Appendix A: Detailed Scenario Description and Regional Inputs

1- Africa & ME

Issue	1-Freeway	2-Tollway
General	World with solutions where pure market forces prevail	Regulated world where governments and politicians decide to put common interests at forefront and intervene in markets
Players	 Private sector leads Global companies emerging as central players Entrepreneurs Consumers 	 Public sector leads Local Governments acting as central planners NGOs Citizens
Trade	WTO makes progress on competitive issues Free and expanding international trade in regard to trade & barriers removals. Globalized economy Global competition and occasional trade disputes High global trade imbalances Trade activities increase with other countries especially China and India. Trade is made mainly around minerals, metals, and agriculture. Trade ties with OECD countries continue and strengthen.	 WTO shows increased emphasis on free flow of green goods and services Increased international cooperation on climate change issues in the short to medium term. Individual countries/regions preferring local content and solutions More fragmented and /differentiated global economy More trade restrictions due to regional concerns Trade is focussed with small set of selected countries (countries with high technology are invited to invest in South Africa; Germany, USA, and China as examples). Interregional trade increases between Southern African nations.
International Institutions	Less prominent international institutions	Stronger role for international and multilateral institutions
FDI	Increased level of FDI	 Same or less Increased national investments Few selected industrial sectors are targeted for FDI.
Technologies	Technological innovation market driven Emerging innovation centres attracting and competing for investment capital and human resources Original Equipment Manufacturers (OEM) develop transport solutions most wanted by consumers	 Governments picking technology winners (e.g. photovoltaic) Higher amount of technology transfer into developing nations Multinational technology co-operation and initiatives More state subsidies sponsor focused research programs into new transport technologies High degree of technology transfer into sectors that benefit the public (health, water, energy, infrastructure) Multilateral sponsorship programs and with Millennium goals as driving factors Benefits of tech transfer do not accrue to other sectors.
Capital & Labour	Free flow of capital & labour Flow of foreign capital and workers (all skill levels) from OECD and Asian countries. Competitive labour market. Domestic worker unemployment increases, especially in skilled sectors.	 Restricted flow of capital & labour Investment is targeted in select sectors (mining & energy) via government intervention. Only highly-skilled foreign workers are permitted into the labour market. Domestic unemployment is low, but so is productivity.
Manufacturing centres	Manufacturing established in low cost centres & close to major markets	Manufacturing established in less optimal locations but with regional development and factors in mind
Infrastructure	Patch work of improvements in many regions Public infrastructure does not develop to the same level as in Tollway.	New infrastructure projects, mainly in renewable energy and public transport, state funded Access to energy and public transport schemes promoted by international institutions (UNIDO) Public infrastructure improves (roads & buildings). Massive investments in road building programs. Investment in energy infrastructure remains an urgent need, as energy access remains a top priority Multilateral sponsorship programs improving proper government regulation, increasing

Climate change	Commercially viable Innovative Green technologies/practices flourish	 private sector investments into public sector. Divide between rural and urban transport options increases as a result of increased investments in urban infrastructure Accessibility of some rural areas improves due to road construction programs extreme congestion and pollution in the major urban centres increasing Problems with frustrated young and poor portion of the population are alleviated due to improving unemployment numbers. Big focus and international efforts on climate change by governments in short, medium to long terms. Africa & Middle East are not going to go green on own volition Local strategies aimed at providing maximum energy at lowest cost possible Additional funding for energy efficiency programs and climate change mitigation initiatives based on foreign funding via Copenhagen mechanisms There is consensus that a consolidated approach promoting all forms of energy is the
Politics & competition for resources	Pure competition creates cost-efficient solutions Higher In some Western Africa and MENA energy-rich countries, the demographic demands in countries like Nigeria/Libya/Iraq/Iran have an impact on that country's stability and ability to export oil. Remain mostly unstable though 2050. Hydrocarbon supplies from MENA remain at risk. Straits of Hormuz, Bab Al-Mandab and Suez Canal remain vulnerable. Conflicts in Libya, Sudan, Somalia, West Africa, Iraq, Iran, Lebanon, Palestine, and Yemen are expected to last for few more decades. demand creates global competition for resources	 Less competition over energy resources Focuses on regional supply and energy efficiency reduce competition for resources. Unemployment improving in areas of large infrastructure investments African middle classes developing at a slow pace Government health programs first increase birth rates, but then lead to stabilisation and even decrease in fertility rates due to increased awareness Political volatility due to series of backlashes based on widespread corruption and inefficiencies linked to large investments in infrastructure programs International pressure and monitoring mechanisms based on EU model of common currency mechanisms Arab spring in MENA is expected to end at Libya/Yemen/Syria but reforms will take years. These conflicts are expected to adversely slow down the demand for transport in these countries.
Regulation	Low government regulation (minimum regulated environment)	High government regulation (fully regulated environment) Major local energy companies continue to dominate local markets.
Competitive	 Pure market forces Market seeks competitive cost solutions Favourable climate for open global competition US and Chinese companies dominate, Germany continues to be an export leader 	Same or less market influence Market distortions through government intervention Company reputation and ability to work with bureaucratic governments become a competitive differentiator BRIC countries outperforming OECD
Privatization, liberalization, deregulation	 Wave of privatization, liberalization & deregulation Lack of proper government frameworks remain a challenging concern for the market Privatization remains challenging (South Africa could be exception?) 	 Same level or less Energy and transport sector considered strategic in most countries Government processes slowly improving
Economic Volatility	High economic volatility Potential super-cycles	More stable economic environment at lower growth levels in the short term.
Wealth	High & increasing wealth in western world & successful new industrial (SE Asia & LAC). Africa still marginalized. Rise of the super-rich (expats and politicians). Wealth accrues to very select minority Increasing number of urban poor.	Wealth disparity is less obvious in industrial countries Africa improving due to technology transfer (e.g. Copenhagen accord) and multi-lateral programs (e.g. UNIDO access to energy program).

	Outpouring of civil unrest due to income disparity and increasing crime waves	 Sub-Saharan Africa has still the lowest GDP per capita (\$1,138 versus a world average of \$8,599) but is slowly improving at the backend
		of scenario period. North Africa has a relatively higher per capita GDP of close to \$3,000, which is still far below the world's average. The ME is higher than Africa and stands at an average of
	Diverse R&D efforts	 \$5,763. More focused R&D programmes driven mainly
	Driven by both private and public sectors	by public sector
R&D		 International research programs and technology "clearing houses" to facilitate technology transfer.
		Remains dependent on technology transfer
	 Efficient carbon price mechanisms Entry into market only after significant gains 	Existing Clean Development Mechanisms (CDMs) may fail in EU-US and not take off in
	(OECD levels) in per capita income across all sections of society.	other markets Regional limits and penalties imposed by local
	Entry post-2020 (??).CSS will not be adopted unless mandated, price	 governments. Set of regional agreements on climate change
	increases will be absorbed.	and introduction of carbon price mechanisms.
Carbon pricing		 International incentives for countries to join, through investment funding and technology transfer system.
		Entry may happen sooner, but only due to
		government intervention and international political pressure.
		Carbon trade remains very small.
		 Conflict with major local energy producers may be a hurdle
	Cheaper but less wide-spread solutions	More expensive sustainability (as efficient
Sustainability		prices are not driving players actions) but faster implementation
	Consumer spending increases, savings drop	Consumer spending decreases, saving increases
	Individual interests dominate	Common interests at forefront
	Cheapest price and highest comfort dominate and differentiate products	Consumer power used to stimulate development of greener goods and services
	Increasing levels of consumption (demand for)	Social activism increases and forces producers
	fast moving consumer goods increases).	and governments to put common interests at
	 Entry of foreign retail firms into the market. Increasing high-street banking services & 	forefront Best public image and corporate responsibility
	lending	differentiate in addition to price
	Domestic savings level drops. Domestic savings level drops.	 Consumption levels are lower Very few market players (mostly local firms).
Consumer behaviour	 Demand for more sophisticated goods – high- end electronics, cars, etc. 	High level of domestic savings.
& lifestyle		Tourism industry remains dominant factor in
		 foreign spending. Banking services growth remains limited to non-
		retail banking.
		 African individual interest remains at front. Consumers in sub-Saharan Africa looking for any
		affordable transport mean.
		In the higher income and more urbanized ASSNA granulation and foresteed with the
		MENA, population are frustrated with the congestions and pollution problems (major cities).
	High but uneven distributed economic growth.	Sufficient economic performance to fund
	Sufficient fund for new private investments.	 government initiatives in energy. Overall economic growth is more moderate. Still
		distributed unevenly across regions.
Good Economic Situation-Top of		 Between 1990 and 2008, Africa's GDP grew at about 3.8% per year while the ME at 3.9% per
Business cycle		year (both higher the global average of 3.3%)
		Thru 2035, Africa's GDP is expected to grow at about 3.5% per year while the ME is expected to
		about 3.5% per year while the ME is expected to grow at 3.9% per year (both higher the global
	Low & uneven distributed economic growth.	average of 3.2%). Still sufficient economic performance in
Bad Economic	Wide spread austerity packages reducing new	Still sufficient economic performance in developing countries (shielded such as China &
Situation-Bottom of	investments and energy demand.	Brazil). Much weaker in developed. Still
Business cycle		distributed unevenly. • Large public sector debt developing.

		Effect of down-cycle partially mitigated by lower
		energy demand and import bills due to energy efficiency gains.
Population		 Sub-Saharan Africa has the world's highest population growth rate of 2.5%, relative to the global growth rate of 1.2 % and 1.9% in MENA. Thru 2035, Africa's population is expected to grow at about 1.9% while the ME is expected to grow at 1.5% (both higher the global average compared to global average of 0.9%). Africa is expected to double by 2050. In Sub-Saharan Africa almost 43% of the population is 14 years of age or under while in MENA it is about 31% (compared to the world average of 27.2%).
Finance	Private Financing capital available, abundant and easy to flow	 More Limited private financing capital mostly by local institutions Large public sector funding for infrastructure and "green" projects There is no lack of credit and willing investors for energy infrastructure investment.
Corruption	Could lessens in many regions	 Tops list in South Asia, Sub-Saharan Africa, transition economies. Corruption is still a concern in most countries (with the exception of high income ME countries).
Bureaucracy	Lessens in many regions	 Remains an issue everywhere. Sub-Saharan Africa is the least bureaucratic in the world (world economic forum results). Bureaucracy in MENA remains high.
Tax regulation	Taxes (as a market distortion) drops in many regions	 Constitutes a severe constraint on OECD and post socialist transition economies. New taxes needed to finance large public sector debt in Western economies About average (world economic forum results).
Subsidies	Subsidies (as another market distortion) removed in many regions. Remaining subsidies mainly in renewables.	 Subsidies remain and increase for green goods and services. West Africa and MENA countries remain heavily dependent on subsidies especially subsidies related to energy resources.
Energy E&P	 Many countries open their upstream sectors resulting in a surge of supply. Moderate oil prices in the short term. More security of supply and demand Fossil fuel dominance reducing only gradually High growth of energy demand, leading to higher prices at the end of scenario period. Industrial demand for energy reaches all time peak Electricity prices increasing sharply, leading to energy poverty Boost to coal and mining industries. Sasol makes big gains. Eskom has to put up with increasing competition from private power sector. Regional power sharing agreements to balance countries' transmission systems. Oil pipeline infrastructure is developed in the latter half of the next decade. 	 Lack of opening new areas for E&P leading to tight supplies High infrastructure costs for early integration of renewable energy sources higher oil and energy prices at the beginning of scenario period, but lower, more stable prices after quicker transition to renewable energy sources Oil price is tightly regulated Security of supply and climate change concerns push drive to reduce dependence from fossil fuels Clean coal and CCS socially unacceptable in EU and US but becomes a must for developing world Electricity prices increasing sharply, leading to energy poverty and government subsidies for lower incomes Export oriented growth model. Role of Eskom is predominant. Interregional power sharing agreements to meet demand West Africa and MENA's transport situations benefit from the fact that most of these countries have energy reserves, or access to them, that help to fuel a higher level of motorization than that found in the rest of Africa.
Liberalization, policy agreements	Liberalized energy markets and high competition for resources on a global basis Easy to reach international agreements on removing trade barriers	Limited competition and participation Policy agreements of "coalitions of the willing" to reduce greenhouse gas emissions and setting of (increasingly) international standards for

	No agreements on international energy policy due to competing interests. Energy market lacks of ability to reach international agreements and common set of basic rules	carbon pricing Stronger role for international institutions to set policies
Policy initiatives	 Policy initiatives aimed at setting framework conditions for market solutions to emerge Policy is influenced by free market thinking. Generation and transmission is unbundled. Foreign investment in energy sector will be in the form of partnerships with domestic firms to allow technology and knowhow transfers. Policy will focus on diversifying fuel mix Proactive policies. 	 Energy policy initiatives set by centralized government where regulations of energy sector reverts to national states High focus on maintaining government subsidies (impacts future investment on generation capacity). Reactive policies.
International	Successful international coordination on free	International coordination of energy taxes
cooperation	market mechanisms	progressing
Energy Saving	Significant saving (higher prices/efficient markets)	 Large government focus on energy efficiency and energy saving programs Efficiency brands (Like Energy Star) become dominant in consumer minds Dependant on government mandates. Eskom will implement efficiency measures in case of generation shortfall.
Energy Consumption	High economic growth yields high energy consumption	 High impact from energy efficiency and energy saving programs Global demand for energy is also lower because of lower growth and changes in lifestyle. Transport in Africa mostly uses conventional gasoline and diesel In 2008, Africa consumed 28 mtoe (about 0.564 million barrels per day) of gasoline and about 38 mtoe (about 0.765 million barrels per day) of diesel. Similarly, the ME consumed 46 mtoe (about 0.939 million barrels per day) of gasoline and about 54 mtoe (about 1,082 million barrels per day) of diesel. Consumption is expected to double for Africa (from~100 mtoe to~200 mote) and triple for ME (from ~100 to ~300 mote) by 2050, again mostly gasoline and diesel (IEA baseline). Road transport increasing (more than in Freeway) due to road construction programs
Transport Intermodal	 Individual transport solutions Solutions are more short term and lack wide perspectives Rail and bus companies are privatized. Operation of public transport is privatized. High fuel efficiency measures implemented by operators. Electrification of urban public transport remains dependant on government policy support. Transport options from industrial hinterland to urban centres widen. 	Stronger emphasis on public transport Solutions are long term with a wide perspectives Public transport monopolies. Electrification mandated by government policy. Transport links between hinterland and urban centres continue to be underdeveloped. Individual transport solutions dominating.
Air Traffic/Freight	High growth of air traffic and freight sector Dependent on petroleum Increasing fuel economy	 Less growth due to lower economic growth Dependent on petroleum Lesser fuel economy measures For Africa, Boeing expects a growth rate of 5.5% for passenger and 6% for cargo per year thru 2029. For ME, Boeing expects a growth rate of 7.1% for passenger and 6.8% for cargo per year thru 2029.
ICEs	High efficiency ICEs	 High efficiency ICEs In 2005, the passenger LDV stock is about 15 million vehicles in Africa and about 15 million in ME. New car sales in Africa are about 1.6 million /yr and the same in ME. Used cars inflow to Africa is about 243,000 cars in 2005 (mostly from EU) and about 391,000 in ME (mostly from US followed by Japan).

		Conventional ICEs dominates existing stock/new sales /used sales.
	- Marie hishaide	ICE is expected to dominate thru 2050.
Hybrids	More hybrids	 moderate hybrids share growth Now, minimum level and potential
EVs	Batteries still expensive. With time, R&D will drive battery prices down competitive market facilitate new business models for battery replacement Oil still a necessity for most transport demand, even in 2050. Innovation centres in the Eastern markets and mega-cities drive the introduction of large numbers of EVs due to air quality concerns in mega cities. In the longer term, low cost EVs penetrate western markets. Intra-city personal transport solutions viable only post-2020 (??). Crucial factor will be battery capacity and charging infrastructure.	 Earlier penetration of EVs and more use of electricity in public transport fleets (government directed). Efficiency of electric vehicles transforms energy demand and landscape. However, impact really visible after 2025. By 2050, EV expected to be 40% of the LDVs demand share (extreme case as in IEA's 450 level). This is subject to significant improvement to the grid systems. Fossil fuels reduced to cover 30% of LDVs transport energy demand in 2050. Remaining 30% is provided by Biofuels and FCs. Lower OECD transport emission (assuming CCS for power generation) in the long run. Main emerging economies avoid mistakes of developed world, leapfrogging technologies. Limited to public transport fleets. Subject to capacity availability of Eskom in South Africa Heavily subsidised. Company fleets (??) Now, minimum level and potential
CNGs	More CNGs if gas reserves available as E&P accessible by IOCs	 CNGs significantly in transport early on by local governments with access to domestic gas reserves. Minimum level and potential
FCs	FCs small breakthrough as they are still expensive	Fuel cells adopted to reduce dependency on foreign oil Minimum level and potential
Biofuels	 Food crisis depresses global biofuels growth Strong regional hubs in both North and South America Gene technology used to grow energy crops (except EU). 2nd & 3rd generations are still expensive 	 Increasing contribution of 1st gen. biofuels to fuel mix Larger impact on food prices Gene modifications of crops still not accepted in EU. Large contribution of second (and 3rd?) generation biofuels in the long term First generation biofuels have a potential in areas where they do not threaten food security (e.g. ethanol production in Swaziland).
Urban Planning	 Good economies will invite better planning and problem solving. Increasing move from rural to urban areas. Cities grow at a high rate – increasing congestion on roads and land space. Rural areas become the target for large-scale, plantation-type farming enterprises. 	 Governments alone can poorly direct/coordinate urbanisation Problems worsen with tight government budgets and bad economies. Move from rural to urban areas continues, albeit at a lower rate. Cities continue to grow and areas of the cities turn into ghettos/slums – resulting polarization of society. Rural areas continue to engage in subsistence farming. Only about 36% of the sub-Saharan Africans live in cities compared to around 60% in MENA. The world average is about 50%. Good economies will invite better planning and problem solving. Increasingly, young MENA are migrating to the major cities looking for employment, adding more stress on the urban infrastructure (housing, infrastructure, and transportation). This is faced by very little public planning. Urbanisation is growing faster than government response.
High Speed rails	There could be problems with corridors and private sector funding.	Penetration of high speed rail networks at a larger scale, especially in second half of scenario period Minimum level and potential
Vehicles Ownerships	More vehicles ownerships	Less car ownerships & more reliance on public

		•	transport systems, car sharing and rentals. In 2005, Africa had the lowest private car ownership in the world with only 20 privately-owned cars per 1,000 people. In ME, the level is relatively higher (80 cars per 1,000 people). Private car ownership is something that many young Africans & ME would like to have , particularly in the absence of reliable, affordable, and convenient mass transit and public transportation options
Aviation, Ship Rails & Truck	 High growth for both passenger travels and freight especially in eastern markets.	•	More moderate growth levels. High growth for both passenger travels and freight 5-6% per year. Over the next 20 years, Boeing expects the Africa passenger fleet to double from 660 planes to 1130 planes and the ME to more than double from 950 to 2440 planes.

2- Asia

Issue	1-Freeway	2-Tollway
General	World with solutions where pure market forces prevail	Regulated world where governments and politicians decide to put common interests at forefront and intervene in markets
Trade	 WTO makes progress competitive issues??? Free and expanding international trade in regard to trade & barriers removals. Globalized economy Global competition and occasional trade disputes High global trade imbalances Trade between OECD countries, China and India grows substantially. ASEAN trading bloc becomes a major player in world trade. Focus of China on Africa as a food source grows. 	 WTO shows increased emphasis on free flow of green goods and services Increased international cooperation on climate change issues in the short to medium term. Individual countries/regions preferring local content and solutions More fragmented and /differentiated global economy More trade restrictions due to regional concerns Chinese growth begins to be domestically driven. China remains the predominant trading nation in Asia. India continues to remain a business process outsourcing (BPO) hub, but its share begins to erode as Eastern Europe starts IT development. Trade polarizes into Western and Eastern blocs
International Institutions	Less prominent international institutions	Stronger role for international and multilateral institutions
FDI	Increased level of FDI	 Same or less Increased national investments FDI remains constrained FDI levels are up 43% since last year, with the 21% of foreign equity being attracted by the services sector. India continues to lag. Total FDI inflow from 2000-2011 was \$ 19billion. Services attracted 21% of FDI in April 2011 (almost three times the next highest). Housing – 7%, Construction – 7%, Automobiles – 5%, Power – 5%, Metallurgical – 3%, Petroleum & Natural Gas – 2%. Over the same period, FDI in China for 2010 was \$ 105.7 billion. Main focus manufacturing. Road network in China increased 7-fold from 2000-2005 to 1,930,500 kms. By end of 2005, length of running railways in China was 75,000 kms, up 10% since 2000.
Technologies	Technological innovation market driven Emerging innovation centres attracting and competing for investment capital and human resources Original Equipment Manufacturers (OEM) develop transport solutions most wanted by consumers India becomes an R&D hub in South Asia, and its infrastructure improvements enable it to achieve double digit growth year on year.	Governments picking technology winners (e.g. photovoltaic) Higher amount of technology transfer into developing nations Multinational technology co-operation and initiatives More state subsidies sponsor focused research programs into new transport technologies High-end tech research remains in OECD countries due to lack of Asian investment in domestic R&D.

	Japanese technology transfer to Asian manufacturing countries.	Intellectual property violations become a major bone of contention between China and other countries, slowing technology transfer.
Capital & Labour	Free flow of capital & labour India becomes host to increasingly large amounts of capital repatriated by US and UK non-resident Indians. Labour market booms due to infrastructure investments. Asian job market becomes a target for highly experienced western professionals seeking growth opportunities. Asian labour market becomes more mobile.	Restricted flow of capital & labour Capital inflows from western economies depend on currency conditions of Eurozone and US debt levels. Middle Eastern countries (i.e. Saudi Arabia and Qatar) seek to make investments in developing Asian countries. Domestic equity markets contribution is low. Major energy investments made by governments to meet domestic energy demand. Labour market remains in current status. Declining employment in rural areas increases labour push to urban centres.
Manufacturing centres	Manufacturing established in low cost centres & close to major markets	Manufacturing established in less optimal locations but with regional development and factors in mind
Infrastructure	Patch work of improvements in many regions	New infrastructure projects, mainly in renewable energy and public transport, state funded Access to energy and public transport schemes in Africa and developing Asia are being promoted by international institutions (UNIDO) Infrastructure investments are made by central governments (growth is slow) scale is limited due to size of government holdings. Chinese investment in infrastructure continues to develop strongly, levelling off by 2035/2040.
Climate change	Commercially viable Innovative Green technologies/practices flourish Clean energy technologies will only be implemented if international funding is obtained.	Big focus and international efforts on climate change by governments in short, medium to long terms. Chinese investment in renewables in 2009 was US\$ 34.6 billion, which was higher than the US. Set to increase even further It is also the world's leading consumer of coal and coal-fired electricity. CCS technology is expected to play a significant role in the future with dozens of full scale pilot plants operating at the end of the scenario period. The priority for energy access and reliable electricity supply supersedes the need to address climate change concerns in most developing countries in Asia.
Politics & competition for resources	Pure competition creates cost-efficient solutions Higher demand creates global competition for resources Pressure on North Korea to democratize. Chinese economic growth and infrastructure development limited by resource constraints Political unrest increasing due to poverty divide	Less competition over energy resources Focus on regional supply and energy efficiency reduce competition for resources The Chinese political system is scheduled to go through a power transfer in 2012. The old ruling elite will step down and give way to a newer generation. The focus will be on maintaining a steady level of economic growth along with social stability. Indicators of social unrest will be watched very closely by the government. Militarily, China will be seeking to exert its influence in the Asian region more strongly. Stability will hinge on a minimum economic growth of about 9%. The Korean peninsula instability seems to last for few more decades. India-Pakistan nuclear war threat will hang over for many years until Kashmir problem is solved. US influence waning, Asia looks increasingly to itself
Regulation	 Low government regulation (minimum regulated environment), especially with China reducing government interference/involvement. Non-performing public assets are privatised. Higher degree of Chinese dissident opinions forming out of market driven economic 	High government regulation (fully regulated environment) Domestic private conglomerates and industrialists begin to meet demand for services creating more market distortions (rise of monopolies) Government regulation remains high in China. Large infrastructure programs keep large sectors

	 developments New Chinese political power blocks forming from within the communist party 	of the population employed and political reforms stay on the back burner India is has a more liberal regulation policy, but the size of its bureaucracy limits its growth potential.
Competitive	 Pure market forces Market seeks competitive cost solutions Favourable climate for open global competition 	Same or less market influence Market distortions through government intervention
Privatization, liberalization, deregulation	Wave of privatization, liberalization & deregulation	Same level or less Energy and transport sector considered strategic in most countries India liberalised in 1991 and has experienced an average annual GDP growth rate of 4.8% (1990-2009) (World Bank). Chinese growth rate over the same period has been 9%. The biggest sector for FDI in India is Services, while in China, Thailand, and Taiwan it is manufacturing. India infrastructure investments increasing at a rapid pace, albeit regionally very different Some Indian state and city governments are starting to address the urbanisation and energy poverty challenges
Economic Volatility	High economic volatility Potential super-cycles	More stable economic environment at lower growth levels in the short term.
Wealth	 High & increasing wealth in western world & successful new industrial (SE Asia & LAC). Africa still marginalized. Overall ASEAN per capita incomes rise. Flow of capital from traditional high-income Asian nations like Japan, Hong Kong, Singapore to China, India, Vietnam, & Thailand. Standard of living increases across smaller ASEAN countries. India continues to lag due to large rural population. 	Wealth disparity is less obvious in industrial countries Africa improving due to technology transfer (e.g. Copenhagen accord) and multi-lateral programs (e.g. UNIDO access to energy program). Governments continue to subsidize rural populations. High possibility of balance of payments crises. Urban middle class continues to grow due to rural influx Wide variation in GDP per capita figures across Asia (2009, current US\$, World Bank). Can categorize them according to certain economic development stages. GDP per capita are high for OECD members (Korea = \$ 17,078 and Japan = \$ 39,7380 and low for others (China = \$ 3,744 and India = \$ 1,192)
R&D	Diverse R&D efforts Driven by both private and public sectors	More focused R&D programmes driven mainly by public sector International research programs and technology "clearing houses" to facilitate technology transfer. While most of the manufacturing is done in China/Korea/Japan, the R&D for high-end electronics is carried out in countries like Germany, Japan, USA, etc. India has a number of R&D centres on software, pharmaceuticals, and other industries and starts to outpace China in terms of technology development Regional competition increasing Asia as a whole (with the exception of Japan and Korea) remains dependent on technology transfer.
Carbon pricing	Efficient carbon price mechanisms Carbon markets begin to gain a foothold in high-income Asian countries – Singapore, HK, Japan. Indian and Chinese governments adopt carbon credit system with international funding.	Existing Clean Development Mechanisms (CDMs) may fail in EU-US and not take off in other markets Regional limits and penalties imposed by local governments. Set of regional agreements on climate change and introduction of carbon price mechanisms. International incentives for countries to join, through investment funding and technology transfer system. Not a priority, unless international pressure is placed on governments of China and India. Will only take place in a very small scale, along

		with promised international funding.
Sustainability	Cheaper but less wide-spread solutions	Abuse of carbon trading mechanism likely. More expensive sustainability (as efficient prices are not driving players actions) but faster implementation
Consumer behaviour & lifestyle	 Consumer spending increases, savings drop Individual interests dominate Cheapest price and highest comfort dominate and differentiate products Asia opens its doors to foreign/multinational brands. A truly global market is created for high-end consumer goods. Increasing focus on providing consumer experiences/services instead of goods. Credit levels rise – domestic household savings levels drop Growth of smaller firms where innovation thrives. 	 Consumer spending decreases, saving increases Number of middle class consumers increasing, however, during second half of scenario period Common interests at forefront Consumer power used to stimulate development of greener goods and services Social activism increases and forces producers and governments to put common interests at forefront Best public image and corporate responsibility differentiate in addition to price Characterised by constrained demand due to limited infrastructure. Increasing stress placed on electricity, water, and sewage systems in Asian megacities. Rising food and fuel inflation. Consumption levels will increase across most of the developing Asian economies. As incomes rise, there will be a shift towards demand for transport & high end products. Large demand for cars in China, with manufacturers like BMW and Mercedes struggling to meet demand. Entry into the markets by Retail multinational companies faces some opposition from local traders, but the move towards globalization continues. (E.g. Walmart in India) There is huge potential for consumption of services at the domestic household and individual level. Demand for electricity will continue to rise.
Good Economic Situation-Top of Business cycle	High but uneven distributed economic growth. Sufficient fund for new private investments.	 Demand for electricity will continue to rise. Sufficient economic performance to fund government initiatives in energy. Overall economic growth is more moderate. Still distributed unevenly across regions. ADB expects growth in Asia to be driven by the economies of China, India, Indonesia, Japan, Republic of Korea, Thailand and Malaysia. Chinese economic growth is expected to be around 9.5% this year (IMF). However, there are concerns that the Chinese economy may be overheating, with a property bubble in the making. Food inflation is also rising. GDP growth rate in India is expected to be 8.25% in 2011, dropping to 7.75% in 2012. Core inflation is rising in India. Japanese economic output has suffered after Fukushima, affecting electronics supply chains worldwide. Growth is expected to be 2% in 2012. Japan Growth will be crippled by the national debt problems. Currently Japan's net debt stands at 128% of their GDP (higher than Greece which is at 124% of its GDP). Thru 2035, China DGP is expected to grow by 5.7% a year compares to Asia of 5.45% and global of 3.2%. Also, India is expected to grow by 6.4% a year, over the same period.
Bad Economic Situation-Bottom of Business cycle	Low & uneven distributed economic growth. Wide spread austerity packages reducing new investments and energy demand.	Still sufficient economic performance in developing countries (shielded such as China & Brazil). Much weaker in developed. Still distributed unevenly. Large public sector debt developing. Currencies under pressure from finance market speculations Devaluations and trade barriers emerging Effect of down-cycle partially mitigated by lower energy demand and import bills due to energy efficiency gains.

			6.1
			of the world's population
		(4.1 billion out of 6.8 bi	lous country today with 1.3
			llows with 1.189 billion.
			ation growth is about 0.7%
		a year (China is 0.5% ar	_
		which is lower than the	
			lation is expected to grow
			erage (0.8% compared to
			. China will grow at 0.3%
			1%. In fact, most of the
			a. By 2030, India will take
		over and will be the lar	
		Now, almost 22% of As	ia's population is 14 years
		of age or under (compa	ared to the world average
Population		of 27%). South Asia is t	he youngest. In China 20%
ropulation		of the population is bel	ow 14 years while the level
		foe India is 31%.	
		Looking at future trend	
		population are aging ar	
			ia, Pakistan, Bangladesh
			ving and having younger
		population.	leaner durate and abilet
		Chinese demographic o	g this decade. The share of
			lropped 6.3%, while that of
			93%. This represents a
		shrinking labour marke	•
		Demographic decline w	
		concern in Japan. UN n	
		The state of the s	will be aged 65 or more by
		2050.	,
	Private Financing capital available, abundant	More Limited private fi	nancing capital mostly by
	and easy to flow	local institutions	
Finance		Large public sector fun-	ding for infrastructure and
Finance		"green" projects	
		Foreign inflows continu	ie strongly into Asian
		economies.	
	Could lessens in many regions	Tops list in South Asia,	Sub-Saharan Africa,
	Could lessens in many regions	transition economies.	
	Could lessens in many regions	transition economies. Corruption in Asia rema	ains a challenge (south Asia
	Could lessens in many regions	transition economies. Corruption in Asia remais the most corrupted v	ains a challenge (south Asia vorldwide, WB).
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		most Asian sountries. Any increase at the number
Energy E&P	 Many countries open their upstream sectors resulting in a surge of supply. Moderate oil prices in the short term. More security of supply and demand Fossil fuel dominance reducing only gradually High growth of energy demand, leading to higher prices at the end of scenario period. Industrial demand for energy reaches all time peak Electricity prices increasing sharply, leading to energy poverty Coal becomes a main driver for growth (widespread implementation of CCS technologies). Gads from former USSR becomes important for China and India. Mongolia experiences a commodities boom (rare earths/minerals). Riparian conflicts and natural resource disputes increase. 	most Asian countries. Any increase at the pumps will have an immediate adverse impact on economic growth. The Chinese government still subsidises electricity and regularly subsidies State Owned Enterprises. Lack of opening new areas for E&P leading to tight supplies High infrastructure costs for early integration of renewable energy sources higher oil and energy prices at the beginning of scenario period, but lower, more stable prices after quicker transition to renewable energy sources Oil price is tightly regulated Security of supply and climate change concerns push drive to reduce dependence from fossil fuels Clean coal and CCS socially unacceptable in EU and US but becomes a must for developing world Electricity prices increasing sharply, leading to energy poverty and government subsidies for lower incomes Energy investments are funnelled into specific areas by governments (power generation infrastructure to meet urban and industrial demand for the short to medium term only). Continued dependence on oil imports from Middle East and development of gas links with CIS, Qatar and Iran. Formation of regional energy trading blocs. Increasing competition for ME oil as western countries seek to maintain security of supply and Asian countries struggle to meet demand. India and China both continue to invest in the development of their coalfields. Gas exploration continues off the eastern coast of India. India and Iran have an oil supply agreement which has recently run into payment disputes. The region remains heavily dependent on oil imports. Major Asian consuming nations (China, India, and Japan) are trying to secure a foot hold in major
	Liberalized energy markets and high competition for resources on a global basis	A move has begun to exploit the resources of the Central Asian Region. Limited competition and participation Policy agreements of "coalitions of the willing" to
Liberalization, policy agreements	Easy to reach international agreements on removing trade barriers No agreements on international energy policy due to competing interests. Energy market lacks of ability to reach international agreements and common set of basic rules Policy is made to further industrial growth not regulate it. Energy security becomes increasingly important and domestic reserves are optimally exploited.	reduce greenhouse gas emissions and setting of (increasingly) international standards for carbon pricing • Stronger role for international institutions to set policies • Main focus of energy policy will be to ensure energy crises are averted, economy is shielded from oil shocks, and domestic energy reserves are fully developed. • Energy access at an affordable price becomes main target of energy policy
Policy initiatives	Policy initiatives aimed at setting framework conditions for market solutions to emerge	Energy policy initiatives set by centralized government where regulations of energy sector reverts to national states
International	Successful international coordination on free market machanisms	International coordination of energy taxes
cooperation Energy Saving	market mechanisms Significant saving (higher prices/efficient markets) Rising electricity prices force industry and domestic consumers to adopt smart-metering and energy saving measures.	Large government focus on energy efficiency and energy saving programs Efficiency brands (Like Energy Star) become dominant in consumer minds Efficiency does not make inroads unless investment made justifies energy savings in monetary terms. Clean energy mandates are financed by

		international organisations.
		World Bank funds continue to be provided to
		Asian countries to implement energy efficiency
		targets.
	High economic growth yields high energy consumption	High impact from energy efficiency and energy saving programs
		 Global demand for energy is also lower because of lower growth and changes in lifestyle.
		Transport Mostly using conventional gasoline and diesel
		In 2008, China consumed 65 mtoe (about 1.314)
		million barrels per day) of gasoline and about 76
		mtoe (about 1.546 million barrels per day) of diesel.
		In 2008, OECD-Asia consumed 65 mtoe (about)
		1.314 million barrels per day) of gasoline and
		about 54 mtoe (about 1.082 million barrels per day) of diesel.
		 In 2008, rest of Asia's consumed 65 mtoe (about
		1.314 million barrels per day) of gasoline and about 84 mtoe (about 1.700 million barrels per
Energy Consumption		day) of diesel.
Energy Consumption		Passenger and freight transport are up 26 and
		29.2 percent in China (2000-2005)
		By 2050, china transport fuels consumptions is expected to increase from 150 mtoe to around
		700 mtoe (mostly conventional gasoline/diesel/jet
		fuel). • Similarly, India transport fuels consumptions is
		 Similarly, India transport fuels consumptions is expected to increase from 50 mtoe to around 400
		mtoe (mostly conventional gasoline/diesel/jet
		fuel).
		 However, OECD-pacific transport fuels consumptions is expected to remain at the current
		level of around 200 mtoe (mostly conventional
		gasoline/diesel/jet fuel).
		Other Asia transport fuels consumptions is expected to increase from 300 mtoe to around
		550 mtoe (mostly conventional gasoline/diesel/jet
		fuel).
	Individual transport solutions Solutions are more short term and lock wide.	Stronger emphasis on public transport
	Solutions are more short term and lack wide perspectives	Intermodal transport seen as a crucial part of the solution in China
	Megacities embark on electrification of public	In India and Indonesia local and regional efforts on
	transport systems.	public transport around major urban centres
	 Urban planning becomes more important. Intra-city rail projects increase. 	appearing until 2025 driven by local visionary politicians
	intra-city rail projects increase.	 Eventual national solutions developing after 2025;
		long term solutions with wide perspectives
Transport Intermodal		Electrification does on take place till infrastructure and funding is secured.
		 and funding is secured. Freight within countries remains heavily
		dependent on road transport.
		Exxon estimates that by 2030 HDVs will become the largest transportation demand segment.
		the largest transportation demand segment (Energy Outlook, 2009).
		Efforts are underway in India to bring intra-city
		rail systems online, while China has ambitious
		plans of extending its rail network to 120,000kms with 16,000kms of high speed rail.
	High growth of air traffic and freight sector	Less growth due to lower economic growth
	Aircraft orders increase.	Slow to medium growth in Aviation sector.
	Air links to urban centres within manufacturing hinterlands increase in India and China.	Demand for aircraft will depend on oil prices and ability of governments to meet non-aviation
	millerianus increase ili iliula aliu Cililla.	transport demand for oil.
		According to International Civil Airline
Air Traffic/Freight		Organization of Member States, civil airline of
		China became the second largest, next to the US in 2005.
		Freight in India is heavily dependent on road
		transport and also railways. Infrastructure
		developments in the national highway corridors are being carried out.
		are being carried out.

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		 For the Asia pacific market, Boeing expects a growth rate of 6.8% for passenger and 6.8% for cargo per year thru 2029. For china the rates are 7.6% for passenger and 7.4% for cargo, for South Asia it is 7.4% for passenger and 7.7% for cargo, for northeast Asia it is 4% for passenger and 6.3% for cargo for south east Asia it is 6.9% for passenger and 6.5% for cargo for Oceania and Australia it is 6% for passenger
		and 6.2% for cargo
ICEs	High efficiency ICEs	 High efficiency ICEs In 2005, diesel ICEs constitutes about 25% of India's LDV stocks (still gaining popularity) due to the low cost of diesel at the pump compared to petrol. Increasing fuel efficiency, combined with turbocharged technology has boosted the demand for diesel vehicles in India. Gasoline ICEs have a big demand in China and it will continue to grow. In 2005, the passenger LDV stock is about 14 million vehicles in China, about 7 million in India, and 26 million in other Asia (total = 47 million). In 2005, new car sales in China are about 3.1 million /yr, 1.1 million cars/yr in India, and 2.9 in other Asia. In 2005, used cars inflow to Asia is about 274,000 cars (mostly from Japan). Conventional ICEs dominates existing stock/new sales /used sales. ICE is expected to dominate thru 2050. Small fraction will be fuelled off CTL.
Hybrids	More hybrids Hybrid vehicle growth increases in Asian markets.	 moderate hybrids share growth Hybrid penetration is low in Asia, with the exception of Japan where sales were almost 500,000 units in 2010. Expected to increase market share in high income countries (Japan/Korea) In 2009, Japan's sales of hybrid cars were 334,000 and 500,000 in 2010 (now IEA forecasts that there will be about 15-20 million Hybrids by 2020 and about 80 million by 2040.
EVs	 Batteries still expensive. With time, R&D will drive battery prices down competitive market facilitate new business models for battery replacement Oil still a necessity for most transport demand, even in 2050. Innovation centres in the Eastern markets and mega-cities drive the introduction of large numbers of EVs due to air quality concerns in mega cities. In the longer term, low cost EVs penetrate western markets. Begins with hybrid spread. Full EV uptake will not occur until 24-hour electricity supply is guaranteed to urban settlements year-round. EV uptake more likely in China than India. Road and charging infrastructure crucial. Electric two wheeler uptake is rapid and exponential in Asian urban centres as well as across rural areas where road infrastructure is less developed 	 Earlier penetration of EVs and more use of electricity in public transport fleets (government directed). Efficiency of electric vehicles transforms energy demand and landscape. However, impact really visible after 2025. By 2050, EV expected to be 40% of the LDVs demand share (extreme case as in IEA's 450 level). This is subject to significant improvement to the grid systems. Fossil fuels reduced to cover 30% of LDVs transport energy demand in 2050. Remaining 30% is provided by Biofuels and FCs. Lower OECD transport emission (assuming CCS for power generation) in the long run. Main emerging economies avoid mistakes of developed world, leapfrogging technologies. No foreseeable entry in the future, except for government fleets which will be due to government policy. China may roll out EVs with extensive subsidies and tax breaks (dependent on infrastructure and ability to deal with congestions problems in cities). Primary uptake countries in Asia are expected to be China, Japan, and Korea (75% of EV purchases in Asian market). By 2050, EVs are still a small fraction of the fleet (less than 5%). Electric two wheeler uptake is rapid and exponential in Asian urban centres as well as

		across rural areas where road infrastructure is less
CNGs	More CNGs if gas reserves available as E&P accessible by IOCs	 Governments put CNG infrastructure programs in place as part of the drive to reduce dependency from imported oil and with air quality considerations in mind CNGs significantly in transport early on by local governments with access to domestic gas reserves. Potential for CNG vehicles, especially in India, Pakistan and Iran. CNG vehicles are becoming increasingly popular, estimated at 11.4 million vehicles in 2009 by IANGV. Around 72% of these vehicles are located in Pakistan, Argentina, Brazil, Iran, and India. CNG vehicles are becoming more popular in India and other countries due to the low cost of CNG per km compared to other fuels. Still will constitute a small fraction of the total stock.
FCs	FCs small breakthrough as they are still expensive	Fuel cells adopted to reduce dependency on foreign oil Minimum level & potential
Biofuels	 Food crisis depresses global biofuels growth Strong regional hubs in both North and South America Gene technology used to grow energy crops (except EU). 2nd & 3rd generations are still expensive 	 Increasing contribution of first generation biofuels to fuel mix Larger impact on food prices Gene modifications of crops still not accepted in EU. Large contribution of second (and 3rd?) generation biofuels in the long term Developing Asia is expected to consume 16mtoe (322,000 barrel per day) of biofuels in 2030 (China: 7.9mtoe, India: 2.4mtoe, Indonesia: 1.5mtoe). Competitive biofuel production can be achieved in SE Asian countries which produce palm oil. Around 3 billion litres of biofuels were produced in Asia in 2008, compared to a world total of 67 billion litres.
Urban Planning	Good economies will invite better planning and problem solving. Urbanisation sharply grows and then plateaus as income levels rise in non-urban manufacturing areas (e.g. SEZs). Number of industrial cities will grow. Cities begin to grow a more planned manner. Land and house prices sharply increase, leading to a boom in real estate businesses.	 Governments alone can poorly direct/coordinate urbanisation Coalitions of local and regional governments and multi-lateral institutions providing financing and project management expertise inviting private sector consortia to undertake large urban redevelopment projects to improve worst problem areas Urbanisation continues to grow sharply as more and more rural inhabitants move to cities in search of work to meet higher costs of living. Unplanned expansion of urban settlements, particularly in India. Population density in Asia is about 90 people/sq km and expected to grow. In 2000, around 48% of the Asian populations live in cities. Around 30% of the Indian population lived in urban centres while in china it is around 44%. These rates are set to increase. Rural to urban influx is also increasing in China and India. Internal migration is rising; 1 in 5 respondents to the last census has relocated. Bohai Economic Rim, with a series of urban centres located in the industrial hinterland surrounding Beijing and Tianjin is being developed.
High Speed rails	There could be problems with corridors and private sector funding.	Penetration of high speed rail networks at a larger scale, especially in second half of scenario period Move towards electrifying railways China leads the world with 4,840 km in operation and 15,478 km under construction. China plans form more than 12,000 km by 2020. Recent HSR accidents may not slow down the government plans.

		Japan has a total of 2,495 km of HSR, Taiwan –
		345 km, South Korea – 412 km.
	More vehicles ownerships	Less car ownerships & more reliance on public
	Number of two wheelers increasing significantly	transport systems, car sharing and rentals.
	ivaliser of two wifeciers increasing significantly	 In 2005, the vehicle ownership in China was about
		11 cars per 1000 capita and 6 cars per capita in
		India compared to a global average of 111 cars po
		1000 capita. Still very long way to go.
		 In China ownership rate has been growing at the
		rate of 12% per year, in India it has been growing
		at 9% per year. In Beijing, number of new cars
		rose by 23.8% in first four months of 2010.
Vehicles Ownerships		Asia produces 95% of the global 2-3 wheelers and
venicles Ownerships		constitutes 75% of the stocks in the world.
		China is the fastest growing but still within 50-10
		per 1000 capita (still below Malaysia and Thailan
		250/1000 capita).
		Electric bikes cost 505 less than motor scooters
		and about 30% of the conventional ones.
		China banned gasoline motorcycles and scooters
		in Beijing and Shanghai.
		100 million E-bikes in circulation in china. Sales 20 This is a few and a second control of the contro
		million/year.
	High growth for both passenger travels and	 France/US are on the path of china for E-Bikes. More moderate growth levels.
	High growth for both passenger travels and freight especially in eastern markets.	Over the next 20 years, overall Asia-Pacific
	ireight especially in eastern markets.	freighter fleet is expected to grow five-fold, rising
		from 16% of global fleet to almost 40%. Airbus
		expects India's fleet to grow 13.5 times by 2028.
		Over the next 20 years, Boeing expects the Asia
		Pacific passenger fleet to grow by three fold from
Aviation, Shipping,		4110 planes to 12200 planes.
Rails & Trucks		India needs 3000 additional aircraft over the next
		decade to maintain economic growth.
		Chinese investment in air infrastructure over ten
		years is planned to be US\$64 billion (100 new
		airports). India has earmarked US\$ 7 billion for
		airport expansion over next 5 years.
		China plans to invest US\$ 1trillion to expand its
		rail network by 2020.

3- Europe & Russia

Issue	1-Freeway	2-Tollway
General	World with solutions where pure market forces prevail	Regulated world where governments and politicians decide to put common interests at forefront and intervene in markets
Trade	 WTO makes progress competitive issues??? Free and expanding international trade in regard to trade & barriers removals. Globalized economy Global competition and occasional trade disputes High global trade imbalances Stronger trade links between Russia (gas), CIS (gas & oil), and Asian (manufacturing) countries. Euro regains potential after resolution of PIIGS crisis. US remains strongest trading partner. 	 WTO shows increased emphasis on free flow of green goods and services Increased international cooperation on climate change issues in the short to medium term. Individual countries/regions preferring local content and solutions More fragmented and /differentiated global economy More trade restrictions due to regional concerns Trade is mainly focussed on servicing US market. Formation of a Eurasian Economic Union under the leadership of Russia (potential for EU to be polarized into West vs. East trading partners). SE Europe will be increasing influenced by GCC trade investments in the region.
International Institutions	Less prominent international institutions	Stronger role for international and multilateral institutions
FDI	Increased level of FDI	Same or less Increased national investments
Technologies	Technological innovation market driven Emerging innovation centres attracting and competing for investment capital and human resources Original Equipment Manufacturers (OEM) develop transport solutions most wanted by	Governments picking technology winners (e.g. photovoltaic) Higher amount of technology transfer into developing nations Multinational technology co-operation and initiatives

	 consumers Continued R&D on renewables technology. 	 More state subsidies sponsor focused research programs into new transport technologies Focus on renewables R&D is limited to a gropup of countries called the planet pioneers, e.g. Germany, Denmark, UK etc
Capital & Labour	Free flow of capital & labour No shortage of capital as economic growth rebounds. Investment is provided by International Banks and carefully monitored by central banks (new EU banking code)	Restricted flow of capital & labour Highly dependent on ability of Euro zone to stabilize currency and common central banking codes are strictly adhered to. Labour from Eastern Europe continues to flow into NW Europe to benefit from open borders and better social programs. Remittances into Eastern Europe, especially Poland drive economic development.
Manufacturing centres	Manufacturing established in low cost centres & close to major markets Increasingly manufacturing shifts to the East of Europe	Manufacturing established in less optimal locations but with regional development and factors in mind
Infrastructure	Patch work of improvements in many regions In order to meet 20-20-20 target, EU aims to accomplish the following: Connect offshore grids in Northern Seas to consumption centres in C. Europe. Roll out smart grid technologies. Diversify gas southern corridor: bring gas in from Caspian Basin, Central Asia, and Middle East. Baltic Energy Market Interconnection Plan (BEMIP). Linking Baltic, Black, Adriatic, and Aegean Sea via BEIMP and North-South gas corridor. Reinforcing Cen. European pipeline network. Commission first Electricity Highways by 2020. EUR 200 billion needs to be invested until 2020 to meet objectives Existing EU-Russia transport infrastructure is old will be very expensive to replace-modernize	New infrastructure projects, mainly in renewable energy and public transport, state funded Access to energy and public transport schemes in Africa and developing Asia are being promoted by international institutions (UNIDO) EDU starts the planning, design and implementation of the European super-grid, a high voltage network that is centrally run and coordinated New European agency to run EU grid established
Climate change	Commercially viable Innovative Green technologies/practices flourish EU 20-20-20 target	Big focus and international efforts on climate change by governments in short, medium to long terms.
Politics & competition for resources	Pure competition creates cost-efficient solutions Higher demand creates global competition for resources Region is politically stable, although financial crises have lent instability to Ireland, Portugal, Italy, and Greece. Green Parliamentary Group in the Bundestag has come to dominate German politics – all renewable energy by 2030. Russia continues demonstrating its fears from NATO. Instabilities continues in the southern Russian old states (Chechen Republic), Northern Spanish province of Basque, and Northern Ireland	Less competition over energy resources Focus on regional supply and energy efficiency reduce competition for resources
Regulation	Low government regulation (minimum regulated environment) Occurs at the EU-level, which members states have to eventually adopt. Russia is still heavily regulated.	 High government regulation (fully regulated environment) EU-level regulators for gas and electricity markets. EU-level regulation becomes bigger not necessarily stronger.
Competitive	Pure market forces Market seeks competitive cost solutions Favourable climate for open global competition	Same or less market influence Market distortions through government intervention
Privatization, liberalization, deregulation	Wave of privatization, liberalization & deregulation Potential for private operation of transnational pipelines OECD Europe countries have fully liberalized markets. Non-OECD Europe countries will	 Same level or less Energy and transport sector considered strategic in most countries Move towards privatization of energy companies in PIIG countries.

	eventually privatize non-performing public	
	assets, especially in light of financial crisis. Privatization is still an issue in Russia.	
Economic Volatility	Privatization is still an issue in Russia. High economic volatility Potential super-cycles	More stable economic environment at lower growth levels in the short term.
Wealth	 High & increasing wealth in western world & successful new industrial (SE Asia & LAC). Africa still marginalized. Germany remains the most productive economy in Europe. Strong growth of Eastern European economies. In 2010, the GDP per capita for the Euro area was about \$32,772 and for Russia, it was about \$8,684 	Wealth disparity is less obvious in industrial countries Africa improving due to technology transfer (e.g. Copenhagen accord) and multi-lateral programs (e.g. UNIDO access to energy program). Affected by non-resolution of EU currency crisis. Unemployment issues will need to be addressed by job creation instead of clamping immigration. Middle classes continue to get squeezed leading
R&D	 Diverse R&D efforts Driven by both private and public sectors Countries like Germany, UK, and Italy continue to be centres of innovation. 	to demand for political reform. More focused R&D programmes driven mainly by public sector International research programs and technology "clearing houses" to facilitate technology transfer.
Carbon pricing	Efficient carbon price mechanisms Most developed carbon market worldwide.	 Existing Clean Development Mechanisms (CDMs) may fail in EU-US and not take off in other markets Regional limits and penalties imposed by local governments. Set of regional agreements on climate change and introduction of carbon price mechanisms. International incentives for countries to join, through investment funding and technology transfer system. Does not reach to the Freeway level.
Sustainability	Cheaper but less wide-spread solutions	More expensive sustainability (as efficient prices are not driving players actions) but faster implementation
Consumer behaviour & lifestyle	 Consumer spending increases, savings drop Individual interests dominate Cheapest price and highest comfort dominate and differentiate products Demand for green goods and services rises. Public opinion influenced by virtual communities. Increased use of personal gadgets and communication devices. Increased monitoring capability of personal energy consumption In 2008, primary energy consumption for OECD Europe was 1,820 Mtoe and 1,386 Mtoe for non-OECD Europe. Energy intensity has been steadily falling year on year (primarily due to efficiency increases). In 2035, it is expected to increase to 1,843 Mtoe for OECD. In 2007, biggest energy consumers of energy included Germany (339.6 Mtoe), France (270.3 Mtoe), UK (221.1 Mtoe) and Spain (146.8 Mtoe). EU-27 Energy Consumption figures in 2007 were Oil 36.4%, Gas 23.9%, Solid fuels 18.3%, Nuclear 13.4%, Renewables 7.8%. In 2008, the expenditure per head on transport 	Consumer spending decreases, saving increases Common interests at forefront Consumer power used to stimulate development of greener goods and services Social activism increases and forces producers and governments to put common interests at forefront Best public image and corporate responsibility differentiate in addition to price Drive towards increased virtual interconnectedness continues. Trust in government and financial institutions very low, increased political uncertainty. Intra-EU movement decreases.
Good Economic Situation-Top of Business cycle	for EU-27 is around EUR 1,900. High but uneven distributed economic growth. Sufficient fund for new private investments.	Sufficient economic performance to fund government initiatives in energy. Overall economic growth is more moderate. Still distributed unevenly across regions.
Bad Economic Situation-Bottom of Business cycle	Low & uneven distributed economic growth. Wide spread austerity packages reducing new investments and energy demand. Between 1990 and 2008, the EU grew by 2.2%/year while Russia grew by 0.6% a year. In 2010, the inflation of avg. consumer prices in was about 2%. Average unemployment rate is about 9.3%	Still sufficient economic performance in developing countries (shielded such as China & Brazil). Much weaker in developed. Still distributed unevenly. Large public sector debt developing. Effect of down-cycle partially mitigated by lower energy demand and import bills due to energy efficiency gains.

	Growth in EU zone will be slowed down by the	
	debt crises hitting Greece (net debt of 125% of	
	its GDP), Italy (net debt of 101% of its GDP),	
	Belgium (net debt of 80% of its GDP), Portugal	
	(net debt of 75% of its GDP), and Ireland (net	
	debt of 70% of its GDP).	
	It is widely expected that Greece will default in	
	paying its loans and will expose many European	
	banks (mainly French).	
	Austerity measure will also slow down growth in	
	the EU zone.	
	Thru 2035, The WB expects EU to grow at 1.6%	
	a year while Russia to grow at 3%.	
	In 2008, the Europe's population stood at	
	around 723 billion. The current population	
	growth is about -0.1% per year for Russia and	
	0.4% per year for the EU.	
	Most of the EU's population growth is in	
	Northern EU (0.58%/year).	
	Germany, Hungary, and UK experienced	
	negative population growth rate in 2010	
	Around 15% of the Russian population is below	
Population	14 years old while for Eu it is about 17%.	
	Over the last decade EU-25 dependency ratio	
	grew by 1.3% per year and reached 25% in	
	2005.	
	 Low fertility rates (1.5 children per woman) and 	
	high life expectancies are accelerating the	
	demographic decline.	
	9 .	
	Thru 2035, Russia's population is expected to	
	grow at 0.4% and per year while the EU's	
	population is expected to grow by 0.2% a year.	A Mara Limited private financing conital mostly by
	Private Financing capital available, abundant and assute flow	More Limited private financing capital mostly by local institutions
Finance	and easy to flow	
	Wide options of financing options.	Large public sector funding for infrastructure and ""
	0 111 : :	"green" projects
	Could lessens in many regions	Tops list in South Asia, Sub-Saharan Africa,
Corruption	 Minimum in West EU but very high for East EU 	
		transition economies.
	Russia (second to South Asia).	
	Russia (second to South Asia). Lessens in many regions	Remains an issue everywhere.
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Bureaucracy	Russia (second to South Asia). Lessens in many regions	
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	reduced rates of VAT (5 %) on domestic oil and	
	gas (EUR 1.4 billion), while Italy allows reduced VAT rates (10 %) on domestic gas (EUR 0.9	
	billion).Subsidies are significant in Russia too.	
Energy E&P	 Many countries open their upstream sectors resulting in a surge of supply. Moderate oil prices in the short term. More security of supply and demand Fossil fuel dominance reducing only gradually High growth of energy demand, leading to higher prices at the end of scenario period. Industrial demand for energy reaches all time peak Electricity prices increasing sharply, leading to energy poverty Russia becomes largest supplier of gas to EU. Middle East predominant in oil supply. Azerbaijan contribution to gas increases. Electricity infrastructure for unified EU-25 grid is put in place. Creation of common European power trading hub. Gas pipelines (Nabucco & South Stream are achieved, North-South gas corridors) are developed. Adriatic, Aegean, Black, and Baltic seas are linked. Strategies to link into Central Asia reserves. EU as a whole remains heavily dependent on Russian gas supplies. This dependence is expected to last for few more decades especially in light of the current move away from nuclear (Germany) 	 Lack of opening new areas for E&P leading to tight supplies High infrastructure costs for early integration of renewable energy sources higher oil and energy prices at the beginning of scenario period, but lower, more stable prices after quicker transition to renewable energy sources Oil price is tightly regulated Security of supply and climate change concerns push drive to reduce dependence from fossil fuels Clean coal and CCS socially unacceptable in EU and US but becomes a must for developing world Electricity prices increasing sharply, leading to energy poverty and government subsidies for lower incomes Domestic fossil fuel reserves are developed. Energy supply is wielded as a trump card by producer countries. Poland and other developing EU nations concentrate on developing fossil fuel reserves, along with unconventional sources. Gas pipeline development moves towards regionalisation instead of EU-wide level. Formation of regional energy/electricity trading blocs.
Liberalization, policy agreements	Liberalized energy markets and high competition for resources on a global basis Easy to reach international agreements on removing trade barriers No agreements on international energy policy due to competing interests. Energy market lacks of ability to reach international agreements and common set of	Limited competition and participation Policy agreements of "coalitions of the willing" to reduce greenhouse gas emissions and setting of (increasingly) international standards for carbon pricing Stronger role for international institutions to set policies
Policy initiatives	Policy initiatives aimed at setting framework conditions for market solutions to emerge Becomes predominantly focussed on drive to renewables.	Energy policy initiatives set by centralized government where regulations of energy sector reverts to national states Mainly focussed on providing cheap energy for domestic consumption.
International	Successful international coordination on free	International coordination of energy taxes
Energy Saving	Significant saving (higher prices/efficient markets) Credits are given to households for saving energy.	Progressing Large government focus on energy efficiency and energy saving programs Efficiency brands (Like Energy Star) become dominant in consumer minds Energy efficiency targets become compulsory for industry. Governments undertake energy efficiency targets.
Energy Consumption	 High economic growth yields high energy consumption Gas becomes the transition fuel. Oil link is still strong for transport (depending on battery storage technology breakthrough). In 2008, the OECD Europe transportation market is dominated by gasoline, diesel, and jet fuel. It consumed 102 mtoe (2.1 million barrels per day) gasoline and 199 mtoe (4.02 million barrels per day) diesel. Similarly, non-OECD Europe and Russia transportation markets are dominated by gasoline, diesel, and jet fuel. They consumed 56 	 High impact from energy efficiency and energy saving programs Global demand for energy is also lower because of lower growth and changes in lifestyle. Increasing use of coal and gas in power generation. Renewables may reach full scale as envisioned in 20-20-20 targets. CCS projects slowly accepted in some countries, but not across the whole of the EU

	mtoe (1.1 million barrels per day) gasoline and 31 mtoe (0.62 million barrels per day) diesel. • By 2050, all OECD Europe, Eastern Europe, and Russia are expected to remain almost at the current fuel consumption levels of 450 mtoe, 100 mtoe, and 80 mtoe respectively.	
	Significant gains in fuel efficiency.	
Transport Intermodal	 Individual transport solutions prevail Solutions are more short term and lack wide perspectives Roll out of hybrid buses in other parts of Europe. Large emphasis on improved consumption for ICEs New car models with reduced weight and very low fuel consumption levels, 3l to 1l engines seen as the best way forward to reduce emissions from transport 2008 modal split: Road – 45.9%, Rail – 10.8%, Inland waterways – 3.6%, Pipelines – 3%, Sea – 36.6%, Air – 0.1% 	 Stronger emphasis on public transport Solutions are long term with a wide perspectives Increasing share of hybrid. Large scale electrification of public transport in NW Europe.
Air Traffic/Freight	 High growth of air traffic and freight sector Increase is moderate compared to Asian demand. Focus on decarbonising air travel viause of different fuels and technologies. Freight (tkm) level dropped off sharply in 2007 due to recession. Recovery in progress, yet to reach pre-2007 levels. Annual growth rate (2000-2008) in freight transport has been 2%. 	Less growth due to lower economic growth and the emergence of long distance high speed train systems in some EU countries
ICEs	High efficiency ICEs In 2005, diesel ICEs constitutes about 30% of OECD's LDV stocks (still gaining popularity). In 2005, cars stocks stood at 228 million in OECD Europe, 18 millions in east Europe and 29 millions in Russia. In 2005, new car sales 16 millions in OECD Europe, 1.4 million in east Europe and 2 millions in Russia. In 2005, about 701,000 used cars were shipped from Western Europe to Eastern Europe while about 347,000 cars were shipped from Japan to Former USSR. All new and old sales and existing stocks are dominated by conventional ICEs. The ICEs will remain dominant.	High efficiency ICEs ICEs continue to dominate.
Hybrids	 More hybrids In 2010, Europe had sales of only 110,000 hybrid cars. IEA forecasts that there will be about 15-20 million Hybrids by 2020 and about 80 million by 2040. 	moderate hybrids share growth
EVs	Batteries still expensive. With time, R&D will drive battery prices down competitive market facilitate new business models for battery replacement Oil still a necessity for most transport demand, even in 2050. Innovation centres in the Eastern markets and mega-cities drive the introduction of large numbers of EVs due to air quality concerns in mega cities. In the longer term, low cost EVs penetrate western markets. Small scale rollout of electricity transport in Germany and Switzerland. Reaches medium scale. Highly dependent on grids reaching dynamic flexibility and availability of charging infrastructure. ICEs may still dominate if performance of EVs disappoint	Earlier penetration of EVs and more use of electricity in public transport fleets (government directed). Efficiency of electric vehicles transforms energy demand and landscape. However, impact really visible after 2025. By 2050, EV expected to be 40% of the LDVs demand share (extreme case as in IEA's 450 level). This is subject to significant improvement to the grid systems. Fossil fuels reduced to cover 30% of LDVs transport energy demand in 2050. Remaining 30% is provided by Biofuels and FCs. Lower OECD transport emission (assuming CCS for power generation) in the long run. Main emerging economies avoid mistakes of developed world, leapfrogging technologies. Reaches medium scale. Highly dependent on grids reaching dynamic flexibility and availability of

	Largest market expected to be Germany having 25% of EU EV market, France will have 20%, while the UK & Italy will have 15%.	 EV penetration only in pockets – Germany, Sweden, Switzerland. Roll out of test fleets in select cities on a limited scale. EVs a phenomenon of upper middle class but does not reach the majority of populations until 2025 due to high costs
CNGs	More CNGs if gas reserves available as E&P accessible by IOCs Small	CNGs significantly in transport early on by local governments with access to domestic gas reserves.
FCs	FCs small breakthrough as they are still	Fuel cells adopted to reduce dependency on
Biofuels	 expensive Food crisis depresses global biofuels growth Strong regional hubs in both North and South America Gene technology used to grow energy crops (except EU). 2nd & 3rd generations are still expensive EU biofuels production in 2009 was 178 kb/d (about 17% of the global), mostly biodiesel (110,000 b/d and bioethanol 46,000 b/d). IEA expects OECD Europe biofuels consumption to be 0.97 million b/d (in the optimistic 450 Scenario) and non-OECD EU to be 0.11 million b/d. EU RE Directive 2009/28/EC requires GHG savings of at least 35% from end of 2010 – currently, emissions savings are well below this. EU support for biofuels in 2009 was US\$ 7.9 billion; largest share was biodiesel in Germany. 	 foreign oil Increasing contribution of first generation biofuels to fuel mix Larger impact on food prices Gene modifications of crops still not accepted in EU. Large contribution of second (and 3rd?) generation biofuels in the long term
Urban Planning	Good economies will invite better planning and problem solving. Not much change in NW Europe. Eastern Europe and SE Europe experiences increasing urbanisation. Land use may feature greenhouse plantation farming to maintain food security in face of increasing food consumption in producer countries. Around 73% of Europe's (Russia/EU) population is urban Population density is about 119 persons/sq km for EU and about 9 persons/sq km for Russia.	Governments alone can poorly direct/coordinate urbanisation Problems worsen with tight government budgets and bad economies. Prospecting for unconventional receives a boost. Urbanisation grows especially in countries with low economic growth. EU agricultural subsidies continue.
High Speed rails	There could be problems with corridors and private sector funding. 23.9% of total EU-27 rail network is HSR, at 97.6 million passenger km or 6,178 km (EU) 12 HSR lines currently under construction. Russia is lagging behind.	Penetration of high speed rail networks at a larger scale, especially in second half of scenario period
Vehicles Ownerships	More vehicles ownerships In 2005, OECD Europe stands at a vehicle ownership level of 424 cars/1000 capita, Eastern Europe at 149/1000 capita and Russia at 134/1000 capita.	Less car ownerships & more reliance on public transport systems, car sharing and rentals.
Aviation, Shipping, Rails & Trucks	 High growth for both passenger travels and freight especially in eastern markets. Dominated by road (45.9% of tkm in 2008), followed by rail (10.8%), waterways (3.6%). In 2008, the value of EU sea trade (both Export & Import) was about EUR 1.4 trillion (air: EUR 576 billion, road: EUR 476 billion, rail: EUR 46.1 billion) Highest number of commercial freight vehicles in the world: 33.97 million (2008). Thru 2029, Boeing expects the air freight to increase by 4.4% a year while the passenger will increase by 5%. In the CIS, Boeing expects an air freight growth of 4.8% and a passenger growth of 5.7% a year. Boeing also expects that air fleet in Europe to increase from 4300 airplanes to 7460 planes by 	More moderate growth levels.

ĺ	2029. In CIS, it expects an increase from 1150 to
I	1300.

4- North America

Issue	1-Freeway	2-Tollway
	World with solutions where pure market forces	Regulated world where governments and
General	prevail	politicians decide to put common interests at
		forefront and intervene in markets
	Private sector leads	Public sector leads
Players	Global companies emerging as central players	Local Governments acting as central planners
	Entrepreneurs Consumers	NGOs Citizens
	 Consumers WTO makes progress competitive issues??? 	WTO shows increased emphasis on free flow of
	Free and expanding international trade in	green goods and services
	regard to trade & barriers removals.	Increased international cooperation on climate
	Globalized economy	change issues in the short to medium term.
	Global competition and occasional trade	Individual countries/regions preferring local
Trade	disputes	content and solutions
	High global trade imbalances	More fragmented and /differentiated global according
	Increasing trade with Asia – commodities, manufacturing	 economy More trade restrictions due to regional concerns
	Trade with EU is knowledge based – high-tech	Most dominant trading partner is EU
	industries	Trade with China remains at expected growth
	Trade with LAC is resource based	level
International	Less prominent international institutions	Stronger role for international and multilateral
Institutions	US institutions supersede international	institutions
	institutions	International institutions influence US policy
ED!	Increased level of FDI FDI autiliary to Asia and IAC	Same or less
FDI	FDI outflows to Asia and LAC Chinese investment in US grows further	 Increased national investments FDI flows decrease, including foreign aids
	Chinese investment in US grows further Technological innovation market driven	Governments picking technology winners (e.g.
	Emerging innovation centres attracting and	photovoltaic)
	competing for investment capital and human	Higher amount of technology transfer into
	resources	developing nations
	Original Equipment Manufacturers (OEM)	Multinational technology co-operation and
	develop transport solutions most wanted by	initiatives
	consumers	More state subsidies sponsor focused research
Technologies	Technologies are integrated into ITES (information technology enabled services)	programs into new transport technologies • R&D into renewables technology is funded by
	sector	 R&D into renewables technology is funded by government and international grants.
	Carbon mitigation technologies become popular	Consortiums fund research into breakthrough
	Lower growth in "clean energy" sectors, e.g.	technologies
	wind, solar, tidal	Attempts to bring new renewable technologies to
		scale, especially via international funding.
		Growth in "clean energy" technologies
Capital & Labour	Free flow of capital and labour	Restricted flow of capital & labour
	Manufacturing established in low cost centres & close to major markets	Manufacturing established in less optimal lesstions but with regional development and
	Close to major markets Outsourcing of manufacturing to Asian	factors in mind
Manufacturing	countries continues.	Rise in domestic manufacturing
centres		Overall manufacturing output falls due to higher
		costs of production
		Government subsidies increase for domestic
	Buth of the second	industries
	Patch work of improvements in many regions Investment flows into sectors where demand is	New infrastructure projects, mainly in renewable
	 Investment flows into sectors where demand is high 	energy and public transport, state funded Access to energy and public transport schemes in
	Oil pipeline infrastructure (from Canadian oil	Africa and developing Asia are being promoted by
	sands) and shale gas technologies increasing	international institutions (UNIDO)
	become targets of infrastructure investment.	Targeted investment in non-fossil fuel forms of
Infrastructure	High level of infrastructure.	energy – mostly wind, solar, and biofuels.
	Gas network is fully developed in US.	Associated investment costs in grid upgrades and divisional required infrastructure in beautiful
	 Efforts are on to link Canadian oil sands to US ports and refineries via pipelines. 	additional required infrastructure is heavily supported by governments.
	 Over the next 20 years, Boing expects the 	Overall investment levels are lower compared to
	number of passenger planes to increase from	Freeway Scenario
	6590 to 9000.	
Climate change	Commercially viable Innovative Green	Big focus and international efforts on climate
	technologies/practices flourish	change by governments in short, medium to long

	Remain high on the list for the current US govt.	terms.
Politics & competition for resources	Pure competition creates cost-efficient solutions Higher demand creates global competition for resources Full potential of domestic fossil-fuel reserves are developed Increasing oil and mineral flow from LAC to US Stable region. US increasingly characterised by bipartisan politics, which will lend an element of uncertainty to long term energy policies.	Less competition over energy resources Focus on regional supply and energy efficiency reduce competition for resources Oil sands and shale gas do not reach full maturity and are curtailed because of environmental impact concerns Continued reliance on oil imports, gas imports may also begin to creep up in the future
Regulation	Low government regulation (minimum regulated environment) Focus on increasing energy efficiency and boosting renewables contribution under Obama presidency. Canada continuing to develop oil sands with international players.	Relatively higher government regulation , but still much lower than in Europe and other parts of the worldery strong support for renewables technology at state level Framework support for renewables and climat change mitigation on national level
Competitive	Pure market forces Market seeks competitive cost solutions Favourable climate for open global competition	Same or less market influence Market distortions through government intervention
Privatization, liberalization, deregulation	Wave of privatization, liberalization & deregulation Environmental regulation in place, but not very strong Fully liberal markets.	Same level or less Energy and transport sector considered strategic in most countries Strong regulatory forces
Economic Volatility	High economic volatility inside and outside business cycles Potential super-cycles	More stable economic environment at lower growth levels in the short term. Long period of low growth, bordering on recession levels
Wealth	 High & increasing wealth in western world & successful new industrial (SE Asia & LAC). Africa still marginalized. Canadian wealth grows Unemployment is expected to fall over the next 5 years. Current US unemployment rate: 9.2% US and Canada together account for 40% of World GDP in 2010. World Real GDP (PPP) in 2010 was US\$ 37.2 trillion. US gross debt (annual) as a % of its GDP is expected to rise over next 2 years (now the net debt stands at 75% of its GDP). GDP per capita are \$45,989 for US, \$39,599 for Canada and \$8,143 for Mexico. World: \$8,599(current US\$, 2009 figures, World Bank) 	Wealth disparity is less obvious in industrial countries Africa improving due to technology transfer (e.g. Copenhagen accord) and multi-lateral programs (e.g. UNIDO access to energy program). Falling incomes in US Canadian wealth grows, but at lower levels that in Freeway scenario.
R&D	 Diverse R&D efforts Driven by both private and public sectors Mainly driven by private sector Innovation hub (especially USA). Lot of activity around developing new technologies, especially electric transport 	More focused R&D programmes driven mainly by public sector International research programs and technology "clearing houses" to facilitate technology transfer.
Carbon pricing	Efficient carbon price mechanisms Trading is only due to government support and policy Some form of carbon legislation (not very strong)	 Existing Clean Development Mechanisms (CDMs) may fail in EU-US and not take off in other markets Regional limits and penalties imposed by local governments. Set of regional agreements on climate change and introduction of carbon price mechanisms. International incentives for countries to join, through investment funding and technology transfer system. Carbon market is small Mandated carbon reduction/fuel efficiency targets Trading is due to international and national
	Cheaper but less wide-spread solutions	More expensive sustainability (as efficient prices

		implementation
Consumer behaviour & lifestyle	Consumer spending increases, savings drop Individual interests dominate Cheapest price and highest comfort dominate and differentiate products US per capita energy consumption in 2009 was 7 tons of oil equivalent, Canada per capita energy consumption in 2009 was 7.4 toe, World per capita energy consumption in 2008 was 1.8 toe. US energy consumption has been declining since 2000. CECD North America has the highest passenger travel per capita. Vehicle kilometres per licensed driver in US (2006): 23,779 km	Consumer spending decreases, saving increases Common interests at forefront Consumer power used to stimulate development of greener goods and services Social activism increases and forces producers and governments to put common interests at forefront Best public image and corporate responsibility differentiate in addition to price
Good Economic Situation-Top of Business cycle	 High but uneven distributed economic growth. Sufficient fund for new private investments. 	 Sufficient economic performance to fund government initiatives in energy. Overall economic growth is more moderate. Still distributed unevenly across regions.
Bad Economic Situation-Bottom of Business cycle	 Low & uneven distributed economic growth. Wide spread austerity packages reducing new investments and energy demand. Historically, the economic growth rates for US and North America were about 2.8% year. Thru 2035, the IEA expects US and north America GDP to grow at 2.2%. 	Still sufficient economic performance in developing countries (shielded such as China & Brazil). Much weaker in developed. Still distributed unevenly. Large public sector debt developing. Effect of down-cycle partially mitigated by lower energy demand and import bills due to energy efficiency gains.
Population	 In 2008, the North America population stood at around 447 billion (US is about 310 while Mexico is about 110). The current population growth is about 1.3% for Canada, 1% for US, and 0.9% for Mexico. Around 17% of the Canadian population is below 14 years old, us is about 20% while Mexico is about 29%. Mexico got only 6% of the population above 65 years while both Canada and the US, it is about 13%. Thru 2035, both the USA population and North America population are expected to grow at 0.7%per year. US Census Bureau projects US to be world's third most populous nation through 2050 behind India and China (US population in 2050 will be around 423 million). 	
Finance	 Private Financing capital available, abundant and easy to flow Loans for renewable energy projects will require political regulatory certainty Credit sources are available. 	 More Limited private financing capital mostly by local institutions Large public sector funding for infrastructure and "green" projects
Corruption	Could lessens in many regions Minimum	 Tops list in South Asia, Sub-Saharan Africa, transition economies.
Bureaucracy	Lessens in many regions Moderate. Increased focus on drawbacks of offshore drilling after Gulf of Mexico spill. Shale gas exploration also affected by EPA findings and state rulings.	Remains an issue everywhere. Projects will need to clear more regulatory hurdles than before – higher costs, longer times
Tax regulation	Taxes (as a market distortion) drops in many regions Taxes fall if Republican Taxes fall then rise if Democrat US Excise Taxes on Motor Fuels (2009): Gasoline: 18.4 cents/gallon, Diesel: 24.4 c/gallon, Gasohol: 18.4 c/gallon, CNG: 18.3 c/gallon, LNG: 24.3 c/gallon, LPG: 18.3 c/gallon In General, taxes remain high in OECD countries	 Constitutes a severe constraint on OECD and post socialist transition economies. New taxes needed to finance large public sector debt in Western economies Inability to fund basic government commitments eventually forces US government to revamp tax system and raise taxes against strong opposition of parts of US society

Subsidies	Subsidies (as another market distortion) removed in many regions. Remaining subsidies mainly in renewables. US Federal subsidies for energy have more than doubled since 1999. In 2007, govt. spending on energy subsidies was US\$ 16.6 billion (Renewables: \$4.8 bn, End use: \$2.8bn, Refined coal:\$ 2.3 bn, NG & Petroleum liquids: \$2.1bn, Nuclear: \$1.2bn, Electricity:\$ 1.2bn, Coal:\$ 0.9bn, Conservation:\$ 0.9bn) Canada spent CAD 1.4bn on oil and gas	Subsidies remain and increase for green goods and services.
	subsidies. Increase in subsidies between 1996- 2000 was 33%. Expenditure on oil sands from 1996-2002 was CAD 1.2bn. (Source: Pembina) Many countries open their upstream sectors	Lack of opening new areas for E&P leading to tight
Energy E&P	resulting in a surge of supply. Moderate oil prices in the short term. More security of supply and demand Fossil fuel dominance reducing only gradually High growth of energy demand, leading to higher prices at the end of scenario period. Industrial demand for energy reaches all time peak Electricity prices increasing sharply, leading to energy poverty US prospecting of shale gas plays and Canadian development of oil sands continue to surge ahead Reduced reliance on oil and gas imports Increasing WTI-Brent spread Deep water and Arctic oil E&P Shale plays continue to be developed in the US, with increasing focus on developing liquid plays. Canada is developing its oil sands to full potential.	supplies High infrastructure costs for early integration of renewable energy sources higher oil and energy prices at the beginning of scenario period, but lower, more stable prices after quicker transition to renewable energy sources Oil price is tightly regulated Security of supply and climate change concerns push drive to reduce dependence from fossil fuels Clean coal and CCS socially unacceptable in EU and US but becomes a must for developing world Electricity prices increasing sharply, leading to energy poverty and government subsidies for lower incomes Imports of oil and gas remain steady & could grow
Liberalization, policy agreements	 Liberalized energy markets and high competition for resources on a global basis Easy to reach international agreements on removing trade barriers No agreements on international energy policy due to competing interests. Energy market lacks of ability to reach international agreements and common set of basic rules 	 Limited competition and participation Policy agreements of "coalitions of the willing" to reduce greenhouse gas emissions and setting of (increasingly) international standards for carbon pricing Stronger role for international institutions to set policies International consensus on carbon mitigation, higher energy efficiency, and increased roll-out of green technologies is reached.
Policy initiatives	Policy initiatives aimed at setting framework conditions for market solutions to emerge	 Energy policy initiatives set by centralized government where regulations of energy sector reverts to national states
International cooperation	Successful international coordination on free market mechanisms	 International coordination of energy taxes progressing
Energy Saving	Significant saving (higher prices/efficient markets)	Large govt focus on energy efficiency and energy saving programs Efficiency brands (like Energy Star) become dominant in consumer minds
Energy Consumption	 High economic growth yields high energy consumption In 2008, North America transportation market is dominated by gasoline, diesel, and jet fuel. It consumed 448 mtoe (9 million barrels per day) gasoline and 169 mtoe (3.4million barrels per day) diesel. US consume 19.15 Mbpd of petroleum. Transport accounts for 69.7% of total petroleum use (13.3 million barrels per day, 58% gasoline and 21% diesel). The demand in North America expected to increase from 700 mtoe in 2005 to around 800 mtoe in 2050 Light trucks account for 31% of energy use, followed by cars & motorcycles at 28%, other 	 High impact from energy efficiency and energy saving programs Global demand for energy is also lower because of lower growth and changes in lifestyle. Increase in energy consumption, but will be lower than Freeway scenario. Energy monitoring technology will become popular

	trucks 16%, aircraft 9%, boats & ships 5%, trains	
	& buses 3%, military 3%, pipelines 2%, and lubricants 1%.	
	Individual transport solutions	Stronger emphasis on public transport
	Solutions are more short term and lack wide perspectives US has largest freight transportation system	Solutions are long term with a wide perspectives
Transport Intermodal	worldwide. • US freight exports doubled from US\$ 682 bn to	
	US\$ 1.3 trillion from 1998-2008.	
	 However, since 2001 US share of world GDP and merchandise has declined. 	
	Intermodal rail traffic in the US has significantly	
	increased over past 2 decades.	
	High growth of air traffic and freight sector	Less growth due to lower economic growth
	• 45% of goods by value are handled by water in	
	the US, 25% by air, and 24% by land (truck, rail,	
Air Traffic/Freight	pipeline).2008 US receipts for freight transportation were	
7 1	\$22 billion, double 1998 figures. Payment for	
	freight services were \$45 billion.	
	Over the next 20 years, Boeing expects passenger travel to increase by 3.4% a year and	
	freight by 5% a year.	
	High efficiency ICEs	High efficiency ICEs
	 Remain dominant ICE and e-transport technologies grow side by 	
	side – latter is heavily dependent on market	
	demand	
	Remain the dominant transport technology in the region. US government has mandated	
	higher energy efficiency figures. US Fuel	
ICEs	economy figures stand at 22.5 mpg for cars and 18 mpg for Light trucks).	
ICLS	 In 2005, LDV stock was at 211 million in US, 17 	
	millions in Canada and 15 millions in Mexico.	
	 In 2005, sales were 14.7 million in US, 1.3 millions in Canada, and 1.3 in Mexico. 	
	In 2005, 473,000 used cars went from US to	
	Mexico and 186,000 from US to Canada. Within	
	 the US, there was 665,000 used cars sold. Sales of both new and old cars, in addition to 	
	the existing stock are all dominated by ICEs	
	More hybrids Remain popular, although market share remains	 moderate hybrids share growth Market share of hybrids will remain high (if EVs
	stagnant	underperform)
	US Federal government acquisition of hybrids is	
	growing yearly but still at a very low level (4853 vehicles in 2010).	
Hybrids	 Demand and market share for hybrids are rising 	
Hybrius	but still low (290,000 units sold in 2010, total	
	hybrid fleet is reaching 2 million (around 1-2% of the total stock), mostly Toyota Prius followed	
	by Honda Civic).	
	 IEA forecasts that there will be about 15-20 million Hybrids by 2020 and about 80 million by 	
	2040.	
	Batteries still expensive.	Earlier penetration of EVs and more use of
	With time, R&D will drive battery prices down competitive market facilitate new business	electricity in public transport fleets (government directed).
	models for battery replacement	Efficiency of electric vehicles transforms energy
	Oil still a necessity for most transport demand, Out in 2000.	demand and landscape. However, impact really
	even in 2050.Innovation centres in the Eastern markets and	visible after 2025. By 2050, EV expected to be 40% of the LDVs demand share (extreme case as in
EVs	mega-cities drive the introduction of large	IEA's 450 level). This is subject to significant
	numbers of EVs due to air quality concerns in	improvement to the grid systems. • Fossil fuels reduced to cover 30% of LDVs
	mega cities. In the longer term, low cost EVs penetrate western markets.	transport energy demand in 2050. Remaining 30%
	Small market share – personal, intra-city	is provided by Biofuels and FCs.
	transport only	 Lower OECD transport emission (assuming CCS for power generation) in the long run.
		Main emerging economies avoid mistakes of

	EV adoption is expected in urban areas, where distance travelled is within the vehicle range. US is expected to be second largest EV market after	developed world, leapfrogging technologies.
	Asia. More CNGs if gas reserves available as E&P	CNGs significantly in transport early on by local
CNGs	 accessible by IOCs Increasingly popular due to low fuel cost – increasing share in heavy road transport Move towards developing GNG engines for High DVs and Medium DVs. Still at low levels and potential. 	governments with access to domestic gas reserves.
FCs	FCs small breakthrough as they are still expensive Dependent on technological breakthrough Small scale test projects In development stages. IEA estimates likelihood of FCVs emerging as future low carbon option is less than switch to EV.	Fuel cells adopted to reduce dependency on foreign oil
Biofuels	Food crisis depresses global biofuels growth Strong regional hubs in both North and South America Gene technology used to grow energy crops (except EU). 2nd & 3rd generations are still expensive Unlikely to grow without government subsidies. In 2009, the US production of biofuels was about 45% of the global (mostly bioethanol from maize). Production was about 0.585 million b/d bioethanol and about 44,000 b/d biodiesel. IEA expects US to account for 38% of global biofuels market in 2035. Avg. annual growth is expected to be 5%. US targets 136 billion litres of biofuels by 2022 (1.162 million barrel per day). Current legislation allows for E10 blending, farmers lobby is keen on increasing it to E15. US biofuels consumption in 2009 was 0.7 million b/d, world's highest, ahead of Brazil which consumed 0.31 million b/d. IEA estimates 2009 biofuels support to be US \$8.1 billion.	 Increasing contribution of first generation biofuels to fuel mix Larger impact on food prices Gene modifications of crops still not accepted in EU. Large contribution of second (and 3rd?) generation biofuels in the long term Continues to grow under government subsidies & fuel blending regulations.
Urban Planning	 Good economies will invite better planning and problem solving. Congestion in cities will drive private solutions to intra-city transport, e.g. rise in car sharing, innovating car ownership schemes, etc. Second highest urban land area worldwide after Asia. Second lowest urban population density after Oceania. Has a high urbanization rate. About 82% of US population lives in urban areas, Mexico is about 77% and Canada about 81%. North American cities are more spread out and consequently urban consumption of fuel is the highest in the world. Around 80% of urban transport is via individual motorized transport. Automobile usage is more than 10,000km/person/year 	Governments alone can poorly direct/coordinate urbanisation. Problems worsen with tight government budgets and bad economies. Local governments will pass regulations limiting number of cars and increasing certain modes of intra-city transport.
High Speed rails	There could be problems with corridors and private sector funding. Private sector investment available, however, dependent on resolution of political uncertainty. Scale reached will be more than in Tollway scenario. Current US administration seeks to provide high speed rail access to 80% of Americans within next 25 years. \$10 billion grant funding available. So far, 59 projects have been allocated 6 billion. Currently, US has 362 km of HSR, with 900 km being planned.	Penetration of high speed rail networks at a larger scale, especially in second half of scenario period Funding for nation-wide plan may be a problem as it comes with increased govt. regulation.

Vehicles Ownerships	More vehicles ownerships In 2005, the vehicle ownership stood at 710 vehicles/1000 population for US (Avg. annual growth rate: 1.6%), 535 for Canada (Avg. annual growth rate: 1.6%) and 142 for Mexico (Avg. annual growth rate: 2.8%). (Source: Dargay, 2007).	Less car ownerships & more reliance on public transport systems, car sharing and rentals.
Aviation, Shipping, Rails & Trucks	 High growth for both passenger travels and freight especially in eastern markets. Demand in North America is for diesel locomotives (approx 1000 locos sold per year), since the rail system is used for heavy haulage and is mostly single track with few crossing points and intersections. North America has the largest aircraft fleet size – 6,590 (2009). 7,200 new aircraft are due to be supplied to region, and by 2029, the region is expected to have 9,000 aircraft (around 25% of global fleet in 2029). US has highest trucking haulage rates globally. Avg. fuel efficiency per truck is 20-25 km/litre. US is ranked 6th in controlled fleet by deadweight tonnage with 1,865 vessels. IMO expects shipping activities to increase by 150-300% from 2007-2050. 	More moderate growth levels.

5- LAC

Issue	1-Freeway	2-Tollway
General	World with solutions where pure market forces prevail	 Regulated world where governments and politicians decide to put common interests at forefront and intervene in markets
Players	 Private sector leads Global companies emerging as central players Entrepreneurs Consumers 	 Public sector leads Local Governments acting as central planners NGOs Citizens
Trade	 WTO makes progress competitive issues??? Free and expanding international trade in regard to trade & barriers removals. Globalized economy Global competition and occasional trade disputes High global trade imbalances Trade with US increases Chinese investment in LAC increases Joint ventures between Brazil, Argentina, Chile, and developing Asian countries increases Regional trade groups become powerful 	WTO shows increased emphasis on free flow of green goods and services Increased international cooperation on climate change issues in the short to medium term. Individual countries/regions preferring local content and solutions More fragmented and /differentiated global economy More trade restrictions due to regional concerns
International Institutions	Less prominent international institutions	Stronger role for international and multilateral institutions
FDI	Increased level of FDI US and China lead investors IOCs invest in Brazil's offshore oil deposits Mining firms continue to invest in minerals exploration Funding from international institutions increases in line with FDI – they do not influence regional politics	Same or less Increased national investments Funding levels from international institutions are more than Freeway scenario – institutions influence regional politics
Technologies	Technological innovation market driven Emerging innovation centres attracting and competing for investment capital and human resources Original Equipment Manufacturers (OEM) develop transport solutions most wanted by consumers MNCs transfer technology to domestic firms in order to lower costs of production	Governments picking technology winners (e.g. photovoltaic) Higher amount of technology transfer into developing nations Multinational technology co-operation and initiatives More state subsidies sponsor focused research programs into new transport technologies
Capital & Labour	Free flow of capital & labour	Restricted flow of capital & labour
Manufacturing centres	Manufacturing established in low cost centres & close to major markets Flow of foreign goods (esp. Chinese) increases	Manufacturing established in less optimal locations but with regional development and factors in mind

	in domestic markets. Improvements in domestic manufacturing	Brazil and Argentina emerge as regional manufacturing centres
Infrastructure	centres – effect of competition. Patch work of improvements in many regions Large-scale investments made in infrastructure in natural resource rich areas – roads, ports, heavy industry, electricity & water supply	New infrastructure projects, mainly in renewable energy and public transport, state funded Access to energy and public transport schemes in poorer parts of LA are being promoted by international institutions (UNIDO) Government undertakes most of the investment, which is localised (upgrade urban infrastructure, rural energy access) – scale of development is not comparable to Freeway scenario. Regional spend of infrastructure is around 2% of GDP per year. Will need to spend about 4-6% per year to sustain growth. Brazil and Chile have invested heavily in developing their fossil and mineral resources. Main infrastructure spender in the region is
Climate change	Commercially viable Innovative Green technologies/practices flourish Not a priority unless part of official government policy	Big focus and international efforts on climate change by governments in short, medium to long terms. Energy access and rural development more of a priority. Climate change policies implemented only by LAC governments only if there is international and regional consensus Brazil takes a leading role in Biofuels and continues to increase development of agricultural areas, despite ecological concerns about adverse impacts Secondary to energy access and rural development issues.
Politics & competition for resources	Pure competition creates cost-efficient solutions Higher demand creates global competition for resources Fossil-fuel and mineral resources are fully exploited Attempts by regional trade bodies to enforce regulations on foreign trade in order to capture higher returns	Less competition over energy resources Focus on regional supply and energy efficiency reduce competition for resources Governments regulate foreign activity in resource sector Region has undergone political turmoil in the past. Brazil has undergone a presidency change and is stable. Venezuela continues to face uncertainty under Chavez, although his health is failing. Overall political stability in the region ranges is medium to volatile.
Regulation	Low government regulation (minimum regulated environment)	 High government regulation (fully regulated environment) Most energy companies are government owned and run, or at least the government is the majority shareholder.
Competitive	 Pure market forces Market seeks competitive cost solutions Favourable climate for open global competition 	Same or less market influence Market distortions through government intervention
Privatization, liberalization, deregulation	Wave of privatization, liberalization & deregulation	Same level or less Energy and transport sector considered strategic in most countries Energy (upstream) and utilities are still part of public sector Region began to liberalize its trade practices between 1980 and 1990. Active trading within the region; ALADI, CARICOM, Mercosur, etc.
Economic Volatility	High economic volatility Potential super-cycles Argentina experienced recession from 1999-2002, economy still recovering, therefore more susceptible to economic shocks. Brazil – robust economy, embarked on growth trajectory, more resistant to economic volatility. Region will weather short term economic fluctuations, but will be affected by longer,	More stable economic environment at lower growth levels in the short term. True growth potential of LAC economies are not reached due to non-liberal policies. This may shield countries from economic contagion.

	harsher dips.	
Wealth	High & increasing wealth in western world & successful new industrial (SE Asia & LAC). Africa still marginalized. Investment in core industries reduces unemployment and raises wages. Social divide increases and leads to political volatility and unrest	Wealth disparity is less obvious in industrial countries Some poorer LAC countries improving due to technology transfer (e.g. Copenhagen accord) and multi-lateral programs (e.g. UNIDO access to energy program). GDP per capita for LAC is about \$7260 (about \$8230 for Brazil)
R&D	Diverse R&D efforts Driven by both private and public sectors R&D investment correspondent with level of education and literacy - impact will be felt in latter half of scenario.	More focused R&D programmes driven mainly by public sector International research programs and technology "clearing houses" to facilitate technology transfer. State & state enterprises sponsored R&D programmes increase. Low. Dependent on technology transfer. Brazil starts to take a role on par with Western companies in the Biofuels sector where a large number of international co-operation agreements are signed
Carbon pricing	Efficient carbon price mechanisms Carbon price market in LAC dependent on growth and status of global carbon market. Regional market for carbon possible only with government support.	Existing Clean Development Mechanisms (CDMs) may fail in EU-US and not take off in other markets Regional limits and penalties imposed by local governments. Set of regional agreements on climate change and introduction of carbon price mechanisms. International incentives for countries to join, through investment funding and technology transfer system. Regional government align with international consensus on carbon markets. State-funded mechanisms are put in place to encourage carbon trading.
Sustainability	Cheaper but less wide-spread solutions	 More expensive sustainability (as efficient prices are not driving players actions) but faster implementation
Consumer behaviour & lifestyle	Consumer spending increases, savings drop Individual interests dominate Cheapest price and highest comfort dominate and differentiate products Demand for consumer goods, telecom, and IT services will increase, related energy consumption will rise.	 Consumer spending decreases, saving increases Common interests at forefront Consumer power used to stimulate development of greener goods and services Social activism increases and forces producers and governments to put common interests at forefront Best public image and corporate responsibility differentiate in addition to price Region's average individual consumption per capita is above world average. Range: Mexico is three times world average while Bolivia is less than 50% of world avg. Chile, Mexico, Argentina, Uruguay have consumption levels above world average.
Good Economic Situation-Top of Business cycle	High but uneven distributed economic growth. Sufficient fund for new private investments.	Sufficient economic performance to fund government initiatives in energy. Overall economic growth is more moderate. Still distributed unevenly across regions. IMF expects growth in the region to be 4.75% in 2011 and 4.25% in 2012. Thru 2035, the GDP growth for LAC is about 3% a year (about 3.3% for Brazil) Growth will be commodity based and driven to be demand from China.
	Low & uneven distributed economic growth. Wide spread austerity packages reducing new	Still sufficient economic performance in developing countries (shielded such as China &
Bad Economic Situation-Bottom of Business cycle	investments and energy demand.	Brazil). Much weaker in developed. Still distributed unevenly. Large public sector debt developing. Effect of down-cycle partially mitigated by lower energy demand and import bills due to energy efficiency gains.

Finance	 Private Financing capital available, abundant and easy to flow Could lessens in many regions Corruption remains high in first half, but falls in second half. 	 (42% in Brazil, 194 millions). The growth was about 1.1% a year (0.9% for Brazil). About 28% of the total population is under 14 years (26% in Brazil). Population growth rates of countries in the region have been decreasing. Thru 2035, LAC is expected to grow by 0.8% a year (Brazil at 0.5%) More Limited private financing capital mostly by local institutions Large public sector and international funding for infrastructure and "green" projects Funding is quite limited. Funding for infrastructure projects from international organisations like World Bank, IFC, etc. Extensive Chinese funding for infrastructure projects in energy & commodities, around US\$ 4bn/year. Tops list in South Asia, Sub-Saharan Africa, transition economies. Continues to remain high. High level of corruption according to latest Transparency International survey
Bureaucracy	 Lessens in many regions Remains high till latter half, but does not 	Remains an issue everywhere.Remains high.
Tax regulation	impediment private sector investment. Taxes (as a market distortion) drops in many regions	 High level of bureaucracy Constitutes a severe constraint on OECD and post socialist transition economies. New taxes needed to finance large public sector debt in Western economies About average (much less than OECD)
Subsidies	Subsidies (as another market distortion) removed in many regions. Remaining subsidies mainly in renewables.	 Subsidies remain and increase for green goods and services. Biofuels continue to be subsidised. Venezuela has world's 7th highest fossil fuel consumption subsidy (mostly for oil). Total subsidy as share of GDP is less than5%. Oil subsides are around 12 billion dollars (2009). Mexico also has fuel subsidies, but very low in
Energy E&P	 Many countries open their upstream sectors resulting in a surge of supply. Moderate oil prices in the short term. More security of supply and demand Fossil fuel dominance reducing only gradually High growth of energy demand, leading to higher prices at the end of scenario period. Industrial demand for energy reaches all-time peak Electricity prices increasing sharply, leading to energy poverty Sub-salt oil deposits become one of the core drivers of growth in Brazilian economy. Bolivian gas deposits are optimally exploited. 	 Lack of opening new areas for E&P leading to tight supplies High infrastructure costs for early integration of renewable energy sources higher oil and energy prices at the beginning of scenario period, but lower, more stable prices after quicker transition to renewable energy sources Oil price is tightly regulated Security of supply and climate change concerns push drive to reduce dependence from fossil fuels Clean coal and CCS socially unacceptable in EU and US but becomes a must for developing world Electricity prices increasing sharply, leading to energy poverty and government subsidies for lower incomes Sub-salt reserves are not fully exploited. Some LAC countries continue to be dependent on oil imports. Brazil has embarked on developing its sub-salt oil reserves The ultra-deep water drilling has changed the oil picture Development of Venezuela's reserves has slowed during the Chavez regime. Region also has significant reserves of conventional gas in Venezuela, Bolivia, Argentina, Mexico, Trinidad & Tobago.
Liberalization, policy	Liberalized energy markets and high	Limited competition and participation

agreements	 competition for resources on a global basis Easy to reach international agreements on removing trade barriers No agreements on international energy policy due to competing interests. Energy market lacks of ability to reach international agreements and common set of basic rules Markets are liberalized. Move towards creation of a common LAC market. Liberal policies allow inflow of FDI and setting up of industry Underperforming state energy companies are either privatised or made minority partners in ventures with international firms. 	 Policy agreements of "coalitions of the willing" to reduce greenhouse gas emissions and setting of (increasingly) international standards for carbon pricing Stronger role for international institutions to set policies Move towards liberalisation is much slower.
Policy initiatives	Policy initiatives aimed at setting framework conditions for market solutions to emerge	Energy policy initiatives set by centralized government where regulations of energy sector reverts to national states Protectionism continues.
International cooperation	Successful international coordination on free market mechanisms International agreement on clean energy mechanisms may not occur due to imposition of higher costs of production.	International coordination of energy taxes progressing
Energy Saving	Significant saving (higher prices/efficient markets)	 Large government focus on energy efficiency and energy saving programs Efficiency brands (Like Energy Star) become dominant in consumer minds
Energy Consumption	High economic growth yields high energy consumption	 High impact from energy efficiency and energy saving programs Global demand for energy is also lower because of lower growth and changes in lifestyle. LAC is heavily dependent on conventional gasoline/diesel/jet fuel. LAC is expected to be dependent on conventional gasoline/diesel/jet fuel thru 2050. Thru 2050, LAC consumption is expected to double from 150 mtoes in 2005 to around 300 mtoe in 2050. In 2008, LAC consumed about 47 mtoe (about 939,000 b/d) gasoline and 62 mtoe (about 1.236 million b/d) diesels.
Transport Intermodal	Individual transport solutions Solutions are more short term and lack wide perspectives	 Stronger emphasis on public transport Solutions are long term with a wide perspectives LAC is considered a leader in bus Rapid Transit systems (with the first system in Curitiba) Other examples now include Bogota, Sao Paulo, Guayaquil, etc. Boeing projects number of aircraft in the region in 2029 to be 2,770, up from 1,130. Thru 2029, Boeing also expects air cargo traffic to increase by 6.9% a year and the passenger to increase by 6.7% a year.
Air Traffic/Freight	High growth of air traffic and freight sector	Less growth due to lower economic growth
ICEs	High efficiency ICEs	 High efficiency ICEs Predominant mode of transport. Engines in Brazil are FFVs (flex fuel vehicles). FFVs in Brazil account for 40% of car fleet. This is incentivized by the government policies towards biofuels.
Hybrids	 More hybrids Share of hybrids increases if government passes clean air regulation. 	 moderate hybrids share growth Minimum level and potential
EVs	 Batteries still expensive. With time, R&D will drive battery prices down competitive market facilitate new business models for battery replacement Oil still a necessity for most transport demand, even in 2050. Innovation centres in the Eastern markets and mega-cities drive the introduction of large 	 Earlier penetration of EVs and more use of electricity in public transport fleets (government directed). Efficiency of electric vehicles transforms energy demand and landscape. However, impact really visible after 2025. By 2050, EV expected to be 40% of the LDVs demand share (extreme case as in IEA's 450 level). This is subject to significant

	numbers of EVs due to air quality concerns in mega cities. In the longer term, low cost EVs penetrate western markets. •	 improvement to the grid systems. Fossil fuels reduced to cover 30% of LDVs transport energy demand in 2050. Remaining 30% is provided by Biofuels and FCs. Lower OECD transport emission (assuming CCS for power generation) in the long run. Main emerging economies avoid mistakes of developed world, leapfrogging technologies. Minimum level and potential
CNGs	More CNGs if gas reserves available as E&P accessible by IOCs	CNGs significantly in transport early on by local governments with access to domestic gas reserves. Minimum level and potential
FCs	FCs small breakthrough as they are still expensive	Fuel cells adopted to reduce dependency on foreign oil FC technology adoption only if local R&D succeeds and roll-out is economically viable on a small scale. Minimum level and potential
Biofuels	 Food crisis depresses global biofuels growth Strong regional hubs in both North and South America Gene technology used to grow energy crops (except EU). 2nd & 3rd generations are still expensive Continue to enjoy high growth – increasing encroachment on sugar sector 	 Increasing contribution of first generation biofuels to fuel mix Larger impact on food prices Gene modifications of crops still not accepted in EU. Large contribution of second (and 3rd?) generation biofuels in the long term Brazil is the second biofuel producer (after the US) with a production level of 27% of the global, mostly bioethanol from sugar cane (0.467 million b/d) and around 19,000 b/d biodiesel. Consumption of biofuels in the region in 2009 was 0.35 mb/d. Brazil consumption alone accounted for 0.31 mb/d in 2009. The balance was exported (mainly to EU and US). Current blend rate is 25% (flexible when pressure is placed on sugar market)
Urban Planning	Good economies will invite better planning and problem solving. Existing megacities will continue to experience high growth. Transformation of medium-size cities into large cities.	Governments alone can poorly direct/coordinate urbanisation Problems worsen with tight government budgets and bad economies. Megacities will grow more congested, no increase in number of large cities. High level of urbanization. 78% for LAC and 86% for Brazil. Region has 3 megacities in the top 25 megacities worldwide – Sao Paulo, Buenos Aires, and Rio de Janeiro. Of these, Rio is the fastest growing at 0.66% per year. Region has 13.7% of world urban population.
High Speed rails	There could be problems with corridors and private sector funding.	 Penetration of high speed rail networks at a larger scale, especially in second half of scenario period Operational inter-city HSR in Brazil by first half of scenario. Not yet under consideration. Currently, railways are undergoing privatization.
Vehicles Ownerships	More vehicles ownerships	 Less car ownerships & more reliance on public transport systems, car sharing and rentals. The average ownership rate is about 78 cars/1000 capita. Mexico: 165 vehicles/1000 population. Avg. annual growth rate: 4.9% Argentina: 186 vehicles/1000 pop. Avg. AGR: 3.1% Brazil: 121 vehicles/1000 pop. Avg. AGR: 4.6% Chile: 144 vehicles/1000 pop. Avg. AGR: 5.4%
Aviation, Shipping, Rails & Trucks	 High growth for both passenger travels and freight especially in eastern markets. High growth for trucks sector. 	 More moderate growth levels. Main mode of transport is road. Mostly medium trucks perform the haulage.

Appendix B: Model's Input Assumptions (Exogenous Parameters)

1-General

Base year: 2005

Time horizon: 2050

Time step: 5 year

Technology (Cars) life time: 15 years

Discount rate: 5%

Annual GDP growth rate (%)

Freeway	2010	2015	2020	2025	2030	2035	2040	2045
	-2015	-2020	-2025	-2030	-2035	-2040	-2045	-2050
Africa	4.1%	5.1%	5.9%	6.8%	7.6%	7.7%	7.5%	6.6%
Asia (exl. China, India)	7.3%	6.2%	5.5%	4.6%	4.1%	3.4%	3.1%	2.7%
Brazil	3.1%	4.2%	5.5%	5.8%	5.7%	5.0%	4.4%	3.6%
Canada	2.1%	1.8%	1.8%	1.6%	1.8%	1.6%	1.5%	1.4%
China	8.9%	7.4%	6.5%	5.1%	4.1%	3.4%	3.2%	2.6%
Non-OECD Europe	2.9%	2.9%	3.0%	3.2%	3.6%	3.6%	3.4%	3.2%
OECD Europe	2.1%	1.9%	1.8%	1.5%	1.5%	1.3%	1.2%	1.1%
FSU (exl. Russia)	5.9%	5.8%	5.6%	5.4%	5.4%	5.1%	4.7%	4.1%
India	6.5%	6.9%	7.3%	7.2%	7.1%	6.4%	5.9%	4.9%
LAM (exl. Brazil, Mexico)	5.3%	5.0%	4.8%	4.5%	4.5%	4.1%	3.9%	3.4%
MEA	2.9%	3.2%	3.9%	4.5%	5.0%	5.1%	5.0%	4.4%
Mexico	4.1%	4.6%	5.4%	5.3%	5.1%	4.5%	4.1%	3.5%
OECD Pacific+Asia	1.4%	1.1%	1.1%	0.9%	0.8%	0.7%	0.7%	0.7%
Russia	4.4%	4.7%	4.9%	5.1%	5.3%	4.9%	4.3%	3.7%
USA	1.8%	1.4%	1.3%	1.2%	1.6%	1.5%	1.5%	1.3%
World avg.	3.2%	3.1%	3.2%	3.1%	3.2%	3.0%	3.0%	2.7%

Tollway	2010	2015	2020	2025	2030	2035	2040	2045
	-2015	-2020	-2025	-2030	-2035	-2040	-2045	-2050
Africa	3.9%	4.8%	5.5%	6.4%	7.1%	7.2%	7.0%	6.3%
Asia (exl. China, India)	6.4%	5.5%	4.9%	4.1%	3.6%	3.1%	2.8%	2.4%
Brazil	2.8%	3.7%	4.7%	5.0%	4.8%	4.3%	3.7%	3.0%
Canada	1.9%	1.6%	1.6%	1.5%	1.6%	1.4%	1.3%	1.3%
China	7.5%	6.2%	5.4%	4.2%	3.4%	2.9%	2.8%	2.3%
Non-OECD Europe	2.2%	2.2%	2.2%	2.4%	2.7%	2.6%	2.5%	2.3%
OECD Europe	1.8%	1.6%	1.5%	1.3%	1.2%	1.1%	1.0%	0.9%
FSU (exl. Russia)	4.6%	4.6%	4.4%	4.2%	4.2%	3.9%	3.7%	3.2%
India	5.7%	6.0%	6.4%	6.3%	6.2%	5.6%	5.1%	4.3%
LAM (exl. Brazil, Mexico)	4.7%	4.5%	4.3%	4.1%	4.0%	3.7%	3.5%	3.0%
MEA	2.8%	3.1%	3.7%	4.2%	4.6%	4.7%	4.7%	4.1%
Mexico	3.7%	4.1%	4.8%	4.7%	4.5%	3.9%	3.5%	2.9%
OECD Pacific+Asia	1.2%	1.0%	0.9%	0.7%	0.7%	0.6%	0.6%	0.5%
Russia	3.3%	3.6%	3.7%	3.8%	4.0%	3.7%	3.2%	2.8%
USA	1.7%	1.3%	1.3%	1.2%	1.4%	1.4%	1.3%	1.2%
World avg.	2.8%	2.7%	2.7%	2.6%	2.7%	2.6%	2.5%	2.3%

Population (million)

Freeway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	1022	1139	1257	1373	1484	1591	1691	1785	1869
Asia (exl. China, India)	1201	1273	1337	1393	1438	1474	1502	1522	1536
Brazil	195	203	209	214	218	220	220	220	218
Canada	34	36	37	39	40	41	42	43	44
China	1349	1376	1393	1400	1397	1384	1357	1319	1269
Non-OECD Europe	60	59	58	58	56	55	54	53	51
OECD Europe	546	557	567	574	579	583	584	585	584
FSU (exl. Russia)	139	142	145	147	148	148	149	150	150
India	1225	1304	1374	1435	1485	1527	1558	1582	1597
LAM (exl. Brazil, Mexico)	282	298	313	326	338	347	354	359	363
MEA	216	236	256	273	288	302	314	324	333
Mexico	113	120	125	129	133	135	137	138	139
OECD Pacific+Asia	201	204	205	205	204	202	199	196	193
Russia	143	142	141	139	136	134	131	129	126
USA	310	324	337	350	362	373	384	394	403

World Total	7036	7413	7754	8052	8305	8513	8676	8796	8873
Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	1022	1145	1278	1417	1562	1713	1870	2030	2192
Asia (exl. China, India)	1201	1277	1349	1414	1472	1522	1563	1596	1619
Brazil	195	203	210	216	221	223	224	224	223
Canada	34	36	38	39	41	42	43	44	45
China	1349	1378	1396	1404	1402	1391	1371	1342	1306
Non-OECD Europe	60	59	59	58	58	57	56	55	53
OECD Europe	546	560	572	583	591	597	602	605	607
FSU (exl. Russia)	139	143	146	149	151	152	154	155	156
India	1225	1308	1387	1459	1524	1580	1627	1665	1692
LAM (exl. Brazil, Mexico)	282	299	316	332	346	358	369	378	384
MEA	216	237	259	280	299	318	337	354	370
Mexico	113	120	126	131	135	139	142	143	144
OECD Pacific+Asia	201	205	207	208	208	207	205	203	201
Russia	143	143	142	141	139	137	135	133	131
USA	310	326	341	355	369	382	395	407	419
Total	7036	7439	7826	8186	8516	8818	9091	9333	9542

2-LDV Sector Motorization rate (car/1000 capita)

Freeway									
	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	23	28	33	37	40	44	49	58	70
Asia (exl. China, India)	27	34	42	51	65	87	115	143	161
Brazil	125	151	166	187	221	266	322	361	378
Canada	575	603	629	653	675	704	733	763	793
China	15	24	35	51	74	101	136	174	193
Non-OECD Europe	201	228	263	292	328	365	402	439	475
OECD Europe	455	493	502	506	506	508	510	514	517
FSU (exl. Russia)	120	144	176	220	276	323	370	415	457
India	8	11	15	19	25	34	48	68	87
LAM (exl. Brazil, Mexico)	65	79	96	112	127	148	177	215	263
MEA	85	98	114	127	142	156	170	185	203
Mexico	173	206	228	264	312	375	452	518	552
OECD Pacific+Asia	430	463	483	495	501	515	530	550	572
Russia	222	263	316	372	440	507	574	641	712
USA	738	763	785	806	823	849	875	901	928
World avg.	115	126	135	145	157	174	194	217	235
Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	23	27	32	36	38	41	44	49	55
		21	-					49	
Asia (exl. China, India)	27	32	39	44	52	62	75	92	113
	27 125		-					-	113
Brazil Canada	125 575	32 147 591	39 159 606	44 173 623	52	62	75 257 670	92 296 686	113 329 701
Brazil Canada	125	32 147	39 159	44 173	52 196	62 224	75 257	92 296	113 329 701
Brazil Canada China	125 575	32 147 591	39 159 606	44 173 623	52 196 636	62 224 653	75 257 670	92 296 686	113 329 701
Brazil Canada China Non-OECD Europe	125 575 15	32 147 591 21	39 159 606 29	44 173 623 38	52 196 636 49	62 224 653 64	75 257 670 81	92 296 686 102	113 329 701 127 365
Brazil Canada China Non-OECD Europe OECD Europe	125 575 15 201	32 147 591 21 217	39 159 606 29 236	44 173 623 38 257	52 196 636 49 276	62 224 653 64 301	75 257 670 81 323	92 296 686 102 344	113 329 701 127 365
Brazil Canada China Non-OECD Europe OECD Europe FSU (exl. Russia)	125 575 15 201 455	32 147 591 21 217 477	39 159 606 29 236 489	44 173 623 38 257 493	52 196 636 49 276 496	62 224 653 64 301 496	75 257 670 81 323 496	92 296 686 102 344 497	113 329 701 127 365 498 310
Brazil Canada China Non-OECD Europe OECD Europe FSU (exl. Russia) India	125 575 15 201 455 120	32 147 591 21 217 477 134	39 159 606 29 236 489 151	44 173 623 38 257 493 173	52 196 636 49 276 496 200	62 224 653 64 301 496 233	75 257 670 81 323 496 261	92 296 686 102 344 497 287	113 329 701 127 365 498 310 55
Brazil Canada China Non-OECD Europe OECD Europe FSU (exl. Russia) India LAM (exl. Brazil, Mexico)	125 575 15 201 455 120 8	32 147 591 21 217 477 134	39 159 606 29 236 489 151	44 173 623 38 257 493 173	52 196 636 49 276 496 200 21	62 224 653 64 301 496 233 26	75 257 670 81 323 496 261 33	92 296 686 102 344 497 287 42	113 329 701 127 365 498 310 55 188
Brazil Canada China Non-OECD Europe OECD Europe FSU (exl. Russia) India LAM (exl. Brazil, Mexico) MEA	125 575 15 201 455 120 8 65	32 147 591 21 217 477 134 11	39 159 606 29 236 489 151 14	44 173 623 38 257 493 173 17	52 196 636 49 276 496 200 21 113	62 224 653 64 301 496 233 26 126	75 257 670 81 323 496 261 33 143	92 296 686 102 344 497 287 42 164	113 329 701 127 365 498 310 55 188 179
Brazil Canada China Non-OECD Europe OECD Europe FSU (exl. Russia) India LAM (exl. Brazil, Mexico) MEA Mexico	125 575 15 201 455 120 8 65 85	32 147 591 21 217 477 134 11 76 96	39 159 606 29 236 489 151 14 89 110	44 173 623 38 257 493 173 17 105 121	52 196 636 49 276 496 200 21 113 134	62 224 653 64 301 496 233 26 126 146	75 257 670 81 323 496 261 33 143 157	92 296 686 102 344 497 287 42 164 168	113 329 701 127 365 498 310 55 188 179 458
Asia (exl. China, India) Brazil Canada China Non-OECD Europe OECD Europe FSU (exl. Russia) India LAM (exl. Brazil, Mexico) MEA Mexico OECD Pacific+Asia Russia	125 575 15 201 455 120 8 65 85 173	32 147 591 21 217 477 134 11 76 96 201	39 159 606 29 236 489 151 14 89 110 215	44 173 623 38 257 493 173 17 105 121 241	52 196 636 49 276 496 200 21 113 134 272	62 224 653 64 301 496 233 26 126 146 311	75 257 670 81 323 496 261 33 143 157 357	92 296 686 102 344 497 287 42 164 168 411	113 329 701 127 365 498 310 55 188 179 458 510
Brazil Canada China Non-OECD Europe OECD Europe FSU (exl. Russia) India LAM (exl. Brazil, Mexico) MEA Mexico OECD Pacific+Asia	125 575 15 201 455 120 8 65 85 173 430	32 147 591 21 217 477 134 11 76 96 201 449	39 159 606 29 236 489 151 14 89 110 215 464	44 173 623 38 257 493 173 17 105 121 241 475	52 196 636 49 276 496 200 21 113 134 272 481	62 224 653 64 301 496 233 26 126 146 311 486	75 257 670 81 323 496 261 33 143 157 357 492	92 296 686 102 344 497 287 42 164 168 411 500	113 329 701 127 365 498

Share of LDV types (million in base year 2005)

Freeway & Tollway	Africa	Asia	Brazil	Canada	China	EEUR	FSU	India	LAM	MEA	Mexico	Pacific	Russia	USA	WEUR
Electric Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrogen Hybrid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Fuel Hybrid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Fuel ICEV	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Liquid Fuel Plug-in	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel Type Hybrid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gasoline Type Hybrid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Diesel Type ICEV	2	0	1	0	3	0	1	2	0	1	0	10	0	1	62
Gasoline Type ICEV	16	25	18	18	12	10	13	6	13	14	15	69	25	221	161
Total	18	25	20	19	14	11	14	7	15	15	15	79	25	222	223

LDV mileage (1000 v-km/y/car)

Freeway & Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	12	12	12	12	12	12	12	12	12
Asia (exl. China, India)	16	16	16	16	16	16	16	16	16
Brazil	16	16	16	16	16	16	16	16	16
Canada	17	17	17	17	17	17	17	17	17
China	15	15	15	15	15	15	15	15	15
Non-OECD Europe	12	12	12	12	12	12	12	12	12
OECD Europe	12	12	12	12	12	12	12	12	12
FSU (exl. Russia)	13	13	13	13	13	13	13	13	13
India	15	15	15	15	15	15	15	15	15
LAM (exl. Brazil, Mexico)	16	16	16	16	16	16	16	16	16
MEA	18	18	18	18	18	18	18	18	18
Mexico	11	11	11	11	11	11	11	11	11
OECD Pacific+Asia	12	12	12	12	12	12	12	12	12
Russia	13	13	13	13	13	13	13	13	13
USA	19	19	19	19	19	19	19	19	19

LDV transport demand (Billion v-km)

Freeway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	288	381	498	617	719	838	999	1244	1574
Asia (exl. China, India)	512	684	896	1147	1506	2045	2768	3492	3945
Brazil	390	490	555	642	770	935	1136	1270	1319
Canada	332	365	398	429	457	490	522	555	588
China	310	488	730	1061	1542	2105	2759	3433	3680
Non-OECD Europe	144	162	184	201	222	242	260	277	291
OECD Europe	2982	3296	3414	3486	3516	3552	3575	3603	3623
FSU (exl. Russia)	218	266	331	420	529	623	716	806	888
India	153	224	315	417	560	774	1117	1615	2089
LAM (exl. Brazil, Mexico)	293	376	483	583	683	821	1001	1237	1525
MEA	330	417	524	623	734	845	958	1079	1214
Mexico	215	272	313	375	455	559	681	786	840
OECD Pacific+Asia	1038	1131	1187	1215	1225	1245	1266	1294	1321
Russia	412	486	579	673	780	881	980	1074	1168
USA	4354	4694	5028	5355	5656	6018	6373	6739	7108
Total	11972	13732	15436	17246	19353	21973	25110	28503	31175

Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	288	373	484	612	720	842	991	1190	1452
Asia (exl. China, India)	512	650	833	1001	1227	1517	1882	2350	2921
Brazil	390	478	534	598	690	801	923	1063	1173
Canada	332	360	387	415	440	466	491	516	541
China	310	438	613	797	1037	1332	1668	2057	2494
Non-OECD Europe	144	155	167	180	191	205	216	225	233
OECD Europe	2982	3209	3356	3449	3514	3553	3584	3613	3632
FSU (exl. Russia)	218	249	287	334	392	460	522	579	628
India	153	211	292	371	475	614	798	1051	1387
LAM (exl. Brazil, Mexico)	293	362	449	555	623	725	844	990	1156
MEA	330	409	514	610	722	836	952	1072	1191
Mexico	215	265	299	348	405	476	555	648	724
OECD Pacific+Asia	1038	1103	1150	1183	1198	1204	1210	1218	1227
Russia	412	457	511	568	628	695	750	800	841
USA	4354	4656	4941	5244	5530	5863	6182	6490	6788
Total	11972	13376	14818	16263	17793	19589	21568	23862	26389

LDV efficiency (MJ/km)

The state of the s									
Freeway & Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
HEV	1.84	1.65	1.47	1.28	1.1	1.1	1.1	1.1	1.1
Diesel HEV	1.74	1.56	1.38	1.19	1.01	1.01	1.01	1.01	1.01
CNG HEV	1.67	1.52	1.37	1.23	1.08	1.08	1.08	1.08	1.08
H2 HEV	1.77	1.6	1.43	1.26	1.09	1.09	1.09	1.09	1.09
Plugin-HEV (electricity share)	0.39	0.38	0.37	0.37	0.36	0.36	0.36	0.36	0.36
Plugin-HEV (gasoline share)	0.73	0.66	0.58	0.51	0.43	0.43	0.43	0.43	0.43
BEV	0.71	0.68	0.65	0.65	0.65	0.65	0.65	0.65	0.65
HFCV	1	0.97	0.94	0.91	0.88	0.88	0.88	0.88	0.88
Gasoline advanced ICEV	2.27	2.2	2.14	2.07	2.01	2.01	2.01	2.01	2.01
Diesel advanced ICEV	2.11	2.03	1.96	1.83	1.72	1.72	1.72	1.72	1.72

LDV efficiency targets (gCO2/km)

	,	.a. 80 .u	1000-	,,					
Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
AFRICA	-	-	304.4	253.2	239.0	237.9	240.4	238.4	240.9
ASIA	-	263.0	253.0	237.1	213.9	182.9	152.3	128.4	113.1
BRAZIL	-	253.0	237.1	213.9	182.9	152.3	128.4	113.1	106.2
CANADA	-	266.1	222.3	194.4	182.4	160.7	131.8	112.5	102.8
CHINA	-	-	395.3	340.0	285.8	229.6	179.2	146.2	138.5
EEUR	-	253.0	237.1	213.9	182.9	152.3	128.4	113.1	106.2
WEUR	-	168.4	148.3	130.0	116.4	106.7	102.8	102.8	102.8
FSU	-	253.0	237.1	213.9	182.9	152.3	128.4	113.1	106.2
INDIA	-	263.0	253.0	237.1	213.9	182.9	152.3	128.4	113.1
LAM	-	253.0	237.1	213.9	182.9	152.3	128.4	113.1	106.2
MEA	-	263.0	253.0	237.1	213.9	182.9	152.3	128.4	113.1
MEXICO	-	253.0	237.1	213.9	182.9	152.3	128.4	113.1	106.2
PACIFIC	-	207.3	173.4	145.2	130.0	116.4	106.7	102.8	102.8
RUSSIA	-	253.0	237.1	213.9	182.9	152.3	128.4	113.1	106.2
USA	-	309.9	271.0	223.5	188.6	160.7	131.8	112.5	102.8
Freeway	2010	2015	2020	2025	2030	2035	2040	2045	2050
AFRICA	-	-	304.4	253.2	239.0	237.9	240.4	238.4	240.9
ASIA	-	263.0	253.0	237.1	213.9	185.4	161.8	144.3	132.3
BRAZIL	-	253.0	237.1	213.9	185.4	161.8	144.3	132.3	124.3
CANADA	-	266.1	222.3	194.4	184.3	166.6	143.4	128.0	120.3
CHINA	-	-	395.3	340.0	285.8	229.6	179.2	146.2	138.5
EEUR	-	253.0	237.1	213.9	185.4	161.8	144.3	132.3	124.3
WEUR	-	168.4	148.3	131.9	124.1	120.3	120.3	120.3	120.3
FSU	-	253.0	237.1	213.9	185.4	161.8	144.3	132.3	124.3
INDIA	-	263.0	253.0	237.1	213.9	185.4	161.8	144.3	132.3
LAM	-	253.0	237.1	213.9	185.4	161.8	144.3	132.3	124.3
MEA	-	263.0	253.0	237.1	213.9	185.4	161.8	144.3	132.3
MEXICO	-	253.0	237.1	213.9	185.4	161.8	144.3	132.3	124.3
111274100									

Share of short-range cars (% of v-km/y): 10% Flat

173.4

237.1

271.0

145.2

213.9

223.5

131.9

185.4

190.5

124.1

161.8

166.6

LDV size of batteries and FC (kWh and kW per car):

Battery EV = 48kWh, Plug-in-HEV = 8.2kWh, FC in HFCV = 40kW, EB in HFCV = 42kW, HEV = 28kW.

PACIFIC

RUSSIA

USA

Fixed O&M cost (\$2000/car)

About 2-2.5% of the LDV investments (following)

207.3

253.0

309.9

LDV investment cost (\$2000/car/yr), without Battery and Fuel Cell costs

Freeway & Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Gasoline ICEV	17956	17985	18013	18042	18071	18071	18071	18071	18071
Gasoline Adv. ICEV	18100	18275	18450	18625	18800	18800	18800	18800	18800
Gasoline HEV	19800	19800	19800	19800	19800	19800	19800	19800	19800
Diesel ICEV	19856	19885	19913	19942	19971	19971	19971	19971	19971
Diesel Adv. ICEV	20000	20000	20000	20000	20000	20000	20000	20000	20000
Diesel HEV	21000	21000	21000	21000	21000	21000	21000	21000	21000
CNG ICEV	19000	19200	19200	19200	19200	19200	19200	19200	19200
CNG HEV	20100	20100	20100	20100	20100	20100	20100	20100	20100
H2 HEV	21900	21900	21900	21900	21900	21900	21900	21900	21900
Plugin-HEV	20300	20300	20300	20300	20300	20300	20300	20300	20300
BEV	16900	16900	16900	16900	16900	16900	16900	16900	16900
HFCV	18200	18200	18200	18200	18200	18200	18200	18200	18200
Short-range-car Gasoline ICEV	13467	13488	13510	13532	13554	13554	13554	13554	13554
Short-range-car Adv. Gasoline ICEV	13575	13706	13838	13969	14100	14100	14100	14100	14100
Short-range-car HEV	14850	14850	14850	14850	14850	14850	14850	14850	14850
Short-range-car Plug-in HEV	15225	15225	15225	15225	15225	15225	15225	15225	15225
Short-range-car HFCV	12675	12675	12675	12675	12675	12675	12675	12675	12675
Short-range-car BEV	13650	13650	13650	13650	13650	13650	13650	13650	13650

120.3

144.3

143.4

120.3

132.3

128.0

120.3

124.3

120.3

Investment costs for battery and FC (\$2000/kW)

Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Battery Storage	288.48	214.42	140.36	121.11	101.86	100.93	100	100	100
Hydrogen Full Cell	250	231.03	212.06	180.04	148.02	126.475	104.93	94.53	84.13

Freeway									
Battery Storage	300	294.24	288.48	274.31	260.14	232.94	205.74	184.525	163.31
Hydrogen Full Cell	250	250	250	250	250	250	250	250	250

Investment cost adjustments (%)

Long-Range BEV 2010 2015 2020 2025 2030 2035 2040 2045 2050 2076	Tilvestillellt cost a	aujustiiic	1113 (70)							
AFRICA SIA SIA SIA SIA SIA SIA SIA	Tollway									
ASIA BRAZIL BRAZ										
BRAZIL 0 </th <th></th>										
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CHINA 0 <th></th> <th>-</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>-</th> <th></th> <th></th>		-						-		
EEUR										
WEUR										
INDIA	-									
INDIA							-0.18			
LAM			-	-	-	-		-	-	_
MEA 0										
MEXICO 0 </th <th></th> <th></th> <th>-</th> <th>-</th> <th></th> <th>-</th> <th>-</th> <th>-</th> <th>-</th> <th></th>			-	-		-	-	-	-	
PACIFIC -0.18						_				
RUSSIA 0 </th <th>MEXICO</th> <th>-</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th>	MEXICO	-	0	0	0	0	0	0	0	0
USA -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 2040 2045 2050 AFRICA 0 0 0 0 0 0 0 0 0 ASIA 0 0 0 0 0 0 0 0 0 CANADA -0.045 -0	PACIFIC		-0.18	-0.18	-0.18		-0.18	-0.18	-0.18	-0.18
Long-Range PHEV 2010 2015 2020 2025 2030 2035 2040 2045 2050					0	-	0	-	0	_
AFRĪCA 0 </th <th></th>										
ASIA 0 <th></th> <th>2010</th> <th>2015</th> <th>2020</th> <th>2025</th> <th>2030</th> <th>2035</th> <th>2040</th> <th>2045</th> <th>2050</th>		2010	2015	2020	2025	2030	2035	2040	2045	2050
BRAZIL 0 </th <th></th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th>		0	0	0	0	0	0	0	0	0
CANADA -0.045 -0.09 <th>_</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th>	_	0	0	0	0	0	0	0	0	0
CHINA 0 <th></th>										
EEUR -0.045 -0.09 -0.0675 -0.0675 -0.0675	CANADA	-0.045	-0.045	-0.045	-0.045	-0.045	-0.045	-0.045	-0.045	-0.045
WEUR -0.09 -0.0675 -0.0675 -0.0675 -0.0675 -0.0675 -0.0675 -0.0675 -0.0675 -0.0675 -0.0675 -0.0675 -0.0675 <t< th=""><th></th><th></th><th>0</th><th>0</th><th>0</th><th>0</th><th>0</th><th></th><th>0</th><th>0</th></t<>			0	0	0	0	0		0	0
FSU	EEUR	-0.045	-0.045	-0.045	-0.045	-0.045		-0.045	-0.045	-0.045
INDIA	WEUR	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09
LAM 0	FSU	0	0	0	0	0	0	0	0	0
MEA 0 0 0 0 0 0 0 0 MEXICO 0 0 0 0 0 0 0 0 PACIFIC -0.09 -0.0675 -0			0	0	0	0	0	0	0	0
MEXICO 0 <th>LAM</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th>	LAM	0	0	0	0	0	0	0	0	0
PACIFIC -0.09 -0.0675 -0		0	0	0	0	0	0	0	0	0
RUSSIA 0 0 0 0 0 0 0 0 0 USA -0.0675 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.						-	•		-	
USA -0.0675 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 <th>PACIFIC</th> <th>-0.09</th> <th>-0.09</th> <th>-0.09</th> <th>-0.09</th> <th>-0.09</th> <th>-0.09</th> <th>-0.09</th> <th>-0.09</th> <th>-0.09</th>	PACIFIC	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09
Long-Range HFCV 2010 2015 2020 2025 2030 2035 2040 2045 2050 AFRICA 0						-		-	-	-
AFRICA 0 <th>USA</th> <th>-0.0675</th> <th>-0.0675</th> <th>-0.0675</th> <th>-0.0675</th> <th>-0.0675</th> <th></th> <th></th> <th>-0.0675</th> <th>-0.0675</th>	USA	-0.0675	-0.0675	-0.0675	-0.0675	-0.0675			-0.0675	-0.0675
ASIA 0		2010	2015	2020	2025	2030	2035	2040	2045	2050
BRAZIL 0 0 0 0 0 0 0 0 CANADA -0.09										
CANADA -0.09 -0.08 -0.18 -0.18 -0.18 -0.18 -0.18 -0.18 -0.18 -0.18 -0.18 -0.18 <t< th=""><th>_</th><th></th><th></th><th></th><th>-</th><th>-</th><th>_</th><th>-</th><th>-</th><th>0</th></t<>	_				-	-	_	-	-	0
CHINA 0 0 0 0 0 0 0 0 0 EEUR -0.09 -0.08 -0.18 -0.18 -0.18 -0.18 -0.18 -0.18 -0.18 -0.10 0 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>										
EEUR -0.09 -0.08 -0.18 -0.18 -0.18 -0.18 -0.18 -0.18 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 -0.09 0		-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09
WEUR -0.18										
FSU 0 0 0 0 0 0 0 0 INDIA 0 0 0 0 0 0 0 0 0 LAM 0 0 0 0 0 0 0 0 0 MEA 0 0 0 0 0 0 0 0 0 MEXICO 0 0 0 0 0 0 0 0 0 PACIFIC -0.18		-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09
INDIA 0 0 0 0 0 0 0 0 LAM 0 0 0 0 0 0 0 0 0 MEA 0 0 0 0 0 0 0 0 0 MEXICO 0 0 0 0 0 0 0 0 0 PACIFIC -0.18									-0.18	
LAM 0 0 0 0 0 0 0 0 MEA 0 0 0 0 0 0 0 0 0 MEXICO 0 0 0 0 0 0 0 0 0 PACIFIC -0.18 -										0
MEA 0 0 0 0 0 0 0 0 MEXICO 0 0 0 0 0 0 0 0 0 PACIFIC -0.18										
MEXICO 0 <th></th> <th></th> <th>-</th> <th>-</th> <th>-</th> <th>-</th> <th>9</th> <th>-</th> <th>~</th> <th>-</th>			-	-	-	-	9	-	~	-
PACIFIC -0.18 <										
RUSSIA 0 0 0 0 0 0 0 0 0 0 USA -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135				-				~	-	
USA -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135 -0.135										
		-	~	-	~	~		~	~	-
Freeway : all = Zero		-0.135	-0.135	-0.135	-0.135	-0.135	-0.135	-0.135	-0.135	-0.135
	Freeway : all = Zero									

Assumed maximum technically feasible MeOH blend (% J) & EtOH blend (max %J)

Freeway & Tollway	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
MeOH in gasoline	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
EtOH in gasoline	10%	10%	40%	70%	100%	100%	100%	100%	100%	100%
Biodiesel and FT-diesel in diesel	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

3-Other Surface Transport Sector

Other Surface transport demand (PJ)

Other Surface transpe	, t aciii	4114 (13	<i></i>						
Freeway									
	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	1832	2027	2296	2655	3141	3786	4571	5493	6459
Asia (exl. China, India)	4453	5332	6213	7113	7978	8822	9609	10386	11103
Brazil	1193	1288	1429	1634	1886	2170	2458	2743	2999
Canada	749	790	825	862	897	937	976	1013	1049
China	5186	6439	7720	9054	10265	11348	12346	13376	14273
Non-OECD Europe	375	402	432	465	504	551	602	654	708
OECD Europe	7860	8288	8693	9085	9441	9793	10115	10430	10721
FSU (exl. Russia)	1813	2097	2421	2779	3174	3624	4108	4619	5114
India	1334	1565	1854	2217	2648	3153	3695	4269	4821
LAM (exl. Brazil, Mexico)	3613	4117	4660	5244	5865	6549	7252	7983	8693
MEA	4158	4467	4839	5328	5959	6742	7650	8657	9653
Mexico	1385	1534	1721	1967	2244	2547	2848	3154	3438
OECD Pacific+Asia	2852	2955	3040	3122	3189	3257	3317	3379	3437
Russia	793	883	992	1119	1269	1447	1635	1818	1992
USA	6885	7202	7454	7705	7943	8259	8584	8904	9202
Total	44481	49389	54590	60350	66401	72987	79765	86879	93662
Tollway									
Africa	1832	1998	2222	2512	2893	3384	3966	4633	5328
Asia (exl. China, India)	4453	5130	5791	6452	7076	7675	8225	8758	9238
Brazil	1193	1269	1377	1529	1708	1902	2091	2271	2430
Canada	749	782	811	841	869	900	929	958	985
China	5186	6117	7024	7925	8710	9394	10014	10650	11206
Non-OECD Europe	375	394	413	435	459	488	518	547	577
OECD Europe	7860	8184	8487	8776	9036	9290	9520	9742	9945
FSU (exl. Russia)	1813	2010	2225	2452	2692	2953	3224	3500	3759
India	1334	1514	1731	1994	2294	2633	2984	3342	3676
LAM (exl. Brazil, Mexico)	3613	4008	4427	4869	5330	5827	6325	6832	7313
MEA`	4158	4428	4749	5157	5667	6285	6986	7748	8494
Mexico	1385	1504	1648	1833	2033	2247	2452	2654	2834
OECD Pacific+Asia	2852	2932	2997	3058	3107	3156	3197	3239	3278
Russia	793	855	926	1005	1095	1197	1301	1398	1487
USA	6885	7148	7366	7580	7784	8038	8295	8547	8783
Total	44481	48272	52193	56418	60755	65368	70026	74819	79333

Share of fuelling options at base year 2005 (EJ)

	Africa	Asia	Brazil	Canada	China	EEUR	FSU	India	LAM	MEA	Mexico	Pacific	Russia	USA	WEUR
Other (Coal)	0.00	0.00	-	-	0.58	-	0.01	-	-	-	-	0.00	-	-	0.00
Gasoline	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diesel	1.60	4.19	0.97	0.71	3.59	0.28	1.43	0.89	2.91	3.46	1.17	2.99	0.58	6.87	7.80
Biomethanol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bioethanol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bio-Syngas	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-
CNG	0.05	-	0.06	0.00	-	0.00	0.00	0.03	0.13	0.00	-	0.01	-	0.01	0.00
Biodiesel	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	0.00		0.01	
Electricity	0.01	0.00	0.00	0.00	0.03	0.00	0.02	0.01	0.00	-	0.00	0.04	0.08	0.01	0.11
Hydrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bio-Jetfuel	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-
Jetfuel	0.32	0.70	0.16	0.25	0.61	0.04	0.08	0.15	0.23	0.48	0.11	0.85	0.43	3.55	2.23
Total	1.98	4.89	1.18	0.96	4.81	0.33	1.54	1.08	3.28	3.94	1.29	3.89	1.10	10.44	10.15

Assumed maximum technically feasible MeOH blend (max % J) & EtOH blend (max %J)

Freeway & Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
MeOH in petroleum	10%	10%	10%	10%	10%	10%	10%	10%	10%
EtOH in petroleum	10%	40%	70%	100%	100%	100%	100%	100%	100%
Biodiesel	100%	100%	100%	100%	100%	100%	100%	100%	100%

4-Aviation

Aviation transport demand (PJ)

	•	•	•							
Freeway										
		2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa		399	487	623	830	1155	1667	2413	3461	4763

1 . (1 0	205	1005	.=		2225	0.10-		4=05	
Asia (exl. China, India)	888	1265	1710	2234	2802	3420	4051	4728	5398
Brazil	186	217	267	348	461	608	778	967	1153
Canada	248	275	300	328	354	387	419	452	485
China	711	1086	1551	2122	2720	3318	3921	4597	5230
Non-OECD Europe	52	60	69	80	93	112	133	157	183
OECD Europe	2306	2563	2818	3076	3321	3572	3810	4051	4279
FSU (exl. Russia)	91	122	161	212	275	358	458	578	707
India	199	272	380	539	765	1078	1474	1959	2491
LAM (exl. Brazil, Mexico)	252	326	417	526	656	817	999	1209	1431
MEA	533	615	721	872	1088	1389	1783	2276	2823
Mexico	134	164	206	268	348	447	557	682	809
OECD Pacific+Asia	830	891	943	994	1037	1082	1122	1164	1204
Russia	492	609	765	971	1246	1614	2055	2533	3037
USA	3205	3506	3755	4011	4261	4606	4974	5350	5714
Total	10526	12457	14685	17411	20583	24474	28948	34164	39707
Tollway									
Africa	399	469	572	720	937	1254	1686	2253	2923
Asia (exl. China, India)	888	1156	1450	1775	2110	2458	2799	3149	3482
Brazil	186	209	244	297	365	447	534	623	707
Canada	248	269	288	308	328	350	372	394	415
China	711	966	1251	1567	1871	2156	2431	2729	3003
Non-OECD Europe	52	57	62	69	76	85	95	106	117
OECD Europe	2306	2488	2664	2838	2998	3159	3308	3455	3592
FSU (exl. Russia)	91	111	134	161	191	228	268	313	358
India	199	252	323	421	547	707	893	1104	1319
LAM (exl. Brazil, Mexico)	252	306	369	441	522	617	719	831	945
MEA		000							
	533	600	685	799	953	1157	1410	1712	2034
Mexico	533 134		685 186	799 226	953 275	1157 331	1410 390	1712 453	2034 513
Mexico OECD Pacific+Asia		600				-	-		
	134	600 156	186	226	275	331	390	453	513
OECD Pacific+Asia	134 830	600 156 874	186 911	226 947	275 976	331 1005	390 1030	453 1055	513 1079

Assumed maximum technically feasible Blend of biodiesel in aviation fuel (max %J)

Freeway & Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
Bio-liquids and synthetic fossil liquids	50%	50%	50%	50%	50%	50%	50%	50%	50%

5-Fuels Fuels in base year 2005 (EJ)

Fuel	Africa	Asia	Brazil	Canada	China	EEUR	FSU	India	LAM	MEA	Mexico	Pacific	Russia	USA	WEUR
Other (Coal)	-	-	-	-	0.57	-	0.00	-	-	-	-	-	-	-	-
Jetfuels	0.32	0.69	0.15	0.24	0.61	0.04	0.07	0.14	0.23	0.47	0.11	0.85	0.43	3.54	2.23
BioJetfuel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	0.90	1.51	0.92	1.18	0.63	0.39	0.60	0.32	0.80	0.99	0.65	2.97	1.16	16.4	5.42
Diesel	1.70	4.19	1.00	0.73	3.72	0.29	1.45	0.98	2.93	3.52	1.17	3.38	0.59	6.93	9.55
Methanol	-	-	-	-	0.03	-	-	-	-	-	-	-	-	-	-
BioMethanol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BioEthanol	-	0.00	0.19	0.00	0.02	-	-	0.00	0.00	-	-	0.00	-	0.27	0.02
BioSyngas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CNG	0.05	0.02	0.08	0.001	0.01	-	0.01	0.03	0.19	0.01	-	0.01	0.00	0.01	0.01
Biodiesel	-	-	-	-	-	-	-	-	0.00	-	-	0.01	-	0.01	0.10
Electricity	0.01	-	0.01	0.001	0.03	0.01	0.02	0.01	0.00	-	-	0.03	0.08	0.01	0.11
Hydrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CO2-emission Factors of fuels (gC/J)

Electricity (gCO2/Kwh)								
Freeway	2010	2015	2020	2025	2030	2035	2040	2045	2050
AFRICA	0.0482	0.0463	0.0444	0.0425	0.0406	0.0384	0.0362	0.0340	0.0318
ASIA	0.0550	0.0528	0.0507	0.0485	0.0464	0.0438	0.0413	0.0388	0.0362
BRAZIL	0.0064	0.0061	0.0059	0.0056	0.0054	0.0051	0.0048	0.0045	0.0042
CANADA	0.0148	0.0143	0.0137	0.0131	0.0125	0.0118	0.0112	0.0105	0.0098
CHINA	0.0596	0.0573	0.0550	0.0526	0.0503	0.0475	0.0448	0.0420	0.0393
EEUR	0.0355	0.0341	0.0327	0.0313	0.0299	0.0283	0.0266	0.0250	0.0234
WEUR	0.0256	0.0246	0.0236	0.0226	0.0216	0.0204	0.0192	0.0181	0.0169
FSU	0.0252	0.0242	0.0233	0.0223	0.0213	0.0201	0.0189	0.0178	0.0166
INDIA	0.0710	0.0682	0.0654	0.0626	0.0599	0.0566	0.0533	0.0500	0.0468
LAM	0.0147	0.0141	0.0135	0.0130	0.0124	0.0117	0.0110	0.0104	0.0097

MEA	0.0528	0.0507	0.0487	0.0466	0.0445	0.0421	0.0397	0.0372	0.0348
MEXICO	0.0430	0.0413	0.0396	0.0379	0.0362	0.0342	0.0323	0.0303	0.0283
PACIFIC	0.0379	0.0364	0.0349	0.0334	0.0319	0.0302	0.0285	0.0267	0.0250
RUSSIA	0.0246	0.0237	0.0227	0.0217	0.0208	0.0196	0.0185	0.0174	0.0162
USA	0.0432	0.0415	0.0398	0.0381	0.0364	0.0344	0.0324	0.0304	0.0285
World	507.25	487.38125	467.5125	447.6438	427.775	404.4	381.025	357.65	334.275

Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
AFRICA	0.0482	0.0430	0.0377	0.0325	0.0273	0.0251	0.0229	0.0162	0.0095
ASIA	0.0550	0.0490	0.0431	0.0371	0.0312	0.0286	0.0261	0.0185	0.0108
BRAZIL	0.0064	0.0057	0.0050	0.0043	0.0036	0.0033	0.0030	0.0021	0.0013
CANADA	0.0148	0.0132	0.0116	0.0100	0.0084	0.0077	0.0070	0.0050	0.0029
CHINA	0.0596	0.0532	0.0467	0.0403	0.0338	0.0310	0.0283	0.0200	0.0118
EEUR	0.0355	0.0316	0.0278	0.0239	0.0201	0.0185	0.0168	0.0119	0.0070
WEUR	0.0256	0.0228	0.0201	0.0173	0.0145	0.0133	0.0122	0.0086	0.0050
FSU	0.0252	0.0225	0.0198	0.0170	0.0143	0.0131	0.0120	0.0085	0.0050
INDIA	0.0710	0.0633	0.0556	0.0479	0.0402	0.0370	0.0337	0.0238	0.0140
LAM	0.0147	0.0131	0.0115	0.0099	0.0083	0.0077	0.0070	0.0049	0.0029
MEA	0.0528	0.0471	0.0414	0.0356	0.0299	0.0275	0.0251	0.0177	0.0104
MEXICO	0.0430	0.0383	0.0337	0.0290	0.0243	0.0224	0.0204	0.0144	0.0085
PACIFIC	0.0379	0.0338	0.0297	0.0256	0.0215	0.0197	0.0180	0.0127	0.0075
RUSSIA	0.0246	0.0220	0.0193	0.0166	0.0140	0.0128	0.0117	0.0083	0.0049
USA	0.0432	0.0385	0.0338	0.0292	0.0245	0.0225	0.0205	0.0145	0.0085
World	507.25	452.31875	397.3875	342.4563	287.525	264.15	240.775	217.4	194.025

Fossil Fuels Gasoline: 18.9 tC/TJ
Diesel: 20.2 tC/TJ

Natural gas: 15.3 tC/TJ Jet Kerosene: 19.5 tC/TJ

Hydrogen

Biofuels

MeOH, EtOH

Bio-Diesel

Bio-SNG

80% of emission of electricity per Joule
10% of gasoline per Joule
10% of diesel per Joule
10% of CNG per Joule

CO2-taxes-Prices on Fossil Fuels in (\$/tC) with ref year 2000

					(+,,		- ,		
Freeway	2010	2015	2020	2025	2030	2035	2040	2045	2050
AFRICA	0	0	0	0	0	20	50	75	113
ASIA	0	0	0	0	0	20	50	75	113
BRAZIL	0	0	20	50	75	113	169	253	380
CANADA	20	50	75	113	169	253	380	570	650
CHINA	0	0	20	50	75	113	169	253	380
EEUR	20	50	75	113	169	253	380	570	650
WEUR	50	75	113	169	253	380	570	650	700
FSU	0	0	20	50	75	113	169	253	380
INDIA	0	0	0	20	50	75	113	169	253
LAM	0	0	0	0	20	50	75	113	169
MEA	0	0	0	0	0	20	50	75	113
MEXICO	0	0	20	50	75	113	169	253	380
PACIFIC	20	50	75	113	169	253	380	570	650
RUSSIA	0	0	20	50	75	113	169	253	380
USA	0	20	50	75	113	169	253	380	570

Tollway	2010	2015	2020	2025	2030	2035	2040	2045	2050
AFRICA	0	0	0	0	0	0	0	0	0
ASIA	0	0	0	0	0	0	0	0	0
BRAZIL	0	0	0	0	0	0	0	0	0
CANADA	0	0	0	0	0	0	0	0	0
CHINA	0	0	0	0	0	0	0	0	0
EEUR	0	0	0	0	0	0	0	0	0
WEUR	0	0	0	0	0	0	0	0	0
FSU	0	0	0	0	0	0	0	0	0
INDIA	0	0	0	0	0	0	0	0	0
LAM	0	0	0	0	0	0	0	0	0
MEA	0	0	0	0	0	0	0	0	0
MEXICO	0	0	0	0	0	0	0	0	0
PACIFIC	0	0	0	0	0	0	0	0	0
RUSSIA	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0

In addition to the previous table, we also have:

Timelag w.r.t. WEUR (# of 5 year steps)						
AFRICA	6					
ASIA	6					
BRAZIL	3					

CANADA	1
CHINA	3
EEUR	1
WEUR	0
FSU	3
INDIA	4
LAM	5
MEA	6
MEXICO	3
PACIFIC	1
RUSSIA	3
USA	2

Biofuel targets

Tollway			2015	2020	2025	2030	2035	2040	2045	2050
WEUR	all biofuels	%	5%	10%	10%	10%	10%	10%	10%	10%
BRAZIL	EtOH	%	20%	20%	20%	20%	20%	20%	20%	20%
BRAZIL	Biodiesel	%	5%	5%	5%	5%	5%	5%	5%	5%
CANADA	EtOH	%	5%	5%	5%	5%	5%	5%	5%	5%
CANADA	Biodiesel	%	2%	2%	2%	2%	2%	2%	2%	2%
CHINA	EtOH	%	3%	3%	3%	3%	3%	3%	3%	3%
INDIA	EtOH	%	10%	20%	20%	20%	20%	20%	20%	20%
INDIA	Biodiesel	%		20%	20%	20%	20%	20%	20%	20%
MEXICO	EtOH	%	2%	2%	2%	2%	2%	2%	2%	2%
PACIFIC	EtOH	%	4%	4%	4%	4%	4%	4%	4%	4%
PACIFIC	Biodiesel	%	2%	2%	2%	2%	2%	2%	2%	2%
Others	all biofuels	%		4%	4%	4%	4%	4%	4%	4%
USA	all biofuels	PJ	1552	2725	2725	2725	2725	2725	2725	2725

Freeway			2015	2020	2025	2030	2035	2040	2045	2050
WEUR	all biofuels	%	5%	5%	5%	5%	5%	5%	5%	5%
BRAZIL	EtOH	%	20%	20%	20%	20%	20%	20%	20%	20%
BRAZIL	Biodiesel	%	5%	5%	5%	5%	5%	5%	5%	5%
CANADA	EtOH	%	5%	5%	5%	5%	5%	5%	5%	5%
CANADA	Biodiesel	%	2%	2%	2%	2%	2%	2%	2%	2%
CHINA	EtOH	%	3%	3%	3%	3%	3%	3%	3%	3%
INDIA	EtOH	%	10%	20%	20%	20%	20%	20%	20%	20%
INDIA	Biodiesel	%	-	20%	20%	20%	20%	20%	20%	20%
MEXICO	EtOH	%	2%	2%	2%	2%	2%	2%	2%	2%
PACIFIC	EtOH	%	4%	4%	4%	4%	4%	4%	4%	4%
PACIFIC	Biodiesel	%	2%	2%	2%	2%	2%	2%	2%	2%
rest of world	all biofuels	%	-	2%	2%	2%	2%	2%	2%	2%
USA	all biofuels	PJ	1552	1931	1931	1931	1931	1931	1931	1931

Fuel cost-prices (\$2000/GJ)

Freeway	2009	2015	2020	2025	2030	2035	2040	2045	2050
Biodiesel	19.91	24.66	26.04	26.78	27.67	28.30	28.86	29.44	30.03
Bio-Ethanol	16.29	20.18	21.31	21.91	22.64	23.15	23.62	24.09	24.57
Bio-Methanol	15.09	18.69	19.73	20.29	20.97	21.44	21.87	22.31	22.75
Bio-Syngas	16.85	20.87	22.03	22.65	23.41	23.94	24.42	24.91	25.41
Diesel	8.29	10.40	11.51	12.79	13.86	15.00	16.08	17.41	18.86
Gasoline	8.58	12.12	12.74	13.60	14.79	16.06	17.39	18.84	20.41
Coal	1.90	1.99	2.27	2.55	2.92	3.28	3.36	3.43	3.51
Hydrogen	17.82	23.65	23.65	24.24	24.55	24.85	25.16	25.46	25.77
Methanol	9.43	13.31	13.85	14.65	15.76	16.95	18.17	19.49	21.01
Natural Gas	4.38	5.54	5.86	6.18	6.94	7.98	9.07	10.07	11.18
Electricity	21.97	23.43	23.57	24.05	24.98	26.14	26.37	26.74	27.11

Tollway	2009	2015	2020	2025	2030	2035	2040	2045	2050
Biodiesel	19.91	27.12	29.35	29.43	29.67	29.59	29.44	29.29	29.14
Bio-Ethanol	16.29	22.19	24.01	24.08	24.28	24.21	24.09	23.97	23.84
Bio-Methanol	15.09	20.55	22.24	22.30	22.48	22.42	22.31	22.19	22.08
Bio-Syngas	16.85	22.94	24.83	24.90	25.10	25.04	24.91	24.78	24.65
Diesel	8.29	12.26	14.24	16.62	17.57	18.10	17.78	17.66	17.54
Gasoline	8.58	14.23	15.72	17.63	18.69	19.32	19.19	19.05	18.92
Coal	1.90	1.99	2.27	2.55	2.92	3.28	3.36	3.43	3.51
Hydrogen	17.82	25.97	27.29	27.98	27.63	27.35	27.14	26.93	26.71
Methanol	9.43	15.63	17.09	18.98	19.93	20.39	20.05	19.71	19.47
Natural Gas	4.38	6.38	7.09	7.85	8.61	9.42	10.20	10.52	10.84
Electricity	21.97	24.61	25.38	26.55	27.85	28.43	28.68	28.68	28.68

Appendix C: Model's Outputs (Indigenous Variables)

1-Results for the Freeway Scenario

Fuel Demand Fuel for Cars (EJ/Y)

Fuels for Cars (Units: Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.7
•	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	
Hydrogen										0.4
Bio-Syngas	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.1
CNG	0.1	0.3	0.6	1.0	1.4	1.9	2.1	2.4	2.7	2.9
Biofuel(Diesel)	0.1	0.4	0.6	1.0	1.2	0.9	1.0	1.1	1.3	1.2
Diesel	2.7	2.1	2.1	2.2	2.6	4.0	6.3	9.8	14.1	19.4
Methanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Bio-Methanol	0.0	0.1	0.6	1.2	1.9	2.6	3.3	3.4	3.4	2.5
Bio-Ethanol	0.5	1.4	2.2	3.2	3.7	4.0	3.9	4.4	5.1	4.9
Gasoline	35.0	38.2	40.6	41.7	42.0	41.2	40.3	39.2	36.6	32.1
Total	38.5	42.6	47.0	50.7	53.5	55.5	57.9	61.6	64.6	64.3
Fuels for Cars, Region	n AFRICA (Unit	s: EJ/v)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
Diesel	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.6	1.2
Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1
Bio-Ethanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Gasoline	0.9	1.2	1.5	1.8	2.0	2.1	2.1	2.1	1.9	1.6
Total	1.0	1.3	1.6	2.0	2.4	2.5	2.7	2.8	2.9	3.2
Fuels for Cars, Regio		EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
CNG	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Diesel	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.4	1.0	2.1
Bio-Methanol	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.3
Bio-Ethanol	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.3
Gasoline	1.5	1.9	2.3	2.7	3.2	3.9	5.0	6.3	6.6	5.7
Total	1.5	1.9	2.4	3.1	3.7	4.7	6.2	8.0	9.1	8.9
Foods for Company										
Fuels for Cars, Region	n BRAZIL (Unit 2005	s: EJ/y) 2010	2015	2020	2025	2020	2025	2040	2045	2050
Fuel	2003	ZUIU	2015	2020	2025	2030	2035	2040 0.0	2045 0.0	2050 0.0
Flectricity			0.0	0.0	0.0	\cap	$\alpha \alpha$		0.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen CNG	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.1	0.0 0.1	0.0 0.1	0.0 0.1	0.0 0.1	0.0 0.2	0.1	0.0 0.1
Hydrogen CNG Biofuel(Diesel)	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.1 0.0	0.0 0.1 0.0	0.0 0.1 0.0	0.0 0.1 0.0	0.0 0.1 0.0	0.0 0.2 0.0	0.1 0.0	0.0 0.1 0.0
Hydrogen CNG Biofuel(Diesel) Diesel	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1	0.0 0.1 0.0 0.2	0.0 0.1 0.0 0.4	0.0 0.1 0.0 0.6	0.0 0.1 0.0 0.5	0.0 0.1 0.0 0.6	0.0 0.2 0.0 0.7	0.1 0.0 0.9	0.0 0.1 0.0 1.2
Diesel Bio-Methanol	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.1 0.0 0.2 0.0	0.0 0.1 0.0 0.4 0.0	0.0 0.1 0.0 0.6 0.0	0.0 0.1 0.0 0.5 0.0	0.0 0.1 0.0 0.6 0.0	0.0 0.2 0.0 0.7 0.0	0.1 0.0 0.9 0.0	0.0 0.1 0.0 1.2 0.0
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.4	0.0 0.1 0.0 0.2 0.0 0.3	0.0 0.1 0.0 0.4 0.0 0.3	0.0 0.1 0.0 0.6 0.0 0.3	0.0 0.1 0.0 0.5 0.0 0.3	0.0 0.1 0.0 0.6 0.0	0.0 0.2 0.0 0.7 0.0 0.4	0.1 0.0 0.9 0.0 0.3	0.0 0.1 0.0 1.2 0.0 0.3
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.1 0.0 0.4	0.0 0.1 0.0 0.2 0.0 0.3 1.2	0.0 0.1 0.0 0.4 0.0 0.3 1.1	0.0 0.1 0.0 0.6 0.0 0.3 1.1	0.0 0.1 0.0 0.5 0.0 0.3 1.3	0.0 0.1 0.0 0.6 0.0 0.4 1.6	0.0 0.2 0.0 0.7 0.0 0.4 1.7	0.1 0.0 0.9 0.0 0.3 1.4	0.0 0.1 0.0 1.2 0.0 0.3 1.1
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.4	0.0 0.1 0.0 0.2 0.0 0.3	0.0 0.1 0.0 0.4 0.0 0.3	0.0 0.1 0.0 0.6 0.0 0.3	0.0 0.1 0.0 0.5 0.0 0.3	0.0 0.1 0.0 0.6 0.0	0.0 0.2 0.0 0.7 0.0 0.4	0.1 0.0 0.9 0.0 0.3	0.0 0.1 0.0 1.2 0.0 0.3 1.1
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total	0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.9	0.0 0.0 0.0 0.0 0.1 0.0 0.4 0.9	0.0 0.1 0.0 0.2 0.0 0.3 1.2	0.0 0.1 0.0 0.4 0.0 0.3 1.1	0.0 0.1 0.0 0.6 0.0 0.3 1.1	0.0 0.1 0.0 0.5 0.0 0.3 1.3	0.0 0.1 0.0 0.6 0.0 0.4 1.6	0.0 0.2 0.0 0.7 0.0 0.4 1.7	0.1 0.0 0.9 0.0 0.3 1.4	0.0 0.1 0.0 1.2 0.0 0.3 1.1
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Regio	0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.9 1.2	0.0 0.0 0.0 0.0 0.1 0.0 0.4 0.9 1.5	0.0 0.1 0.0 0.2 0.0 0.3 1.2	0.0 0.1 0.0 0.4 0.0 0.3 1.1	0.0 0.1 0.0 0.6 0.0 0.3 1.1 2.1	0.0 0.1 0.0 0.5 0.0 0.3 1.3 2.3	0.0 0.1 0.0 0.6 0.0 0.4 1.6 2.7	0.0 0.2 0.0 0.7 0.0 0.4 1.7 3.0	0.1 0.0 0.9 0.0 0.3 1.4 2.9	0.0 0.1 0.0 1.2 0.0 0.3 1.1 2.7
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region	0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.9 1.2	0.0 0.0 0.0 0.0 0.1 0.0 0.4 0.9 1.5 its: EJ/y)	0.0 0.1 0.0 0.2 0.0 0.3 1.2 1.8	0.0 0.1 0.0 0.4 0.0 0.3 1.1 1.9	0.0 0.1 0.0 0.6 0.0 0.3 1.1 2.1	0.0 0.1 0.0 0.5 0.0 0.3 1.3 2.3	0.0 0.1 0.0 0.6 0.0 0.4 1.6 2.7	0.0 0.2 0.0 0.7 0.0 0.4 1.7 3.0	0.1 0.0 0.9 0.0 0.3 1.4 2.9	0.0 0.1 0.0 1.2 0.0 0.3 1.1 2.7
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region	0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.9 1.2 n CANADA (Un 2005	0.0 0.0 0.0 0.0 0.1 0.0 0.4 0.9 1.5 its: EJ/y) 2010	0.0 0.1 0.0 0.2 0.0 0.3 1.2 1.8	0.0 0.1 0.0 0.4 0.0 0.3 1.1 1.9	0.0 0.1 0.0 0.6 0.0 0.3 1.1 2.1	0.0 0.1 0.0 0.5 0.0 0.3 1.3 2.3	0.0 0.1 0.0 0.6 0.0 0.4 1.6 2.7	0.0 0.2 0.0 0.7 0.0 0.4 1.7 3.0	0.1 0.0 0.9 0.0 0.3 1.4 2.9	0.0 0.1 0.0 1.2 0.0 0.3 1.1 2.7
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen	0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.9 1.2 n CANADA (Un 2005	0.0 0.0 0.0 0.0 0.1 0.0 0.4 0.9 1.5 its: EJ/y) 2010 0.0	0.0 0.1 0.0 0.2 0.0 0.3 1.2 1.8 2015 0.0	0.0 0.1 0.0 0.4 0.0 0.3 1.1 1.9	0.0 0.1 0.0 0.6 0.0 0.3 1.1 2.1 2025 0.0	0.0 0.1 0.0 0.5 0.0 0.3 1.3 2.3 2030 0.0	0.0 0.1 0.0 0.6 0.0 0.4 1.6 2.7 2035 0.0	0.0 0.2 0.0 0.7 0.0 0.4 1.7 3.0	0.1 0.0 0.9 0.0 0.3 1.4 2.9 2045 0.0	0.0 0.1 0.0 1.2 0.0 0.3 1.1 2.7 2050 0.0
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen CNG	0.0 0.0 0.0 0.0 0.0 0.2 0.9 1.2 n CANADA (Un 2005 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.4 0.9 1.5 its: EJ/y) 2010 0.0 0.0	0.0 0.1 0.0 0.2 0.0 0.3 1.2 1.8 2015 0.0 0.0	0.0 0.1 0.0 0.4 0.0 0.3 1.1 1.9	0.0 0.1 0.0 0.6 0.0 0.3 1.1 2.1 2025 0.0 0.0	0.0 0.1 0.0 0.5 0.0 0.3 1.3 2.3 2030 0.0 0.0	0.0 0.1 0.0 0.6 0.0 0.4 1.6 2.7 2035 0.0 0.0	0.0 0.2 0.0 0.7 0.0 0.4 1.7 3.0 2040 0.0 0.0	0.1 0.0 0.9 0.0 0.3 1.4 2.9 2045 0.0 0.0	0.0 0.1 0.0 1.2 0.0 0.3 1.1 2.7 2050 0.0 0.0
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen CNG Biofuel(Diesel)	0.0 0.0 0.0 0.0 0.0 0.2 0.9 1.2 n CANADA (Un 2005 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.4 0.9 1.5 its: EJ/y) 2010 0.0 0.0 0.0	0.0 0.1 0.0 0.2 0.0 0.3 1.2 1.8 2015 0.0 0.0 0.0	0.0 0.1 0.0 0.4 0.0 0.3 1.1 1.9	0.0 0.1 0.0 0.6 0.0 0.3 1.1 2.1 2025 0.0 0.0 0.0	0.0 0.1 0.0 0.5 0.0 0.3 1.3 2.3 2030 0.0 0.0 0.1	0.0 0.1 0.0 0.6 0.0 0.4 1.6 2.7 2035 0.0 0.0 0.1	0.0 0.2 0.0 0.7 0.0 0.4 1.7 3.0 2040 0.0 0.0 0.1	0.1 0.0 0.9 0.0 0.3 1.4 2.9 2045 0.0 0.0	0.0 0.1 0.0 1.2 0.0 0.3 1.1 2.7 2050 0.0 0.0 0.1
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen CNG Biofuel(Diesel) Diesel	0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.9 1.2 n CANADA (Un 2005 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.4 0.9 1.5 its: EJ/y) 2010 0.0 0.0 0.0	0.0 0.1 0.0 0.2 0.0 0.3 1.2 1.8 2015 0.0 0.0 0.0 0.0	0.0 0.1 0.0 0.4 0.0 0.3 1.1 1.9 2020 0.0 0.0 0.0 0.0	0.0 0.1 0.0 0.6 0.0 0.3 1.1 2.1 2025 0.0 0.0 0.0 0.0	0.0 0.1 0.0 0.5 0.0 0.3 1.3 2.3 2030 0.0 0.0 0.1 0.0	0.0 0.1 0.0 0.6 0.0 0.4 1.6 2.7 2035 0.0 0.0 0.1 0.0	0.0 0.2 0.0 0.7 0.0 0.4 1.7 3.0 2040 0.0 0.0 0.1 0.0	0.1 0.0 0.9 0.0 0.3 1.4 2.9 2045 0.0 0.0 0.1 0.0	0.0 0.1 0.0 1.2 0.0 0.3 1.1 2.7 2050 0.0 0.0 0.1 0.0
Hydrogen CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen CNG Biofuel(Diesel)	0.0 0.0 0.0 0.0 0.0 0.2 0.9 1.2 n CANADA (Un 2005 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.4 0.9 1.5 its: EJ/y) 2010 0.0 0.0 0.0	0.0 0.1 0.0 0.2 0.0 0.3 1.2 1.8 2015 0.0 0.0 0.0	0.0 0.1 0.0 0.4 0.0 0.3 1.1 1.9	0.0 0.1 0.0 0.6 0.0 0.3 1.1 2.1 2025 0.0 0.0 0.0	0.0 0.1 0.0 0.5 0.0 0.3 1.3 2.3 2030 0.0 0.0 0.1	0.0 0.1 0.0 0.6 0.0 0.4 1.6 2.7 2035 0.0 0.0 0.1	0.0 0.2 0.0 0.7 0.0 0.4 1.7 3.0 2040 0.0 0.0 0.1	0.1 0.0 0.9 0.0 0.3 1.4 2.9 2045 0.0 0.0	0.0 0.1 0.0 1.2 0.0 0.3 1.1 2.7 2050 0.0 0.0 0.1

Gasoline	1.2	1.2	1.1	1.1	1.0	0.9	0.8	0.5	0.4	0.3
Total	1.2	1.3	1.3	1.3	1.3	1.2	1.1	1.1	1.0	1.0
Fuels for Cars, Region	n CHINA (Units	s: EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
CNG Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1
Diesel	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.6	1.3
Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Bio-Methanol	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.7	0.9	0.4
Bio-Ethanol	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.3
Gasoline	0.6	0.9	1.4	2.0	3.0	4.3	5.7	7.0	7.8	7.3
Total	0.8	1.2	1.8	2.6	3.7	5.2	7.0	8.9	10.4	9.7
Fuels for Cars, Region	n EEUR (Units:	EJ/v)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol Gasoline	0.0 0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.4	0.4	0.5	0.5	0.6	0.5	0.4	0.4	0.5	0.5
Fuels for Cars, Region										
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen Bio-Syngas	0.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.6
Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
Gasoline Total	0.6 0.6	0.7 0.8	0.8	1.0 1.1	1.1	1.3 1.6	1.3 1.7	1.3 1.8	1.0 1.8	0.7 1.8
Total	0.0	0.0	0.5	1.1	1.5	1.0	1.,	1.0	1.0	1.0
Fuels for Cars, Region	n INDIA (Units:	: EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen Bio-Syngas	0.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.6	0.8
Diesel	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Bio-Ethanol	0.0	0.0	0.1	0.3	0.4	0.5	0.6	0.8	1.0	1.3
Gasoline	0.3	0.5	0.6	0.7	0.9	1.2	1.7	2.3	3.2	3.8
Total	0.4	0.6	0.8	1.1	1.4	1.8	2.5	3.5	5.0	6.1
Fuels for Cars, Region	n LAM (Units: I	EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Biofuel(Diesel) Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 1.0
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.5	0.2
Bio-Ethanol	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1
Gasoline	0.8	1.0	1.2	1.4	1.6	1.7	1.7	1.8	1.8	1.7
Total	0.9	1.1	1.4	1.7	2.0	2.2	2.4	2.7	3.0	3.2
- 1 (6 - :		/ \								
Fuels for Cars, Region	•		2015	2020	2025	2020	2025	2040	2045	2050
Fuel Electricity	2005 0.0	2010 0.0	2015 0.0	2020 0.0	2025 0.0	2030 0.0	2035 0.0	2040 0.0	2045 0.0	2050 0.0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Diesel	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6	1.0
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1

Bio-Ethanol	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Gasoline Total	1.0 1.1	1.2	1.4 1.5	1.7 1.9	1.9 2.1	2.0 2.4	2.1	1.9 2.6	1.5 2.4	1.1 2.4
Total	1.1	1.5	1.5	1.5	2.1	2.4	2.5	2.0	2.7	2.4
Fuels for Cars, Region	•									
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.6
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1
Bio-Ethanol Gasoline	0.0	0.0	0.0	0.0 1.0	0.1	0.1	0.1	0.2 1.3	0.1	0.1
Total	0.7	0.8	1.0	1.1	1.2	1.4	1.7	1.8	1.1	1.7
Fuels for Cars, Region										
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
Diesel	0.4	0.3	0.3	0.2	0.2	0.4	0.6	0.7	0.9	0.9
Bio-Methanol	0.0	0.0	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.0
Bio-Ethanol	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.0
Gasoline Total	3.0 3.4	3.2	3.1	2.7 3.6	2.3 3.4	1.8 3.0	1.5 2.7	1.3 2.5	1.1 2.3	1.0 2.2
Total	3.4	3.0	3.7	3.0	3.4	3.0	2.7	2.5	2.5	2.2
Fuels for Cars, Region	RUSSIA (Unit	s: EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.7	1.0
Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Methanol Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Gasoline	1.2	1.4	1.5	1.7	1.8	1.8	1.7	1.4	1.0	0.2
Total	1.2	1.4	1.6	1.8	2.0	2.2	2.3	2.2	2.1	2.1
Fuels for Cars, Region										
Fuel Electricity	2005 0.0	2010 0.0	2015 0.0	2020 0.0	2025 0.1	2030 0.1	2035 0.1	2040 0.2	2045 0.2	2050 0.3
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3
Bio-Syngas	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.1	0.3	0.5	0.7	0.7	0.7	0.7	0.8
Diesel	0.1	0.1	0.2	0.4	0.7	1.2	2.3	3.9	5.0	5.8
Bio-Methanol	0.0	0.0	0.1	0.3	0.5	0.8	1.1	0.9	0.7	0.6
Bio-Ethanol Gasoline	0.3 16.5	0.8 16.7	1.1 16.4	1.5 15.7	1.4 14.8	1.1 12.6	0.8 9.6	1.1 6.7	1.2 4.8	1.4 3.6
Total	16.8	17.6	18.1	18.4	18.0	16.6	14.7	13.4	12.7	12.4
1014	20.0	2710	10.1	2011	10.0	10.0	2	10		
Fuels for Cars, Region	•									
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.8	0.9
Biofuel(Diesel)	0.1	0.4	0.5	0.8	0.9	0.4	0.3	0.2	0.1	0.1
Diesel	1.8	1.2	0.9	0.6	0.5	1.2	1.6	1.9	2.1	1.9
Bio-Methanol	0.0	0.0	0.1	0.2	0.3	0.5	0.5	0.4	0.3	0.3
Bio-Ethanol	0.0	0.1 6.2	0.2 6.7	0.4	0.6 5.7	0.7	0.6	0.3 3.4	0.4 2.7	0.5
Gasoline Total	5.4 7.3	6.2 7.9	6.7 8.6	6.4 8.6	8.3	4.5 7.7	3.8 7.2	6.8	6.5	2.6 6.4
							1./	U.O		U.4

Fuel for Other Surface Transport and Aviation (EJ/Y)

Fuel in Other Surface Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Other (Coal)	0.6	0.8	1.0	1.2	1.4	1.3	0.4	0.1	0.0	0
Gasoline	0.0	0.0	0.3	0.4	0.5	0.4	0.3	0.2	0.0	0
Diesel	39.5	40.1	42.5	45.3	48.4	51.4	55.3	59.4	63.4	66
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Bio-Ethanol	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
CNG	0.3	0.4	0.3	0.3	0.4	0.5	0.7	0.8	1.1	1
Biofuel(Diesel)	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.1	0
Electricity	0.3	0.3	0.5	0.4	1.2	2.0	2.8	3.7	4.6	5
Hydrogen	0.0	0.0				0.0			0.0	0
, •			0.0	0.0	0.0		0.0	0.0		
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C
Jetfuel	10.2	10.7	12.4	14.6	17.1	19.7	22.8	26.4	30.6	34
Total	50.9	52.5	57.6	63.1	69.5	75.8	82.8	90.9	99.8	108
Friel in Other Cristage	Transport and Arris	lian Dagian	AFRICA (LIMITA							
Fuel in Other Surface										
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	(
Diesel	1.6	1.6	1.7	1.9	2.1	2.4	2.8	3.4	4.0	4
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Electricity	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	Ò
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
letfuel	0.3	0.4	0.5	0.6	0.8	1.1	1.5	2.2	3.0	2
Total	2.0	2.1	2.3	2.7	3.2	3.8	4.6	5.8	7.4	9
	2.0	2.1	2.3	۷.7	ی. ر	5.0	7.0	5.0	7.4	
Fuel in Other Surface	Transport and Avia	tion Region	ASIA (I Inite: F	1/v)						
Fuel	2005	2010 2011	2015	2020	2025	2030	2035	2040	2045	205
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	(
Diesel	4.2	4.1	4.8	5.4	6.0	6.6	7.2	7.7	8.0	8
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
CNG	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Electricity	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	(
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(
Jetfuel	0.7	0.9	1.3	1.7	2.2	2.7	3.2	3.7	4.2	4
Total	4.9	5.1	6.1	7.2	8.4	9.6	10.6	11.6	12.6	13
Fuel in Other Surface	Transport and Avia	tion. Region	BRAZIL (Units	: EJ/v)						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	(
Diesel		0.0	1.0	1.1	1.2	1.3	1.5	1.7	1.9	
	1.0	1.0					0.0	0.0	0.0	(
Rio-Methanol	1.0	1.0				\cap	0.0		0.0	(
	0.0	0.0	0.0	0.0	0.0	0.0	0.0		U.U	(
Bio-Ethanol	0.0 0.0	0.0 0.0	0.0 0.0	0.0	0.0	0.0	0.0	0.0		- (
Bio-Ethanol Bio-Syngas	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0	0.0	0.0	0.0	
Bio-Ethanol Bio-Syngas CNG	0.0 0.0 0.0 0.1	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0	0.0	0.0	0.0	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1	0.0 0.0 0.0 0.0 0.1	0.0 0.0 0.0 0.1	0.0 0.0 0.1	0.0 0.0 0.1	0.0 0.0 0.1	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0 0.1 0.1	0.0 0.0 0.1 0.1	0.0 0.0 0.1 0.2	0.0 0.0 0.1 0.2	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1	0.0 0.0 0.0 0.0 0.1	0.0 0.0 0.0 0.1	0.0 0.0 0.1	0.0 0.0 0.1	0.0 0.0 0.1	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0 0.1 0.1	0.0 0.0 0.1 0.1	0.0 0.0 0.1 0.2	0.0 0.0 0.1 0.2	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel	0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0 0.1 0.1 0.0	0.0 0.0 0.1 0.1 0.0	0.0 0.0 0.1 0.2 0.0	0.0 0.0 0.1 0.2 0.0	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel letfuel	0.0 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.1 0.2 0.0	0.0 0.0 0.1 0.2 0.0	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel etfuel	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.1 0.2 0.0 0.0	0.0 0.0 0.1 0.2 0.0 0.0	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Fotal	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.1 0.2 0.0 0.0	0.0 0.0 0.1 0.2 0.0 0.0	(
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Fotal Fuel in Other Surface	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.1 0.2 0.0 0.0	0.0 0.0 0.1 0.2 0.0 0.0	
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Fotal Fuel in Other Surface	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.2 1.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.3	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.6	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.3 1.8	0.0 0.0 0.0 0.1 0.1 0.0 0.0 0.4 2.1	0.0 0.0 0.1 0.1 0.0 0.0 0.5 2.3	0.0 0.0 0.1 0.2 0.0 0.0 0.7 2.6	0.0 0.0 0.1 0.2 0.0 0.0 0.8 3.0	205
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Fuel Other (Coal)	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.3	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4 CANADA (Uni	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.6	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.3 1.8	0.0 0.0 0.0 0.1 0.1 0.0 0.0 0.4 2.1	0.0 0.0 0.1 0.1 0.0 0.0 0.5 2.3	0.0 0.0 0.1 0.2 0.0 0.0 0.7 2.6	0.0 0.0 0.1 0.2 0.0 0.0 0.8 3.0	205
Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Fuel Other (Coal) Diesel CNG	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.2 Transport and Aviat 2005 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.3 tion, Region 2 2010 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4 CANADA (Uni 2015 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.2 1.6 ts: EJ/y) 2020 0.0 0.7	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.8	0.0 0.0 0.0 0.1 0.1 0.0 0.0 0.4 2.1	0.0 0.0 0.1 0.1 0.0 0.0 0.5 2.3 2035 0.0	0.0 0.0 0.1 0.2 0.0 0.7 2.6	0.0 0.0 0.1 0.2 0.0 0.0 0.8 3.0 2045 0.0	205
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Total Fuel in Other Surface Fuel Other (Coal) Diesel CNG	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.2 Transport and Aviat 2005 0.0 0.7	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.3 tion, Region 2 2010 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4 CANADA (Uni 2015 0.0 0.7	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.2 1.6 ts: EJ/y) 2020 0.0 0.7 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.8 2025 0.0 0.7	0.0 0.0 0.0 0.1 0.1 0.0 0.4 2.1 2030 0.0 0.7	0.0 0.0 0.1 0.1 0.0 0.5 2.3 2035 0.0 0.7	0.0 0.0 0.1 0.2 0.0 0.7 2.6 2040 0.0 0.7 0.0	0.0 0.0 0.1 0.2 0.0 0.8 3.0 2045 0.0 0.7	20!
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Total Fuel in Other Surface Fuel Diter (Coal) Diesel CNG Biofuel(Diesel)	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.2 1.2 Transport and Aviate 2005 0.0 0.7 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4 CANADA (Uni 2015 0.0 0.7 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.6 ts: EJ/y) 2020 0.7 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.8 2025 0.0 0.7	0.0 0.0 0.0 0.1 0.1 0.0 0.4 2.1 2030 0.0 0.7 0.0	0.0 0.0 0.1 0.1 0.0 0.5 2.3 2035 0.0 0.7 0.0	0.0 0.0 0.1 0.2 0.0 0.7 2.6 2040 0.0 0.7 0.0	0.0 0.0 0.1 0.2 0.0 0.8 3.0 2045 0.0 0.7 0.0	205
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Total Fuel in Other Surface Fuel Diter (Coal) Diesel CNG Biofuel(Diesel) Electricity	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.2 1.2 Transport and Aviate 2005 0.0 0.7 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4 CANADA (Uni 2015 0.0 0.7 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.6 ts: EJ/y) 2020 0.0 0.7 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.8 2025 0.0 0.7 0.0 0.0	0.0 0.0 0.0 0.1 0.1 0.0 0.4 2.1 2030 0.0 0.7 0.0 0.0	0.0 0.0 0.1 0.1 0.0 0.5 2.3 2035 0.0 0.7 0.0 0.0	0.0 0.0 0.1 0.2 0.0 0.7 2.6 2040 0.0 0.7 0.0 0.0	0.0 0.0 0.1 0.2 0.0 0.8 3.0 2045 0.0 0.7 0.0 0.0	205 (((((((((((((((((((
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel letfuel Total Fuel in Other Surface Fuel Other (Coal) Diesel CNG Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.2 1.2 Transport and Aviat 2005 0.0 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4 CANADA (Uni 2015 0.0 0.7 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.6 ts: EJ/y) 2020 0.7 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.8 2025 0.0 0.7 0.0 0.0	0.0 0.0 0.0 0.1 0.1 0.0 0.4 2.1 2030 0.0 0.7 0.0 0.0 0.0	0.0 0.0 0.1 0.1 0.0 0.5 2.3 2035 0.0 0.7 0.0 0.0 0.1	0.0 0.0 0.1 0.2 0.0 0.7 2.6 2040 0.0 0.7 0.0 0.0 0.1	0.0 0.0 0.1 0.2 0.0 0.8 3.0 2045 0.0 0.7 0.0 0.0 0.1	209 ((((((((((((((((((((((((((((((((((((
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Fuel in Other Surface Fuel Other (Coal) Diesel CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4 CANADA (Uni 2015 0.0 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.2 1.6 tts: EJ/y) 2020 0.7 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.8 2025 0.0 0.7 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.1 0.0 0.4 2.1 2030 0.0 0.7 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.1 0.0 0.5 2.3 2035 0.0 0.7 0.0 0.0 0.1	0.0 0.0 0.1 0.2 0.0 0.7 2.6 2040 0.0 0.7 0.0 0.0 0.1	0.0 0.0 0.1 0.2 0.0 0.8 3.0 2045 0.0 0.7 0.0 0.0 0.1	209 ((((((((((((((((((((((((((((((((((((
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel etfuel Fotal Euel in Other Surface Fuel Other (Coal) Diesel CNG Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.2 1.2 Transport and Aviat 2005 0.0 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.4 CANADA (Uni 2015 0.0 0.7 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.2 1.6 ts: EJ/y) 2020 0.7 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.8 2025 0.0 0.7 0.0 0.0	0.0 0.0 0.0 0.1 0.1 0.0 0.4 2.1 2030 0.0 0.7 0.0 0.0 0.0	0.0 0.0 0.1 0.1 0.0 0.5 2.3 2035 0.0 0.7 0.0 0.0 0.1	0.0 0.0 0.1 0.2 0.0 0.7 2.6 2040 0.0 0.7 0.0 0.0 0.1	0.0 0.0 0.1 0.2 0.0 0.8 3.0 2045 0.0 0.7 0.0 0.0 0.1	2000 ((((((((((((((((((

Fuel	2005	2010		2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.		0.6	0.6		0.7	0.7	0.2	0.1	0.0	0.0
Diesel	3.		4.6	5.5		7.4	8.1	8.8	9.5	10.0	10.3
Bio-Syngas	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Electricity	0.0)	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.7	0.9
Hydrogen	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.	5	0.7	1.1	1.5	2.1	2.6	3.1	3.6	4.1	4.6
Total	7.0)	8.2	9.7	11.4	13.2	14.9	16.0	17.4	19.0	20.4
Fuel in Other Surface Trans	sport and A	iation, Re	gion	EEUR (Units	: EJ/y)						
Fuel	2005	2010		2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.	3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
CNG	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.0)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Total	7.		9.3	11.2		15.7	18.0	19.6	21.6	23.8	25.7
Fuel in Other Surface Trans	sport and A	iation, Re	gion	FSU (Units: I	EJ/y)						
Fuel	2005	2010		2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0		0.0	0.1		0.1	0.0	0.0	0.0	0.0	0.0
Diesel	1.4		1.6	1.8		2.2	2.4	2.6	2.9	3.2	3.4
Bio-Syngas	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0		0.0	0.0		0.0	0.1	0.1	0.1	0.2	0.3
Biofuel(Diesel)	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0		0.0	0.0		0.1	0.1	0.2	0.2	0.3	0.3
Hydrogen	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.		0.0	0.0		0.0	0.3	0.3	0.4	0.5	0.6
Total	9.		11.0	13.3		18.4	20.9	22.9	25.2	27.9	30.3
Total	9.4	+ .	11.0	15.5	15.7	10.4	20.9	22.9	25.2	27.9	30.3
Fuel in Other Surface Trans	enart and A	viation Ro	gion I	INDIA (Linita	· FI/v)						
Fuel	2005	2010	gioii	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Gasoline	0.0		0.0	0.0		0.5	0.0	0.0	0.0	0.0	0.0
Diesel	0.9		1.1				1.2	1.5	2.0	2.5	2.7
Bio-Methanol	0.0			0.8		0.8	0.0	0.0	0.0	0.0	
			0.0								0.0
Bio-Ethanol	0.0		0.0	0.1		0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0		0.1	0.1		0.2	0.3	0.4	0.5	0.7	0.9
		J	0.0	0.2		0.2	0.2	0.2	0.1	0.0	0.0
Biofuel(Diesel)	0.0				0.0	0.1	0.1	0.1			
Biofuel(Diesel) Electricity	0.0		0.0	0.0					0.2	0.2	0.3
Biofuel(Diesel) Electricity Hydrogen	0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel	0.0 0.0 0.0))	0.0	0.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel	0. 0. 0. 0.)) 1	0.0 0.0 0.2	0.0 0.0 0.3	0.0 0.0 0.4	0.0 0.5	0.0 0.7	0.0 0.0 1.0	0.0 0.0 1.3	0.0 0.0 1.7	0.0 0.0 2.2
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel	0.0 0.0 0.0)) 1	0.0	0.0 0.0	0.0 0.0 0.4	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total	0.0 0.0 0.0 1.0)) 1 1	0.0 0.0 0.2 1.4	0.0 0.0 0.3 1.7	0.0 0.0 0.4 2.0	0.0 0.5	0.0 0.7	0.0 0.0 1.0	0.0 0.0 1.3	0.0 0.0 1.7	0.0 0.0 2.2
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans	0.0 0.0 0.0 1.0 sport and A)) 1 1 viation, Re	0.0 0.0 0.2 1.4	0.0 0.0 0.3 1.7 LAM (Units:	0.0 0.0 0.4 2.0	0.0 0.5 2.4	0.0 0.7 2.9	0.0 0.0 1.0 3.6	0.0 0.0 1.3 4.3	0.0 0.0 1.7 5.1	0.0 0.0 2.2 6.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans	0.0 0.0 0.1 1. sport and Av)) 1 1 viation, Re 2010	0.0 0.0 0.2 1.4	0.0 0.0 0.3 1.7 LAM (Units: 2015	0.0 0.0 0.4 2.0 EJ/y) 2020	0.0 0.5 2.4 2025	0.0 0.7 2.9	0.0 0.0 1.0 3.6	0.0 0.0 1.3 4.3	0.0 0.0 1.7 5.1	0.0 0.0 2.2 6.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal)	0.0 0.0 0.1 1. sport and Av 2005) 1 1 viation, Re 2010	0.0 0.0 0.2 1.4 gion	0.0 0.0 0.3 1.7 LAM (Units: 2015	0.0 0.0 0.4 2.0 EJ/y) 2020 0.0	0.0 0.5 2.4 2025 0.0	0.0 0.7 2.9 2030 0.0	0.0 0.0 1.0 3.6 2035 0.0	0.0 0.0 1.3 4.3 2040 0.0	0.0 0.0 1.7 5.1 2045 0.0	0.0 0.0 2.2 6.0 2050 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel	0.4 0.4 0. 1. sport and Av 2005 0.)) 1 1 viation, Re 2010	0.0 0.0 0.2 1.4 gion	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 3.6	0.0 0.0 0.4 2.0 EJ/y) 2020 0.0 4.0	0.0 0.5 2.4 2025 0.0 4.4	0.0 0.7 2.9 2030 0.0 4.8	0.0 0.0 1.0 3.6 2035 0.0 5.3	0.0 0.0 1.3 4.3 2040 0.0 5.7	0.0 0.0 1.7 5.1 2045 0.0 6.0	0.0 0.0 2.2 6.0 2050 0.0 6.2
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol	0.4 0.4 0. 1. sport and Av 2005 0.4 2.4 0.4)) 1 1 viation, Re 2010)	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0	0.0 0.3 1.7 LAM (Units: 2015 0.0 3.6	0.0 0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0	0.0 0.0 2.2 6.0 2050 0.0 6.2 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol	0.4 0.4 0. 1. sport and Av 2005 0. 2.4 0.0) interpolation, Report 2010 interpolation	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0	0.0 0.3 1.7 LAM (Units: 2015 0.0 3.6 0.0	0.0 0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0	0.0 0.0 2.2 6.0 2050 0.0 6.2 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG	0.4 0.4 0.5 1. sport and Av 2005 0. 2.2 0.0) interpolation, Report 2010 interpolation	0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.1	0.0 0.3 1.7 LAM (Units: 2015 0.0 3.6 0.0 0.0	0.0 0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0	0.0 0.0 2.2 6.0 2050 0.0 6.2 0.0 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel)	0.4 0.4 0.5 0. 1. sport and Av 2005 0. 0. 0. 0.) interpolation, Report 2010 2010 300 300 300 300 300 300	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.1	0.0 0.3 1.7 LAM (Units: 2015 0.0 3.6 0.0 0.1	0.0 0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.0 0.1	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0	0.0 0.0 2.2 6.0 2050 0.0 6.2 0.0 0.0 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity	0.4 0.4 0.5 1. sport and Av 2005 0. 0. 0. 0. 0.	() (iation, Report 2010 () () () () () () () () () () () () ()	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.1 0.0	0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0	0.0 0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.0	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen	0.4 0.1 0.2 0.3 1. sport and At 2005 0.4 0.4 0.4 0.0 0.4 0.4 0.4 0.4 0.4 0.4	(in the control of th	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.0	2030 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.0 0.1	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.2	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.0	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.0 0.5
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel	0.4 0.1 0.2 0.3 1. sport and Ar 2005 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	() (iation, Re. 2010 () () () () () () () () () () () () ()	0.0 0.0 0.2 1.4 gion 1 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.0 0.1 0.0 0.5	2030 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.0 0.1 0.0 0.6	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.2 0.0	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.0 0.0 1.1	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.0 0.5 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen	0.4 0.1 0.2 0.3 1. sport and At 2005 0.4 0.4 0.4 0.0 0.4 0.4 0.4 0.4 0.4 0.4	() (iation, Re. 2010 () () () () () () () () () () () () ()	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.0	2030 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.0 0.1	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.2	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.0	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.0 0.5
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total	0.4 0.1 0.1 0.2 1. 5port and Av 2005 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	7) 10 11 11 17 17 17 17 17 17 17 17 17 17 17	0.0 0.0 0.2 1.4 gion 1 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0 3.6	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.0 0.1 0.0 0.5	2030 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.0 0.1 0.0 0.6	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.2 0.0	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.0 0.0 1.1	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.0 0.5 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans	0.4 0.1 0.1 2005 0.1 2.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0	iation, Re 2010	0.0 0.0 0.2 1.4 gion 1 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0 3.6	0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 4.5	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.0 0.1 0.0 0.6 5.6	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.2 0.0 0.9 6.9	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.5 0.0 1.3 8.1
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans Fuel	0.4 0.1 0.1 2005 0.4 2.2 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1	iation, Re 2010	0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.3 3.6 gion	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.3 4.0 MEA (Units: 2015	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.0 0.4 4.5 EJ/y) 2020	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.0 0.1 0.0 0.6 5.6	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.2 0.0 0.9 6.9	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.5 0.0 1.3 8.1
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal)	0.4 0.1 0.1 2005 0.4 2.2. 0.1 0.0 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.	(iation, Report of the control of th	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.3 4.0 MEA (Units: 2015	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.0 0.4 4.5 EJ/y) 2020 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.1 0.0 0.6 5.6	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.2 0.0 0.9 6.9	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.5 0.0 1.3 8.1
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Gasoline	0.4 0.1 0.1 2005 0.4 2.2 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1	(iation, Report of the control of th	0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.3 3.6 gion	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.3 4.0 MEA (Units: 2015	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.0 0.4 4.5 EJ/y) 2020 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.0 0.1 0.0 0.6 5.6	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.2 0.0 0.9 6.9	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.5 0.0 1.3 8.1
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Gasoline Diesel	0.4 0.1 0.1 2005 0.4 2.2 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	viation, Re 2010 0 0 0 0 0 0 0 1 0 0 0 0 2 3 viation, Re 2010	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.3 4.0 MEA (Units: 2015	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.4 4.5 EJ/y) 2020 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.1 0.0 0.6 5.6	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.2 0.0 0.9 6.9	0.0 0.0 1.7 5.1 2045 0.0 6.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.5 0.0 1.3 8.1
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Gasoline	0.4 0.1 0.1 0.2 0.1 2005 0.1 0.1 0.1 0.1 0.1 0.2 0.1 0.1 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	viation, Re 2010 0 0 0 0 0 0 0 1 0 0 0 0 2 3 viation, Re 2010	0.0 0.0 0.2 1.4 gion 0.0 3.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.3 4.0 MEA (Units: 2015	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.4 4.5 EJ/y) 2020 0.0 4.5	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0 2025 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.1 0.0 5.6 2030 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.2 0.0 0.9 6.9	0.0 0.0 1.7 5.1 2045 0.0 0.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.0 0.5 0.0 1.3 8.1 2050 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Gasoline Diesel	0.4 0.1 0.1 2005 0.4 2.2 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	/iation, Re 2010)))))))))) iation, Re 2010))	0.0 0.0 0.2 1.4 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.3 3.6 gion	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.3 4.0 MEA (Units: 2015 0.0 0.0 0.0 0.3	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.4 4.5 EJ/y) 2020 0.0 4.5	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0 2025 0.0 4.4 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.1 0.0 0.6 5.6	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2 2035 0.0 0.0 5.3	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.2 0.0 0.9 6.9 2040 0.0 6.2	0.0 0.0 1.7 5.1 2045 0.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5 2045 0.0 0.0	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.5 0.0 1.3 8.1 2050 0.0 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Gasoline Diesel Bio-Methanol	0.4 0.1 0.1 2005 0.4 2.2 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	/iation, Re 2010	0.0 0.0 0.2 1.4 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.3 3.6 gion	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.1 0.0 0.0 0.3 4.0 MEA (Units: 2015 0.0 0.0 0.0	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.4 4.5 EJ/y) 2020 0.0 0.0 0.4 4.5	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0 2025 0.0 4.4 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.1 0.0 0.6 5.6 2030 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2 2035 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.2 0.0 0.9 6.9 2040 0.0 6.2 0.0	0.0 0.0 1.7 5.1 2045 0.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5 2045 0.0 0.0 6.7	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.5 0.0 1.3 8.1 2050 0.0 0.0 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Gasoline Diesel Bio-Methanol	0.4 0.1 0.1 2005 0.4 2.2 0.4 0.0 0.0 0.0 0.1 0.0 0.0 0.1 0.0 0.1 0.1	/iation, Re 2010	0.0 0.0 0.2 1.4 0.0 3.2 0.0 0.1 0.0 0.0 0.3 3.6 gion	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.0 0.1 0.0 0.3 4.0 MEA (Units: 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.4 4.5 EJ/y) 2020 0.0 0.0 4.2 0.0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.0 0.1 0.0 0.5 5.0 2025 0.0 4.5 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.1 0.0 0.6 5.6 2030 0.0 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2 2035 0.0 0.0 5.6 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.2 0.0 0.9 6.9 2040 0.0 6.2 0.0	0.0 0.0 1.7 5.1 2045 0.0 0.0 0.0 0.0 0.4 0.0 1.1 7.5 2045 0.0 0.0 6.7 0.0	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.5 0.0 1.3 8.1 2050 0.0 0.0 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Gasoline Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG	0.4 0.1 0.1 0.1 0.1 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// iation, Re 2010	0.0 0.0 0.2 1.4 0.0 3.2 0.0 0.1 0.0 0.0 0.3 3.6 gion 0.0 0.0 0.3 3.6	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.0 0.1 0.0 0.3 4.0 MEA (Units: 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.4 4.5 EJ/y) 2020 0.0 0.0 4.5	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.1 0.0 0.5 5.0 2025 0.0 0.0 4.5 0.0 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.1 0.0 0.6 5.6 2030 0.0 0.0 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2 2035 0.0 0.0 5.6 0.0 0.0 0.0	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.2 0.0 0.9 6.9 2040 0.0 0.0 6.2 0.0	0.0 0.0 1.7 5.1 2045 0.0 0.0 0.0 0.0 0.0 0.0 1.1 7.5 2045 0.0 0.0 6.7 0.0 0.0 0.0	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.5 0.0 1.3 8.1 2050 0.0 0.0 0.0 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Gasoline Diesel Bio-Methanol Grasoline Diesel Bio-Methanol Bio-Ethanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	0.4 0.4 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7	/iation, Re. 2010	0.0 0.0 0.2 1.4 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.3 3.6 gion 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.0 0.4 4.5 EJ/y) 2020 0.0 0.0 4.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.1 0.0 0.5 5.0 2025 0.0 0.0 4.5 0.0 0.0 0.0 0.0	2030 0.0 4.8 0.0 0.0 0.0 0.0 0.1 0.0 0.6 5.6 2030 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.8 6.2 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.2 0.0 0.9 6.9 2040 0.0 0.0 6.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 1.7 5.1 2045 0.0 0.0 0.0 0.0 0.0 0.1 1.1 7.5 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.5 0.0 1.3 8.1 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Gasoline Diesel Bio-Methanol Bio-Ethanol CNG Biofuel(Diesel) Electricity Hydrogen Jetfuel Total Fuel in Other Surface Transfuel Other (Coal) Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG	0.4 0.4 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7	viation, Re 2010	0.0 0.0 0.2 1.4 0.0 3.2 0.0 0.0 0.1 0.0 0.0 0.3 3.6 gion 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.3 1.7 LAM (Units: 2015 0.0 0.0 0.0 0.1 0.0 0.3 4.0 MEA (Units: 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.4 2.0 EJ/y) 2020 0.0 4.0 0.0 0.1 0.0 0.4 4.5 EJ/y) 2020 0.0 0.0 4.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.5 2.4 2025 0.0 4.4 0.0 0.0 0.1 0.0 0.5 5.0 2025 0.0 0.0 4.5 0.0 0.0 0.0	0.0 0.7 2.9 2030 0.0 4.8 0.0 0.0 0.0 0.1 0.0 0.6 5.6 2030 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 1.0 3.6 2035 0.0 5.3 0.0 0.0 0.0 0.1 0.0 0.8 6.2 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 1.3 4.3 2040 0.0 5.7 0.0 0.0 0.0 0.0 0.9 6.9 2040 0.0 0.0 6.2 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 1.7 5.1 2045 0.0 0.0 0.0 0.0 0.0 0.1 1.1 7.5 2045 0.0 0.0 6.7 0.0 0.0 0.0 0.0 0.0	0.0 0.0 2.2 6.0 0.0 6.2 0.0 0.0 0.5 0.0 1.3 8.1 2050 0.0 0.0 0.0 0.0 0.0

	2.0		4.5			C 4	7.0	0.0	0.4	40.2
Total	3.9	4.4	4.6	5.0	5.5	6.1	7.0	8.0	9.1	10.2
Fuel in Other Surface Tr	ansport and Avia	tion, Region I	MEXICO (Uni	ts: EJ/y)						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	1.2	1.3	1.4	1.5	1.6	1.8	2.0	2.2	2.3	2.5
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7
Total	5.7	6.4	6.8	7.4	8.3	9.4	10.8	12.4	14.2	16.0
Fuel in Other Surface Tr	ansport and Avia	tion. Region (PACIFIC (Unit	s: EJ/v)						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Gasoline	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	3.0	2.7	2.4	2.5	2.5	2.4	2.4	2.4	2.4	2.5
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
· · · · · · · · · · · · · · · · · · ·										
Electricity	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.9	0.8	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1
Total	3.9	3.6	3.6	3.6	3.7	3.6	3.6	3.7	3.7	3.8
Fuel in Other Surface Tr	ansport and Avia	tion, Region I	RUSSIA (Unit	s: EJ/y)						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.6	0.6	0.9	0.9	0.8	0.9	1.0	1.1	1.2	1.3
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
Electricity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.4	0.5	0.6	0.8	0.9	1.2	1.5	1.9	2.2	2.7
Total	5.8	5.6	6.1	6.3	6.5	6.8	7.3	7.9	8.5	9.1
Fuel in Other Surface Tr	onenest and Assia	tion Docion I	ICA /I Inita. F	164						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	6.9	6.3	6.3	6.4	6.5	6.5	6.5	6.3	6.4	6.6
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.6	0.6
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	3.5	3.4	3.5	3.7	4.0	4.1	4.4	4.6	4.9	5.1
				10.3	10.6	10.8	11.1	11.5	11.9	12.3
Total	10.4	9.7	10.0	10.3	10.0					
Total Fuel in Other Surface Tr					10.0					
						2030	2035	2040		2050
Fuel in Other Surface Tr	ansport and Avia	tion, Region \ 2010	WEUR (Units	EJ/y) 2020	2025	2030	2035		2045	2050
Fuel in Other Surface Tr Fuel Other (Coal)	ansport and Avia 2005 0.0	tion, Region \ 2010 0.0	WEUR (Units 2015 0.0	EJ/y) 2020 0.1	2025 0.1	2030 0.0	2035 0.0	0.0	2045 0.0	2050 0.0
Fuel in Other Surface Tr Fuel Other (Coal) Diesel	ransport and Avia 2005 0.0 7.8	tion, Region N 2010 0.0 7.1	WEUR (Units 2015 0.0 7.2	EJ/y) 2020 0.1 7.2	2025 0.1 7.1	2030 0.0 6.9	2035 0.0 7.1	0.0 7.3	2045 0.0 7.5	2050 0.0 7.7
Fuel in Other Surface Tr Fuel Other (Coal) Diesel Bio-Methanol	2005 0.0 7.8 0.0	tion, Region N 2010 0.0 7.1 0.0	WEUR (Units 2015 0.0 7.2 0.0	EJ/y) 2020 0.1 7.2 0.0	2025 0.1 7.1 0.0	2030 0.0 6.9 0.0	2035 0.0 7.1 0.0	0.0 7.3 0.0	2045 0.0 7.5 0.0	2050 0.0 7.7 0.0
Fuel in Other Surface Tr Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol	2005 0.0 7.8 0.0 0.0	2010 0.0 7.1 0.0 0.0	WEUR (Units 2015 0.0 7.2 0.0 0.0	2020 0.1 7.2 0.0 0.0	2025 0.1 7.1 0.0 0.0	2030 0.0 6.9 0.0 0.0	2035 0.0 7.1 0.0 0.0	0.0 7.3 0.0 0.0	2045 0.0 7.5 0.0 0.0	2050 0.0 7.7 0.0 0.0
Fuel in Other Surface Tr Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG	2005 0.0 7.8 0.0 0.0 0.0	2010 0.0 7.1 0.0 0.0 0.0	WEUR (Units 2015 0.0 7.2 0.0 0.0 0.0	2020 0.1 7.2 0.0 0.0 0.0	2025 0.1 7.1 0.0 0.0 0.0	2030 0.0 6.9 0.0 0.0	2035 0.0 7.1 0.0 0.0 0.0	0.0 7.3 0.0 0.0 0.0	2045 0.0 7.5 0.0 0.0 0.0	2050 0.0 7.7 0.0 0.0 0.0
Fuel in Other Surface Tr Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Electricity	2005 0.0 7.8 0.0 0.0 0.0 0.0	2010 0.0 7.1 0.0 0.0 0.0 0.0	WEUR (Units 2015 0.0 7.2 0.0 0.0 0.0 0.0	2020 0.1 7.2 0.0 0.0 0.0 0.0	2025 0.1 7.1 0.0 0.0 0.0 0.0	2030 0.0 6.9 0.0 0.0 0.0	2035 0.0 7.1 0.0 0.0 0.0 0.0	0.0 7.3 0.0 0.0 0.0 0.0	2045 0.0 7.5 0.0 0.0 0.0	2050 0.0 7.7 0.0 0.0 0.0 0.0
Fuel in Other Surface Tr Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Electricity Hydrogen	2005 0.0 7.8 0.0 0.0 0.0 0.0 0.1	2010 0.0 7.1 0.0 0.0 0.0 0.0 0.0	WEUR (Units 2015 0.0 7.2 0.0 0.0 0.0 0.1 0.0	0.1 7.2 0.0 0.0 0.0 0.0 0.0	2025 0.1 7.1 0.0 0.0 0.0 0.4 0.0	2030 0.0 6.9 0.0 0.0 0.0 0.6	2035 0.0 7.1 0.0 0.0 0.0 0.6 0.0	0.0 7.3 0.0 0.0 0.0 0.6 0.0	2045 0.0 7.5 0.0 0.0 0.0 0.7 0.0	2050 0.0 7.7 0.0 0.0 0.0 0.7 0.0
Fuel in Other Surface Tr Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol CNG Electricity	2005 0.0 7.8 0.0 0.0 0.0 0.0	2010 0.0 7.1 0.0 0.0 0.0 0.0	WEUR (Units 2015 0.0 7.2 0.0 0.0 0.0 0.0	2020 0.1 7.2 0.0 0.0 0.0 0.0	2025 0.1 7.1 0.0 0.0 0.0 0.0	2030 0.0 6.9 0.0 0.0 0.0	2035 0.0 7.1 0.0 0.0 0.0 0.0	0.0 7.3 0.0 0.0 0.0 0.0	2045 0.0 7.5 0.0 0.0 0.0	2050 0.0 7.7 0.0 0.0 0.0 0.7

Fuel for All Transport (EJ/Y)

Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.6	0.8	1.0	1.2	1.4	1.3	0.4	0.1	0.0	0.0
Jetfuels	10.2	10.7	12.4	14.6	17.1	19.7	22.8	26.4	30.6	34.9
Bio-Jetfuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Gasoline	35.0	38.2	40.9	42.1	42.5	41.6	40.6	39.4	36.6	32.1
Diesel	42.2	42.2	44.6	47.5	51.0	55.5	61.7	69.2	77.5	85.6
Methanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3
Bio-Methanol	0.0	0.1	0.7	1.2	1.9	2.6	3.3	3.4	3.4	2.5
Bio-Ethanol	0.5	1.4	2.4	3.3	3.7	4.0	3.9	4.4	5.1	4.9
Bio-Syngas CNG	0.0	0.0	0.1	0.2 1.3	0.2 1.8	0.2 2.4	0.3 2.8	0.3 3.2	0.2 3.8	0.1 4.4
Biofuel(Diesel)	0.4	0.7	1.1	1.4	1.6	1.2	1.4	1.3	1.4	1.3
Electricity	0.1	0.3	0.5	0.9	1.4	2.3	3.2	4.1	5.2	6.
Hydrogen	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.
total	89.4	95.1	104.6	113.7	123.0	131.3	140.8	152.5	164.4	172.
Forbit All Toront Doctor	AFRICA (III.)									
Fuels in All Transport, Region	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.
Jetfuels	0.3	0.4	0.5	0.6	0.8	1.1	1.5	2.2	3.0	4.3
Gasoline	0.9	1.2	1.5	1.8	2.0	2.1	2.1	2.1	1.9	1.0
Diesel	1.7	1.7	1.8	2.0	2.2	2.5	2.9	3.7	4.6	5.
Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.
Bio-Ethanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
CNG	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.
Electricity Hydrogen	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0. 0.
total	3.0	3.4	4.0	4.7	5.5	6.3	7.3	8.6	10.3	12.
totai	3.0	3.4	4.0	7.7	3.3	0.5	7.5	0.0	10.5	12.
Fuels in All Transport, Region Fuel	on ASIA (Units: 2005	EJ/y) 2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0
Jetfuels	0.0	0.0	1.3	1.7	2.2	2.7	3.2	3.7	4.2	4.
Gasoline	1.5	1.9	2.3	2.7	3.2	3.9	5.0	6.3	6.6	5.
Diesel	4.2	4.1	4.8	5.4	6.1	6.7	7.4	8.1	8.9	10.
Bio-Methanol	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.
Bio-Ethanol	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.
CNG	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.
Electricity	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.
total	6.4	7.0	8.6	10.3	12.2	14.2	16.8	19.6	21.8	22.
	6.4 on BRAZIL (Uni	7.0 ts: EJ/y)	8.6	10.3		14.2				
Fuels in All Transport, Regio	6.4 on BRAZIL (Uni 2005	7.0 ts: EJ/y) 2010	8.6 2015	10.3 2020	2025	14.2 2030	2035	2040	2045	2050
Fuels in All Transport, Regio Fuel Other (Coal)	6.4 on BRAZIL (Uni 2005 0.0	7.0 ts: EJ/y) 2010 0.0	8.6 2015 0.1	10.3 2020 0.1	2025 0.1	14.2 2030 0.2	2035 0.0	2040 0.0	2045 0.0	205 0
Fuels in All Transport, Regio Fuel Other (Coal) Jetfuels	6.4 on BRAZIL (Uni 2005 0.0 0.2	7.0 ts: EJ/y) 2010 0.0 0.2	8.6 2015 0.1 0.2	10.3 2020 0.1 0.2	2025 0.1 0.3	14.2 2030 0.2 0.4	2035 0.0 0.5	2040 0.0 0.7	2045 0.0 0.8	2050 0. 1.
Fuels in All Transport, Regio Fuel Other (Coal) Jetfuels Bio-Jetfuels	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0	7.0 ts: EJ/y) 2010 0.0 0.2 0.0	8.6 2015 0.1 0.2 0.0	10.3 2020 0.1 0.2 0.0	2025 0.1 0.3 0.0	14.2 2030 0.2 0.4 0.0	2035 0.0 0.5 0.0	2040 0.0 0.7 0.0	2045 0.0 0.8 0.0	2050 0.0 1.0
Fuels in All Transport, Regio Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9	8.6 2015 0.1 0.2 0.0 1.2	10.3 2020 0.1 0.2 0.0 1.1	2025 0.1 0.3 0.0 1.1	14.2 2030 0.2 0.4 0.0 1.3	2035 0.0 0.5 0.0 1.6	2040 0.0 0.7 0.0 1.7	2045 0.0 0.8 0.0 1.4	2050 0. 1. 0.
Fuels in All Transport, Regio Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0	7.0 ts: EJ/y) 2010 0.0 0.2 0.0	8.6 2015 0.1 0.2 0.0	10.3 2020 0.1 0.2 0.0	2025 0.1 0.3 0.0	14.2 2030 0.2 0.4 0.0	2035 0.0 0.5 0.0	2040 0.0 0.7 0.0	2045 0.0 0.8 0.0	2050 0. 1. 0. 1. 3.
Fuels in All Transport, Regio Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1	8.6 2015 0.1 0.2 0.0 1.2 1.2	10.3 2020 0.1 0.2 0.0 1.1 1.5	2025 0.1 0.3 0.0 1.1 1.8	14.2 2030 0.2 0.4 0.0 1.3 1.9	2035 0.0 0.5 0.0 1.6 2.1	2040 0.0 0.7 0.0 1.7 2.3	2045 0.0 0.8 0.0 1.4 2.8	2050 0. 1. 0. 1. 3.
Fuels in All Transport, Regio Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0	10.3 2020 0.1 0.2 0.0 1.1 1.5 0.0	2025 0.1 0.3 0.0 1.1 1.8 0.0	14.2 2030 0.2 0.4 0.0 1.3 1.9 0.0	2035 0.0 0.5 0.0 1.6 2.1 0.0	2040 0.0 0.7 0.0 1.7 2.3 0.0	2045 0.0 0.8 0.0 1.4 2.8 0.0	2050 0. 1. 0. 1. 3. 0.
Fuels in All Transport, Regio Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3	10.3 2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3	14.2 2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3	2050 0. 1. 0. 1. 3. 0. 0.
Fuels in All Transport, Regio Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0	2050 0. 1. 0. 1. 3. 0. 0.
Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.1	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3 0.0 0.1 0.1	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2	2050 0. 1. 0. 1. 3. 0. 0. 0. 0.
Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0 0.0 0.0	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0 0.0	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0 0.0	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.1 0.0	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1 0.1	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3 0.0 0.1 0.1 0.1	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1 0.1	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2 0.1 0.2 0.0	2050 0. 1. 0. 1. 3. 0. 0. 0. 0. 0.
Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.1	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3 0.0 0.1 0.1	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2	2050 0. 1. 0. 1. 3. 0. 0. 0. 0. 0.
Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0 0.0 0.0 2.4	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0 0.0 0.0 2.8	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.2	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.1 0.0	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1 0.1	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3 0.0 0.1 0.1 0.1	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1 0.1	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2 0.1 0.2 0.0	2050 0. 1. 0. 1. 3. 0. 0. 0. 0. 0.
Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0 0.0 0.0 2.4	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0 0.0 0.0 2.8	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.2	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.1 0.0	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1 0.1	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3 0.0 0.1 0.1 0.1	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1 0.1	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2 0.1 0.2 0.0	2050 0. 1. 0. 1. 3. 0. 0. 0. 0. 0.
Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0 0.0 2.4 on CANADA (U	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0 0.0 2.8 mits: EJ/y) 2010 0.0	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0 0.0 3.2	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.1 0.0 3.5	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1 0.1 0.0 3.9	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3 0.0 0.1 0.1 0.1	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1 0.0 5.0	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2 0.0 5.6	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2 0.1 0.2 0.0 5.9	2050 0. 1. 0. 1. 3. 0. 0. 0. 0. 0. 0. 0.
Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0 0.0 2.4 on CANADA (U 2005 0.0 0.2	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0 0.0 2.8 nits: EJ/y) 2010 0.0 0.2	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0 0.0 3.2 2015 0.0 0.3	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.1 0.0 3.5 2020 0.0 0.3	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1 0.1 0.0 3.9	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3 0.0 0.1 0.1 0.1 0.0 4.4	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1 0.1 0.0 5.0	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2 0.0 5.6	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2 0.1 0.2 0.0 5.9	2050 0. 1. 0. 1. 3. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0 0.0 2.4 on CANADA (U 2005 0.0 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0 0.0 2.8 mits: EJ/y) 2010 0.0 0.2	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0 0.0 3.2 2015 0.0 0.3 0.0	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.0 3.5 2020 0.0 0.3 0.0	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1 0.0 3.9 2025 0.0 0.3 0.0	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.1 0.1 0.1 0.4 4.4 2030 0.0 0.3 0.0	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1 0.0 5.0 2035 0.0 0.4	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2 0.0 5.6	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2 0.1 0.2 0.0 5.9 2045 0.0 0.4 0.0	22. 205CC 0.1 1. 0.0. 1. 3. 0.0. 0.0. 0.0. 0.0. 0
Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Ethanol Bio-Ethanol Bio-Ethanol Fuels (Diesel) Flectricity Hydrogen total Fuels in All Transport, Region	6.4 on BRAZIL (Uni 2005 0.0 0.2 0.0 0.9 1.0 0.0 0.2 0.0 0.1 0.0 0.0 0.0 2.4 on CANADA (U 2005 0.0 0.2	7.0 ts: EJ/y) 2010 0.0 0.2 0.0 0.9 1.1 0.0 0.4 0.0 0.1 0.0 0.0 2.8 nits: EJ/y) 2010 0.0 0.2	8.6 2015 0.1 0.2 0.0 1.2 1.2 0.0 0.3 0.0 0.1 0.0 0.0 3.2 2015 0.0 0.3	2020 0.1 0.2 0.0 1.1 1.5 0.0 0.3 0.0 0.1 0.1 0.0 3.5 2020 0.0 0.3	2025 0.1 0.3 0.0 1.1 1.8 0.0 0.3 0.0 0.1 0.1 0.1 0.0 3.9 2025 0.0 0.3	2030 0.2 0.4 0.0 1.3 1.9 0.0 0.3 0.0 0.1 0.1 0.1 0.0 4.4	2035 0.0 0.5 0.0 1.6 2.1 0.0 0.4 0.0 0.1 0.1 0.1 0.0 5.0	2040 0.0 0.7 0.0 1.7 2.3 0.0 0.4 0.0 0.2 0.1 0.2 0.0 5.6	2045 0.0 0.8 0.0 1.4 2.8 0.0 0.3 0.0 0.2 0.1 0.2 0.0 5.9	2050 0. 1. 0. 1. 3. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

Bio-Ethanol										
	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.
CNG	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.
Hydrogen	0.0 2.2	0.0	0.0	0.0 2.4	0.0 2.4	0.0 2.3	0.0 2.2	0.0 2.2	0.0	0.
total	2.2	2.2	2.3	2.4	2.4	2.3	2.2	2.2	2.2	2.
Fuels in All Transport, Region	n CHINA (Units	: EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.6	0.6	0.6	0.7	0.7	0.7	0.2	0.1	0.0	0.
Jetfuels	0.6	0.7	1.1	1.5	2.1	2.6	3.1	3.6	4.1	4.
Gasoline	0.6	0.9	1.4	2.0	3.0	4.3	5.7	7.0	7.8	7.
Diesel Methanol	3.7 0.0	4.7 0.0	5.7 0.0	6.6	7.6 0.0	8.3 0.0	9.1	9.8	10.6 0.1	11 0
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0
Bio-Ethanol	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.9	0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0
CNG	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0
Electricity	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.7	0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0
total	5.6	7.1	9.1	11.4	14.0	16.9	19.6	22.5	25.2	25
Fuels in All Transport, Region	n EELID (Linite:	E1/v)								
rueis in Ali Transport, Regioi Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Jetfuels	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0
Gasoline	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0
Diesel	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
total	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1
Fuels in All Transport, Region			2045	2020	2025	2020	2025	2040	2045	205
Fuel Other (Coal)	2005 0.0	2010 0.0	2015 0.1	2020 0.1	2025 0.1	2030 0.0	2035 0.0	2040 0.0	2045 0.0	205 0
Jetfuels	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.5	0
Gasoline	0.6	0.7	0.1	1.0	1.1	1.3	1.3	1.3	1.0	0
Diesel	1.5	1.6	1.8	2.0	2.2	2.4	2.6	3.0	3.5	4
Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
										0
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	
	0.0	0.0	0.0		0.0	0.1	0.1	0.1 0.1	0.1	0
Bio-Ethanol	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.1 0.1 0.0	0.1 0.1 0.0	0.1 0.1 0.0		0
Bio-Ethanol Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1 0.1	0 0 0
Bio-Ethanol Bio-Syngas CNG	0.0 0.0	0.0	0.0	0.0	0.0 0.0	0.1 0.0	0.1 0.0	0.1 0.0	0.1 0.1 0.0	0 0 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.2	0.1 0.1 0.0 0.2	0 0 0 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0	0.1 0.0 0.1 0.1	0.1 0.0 0.1 0.1	0.1 0.0 0.2 0.1	0.1 0.1 0.0 0.2 0.1	0 0 0 0 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.1	0.1 0.0 0.1 0.1	0.1 0.0 0.1 0.1 0.2	0.1 0.0 0.2 0.1 0.3	0.1 0.1 0.0 0.2 0.1	0 0 0 0 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total	0.0 0.0 0.0 0.0 0.0 0.0 2.2	0.0 0.0 0.0 0.0 0.0 0.0 2.5	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.1	0.1 0.0 0.1 0.1 0.1	0.1 0.0 0.1 0.1 0.2 0.0	0.1 0.0 0.2 0.1 0.3 0.0	0.1 0.1 0.0 0.2 0.1 0.3	0 0 0 0 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region	0.0 0.0 0.0 0.0 0.0 0.0 2.2	0.0 0.0 0.0 0.0 0.0 0.0 2.5	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.1	0.1 0.0 0.1 0.1 0.1	0.1 0.0 0.1 0.1 0.2 0.0	0.1 0.0 0.2 0.1 0.3 0.0	0.1 0.1 0.0 0.2 0.1 0.3	0 0 0 0 0 0 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal)	0.0 0.0 0.0 0.0 0.0 0.0 2.2	0.0 0.0 0.0 0.0 0.0 0.0 2.5	0.0 0.0 0.0 0.0 0.0 0.0 2.9	0.0 0.0 0.0 0.0 0.0 0.0 3.4	0.0 0.0 0.1 0.0 0.1 0.0 3.9	0.1 0.0 0.1 0.1 0.1 0.0 4.5	0.1 0.0 0.1 0.1 0.2 0.0 5.0	0.1 0.0 0.2 0.1 0.3 0.0 5.5	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9	0 0 0 0 0 0 0 6
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels	0.0 0.0 0.0 0.0 0.0 0.0 2.2 n INDIA (Units: 2005	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5	0.1 0.0 0.1 0.1 0.1 0.0 4.5 2030 0.0	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0	0.1 0.0 0.2 0.1 0.3 0.0 5.5	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7	0 0 0 0 0 0 0 6
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels	0.0 0.0 0.0 0.0 0.0 0.0 2.2 n INDIA (Units: 2005 0.0 0.1	0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.2	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5	0.1 0.0 0.1 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0	0 0 0 0 0 0 6 205 0 2
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline	0.0 0.0 0.0 0.0 0.0 0.0 2.2 n INDIA (Units: 2005 0.0 0.1 0.0 0.3	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.2 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0	0.1 0.0 0.1 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2	0 0 0 0 0 0 6 205 0 2
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel	0.0 0.0 0.0 0.0 0.0 0.0 2.2 INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0	0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.2 0.0 0.5 1.2	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5	0.1 0.0 0.1 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5	00 00 00 00 00 00 66 205 00 00 00 00 00 00 00 00 00 00 00 00 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol	0.0 0.0 0.0 0.0 0.0 0.0 2.2 INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0 0.0	0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.2 0.0 0.5 1.2	0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1 0.8	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9	0.1 0.0 0.1 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol	0.0 0.0 0.0 0.0 0.0 0.0 2.2 INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.2 0.0 0.5 1.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0	0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1 0.8 0.0	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1	00 00 00 00 00 00 66 2055 00 22 00 33 22 00
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas	0.0 0.0 0.0 0.0 0.0 0.0 2.2 INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.2 0.0 0.5 1.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0	0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1 0.8 0.0	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5 0.0	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.8 0.0	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0	00 00 00 00 00 00 66 205 00 22 00 33 22 00
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG	0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.0 0.0 0.1	0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2	0.0 0.0 0.0 0.0 0.0 3.4 2020 0.4 0.0 1.1 0.8 0.0 0.3 0.0	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.7 0.0 1.7 1.2 0.0 0.5 0.0	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.6 0.0	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.8 0.0	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0	00 00 00 00 00 00 66 2055 00 22 00 00 11 00 00 00 00 00 00 00 00 00 00
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel)	0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2 0.0	0.0 0.0 0.0 0.0 0.0 3.4 2020 0.4 0.0 1.1 0.8 0.0 0.3 0.0	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0 0.3 0.2	0.1 0.0 0.1 0.1 0.1 0.0 4.5 2030 0.7 0.0 1.7 1.2 0.0 0.5 0.0 0.3	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.6 0.0 0.4	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.8 0.0	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0 0.7	00 00 00 00 00 00 66 2055 00 22 00 00 00 00 00 00 00 00 00 00 00
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity	0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2 0.0 0.1	0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1 0.8 0.0 0.3 0.0 0.2	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0 0.3 0.2 0.1	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5 0.0 0.3 0.3	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.6 0.0 0.4 0.4	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.8 0.0 0.6 0.5	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0 0.7 0.6 0.2	00 00 00 00 00 00 66 2055 00 22 00 00 00 00 00 00 00 00 00 00 00
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2 0.0 0.1 0.2 0.0	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.4 0.0 1.1 0.8 0.0 0.3 0.0 0.2 0.2	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0 0.3 0.2 0.1	0.1 0.0 0.1 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5 0.0 0.3 0.3 0.1	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.6 0.0 0.4 0.4 0.1	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.8 0.0 0.6 0.5	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0 0.7 0.6 0.2 0.0	00 00 00 00 00 00 00 22 20 00 00 00 00 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2 0.0 0.1	0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1 0.8 0.0 0.3 0.0 0.2	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0 0.3 0.2 0.1	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5 0.0 0.3 0.3	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.6 0.0 0.4 0.4	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.8 0.0 0.6 0.5	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0 0.7 0.6 0.2	00 00 00 00 00 00 00 22 20 00 00 00 00 0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region	0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005) 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.1 0.0 0.0 0.0 2.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2 0.0 0.1 0.2 0.0 0.2 0.0 0.3	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.4 0.0 1.1 0.8 0.0 0.3 0.0 0.2 0.2 0.0 0.3	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0 0.3 0.2 0.1 0.0 0.3	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5 0.0 0.3 0.3 0.1 0.0	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.6 0.0 0.4 0.4 0.1 0.0 6.1	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.8 0.0 0.0 1.3 0.0 2.5 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0 0.7 0.6 0.2 0.0 10.1	00 00 00 00 00 00 22 00 03 33 22 00 00 00 00 00 00 00 00 00 00 00 00
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuels in All Transport, Region	0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005) 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.1 0.0 0.0 0.0 2.0	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2 0.0 0.1 0.2 0.0 2.5	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1 0.8 0.0 0.3 0.0 0.2 0.2 0.0 0.3	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0 3.8	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5 0.0 0.3 0.3 0.1 0.0	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.4 0.4 0.1 0.0 6.1	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.6 0.5 0.2 0.0 7.9	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0 0.7 0.6 0.2 0.0 10.1	00 00 00 00 00 00 22 00 03 33 22 00 00 00 00 00 00 00 00 00 00 00 00
Bio-Methanol Bio-Ethanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region	0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005) 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.0 0.1 0.0 0.0 2.0	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2 0.0 0.1 0.2 0.0 0.2 0.0	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.4 0.0 1.1 0.8 0.0 0.3 0.0 0.2 0.2 0.0 0.0	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0 0.3 0.2 0.1 0.0	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5 0.0 0.3 0.1 0.0 4.8	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.4 0.4 0.1 0.0 6.1	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.8 0.0 0.6 0.5 0.2 0.0 7.9	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0 0.7 0.6 0.2 0.0 10.1	00 00 00 00 00 00 22 00 33 22 00 00 00 00 00 00 12 20 50 10 10 10 10 10 10 10 10 10 10 10 10 10
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Region Fuels	0.0 0.0 0.0 0.0 0.0 0.0 2.2 In INDIA (Units: 2005) 0.0 0.1 0.0 0.3 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 2.5 EJ/y) 2010 0.0 0.5 1.2 0.0 0.0 0.1 0.0 0.0 0.0 2.0	0.0 0.0 0.0 0.0 0.0 0.0 2.9 2015 0.0 0.3 0.0 0.8 0.9 0.0 0.2 0.0 0.1 0.2 0.0 2.5	0.0 0.0 0.0 0.0 0.0 0.0 3.4 2020 0.0 0.4 0.0 1.1 0.8 0.0 0.3 0.0 0.2 0.2 0.0 0.3	0.0 0.0 0.1 0.0 0.1 0.0 3.9 2025 0.0 0.5 0.0 1.5 0.9 0.0 0.4 0.0 3.8	0.1 0.0 0.1 0.1 0.0 4.5 2030 0.0 0.7 0.0 1.7 1.2 0.0 0.5 0.0 0.3 0.3 0.1 0.0	0.1 0.0 0.1 0.1 0.2 0.0 5.0 2035 0.0 1.0 0.0 2.0 1.5 0.0 0.4 0.4 0.1 0.0 6.1	0.1 0.0 0.2 0.1 0.3 0.0 5.5 2040 0.0 1.3 0.0 2.5 2.0 0.0 0.6 0.5 0.2 0.0 7.9	0.1 0.1 0.0 0.2 0.1 0.3 0.0 5.9 2045 0.0 1.7 0.0 3.2 2.5 0.1 1.0 0.0 0.7 0.6 0.2 0.0 10.1	00 00 00 00 00 00 00 22 00 00 00 00 00 0

Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2
Bio-Ethanol CNG	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.1
Biofuel(Diesel)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
total	4.2	4.7	5.4	6.2	7.0	7.7	8.7	9.6	10.4	11.3
			J	0.2	7.0	, , ,	0.7	3.0	2011	11.0
Fuels in All Transport, Reg	gion MEA (Units	: EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuels	0.5	0.5	0.6	0.7	0.9	1.1	1.3	1.6	2.0	2.5
Gasoline	1.0	1.2	1.5	1.7	1.9	2.0	2.1	1.9	1.5	1.1
Diesel	3.5	3.9	4.0	4.2	4.6	5.1	5.7	6.5	7.3	8.2
Bio-Methanol Bio-Ethanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2 0.1	0.1
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
total	5.0	5.7	6.2	6.8	7.6	8.5	9.5	10.5	11.5	12.6
	_									
Fuels in All Transport, Reg	•									
Fuel Other (Coal)	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal) Jetfuels	0.0 0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gasoline	0.1	0.1	0.2	1.0	1.1	1.2	1.3	1.3	1.1	0.7
Diesel	1.2	1.3	1.4	1.5	1.7	1.8	2.1	2.3	2.7	3.1
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1
Bio-Ethanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Electricity	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
total	1.9	2.2	2.5	2.8	3.2	3.6	4.2	4.6	4.9	5.1
Fuels in All Transport, Reg	gion PACIFIC (Un	its: FI/v)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Fuel Other (Coal)			2015 0.0	2020 0.1	2025 0.1	2030 0.0	2035 0.0	2040 0.0	2045 0.0	2050 0.0
	2005	2010								
Other (Coal) Jetfuels Bio-Jetfuels	2005 0.0 0.9 0.0	0.0 0.8 0.0	0.0 0.9 0.0	0.1 0.9 0.0	0.1 1.0 0.0	0.0 1.0 0.0	0.0 1.0 0.0	0.0 1.1 0.0	0.0 1.1 0.0	0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline	2005 0.0 0.9 0.0 3.0	0.0 0.8 0.0 3.2	0.0 0.9 0.0 3.1	0.1 0.9 0.0 2.7	0.1 1.0 0.0 2.3	0.0 1.0 0.0 1.8	0.0 1.0 0.0 1.5	0.0 1.1 0.0 1.3	0.0 1.1 0.0 1.1	0.0 1.1 0.0 1.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel	2005 0.0 0.9 0.0 3.0 3.4	0.0 0.8 0.0 3.2 3.1	0.0 0.9 0.0 3.1 2.7	0.1 0.9 0.0 2.7 2.7	0.1 1.0 0.0 2.3 2.7	0.0 1.0 0.0 1.8 2.8	0.0 1.0 0.0 1.5 2.9	0.0 1.1 0.0 1.3 3.1	0.0 1.1 0.0 1.1 3.3	0.0 1.1 0.0 1.0 3.4
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol	2005 0.0 0.9 0.0 3.0 3.4 0.0	0.0 0.8 0.0 3.2 3.1 0.0	0.0 0.9 0.0 3.1 2.7 0.2	0.1 0.9 0.0 2.7 2.7 0.3	0.1 1.0 0.0 2.3 2.7 0.3	0.0 1.0 0.0 1.8 2.8 0.2	0.0 1.0 0.0 1.5 2.9 0.2	0.0 1.1 0.0 1.3 3.1	0.0 1.1 0.0 1.1 3.3 0.1	0.0 1.1 0.0 1.0 3.4 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol	2005 0.0 0.9 0.0 3.0 3.4 0.0	0.0 0.8 0.0 3.2 3.1 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2	0.1 0.9 0.0 2.7 2.7 0.3 0.2	0.1 1.0 0.0 2.3 2.7 0.3	0.0 1.0 0.0 1.8 2.8 0.2 0.3	0.0 1.0 0.0 1.5 2.9 0.2	0.0 1.1 0.0 1.3 3.1 0.1	0.0 1.1 0.0 1.1 3.3 0.1	0.0 1.1 0.0 1.0 3.4 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0	0.0 0.8 0.0 3.2 3.1 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.2	0.1 0.9 0.0 2.7 2.7 0.3 0.2	0.1 1.0 0.0 2.3 2.7 0.3 0.3	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0	0.0 1.0 0.0 1.5 2.9 0.2 0.2	0.0 1.1 0.0 1.3 3.1 0.1 0.1	0.0 1.1 0.0 1.1 3.3 0.1 0.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.2 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0	0.0 1.0 0.0 1.5 2.9 0.2 0.2 0.0	0.0 1.1 0.0 1.3 3.1 0.1 0.1 0.0	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.0 0.2
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.2 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0	0.0 1.0 0.0 1.5 2.9 0.2 0.2 0.0	0.0 1.1 0.0 1.3 3.1 0.1 0.1 0.0	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.2 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.2 0.0 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.1 0.0 0.1	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.0 0.2 0.1
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.3	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.9 0.0 3.1 2.7 0.2 0.2 0.0 0.0 0.1	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.0 0.1	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.2 0.0 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.0 0.2 0.1
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 7.2 its: EJ/y)	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.0 0.1 0.1 0.0 7.3	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2 0.1	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 7.2 its: EJ/y) 2010	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.0 0.1 0.1 0.0 7.3	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2 0.1 0.0 7.1	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 7.2 its: EJ/y) 2010 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2 0.1 0.0 7.1	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.1 0.2 0.0 6.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005 0.0 0.4	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.2 its: EJ/y) 2010 0.0 0.5	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2 2015 0.0 0.6	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.0 0.1 0.1 0.0 7.3	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2 0.1 0.0 7.1	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 7.2 its: EJ/y) 2010 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2 0.1 0.0 7.1	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.1 0.2 0.0 6.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005 0.0 0.4 1.2	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2 2015 0.0 0.6 1.5	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2 0.1 0.0 7.1	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.2 0.0 6.2 2040 0.0 1.9	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline Diesel	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2 2015 0.0 0.6 1.5	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 1.9	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline Diesel Methanol	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 its: EJ/y) 2010 0.5 1.4 0.6 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2 2015 0.0 0.6 1.5 0.9	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 1.9 0.0	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2 0.0 0.1 0.2
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Regulation All T	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 its: EJ/y) 2010 0.5 1.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 0.1 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.8 1.7 0.9 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0 0.1 0.1 0.1	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 1.9 0.0 0.1 0.2 0.0	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2 0.0 0.1 0.2 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Regulation of the Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Syngas CNG	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 its: EJ/y) 2010 0.5 1.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.1 3.3 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 1.9 0.0 0.1 0.2 0.0 0.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2 0.0 0.1 0.2 0.0 0.2
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Regulation of the Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Syngas CNG Biofuel(Diesel)	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 its: EJ/y) 2010 0.0 0.5 1.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 0.1 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 0.0 0.1 0.1 0.1 0.0 0.1 0.1 0.0	0.0 1.1 0.0 1.1 3.3 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Regulation of the Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 its: EJ/y) 2010 0.0 0.5 1.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 0.0 0.1 0.1 0.1 0.1 0.0 0.1 0.1 0.1 0.0 0.1	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 1.9 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 0.2 0.1 0.2 0.0 0.2 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Regulation of the Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 0.6 0.0 0.4 1.2 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 its: EJ/y) 2010 0.0 0.5 1.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0 0.1 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 0.2 0.0 0.2 0.0 0.2 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Regulation of the Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2 its: EJ/y) 2010 0.0 0.5 1.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 0.0 0.1 0.1 0.1 0.1 0.0 0.1 0.1 0.1 0.0 0.1	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 1.9 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 0.2 0.1 0.2 0.0 0.2 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005 0.0 0.4 1.2 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.2 its: EJ/y) 2010 0.5 1.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0 0.1 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 0.2 0.0 0.2 0.0 0.2 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Regulation of the Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005 0.0 0.4 1.2 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.2 its: EJ/y) 2010 0.5 1.4 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0 0.1 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.1 0.2 0.0	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 0.2 0.0 0.2 0.0
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 0.0 7.2 2015 0.0 0.6 1.5 0.9 0.0 0.0 0.0 0.0 0.0 3.2	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0 3.9	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0 0.1 0.1 0.0 0.1 0.1 0.0 5.3	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 1.9 0.0 0.1 0.2 0.0 0.1 0.2 0.0 0.5.8	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 6.4
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 0.0 7.2 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 3.2	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.8 1.7 0.9 0.0 0.0 0.0 0.0 0.0 3.5	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0 3.9	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.4 4.4	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.1 0.0 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0 0.1 0.1 0.1 0.0 5.3	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.2 0.1 0.2 0.0 6.1 2045 0.0 2.2 1.0 1.9 0.0 0.1 0.2 0.0 0.1 0.2 0.0 5.8	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.0 2.7 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 6.4
Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline Diesel Methanol Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen total	2005 0.0 0.9 0.0 3.0 3.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.3 gion RUSSIA (Un 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.8 0.0 3.2 3.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.9 0.0 3.1 2.7 0.2 0.0 0.0 0.1 0.0 0.0 7.2 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.1 0.9 0.0 2.7 2.7 0.3 0.2 0.0 0.1 0.1 0.0 7.3 2020 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.1 1.0 0.0 2.3 2.7 0.3 0.3 0.0 0.1 0.2 0.1 0.0 7.1 2025 0.0 0.9 1.8 0.8 0.0 0.0 0.0 0.0 0.0 0.0 3.9 2025 0.0	0.0 1.0 0.0 1.8 2.8 0.2 0.3 0.0 0.1 0.1 0.2 0.0 6.6 2030 0.0 1.2 1.8 0.9 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.4 4.4 2030 0.0	0.0 1.0 0.0 1.5 2.9 0.2 0.0 0.1 0.1 0.2 0.0 6.3 2035 0.0 1.5 1.7 1.1 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.0 1.1 0.0 1.3 3.1 0.1 0.1 0.0 0.1 0.1 0.2 0.0 6.2 2040 0.0 1.9 1.4 1.4 0.0 0.1 0.1 0.0 0.1 0.1 0.0 5.3	0.0 1.1 0.0 1.1 3.3 0.1 0.1 0.0 0.2 0.1 0.2 0.0 6.1 2045 0.0 0.1 0.2 0.0 0.1 0.2 0.0 5.8	0.0 1.1 0.0 1.0 3.4 0.0 0.0 0.2 0.1 0.3 0.0 6.0 2050 0.7 2.2 0.0 0.1 0.2 0.0 0.2 0.0 6.4

Diesel	6.9	6.3	6.5	6.8	7.2	7.6	8.7	10.2	11.5	12.4
Bio-Methanol	0.0	0.0	0.1	0.3	0.5	0.8	1.1	0.9	0.7	0.6
Bio-Ethanol	0.3	0.8	1.1	1.5	1.4	1.1	0.8	1.1	1.2	1.4
Bio-Syngas	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.1	0.3	0.5	0.7	0.7	0.7	0.7	0.8
Biofuel(Diesel)	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.7	0.8	0.8
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
total	27.3	27.3	28.1	28.6	28.6	27.4	25.8	24.9	24.6	24.7
Fuels in All Transport, Re	gion WEUR (Unit	s: EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
	0.0	0.0		0.1	0.1	0.0		0.0	0.0	
Jetfuels	2.2	2.3	2.6	2.8	3.0	3.2	3.4	3.6	3.7	3.9
Jetfuels	2.2	2.3	2.6	2.8	3.0	3.2	3.4	3.6	3.7	3.9
Jetfuels Gasoline	2.2 5.4	2.3 6.2	2.6 6.7	2.8 6.4	3.0 5.7	3.2 4.5	3.4 3.8	3.6 3.4	3.7 2.7	3.9 2.6
Jetfuels Gasoline Diesel	2.2 5.4 9.6	2.3 6.2 8.4	2.6 6.7 8.1	2.8 6.4 7.8	3.0 5.7 7.6	3.2 4.5 8.1	3.4 3.8 8.8	3.6 3.4 9.2	3.7 2.7 9.6	3.9 2.6 9.6
Jetfuels Gasoline Diesel Bio-Methanol	2.2 5.4 9.6 0.0	2.3 6.2 8.4 0.0	2.6 6.7 8.1 0.1	2.8 6.4 7.8 0.2	3.0 5.7 7.6 0.3	3.2 4.5 8.1 0.5	3.4 3.8 8.8 0.5	3.6 3.4 9.2 0.4	3.7 2.7 9.6 0.3	3.9 2.6 9.6 0.3
Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol	2.2 5.4 9.6 0.0 0.0	2.3 6.2 8.4 0.0 0.1	2.6 6.7 8.1 0.1 0.2	2.8 6.4 7.8 0.2 0.4	3.0 5.7 7.6 0.3 0.6	3.2 4.5 8.1 0.5 0.7	3.4 3.8 8.8 0.5 0.6	3.6 3.4 9.2 0.4 0.3	3.7 2.7 9.6 0.3 0.4	3.9 2.6 9.6 0.3 0.5
Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas	2.2 5.4 9.6 0.0 0.0	2.3 6.2 8.4 0.0 0.1 0.0	2.6 6.7 8.1 0.1 0.2 0.0	2.8 6.4 7.8 0.2 0.4 0.0	3.0 5.7 7.6 0.3 0.6 0.0	3.2 4.5 8.1 0.5 0.7	3.4 3.8 8.8 0.5 0.6 0.0	3.6 3.4 9.2 0.4 0.3 0.0	3.7 2.7 9.6 0.3 0.4 0.0	3.9 2.6 9.6 0.3 0.5
Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG	2.2 5.4 9.6 0.0 0.0 0.0	2.3 6.2 8.4 0.0 0.1 0.0	2.6 6.7 8.1 0.1 0.2 0.0	2.8 6.4 7.8 0.2 0.4 0.0	3.0 5.7 7.6 0.3 0.6 0.0	3.2 4.5 8.1 0.5 0.7 0.0	3.4 3.8 8.8 0.5 0.6 0.0	3.6 3.4 9.2 0.4 0.3 0.0	3.7 2.7 9.6 0.3 0.4 0.0	3.9 2.6 9.6 0.3 0.5 0.0
Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	2.2 5.4 9.6 0.0 0.0 0.0 0.0 0.0	2.3 6.2 8.4 0.0 0.1 0.0 0.0 0.0	2.6 6.7 8.1 0.1 0.2 0.0 0.1	2.8 6.4 7.8 0.2 0.4 0.0 0.2	3.0 5.7 7.6 0.3 0.6 0.0 0.3 0.9	3.2 4.5 8.1 0.5 0.7 0.0 0.4 0.4	3.4 3.8 8.8 0.5 0.6 0.0 0.5	3.6 3.4 9.2 0.4 0.3 0.0 0.6 0.2	3.7 2.7 9.6 0.3 0.4 0.0 0.8	3.9 2.6 9.6 0.3 0.5 0.0 1.0

Technology Mix (billion v-km/y)

Technology Mix of Milea	age for Cars (Unit	s: billion v-ki	п/у)							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	22	61	113	171	234	308	368	442
Hydrogen Fuel Cell	0	0	8	23	49	80	110	126	133	117
Hydrogen Hybrid	0	0	31	68	147	229	264	286	282	270
Gas Fuel Hybrid	0	0	99	208	329	463	610	772	952	1150
Gas Fuel ICEV	51	104	214	335	469	617	673	740	762	755
Liquid Fuel Plug-in	0	0	94	199	316	447	575	720	883	1077
Liquid Fuel Hybrid	11	80	333	599	903	1249	1643	2091	2602	3184
Liquid Fuel ICEV	10652	11788	12930	13941	14919	16097	17865	20067	22522	24181
Total	10714	11972	13732	15436	17246	19353	21973	25110	28503	31175
Technology Mix of Milea	age for Cars, Regi	ion AFRICA (L	Jnits: billion v	/-km/y)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	1	4	9	13	18	24	24	24
Hydrogen Fuel Cell	0	0	1	4	9	13	14	12	10	9
Hydrogen Hybrid	0	0	3	5	9	12	16	20	18	15
Gas Fuel Hybrid	0	0	3	5	9	12	16	20	25	30
Gas Fuel ICEV	1	3	6	10	13	17	22	27	23	20
Liquid Fuel Plug-in	0	0	3	7	12	17	22	28	35	43
Liquid Fuel Hybrid	0	2	9	17	25	35	46	58	73	89
Liquid Fuel ICEV	222	282	355	444	532	599	684	809	1036	1344
Total	223	288	381	498	617	719	838	999	1244	1574
Technology Mix of Milea	age for Cars, Regi	on ASIA (Uni	ts: billion v-k	m/y)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	2	8	15	24	33	43	55	68
Hydrogen Fuel Cell	0	0	2	3	7	14	22	31	36	31
Hydrogen Hybrid	0	0	5	10	16	22	29	37	45	39
Gas Fuel Hybrid	0	0	5	10	16	22	29	37	45	55
Gas Fuel ICEV	8	15	21	28	36	44	53	64	75	65
Liquid Fuel Plug-in	0	0	6	13	21	30	40	51	63	77
Liquid Fuel Hybrid	0	4	17	31	46	63	83	106	132	162
Liquid Fuel ICEV	397	494	627	793	990	1287	1755	2399	3040	3448
Total	404	512	684	896	1147	1506	2045	2768	3492	3945
Technology Mix of Milea	age for Cars, Regi	ion BRAZIL (U	nits: billion v	-km/y)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	1	2	3	5	7	12	14	16
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	0	0
Hydrogen Hybrid	0	0	0	3	6	9	13	17	15	13
Gas Fuel Hybrid	0	0	3	6	9	13	17	22	27	33
Gas Fuel ICEV	10	16	20	25	30	36	43	50	43	37
Liquid Fuel Plug-in	0	0	4	8	13	18	24	30	38	46
Liquid Fuel Hybrid	0	3	11	19	29	39	51	65	81	99

Liquid Fuel ICEV	301	372	451	493	552	649	780	940	1053	1076
Total	311	390	490	555	642	770	935	1136	1270	1319
Technology Mix of Mileag	e for Cars, Regio	on CANADA	(Units: billior	v-km/y)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	0	2	6	10	9	10	10	14
Hydrogen Fuel Cell	0	0	0	1	4	6	5	4	4	3
Hydrogen Hybrid	0	0	3	6	9	13 13	17 17	15 22	13 27	11 33
Gas Fuel Hybrid Gas Fuel ICEV	0	1	4	7	10	14	12	11	9	8
Liquid Fuel Plug-in	0	0	3	7	11	16	21	26	32	39
Liquid Fuel Hybrid	0	3	11	18	27	37	48	61	76	93
Liquid Fuel ICEV	313	329	341	351	351	349	360	374	384	387
Total	314	332	365	398	429	457	490	522	555	588
Technology Mix of Mileag	e for Cars. Regio	on CHINA (U	nits: billion v	-km/v)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	2	6	12	18	24	32	41	50
Hydrogen Fuel Cell	0	0	2	3	8	14	21	28	36	31
Hydrogen Hybrid	0	0	3	6	10	13	18	22	28	33
Gas Fuel Hybrid Gas Fuel ICEV	0	0	3 7	6 10	10 14	13 18	18 23	22 28	28 34	33 30
Liquid Fuel Plug-in	0	0	4	10	15	22	29	37	46	56
Liquid Fuel Hybrid	0	2	11	19	30	41	54	69	86	106
Liquid Fuel ICEV	213	305	457	669	963	1402	1918	2519	3134	3340
Total	213	310	488	730	1061	1542	2105	2759	3433	3680
Technology Mix of Mileag	e for Cars Region	on FFLIR (LIn	its: billion v-	km/vl						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	0	0	1	1	1	2	2	3
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	0	0
Hydrogen Hybrid	0	0	0	0	0	0	0	0	0	0
Gas Fuel Hybrid Gas Fuel ICEV	0	0	1 2	2	4 5	6 7	7 9	9 7	11 6	14 6
Liquid Fuel Plug-in	0	0	0	0	1	1	1	2	2	4
Liquid Fuel Hybrid	0	1	3	5	9	12	17	22	28	34
Liquid Fuel ICEV	131	142	155	172	182	195	207	218	227	231
Total	131	144	162	184	201	222	242	260	277	291
Technology Mix of Mileag	e for Cars. Regio	on FSU (Unit	s: billion v-kr	n/v)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	0	1	3	5	8	11	11	11
Hydrogen Fuel Cell	0	0	0	1	3	5	8	8	7	6
Hydrogen Hybrid	0	0	2	3	5	8	10	13	11	9
Gas Fuel Hybrid Gas Fuel ICEV	0	2	4	6	8	10	10 13	13 16	16 14	19 12
Liquid Fuel Plug-in	0	0	2	4	7	9	12	16	20	24
Liquid Fuel Hybrid	0	2	6	11	16	22	28	36	45	54
Liquid Fuel ICEV	179	214	250	302	373	462	533	604	684	753
Total	180	218	266	331	420	529	623	716	806	888
Technology Mix of Mileag	e for Cars. Regio	on INDIA (Ur	nits: billion v-	km/v)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	1	1	3	5	7	10	13	16
Hydrogen Fuel Cell	0	0	1	1	2	3	5	7	10	10
Hydrogen Hybrid	0	0	1	2	3	5	6	8	10	12
Gas Fuel Hybrid Gas Fuel ICEV	0	0	1	2 5	3 7	5 8	6 10	8 12	10 14	12 17
Liquid Fuel Plug-in	0	0	2	3	5	8	10	13	16	20
Liquid Fuel Hybrid	0	1	4	7	11	15	20	26	32	39
Liquid Fuel ICEV	111	149	211	293	383	511	710	1034	1511	1964
Total	112	153	224	315	417	560	774	1117	1615	2089
Technology Mix of Mileag	e for Cars Regio	on I AM (Uni	ts: hillion v-k	m/v)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	1	2	5	8	12	16	21	26
Hydrogen Fuel Cell	0	0	0	1	2	5	8	10	9	7
Hydrogen Hybrid	0	0	2	4	7	10	13	16	20	17
		0	2	4	7	10	13 54	16 62	20	24 55
Gas Fuel Hybrid	0	25	30	2 -	// //					
Gas Fuel Hybrid Gas Fuel ICEV	22	25 0	30	35 6	41 9	47 13			63 28	
Gas Fuel Hybrid		25 0 2	30 3 8	6 15	41 9 21	13 29	18 38	23 49	28 61	34 74
Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	22 0	0	3	6	9	13	18	23	28	34

Technology Mix of Mileag	ge for Cars, Regi	on MEA (Uni	ts: billion v-k	m/y)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	1	2	3	4	6	7	9	12
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	0	0
Hydrogen Hybrid Gas Fuel Hybrid	0	0	0	0 5	1 8	4 11	7 15	10 19	8 24	7 28
Gas Fuel ICEV	1	4	7	10	13	17	21	26	22	19
Liquid Fuel Plug-in	0	0	3	7	11	16	21	26	33	40
Liquid Fuel Hybrid	0	3	10	17	25	34	45	57	71	86
Liquid Fuel ICEV	271	324	394	483	562	648	731	813	912	1021
Total	273	330	417	524	623	734	845	958	1079	1214
Technology Mix of Mileag										
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	0	1	3	5	7	10	10	10
Hydrogen Fuel Cell	0	0	0	1	1	3	5	6	5	4
Hydrogen Hybrid Gas Fuel Hybrid	0	0	2	3	5 5	7 7	10 10	12 12	11 15	9 18
Gas Fuel ICEV	0	0	2	4	5	8	10	12	11	9
Liquid Fuel Plug-in	0	0	2	4	6	9	12	15	19	23
Liquid Fuel Hybrid	0	2	6	10	15	21	27	34	43	52
Liquid Fuel ICEV	172	213	258	287	334	395	478	579	673	714
Total	172	215	272	313	375	455	559	681	786	840
Technology Mix of Mileag										
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	1	3	5	7	10	13	17	21
Hydrogen Fuel Cell	0	0	1	3	5	4	4	3	3	2
Hydrogen Hybrid	0	0	9	18	29	34	29	25	22	19
Gas Fuel Hybrid	0	0	9	18	29	41	54	68	84	102
Gas Fuel ICEV Liquid Fuel Plug-in	0	0	9 10	18 22	29 34	41 48	35 45	30 43	26 43	25 54
Liquid Fuel Hybrid	3	14	41	66	95	127	164	206	254	309
Liquid Fuel ICEV	969	1024	1050	1038	989	922	903	876	845	791
Total	972	1038	1131	1187	1215	1225	1245	1266	1294	1321
Technology Mix of Mileag										
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Technology Electric Vehicle	2005	2010 0	2015 2	2020 6	10	15	20	26	25	25
Technology Electric Vehicle Hydrogen Fuel Cell	2005 0 0	2010 0 0	2015 2 1	2020 6 4	10 9	15 13	20 19	26 16	25 14	25 12
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid	2005 0 0 0	2010 0 0 0	2015 2 1 3	2020 6 4 6	10 9 10	15 13 14	20 19 19	26 16 23	25 14 23	25 12 26
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	2005 0 0 0 0	2010 0 0 0 0	2015 2 1 3 3	2020 6 4 6 6	10 9 10 10	15 13 14 14	20 19 19 19	26 16 23 23	25 14 23 29	25 12 26 35
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV	2005 0 0 0 0 0	2010 0 0 0 0 0 0 3	2015 2 1 3 3 6	2020 6 4 6 6 9	10 9 10	15 13 14 14 18	20 19 19 19 23	26 16 23 23 28	25 14 23 29 24	25 12 26 35 21
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	2005 0 0 0 0	2010 0 0 0 0	2015 2 1 3 3	2020 6 4 6 6	10 9 10 10 13	15 13 14 14	20 19 19 19	26 16 23 23	25 14 23 29	25 12 26 35
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV	2005 0 0 0 0 0	2010 0 0 0 0 0 0 3 0	2015 2 1 3 3 6 6 4	6 4 6 6 9 8	10 9 10 10 13	15 13 14 14 18 17	20 19 19 19 23 23	26 16 23 23 28 29	25 14 23 29 24 37	25 12 26 35 21 44 101
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid	2005 0 0 0 0 0 0	2010 0 0 0 0 3 0 3	2015 2 1 3 3 6 4 12	6 4 6 6 9 8 20	10 9 10 10 13 12	15 13 14 14 18 17 40	20 19 19 19 23 23 53	26 16 23 23 28 29 67	25 14 23 29 24 37 83	25 12 26 35 21 44 101
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total	2005 0 0 0 0 0 0 0 0 334 334	2010 0 0 0 0 3 0 3 407 412	2015 2 1 3 3 6 4 12 457 486	2020 6 4 6 6 9 8 20 519 579	10 9 10 10 13 12 30 579	15 13 14 14 18 17 40 648	20 19 19 19 23 23 53 707	26 16 23 23 28 29 67 766	25 14 23 29 24 37 83 839	25 12 26 35 21 44 101 904
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag	2005 0 0 0 0 0 0 0 0 334 334 334	2010 0 0 0 0 3 0 3 407 412	2015 2 1 3 3 6 4 12 457 486	2020 6 4 6 6 9 8 20 519 579	10 9 10 10 13 12 30 579 673	15 13 14 14 18 17 40 648 780	20 19 19 19 23 23 53 707 881	26 16 23 23 28 29 67 766 980	25 14 23 29 24 37 83 839 1074	25 12 26 35 21 44 101 904 1168
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag	2005 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regionation	2010 0 0 0 0 3 0 3 407 412 con USA (Unite	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr	2020 6 4 6 6 9 8 20 519 579	10 9 10 10 13 12 30 579 673	15 13 14 14 18 17 40 648 780	20 19 19 19 23 23 53 707 881	26 16 23 23 28 29 67 766 980	25 14 23 29 24 37 83 839 1074	25 12 26 35 21 44 101 904 1168
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle	2005 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regionated to the control of the control	2010 0 0 0 0 3 0 3 407 412 con USA (United 2010)	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6	2020 6 4 6 6 9 8 20 519 579 m/y) 2020	10 9 10 10 13 12 30 579 673	15 13 14 14 18 17 40 648 780	20 19 19 19 23 23 53 707 881	26 16 23 23 28 29 67 766 980	25 14 23 29 24 37 83 839 1074 2045 70	25 12 26 35 21 44 101 904 1168
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell	2005 0 0 0 0 0 0 0 0 334 334 334	2010 0 0 0 0 3 0 3 407 412 2010 0 0	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0	10 9 10 10 13 12 30 579 673 2025 22 0	15 13 14 14 18 17 40 648 780 2030 31	20 19 19 19 23 23 53 707 881 2035 42 0	26 16 23 23 28 29 67 766 980 2040 55 0	25 14 23 29 24 37 83 839 1074 2045 70 0	25 12 26 35 21 44 101 904 1168 2050 88 0
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid	2005 0 0 0 0 0 0 0 0 334 334 394 2005	2010 0 0 0 0 3 0 3 407 412 con USA (Unit 2010 0 0	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0	2020 6 4 6 6 9 8 20 519 579 m/y) 2020 14 0	10 9 10 10 13 12 30 579 673 2025 22 0 37	15 13 14 14 18 17 40 648 780 2030 31 0 78	20 19 19 19 23 23 53 707 881 2035 42 0 78	26 16 23 28 29 67 766 980 2040 55 0	25 14 23 29 24 37 83 839 1074 2045 70 0 58	25 12 26 35 21 44 101 904 1168 2050 88 0 58
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	2005 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regination of the control	2010 0 0 0 0 3 0 3 407 412 con USA (Unit 2010 0 0 0	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0 37	2020 6 4 6 6 9 8 20 519 579 m/y) 2020 14 0 0 78	10 9 10 10 13 12 30 579 673 2025 22 0 37 123	15 13 14 14 18 17 40 648 780 2030 31 0 78 172	20 19 19 19 23 23 53 707 881 2035 42 0 78 227	26 16 23 28 29 67 766 980 2040 55 0 67 288	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV	2005 0 0 0 0 0 0 0 0 334 334 394 2005	2010 0 0 0 0 3 0 3 407 412 con USA (Unit 2010 0 0	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0	2020 6 4 6 6 9 8 20 519 579 m/y) 2020 14 0	10 9 10 10 13 12 30 579 673 2025 22 0 37	15 13 14 14 18 17 40 648 780 2030 31 0 78	20 19 19 19 23 23 53 707 881 2035 42 0 78	26 16 23 28 29 67 766 980 2040 55 0	25 14 23 29 24 37 83 839 1074 2045 70 0 58	25 12 26 35 21 44 101 904 1168 2050 88 0 58
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	2005 0 0 0 0 0 0 0 334 334 2005 0 0 0 0 2	2010 0 0 0 0 3 0 3 407 412 2010 0 0 0 0 10	2015 2 1 3 3 6 4 12 457 486 as: billion v-kr 2015 6 0 0 37 48	2020 6 4 6 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90	10 9 10 10 13 12 30 579 673 2025 22 0 37 123 136	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162	26 16 23 28 29 67 766 980 2040 55 0 67 288 139	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	2005 0 0 0 0 0 0 0 334 334 334 2005 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0	2010 0 0 0 0 3 0 3 407 412 2010 0 0 0 0 10 0	2015 2 1 3 3 6 4 12 457 486 as: billion v-kr 2015 6 0 0 37 48 43	2020 6 4 6 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91	10 9 10 10 13 12 30 579 673 2025 22 0 37 123 136	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid	2005 0 0 0 0 0 0 0 0 334 334 334 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2010 0 0 0 0 3 0 3 407 412 00 USA (Unit 2010 0 0 0 10 0 32	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0 37 48 43 132	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231	10 9 10 10 13 12 30 579 673 2025 22 0 37 123 136 144 344	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204 472	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel Hybrid Liquid Fuel Hybrid Liquid Fuel Hybrid Liquid Fuel ICEV Total	2005 0 0 0 0 0 0 0 334 334 334 2005 0 0 0 0 4097 4105	2010 0 0 0 0 3 407 412 con USA (Unit 2010 0 0 0 0 10 0 32 4312 4354	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0 37 48 43 132 4427 4694	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028	10 9 10 10 13 12 30 579 673 2025 22 0 37 123 136 144 344	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204 472 4511	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag	2005 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regination 2005 0 0 0 4097 4105 ge for Cars, Regination 3	2010 0 0 0 0 3 407 412 00 USA (Unit 2010 0 0 0 10 0 32 4312 4354 00 WEUR (U	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0 37 48 43 132 4427 4694 nits: billion v-kr	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 344 4549 5355	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204 472 4511 5656	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726 7108
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Mix of Mileag Technology	2005 0 0 0 0 0 0 0 334 334 334 2005 0 0 0 0 0 4097 4105 ge for Cars, Reginate the control of t	2010 0 0 0 0 3 407 412 00 USA (Unit 2010 0 0 0 32 4312 4354 00 WEUR (U 2010	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0 37 48 43 132 4427 4694 nits: billion v- 2015	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028 	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 344 4549 5355	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204 472 4511 5656	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726 7108
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid	2005 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regin 2005 0 4097 4105 ge for Cars, Regin 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2010 0 0 0 0 3 407 412 00 USA (Unit 2010 0 0 0 32 4312 4354 00 WEUR (U 2010 0 0	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0 37 48 43 132 4427 4694 nits: billion v- 2015 4	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028 	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 4549 5355	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204 472 4511 5656	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726 7108
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell	2005 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regin 2005 0 0 4097 4105 ge for Cars, Regin 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2010 0 0 0 0 3 407 412 00 USA (Unit 2010 0 0 0 32 4312 4354 00 WEUR (U 2010 0 0 0 0	2015 2 1 3 3 6 4 12 457 486 ts: billion v-kr 2015 6 0 0 37 48 43 132 4427 4694 nits: billion v- 2015 4 0	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028 	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 4549 5355 2025 14 0	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204 472 4511 5656 2030 21 0	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726 7108
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Hybrid Liquid Fuel ICEV	2005 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regination Companies	2010 0 0 0 0 3 407 412 00 USA (Unit 2010 0 0 32 4312 4354 00 WEUR (U 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2015 2 1 3 3 6 4 12 457 486 25: billion v-kr 2015 6 0 0 37 48 43 132 4427 4694 nits: billion v- 2015 4 0 0	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028 -km/y) 2020 9 0	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 4549 5355 2025 14 0 0	15 13 14 14 18 17 40 648 780 31 0 78 172 187 204 472 4511 5656 2030 21 0	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018 2035 28 0	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739 2045 47 0 0	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726 7108
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Gas Fuel ICEV Liquid Fuel Hybrid Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	2005 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regi 2005 0 0 4097 4105 ge for Cars, Regi 2005	2010 0 0 0 0 3 407 412 00 USA (Unit 2010 0 0 32 4312 4354 00 WEUR (U 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2015 2 1 3 3 6 4 12 457 486 25: billion v-kr 2015 6 0 0 37 48 43 132 4427 4694 nits: billion v- 2015 4 0 0 25	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 78 90 91 231 4525 5028 -km/y) 2020 9 0 0 52	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 4549 5355 2025 14 0 0 82	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204 472 4511 5656 21 0 0	20 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018 2035 28 0 0	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373 2040 37 0 0	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739 2045 47 0 0 237	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726 7108 2050 58 0 0
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Gas Fuel ICEV Liquid Fuel Hybrid Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV	2005 0 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regination of the company of the c	2010 0 0 0 0 3 0 3 407 412 00 USA (Unit 2010 0 0 10 0 32 4312 4354 00 WEUR (U 2010 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0	2015 2 1 3 3 6 4 12 457 486 2015 6 0 0 37 48 43 132 4427 4694 mits: billion v- 2015 4 0 0 25 46	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028 -km/y) 2020 9 0 0 52 75	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 344 4549 5355 2025 14 0 0 82 108	15 13 14 14 18 17 40 648 780 31 0 78 172 187 204 472 4511 5656 2030 21 0 0	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018 2035 28 0 0	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373 2040 37 0 0	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739 2045 47 0 0 0	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 7108 2050 58 0 0 2250 58
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Gas Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Hybrid Liquid Fuel Plug-in Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel ICEV Liquid Fuel Plug-in	2005 0 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regination of the company of the c	2010 0 0 0 0 3 407 412 00 USA (Unit 2010 0 0 32 4312 4354 00 WEUR (U 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2015 2 1 3 3 6 4 12 457 486 2015 6 0 0 37 48 43 132 4427 4694 nits: billion v- 2015 4 0 0 25 46 4	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028 -km/y) 2020 9 0 0 52 75 9	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 344 4549 5355 2025 14 0 0 82 108 14	15 13 14 14 18 17 40 648 780 2030 31 0 78 172 187 204 472 4511 5656 2030 21 0 0 0 115 144 21	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018 2035 28 0 0 152 183 28	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373 2040 37 0 0 192 227 37	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739 2045 47 0 0 237 275 47	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726 7108 2050 0 286 329 56
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Gas Fuel ICEV Liquid Fuel Hybrid Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Mileag Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV	2005 0 0 0 0 0 0 0 0 334 334 334 ge for Cars, Regination of the company of the c	2010 0 0 0 0 3 0 3 407 412 00 USA (Unit 2010 0 0 0 10 0 32 4312 4354 00 WEUR (U 2010 0 0 0 1 0 0 0 1 0 0 1 0 0 0 1 0 0 0 1 0 0 1 0 0 1 0 0 0 1 0	2015 2 1 3 3 6 4 12 457 486 2015 6 0 0 37 48 43 132 4427 4694 mits: billion v- 2015 4 0 0 25 46	2020 6 4 6 9 8 20 519 579 m/y) 2020 14 0 0 78 90 91 231 4525 5028 -km/y) 2020 9 0 0 52 75	10 9 10 13 12 30 579 673 2025 22 0 37 123 136 144 344 4549 5355 2025 14 0 0 82 108	15 13 14 14 18 17 40 648 780 31 0 78 172 187 204 472 4511 5656 2030 21 0 0	20 19 19 19 23 23 53 707 881 2035 42 0 78 227 162 270 617 4622 6018 2035 28 0 0	26 16 23 28 29 67 766 980 2040 55 0 67 288 139 343 783 4697 6373 2040 37 0 0	25 14 23 29 24 37 83 839 1074 2045 70 0 58 355 120 425 972 4738 6739 2045 47 0 0 237 275	25 12 26 35 21 44 101 904 1168 2050 88 0 58 429 104 516 1187 4726 7108 2050 58 0 0 286 329

Technology Mix for Cars (million)

Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Electric Vehicle	0	0	1	4	8	12	16	21	25	3
Hydrogen Fuel Cell	0	0	1 2	2 5	3 10	6 15	8 17	9 19	9 19	1
Hydrogen Hybrid Gas Fuel Hybrid	0	0	7	14	22	31	41	52	64	18 78
Gas Fuel ICEV	3	7	14	23	32	42	46	52	54	5
Liquid Fuel Plug-in	0	0	6	13	20	28	36	45	55	6
Diesel Type Hybrid	0	0	5	13	21	29	39	50	62	7.
Gasoline Type Hybrid	1	5	17	27	40	54	71	90	113	13
Diesel Type ICEV	83	74	75	83	106	153	238	365	531	72
Gasoline Type ICEV	636	725	803	861	903	934	964	981	977	89
Total	723	810	931	1045	1165	1304	1477	1684	1909	208
Technology Mix for Cars, I				2020	2025	2020	2025	2040	2045	205
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Electric Vehicle	0	0	0	0	1	1	1	2	2 1	
Hydrogen Fuel Cell	0	0	0		1	1	1	1	1	
Hydrogen Hybrid Gas Fuel Hybrid	0	0	0	0	1	1	1	2	2	
Gas Fuel ICEV	0	0	1	1	1	1	2	2	2	
Gas Fuel ICEV Liquid Fuel Plug-in	0	0	0	1	1	1	2	2	3	
Diesel Type Hybrid	0	0	0	0	1	1	1	2	2	
Gasoline Type Hybrid	0	0	1	1	1	2	2	3	4	
Diesel Type ICEV	2	2	2	2	3	5	8	15	29	5
Gasoline Type ICEV	16	21	27	34	41	44	48	51	56	5
Total	18	23	31	41	50	59	68	82	102	12
· 	10		31		50	33				
Technology Mix for Cars, I	Region ASIA (Units: mil	lion)							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Electric Vehicle	0	0	0	1	1	2	2	3	4	
Hydrogen Fuel Cell	0	0	0	0	0	1	1	2	2	
Hydrogen Hybrid	0	0	0	1	1	1	2	2	3	
Gas Fuel Hybrid	0	0	0	1	1	1	2	2	3	
Gas Fuel ICEV	0	1	1	2	2	3	3	4	5	
Liquid Fuel Plug-in	0	0	0	1	1	2	3	3	4	
Diesel Type Hybrid	0	0	0	1	1 2	1	2	2 4	3 5	
Gasoline Type Hybrid	0	0	0	1	2	3	3 9	19	39	7
Diesel Type ICEV Gasoline Type ICEV	25	31	39	49	60	76	101	132	153	13
Total	25	32	43	56	72	95	129	174	220	24
Total	25	32	73	30	,,_	33	123	1/4	220	
Technology Mix for Cars, I	Region BRAZI	L (Units: n	nillion)							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Electric Vehicle	0	0	0	0	0	0	0	1	1	
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	0	
Hydrogen Hybrid	0	0	0	0	0	1	1	1	1	
Gas Fuel Hybrid	0	0	0	0	1	1	1	1	2	
Gas Fuel ICEV	1	1	1	2	2	2	3	3	3	
Liquid Fuel Plug-in	0	0	0	1	1	1	2	2	2	
Diesel Type Hybrid	0	0	0	0	1	1	1	1	2	
Gasoline Type Hybrid	0	0	1	1	1	2	2	3	3	
Diesel Type ICEV	1	2	4	8	11	11	13	18	28	3
Gasoline Type ICEV	18	22	25	23	24	30	36	41	38	3
Total	20	25	31	35	40	48	59	71	80	8
Technology Mix for Cars, I	Region CANA	DA (Units:	million)							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Electric Vehicle	0	0	0	0	0	1	1	1	1	
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	0	
Hydrogen Hybrid	0	0	0	0	1	1	1	1	1	
Gas Fuel Hybrid	0	0	0	0	1	1	1	1	2	
Gas Fuel ICEV	0	0	0	0	1	1	1	1	1	
Liquid Fuel Plug-in	0	0	0	0	1	1	1	2	2	
Diesel Type Hybrid	0	0	0	0	1	1	1	1	2	
	0	0	0	1	1	1	2	2	3	
Gasoline Type Hybrid	0	1	1	2	2	3	6	10	13	1
Diesel Type ICEV			40	19	19	17	15	12	9	
	18	19	19	13						
Diesel Type ICEV		19 20	22	24	26	27	29	31	33	3
Diesel Type ICEV Gasoline Type ICEV Total	18 19	20	22			27	29	31	33	3
Diesel Type ICEV Gasoline Type ICEV	18 19	20	22			27 2030	29 2035	31 2040	33 2045	205

Hydrogen Fuel Cell	0	0	0	0	1	1	1	2	2	2
Hydrogen Hybrid Gas Fuel Hybrid	0	0	0	0	1	1	1	1	2	2
Gas Fuel ICEV	0	0	0	1	1	1	2	2	2	2
Liquid Fuel Plug-in	0	0	0	1	1	1	2	2	3	4
Diesel Type Hybrid	0	0	0	0	1	1	1	1	2	2
Gasoline Type Hybrid	0	0	1	1	1	2 5	2 8	3 15	4 27	5 52
Diesel Type ICEV Gasoline Type ICEV	12	18	27	41	60	S 88	120	153	182	170
Total	14	21	33	49	71	103	140	184	229	245
Technology Mix for Cars,	Region EEUR (2005	(Units: mil 2010	llion) 2015	2020	2025	2030	2035	2040	2045	2050
Technology Electric Vehicle	2005	0	0	0	0	2030	2035	2040	2045	2030
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	0	0
Hydrogen Hybrid	0	0	0	0	0	0	0	0	0	0
Gas Fuel Hybrid	0	0	0	0	0	0	1	1	1	1
Gas Fuel ICEV	0	0	0	0	0	1	1 0	1	1	0
Liquid Fuel Plug-in Diesel Type Hybrid	0	0	0	0	0	0	0	0	1	1
Gasoline Type Hybrid	0	0	0	0	1	1	1	1	2	2
Diesel Type ICEV	0	0	0	1	1	2	3	7	9	12
Gasoline Type ICEV	10	11	12	14	14	14	14	11	9	7
Total	11	12	13	15	16	18	20	21	23	24
Technology Mix for Cars,	Region FSU (U	Jnits: milli	on)							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	0	0	0	0	1	1	1	1
Hydrogen Fuel Cell	0	0	0	0	0	0	1	1	0	0
Hydrogen Hybrid Gas Fuel Hybrid	0	0	0	0	0	1	1	1	1	1
Gas Fuel ICEV	0	0	0	0	1	1	1	1	1	1
Liquid Fuel Plug-in	0	0	0	0	0	1	1	1	1	2
Diesel Type Hybrid	0	0	0	0	0	1	1	1	1	1
Gasoline Type Hybrid Diesel Type ICEV	0	0	0	1	1	1 2	1	2 8	2 16	3 29
Gasoline Type ICEV	13	16	18	22	27	33	36	38	36	28
Total	14	17	20	25	32	40	47	54	61	67
T. d	D ' INIDIA	/11								
Technology Mix for Cars,				2020	2025	2030	2035	2040	2045	2050
Technology Mix for Cars, Technology Electric Vehicle	Region INDIA 2005 0	(Units: mi 2010 0	illion) 2015 0	2020	2025	2030	2035	2040	2045	2050
Technology	2005	2010	2015							
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid	2005 0 0 0	2010 0 0 0	2015 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 1	1 1 1	1 1 1
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	2005 0 0 0	2010 0 0 0 0	2015 0 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0 0	1 0 1	1 1 1 1	1 1 1
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV	2005 0 0 0 0	2010 0 0 0 0 0	2015 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0	1 0 1 1	1 1 1 1 1	1 1 1 1
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	2005 0 0 0	2010 0 0 0 0	2015 0 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0 0	1 0 1	1 1 1 1	1 1 1
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	2005 0 0 0 0 0 0	2010 0 0 0 0 0	2015 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 1	0 0 0 0 0 1	1 0 1 1 1	1 1 1 1 1 1	1 1 1 1 1
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV	2005 0 0 0 0 0 0 0 0 0 0 2	2010 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 1 1 0 1 2	0 0 0 0 1 1 0 1 4	1 0 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 2 25
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV	2005 0 0 0 0 0 0 0 0 0 0 2 6	2010 0 0 0 0 0 0 0 0 0 2 8	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 2 18	0 0 0 0 0 0 0 1 2	0 0 0 0 1 1 0 1 2	0 0 0 0 1 1 0 1 4	1 0 1 1 1 1 1 1 1 9	1 1 1 1 1 1 1 1 1 7 84	1 1 1 1 1 1 1 2 25 106
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV	2005 0 0 0 0 0 0 0 0 0 0 2	2010 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 1 1 0 1 2	0 0 0 0 1 1 0 1 4	1 0 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 2 25
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV	2005 0 0 0 0 0 0 0 2 6 7	2010 0 0 0 0 0 0 0 0 0 2 8 10	2015 0 0 0 0 0 0 0 0 1 13 15	0 0 0 0 0 0 0 0 0 2 18	0 0 0 0 0 0 0 1 2 24 28	0 0 0 0 1 1 0 1 2	0 0 0 0 1 1 0 1 4	1 0 1 1 1 1 1 1 1 9	1 1 1 1 1 1 1 1 1 7 84	1 1 1 1 1 1 1 2 25 106
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology	2005 0 0 0 0 0 0 0 0 2 6 7	2010 0 0 0 0 0 0 0 0 2 8 10 Units: mill	2015 0 0 0 0 0 0 0 0 1 13 15 sion) 2015	0 0 0 0 0 0 0 0 0 2 18 21	0 0 0 0 0 0 0 1 2 24 28	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52	1 0 1 1 1 1 1 1 1 9 60 74	1 1 1 1 1 1 1 1 1 17 84 108	1 1 1 1 1 1 1 2 25 106 139
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle	2005 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	2010 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010	2015 0 0 0 0 0 0 0 0 1 13 15 lion) 2015	0 0 0 0 0 0 0 0 2 18 21	0 0 0 0 0 0 0 1 2 24 28	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52	1 0 1 1 1 1 1 1 1 9 60 74	1 1 1 1 1 1 1 1 1 17 84 108	1 1 1 1 1 1 1 2 25 106 139
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell	2005 0 0 0 0 0 0 0 0 2 6 7 Region LAM (I	2010 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0	2015 0 0 0 0 0 0 0 0 1 13 15 (ion) 2015 0	0 0 0 0 0 0 0 0 2 18 21	0 0 0 0 0 0 0 1 2 24 28	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52	1 0 1 1 1 1 1 1 1 9 60 74	1 1 1 1 1 1 1 1 1 17 84 108	1 1 1 1 1 1 1 2 25 106 139
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle	2005 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	2010 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010	2015 0 0 0 0 0 0 0 0 1 13 15 lion) 2015	0 0 0 0 0 0 0 0 2 18 21	0 0 0 0 0 0 0 1 2 24 28	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52	1 0 1 1 1 1 1 1 1 9 60 74	1 1 1 1 1 1 1 1 1 17 84 108	1 1 1 1 1 1 1 2 25 106 139
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV	2005 0 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	2010 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 2	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 2	0 0 0 0 0 0 0 0 2 18 21	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52	1 0 1 1 1 1 1 1 9 60 74	1 1 1 1 1 1 1 1 1 17 84 108	1 1 1 1 1 1 2 25 106 139 2050 2 0 1 2 3
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	2005 0 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	2010 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 2 8	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 2	0 0 0 0 0 0 0 0 2 18 21	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52	1 0 1 1 1 1 1 1 9 60 74	1 1 1 1 1 1 1 1 1 17 84 108	1 1 1 1 1 1 2 25 106 139 2050 2 0 1 2 3 2
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid	2005 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	2010 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 2 8 10 0 0 0 0 0 0 0 0 0 0 0 0 0	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 0 2 2 18 21	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 3	1 0 1 1 1 1 1 1 9 60 74	1 1 1 1 1 1 1 1 1 17 84 108 2045 1 1 1 1 4 2	1 1 1 1 1 1 2 25 106 139 2050 2 0 1 2 3 2 2
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid	2005 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	2010 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 2 8	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 2	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 0 2 2 18 21	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0 3 1 1 0	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52	1 0 1 1 1 1 1 1 9 60 74 2040 1 1 1 1 4 1 1	1 1 1 1 1 1 1 1 1 17 84 108 2045 1 1 1 1 4 2 1 3	1 1 1 1 1 1 2 25 106 139 2050 2 0 1 2 3 2 2 3
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid	2005 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	2010 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 0 2 2 18 21	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 3 1	1 0 1 1 1 1 1 1 9 60 74	1 1 1 1 1 1 1 1 1 17 84 108 2045 1 1 1 1 4 2	1 1 1 1 1 1 2 25 106 139 2050 2 0 1 2 3 2 2
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Diesel Type Hybrid	2005 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2010 0 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 2 2 18 21	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0 3 1 1 0	0 0 0 0 1 1 0 1 2 32 37	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 3 1 2 4	1 0 1 1 1 1 1 1 9 60 74 2040 1 1 1 1 4 1 1 2 9	1 1 1 1 1 1 1 1 1 17 84 108 2045 1 1 1 1 4 2 1 3 17	1 1 1 1 1 1 2 25 106 139 2 0 1 2 3 2 2 3 3 5
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Diesel Type Hybrid Diesel Type ICEV Gasoline Type ICEV	2005 0 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005 0 0 0 0 0 1 0 0 0 13 15	2010 0 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 16 18	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 0 2 0 0 2 24	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 2 0 0 0 0 2 18 21 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0 3 1 1 0 1 1 1 3 1 1 1 1 1 1 1 1	0 0 0 0 1 1 0 1 2 32 37 2030 1 0 1 1 3 1 1 2 3 3 1 1 2 3 3 1 1 1 1 1 1 1	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 3 1 1 2 4 4 3 8	1 0 1 1 1 1 1 1 9 60 74 2040 1 1 1 1 1 4 1 1 2 9	1 1 1 1 1 1 1 1 17 84 108 2045 1 1 1 1 4 2 1 3 17	1 1 1 1 1 1 2 25 106 139 2 0 1 2 3 2 2 3 3 46
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars,	2005 0 0 0 0 0 0 0 0 2 6 7 Region LAM (2005 0 0 0 0 1 0 0 1 1 0 0 0 Region MEA (2010 0 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 16 18	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 0 2 0 0 24	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0 3 1 1 0 1 1 3 1 3 1 3 1 3 1 3 1	0 0 0 0 1 1 0 1 2 32 37 2030 1 0 1 1 3 1 1 1 2 3 2 3 7	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 3 1 1 2 4 3 8 5 2	1 0 1 1 1 1 1 1 9 60 74 2040 1 1 1 1 4 1 1 2 9 42 63	1 1 1 1 1 1 1 1 1 17 84 108 2045 1 1 1 1 4 2 1 3 17 47 78	1 1 1 1 1 1 1 2 25 106 139 2 0 1 2 3 2 2 3 3 5 46 96
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Diesel Type Hybrid Diesel Type ICEV Gasoline Type ICEV	2005 0 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005 0 0 0 0 0 1 0 0 0 13 15	2010 0 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 16 18	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 0 2 0 0 2 24	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 2 0 0 0 0 2 18 21 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0 3 1 1 0 1 1 1 3 1 1 1 1 1 1 1 1	0 0 0 0 1 1 0 1 2 32 37 2030 1 0 1 1 3 1 1 2 3 3 1 1 2 3 3 1 1 1 1 1 1 1	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 3 1 1 2 4 4 3 8	1 0 1 1 1 1 1 1 9 60 74 2040 1 1 1 1 1 4 1 1 2 9	1 1 1 1 1 1 1 1 17 84 108 2045 1 1 1 1 4 2 1 3 17	1 1 1 1 1 1 2 25 106 139 2 0 1 2 3 2 2 3 3 5 46
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Diesel Type Hybrid Diesel Type ICEV Total Technology Mix for Cars, Technology Mix for Cars, Technology Mix for Cars,	2005 0 0 0 0 0 0 0 0 0 2 6 7 Region LAM (2005 0 0 0 1 0 0 1 1 0 0 1 1 8 Region MEA (2005	2010 0 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 16 18 Units: mill 2010	2015 0 0 0 0 0 0 0 0 1 13 15 lion) 2015 0 0 0 2 4 lion) 2015	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0 3 1 1 0 1 1 1 3 0 2 2 4 2 2 5 2 7 8 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 1 1 0 1 2 32 37 2030 1 0 1 1 3 1 1 1 2 3 2 37	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 3 1 1 2 4 3 8 5 2	1 0 1 1 1 1 1 1 9 60 74 2040 1 1 1 1 4 1 1 2 9 42 63	1 1 1 1 1 1 1 1 17 84 108 2045 1 1 1 1 4 2 1 3 17 47 78	1 1 1 1 1 1 2 25 106 139 2050 2 0 1 2 3 2 2 3 3 5 46 96
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Hybrid	2005 0 0 0 0 0 0 0 0 0 0 2 6 7 Region LAM (2005 0 0 0 1 0 0 1 1 0 0 0 1 1 5 Region MEA (2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2010 0 0 0 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 16 18 Units: mill 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2015 0 0 0 0 0 0 0 0 1 13 15 (ion) 2015 0 0 0 2 0 2 4 (lion) 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 2 0 0 0 2 1 2 1 2 1 2 0 0 0 0	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0 3 1 0 1 1 3 3 3 7	0 0 0 0 1 1 2 32 37 2030 1 0 1 1 1 2 3 3 3 4 3 2 3 3 4 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 2 4 3 8 52	1 0 1 1 1 1 1 1 9 60 74 2040 1 1 1 1 1 2 9 42 63	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 2 25 106 139 2 2050 2 0 1 2 3 3 2 2 2 3 3 5 46 96 96
Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Total Technology Mix for Cars, Technology Mix for Cars, Technology Mix for Cars, Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	2005 0 0 0 0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005 0 0 0 0 1 0 0 1 1 0 0 0 1 1 5 Region MEA (1 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2010 0 0 0 0 0 0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 16 18 Units: mill 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2015 0 0 0 0 0 0 0 0 1 13 15 ion) 2015 0 0 0 2 0 0 2 4 lion) 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 2 18 21 2020 0 0 0 0 2 0 0 0 0 2 18 21 21 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 2 24 28 2025 0 0 0 0 3 1 1 30 37	0 0 0 0 1 1 2 32 37 2030 1 0 1 1 1 2 33 43	0 0 0 0 1 1 0 1 4 43 52 2035 1 1 1 1 1 2 4 38 52 2035 0 0 0 0 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1	1 0 1 1 1 1 1 1 9 60 74 2040 1 1 1 1 1 2 9 42 63	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 4 2 1 3 1 7 84 1 7 84 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 2 25 106 139 2 2050 2 0 1 2 3 3 2 2 2 3 3 46 96
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Casaline Type Hybrid 1	Diesel Type Hybrid	0	0	0	0	0	1	1	1	1	2
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Technology Mix for Cars, Region MEXICUTION Technology 1005 2010 2010 2020 2025 2030 2030 2040											
Technology Page P	Total	13	19	24	30	33	42	40	54	01	09
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Hydrogen Hybrid											
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Technology	Total	15	19	24	28	33	40	49	60	70	74
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Flectric Vehicle	Diesel Type ICEV Gasoline Type ICEV	0 0 25	0 0 0 31	0 1 0 34	0 1 1 38	1 1 2 42	1 2 4 45	1 3 7 46	2 3 15 43	2 4 30 33	3 5 42 26
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Diesel Type Hybrid 0 0 1 3 5 8 11 14 18 21 Gasoline Type Hybrid 0 1 3 6 9 13 18 23 29 36 Diesel Type ICEV 62 54 49 46 49 61 75 82 88 76 Gasoline Type ICEV 161 187 210 212 203 180 155 133 111 104	Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Re Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Re Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid	0 0 0 25 25 25 26 2005 0 0 0 0 0 0 0 0 1 221 222 222 2005 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 31 31 31 Units: milli 2010 0 0 0 1 0 0 2 1 232 235 (Units: m 2010	0 1 0 34 37 37 30n) 2015 0 0 0 2 3 2 2 2 5 3 236 254 illion) 2015	0 1 1 38 44 2020 1 0 0 4 5 5 4 8 7 238 272 2020 1 0 0	1 1 2 42 51 2025 1 0 2 6 7 8 6 12 15 231 289	1 2 4 45 59 2030 2 0 4 9 10 11 9 16 30 214 306	1 3 7 46 67 2035 3 0 4 12 9 15 12 21 62 188 325 2035 2 0	2 3 15 43 74 2040 4 0 4 15 7 19 15 27 110 144 344 2040 2 0 0	2 4 30 33 82 2045 5 0 3 19 6 23 19 33 142 114 364 2045 3 0 0	3 5 42 26 89 2050 6 0 3 23 5 28 23 41 163 92 384 2050 4 0
Gasoline Type Hybrid 0 1 3 6 9 13 18 23 29 36 Diesel Type ICEV 62 54 49 46 49 61 75 82 88 76 Gasoline Type ICEV 161 187 210 212 203 180 155 133 111 104	Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Refectoric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Refectoric Vehicle Hydrogen Hybrid Gas Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	0 0 0 25 25 25 26 2005 0 0 0 0 0 0 0 1 221 222 222 2005 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 31 31 31 Units: milli 2010 0 0 0 1 0 2 2 1 232 235 (Units: m 2010 0 0 0	0 1 0 34 37 ion) 2015 0 0 2 3 2 2 5 3 236 254 illion) 2015 0 0 0 2 4	0 1 1 38 44 2020 1 0 0 4 5 5 4 8 7 238 272 2020 1 0 0 4 6	1 1 2 42 51 2025 1 0 2 6 7 8 6 12 15 231 289 2025 1 0 0 7	1 2 4 45 59 2030 2 0 4 9 10 11 9 16 30 214 306	1 3 7 46 67 2035 3 0 4 12 9 15 12 21 62 188 325 200 0 0 13	2 3 15 43 74 2040 4 0 4 15 7 19 15 27 110 144 344 2040 2 0 0 0	2 4 30 33 82 2045 5 0 3 19 6 23 19 33 142 114 364 2045 3 0 0 20 23	3 5 42 26 89 2050 6 0 3 23 5 28 23 41 163 92 384 2050 4 0 0
Diesel Type ICEV 62 54 49 46 49 61 75 82 88 76 Gasoline Type ICEV 161 187 210 212 203 180 155 133 111 104	Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Refectoric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Refectoric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	0 0 0 25 25 25 26 2005 0 0 0 0 0 0 0 1 221 222 222 2005 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 31 31 31 Units: milli 2010 0 0 0 2 1 232 235 (Units: m 2010 0 0 0	0 1 0 34 37 37 300) 2015 0 0 2 3 2 2 5 3 236 254 illion) 2015 0 0 0 2 4 0	0 1 1 38 44 2020 1 0 0 4 5 5 4 8 7 238 272 2020 1 0 0 4 5 1 0 0 0 4 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 2 42 51 2025 1 0 2 6 7 8 6 12 15 231 289 2025 1 0 0 7	1 2 4 45 59 2030 2 0 4 9 10 11 9 16 30 214 306 2030 1 0 0 10 11 11 10 10 11 10 10 10 10 10	1 3 7 46 67 2035 3 0 4 12 9 15 12 21 62 188 325 200 0 13 15 2	2 3 15 43 74 2040 4 0 4 15 7 19 15 27 110 144 344 2040 2 0 0 16 19 2	2 4 30 33 82 2045 5 0 3 19 6 23 19 33 142 114 364 2045 3 0 0 20 23 3	3 5 42 26 89 2050 6 0 3 23 5 28 23 41 163 92 384 2050 4 0 0
Gasoline Type ICEV 161 187 210 212 203 180 155 133 111 104	Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Refectoric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Refectoric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	0 0 0 25 25 25 egion USA (U 2005 0 0 0 0 0 1 221 222 egion WEUR 2005 0 0 0	0 0 0 31 31 31 Jnits: milli 2010 0 0 0 1 0 2 2 1 232 235 (Units: m 2010 0 0 0	0 1 0 34 37 37 300) 2015 0 0 2 3 2 2 5 3 236 254 illion) 2015 0 0 0 2 4 0 1	0 1 1 38 44 2020 1 0 0 4 5 5 4 8 7 238 272 2020 1 0 0 4 5 4 3 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 2 42 51 2025 1 0 2 6 7 8 6 12 15 231 289 2025 1 0 0 7 7	1 2 4 45 59 2030 2 0 4 9 10 11 9 16 30 214 306 200 1 0 0 10 11 8	1 3 7 46 67 2035 3 0 4 12 9 15 12 21 62 188 325 2 0 0 0 13 15 2	2 3 15 43 74 2040 4 0 4 15 7 19 15 27 110 144 344 2040 2 0 0 16 19 2	2 4 30 33 82 2045 5 0 3 19 6 23 19 33 142 114 364 2045 3 0 0 20 23 3 18	3 5 42 26 89 2050 6 0 3 23 5 28 23 41 163 92 384 2050 4 0 0 24 27 4 21
Total 223 244 269 279 285 287 290 292 294 296	Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Reference Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Reference Type ICEV Liquid Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid	0 0 0 25 25 25 egion USA (U 2005 0 0 0 0 0 1 221 222 egion WEUR 2005 0 0 0	0 0 0 31 31 31 Jnits: milli 2010 0 0 0 0 1 2 1 232 235 (Units: m 2010 0 0 0	0 1 0 34 37 37 300) 2015 0 0 2 3 2 2 5 3 236 254 illion) 2015 0 0 0 2 4 0 1 3	0 1 1 38 44 2020 1 0 0 4 5 5 4 8 7 238 272 2020 1 0 0 4 6 1 1 3 6	1 1 2 42 51 2025 1 0 2 6 7 8 6 12 15 231 289 2025 1 0 0 7 9 9	1 2 4 45 59 2030 2 0 4 9 10 11 9 16 30 214 306 214 306 214 306	1 3 7 46 67 2035 3 0 4 12 9 15 12 21 62 188 325 2035 2 0 0 13 15 2 11 18	2 3 15 43 74 2040 4 0 4 15 7 19 15 27 110 144 344 2040 2 0 0 16 19 2 14 23	2 4 30 33 82 2045 5 0 3 19 6 23 19 33 142 114 364 2045 3 0 0 20 23 3 18 29	3 5 42 26 89 2050 6 0 3 23 5 28 23 41 163 92 384 2050 4 0 0 24 27 4 21 36
	Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Reference Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Reference Type ICEV Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type Hybrid Diesel Type ICEV Gasoline Type ICEV	0 0 25 25 25 25 2005 0 0 0 0 0 0 0 0 0 0	0 0 0 31 31 31 Jnits: milli 2010 0 0 0 0 2 1 232 235 (Units: m 2010 0 0 0 0	0 1 0 34 37 ion) 2015 0 0 2 3 2 2 5 3 236 254 illion) 2015 0 0 0 2 4 0 1 3 49	0 1 1 38 44 2020 1 0 0 4 5 5 4 8 7 238 272 2020 1 0 0 0 4 5 5 4 8 7 238 272	1 1 2 42 51 2025 1 0 2 6 7 8 6 12 15 231 289 2025 1 0 0 7 9 9 1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	1 2 4 45 59 2030 2 0 4 9 10 11 9 16 30 214 306 214 306 214 306	1 3 7 46 67 2035 3 0 4 12 9 15 12 21 62 188 325 2035 2 0 13 15 2 11 18 75	2 3 15 43 74 2040 4 0 4 15 7 19 15 27 110 144 344 2 0 0 0 16 19 2 14 23 82	2 4 30 33 82 2045 5 0 3 19 6 23 19 33 142 114 364 2045 3 0 0 20 23 3 18 29 88	3 5 42 26 89 2050 6 0 3 23 5 28 23 41 163 92 384 2050 4 0 0 24 27 4 21 36 76

CO2 Emission

CO2-Emission f	rom Cars (Unit	s: GtCO2/y)								
Region	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
USA	1.1	1.2	1.2	1.1	1.1	1.0	0.9	0.8	0.7	0.7
RUSSIA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PACIFIC	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
MEXICO	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MEA	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
LAM	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
INDIA	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3
FSU	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
WEUR	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
EEUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHINA	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.6
CANADA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
BRAZIL	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
ASIA	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.6
AFRICA	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total	2.6	2.8	3.0	3.1	3.2	3.3	3.4	3.6	3.7	3.8

CO2-Emission (U	nits: GtCO2/y)									
Region	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
USA	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.7	1.7
RUSSIA	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4
PACIFIC	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
MEXICO	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4
MEA	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.8	0.9
LAM	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8
INDIA	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8
FSU	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4
WEUR	1.3	1.2	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.3
EEUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHINA	0.5	0.6	0.7	0.9	1.1	1.3	1.4	1.6	1.8	1.9
CANADA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
BRAZIL	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4
ASIA	0.5	0.5	0.7	0.8	0.9	1.1	1.2	1.4	1.5	1.6
AFRICA	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.8	0.9
Total	6.5	6.8	7.4	7.9	8.6	9.2	9.8	10.6	11.5	12.2

2-Results for Tollway Scenario

Fuel Demand Fuel for Cars (EJ/Y)

Fuels for Cars (Units: E	J/y)									
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.1	0.3	0.6	1.0	1.6	2.5	3.6	4.6
Hydrogen	0.0	0.0	0.1	0.2	0.4	0.6	0.8	1.0	1.2	1.5
Bio-Syngas	0.0	0.0	0.3	0.7	0.9	0.7	0.5	0.4	0.2	0.1
CNG	0.1	0.3	0.5	0.7	1.2	1.8	2.5	3.0	3.1	3.1
Biofuel(Diesel)	0.0	0.0	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.3
Diesel	2.8	2.6	2.7	2.8	3.5	4.0	4.4	4.8	5.1	5.3
Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Methanol	0.0	0.1	0.4	0.7	1.1	1.4	1.5	1.5	1.6	1.3
Bio-Ethanol	0.6	1.5	2.3	2.8	3.5	3.9	4.4	5.1	6.0	7.2
Gasoline	34.9	38.0	38.7	38.2	35.2	30.4	25.7	21.2	17.1	14.1
Total	38.5	42.6	45.2	46.8	46.5	43.8	41.5	39.5	38.1	37.5
Fuels for Cars, Region										
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.4
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Bio-Ethanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Gasoline	0.9	1.2	1.4	1.7	1.9	1.9	1.8	1.6	1.3	1.2
Total	1.0	1.3	1.6	1.9	2.3	2.4	2.4	2.4	2.3	2.3

Fuels for Cars, Region	ASIA (Units: E	IJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.4
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.6	0.9
Bio-Methanol	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.2	0.1
Bio-Ethanol	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.5
Gasoline	1.5	1.9	2.1	2.4	2.5	2.5	2.6	2.6	2.4	2.1
Total	1.5	1.9	2.3	2.8	3.1	3.4	3.7	4.1	4.3	4.4
Fuels for Cars, Region	RDA7II (I Inite	· E1/A								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Bio-Ethanol	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6
Gasoline	0.9	0.9	1.2	1.2	1.2	1.2	1.1	0.8	0.5	0.3
Total	1.2	1.5	1.7	1.8	1.8	1.9	1.9	1.8	1.7	1.6
Fuels for Cars, Region	•									
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0 1.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2
Gasoline Total	1.2 1.2	1.2	1.1	1.1	1.0 1.2	0.8 1.0	0.6 0.9	0.4	0.2 0.7	0.1
Total	1.2	1.5	1.5	1.3	1.2	1.0	0.5	0.6	0.7	0.0
Fuels for Cars. Region	CHINA (Units	: EJ/v)								
Fuels for Cars, Region	CHINA (Units	: EJ/y) 2010	2015	2020	2025	2030	2035	2040	2045	2050
			2015 0.0	2020 0.0	2025 0.0	2030 0.0	2035 0.1	2040 0.1	2045 0.2	2050 0.2
Fuel	2005	2010								
Fuel Electricity	2005 0.0	2010 0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2
Fuel Electricity Hydrogen Bio-Syngas CNG	2005 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0	0.0 0.0 0.0 0.1	0.0 0.0 0.0 0.1	0.1 0.1 0.0 0.1	0.1 0.1 0.0 0.2	0.2 0.1 0.0 0.2	0.2 0.1 0.0 0.3
Fuel Electricity Hydrogen Bio-Syngas	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0	0.1 0.1 0.0	0.1 0.1 0.0	0.2 0.1 0.0	0.2 0.1 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel	2005 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5	0.0 0.0 0.0 0.1 0.0 0.5	0.1 0.1 0.0 0.1	0.1 0.1 0.0 0.2	0.2 0.1 0.0 0.2	0.2 0.1 0.0 0.3
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5	0.0 0.0 0.0 0.1 0.0	0.1 0.1 0.0 0.1 0.0	0.1 0.1 0.0 0.2 0.0 0.5	0.2 0.1 0.0 0.2 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.4 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.0	0.1 0.0 0.1 0.0 0.5 0.0 0.5	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.0 0.3	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.0 0.1	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.0 0.1 2.3	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.0 0.2	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.0 0.2 3.2	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.0 0.3 3.4	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.0	0.1 0.0 0.1 0.0 0.5 0.0 0.5	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.0 0.3	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.0 0.1	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.0 0.1 2.3	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.0 0.2	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.0 0.2 3.2	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.0 0.3 3.4	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region	2005 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 0.0 1.1	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0 1.4 2.1	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1	0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.0 0.2 4.3	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel	2005 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 0.0 1.1 1.6	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0 1.4 2.1	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.0 0.2 3.2 4.3	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.8 DEEUR (Units: 2005)	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 1.1 1.6	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0 1.4 2.1	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen	2005 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 1.1 1.6	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0 1.4 2.1	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.8 EEUR (Units: 2005 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 1.1 1.6	0.0 0.0 0.0 0.0 0.5 0.0 0.0 1.4 2.1	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.6 0.8 EEUR (Units: 2005 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 1.1 1.6	0.0 0.0 0.0 0.0 0.5 0.0 0.0 1.4 2.1	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.6 0.8 EEUR (Units: 2005 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel)	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.6 0.8 EEUR (Units: 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.6 0.8 EEUR (Units: 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.0 1.4 2.1 2020 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.6 0.8 EEUR (Units: 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol	2005 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.6 0.8 EEUR (Units: 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.1 1.6 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.1
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.1 1.6 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0 0.0 0.0
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.1 1.6 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0 0.1 0.1 0.3
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.3	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.0 1.1 1.6 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.0 2015 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.0 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2 0.3 2 2040 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 2.0 2.0 2.0 2.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0 0.1 0.1 0.3
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Fuel Fuels for Cars, Region Fuel Fuels for Cars, Region Fuel Fuels for Cars, Region Fuel Electricity Hydrogen	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2 0.4	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2 0.3 2 2040 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 2.0 2.0 2.0 2.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.0 0.1 0.1 0.3
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Fuel Electricity Fuels	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 2.0 0.0 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 2.0 2.0 2.0 2.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.1 0.1 0.3 2050 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Fuel Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.1 1.6 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 2.0 2.0 2.0 2.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.1 0.1 0.3
Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Methanol Bio-Methanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Bio-Syngas CNG Biofuel(Diesel) Diesel Bio-Methanol Bio-Ethanol Gasoline Total Fuels for Cars, Region Fuel Electricity Hydrogen Fuel Electricity Fuels	2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 1.9 2.5 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.1 0.0 0.5 0.0 0.1 2.3 3.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.1 0.0 0.5 0.0 0.2 2.9 3.7 2035 0.0 0.0 0.0 0.0 0.0 2.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.2 0.0 0.5 0.0 0.2 3.2 4.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.1 0.0 0.2 0.0 0.6 0.0 0.3 3.4 4.8 2045 0.0 0.0 0.0 0.0 0.0 0.0 2.0 2.0 2.0 2.0	0.2 0.1 0.0 0.3 0.0 0.8 0.0 0.1 0.4 3.0 5.0 2050 0.1 0.0 0.0 0.0 0.1 0.1 0.3 2050 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.

Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Gasoline	0.6	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.4	0.3
Total	0.6	0.8	0.8	0.9	1.0	1.0	1.1	1.0	0.9	0.9
Fuels for Cars, Region										
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Diesel Bio Mothanol	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.6	0.7
Gasoline	0.3	0.5	0.6	0.7	0.9	1.1	1.3	1.5	1.8	2.2
Total	0.4	0.6	0.8	1.0	1.2	1.5	1.8	2.2	2.8	3.4
Fuels for Cars, Region	IAM (Unite: F	:1/v\								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.4	0.3
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Bio-Ethanol	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3
Gasoline	0.8	1.0	1.1	1.2	1.3	1.2	1.1	0.8	0.7	0.6
Total	0.9	1.1	1.3	1.5	1.8	1.8	1.8	1.8	1.7	1.7
Fuels for Cars, Region	MEA (Units: I	EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Biofuel (Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4
Bio-Methanol	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1
Bio-Ethanol	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3
Gasoline	1.0	1.2	1.4	1.6	1.7	1.7	1.5	1.3	0.9	0.7
Total	1.1	1.3	1.5	1.8	1.9	2.1	2.2	2.1	1.9	1.8
Fuels for Cars, Region	MEVICO /IImi	to. E1/./\								
Fuels for Cars, Region	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
Gasoline	0.7	0.8	0.9	1.0	1.0	1.0	0.9	0.8	0.6	0.5
Total	0.7	0.8	1.0	1.0	1.1	1.2	1.2	1.2	1.1	1.0
Fuels for Cars, Region										
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Diesel	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2
Bio-Methanol	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1
Bio-Ethanol	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.3
Gasoline	3.0	3.2	3.0	2.6	2.1	1.7	1.3	0.9	0.5	0.3
Total	3.4	3.6	3.6	3.4	3.0	2.5	2.1	1.8	1.6	1.4
Fuels for Cars, Region	BIICCIV /IImit	c. E1/v)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0					0.0	0.0		
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CNG	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Gasoline	1.2	1.4	1.5	1.5	1.4	1.3	1.1	0.8	0.6	0.5
Total	1.2	1.4	1.5	1.6	1.6	1.6	1.5	1.3	1.2	1.1
Fuels for Cars, Region	•									
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.1	0.2	0.4	0.6	0.9	1.4	1.8
Hydrogen	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.5
Bio-Syngas	0.0	0.0	0.2	0.4	0.6	0.5	0.4	0.3	0.1	0.1
CNG	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.5	0.5	0.5
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.1	0.1	0.2	0.4	0.6	1.0	1.2	1.1	1.0	0.8
Bio-Methanol	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.5	0.4
Bio-Ethanol	0.3	0.9	1.3	1.4	1.6	1.7	1.8	1.8	1.8	1.9
Gasoline	16.4	16.6	15.9	14.7	12.5	9.2	6.3	4.2	2.8	1.9
Total	16.8	17.6	17.7	17.2	15.9	13.4	11.1	9.6	8.5	7.8
Fuels for Cars, Region	•									
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electricity	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.6	0.8	1.0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3
Bio-Syngas	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0
CNG	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.5	0.4	0.4
Biofuel(Diesel)	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0
Diesel	1.9	1.6	1.3	1.1	1.3	1.3	1.2	1.0	0.9	0.8
Bio-Methanol	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.3	0.2	0.2
Bio-Ethanol	0.0	0.1	0.2	0.3	0.5	0.6	0.7	0.9	1.1	1.2
Gasoline	5.4	6.2	6.3	5.9	4.8	3.4	2.4	1.6	0.9	0.4
Total	7.3	7.9	8.2	8.1	7.6	6.6	5.8	5.0	4.5	4.2

Fuel in Other Surface Transport and Aviation (EJ/y)

Fuel in Other Surface Tra	insport and Avia	tion (Units: E	J/y)							
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.6	0.8	1.0	1.1	1.3	0.6	0.2	0.1	0.0	0.0
Gasoline	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.2	0.4	0.3
Diesel	39.4	39.3	40.8	42.0	43.8	46.5	49.2	51.5	54.0	56.0
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.1	1.0	0.2	0.1	0.0	0.0	0.0	0.0
CNG	0.3	0.4	0.2	0.2	0.4	0.5	0.6	0.5	0.4	0.3
Biofuel(Diesel)	0.1	0.5	1.0	1.3	1.2	0.8	0.8	0.8	0.6	0.8
Electricity	0.3	0.4	0.6	1.0	1.6	2.1	2.6	3.3	4.0	4.8
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-FT-Jetfuel	0.0	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2
Jetfuel	10.2	10.5	11.6	12.8	14.3	15.9	17.7	19.6	21.7	23.7
Total	50.9	52.4	55.9	59.9	63.1	66.7	71.4	76.1	81.3	86.2
Fuel in Other Surface Tra	•		•							
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0
Diesel	1.6	1.6	1.6	1.7	1.9	2.1	2.6	3.0	3.4	3.8
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.3 2.0	0.4	0.5	0.6	0.7	0.9	1.1	1.5	2.0 5.7	2.5
Total	2.0	2.1	2.3	2.5	2.9	3.4	3.9	4.7	5.7	6.7
Fuel in Other Surface Tra	nsnort and Δvia	tion Region	ΔSIΔ (Units: F	1/v)						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0
Diesel	4.2	4.1	4.5	4.9	5.4	5.8	6.2	6.5	6.7	6.8
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG Riofuel(Diesel)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel) Electricity	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.7	0.9	1.1	1.4	1.7	2.0	2.2	2.5	2.8	3.0
Total	4.9	5.1	5.8	6.6	7.4	8.1	8.7	9.3	9.9	10.4
Fullis Other Confess Town			DD 4 711 /11 - 11 -	F1/ \						
Fuel in Other Surface Transp	port and Avia	tion, Kegion E 2010	2015	: EJ/Y) 2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Diesel	1.0	1.0	1.0	1.1	1.1	1.3	1.4	1.5	1.6	1.7
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Electricity Hydrogen	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6
Total	1.2	1.3	1.4	1.5	1.7	1.8	2.0	2.2	2.3	2.5
Fuel in Other Surface Transp		. •			202-	2022	202-	2010	204-	2050
Fuel Other (Coal)	2005 0.0	2010 0.0	2015 0.0	2020 0.0	2025 0.0	2030 0.0	2035 0.0	2040 0.0	2045 0.0	2050 0.0
Diesel	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.0	0.0	0.0
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity Hydrogen	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel										
JELIUEI	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Total	1.0	0.2	1.0	0.3 1.0	0.3 1.0	1.0	1.0	1.1	1.1	1.1
Total	1.0	0.9	1.0	1.0					-	
Total Fuel in Other Surface Transp	1.0 port and Avia	0.9 tion, Region (1.0 CHINA (Units:	1.0 EJ/y)	1.0	1.0	1.0	1.1	1.1	1.1
Total Fuel in Other Surface Transpruel	1.0 port and Avia 2005	0.9 tion, Region (2010	1.0 CHINA (Units: 2015	1.0 EJ/y) 2020	1.0 2025	1.0 2030	1.0 2035	1.1 2040	1.1 2045	1.1 2050
Total Fuel in Other Surface Transp	1.0 port and Avia 2005 0.6	0.9 tion, Region (2010 0.6	1.0 CHINA (Units: 2015 0.6	1.0 EJ/y) 2020 0.7	1.0 2025 0.7	1.0	1.0 2035 0.1	1.1	1.1 2045 0.0	1.1 2050 0.0
Total Fuel in Other Surface Transpuel Other (Coal)	1.0 port and Avia 2005	0.9 tion, Region (2010	1.0 CHINA (Units: 2015	1.0 EJ/y) 2020	1.0 2025	1.0 2030 0.2	1.0 2035	1.1 2040 0.0	1.1 2045	1.1 2050
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol	1.0 port and Avia 2005 0.6 3.6 0.0 0.0	0.9 tion, Region (2010 0.6 4.5 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0	1.0 2025 0.7 6.3 0.0 0.0	1.0 2030 0.2 6.9 0.0 0.0	1.0 2035 0.1 7.3 0.0 0.0	1.1 2040 0.0 7.6 0.0 0.0	1.1 2045 0.0 7.9 0.0 0.0	1.1 2050 0.0 8.1 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel)	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0	0.9 tion, Region (2010 0.6 4.5 0.0 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0	1.0 2025 0.7 6.3 0.0 0.0 0.0	1.0 2030 0.2 6.9 0.0 0.0 0.0	1.0 2035 0.1 7.3 0.0 0.0 0.0	1.1 2040 0.0 7.6 0.0 0.0 0.0	1.1 2045 0.0 7.9 0.0 0.0 0.0	1.1 2050 0.0 8.1 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0	0.9 tion, Region (2010 0.6 4.5 0.0 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.0	1.0 2030 0.2 6.9 0.0 0.0 0.0 0.0	1.0 2035 0.1 7.3 0.0 0.0 0.0 0.0	1.1 2040 0.0 7.6 0.0 0.0 0.0 0.0	1.1 2045 0.0 7.9 0.0 0.0 0.0 0.0	2050 0.0 8.1 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region (2010 0.6 4.5 0.0 0.0 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0	1.0 2030 0.2 6.9 0.0 0.0 0.0 0.3 0.0	1.0 2035 0.1 7.3 0.0 0.0 0.0 0.3 0.0	1.1 2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0	1.1 2045 0.0 7.9 0.0 0.0 0.0 0.6 0.0	2050 0.0 8.1 0.0 0.0 0.0 0.7
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region (2010 0.6 4.5 0.0 0.0 0.0 0.0 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0 0.0	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0	1.0 2030 0.2 6.9 0.0 0.0 0.0 0.3 0.0 0.0	1.0 2035 0.1 7.3 0.0 0.0 0.0 0.3 0.0 0.0	1.1 2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 0.0	1.1 2045 0.0 7.9 0.0 0.0 0.0 0.6 0.0 0.0	1.1 2050 0.0 8.1 0.0 0.0 0.0 0.7 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region (2010 0.6 4.5 0.0 0.0 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0 0.0 1.2	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0	1.0 2030 0.2 6.9 0.0 0.0 0.0 0.3 0.0	1.0 2035 0.1 7.3 0.0 0.0 0.0 0.3 0.0	1.1 2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0	1.1 2045 0.0 7.9 0.0 0.0 0.0 0.6 0.0	2050 0.0 8.1 0.0 0.0 0.0 0.7
Total Fuel in Other Surface Transpuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.9 tion, Region (2010 0.6 4.5 0.0 0.0 0.0 0.0 0.0 0.0 0.7 5.9	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0 1.2 7.8	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5	1.0 2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7	2035 0.1 7.3 0.0 0.0 0.0 0.3 0.0 0.0 2.0	1.1 2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 0.0 2.2	1.1 2045 0.0 7.9 0.0 0.0 0.0 0.6 0.0 0.0 2.4	1.1 2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: E	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0 0.0 1.2 7.8	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7	1.0 2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1	1.0 2035 0.1 7.3 0.0 0.0 0.3 0.0 0.0 2.0 9.7	1.1 2040 0.0 7.6 0.0 0.0 0.4 0.0 0.0 2.2 10.3	1.1 2045 0.0 7.9 0.0 0.0 0.0 0.0 0.0 2.4 10.9	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: E	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0 0.1 1.2 7.8 EJ/y) 2020	1.0 2025 0.7 6.3 0.0 0.0 0.2 0.0 0.0 1.5 8.7	1.0 2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1	2035 0.1 7.3 0.0 0.0 0.3 0.0 0.0 2.0 9.7	2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 2.2 10.3	1.1 2045 0.0 7.9 0.0 0.0 0.6 0.0 0.0 2.4 10.9	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal)	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: E2015 0.0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0 0.0 1.2 7.8 EJ/y) 2020 0.0	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7	1.0 2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1 2030 0.0	1.0 2035 0.1 7.3 0.0 0.0 0.0 0.3 0.0 0.0 2.0 9.7	2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 0.0 2.2 10.3	1.1 2045 0.0 7.9 0.0 0.0 0.6 0.0 0.0 2.4 10.9	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: E	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0 0.1 1.2 7.8 EJ/y) 2020	1.0 2025 0.7 6.3 0.0 0.0 0.2 0.0 0.0 1.5 8.7	1.0 2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1	2035 0.1 7.3 0.0 0.0 0.3 0.0 0.0 2.0 9.7	2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 2.2 10.3	1.1 2045 0.0 7.9 0.0 0.0 0.6 0.0 0.0 2.4 10.9	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.3	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.3	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 1.0 6.9 EEUR (Units: E2015 0.0 0.3	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.0 0.1 0.0 0.1 2.7 7.8 EJ/y) 2020 0.0 0.3	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.3	1.0 2030 0.2 6.9 0.0 0.0 0.3 0.0 1.7 9.1 2030 0.0 0.3	2035 0.1 7.3 0.0 0.0 0.0 0.3 0.0 0.0 2.0 9.7	1.1 2040 0.0 7.6 0.0 0.0 0.4 0.0 0.2 10.3 2040 0.4	1.1 2045 0.0 7.9 0.0 0.0 0.6 0.0 0.0 2.4 10.9 2045 0.0 0.4	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4 2050 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.3 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region 8 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.3 0.0 0.0 0.0 0.0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 1.2 7.8 EJ/y) 2020 0.0 0.3 0.0 0.0 0.0	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.3 0.0 0.0 0.0	2030 0.2 6.9 0.0 0.0 0.3 0.0 1.7 9.1 2030 0.0 0.3 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.3 0.0 2.0 9.7 2035 0.0 0.4 0.0 0.0	2040 0.0 7.6 0.0 0.0 0.4 0.0 2.2 10.3 2040 0.0 0.4 0.0	1.1 2045 0.0 7.9 0.0 0.0 0.6 0.0 2.4 10.9 2045 0.0 0.4 0.0 0.0 0.0 0.0	2050 0.0 8.1 0.0 0.0 0.7 0.0 2.6 11.4 2050 0.0 0.4 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region 8 2010 0.0 0.3 0.0 0.0 0.0 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 2.7 7.8 EJ/y) 2020 0.0 0.3 0.0 0.0 0.0 0.0 0.0	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 1.5 8.7 2025 0.0 0.3 0.0 0.0 0.0 0.0	2030 0.2 6.9 0.0 0.0 0.3 0.0 1.7 9.1 2030 0.0 0.3 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.3 0.0 2.0 9.7 2035 0.0 0.4 0.0 0.0 0.0	2040 0.0 7.6 0.0 0.0 0.4 0.0 2.2 10.3 2040 0.4 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.6 0.0 2.4 10.9 2045 0.0 0.4 0.0 0.0	2050 0.0 8.1 0.0 0.0 0.7 0.0 2.6 11.4 2050 0.0 0.4 0.0 0.0 0.0
Total Fuel in Other Surface Transpuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transpuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region 8 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 1.2 7.8 EJ/y) 2020 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 1.5 8.7 2025 0.0 0.3 0.0 0.0 0.0 0.0 0.0	2030 0.2 6.9 0.0 0.0 0.3 0.0 1.7 9.1 2030 0.0 0.3 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.3 0.0 2.0 9.7 2035 0.0 0.4 0.0 0.0 0.0 0.0	2040 0.0 7.6 0.0 0.0 0.4 0.0 2.2 10.3 2040 0.0 0.4 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0	2050 0.0 8.1 0.0 0.0 0.7 0.0 2.6 11.4 2050 0.0 0.4 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region 8 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 2.7 7.8 EJ/y) 2020 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2030 0.2 6.9 0.0 0.0 0.3 0.0 1.7 9.1 2030 0.0 0.3 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.3 0.0 2.0 9.7 2035 0.0 0.4 0.0 0.0 0.0 0.0	2040 0.0 7.6 0.0 0.0 0.4 0.0 2.2 10.3 2040 0.0 0.4 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0	2050 0.0 8.1 0.0 0.0 0.7 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region 8 2010 0.0 0.3 0.0 0.0 0.0 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 2.7 7.8 EJ/y) 2020 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.3 0.0 0.0 2.0 9.7 2035 0.0 0.4 0.0 0.0 0.0 0.0 0.0 0.0	2040 0.0 7.6 0.0 0.0 0.4 0.0 2.2 10.3 2040 0.0 0.4 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0	2050 0.0 8.1 0.0 0.0 0.7 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region 8 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 2.7 7.8 EJ/y) 2020 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2030 0.2 6.9 0.0 0.0 0.3 0.0 1.7 9.1 2030 0.0 0.3 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.3 0.0 2.0 9.7 2035 0.0 0.4 0.0 0.0 0.0 0.0 0.0 0.0	2040 0.0 7.6 0.0 0.0 0.4 0.0 2.2 10.3 2040 0.0 0.4 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.4 0.0 0.0 0.0 0.0	2050 0.0 8.1 0.0 0.0 0.7 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Transpuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Transpuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 2.7 7.8 EJ/y) 2020 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2030 0.2 6.9 0.0 0.0 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.3 0.0 0.0 2.0 9.7 2035 0.0 0.4 0.0 0.0 0.0 0.0 0.0 0.0	2040 0.0 7.6 0.0 0.0 0.4 0.0 2.2 10.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2050 0.0 8.1 0.0 0.0 0.7 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 1.2 7.8 EJ/y) 2020 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2030 0.2 6.9 0.0 0.0 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.3 0.0 0.0 2.0 9.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2040 0.0 7.6 0.0 0.0 0.4 0.0 2.2 10.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2050 0.0 8.1 0.0 0.0 0.7 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 6.9 EEUR (Units: E) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 1.2 7.8 EJ/y) 2020 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2030 0.2 6.9 0.0 0.0 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.0 0.0 2.0 9.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 0.2 10.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: EU) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 1.2 7.8 EJ/y) 2020 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.0 0.0 2.0 9.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 0.2 10.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Wethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal)	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 6.9 EEUR (Units: E 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 1.2 7.8 EJ/y) 2020 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.0 0.0 2.0 9.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 0.0 2.2 10.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 0.0 1.0 6.9 EEUR (Units: EU) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 1.2 7.8 EJ/y) 2020 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.0 0.0 2.0 9.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 0.2 10.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Wethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.0 0.0 0.0 0.0 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 1.2 7.8 EJ/y) 2020 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.0 0.0 2.0 9.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2040 0.0 7.6 0.0 0.0 0.0 0.4 0.0 0.0 2.2 10.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.0 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Trans Fuel Other (Coal) Diesel Bio-Methanol	1.0 port and Avia 2005 0.6 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.8 port and Avia 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.9 tion, Region 0 2010 0.6 4.5 0.0 0.0 0.0 0.0 0.7 5.9 tion, Region E 2010 0.0 0.0 0.0 0.0 0.0 0.0 1.6 0.0 1.6 0.0	1.0 CHINA (Units: 2015 0.6 5.2 0.0 0.0 0.0 0.1 0.0 1.0 6.9 EEUR (Units: E 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.	1.0 EJ/y) 2020 0.7 5.8 0.0 0.0 0.1 0.0 0.1 2.2 7.8 EJ/y) 2020 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.0 2025 0.7 6.3 0.0 0.0 0.0 0.2 0.0 0.0 1.5 8.7 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2030 0.2 6.9 0.0 0.0 0.3 0.0 0.0 1.7 9.1 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2035 0.1 7.3 0.0 0.0 0.0 0.0 2.0 9.7 2035 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2040 0.0 7.6 0.0 0.0 0.4 0.0 0.2 10.3 2040 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2045 0.0 7.9 0.0 0.0 0.6 0.0 0.0 2.4 10.9 2045 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.0 2.5 0.0	2050 0.0 8.1 0.0 0.0 0.7 0.0 0.0 2.6 11.4 2050 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Electricity	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Jetfuel	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.
Total	1.5	1.8	1.9	2.1	2.3	2.4	2.6	2.8	3.0	3.
Fuel in Other Surface 1										
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.
Diesel	0.9	1.1	0.9	1.0	1.1	1.2	1.3	1.4	1.6	1.
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
CNG	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.3	0.2	0.
Biofuel(Diesel)	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.
Electricity	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Jetfuel Total	0.1	0.2	0.3	0.3	0.4	0.5 2.4	0.6	0.8	1.0	1.
lotai	1.1	1.4	1.6	1.8	2.1	2.4	2.8	3.2	3.6	4.
Fuel in Other Surface 1	Fransport and Aviat	tion. Region I	LAM (Units: E	J/v)						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Diesel	2.9	3.2	3.5	3.7	4.0	4.4	4.7	4.9	5.1	5
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
CNG	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0
Biofuel(Diesel)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0
Electricity	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Jetfuel	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0
Total	3.3	3.6	3.9	4.2	4.6	5.0	5.4	5.8	6.2	6
Fuel in Other Surface 1										
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Gasoline Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
	3.5	3.8	3.9	4.0	4.3	4.6	5.1	5.6	6.0	6
Bio-Methanol	0.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Bio-Ethanol	0.0	0.0				0.0	0.0	0.0	0.0	0
Bio-Syngas		0.0	0.0	0.0		0.0	0.0	0.0		
CNIC	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	
	0.0 0.0	0.0 0.0	0.0	0.1 0.0	0.0	0.0	0.0	0.0	0.0	0
Biofuel(Diesel)	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.1 0.0 0.1	0.0 0.0 0.1	0.0	0.0	0.0	0.0	0
Biofuel(Diesel) Electricity	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.1 0.0 0.1 0.0	0.0 0.0 0.1 0.0	0.0 0.0 0.1	0.0 0.0 0.1	0.0 0.0 0.2	0.0 0.0 0.3	0 0 0
Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.1 0.0 0.1 0.0 0.0	0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.1 0.0	0.0 0.0 0.1 0.0	0.0 0.0 0.2 0.0	0.0 0.0 0.3 0.0	0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.0 0.1 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.2 0.0 0.0	0.0 0.0 0.3 0.0 0.0	0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel letfuel	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.9	0.0 0.0 0.1 0.0 0.0 1.1	0.0 0.0 0.2 0.0 0.0 1.3	0.0 0.0 0.3 0.0 0.0 1.5	0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.0 0.1 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.2 0.0 0.0	0.0 0.0 0.3 0.0 0.0	0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total	0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4	0.0 0.0 0.0 0.0 0.0 0.0 0.0 4.6	0.1 0.0 0.1 0.0 0.0 0.0 0.7 4.9	0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.9	0.0 0.0 0.1 0.0 0.0 1.1	0.0 0.0 0.2 0.0 0.0 1.3	0.0 0.0 0.3 0.0 0.0 1.5	0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1	0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4	0.0 0.0 0.0 0.0 0.0 0.0 0.0 4.6	0.1 0.0 0.1 0.0 0.0 0.0 0.7 4.9	0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.9	0.0 0.0 0.1 0.0 0.0 1.1	0.0 0.0 0.2 0.0 0.0 1.3	0.0 0.0 0.3 0.0 0.0 1.5	0 0 0 0 0 1 8
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1	0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6	0.1 0.0 0.1 0.0 0.0 0.0 0.7 4.9	0.0 0.0 0.1 0.0 0.0 0.0 0.8 5.2	0.0 0.0 0.1 0.0 0.0 0.9 5.7	0.0 0.0 0.1 0.0 0.0 1.1 6.3	0.0 0.0 0.2 0.0 0.0 1.3 7.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8	0 0 0 0 0 1 8
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Ietfuel Total Fuel in Other Surface 1 Fuel Other (Coal)	0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit	0.1 0.0 0.1 0.0 0.0 0.0 0.7 4.9 (ss: EJ/γ) 2020	0.0 0.0 0.1 0.0 0.0 0.0 0.8 5.2	0.0 0.0 0.1 0.0 0.0 0.9 5.7	0.0 0.0 0.1 0.0 0.0 1.1 6.3	0.0 0.0 0.2 0.0 0.0 1.3 7.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8	0 0 0 0 0 1 8
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Diesel	0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviate 2005 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015	0.1 0.0 0.1 0.0 0.0 0.0 0.7 4.9 2020 0.0	0.0 0.0 0.1 0.0 0.0 0.0 0.8 5.2	0.0 0.0 0.1 0.0 0.0 0.9 5.7 2030 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3	0.0 0.0 0.2 0.0 0.0 1.3 7.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8	0 0 0 0 0 1 8 205
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Ietfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Diesel Bio-Methanol	0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 1.2	0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0	0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 1.3	0.1 0.0 0.1 0.0 0.0 0.7 4.9 ss: EJ/y) 2020 0.0 1.4	0.0 0.0 0.1 0.0 0.0 0.0 0.8 5.2 2025 0.0 1.5	0.0 0.0 0.1 0.0 0.0 0.9 5.7 2030 0.0 1.6	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 1.9	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 2.0	0 0 0 0 1 8 205 0 2
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Fotal Fuel in Other Surface 1 Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol	0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 1.2	0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 1.3	0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 1.3	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0	0.0 0.0 0.1 0.0 0.0 0.0 0.8 5.2 2025 0.0 1.5	0.0 0.0 0.1 0.0 0.0 0.9 5.7 2030 0.0 1.6 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 1.8	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 1.9	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 2.0	0 0 0 0 1 8 205 0 2
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Fotal Fuel in Other Surface 1 Fuel Other (Coal) Diesel Bio-Methanol Biofuel(Diesel)	0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 1.2 0.0	0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 1.3 0.0	0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 1.3 0.0	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 1.6 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 1.8 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 1.9 0.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 2.0 0.0	0 0 0 0 1 8 205 0 2 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Fotal Fuel in Other Surface 1 Fuel Dither (Coal) Diesel Bio-Methanol Biofuel(Diesel) Electricity	0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviate 2005 0.0 1.2 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 1.3 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 1.3 0.0 0.0	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 1.6 0.0 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 1.8 0.0 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 1.9 0.0 0.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 2.0 0.0 0.0	0 0 0 0 0 1 1 8 2 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel letfuel Total Fuel in Other Surface T Fuel Other (Coal) Diesel Bio-Methanol Biofuel(Diesel) Electricity Hydrogen	0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviate 2005 0.0 1.2 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 1.3 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 1.3 0.0 0.0	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 1.6 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 1.8 0.0 0.0 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 1.9 0.0 0.0 0.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 2.0 0.0 0.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel letfuel Total Fuel in Other Surface T Fuel Other (Coal) Diesel Bio-Methanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel	0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 1.2 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 1.3 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 1.6 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 1.8 0.0 0.0 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 1.9 0.0 0.0 0.0 0.1	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 2.0 0.0 0.0 0.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel letfuel Total Fuel in Other Surface Teuel Other (Coal) Diesel Bio-Methanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel letfuel	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 1.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 1.3 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 1.6 0.0 0.0 0.0 0.1	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 1.8 0.0 0.0 0.0 0.1	0.0 0.0 0.2 0.0 1.3 7.0 2040 0.0 1.9 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.3 0.0 1.5 7.8 2045 0.0 2.0 0.0 0.0 0.1 0.0	0 0 0 0 0 1 1 8 2055 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Teuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Jetfuel	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 1.6 0.0 0.0 0.1 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 1.8 0.0 0.0 0.0 0.1 0.0	0.0 0.0 0.2 0.0 1.3 7.0 2040 0.0 1.9 0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.3 0.0 1.5 7.8 2045 0.0 2.0 0.0 0.0 0.1 0.0 0.0	00 00 00 00 11 88 205 00 00 00 00 00 00 00 00 00 00 00 00 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Ietfuel Total Fuel in Other Surface Teuel Other (Coal) Diesel Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Ietfuel Total Fuel in Other Surface Teuel	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.1 1.3	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 1.3 1.3 1.4 1.4 1.4 1.4 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0 0.0 0.0 0.0 1.8	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.9	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 0.0 0.0 0.1 0.0 0.0 0.3 2.2	0.0 0.0 0.2 0.0 1.3 7.0 2040 0.0 1.9 0.0 0.0 0.1 0.0 0.0 0.4 2.3	0.0 0.0 0.3 0.0 1.5 7.8 2045 0.0 0.0 0.0 0.1 0.0 0.0 0.4 2.5	0 0 0 0 0 1 1 8 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Ietfuel Total Fuel in Other Surface Teuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Ietfuel Total Fuel in Other Surface Teuel	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.1 1.3 Transport and Aviat 2005	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 1.3 1.3 1.4 1.4 1.4 1.4 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0 0.0 0.0 1.8	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 0.0 0.0 0.1 0.0 0.3 1.9	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 0.0 0.0 0.1 0.0 0.3 2.2	0.0 0.0 0.2 0.0 1.3 7.0 2040 0.0 0.0 0.0 0.1 0.0 0.0 0.4 2.3	0.0 0.0 0.3 0.0 1.5 7.8 2045 0.0 0.0 0.0 0.1 0.0 0.4 2.5	0 0 0 0 0 1 1 8 2055 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal)	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.1 1.3 Transport and Aviat 2005 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.0 0.0 1.3 0.0 0.0 0.0 0.0 1.3 1.3 1.4 1.4 1.5 1.4 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0 0.0 0.0 1.8	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 0.0 0.0 0.1 0.0 0.3 1.9	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 1.8 0.0 0.0 0.0 0.1 0.0 0.0 0.3 2.2	0.0 0.0 0.2 0.0 1.3 7.0 2040 0.0 0.0 0.0 0.1 0.0 0.0 0.4 2.3	0.0 0.0 0.3 0.0 1.5 7.8 2045 0.0 0.0 0.0 0.1 0.0 0.4 2.5	0 0 0 0 0 1 1 8 2055 0 0 0 0 0 0 0 0 0 2 2 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Gasoline	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.1 1.3 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.1 1.4 tion, Region I 2010 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.5 PACIFIC (Unit 2015	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0 0.0 1.8 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.9 2030 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 0.0 0.1 0.0 0.0 0.3 2.2 2035 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 0.0 0.0 0.1 0.0 0.0 0.4 2.3	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 0.0 0.0 0.1 0.0 0.4 2.5	0 0 0 0 0 1 1 8 2055 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Tele Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface Tele Fuel Other (Coal) Gasoline	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.1 1.3 Transport and Aviat 2005 0.0 0.0 0.1 1.3	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.1 1.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 1.4	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.5 PACIFIC (Unit 2015 0.0 0.1 2.4	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0 0.0 1.8 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.9 2030 0.0 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 0.0 0.1 0.0 0.0 0.3 2.2 2035 0.0 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 0.0 0.0 0.1 0.0 0.0 0.4 2.3 2040 0.0 0.0 0.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 0.0 0.0 0.0 0.1 0.0 0.4 2.5 2045 0.0 0.0 2.3	0 0 0 0 0 1 1 8 2055 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
CNG Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Diesel Bio-Methanol Bio-Ethanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Gasoline Diesel Bio-Methanol	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.1 1.3 Transport and Aviat 2005 0.0 0.0 0.1 1.3	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.1 1.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.5 PACIFIC (Unit 2015 0.0 0.1 2.4 0.0	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0 0.0 1.8 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.3 1.9 2030 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.1 0.0 0.1 6.3 2035 0.0 1.8 0.0 0.0 0.0 0.1 0.0 0.3 2.2 2035 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 1.9 0.0 0.0 0.1 0.0 0.4 2.3 2040 0.0 0.0 2.3 0.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.4 2.5 2045 0.0 0.0 2.3 0.0	0 0 0 0 0 1 1 8 2055 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Diesel Bio-Methanol Biofuel(Diesel) Electricity Hydrogen Bio-FT-Jetfuel Jetfuel Total Fuel in Other Surface 1 Fuel Other (Coal) Gasoline Diesel	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 3.9 Transport and Aviat 2005 0.0 0.0 0.0 0.0 0.0 0.1 1.3 Transport and Aviat 2005 0.0 0.0 0.1 1.3	0.0 0.0 0.0 0.0 0.0 0.0 0.5 4.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.1 1.4 tion, Region I 2010 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 1.4	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.6 4.6 MEXICO (Unit 2015 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 1.5 PACIFIC (Unit 2015 0.0 0.1 2.4	0.1 0.0 0.1 0.0 0.0 0.7 4.9 2020 0.0 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.1 0.0 0.0 0.8 5.2 2025 0.0 1.5 0.0 0.0 0.0 0.0 1.8 2025 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.1 0.0 0.9 5.7 2030 0.0 0.0 0.0 0.1 0.0 0.0 0.3 1.9 2030 0.0 0.0	0.0 0.0 0.1 0.0 0.0 1.1 6.3 2035 0.0 0.0 0.1 0.0 0.0 0.3 2.2 2035 0.0 0.0	0.0 0.0 0.2 0.0 0.0 1.3 7.0 2040 0.0 0.0 0.0 0.1 0.0 0.0 0.4 2.3 2040 0.0 0.0 0.0	0.0 0.0 0.3 0.0 0.0 1.5 7.8 2045 0.0 0.0 0.0 0.0 0.1 0.0 0.4 2.5 2045 0.0 0.0 2.3	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0
Total	3.9	3.6	3.5	3.4	3.4	3.4	3.4	3.5	3.5	3.5
Fuel in Other Surface Tran	sport and Avia	tion, Region F	RUSSIA (Units	: EJ/y)						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	0.6	0.6	0.9	0.8	0.8	0.8	0.9	0.9	1.0	1.1
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuel	0.4	0.5	0.6	0.6	0.7	0.8	1.0	1.1	1.3	1.4
Total	1.1	1.2	1.6	1.6	1.6	1.7	1.9	2.1	2.4	2.6
Fuel in Other Surface Tran	sport and Avia	tion, Region (JSA (Units: E.	l/y)						
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	6.9	6.3	6.3	6.2	6.1	6.1	6.1	5.9	6.0	6.1
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.3
Electricity	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.5	0.5
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-FT-Jetfuel	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1
Jetfuel	3.5	3.4	3.4	3.5	3.7	3.8	4.0	4.2	4.3	4.4
Total	10.4	9.7	9.9	10.7	10.2	10.4	10.6	10.8	11.1	11.4
Fuel in Other Surface Tran					2025	2020	2025	2040	2045	2050
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel	7.7	6.8	6.5	6.2	6.1	6.4	6.5	6.7	7.0	7.1
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)	0.1	0.3	0.5	0.5	0.4	0.2	0.2	0.1	0.0	0.1
Electricity	0.1	0.1	0.2	0.3	0.5	0.6	0.6	0.6	0.6	0.6
Hydrogen	0.0	0.0 0.1	0.0 0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			01/	111-4	11/	11.7	0.1	(1()	1111	0.0
Bio-FT-Jetfuel										
Jetfuel Total	2.2 10.1	2.2	2.3 9.7	2.4 9.8	2.6 9.8	2.8	2.9	3.0 10.6	3.1 10.8	3.2 11.0

Fuels in All Transport (EJ/y)

Fuels in All Transport (L	Jnits: EJ/y)									
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.6	0.8	1.0	1.1	1.3	0.6	0.2	0.1	0.0	0.0
Jetfuels	10.2	10.5	11.6	12.8	14.3	15.9	17.7	19.6	21.7	23.7
Bio-Jetfuels	0.0	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2
Gasoline	34.9	38.4	38.8	38.2	35.2	30.4	25.7	21.4	17.5	14.4
Diesel	42.2	41.9	43.5	44.8	47.3	50.5	53.6	56.3	59.1	61.3
Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Methanol	0.0	0.1	0.4	0.8	1.1	1.4	1.5	1.6	1.6	1.3
Bio-Ethanol	0.6	1.5	2.4	2.8	3.5	3.9	4.4	5.1	6.0	7.2
Bio-Syngas	0.0	0.0	0.5	1.6	1.1	0.8	0.5	0.4	0.2	0.1
CNG	0.4	0.7	0.7	0.9	1.5	2.3	3.2	3.6	3.6	3.4
Biofuel(Diesel)	0.1	0.5	1.1	1.7	1.4	0.9	0.9	0.8	0.8	1.0
Electricity	0.3	0.4	0.8	1.4	2.2	3.1	4.2	5.8	7.6	9.4
Hydrogen	0.0	0.0	0.1	0.2	0.4	0.6	0.8	1.0	1.2	1.5
Total	89.4	95.0	101.1	106.7	109.5	110.5	112.9	115.7	119.4	123.6
Fuels in All Transport, R	egion AFRICA (Un	its: EJ/y)								

Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0
Jetfuels	0.3	0.4	0.5	0.6	0.7	0.9	1.1	1.5	2.0	2.5
Bio-Jetfuels	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gasoline	0.9		1.4	1.7	1.9	1.9	1.8	1.6	1.3	1.2
Diesel	1.7			1.8		2.3	2.7	3.2	3.8	4.3
			1.7		2.0					
Bio-Methanol	0.0		0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Bio-Ethanol	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Bio-Syngas	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0		0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.5
Hydrogen	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total	3.0		3.9	4.5	5.1	5.7	6.4	7.1	8.0	9.0
TOtal	3.0) 3.4	3.5	4.3	5.1	3.7	0.4	7.1	8.0	3.0
Fuels in All Transport Box	ion ASIA (IIni	to EI/v								
Fuels in All Transport, Reg	-		2045	2020	2025	2020	2025	2040	2045	2050
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0		0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0
Jetfuels	0.7	7 0.9	1.1	1.4	1.7	2.0	2.2	2.5	2.8	3.0
Bio-Jetfuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gasoline	1.5	5 1.9	2.1	2.4	2.5	2.5	2.6	2.6	2.4	2.1
Diesel	4.2		4.5	4.9	5.4	5.9	6.4	6.8	7.2	7.7
Bio-Methanol	0.0		0.0	0.1	0.1	0.2	0.4	0.3	0.2	0.1
	0.0			0.1	0.1	0.2		0.3	0.2	
Bio-Ethanol			0.0				0.2			0.5
Bio-Syngas	0.0		0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0		0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.5
Biofuel(Diesel)	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.8
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Total	6.4		8.1	9.3	10.4	11.5	12.4	13.3	14.1	14.8
Total	O.	7.0	0.1	3.3	10.1	11.5	12.1	13.3		11.0
Fuels in All Transport, Reg	ion BRAZII (II	nite: FI/v)								
			2015	2020	2025	2030	2025	2040	2045	2050
Fuel	2005	2010	2015		2025		2035	2040		
Other (Coal)	0.0		0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Jetfuels	0.2		0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6
Bio-Jetfuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gasoline	0.9	0.9	1.2	1.2	1.2	1.2	1.1	0.8	0.5	0.3
Diesel	1.0	1.1	1.1	1.2	1.3	1.4	1.6	1.8	1.9	1.9
Bio-Methanol	0.0	0.0						0.0	0.0	0.1
Bio-Methanol	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Bio-Ethanol	0.2	0.4	0.0 0.3	0.0 0.3	0.0	0.0	0.0	0.3	0.4	0.6
Bio-Ethanol Bio-Syngas	0.2 0.0	0.4	0.0 0.3 0.0	0.0 0.3 0.0	0.0 0.3 0.0	0.0 0.3 0.0	0.0 0.3 0.0	0.3 0.0	0.4	0.6 0.0
Bio-Ethanol Bio-Syngas CNG	0.2 0.0 0.1	0.4 0 0.0 1 0.1	0.0 0.3 0.0 0.1	0.0 0.3 0.0 0.1	0.0 0.3 0.0 0.2	0.0 0.3 0.0 0.2	0.0 0.3 0.0 0.3	0.3 0.0 0.2	0.4 0.0 0.2	0.6 0.0 0.2
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	0.2 0.0 0.1 0.0	0.4 0 0.0 1 0.1 0 0.0	0.0 0.3 0.0 0.1 0.0	0.0 0.3 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1	0.0 0.3 0.0 0.2 0.1	0.0 0.3 0.0 0.3 0.1	0.3 0.0 0.2 0.1	0.4 0.0 0.2 0.1	0.6 0.0 0.2 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	0.2 0.0 0.2 0.0	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0	0.0 0.3 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1	0.0 0.3 0.0 0.2 0.1	0.0 0.3 0.0 0.3 0.1 0.1	0.3 0.0 0.2 0.1 0.2	0.4 0.0 0.2 0.1 0.2	0.6 0.0 0.2 0.1 0.3
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	0.2 0.0 0.1 0.0	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0	0.0 0.3 0.0 0.1 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1	0.0 0.3 0.0 0.2 0.1 0.1	0.0 0.3 0.0 0.3 0.1	0.3 0.0 0.2 0.1 0.2 0.0	0.4 0.0 0.2 0.1	0.6 0.0 0.2 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	0.2 0.0 0.2 0.0	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1	0.0 0.3 0.0 0.2 0.1 0.1	0.0 0.3 0.0 0.3 0.1 0.1	0.3 0.0 0.2 0.1 0.2 0.0	0.4 0.0 0.2 0.1 0.2	0.6 0.0 0.2 0.1 0.3
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.2 0.0 0.1 0.0 0.0	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0	0.0 0.3 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1	0.0 0.3 0.0 0.2 0.1	0.0 0.3 0.0 0.3 0.1 0.1	0.3 0.0 0.2 0.1 0.2	0.4 0.0 0.2 0.1 0.2 0.0	0.6 0.0 0.2 0.1 0.3
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.2 0.0 0.2 0.0 0.0 0.0	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1	0.0 0.3 0.0 0.1 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1	0.0 0.3 0.0 0.2 0.1 0.1	0.0 0.3 0.0 0.3 0.1 0.1	0.3 0.0 0.2 0.1 0.2 0.0	0.4 0.0 0.2 0.1 0.2 0.0	0.6 0.0 0.2 0.1 0.3
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total	0.2 0.0 0.2 0.0 0.0 0.0	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8	0.3 0.0 0.2 0.1 0.2 0.0 3.9	0.4 0.0 0.2 0.1 0.2 0.0 4.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg	0.2 0.0 0.1 0.0 0.0 0.0 2.2 ion CANADA 2005	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8	0.3 0.0 0.2 0.1 0.2 0.0 3.9	0.4 0.0 0.2 0.1 0.2 0.0 4.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal)	0.2 0.0 0.1 0.0 0.0 0.0 2.2 ion CANADA 2005	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1)	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8	0.3 0.0 0.2 0.1 0.2 0.0 3.9	0.4 0.0 0.2 0.1 0.2 0.0 4.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels	0.2 0.6 0.1 0.6 0.6 2.2 ion CANADA 2005 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1) 2015 0.0 0.3	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4	0.6 0.0 0.2 0.1 0.3 0.1 4.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels	0.2 0.6 0.1 0.6 0.6 0.6 2.2 ion CANADA 2005 0.2	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1) 2015 0.0 0.3 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.0 0.3 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline	0.2 0.6 0.1 0.0 0.0 0.0 2.2 ion CANADA 2005 0.2 0.2	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1) 2015 0.0 0.3 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.3 0.0 1.1	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel	0.2 0.6 0.1 0.0 0.0 0.0 2.2 ion CANADA 2005 0.2 0.2	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 0.2 7 0.7	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1) 2015 0.0 0.3 0.0 1.1 0.7	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.3 0.0 1.1	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline	0.2 0.6 0.1 0.0 0.0 0.0 2.2 ion CANADA 2005 0.2 0.2	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 0.2 7 0.7	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1) 2015 0.0 0.3 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.3 0.0 1.1	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel	0.2 0.6 0.1 0.0 0.0 0.0 2.2 ion CANADA 2005 0.2 0.2	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1) 2015 0.0 0.3 0.0 1.1 0.7	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.3 0.0 1.1	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol	0.2 0.6 0.6 0.0 0.0 2.4 ion CANADA 2005 0.6 0.2 0.7 0.0 0.7	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 4 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1) 2015 0.0 0.3 0.0 1.1 0.7 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.3 0.0 1.1 0.7 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.3 0.0 0.4 0.8 0.0 0.1	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas	0.2 0.6 0.6 0.6 0.6 2.4 ion CANADA 2005 0.6 0.2 0.6 0.7 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 4 2.8 (Units: EJ/y 2010 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.1) 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.1	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.3 0.0 1.1 0.7 0.0 0.1	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.3 0.0 0.4 0.8 0.0 0.1 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG	0.2 0.6 0.6 0.6 0.6 2.4 ion CANADA 2005 0.6 0.2 0.7 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 4 2.8 (Units: EJ/y 2010 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1) 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.3 0.0 1.1 0.7 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7 0.0 0.1 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.8 0.7 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.3 0.0 0.4 0.8 0.0 0.1 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	0.2 0.6 0.6 0.6 0.6 0.6 2.4 ion CANADA 2005 0.6 0.2 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.3 0.0 1.1 0.7 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.8 0.7 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2 0.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	0.2 0.6 0.6 0.6 0.6 0.6 2.4 ion CANADA 2005 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.0 0.1	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.0 0.1 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 0.1	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 0.1	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1 0.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 4 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.2 7 0.7 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 0.1	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 0.1 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity	0.2 0.6 0.6 0.6 0.6 0.6 2.4 ion CANADA 2005 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 4 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.2 7 0.7 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.0 0.1	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.0 0.1 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 0.1	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 0.1	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1 0.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.2 0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.7 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 0.1	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 0.1 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.2 0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.7 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 0.1	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 0.1 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen	0.2 0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.7 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.3 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 0.1	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 0.1 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 0.0 2.2	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 2.2	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.1 1.8	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 1.8
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal)	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1) 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 2.2 2015 0.6	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.3 0.0 1.1 0.7 0.0 0.0 0.0 0.0 0.0 2.2 2020 0.7	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.2 0.0 1.8	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.1 0.0 0.2 0.0 0.1 0.0 1.8
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.1 0.7 0.0 0.1 0.0 0.0 0.0 2.2 2015 0.6 1.0	0.0 0.3 0.0 0.1 0.0 0.0 0.0 3.3 2020 0.0 0.1 0.7 1.2	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7 1.5	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9 2035 0.1 2.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.1 0.0 0.1 0.0 0.2 0.0 1.8	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 1.8
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 0 0.0 1 0.1 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.1 0.7 0.0 0.0 0.0 0.0 0.0 2.2 2015 0.6 1.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.1 0.7 1.2 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7 1.5 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0 2030 0.2 1.7 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9 2035 0.1 2.0 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8 2040 0.0 2.2 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.2 0.8 2045 0.0 0.1 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.0 0.1 0.0 0.2 0.0 0.0 0.1 0.0 0.2 0.0 0.0 0.1 0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 2.6 0.0 2.6 0.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline	0.2 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 4 2.8 (Units: EJ/y) 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.0 0.1 0.7 0.0 0.0 0.0 0.0 0.0 2.2 2015 0.6 1.0 0.0 1.1	0.0 0.3 0.0 0.1 0.0 0.0 0.3 3.3 2020 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 2.2 2020 0.7 1.2 0.0 1.4	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7 1.5 0.0 1.9	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0 2030 0.2 1.7 0.0 2.3	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9 2035 0.1 2.0 0.0 2.9	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8 2040 0.0 3.2	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.2 0.0 1.8 2045 0.0 3.4	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 1.8 2050 0.0 3.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline Diesel	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 4 2.8 (Units: EJ/y) 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.1 0.7 0.0 0.0 0.0 0.0 0.0 2.2 2015 0.6 1.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.0 0.1 0.7 1.2 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7 1.5 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0 2030 0.2 1.7 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9 2035 0.1 2.0 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8 2040 0.0 2.2 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.2 0.8 2045 0.0 0.1 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.1 0.0 0.2 0.0 0.0 0.1 0.0 0.2 0.0 0.0 0.1 0.0 0.2 0.0 0.0 0.1 0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 2.6 0.0 2.6 0.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline	0.2 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y) 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.0 0.1 0.7 0.0 0.0 0.0 0.0 0.0 2.2 2015 0.6 1.0 0.0 1.1	0.0 0.3 0.0 0.1 0.0 0.0 0.3 3.3 2020 0.0 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 2.2 2020 0.7 1.2 0.0 1.4	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 1.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7 1.5 0.0 1.9	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0 2030 0.2 1.7 0.0 2.3	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9 2035 0.1 2.0 0.0 2.9	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8 2040 0.0 3.2	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.2 0.0 1.8 2045 0.0 3.4	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 1.8 2050 0.0 3.0
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.0 0.0 0.0 0.0 2.2 2015 0.6 1.0 0.0 1.1 5.6	0.0 0.3 0.0 0.1 0.0 0.0 3.3 2020 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 2.2 2020 0.7 1.2 0.0 1.4 6.3	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7 1.5 0.0 1.9 6.8	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0 2030 0.2 1.7 0.0 2.3 7.4	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9 2035 0.1 2.0 0.0 2.9 7.8	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8 2040 0.0 3.2 8.1	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.2 0.0 1.8 2045 0.0 3.4 8.5	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.0 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 1.8 2050 0.0 3.0 8.9
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0 2 1.2 7 0.7 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1) 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.0 0.0 0.0 0.0 2.2 2015 0.6 1.0 0.0 1.1 5.6 0.0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.3 3.3 2020 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 2.2 2020 0.7 1.2 0.0 1.4 6.3 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7 1.5 0.0 1.9 6.8 0.0 0.0 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.3 0.0 0.3 0.0 0.0 0.1 0.0 0.1 0.0 2.0 2030 0.2 1.7 0.0 2.3 7.4 0.0 0.0 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9 2035 0.1 2.0 0.0 2.9 7.8 0.0 0.0 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8 2040 0.0 3.2 8.1 0.0 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.2 0.8 0.0 3.4 8.5 0.0 0.0 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 1.8 2050 0.0 3.0 8.9 0.0 0.1
Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity Hydrogen Total Fuels in All Transport, Reg Fuel Other (Coal) Jetfuels Gasoline Diesel Bio-Methanol	0.2 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	2 0.4 0 0.0 1 0.1 0 0.0 0 0.0 0 0.0 1 2.8 (Units: EJ/y 2010 0 0.0 2 0.2 0 0.0	0.0 0.3 0.0 0.1 0.0 0.0 3.1) 2015 0.0 0.3 0.0 1.1 0.7 0.0 0.0 0.0 0.0 0.0 2.2 2015 0.6 1.0 0.0 1.1 5.6 0.0	0.0 0.3 0.0 0.1 0.0 0.0 0.3 3.3 2020 0.3 0.0 1.1 0.7 0.0 0.1 0.0 0.0 0.0 0.0 2.2 2020 0.7 1.2 0.0 1.4 6.3 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.5 2025 0.0 0.3 0.0 0.7 0.0 0.1 0.0 0.0 0.1 0.0 2.2 2025 0.7 1.5 0.0 1.9 6.8 0.0	0.0 0.3 0.0 0.2 0.1 0.1 0.0 3.6 2030 0.0 0.3 0.0 0.8 0.7 0.0 0.0 0.1 0.0 0.1 0.0 2.0 2030 0.2 1.7 0.0 2.3 7.4 0.0	0.0 0.3 0.0 0.3 0.1 0.1 0.0 3.8 2035 0.0 0.3 0.0 0.6 0.8 0.0 0.1 0.0 0.1 0.0 1.9 2035 0.1 2.0 0.0 2.9 7.8 0.0	0.3 0.0 0.2 0.1 0.2 0.0 3.9 2040 0.0 0.3 0.0 0.4 0.8 0.0 0.1 0.0 0.1 0.0 1.8 2040 0.0 3.2 8.1 0.0	0.4 0.0 0.2 0.1 0.2 0.0 4.0 2045 0.0 0.4 0.0 0.2 0.8 0.0 0.1 0.0 0.1 0.0 0.2 0.8 0.0 3.4 8.5 0.0	0.6 0.0 0.2 0.1 0.3 0.1 4.1 2050 0.4 0.0 0.1 0.8 0.0 0.2 0.0 0.1 0.0 0.2 0.0 1.8 2050 0.0 3.0 8.9 0.0

CNG		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3
Biofuel(Diesel)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity Hydrogen		0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.7 0.1	0.9
Total		5.6	7.1	8.4	9.9	11.3	12.2	13.4	14.6	15.7	16.4
TOLAI		5.0	7.1	0.4	9.9	11.5	12.2	15.4	14.0	15.7	10.4
Fuels in All Transport, R		Units		2215					2012		
Fuel	2005	0.0	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal) Jetfuels		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Jetfuels		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gasoline		0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1
Diesel		0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Bio-Methanol		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Bio-Syngas		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biofuel(Diesel)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Hydrogen		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		0.7	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Fuels in All Transport, R		nits: E									
Fuel	2005	0.0	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)		0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Jetfuels Bio-Jetfuels		0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3
Gasoline		0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel		1.5	1.6	1.7	1.8	1.9	2.1	2.2	2.4	2.7	2.8
Bio-Methanol		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Bio-Ethanol		0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Bio-Syngas		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG		0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Biofuel(Diesel)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity		0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3
Hydrogen		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		2.2	2.5	2.8	3.0	3.3	3.4	3.6	3.8	3.9	4.1
Fuels in All Transport, R	egion INDIA (Units	: EJ/y)								
Fuel	2005		2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuels Bio Jetfuels		0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.8	1.0	1.1
Bio-Jetfuels Gasoline		0.0	0.0	0.0	0.0	0.0	0.0	0.0 1.3	0.0 1.7	0.0 2.2	0.0 2.5
Diesel		1.0	1.2	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.9
Bio-Methanol		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol		0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.6	0.7
Bio-Syngas		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG		0.0	0.1	0.1	0.2	0.3	0.3	0.5	0.4	0.3	0.3
Biofuel(Diesel)		0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5
Electricity		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3
Hydrogen		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		1.5	2.0	2.3	2.8	3.3	3.9	4.6	5.4	6.4	7.4
Fuels in All Transport, R	egion LAM (U	Jnits:	EJ/y)								
Fuel	2005		2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuels Bio Letfuels		0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.8
Bio-Jetfuels Gasoline		0.0	0.0	0.0 1.1	0.0 1.2	0.0	0.0 1.2	0.0	0.0	0.0 0.7	0.0
Diesel		0.8 2.9	1.0 3.2	3.5	3.8	1.3 4.1	4.4	4.8	5.1	5.3	5.5
Bio-Methanol		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Bio-Ethanol		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Bio-Syngas		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG		0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4
Biofuel(Diesel)		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Electricity		0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6
Hydrogen		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		4.2	4.7	5.2	5.8	6.4	6.8	7.2	7.6	7.9	8.2
Fuels in All Transport R	egion MFA (I	Jnits:	EJ/v)								
Fuels in All Transport, R Fuel	egion MEA (L 2005	Jnits:	EJ/y) 2010	2015	2020	2025	2030	2035	2040	2045	2050
	2005	Jnits: 0.0		2015 0.0	2020 0.0	2025 0.0	2030 0.0	2035 0.0	2040 0.0	2045 0.0	2050 0.0
Fuel Other (Coal) Jetfuels	2005		2010								
Fuel Other (Coal)	2005	0.0	2010 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Gasoline	1.0	1.2	1.4	1.6	1.7	1.7	1.5	1.3	0.9	0.7
Diesel Bio-Methanol	3.5 0.0	3.9 0.0	4.0 0.0	4.1 0.1	4.3 0.1	4.7 0.1	5.3 0.2	5.8 0.2	6.3 0.1	6.5 0.1
Bio-Ethanol	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1
Bio-Syngas	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6
Hydrogen Total	0.0 5.0	0.0 5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0 9.7	0.0 10.2
TOLAI	5.0	5.7	6.1	6.6	7.2	7.8	8.5	9.1	9.7	10.2
Fuels in All Transport, Regi	on MEXICO (Uni	its: EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuels Bio-Jetfuels	0.1 0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4
Gasoline	0.7	0.8	0.9	1.0	1.0	1.0	0.9	0.8	0.6	0.5
Diesel	1.2	1.3	1.3	1.4	1.5	1.7	1.8	2.0	2.2	2.2
Bio-Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Ethanol	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.9	2.2	2.5	2.6	2.9	3.1	3.3	3.5	3.6	3.7
Fuels in All Transport, Regi	ion DACIEIC (Uni	to: E1/v/\								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuels	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0
Bio-Jetfuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gasoline Diesel	3.0 3.4	3.6 2.6	3.0 2.7	2.6 2.6	2.1 2.6	1.7 2.5	1.3 2.5	0.9 2.5	0.5 2.5	0.3 2.5
Bio-Methanol	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1
Bio-Ethanol	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.3
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CNG	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1
Biofuel(Diesel)	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Electricity Hydrogen	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.5 0.1	0.5 0.1
Total	7.3	7.2	7.1	6.9	6.5	5.9	5.5	5.3	5.1	5.0
Fuels in All Transport, Regi	•		2015	2020	2025	2020	2025	2040	2045	2050
Fuel Other (Coal)	2005 0.0	2010 0.0	2015 0.0	2020 0.0	2025 0.0	2030 0.0	2035 0.0	2040 0.0	2045 0.0	2050 0.0
Jetfuels	0.4	0.5	0.6	0.6	0.7	0.8	1.0	1.1	1.3	1.4
Bio-Jetfuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gasoline	1.2	1.4	1.5	1.5	1.4	1.3	1.1	0.8	0.6	0.5
Diesel	0.6	0.6	0.9	0.9	0.8	0.9	1.0	1.1	1.2	1.2
Bio-Methanol Bio-Ethanol	0.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bio-Syngas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
CNG	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Biofuel(Diesel)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Hydrogen Total	0.0 2.3	0.0 2.6	0.0 3.1	0.0 3.2	0.0 3.3	0.0 3.3	0.0 3.4	0.0 3.5	0.0 3.6	0.0 3.7
TOLAI	2.5	2.0	5.1	5.2	3.3	3.3	3.4	3.3	5.0	5.7
Fuels in All Transport, Regi	on USA (Units: F	J/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	3.5	3.4	3.4 0.0	3.5 0.0	3.7 0.1	3.8 0.1	4.0 0.1	4.2 0.0	4.3 0.1	4.4 0.1
Jetfuels Rio-letfuels	0.0	() ()	0.0	0.0	0.1		6.3			1.9
Bio-Jetfuels Gasoline	0.0 16.4	0.0 16.6		14.7	12.5	9.2	0.5	4.2	2.8	
Bio-Jetfuels Gasoline Diesel	0.0 16.4 6.9	16.6 6.4	15.9 6.5	14.7 6.6	12.5 6.8	9.2 7.1	7.3	4.2 7.0	2.8 6.9	6.9
Bio-Jetfuels Gasoline Diesel Bio-Methanol	16.4 6.9 0.0	16.6 6.4 0.0	15.9 6.5 0.0	6.6 0.1	6.8 0.2	7.1 0.2	7.3 0.3	7.0 0.4	6.9 0.5	6.9 0.4
Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol	16.4 6.9 0.0 0.3	16.6 6.4 0.0 0.9	15.9 6.5 0.0 1.3	6.6 0.1 1.4	6.8 0.2 1.6	7.1 0.2 1.7	7.3 0.3 1.8	7.0 0.4 1.8	6.9 0.5 1.8	6.9 0.4 1.9
Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas	16.4 6.9 0.0 0.3 0.0	16.6 6.4 0.0 0.9 0.0	15.9 6.5 0.0 1.3 0.2	6.6 0.1 1.4 1.1	6.8 0.2 1.6 0.7	7.1 0.2 1.7 0.5	7.3 0.3 1.8 0.4	7.0 0.4 1.8 0.3	6.9 0.5 1.8 0.1	6.9 0.4 1.9 0.1
Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG	16.4 6.9 0.0 0.3 0.0	16.6 6.4 0.0 0.9 0.0	15.9 6.5 0.0 1.3 0.2 0.0	6.6 0.1 1.4 1.1 0.0	6.8 0.2 1.6 0.7 0.0	7.1 0.2 1.7 0.5 0.2	7.3 0.3 1.8 0.4 0.3	7.0 0.4 1.8 0.3 0.5	6.9 0.5 1.8 0.1 0.6	6.9 0.4 1.9 0.1 0.5
Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel)	16.4 6.9 0.0 0.3 0.0 0.0	16.6 6.4 0.0 0.9 0.0 0.0	15.9 6.5 0.0 1.3 0.2 0.0	6.6 0.1 1.4 1.1 0.0	6.8 0.2 1.6 0.7 0.0 0.2	7.1 0.2 1.7 0.5 0.2	7.3 0.3 1.8 0.4 0.3	7.0 0.4 1.8 0.3 0.5	6.9 0.5 1.8 0.1 0.6 0.2	6.9 0.4 1.9 0.1 0.5 0.3
Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG	16.4 6.9 0.0 0.3 0.0	16.6 6.4 0.0 0.9 0.0	15.9 6.5 0.0 1.3 0.2 0.0	6.6 0.1 1.4 1.1 0.0	6.8 0.2 1.6 0.7 0.0	7.1 0.2 1.7 0.5 0.2	7.3 0.3 1.8 0.4 0.3	7.0 0.4 1.8 0.3 0.5	6.9 0.5 1.8 0.1 0.6	6.9 0.4 1.9 0.1 0.5
Bio-Jetfuels Gasoline Diesel Bio-Methanol Bio-Ethanol Bio-Syngas CNG Biofuel(Diesel) Electricity	16.4 6.9 0.0 0.3 0.0 0.0 0.0	16.6 6.4 0.0 0.9 0.0 0.0 0.0	15.9 6.5 0.0 1.3 0.2 0.0 0.1	6.6 0.1 1.4 1.1 0.0 0.1 0.2	6.8 0.2 1.6 0.7 0.0 0.2 0.3	7.1 0.2 1.7 0.5 0.2 0.2 0.6	7.3 0.3 1.8 0.4 0.3 0.2	7.0 0.4 1.8 0.3 0.5 0.1	6.9 0.5 1.8 0.1 0.6 0.2 1.9	6.9 0.4 1.9 0.1 0.5 0.3 2.3

Fuels in All Transport, Reg	ion WEUR (Unit	s: EJ/y)								
Fuel	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other (Coal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jetfuels	2.2	2.2	2.3	2.4	2.6	2.8	2.9	3.0	3.1	3.2
Bio-Jetfuels	0.0	0.1	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0
Gasoline	5.4	6.2	6.3	5.9	4.8	3.4	2.4	1.6	0.9	0.4
Diesel	9.6	8.4	7.8	7.4	7.4	7.7	7.7	7.8	7.9	7.8
Bio-Methanol	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.3	0.2	0.2
Bio-Ethanol	0.0	0.1	0.2	0.3	0.5	0.6	0.7	0.9	1.1	1.2
Bio-Syngas	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0
CNG	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.5	0.4	0.4
Biofuel(Diesel)	0.1	0.3	0.6	0.8	0.5	0.3	0.3	0.2	0.1	0.1
Electricity	0.1	0.1	0.2	0.4	0.7	0.8	1.0	1.2	1.4	1.6
Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3
Total	17.5	17.5	17.9	17.9	17.4	16.7	16.1	15.6	15.3	15.2

Technology Mix (billion v-km/y)

Technology Mix of Mileage	for Cars (Unit	ts: billion v-kı	m/y)							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	1	117	288	536	894	1414	2168	3156	4298
Hydrogen Fuel Cell	0	0	58	140	275	438	587	824	1023	1359
Hydrogen Hybrid	0	0	26	59	111	177	223	276	287	279
Gas Fuel Hybrid	0	0	99	232	409	647	964	1177	1209	1274
Gas Fuel ICEV	51	104	232	395	603	708	773	813	761	700
Liquid Fuel Plug-in	0	0	120	313	624	1115	1832	2923	4222	4895
Liquid Fuel Hybrid	11	79	347	777	1471	2578	4067	4901	5675	6905
Liquid Fuel ICEV	10652	11788	12377	12614	12235	11238	9728	8486	7529	6679
Total	10714	11972	13376	14818	16263	17793	19589	21568	23862	26389
Technology Mix of Mileage	_									
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	3	9	16	27	43	66	98	97
Hydrogen Fuel Cell	0	0	1	3	7	13	16	22	29	25
Hydrogen Hybrid	0	0	3	5	9	14	20	29	25	22
Gas Fuel Hybrid	0	0	3	6	11	17	25	37	52	72
Gas Fuel ICEV	1	3	7	12	17	25	34	46	40	34
Liquid Fuel Plug-in	0	0	3	9	18	33	56	86	129	201
Liquid Fuel Hybrid	0	2	9	21	40	71	120	200	328	535
Liquid Fuel ICEV	222	282	344	419	493	522	527	505	489	466
Total	223	288	373	484	612	721	842	991	1190	1452
Table of a part of parts and	f C D			/ .						
Technology Mix of Mileage					2025	2020	2025	2040	2045	2050
Technology	2005	2010	2015	2020	2025	2030	2035		2045	2050
Electric Vehicle	0	0	6 2	15	29	49 2 5	77	120	184 57	260
Hydrogen Fuel Cell	0	0	5	7 10	15 16	25	33 37	44 52	71	75 61
Hydrogen Hybrid Gas Fuel Hybrid	0	0	5	11	20	31	46	66	94	130
Gas Fuel ICEV	8	15	24	35	49	68	91	121	131	113
Liquid Fuel Plug-in	0	0	6	16	33	59	102	165	248	376
Liquid Fuel Hybrid	0	4	17	39	73	129	219	363	596	970
Liquid Fuel ICEV	397	494	586	700	766	842	913	952	969	935
Total	404	512	650	833	1001	1227	1517	1882	2350	2921
Total	707	312	030	033	1001	1227	1317	1002	2330	2321
Technology Mix of Mileage	for Cars, Reg	ion BRAZIL (U	nits: billion v	/-km/y)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	4	9	17	29	46	70	102	113
Hydrogen Fuel Cell	0	0	1	2	6	10	14	19	26	35
Hydrogen Hybrid	0	0	3	6	9	14	20	28	24	21
Gas Fuel Hybrid	0	0	3	7	12	18	27	39	55	51
Gas Fuel ICEV	10	16	23	32	43	58	77	70	60	52
Liquid Fuel Plug-in	0	0	4	10	19	35	58	87	134	200
Liquid Fuel Hybrid	0	3	11	25	46	81	137	226	364	471
Liquid Fuel ICEV	301	372	430	445	446	446	422	384	297	229
Total	311	390	478	534	598	690	801	923	1063	1173
	_									
Technology Mix of Mileage			•							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	3	8	15	25	39	59	88	125
Hydrogen Fuel Cell	0	0	0	1	5	8	12	18	25	35
Hydrogen Hybrid	0	0	3	6	8	12	10	9	8	7
Gas Fuel Hybrid Gas Fuel ICEV	0	0	3	7	12	18	27	40	36	31
1-00 FUOLICEV	0	1	4	7	12	11	9	8	7	6

Liquid Fuel Plug-in	0	0	3	9	17	31	50	80	129	155
Liquid Fuel Hybrid	0	3	11	24	44	77	130	141	121	105
Liquid Fuel ICEV	313	329	333	326	302	258	187	137	102	79
Total	314	332	360	387	415	440	466	491	516	541
Technology Mix of Milea	ge for Cars, Regio	on CHINA (U	nits: billion v	-km/y)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	4	11	21	36	57	90	140	216
Hydrogen Fuel Cell	0	0	4	10	16	24	33	40	51	64
Hydrogen Hybrid	0	0	3	6	10	15	22	31	43	58
Gas Fuel Hybrid	0	0	3	7	12	19	28	40	57	79
Gas Fuel ICEV Liquid Fuel Plug-in	1 0	3	7 4	12 12	18 23	26 42	36 72	49 110	65 156	86 233
Liquid Fuel Hybrid	0	2	11	24	47	82	140	233	377	581
Liquid Fuel ICEV	213	305	401	531	650	792	943	1073	1168	1176
Total	213	310	438	613	797	1037	1332	1668	2057	2494
Technology Mix of Milea										
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	0	2	4	7	12	18	28	40
Hydrogen Fuel Cell	0	0	0	0	0	1	3	5 0	7	10
Hydrogen Hybrid Gas Fuel Hybrid	0	0	1	3	5	8	12	17	16	14
Gas Fuel ICEV	0	1	2	4	6	8	9	7	6	5
Liquid Fuel Plug-in	0	0	1	4	7	13	21	34	54	71
Liquid Fuel Hybrid	0	1	5	10	18	32	54	66	62	53
Liquid Fuel ICEV	131	142	145	145	139	121	94	68	51	39
Total	131	144	155	167	180	191	205	216	225	233
Tachnology Miv of Miles	an for Core Book		a. hillian lee	(· ·)						
Technology Mix of Milea Technology	2005	2010	2015	11/ y) 2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	2	5	9	15	24	36	47	53
Hydrogen Fuel Cell	0	0	0	1	1	3	5	7	6	5
Hydrogen Hybrid	0	0	0	2	3	6	9	10	8	7
Gas Fuel Hybrid	0	0	2	4	7	11	16	23	32	44
Gas Fuel ICEV	0	2	4	7	10	15	21	21	18	15
Liquid Fuel Plug-in	0	0	2	5	10	19	32	52	79	94
Liquid Fuel Hybrid	0	2	6	14	26	45	76	126	204	270
Liquid Fuel ICEV	179	214	233	251	267	279	278	248	184	138
Total	180	218	249	287	334	392	460	522	579	628
Technology Mix of Milea	ge for Cars, Regio	on INDIA (Ur	its: billion v-	km/y)						
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	2	4	7	12	20	32	49	76
Hydrogen Fuel Cell	0	0	2	3	6	9	13	18	22	29
Hydrogen Hybrid	0	0	1	2	3	5	8	11	15	20
Gas Fuel Hybrid Gas Fuel ICEV	0	0	1	2	4	7	10	14		28
Liquid Fuel Plug-in	1	2	4	-	0	12	17		20	
Liquid i dei riug-iii	0	2	4	6	9	12 15	17 25	22	29	39
Liquid Fuel Hybrid	0	0	2	4	8	15	25	22 42	29 70	39 101
Liquid Fuel Hybrid Liquid Fuel ICEV	0	0 1	2 4	4 9	8 18	15 31	25 53	22 42 88	29 70 144	39 101 235
Liquid Fuel Hybrid Liquid Fuel ICEV Total		0	2	4	8	15	25	22 42	29 70	39 101
Liquid Fuel ICEV Total	0 111 112	0 1 149 153	2 4 196 211	4 9 261 292	8 18 316	15 31 384	25 53 468	22 42 88 571	29 70 144 702	39 101 235 859
Liquid Fuel ICEV Total Technology Mix of Milea	0 111 112 ge for Cars, Regio	0 1 149 153 on LAM (Unit	2 4 196 211 ts: billion v-k	4 9 261 292 m/y)	8 18 316 371	15 31 384 475	25 53 468 614	22 42 88 571 798	29 70 144 702 1051	39 101 235 859 1387
Liquid Fuel ICEV Total	0 111 112	0 1 149 153	2 4 196 211	4 9 261 292	8 18 316	15 31 384	25 53 468	22 42 88 571	29 70 144 702	39 101 235 859
Liquid Fuel ICEV Total Technology Mix of Milea Technology	0 111 112 ge for Cars, Regio 2005	0 1 149 153 on LAM (Unit	2 4 196 211 ts: billion v-ki 2015	4 9 261 292 m/y) 2020	8 18 316 371	15 31 384 475 2030	25 53 468 614 2035	22 42 88 571 798	29 70 144 702 1051	39 101 235 859 1387
Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle	0 111 112 ge for Cars, Regio 2005	0 1 149 153 on LAM (Unit 2010	2 4 196 211 ts: billion v-ki 2015	4 9 261 292 m/y) 2020	8 18 316 371 2025 13	15 31 384 475 2030 22	25 53 468 614 2035 34	22 42 88 571 798 2040 53	29 70 144 702 1051 2045 80	39 101 235 859 1387 2050 99
Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell	0 111 112 ge for Cars, Regio 2005 0	0 1 149 153 on LAM (Unit 2010 0 0	2 4 196 211 ts: billion v-ki 2015 3 1	4 9 261 292 m/y) 2020 7 4 4 5	8 18 316 371 2025 13 7	15 31 384 475 2030 22 11	25 53 468 614 2035 34 15	22 42 88 571 798 2040 53 20	29 70 144 702 1051 2045 80 27	39 101 235 859 1387 2050 99 35
Liquid Fuel ICEV Total Technology Mix of Milear Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV	0 111 112 ge for Cars, Regio 2005 0 0 0 0	0 1 149 153 on LAM (Unit 2010 0 0 0 0	2 4 196 211 ts: billion v-ki 2015 3 1 2 2 3	4 9 261 292 m/y) 2020 7 4 4 5 46	8 18 316 371 2025 13 7 7 9 60	15 31 384 475 2030 22 11 11 14 79	25 53 468 614 2035 34 15 16 20 103	22 42 88 571 798 2040 53 20 23 29 133	29 70 144 702 1051 2045 80 27 20 42 115	39 101 235 859 1387 2050 99 35 17 58 99
Liquid Fuel ICEV Total Technology Mix of Milear Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	0 111 112 ge for Cars, Regio 2005 0 0 0 0 22	0 1 149 153 on LAM (Unit 2010 0 0 0 0 0	2 4 196 211 ts: billion v-k 2015 3 1 2 2 34 3	4 9 261 292 m/y) 2020 7 4 4 5 46 7	8 18 316 371 2025 13 7 7 9 60 15	15 31 384 475 2030 22 11 11 14 79 26	25 53 468 614 2035 34 15 16 20 103 45	22 42 88 571 798 2040 53 20 23 29 133 70	29 70 144 702 1051 2045 80 27 20 42 115 105	39 101 235 859 1387 2050 99 35 17 58 99 162
Liquid Fuel ICEV Total Technology Mix of Milear Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid	0 111 112 ge for Cars, Regio 2005 0 0 0 0 22 0	0 1 149 153 on LAM (Unit 2010 0 0 0 0 25 0 2	2 4 196 211 ts: billion v-ki 2015 3 1 2 2 34 3 8	4 9 261 292 m/y) 2020 7 4 4 5 46 7	8 18 316 371 2025 13 7 7 9 60 15 35	15 31 384 475 2030 22 11 11 14 79 26 61	25 53 468 614 2035 34 15 16 20 103 45 102	22 42 88 571 798 2040 53 20 23 29 133 70 170	29 70 144 702 1051 2045 80 27 20 42 115 105 276	39 101 235 859 1387 2050 99 35 17 58 99 162 435
Liquid Fuel ICEV Total Technology Mix of Milear Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV	0 111 112 ge for Cars, Regio 2005 0 0 0 0 22 0 0	0 1 149 153 on LAM (Unit 2010 0 0 0 0 25 0 2 266	2 4 196 211 ts: billion v-k 2015 3 1 2 2 34 3 8 310	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358	8 18 316 371 2025 13 7 7 9 60 15 35 409	15 31 384 475 2030 22 11 11 14 79 26 61 400	25 53 468 614 2035 34 15 16 20 103 45 102 388	22 42 88 571 798 2040 53 20 23 29 133 70 170 345	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251
Liquid Fuel ICEV Total Technology Mix of Milear Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid	0 111 112 ge for Cars, Regio 2005 0 0 0 0 22 0	0 1 149 153 on LAM (Unit 2010 0 0 0 0 25 0 2	2 4 196 211 ts: billion v-ki 2015 3 1 2 2 34 3 8	4 9 261 292 m/y) 2020 7 4 4 5 46 7	8 18 316 371 2025 13 7 7 9 60 15 35	15 31 384 475 2030 22 11 11 14 79 26 61	25 53 468 614 2035 34 15 16 20 103 45 102	22 42 88 571 798 2040 53 20 23 29 133 70 170	29 70 144 702 1051 2045 80 27 20 42 115 105 276	39 101 235 859 1387 2050 99 35 17 58 99 162 435
Liquid Fuel ICEV Total Technology Mix of Milear Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV	0 111 112 ge for Cars, Regio 2005 0 0 0 22 0 0 211 233	0 1 149 153 on LAM (Unit 2010 0 0 0 0 25 0 2 266 293	2 4 196 211 ts: billion v-k 2015 3 1 2 2 2 34 3 8 310 362	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449	8 18 316 371 2025 13 7 7 9 60 15 35 409	15 31 384 475 2030 22 11 11 14 79 26 61 400	25 53 468 614 2035 34 15 16 20 103 45 102 388	22 42 88 571 798 2040 53 20 23 29 133 70 170 345	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251
Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Milea Technology	0 111 112 ge for Cars, Regio 2005 0 0 0 22 0 0 211 233	0 1 149 153 on LAM (Unit 2010 0 0 0 0 25 0 2 266 293	2 4 196 211 ts: billion v-k 2015 3 1 2 2 2 34 3 8 310 362	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449	8 18 316 371 2025 13 7 7 9 60 15 35 409	15 31 384 475 2030 22 11 11 14 79 26 61 400	25 53 468 614 2035 34 15 16 20 103 45 102 388	22 42 88 571 798 2040 53 20 23 29 133 70 170 345	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251
Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Milea	0 111 112 ge for Cars, Region 2005 0 0 0 22 0 0 211 233 ge for Cars, Region 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 149 153 on LAM (Unit 2010 0 0 0 25 0 2 266 293 on MEA (Unit 2010	2 4 196 211 ts: billion v-k 2015 3 1 2 2 34 3 8 310 362 ts: billion v-k 2015	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449 m/y) 2020 8	8 18 316 371 2025 13 7 7 9 60 15 35 409 555	15 31 384 475 2030 22 11 11 14 79 26 61 400 623	25 53 468 614 2035 34 15 16 20 103 45 102 388 725	22 42 88 571 798 2040 53 20 23 29 133 70 170 345 844	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326 990	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251 1156
Liquid Fuel ICEV Total Technology Mix of Milear Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Milear Technology Electric Vehicle Hydrogen Fuel Cell	0 111 112 ge for Cars, Region 2005 0 0 0 22 0 211 233 ge for Cars, Region 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 149 153 on LAM (Unit 2010 0 0 0 25 0 2 266 293 on MEA (Unit 2010	2 4 196 211 ts: billion v-k 2015 3 1 2 2 34 3 8 310 362 ts: billion v-k 2015	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449 m/y) 2020 8 3	8 18 316 371 2025 13 7 7 9 60 15 35 409 555	15 31 384 475 2030 22 11 11 14 79 26 61 400 623 2030 25 12	25 53 468 614 2035 34 15 16 20 103 45 102 388 725 2035 40 17	22 42 88 571 798 2040 53 20 23 29 133 70 170 345 844 2040 62 23	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326 990 2045 86 21	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251 1156 2050 74 18
Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Hybrid	0 111 112 ge for Cars, Region 2005 0 0 0 22 0 0 211 233 ge for Cars, Region 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 149 153 on LAM (Unit 2010 0 0 0 25 0 2 266 293 on MEA (Unit 2010	2 4 196 211 ts: billion v-k 2015 3 1 2 2 34 3 8 310 362 ts: billion v-k 2015	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449 m/y) 2020 8 3	8 18 316 371 2025 13 7 7 9 60 15 35 409 555 2025 15 7 8	15 31 384 475 2030 22 11 11 14 79 26 61 400 623 2030 25 12	25 53 468 614 2035 34 15 16 20 103 45 102 388 725 2035 40 17	22 42 88 571 798 2040 53 20 23 29 133 70 170 345 844 2040 62 23 27	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326 990 2045 86 21 23	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251 1156 2050 74 18
Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Hybrid Gas Fuel Hybrid	0 111 112 ge for Cars, Region 2005 0 0 0 22 0 0 211 233 ge for Cars, Region 2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 149 153 on LAM (Unit 2010 0 0 0 25 0 2 266 293 on MEA (Unit 2010	2 4 196 211 ts: billion v-ki 2015 3 1 2 2 34 3 8 310 362 ts: billion v-k 2015	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449 m/y) 2020 8 3 5	8 18 316 371 2025 13 7 7 9 60 15 35 409 555 2025 15 7 8	15 31 384 475 2030 22 11 11 14 79 26 61 400 623 2030 25 12 13 16	25 53 468 614 2035 34 15 16 20 103 45 102 388 725 2035 40 17 19 24	22 42 88 571 798 2040 53 20 23 29 133 70 170 345 844 2040 62 23 27 34	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326 990 2045 86 21 23 48	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251 1156 2050 74 18 20 67
Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid	0 111 112 ge for Cars, Region 2005 0 0 0 22 0 0 211 233 ge for Cars, Region 2005 0 1 1	0 1 149 153 on LAM (Unit 2010 0 0 0 25 0 2 266 293 on MEA (Unit 2010 0 0	2 4 196 211 ts: billion v-ki 2015 3 1 2 2 34 3 8 310 362 ts: billion v-ki 2015	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449 2020 8 3 5 6	8 18 316 371 2025 13 7 7 9 60 15 35 409 555 2025 15 7 8 10 17	15 31 384 475 2030 22 11 11 14 79 26 61 400 623 25 12 13 16 25	25 53 468 614 2035 34 15 16 20 103 45 102 388 725 2035 40 17 19 24 34	22 42 88 571 798 2040 53 20 23 29 133 70 170 345 844 2040 62 23 27 34 32	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326 990 2045 86 21 23 48 28	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251 1156 2050 74 18 20 67 24
Liquid Fuel ICEV Total Technology Mix of Milean Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Plug-in Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Milean Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	0 111 112 ge for Cars, Region 2005 0 0 0 22 0 0 211 233 ge for Cars, Region 2005 0 1 0 0 0 0 1	0 1 149 153 on LAM (Unit 2010 0 0 0 25 0 2 266 293 on MEA (Unit 2010 0 0	2 4 196 211 ts: billion v-ki 2015 3 1 2 2 34 3 8 310 362 ts: billion v-k 2015 3 0 2 2	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449 2020 8 3 5 6 12 9	8 18 316 371 2025 13 7 9 60 15 35 409 555 2025 15 7 8 10 17	15 31 384 475 2030 22 11 11 14 79 26 61 400 623 2030 25 12 13 16 25 31	25 53 468 614 2035 34 15 16 20 103 45 102 388 725 2035 40 17 19 24 34 53	22 42 88 571 798 2040 53 20 23 29 133 70 170 345 844 2040 62 23 27 34 32 79	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326 990 2045 86 21 23 48 28 120	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251 1156 2050 74 18 20 67 24
Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Liquid Fuel Hybrid Liquid Fuel ICEV Total Technology Mix of Milea Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid	0 111 112 ge for Cars, Region 2005 0 0 0 22 0 0 211 233 ge for Cars, Region 2005 0 1 1	0 1 149 153 on LAM (Unit 2010 0 0 0 25 0 2 266 293 on MEA (Unit 2010 0 0	2 4 196 211 ts: billion v-ki 2015 3 1 2 2 34 3 8 310 362 ts: billion v-ki 2015	4 9 261 292 m/y) 2020 7 4 4 5 46 7 18 358 449 2020 8 3 5 6	8 18 316 371 2025 13 7 7 9 60 15 35 409 555 2025 15 7 8 10 17	15 31 384 475 2030 22 11 11 14 79 26 61 400 623 25 12 13 16 25	25 53 468 614 2035 34 15 16 20 103 45 102 388 725 2035 40 17 19 24 34	22 42 88 571 798 2040 53 20 23 29 133 70 170 345 844 2040 62 23 27 34 32	29 70 144 702 1051 2045 80 27 20 42 115 105 276 326 990 2045 86 21 23 48 28	39 101 235 859 1387 2050 99 35 17 58 99 162 435 251 1156 2050 74 18 20 67 24

Total	273	330	409	514	610	722	836	952	1072	1191				
					010	,,,	030	332	1072	1131				
Technology Mix of Milea Technology	ge for Cars, Regi	ion MEXICO (2010	Units: billion 2015	v-km/y) 2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	0	2013	5	9	14	23	35	41	45				
Hydrogen Fuel Cell	0	0	0	1	3	6	9	12	16	21				
Hydrogen Hybrid	0	0	1	2	4	7	10	14	13	11				
Gas Fuel Hybrid	0	0	2	4	6	10	15	22	31	42				
Gas Fuel ICEV	0	0	2	4	6	10	14	20	17	15				
Liquid Fuel Plug-in	0	0	2	5	10	18	30	51	79	107				
Liquid Fuel Hybrid	0	2	6	13	25	43	73	120	197	288				
Liquid Fuel ICEV	172	213	251	265	285	298	302	281	255	197				
Total	172	215	265	299	348	405	476	555	648	724				
Technology Mix of Mileage for Cars, Region PACIFIC (Units: billion v-km/y)														
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	0	10	25	46	76	120	181	260	364				
Hydrogen Fuel Cell	0	0	4	15	27	41	59	83	113	152				
Hydrogen Hybrid	0	0	4	7	14	12	10	9	8	6				
Gas Fuel Hybrid	0	0	9	20	36	57	85	82	71	61				
Gas Fuel ICEV	0	0	9	20	34	29	25	22	19	16				
Liquid Fuel Plug-in	0	0	10	27	53	92	149	243	277	244				
Liquid Fuel Hybrid	3	13	39	82	152	253	303	262	226	195				
Liquid Fuel ICEV	969	1025	1018	954	822	638	452	329	245	188				
Total	972	1038	1103	1150	1183	1198	1204	1210	1218	1227				
Technology Mix of Mileage for Cars, Region RUSSIA (Units: billion v-km/y)														
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	0	1	5	11	19	32	51	58	65				
Hydrogen Fuel Cell	0	0	0	1	2	2	2	5	8	13				
Hydrogen Hybrid	0	0	0	0	2	5	6	5	4	4				
Gas Fuel Hybrid	0	0	3	7	12	20	29	42	59	83				
Gas Fuel ICEV	0	3	6	11	17	25	29	25	22	19				
Liquid Fuel Plug-in	0	0	4	10	19	35	58	89	109	94				
Liquid Fuel Hybrid	0	3	12	25	48	84	141	232	318	398				
Liquid Fuel ICEV	334	407	432	452	458	440	397	301	220	166				
Total	334	412	457	511	568	628	695	750	800	841				
Technology Mix of Milea						2222		2212	22.5					
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	1 0	44	107 90	196	325	510	780	1156	1638				
Hydrogen Fuel Cell Hydrogen Hybrid	0	0	43	90	149 17	217 38	260 34	361 29	402 25	544 25				
Gas Fuel Hybrid	0	0	37	86	153	241	360	444	383	330				
Gas Fuel ICEV	2	10	50	100	165	143	123	106	91	330 79				
Liquid Fuel Plug-in	0	0	43	113	224	404	655	1047	1685	1925				
Liquid Fuel Hybrid	6	32	132	293	551	968	1639	1767	1524	1315				
Liquid Fuel ICEV	4097	4311	4307	4149	3789	3195	2282	1648	1223	931				
Total	4105	4354	4656	4941	5244	5530	5863	6182	6490	6788				
Technology Mix of Milea	ge for Cars Rogi	ion WELLR /LL	nits: hillion w	-km/y)										
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	0	2013	70	129	214	337	513	738	1032				
Hydrogen Fuel Cell	0	0	0	0	25	56	96	147	213	296				
Hydrogen Hybrid	0	0	0	0	0	0	0	0	0	0				
Gas Fuel Hybrid	0	0	25	58	102	161	240	248	214	184				
Gas Fuel ICEV	4	19	49	88	136	175	151	130	112	97				
Liquid Fuel Plug-in	0	0	29	75	150	263	424	687	848	786				
Liquid Fuel Hybrid	1	7	65	159	309	551	760	710	612	528				
Liquid Fuel ICEV	2731	2955	3012	2907	2599	2094	1545	1148	876	709				
Total	2736	2982	3209	3356	3449	3514	3553	3584	3613	3632				
luidi	2/30	2982	3209	5550	5449	5514	3333	5384	2013	30				

Technology Mix for Cars (million)

Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
Electric Vehicle	0	0	8	19	36	60	95	146	212	288
Hydrogen Fuel Cell Hydrogen Hybrid	0	0	3	8 4	17 7	28 12	38 15	54 18	68 19	91 18
Gas Fuel Hybrid	0	0	7	16	28	44	65	79	81	86
Gas Fuel ICEV	3	7	16	27	41	49	53	55	52	47
Liquid Fuel Plug-in	0	0	8	21	42	75	124	197	279	320
Diesel Type Hybrid	0	0	7	17	35	62	88	103	121	142
Gasoline Type Hybrid	1	5	17	35	64	111	181	220	257	323
Diesel Type ICEV	84	75	76	82	94	103	104	110	120	123
Gasoline Type ICEV Total	636 723	723 810	763	773 1002	735	656 1199	554	464	390 1598	332 1766
TOLAI	723	910	906	1002	1098	1199	1317	1447	1598	1/0
Technology Mix for Cars,	Region AFRIC	A (Units: r	nillion)							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Electric Vehicle	0	0	0	1	1	2	3	5	8	
Hydrogen Fuel Cell	0	0	0	0	1	1	1	2	2	
Hydrogen Hybrid	0	0	0	0	1	1	2	2	2	
Gas Fuel Hybrid	0	0	0	1	1	1	2	3	4	(
Gas Fuel ICEV Liquid Fuel Plug-in	0	0	0	1	1	2	3	4 7	3 11	1
Diesel Type Hybrid	0	0	0	1	1	2	4	6	10	10
Gasoline Type Hybrid	0	0	1	1	2	4	6	10	17	2
Diesel Type ICEV	2	2	2	2	3	3	5	7	10	1
Gasoline Type ICEV	16	21	26	32	38	40	39	35	30	2
Total	18	23	30	40	50	59	69	81	97	11
Technology Mix for Cars,			lion) 2015	2020	2025	2020	2025	2040	2045	205
Technology Electric Vehicle	2005	2010	2015	2020	2025 2	2030	2035 5	2040 8	2045 12	205
Hydrogen Fuel Cell	0	0	0	0	1	2	2	3	4	
Hydrogen Hybrid	0	0	0	1	1	2	2	3	4	
Gas Fuel Hybrid	0	0	0	1	1	2	3	4	6	
Gas Fuel ICEV	0	1	1	2	3	4	6	8	8	
Liquid Fuel Plug-in	0	0	0	1	2	4	6	10	16	2
Diesel Type Hybrid	0	0	0	1	2	3	5	8	13	2
Gasoline Type Hybrid	0	0	1	2	3	5	9	15	24	4
Diesel Type ICEV	0	0	0	1	2	3	5	8	13	1
Gasoline Type ICEV Total	25 25	31 32	37 41	43 52	47 63	50	53 95	52	48 148	40
TOLAI	25	32	41	52	03	77	95	118	148	18
Technology Mix for Cars,	Region BRAZI	L (Units: n	nillion)							
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	205
Electric Vehicle	0	0	0	1	1	2	3	4	7	
Hydrogen Fuel Cell	0	0	0	0	0	1	1	1	2	
Hydrogen Hybrid	0	0	0	0	1	1	1	2	1	
Gas Fuel Hybrid	0	0	0	0	1	1	2	2	3	
Gas Fuel ICEV	1	1	1	2	3	4	5 4	4	4	1
Liquid Fuel Plug-in Diesel Type Hybrid	0	0	0	1	1 1	2	3	5 5	8	1
Gasoline Type Hybrid	0	0	1	1	2	3	6	10	15	2
Diesel Type ICEV	1	1	2	3	3	3	4	6	6	
Gasoline Type ICEV	18	22	25	25	25	25	22	18	13	1
Total	20	25	30	34	38	43	50	58	67	7
Technology Mix for Cars,			million) 2015	2020	2025	2020	2025	2040	2045	305
Technology Electric Vehicle	2005	2010		2020	2025	2030	2035	2040 4	2045 5	205
Hydrogen Fuel Cell	0	0	0	0	1	1	1	1	2	
Hydrogen Hybrid	0	0	0	0	0	1	1	1	0	
Gas Fuel Hybrid	0	0	0	0	1	1	2	2	2	
Gas Fuel ICEV	0	0	0	0	1	1	1	0	0	
Liquid Fuel Plug-in	0	0	0	1	1	2	3	5	8	
	0	0	0	0	1	2	3	2	2	
	0	0	0	1	2	3	5	6	5	
Diesel Type Hybrid Gasoline Type Hybrid			1	1	2	2	2	2	2	
Gasoline Type Hybrid Diesel Type ICEV	0	1								
Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV	0 18	19	19	18	16	13	9	6	5	
Gasoline Type Hybrid Diesel Type ICEV	0			18 23	16 25	13 26	28	6 29	31	
Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total	0 18 19	19 20	19 21							3
Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV	0 18 19	19 20	19 21							

Hydrogen Fuel Cell	0	0	0	1	1	2	2	3	3	4				
Hydrogen Hybrid Gas Fuel Hybrid	0	0	0	0	1	1	1 2	2	3 4	4 5				
Gas Fuel ICEV	0	0	0	1	1	2	2	3	4	6				
Liquid Fuel Plug-in	0	0	0	1	2	3	5	7	10	16				
Diesel Type Hybrid	0	0	0	1	1	2	3	5	9	14				
Gasoline Type Hybrid	0	0	1	1	2	4	6	10	17	25				
Diesel Type ICEV	3	4	7	10	10	9	10	11	13	18				
Gasoline Type ICEV	12	16	20	25	34	44	53	61	65	60				
Total	14	21	29	41	53	69	89	111	137	166				
Technology Mix for Cars,	Region EEUR (Units: mil	llion)											
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	0	0	0	0	1	1	1	2	3				
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	1	1				
Hydrogen Hybrid Gas Fuel Hybrid	0	0	0	0	0	1	1	1	1	1				
Gas Fuel ICEV	0	0	0	0	1	1	1	1	1	0				
Liquid Fuel Plug-in	0	0	0	0	1	1	2	3	4	6				
Diesel Type Hybrid	0	0	0	0	1	1	2	1	1	1				
Gasoline Type Hybrid	0	0	0	1	1	2	3	4	4	3				
Diesel Type ICEV	0	0	0 12	0	1	1 9	1 6	1	1	1				
Gasoline Type ICEV Total	10 11	11 12	13	11 14	11 15	16	17	18	18	19				
	11	14	13	14	13	10	1,	10	10	1,5				
Technology Mix for Cars, Region FSU (Units: million) Technology 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050														
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle Hydrogen Fuel Cell	0	0	0	0	1	1	2	3 1	3	4				
Hydrogen Hybrid	0	0	0	0	0	0	1	1	1	1				
Gas Fuel Hybrid	0	0	0	0	1	1	1	2	2	3				
Gas Fuel ICEV	0	0	0	1	1	1	2	2	1	1				
Liquid Fuel Plug-in	0	0	0	0	1	1	2	4	6	7				
Diesel Type Hybrid	0	0	0	0	1	1	2	3	6	5				
Gasoline Type Hybrid Diesel Type ICEV	0	0	0	1	1	2 1	4	6 4	10 3	16 3				
Gasoline Type ICEV	13	16	17	18	19	20	19	15	11	8				
Total	14	17	19	22	25	30	35	40	44	48				
Technology Mix for Cars,	Region INDIA 2005	(Units: mi 2010	illion) 2015	2020	2025	2030	2035	2040	2045					
Technology Electric Vehicle	2005	2010		2020	2023	2030								
	0	0		0		1				2050				
Hydrogen Fuel Cell	0	0	0	0	0	1	1	2	3	2050 5 2				
Hydrogen Fuel Cell Hydrogen Hybrid			0		0		1	2	3	5				
Hydrogen Hybrid Gas Fuel Hybrid	0 0 0	0 0 0	0 0 0 0	0 0	0 0 0	1 0 0	1 1 1 1	2 1 1 1	3 1 1 1	5 2 1 2				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV	0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	1 0 0 1	1 1 1 1 1	2 1 1 1 1	3 1 1 1 2	5 2 1 2 3				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0 0 1	1 0 0 1 1	1 1 1 1 1 2	2 1 1 1 1 3	3 1 1 1 2 5	5 2 1 2 3 7				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 1 1	1 0 0 1 1	1 1 1 1 1 2	2 1 1 1 1 3 2	3 1 1 1 2 5 3	5 2 1 2 3 7 5				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in	0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0 0 1	1 0 0 1 1	1 1 1 1 1 2	2 1 1 1 1 3	3 1 1 1 2 5	5 2 1 2 3 7				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 1 1 0 1 1 20	1 0 0 1 1 1	1 1 1 1 1 2 1	2 1 1 1 1 3 2	3 1 1 1 2 5 3 7	5 2 1 2 3 7 5				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 1 1 0 1	1 0 0 1 1 1 1	1 1 1 1 1 2 1 2 2	2 1 1 1 1 3 2 4 3	3 1 1 1 2 5 3 7 4	5 2 1 2 3 7 5 11 6				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total	0 0 0 0 0 0 0 0 2 6 7	0 0 0 0 0 0 0 0 2 8	0 0 0 0 0 0 0 0 0 0 1 12 14	0 0 0 0 0 0 0 0	0 0 0 0 1 1 0 1 1 20	1 0 0 1 1 1 1 1 24	1 1 1 1 1 2 1 2 2 2 2	2 1 1 1 1 3 2 4 3 35	3 1 1 1 2 5 3 7 4	5 2 1 2 3 7 5 11 6				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV	0 0 0 0 0 0 0 0 2 6 7	0 0 0 0 0 0 0 0 2 8	0 0 0 0 0 0 0 0 0 0 1 12 14	0 0 0 0 0 0 0 0	0 0 0 0 1 1 0 1 1 20	1 0 0 1 1 1 1 1 24	1 1 1 1 1 2 1 2 2 2 2	2 1 1 1 1 3 2 4 3 35	3 1 1 1 2 5 3 7 4	5 2 1 2 3 7 5 11 6				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars,	0 0 0 0 0 0 0 2 6 7	0 0 0 0 0 0 0 2 8 10	0 0 0 0 0 0 0 0 0 1 12 14	0 0 0 0 0 0 0 0 1 16	0 0 0 0 1 1 0 1 1 20 25	1 0 0 1 1 1 1 1 24 32	1 1 1 1 1 2 1 2 2 2 29 41	2 1 1 1 1 3 2 4 3 35 53	3 1 1 1 2 5 3 7 4 43 70	5 2 1 2 3 7 5 11 6 52 92				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell	0 0 0 0 0 0 2 6 7 Region LAM (1 2005	0 0 0 0 0 0 2 8 10 Units: mill 2010	0 0 0 0 0 0 0 0 1 12 14 (ion) 2015	0 0 0 0 0 0 0 1 16 19	0 0 0 0 1 1 0 1 1 20 25	1 0 0 1 1 1 1 1 24 32	1 1 1 1 1 2 1 2 2 2 29 41	2 1 1 1 1 3 2 4 3 35 53	3 1 1 1 2 5 3 7 4 43 70 2045 5 2	5 2 1 2 3 7 5 11 6 52 92 2050 6 2				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid	0 0 0 0 0 0 2 6 7 Region LAM (1 2005	0 0 0 0 0 0 2 8 10 Units: mill 2010	0 0 0 0 0 0 0 0 1 12 14 (ion) 2015	0 0 0 0 0 0 0 1 16 19	0 0 0 0 1 1 0 1 1 20 25	1 0 0 1 1 1 1 1 24 32 2030 1 1	1 1 1 1 1 2 1 2 2 2 29 41	2 1 1 1 1 3 2 4 3 35 53	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1	5 2 1 2 3 7 5 11 6 52 92 2050 6 2				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Hybrid Gas Fuel Hybrid	0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0	0 0 0 0 0 0 0 0 1 12 14 (ion) 2015	0 0 0 0 0 0 0 1 16 19	0 0 0 0 1 1 1 20 25 20 25	1 0 0 1 1 1 1 1 24 32 2030 1 1 1	1 1 1 1 2 1 2 2 29 41 2035 2	2 1 1 1 1 3 2 4 3 35 53	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV	0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015	0 0 0 0 0 0 0 1 16 19 2020 0 0 0	0 0 0 0 1 1 0 1 20 25 2025 1 0 0	1 0 0 1 1 1 1 1 24 32 2030 1 1 1	1 1 1 1 1 2 1 2 2 29 41 2035 2 1 1 1 6	2 1 1 1 1 3 2 4 3 35 53	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Hybrid Gas Fuel Hybrid	0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005	0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0	0 0 0 0 0 0 0 0 1 12 14 (ion) 2015	0 0 0 0 0 0 0 1 16 19	0 0 0 0 1 1 1 20 25 20 25	1 0 0 1 1 1 1 1 24 32 2030 1 1 1	1 1 1 1 2 1 2 2 29 41 2035 2	2 1 1 1 1 3 2 4 3 35 53 2 4 3 3 5 5 3 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid	0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005 0 0 0 0	0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0	0 0 0 0 1 1 1 20 25 25 2025 1 0 0 1 4 1 1	1 0 0 1 1 1 1 1 24 32 2030 1 1 1 1 5 2 1	1 1 1 1 1 2 2 2 29 41 2 2 29 41 1 1 6 3 2 4	2 1 1 1 1 3 2 4 3 35 53 2 4 3 3 5 5 3 1 1 2 8 8 8 8 9 8 9 8 9 9 8 9 8 9 8 9 8 9 8	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV	0 0 0 0 0 0 0 2 6 7 Region LAM (I 2005 0 0 0 0	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 2	0 0 0 0 0 0 0 0 0 1 12 14 lion) 2015 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 3 0 0 0 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 1 1 1 20 25 25 2025 1 0 0 1 4 1 1	1 0 0 1 1 1 1 1 24 32 2030 1 1 1 1 5 2 1	1 1 1 1 1 2 2 2 29 41 2 2 29 41 1 1 6 3 2 4	2 1 1 1 1 3 2 4 3 35 53 2 4 3 3 5 5 3 1 1 2 8 8 8 8 9 8 9 8 9 8 9 8 9 8 9 8 8 9 8 8 9 8 9 8 9 8 9 8 9 8 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 8 9 8 9 8 8 9 8 9 8 9 8 8 8 8 8 8 8 8 8 8 9 8 9 8	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 12 6	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV	0 0 0 0 0 0 0 2 6 7 Region LAM (I 2005 0 0 0 0 0 0	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 1 12 14 14 16ion) 2015 0 0 0 0 0 0 0 1 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 0 3 0 0 0 1 1 1 1 1 1 1 1 1 1	0 0 0 0 1 1 1 20 25 25 2025 1 0 0 1 4 1 1 1 2 2 5	1 0 0 1 1 1 1 1 24 32 2030 1 1 1 1 5 2 1 3 1	1 1 1 1 1 2 2 2 29 41 2 2 29 41 1 1 6 3 2 4 2	2 1 1 1 1 3 2 4 3 35 53 2 4 3 3 5 5 3 1 1 2 8 4 4 7 4 4 7 4 7 4 7 7 8 8 7 8 8 8 8 7 8 8 8 8	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 12 6 15	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5 11				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV	0 0 0 0 0 0 0 2 6 7 Region LAM (I 2005 0 0 0 0	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 2	0 0 0 0 0 0 0 0 0 1 12 14 lion) 2015 0 0 0 0 0 2	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 3 0 0 0 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 1 1 1 20 25 25 2025 1 0 0 1 4 1 1	1 0 0 1 1 1 1 1 24 32 2030 1 1 1 1 5 2 1	1 1 1 1 1 2 2 2 29 41 2 2 29 41 1 1 6 3 2 4	2 1 1 1 1 3 2 4 3 35 53 2 4 3 3 5 5 3 1 1 2 8 8 8 8 9 8 9 8 9 8 9 8 9 8 9 8 8 9 8 8 9 8 9 8 9 8 9 8 9 8 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 8 9 8 9 8 8 9 8 9 8 9 8 8 8 8 8 8 8 8 8 8 9 8 9 8	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 12 6	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV	0 0 0 0 0 0 0 2 6 7 Region LAM (I 2005 0 0 0 0 0 0 0	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 0 3 0 0 0 1 1 1 1 1 1 1 1 1 1	0 0 0 0 1 1 1 20 25 25 2025 1 0 0 1 4 1 1 1 2 2 5	1 0 0 1 1 1 1 1 24 32 2030 1 1 1 1 5 2 1 3 1	1 1 1 1 1 2 2 2 29 41 2 2 29 41 1 1 6 3 2 4 2	2 1 1 1 1 3 2 4 3 35 53 2 4 3 3 5 5 3 1 1 2 8 4 4 7 4 4 7 4 7 4 7 7 8 8 7 8 8 8 8 7 8 8 8 8	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 12 6 15	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5 11				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Mix for Cars, Technology Mix for Cars, Technology	0 0 0 0 0 0 0 2 6 7 Region LAM (1 2005 0 0 0 0 0 0 1 0 0 0 0 0 1 1 0 0 0 0	0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 16 18 Units: mill	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015 0 0 0 0 0 0 0 1 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 0 1 1 1 2 2 2 8 2 8	0 0 0 0 1 1 1 20 25 25 2025 1 0 0 1 4 1 1 1 2 2 5	1 0 0 1 1 1 1 1 24 32 2030 1 1 1 1 5 2 1 3 1	1 1 1 1 2 2 2 29 41 2 2035 2 1 1 1 6 3 2 4 4 2 2 2 9 41	2 1 1 1 1 3 2 4 3 35 53 2040 3 1 1 1 2 8 4 4 7 4 1 1 1 2 8 1 1 1 1 2 8 1 1 1 1 1 1 1 2 8 1 1 1 1	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 12 6 15 62	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Mix for Cars, Technology Electric Vehicle	0 0 0 0 0 0 0 2 6 7 Region LAM (I 2005 0 0 0 0 0 0 1 0 0 0 0 0 8 1 7	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 0 0 16 18 Units: mill 18 0 0	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 1 16 19 2020 0 0 0 0 0 1 1 1 2 2 2 8	0 0 0 0 1 1 1 20 25 2025 1 0 0 1 4 1 1 1 2 5 3 5	1 0 0 1 1 1 1 24 32 2030 1 1 1 5 2 1 3 1 24 32	1 1 1 1 2 2 2 29 41 2 2035 2 1 1 1 6 3 2 4 4 2 2 2 9 41	2 1 1 1 1 3 2 4 3 35 53 2040 3 1 1 2 8 4 4 7 7 4 18 53	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 12 6 15 62	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5 11 73				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Mix for Cars, Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell	0 0 0 0 0 0 0 2 6 7 Region LAM (I 2005 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 1 0	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 0 0 16 18 Units: mill 18 Units: mill 2010	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015 0 0 0 0 2 0 0 0 0 1 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 0 1 1 1 2 2 2 8	0 0 0 0 1 1 1 20 25 2025 1 0 0 1 4 1 1 1 25 35	1 0 0 1 1 1 1 24 32 2030 1 1 1 5 2 1 3 3 1 24 3 2	1 1 1 1 2 2 2 29 41 2 2035 2 1 1 1 6 3 2 4 4 2 2 2 1 1 6 4 1 1 6 4 1 1 1 1 1 1 1 1 1 1 1 1	2 1 1 1 1 3 2 4 3 35 53 2040 3 1 1 2 8 4 4 7 7 4 18 53	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 6 12 6 15 62	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5 11 73				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Diesel Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Fuel Cell Hydrogen Fuel Cell	0 0 0 0 0 0 0 0 2 6 7 Region LAM ((2005 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 16 18 Units: mill 2010	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015 0 0 0 0 0 0 0 1 12 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 1 1 1 22 28 2020 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 1 1 1 20 25 2025 1 0 0 1 4 1 1 1 2 5 3 5	1 0 0 1 1 1 1 24 32 2030 1 1 1 24 3 1 24 39	1 1 1 1 1 2 1 2 2 2 9 41 2035 2 1 1 6 3 2 4 2 22 46 2035 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 1 1 1 1 3 2 4 3 35 53 2040 3 1 1 1 2 8 4 4 7 4 1 18 5 3 2	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 12 6 15 62 2045 5 1 1	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 10 18 5 11 7 3				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Mix for Cars, Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell	0 0 0 0 0 0 0 2 6 7 Region LAM (I 2005 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 1 0	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 0 0 16 18 Units: mill 18 Units: mill 2010	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015 0 0 0 0 2 0 0 0 0 1 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 0 1 1 1 2 2 2 8	0 0 0 0 1 1 1 20 25 2025 1 0 0 1 4 1 1 1 25 35	1 0 0 1 1 1 1 24 32 2030 1 1 1 5 2 1 3 3 1 24 3 2	1 1 1 1 2 2 2 29 41 2035 2 1 1 1 6 3 2 4 2 2 2 9 41	2 1 1 1 1 3 2 4 3 35 53 2040 3 1 1 2 8 4 4 7 7 4 18 53	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 6 12 6 15 62	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5 11 73				
Hydrogen Hybrid Gas Fuel Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Gasoline Type ICEV Total Technology Mix for Cars, Technology Electric Vehicle Hydrogen Fuel Cell Hydrogen Hybrid Gas Fuel ICEV Liquid Fuel Plug-in Diesel Type Hybrid Gasoline Type Hybrid Gasoline Type Hybrid Diesel Type ICEV Total Technology Mix for Cars, Technology Mix for Cars, Technology Mix for Cars, Technology Mix for Cars, Technology Electric Vehicle Hydrogen Hybrid Gas Fuel Cell Hydrogen Hybrid Gas Fuel Hybrid	0 0 0 0 0 0 0 0 2 6 7 Region LAM (I 2005 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 2 8 10 Units: mill 2010 0 0 0 0 0 0 16 18 Units: mill 2010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 1 12 14 (ion) 2015 0 0 0 0 0 1 9 2015 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1 16 19 2020 0 0 0 0 1 1 1 22 28 2020 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 1 1 1 20 25 2025 1 0 0 1 4 1 1 1 2 5 3 5	1 0 0 1 1 1 1 1 24 32 2030 1 1 1 24 39 2030 1 1 24 39 1	1 1 1 1 2 2 2 29 41 2 2035 2 1 1 1 6 3 2 4 2 2 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 1 1 1 1 3 2 4 3 35 53 2040 3 1 1 2 8 4 4 7 4 1 18 53	3 1 1 1 2 5 3 7 4 43 70 2045 5 2 1 3 7 7 6 12 6 15 62 2045 5 1 1 3	5 2 1 2 3 7 5 11 6 52 92 2050 6 2 1 4 6 10 10 18 5 11 73				

Diesel Type Hybrid Gasoline Type Hybrid	0	0	0	0	1	1	2 5	4 8	6 12	10 20				
Diesel Type ICEV	1	1	1	1	1	2	3	4	6	6				
Gasoline Type ICEV	14	17	21	24	27	28	27	24	17	12				
Total	15	19	23	29	35	41	47	54	61	68				
Tankanalama Minifes Coss. F		CO /! !=:t=:												
Technology Mix for Cars, F Technology	Region MEXIC	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	0	0	0	1	1	2	3	3	4				
Hydrogen Fuel Cell	0	0	0	0	0	0	1	1	1	2				
Hydrogen Hybrid	0	0	0	0	0	1	1	1	1	1				
Gas Fuel Hybrid	0	0	0	0	1	1	1	2	3	4				
Gas Fuel ICEV Liquid Fuel Plug-in	0	0	0	0	1	1 2	1	2 4	2 7	1 9				
Diesel Type Hybrid	0	0	0	0	1	1	2	4	6	8				
Gasoline Type Hybrid	0	0	0	1	1	3	4	7	11	18				
Diesel Type ICEV	0	0	0	1	1	1	2	4	5	5				
Gasoline Type ICEV	15	19	22	23	24	25	24	21	17	13				
Total	15	19	23	26	31	36	42	49	57	64				
Technology Mix for Cars, F	Region PACIF	IC (Units: ı	million)											
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	0	1	2	4	6	10	14	21	29				
Hydrogen Fuel Cell	0	0	0	1	2	3	5	7	9	13				
Hydrogen Hybrid Gas Fuel Hybrid	0	0	0	1 2	1	1 5	1 7	1 7	1	1 5				
Gas Fuel ICEV	0	0	1	2	3	2	2	2	2	1				
Liquid Fuel Plug-in	0	0	1	2	4	7	12	20	23	20				
Diesel Type Hybrid	0	0	1	2	4	6	5	5	4	3				
Gasoline Type Hybrid	0	1	3	5	9	15	20	17	15	13				
Diesel Type ICEV	10 69	9 75	75	8 69	9 58	9 43	8 29	7 20	6 14	5 10				
Gasoline Type ICEV Total	79	85	90	94	97	98	98	99	99	100				
Technology Mix for Cars, Region RUSSIA (Units: million)														
Technology Electric Vehicle	2005	2010	2015	2020	2025	2030	2035	2040 4	2045 4	2050 5				
Hydrogen Fuel Cell	0	0	0	0	0	0	0	0	1	1				
Hydrogen Hybrid	0	0	0	0	0	0	0	0	0	0				
Gas Fuel Hybrid	0	0	0	1	1	2	2	3	5	6				
Gas Fuel ICEV	0	0	0	1	1	2	2	2	2	1				
Liquid Fuel Plug-in Diesel Type Hybrid	0	0	0	1	1	3 2	4	7 6	8	7 6				
Gasoline Type Hybrid	0	0	1	1	2	4	7	11	18	25				
Diesel Type ICEV	0	0	0	1	1	2	4	4	4	3				
Gasoline Type ICEV	25	31	32	33	33	31	26	19	13	9				
Total	25	31	35	39	43	48	53	57	61	64				
Technology Mix for Cars, F	Region LISA (I	Inits: milli	ion)											
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle	0	0	2	6	11	18	28	43	64	91				
Hydrogen Fuel Cell	0	0	2	5	8	12	14	19	21	29				
Hydrogen Hybrid	0	0	0	0	1	2	2	2	1	1				
Gas Fuel Hybrid Gas Fuel ICEV	0	0	2	5 5	8	13 8	19 6	23 6	20 5	17 4				
Liquid Fuel Plug-in	0	0	2	6	12	22	35	56	89	102				
Diesel Type Hybrid	0	0	2	5	10	18	31	32	27	23				
Gasoline Type Hybrid	0	2	5	11	19	34	56	63	54	47				
Diesel Type ICEV	1	1	3	6	11	19	17	15	13	11				
Gasoline Type ICEV Total	221 222	232 235	230 252	219 267	194 283	154 299	107 317	76 334	55 351	41 367				
iotai	222	233	232	207	263	299	31/	334	331	307				
Technology Mix for Cars, F														
Technology	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050				
Electric Vehicle Hydrogen Fuel Cell	0	0	2	6 0	10 2	17 5	27 8	41 12	59 18	83 25				
Hydrogen Hybrid	0	0	0	0	0	0	0	0	0	0				
Gas Fuel Hybrid	0	0	2	5	8	13	20	21	18	15				
Gas Fuel ICEV	0	2	4	7	11	15	13	11	9	8				
Liquid Fuel Plug-in	0	0	2	6	12	21	35	57	70	65				
Diesel Type Hybrid	0	0	2	5	11	19	19	17	14	12				
Gasoline Type Hybrid Diesel Type ICEV	0 62	1 54	3 49	8 45	15 48	26 44	43 38	42 32	36 28	31 24				
Gasoline Type ICEV	161	187	197	192	164	127	88	60	42	33				
Total	223	244	262	274	282	287	290	293	295	297				

CO2 Emission

CO2-Emission f	rom Cars (Unit	s: GtCO2/y)								
Region	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
USA	1.1	1.2	1.1	1.0	0.9	0.7	0.5	0.4	0.3	0.2
RUSSIA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PACIFIC	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0
MEXICO	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
MEA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LAM	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
INDIA	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
FSU	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
WEUR	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.1
EEUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHINA	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3
CANADA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
BRAZIL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ASIA	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
AFRICA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total	2.6	2.8	2.9	2.9	2.8	2.5	2.3	2.0	1.7	1.5

CO2-Emission (U	Inits: GtCO2/y)									
Region	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
USA	1.9	1.9	1.9	1.8	1.7	1.5	1.4	1.3	1.2	1.1
RUSSIA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PACIFIC	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3
MEXICO	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
MEA	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7
LAM	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
INDIA	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4
FSU	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
WEUR	1.3	1.2	1.2	1.2	1.1	1.1	1.0	1.0	1.0	0.9
EEUR	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CHINA	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.1
CANADA	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
BRAZIL	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ASIA	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.0
AFRICA	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6
Total	6.5	6.8	7.1	7.4	7.6	7.6	7.7	7.9	7.9	7.9