COVID IMPLICATIONS AND OUTLOOK: RECOVERY WITH DIVERSITY AND RESILIENCE

COVID-19 GLOBAL SURVEY RESULTS | 3RD ROUND | MARCH 2021

COVID implications, recovery and transformational actions: experiences and outlook from the world energy community

The COVID crisis continues to have significant and uneven impacts across societies and economies.

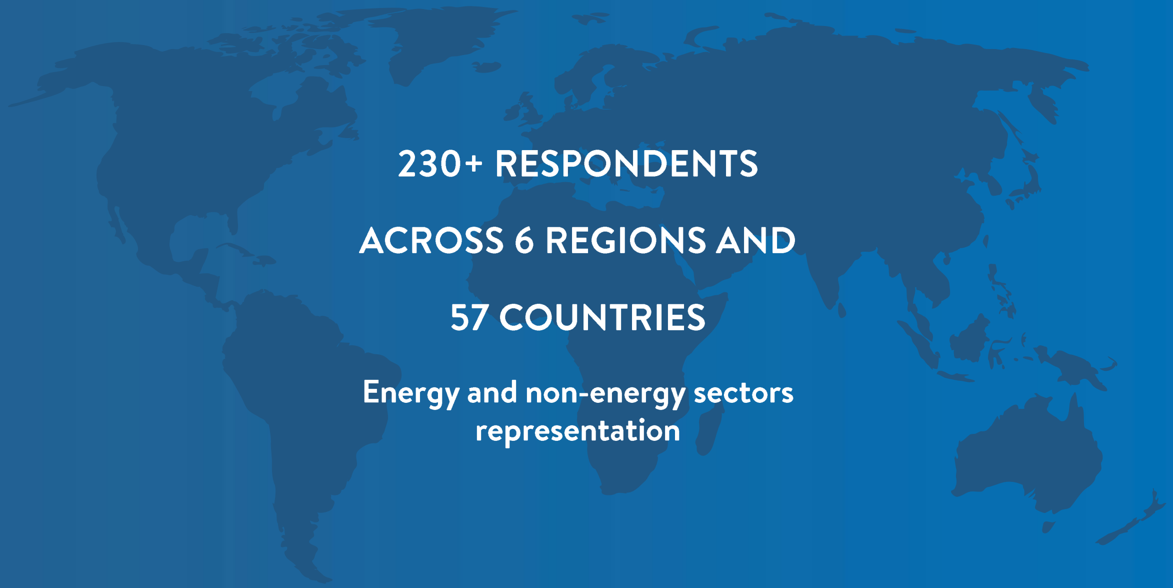
At the World Energy Council, we are working with our global community to explore the impact of the pandemic on the energy sector, capture key insights and share know-how. We leverage these insights to enable a smart, resilient and sustainable energy community response and better recovery within the context of affordability and social justice.

This brief presents a **quick "pulse" of current attitudes and trends** felt across the industry. It is based on the results of a third World Energy Council COVID survey in a series that began in March 2020. Previous surveys were used to build the world's first World Energy Transition Radar and facilitate strategic conversations on COVID crisis recovery among diverse stakeholders.

Findings in this brief are based on responses received during **February 2021**.

The brief provides a **global perspective** with selected insights on regional and sectoral implications.

Should you wish to get access to more detailed data and insights, please contact us at partners@worldenergy.org



230+ RESPONDENTS

ACROSS 6 REGIONS AND

57 COUNTRIES

Energy and non-energy sectors representation

EXECUTIVE SUMMARY | RECOVERY WITH DIVERSITY AND RESIELINCE

The COVID crisis continues to have significant and uneven impacts across societies, economies and businesses. The World Energy Council COVID survey shows that regions and energy companies are adopting diverse approaches to recovery which reflect different starting points, circumstances and ambitions. While views on a post-pandemic world are still unclear, there are more signals of certainty about uncertainty. The other key insights include:

1. **No return to a pre-pandemic normal.** Almost half of our global energy community (48%) – three times more than in April 2020 – now expect a **new normal**. As lockdowns begin to lift across the world, **65%** of respondents anticipate a **shift or growth in energy demand**. This outlook raises questions about producing more energy to meet increasing demand while achieving climate neutrality.

2. **Increasing resilience of energy companies.** While some energy companies (28%) are still experiencing significant disruption from COVID on their businesses, it is down from 50% indicated in April 2020. Energy companies are increasing their resilience and learning to navigate through the uncertainty. They are moving **beyond business-as-usual** action and **reallocating investments**, especially in digitisation (56%) and R&D (40%).

3. **Multiple recovery pathways.** The crisis has emphasised that there is no 'one size fits all' solution. Regions are taking **diverse approaches to recovery** which reflect geographical diversity, different staring points and ambitions. Many countries are turning this crisis into **opportunity for transformation**. While regional views vary, half (51%) of our global community indicate that COVID recovery actions contribute to **accelerating energy transition**.

4. **Human-centred energy transition.** There is a greater recognition of the role of people and consumers in energy transition. The **gap** between their current role and what is needed to successfully recover from the crisis, and drive energy transition, is significant (the average score of current role versus desired role in a scale from 1-min to 5-max is 2.5/5 vs 4/5). **Information, education, and citizen engagement** are mentioned as the most important approaches to enabling a greater role of consumers.

5. **Turning challenges into opportunities.** **Insufficient behavioural changes** are mentioned as the biggest barrier to meeting the Paris Agreement (48% of respondents). This shows that the pace of transition is not determined by the accelerated rate of technological innovation but by the ability of people to make choices. Nearly half (49%) of respondents believe **shifting energy demand** and a third (31%) believe the **energy-digital nexus** are important emerging solution spaces to tap into.

5. **Co-shaping a new energy future.** While **governments** are playing a leading role (indicated by 49% of respondents) in recovering from crisis and progressing successful energy transition, there is a recognition that responsibilities are distributed across business, civil society, investors, etc. (30% of respondents). There is also a growing need to engage across energy sector boundaries and work with **new energy players**, e.g. digital giants, demand aggregators and entrepreneurs.

1 | NO RETURN TO A PRE-PANDEMIC NORMAL

Changing expectations of a new normal

Across all regions, almost half of respondents from our global community (48%) anticipate that there will not be a return to a pre-pandemic normal. Instead, we will need to adjust to a **different post-pandemic future**. This is three times higher than in April 2020.

However, 14% of respondents do not see signals that "peak disruption" has been achieved and indicate that there will an **extended period of uncertainty.**

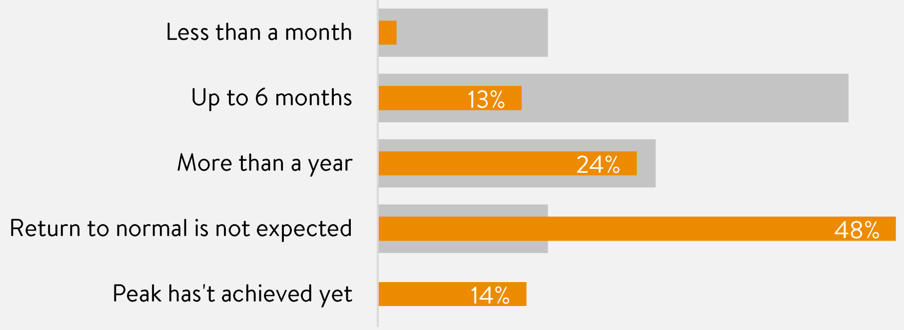
The post-COVID world will see an energy demand change

While a quarter (24%) expect demand to return to pre-pandemic level, **65%** of respondents expect **energy demand to shift or grow** due to the changes in energy behaviours, focus on green recovery actions and reset to lower carbon emission.

On a regional level expectations are diverse: **Asia** sees a permanent demand **disruption** (18% of respondents) while **Africa** expects the most **significant growth** in demand (55%). *(See regional and sectoral details in annex).*

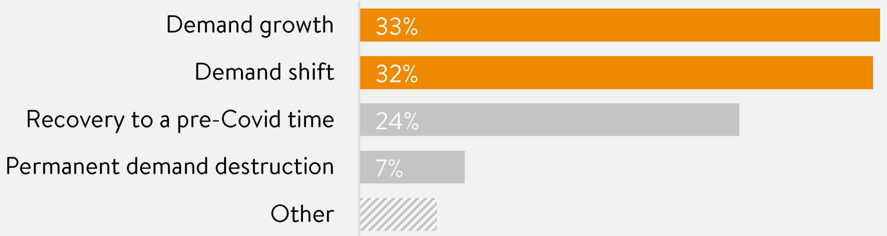
The need to meet an increasing and changing energy demand raises questions about producing more energy while achieving climate neutrality.

Q: How long will it take for energy systems to come back to normal after the peak disruption from COVID? (global view)



April 2020
February 2021

Q: What is your expectation on the recovery of energy demand in your country after all government restrictions related to pandemic have been lifted? (global view)



Top responses

2 | INCREASING RESILIENCE OF ENERGY COMPANIES

Energy companies have learned to operate through crisis

Whereas 96% of energy businesses indicated that they had been negatively affected by COVID in April 2020, today energy companies are building greater resilience. Less than a third (28%) indicate significant disruption to their businesses, and most of respondents see only **a slight impact or no impact (69%).**

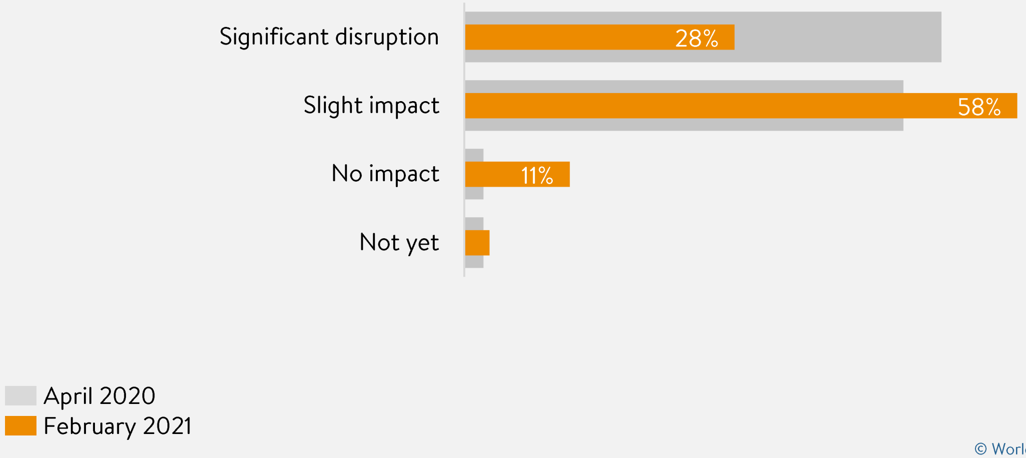
Decreased productivity is mentioned by **half** of the global community compared to April 2020 (27% vs 48%), showing that companies are adapting to a shifting environment and learning to work remotely and with uncertainty. **Decreased demand** for products and services is still perceived as a major area of disruption (36%). *(See regional and sectoral details in annex).*

Digitalisation and R&D are still major priority areas

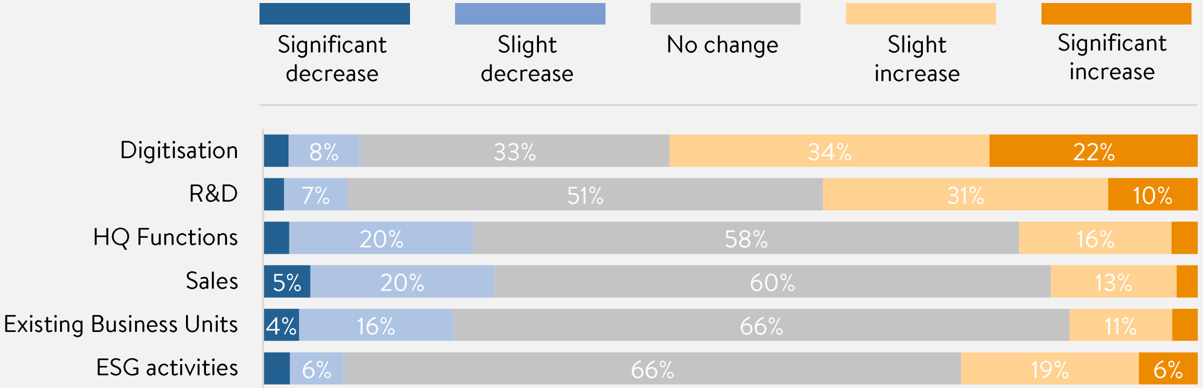
Energy companies are moving **beyond business-as-usual** action and reallocating investments. **56%** of organisations are directing an increasing amount of their investment to the **digitalisation** of their businesses. Technology and fossil fuel sectors (coal, gas, oil) specifically see digitalisation as a major area for investments, focussing on enhancing remote communication and new services.

Similar to data from the April 2020 COVID survey, more than **40%** of organisations are increasing **R&D** spend into transformational new businesses.

Q: Has your organisation been affected by the COVID-19? (global view)?



Q: How is your organisation reallocating investment to prioritise key functions within the business? (global view)



3 | MULTIPLE RECOVERY PATHWAYS

There is no 'one size fits all' approach

The survey results show that there are **diverse approaches to recovery** which reflect different starting points, circumstances and ambitions across geographies.

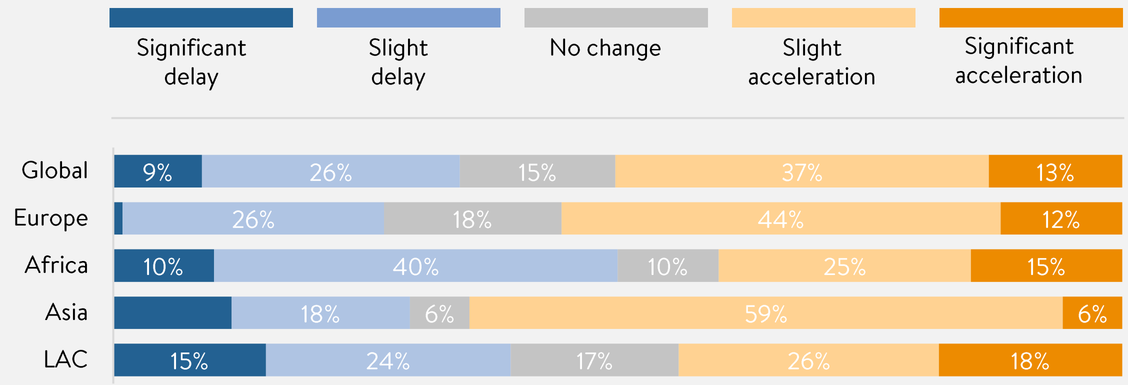
While regional views vary, **half** of our global community indicated that COVID and recovery actions are **accelerating energy transition**. Asia (65%) and Europe (56%) are more optimistic, while 50% of respondents from Africa are seeing a delay in energy transition across the continent due to COVID.

Many countries (52%) are taking this an **opportunity for transformation** while some are more cautious and prefer to work on a diverse but less ambitious agenda.

Among regions with a greater ambition for transformation, top recovery options for local stakeholders include **advancing auto-tech revolution** (electric vehicles, autonomous vehicles), promoting clean energies, e.g clean **hydrogen**; focusing on **grid flexibility**; investing in **local innovation** ecosystems; and promoting new **development models** (circular/regenerative).

For regions that see signals of recovery actions with a less transformational agenda, top priorities include focusing on creating **local jobs;** increasing end-use efficiency; replacing import with **domestic production** and focusing on **local environmental issues.**

Q: How do you expect COVID to impact upon energy transition (global vs regional views)?



Q: What are the top recovery options local stakeholders are focussing on? (global view)

Diverse but less ambitious change:

1. Focus on **end-use efficiency**
2. Promote **infrastructure** action plans
3. Increase **local jobs**
4. Focus on local **environmental issues**
5. Replace imports with **domestic production**

Greater transformational ambition:

1. Focus on greater regional **grid flexibility**
2. Advance **auto-tech revolution**
3. **Repurpose existing infrastructures** for clean hydrogen
4. Build local **innovation ecosystems**
5. Promote **circular/regenerative models**

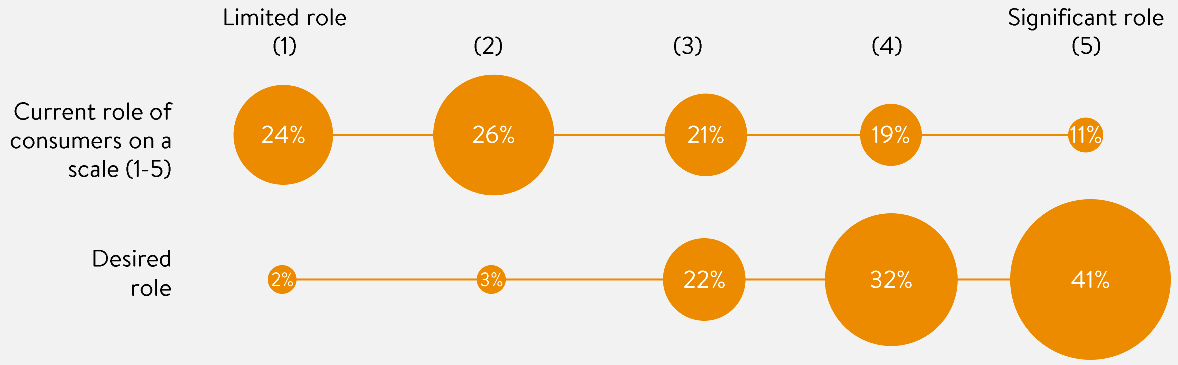
4 | HUMAN-CENTRED ENERGY TRANSITION

Enabling 'societal pull' to keep pace with 'technology push'

While many regions are focusing on advancing technological innovation, there is a recognition for **increasing the role of society and consumers** in energy systems. Most respondents indicate that the **gap** between the current role of consumers in energy systems and what is needed to successfully recover from COVID crisis and drive energy transition, is significant (the average score of current role versus desired role in a scale from 1-min to 5-max is 2.5/5 vs 4/5).

Information, education, and citizen engagement are the common approaches to enabling a greater role of consumers in energy systems, as mentioned by global energy community. Greater government incentives, coherent energy policy and behavioural change are also seen as key priorities.

Q: Within your country's current energy system how central do you think is the role of consumers? As countries recover from COVID with more ambition for a better energy transition, how important is it to put people at the centre of the energy transition? (global view)



Q: What is needed to bridge the gap and what are the key priorities to better leverage human-centric energy systems to accelerate energy transition?

5 | TURNING CHALLENGES INTO OPPORTUNITIES

Need for behavioural change, incentives and clearer policies

Insufficient **behavioural change, lack of clearly defined energy policy, and incentive mechanisms** are among the biggest barriers to achieving climate change targets, mentioned by our global community.

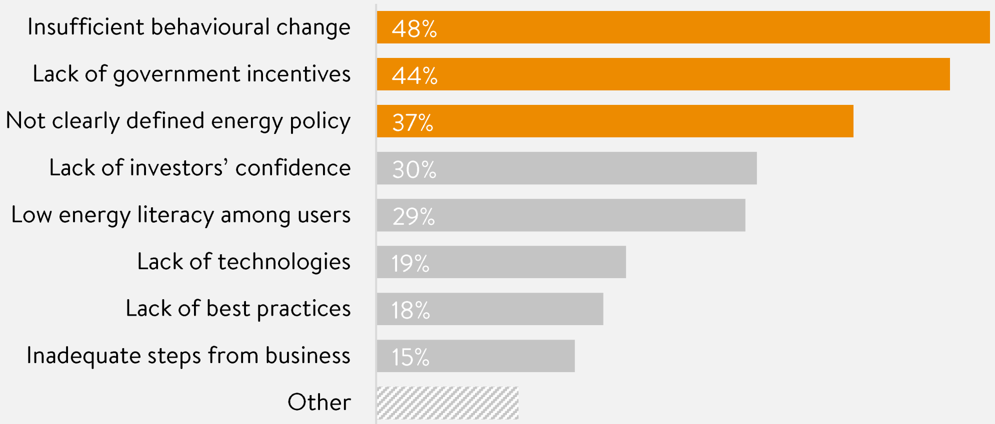
A third of respondents in **Asia** indicate the need to close skills and capabilities gaps and invest in **energy literacy** of non-energy professionals and users as the biggest priorities. 30% of respondents from **Africa** see a **lack of technologies** as a challenge.

New solution spaces emerge

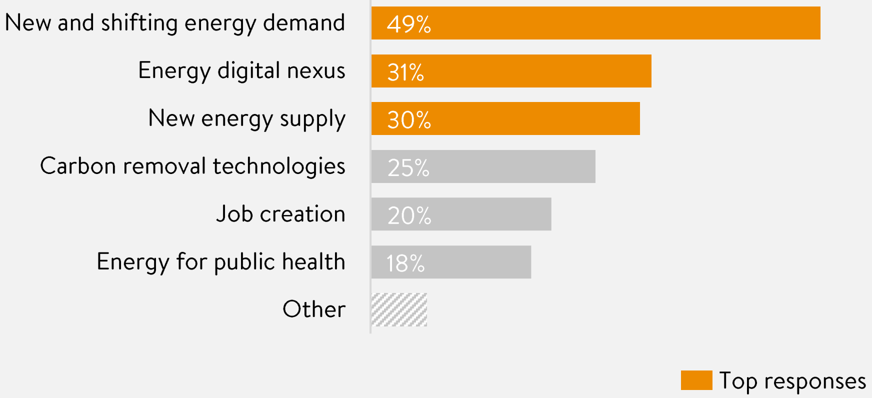
There is an emergence of new solution spaces and new ways of turning challenges into opportunities. **Shifting energy demand is** mentioned by **half** of respondents, while an increase in remote/home working created more emphasis on **energy-digital nexus** (30%).

Many in **Asia** (41%) are focusing on **carbon removal technologies**. 30% in **Latin America and Caribbean** region is prioritising **job creation** opportunities, while **Africa** is directing attention to the pressing issues and opportunities of producing more energy for **public health** and cold chain innovation (25% of respondents). *(See regional details in annex).*

Q: What are the top 2-3 biggest challenges to achieving the Paris Agreement target? (global view)



Q: What are the most promising new solution spaces emerging as a result of COVID pandemic recovery? (global view)



6 | CO-SHAPING A NEW ENERGY FUTURE

Wider ecosystem stakeholders effort

Government role is seen as critical in recovery from crisis and defining clear rules to support acceleration of energy transition (indicated by nearly **half** of respondents).

At the same time a third (30%) of respondents recognise the need for an **ecosystem approach and engaging the whole energy system and adjacent sectors** in enabling transformation and change.

Regionally, **Latin America and the Caribbean** puts more emphasis on actions from **civil society** (28%), while **Asia** relies on **investors** in recovering from crisis and progressing energy transition (35%).

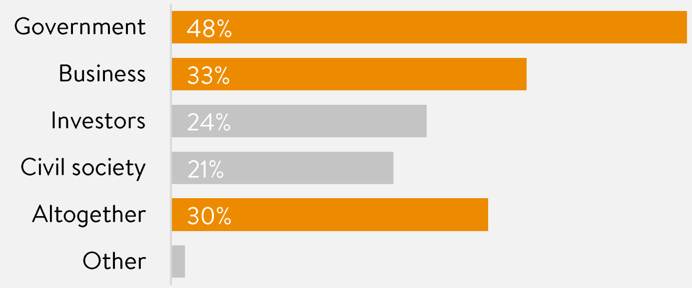
Engaging new energy landscape players

COVID is changing the energy landscape with new players coming into market. Traditional energy companies are struggling to hold their leading positions, with **integrated energy companies** gaining momentum (71% of respondents).

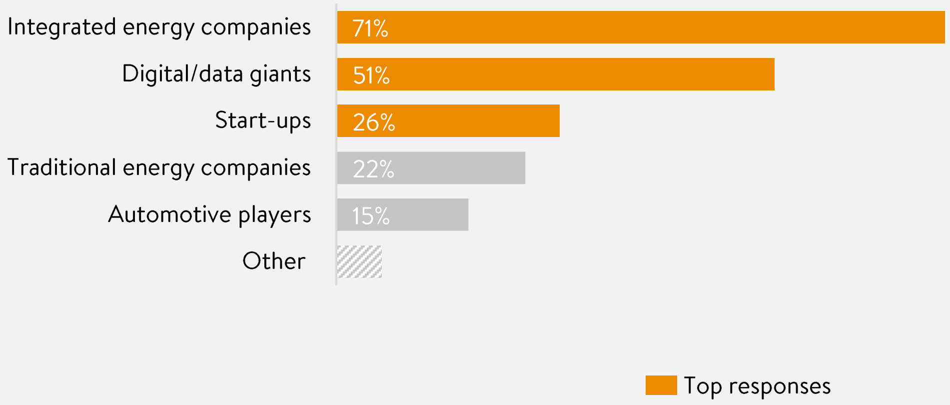
Digital giants, with their capacity to know and interact directly with individual customers, rapidly expand their capabilities in energy systems integration and grid management to capture an increasing share of electrified mobility and other energy-plus services (indicated by 51% of respondents).

Some other new players include customer associations, demand aggregators and energy efficiency promoters.

Q: Who will play a greater role in the recovery from the COVID crisis? (global view)



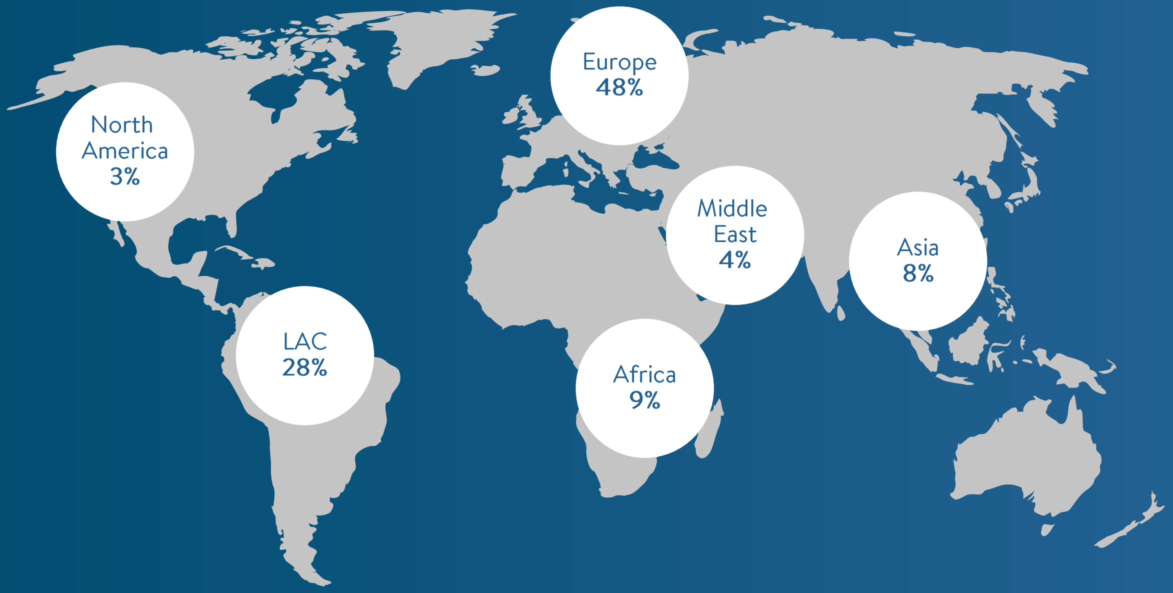
Q: In 3-5 year which organisations operating in energy markets will be most valuable? (global view)



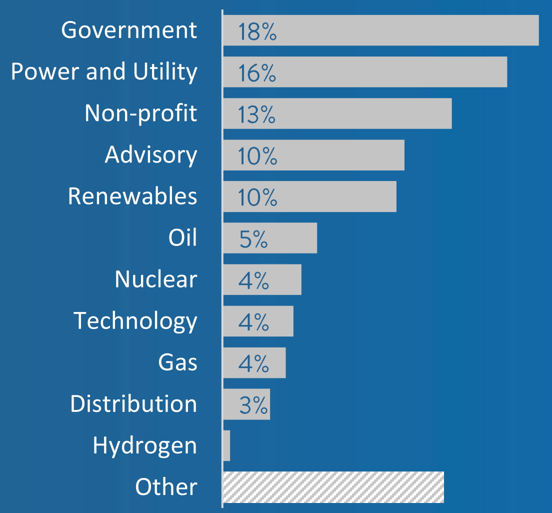
Who responded to the survey

230+ respondents

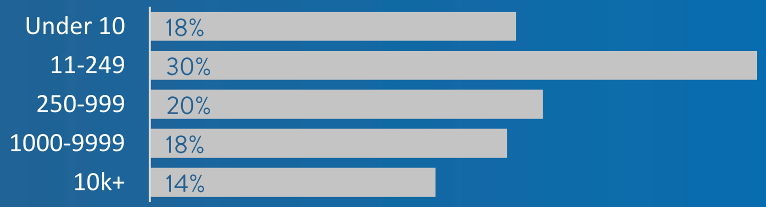
Across **6** regions and **57** countries



Sectoral representation



Size of organisations (number of employees)



Size of organisations (turnover)

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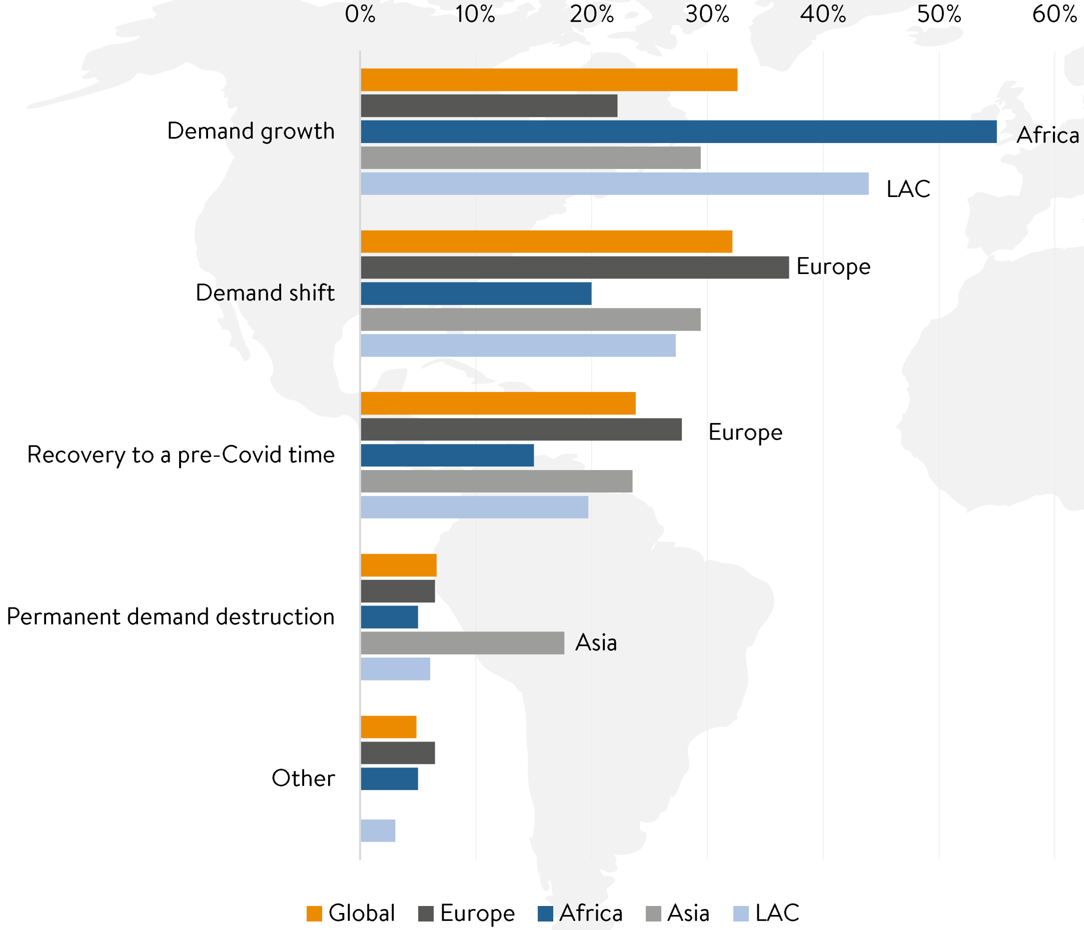
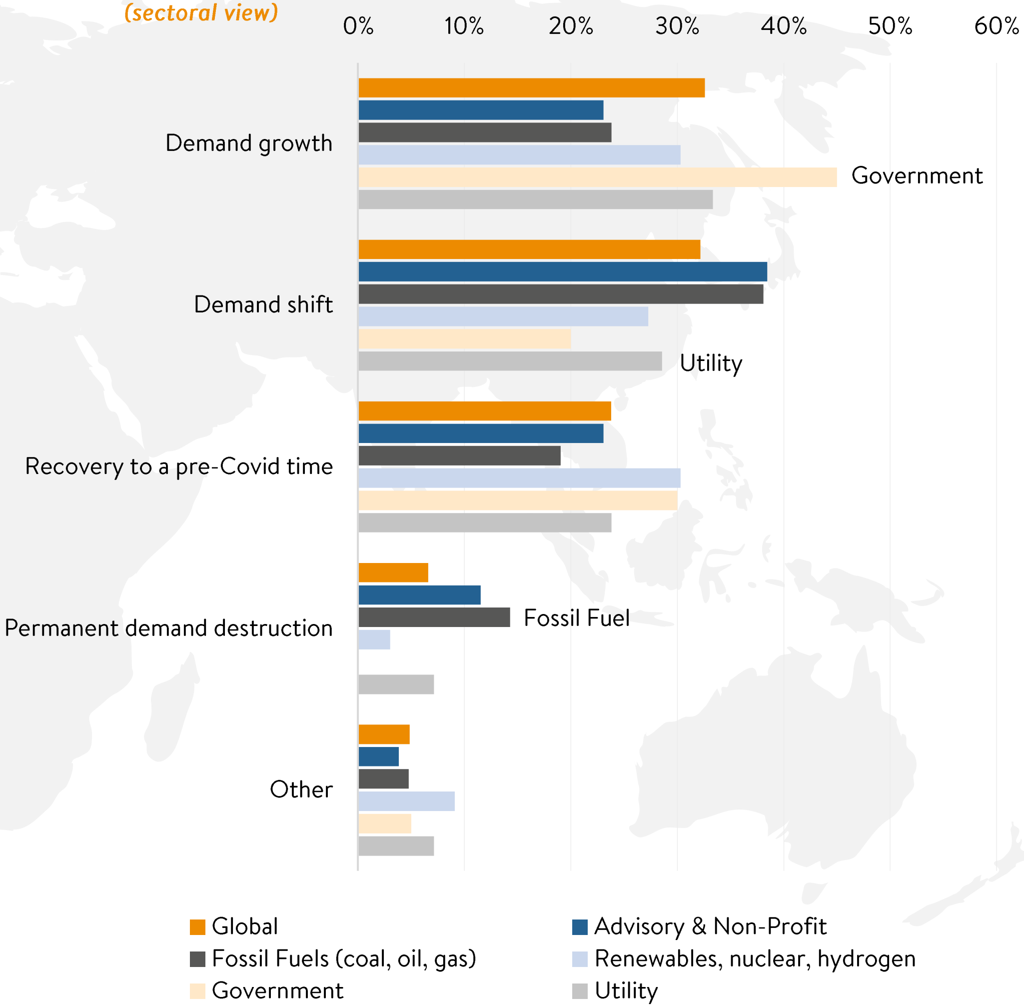
Expectation on energy demand change – regional and sectoral views

Q: What is your expectation on the recovery of energy demand in your country after all government restrictions related to pandemic have been lifted?

(regional view)



(sectoral view)



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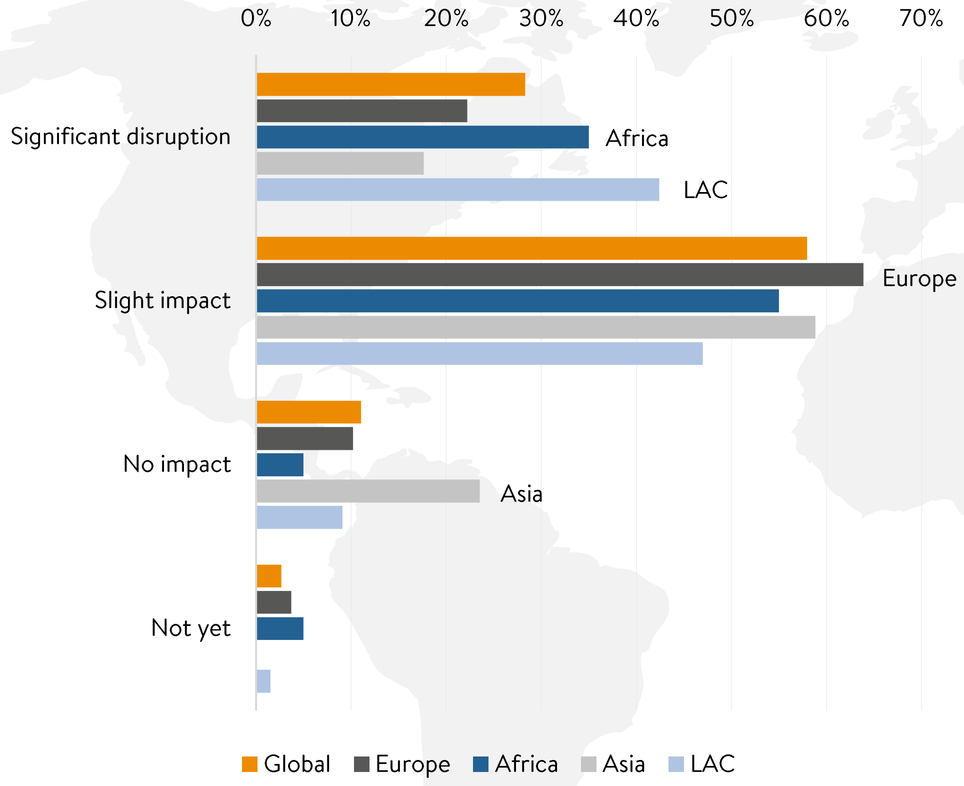
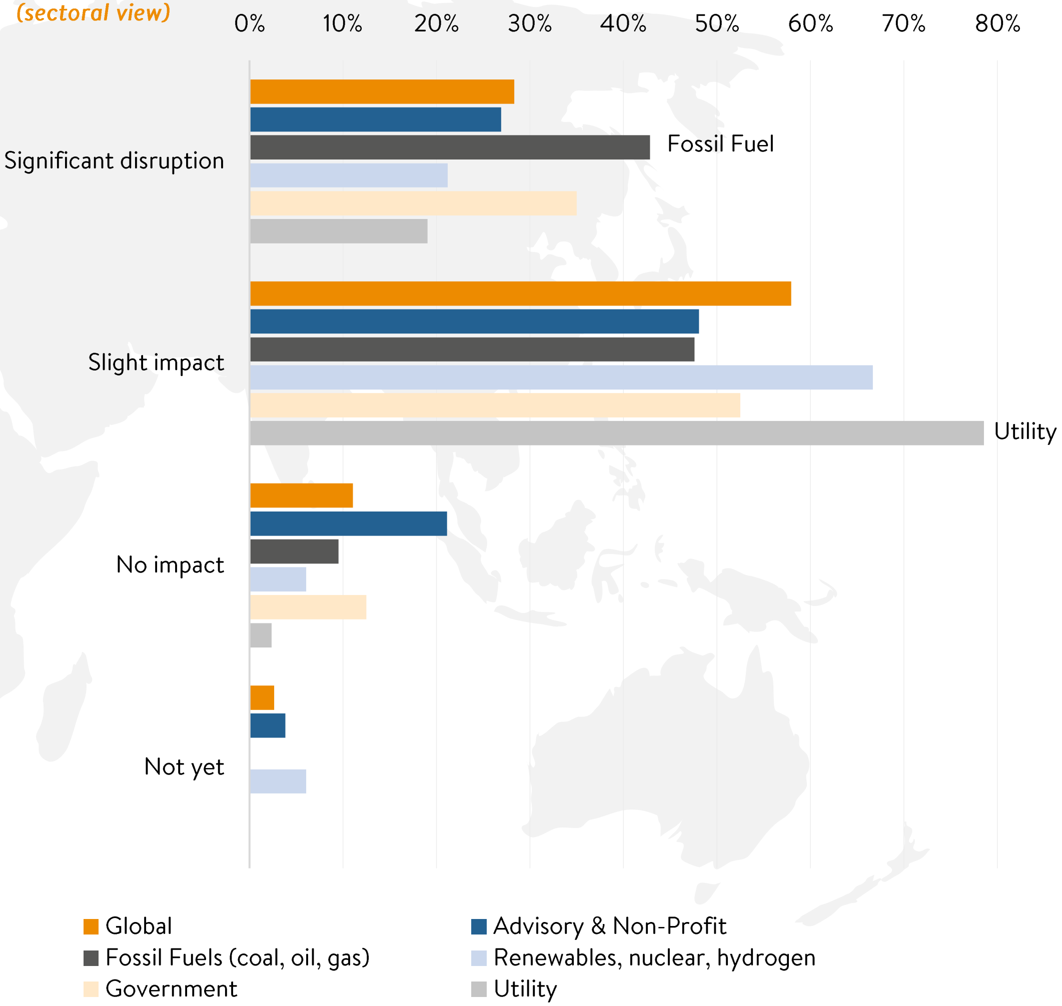
Resilience of energy companies – regional and sectoral views

Q: Has your organisation been affected by the COVID-19?

(regional view)



(sectoral view)



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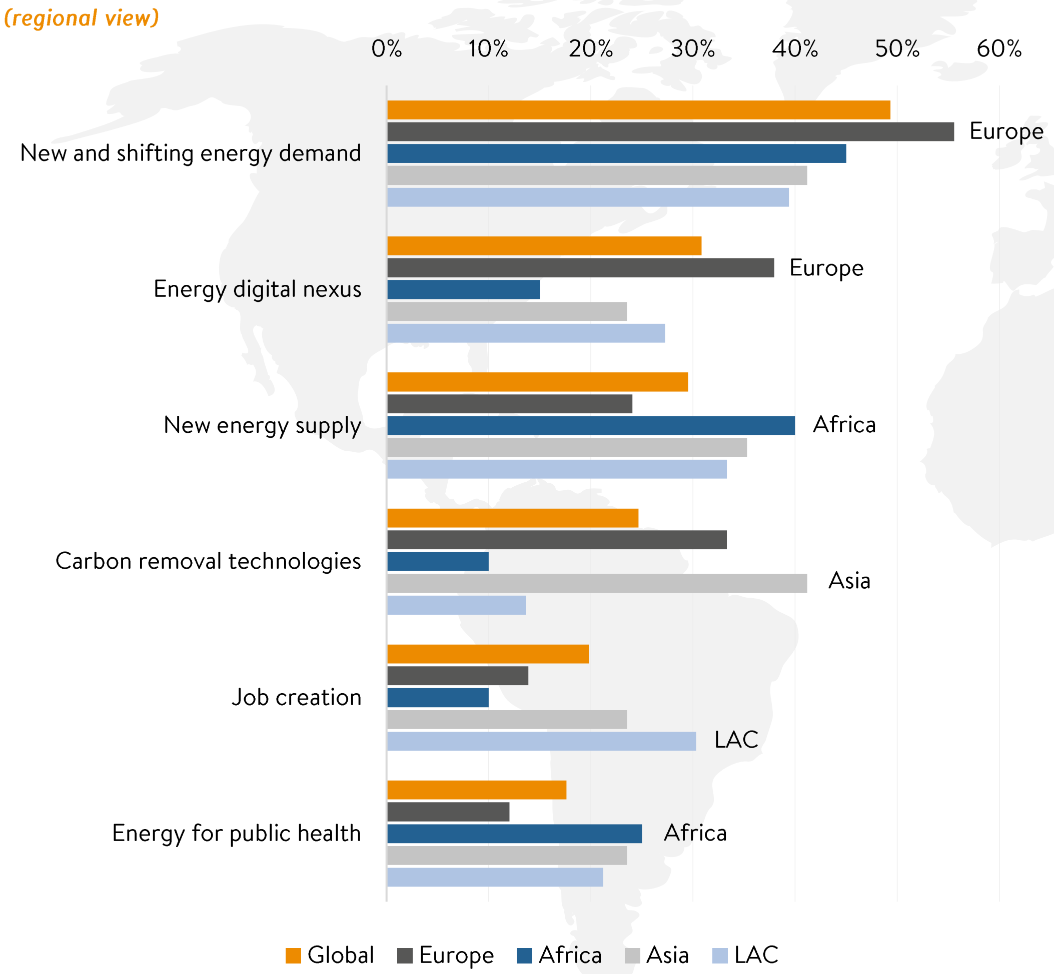
Emergence of new solution spaces – regional views

Q: What are the most promising new solution spaces emerging as a result of COVID pandemic recovery?



ABOUT THE WORLD ENERGY COUNCIL

WORLD ENERGY COUNCIL

Formed in **1923**, the World Energy Council is the world's first permanent energy organisation and a registered charity.

We are an **open-to-all** and fully independent **world energy community.** We do not advocate for any country, company, resource, technology or solution.

Our enduring mission focusses on **"how to"** secure better energy for humanity in the current era of energy for people and planet.

Globally networked and locally strong, we work dynamically with 3,000+ member organisations, in nearly 90 countries, across all energy sectors.

In 2019, the World Energy Council launched a new vision of '**Humanising Energy**' which has rapidly come of age in the global health emergency.

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