LATVIA

1. INTRODUCTION

Generally, Latvia has good results in ensuring Energy sustainability, affordability and security. However, the current geopolitical situation, especially Russia's invasion of Ukraine, underscores the importance of cybersecurity and digital innovation in energy infrastructure. Latvia ranks 17th in the EU's 2022 Digital Economy and Society Index (DESI), with strong ICT capabilities and high broadband coverage, positioning it well for digital energy solutions like smart metering, smart grids and energy efficiency monitoring. Latvia excels in digital public services, but still has a high potential in integrating key technologies like Big Data and AI, which are crucial for optimizing energy production. Addressing rural connectivity gaps is also essential for equitable access to energy innovations and a sustainable energy transition.

Towards the achievement of the goals set in the Latvian National Energy and Climate Plan, including the promotion of energy security and independence, the further development of RES projects and a full-fledged regulation of energy communities is an essential tool for encouraging public participation in achieving national goals.

2. POLICY PATHFINDING FOR MANAGING THE TRILEMMA

As an EU country Latvia follows the EU common approach on the decisions, subsidies and regulations of the EU, which tends to be a positive boost and a push for the energy transition. Many of the Europe region 2024 World Energy Trilemma Report signals are representative of the success and challenges of Latvia. The historical high dependence on imported from Russia gas came with energy cost disturbance, need for sustainable energy resources vs the social approval and lack of workforce/ need of its upskilling for the energy transition.

Besides the extremely high energy prices, an important concern was finding alternative source of gas in a very short-term. Though, there still exists the reliance on imported gas (non-EU), which basically just moves the dependence to another supplier.

The need to detach from import dependency also gave a boost to renewable energy development in Latvia. There are a lot of solar and wind projects in planning coming up to 6GW of reserved grid connections, exceeding the pick consumption more than 3 times. Although, Latvia already has a very high power generation from renewables (thanks to hydro) till now, it has not dug into the potential of solar and wind. The need to diversify gave these solar and wind projects visible acceleration. Moreover, the proximity to Nordic countries ensures additional motivation to strive for mainly cheaper and at the same time more sustainable energy.

As a result of refusing gas from Russia, the societal interest in electric heat pumps for residential heating increased (governmental subsidies fostered the attractiveness as well). The increase of energy costs proved the need for the local energy resources and a higher diversity on different levels.

The war in Ukraine had an impact on equity dimension in Latvia. It was mainly visible through the increased cost of consumer goods on top of energy itself. In order to support the society, government subsidized household energy bills similarly as many countries across Europe did. This applied to all households to avoid complex administration and possible discrimination. Moreover, government provides subsidies for heat pumps, EVs and residential PVs. The measure definitely encourages a wider demand for low-carbon technologies improving its affordability; however, a low-income part of population still cannot afford them.

A key discussion in recent years regarding energy security has focused on energy efficiency, as reducing energy consumption increases the proportion of locally generated energy. The EU regulation and the availability of the EU funding facilitates energy efficiency measures. The energy crisis and the soaring energy costs was also a good push to every energy user considering energy efficiency.

Similarly like in other countries “NIMBY” – “Not in my backyard” approach still creates barriers for rapid development of RES in Latvia. However, the regulation encouraging municipalities to participate in the development of RES projects has been established.

There is a good point in the 2024 World Energy Trilemma Report stating that Europe is experiencing uneven and uncoordinated transition with national divergences, the same point has been expressed by energy leaders in Latvia. The EU wide approach, cross border projects and sector wide standardisation could foster the energy transition in Latvia and the region.

A major difference in energy security in Latvia (Baltic states) that is not mentioned in WEC 2024 report and doesn’t impact as much Europe as the Baltic states is power grid synchronization with the European network. The Baltic states have been historically operating in synchronous mode with the Russian and Belarusian electricity systems. The synchronisation with the European network will enhance the Baltic States' ability to independently manage the electricity system, ensure a balance between production and consumption, and regulate flows and frequency without external involvement. The Baltic balancing market started functioning in 2024, the trading time is shorten to 15 minutes, and a further integration into the European balancing market is a step towards further development bringing competition and lower prices in this energy market segment.

3. BEYOND THE TRADITIONAL DIMENSONS

The current geopolitical situation, marked by Russia's invasion of Ukraine, makes the enhancement of cybersecurity and implementation of innovative digital solutions, technologies, and smart solutions for energy infrastructure and management, even more crucial. All the mentioned aspects are important for resilience, security and sustainability of the energy sector. Digital Economy and Society Index (DESI) summarises indicators on Europe’s digital performance and can help to get an overall overview of digitalization level in Latvia. According to the Digital Economy and Society Index (DESI) 2022, Latvia ranks 17th out of 27 EU Member States.1 The DESI consists of four dimensions: Human capital, Connectivity, Integration of digital technology and Digital public services.

According to the analyses of the DESI index, Latvia has a good background for more rapid digital development. Latvia’s strong performance in ICT and digital infrastructure offers significant potential for advancing the energy sector. With a growing ICT workforce and high VHCN coverage (91% compared to the EU average of 70%), Latvia is well-positioned to implement digital solutions for energy management, such as smart metering, smart grids, predictive analytics, and energy efficiency monitoring. The ongoing 5G rollout further supports the development of real-time energy systems and the integration of renewable energy sources. In terms of smart electricity meter, the distribution system operator has completed the rollout, equipping 1.1 million customer connections across Latvia.

Over the past five years, additional measures have been implemented to enhance operations, including digital and automated power grid management, optimized logistics and workforce, streamlined fleet management, and new digital self-service solutions for customers. Additionally Latvian largest distribution system operator JSC “Sadales Tīkls” as of March 2023 has started to provide services of the "Step" data platform for electricity market participants. The data platform "Step" is an information technology system, the purpose of which, in accordance with the Electricity Market Law, is to ensure standardized and centralized data exchange and storage for all electricity market participants and system operators. The data platform "Step" allows market participants to speak a common language, ensures transparent and equal data management, as well as fast, efficient data exchange, thereby increasing the efficiency of the industry and making the electricity market more dynamic and more accessible. Unified data quality standards, centralized exchange and effective use of new technology solutions are essential prerequisites for the successful development of the Latvian electricity market.

However, dimension of Integration of digital technologies shows that digital technology integration offers Latvian businesses competitiveness, but they lag behind the EU average in key areas like Big Data, AI, and Cloud, which are crucial for optimizing energy production and distribution, highlights a challenge. Bridging this gap will be essential for fully harnessing digital technologies to enhance competitiveness and sustainability in the energy sector. The government's success in digital public Latvia's National Energy and Climate Plan for 2021-2030 focuses on multi-sector collaboration to

address key energy and climate challenges. It sets ambitious targets for reducing greenhouse gas emissions, increasing the use of renewable energy, and improving energy efficiency across various sectors, including transportation, industry, buildings, agriculture. Innovation and research are emphasized as drivers of progress, fostering competitiveness and enabling the development of new technologies. The plan also highlights the need for cross-sectoral cooperation, engaging the public, businesses, and institutions to align efforts toward energy security, climate neutrality, and sustainable growth, while overcoming economic and technological challenges.

In 2022, Latvia took a major step toward energy independence by establishing a joint venture of two state owned companies - Latvenergo AS and Latvijas valsts meži AS. This national company aims to boost renewable energy, create long-term value, and benefit Latvian citizens and businesses. It plans to build wind farms with at least 800 MW capacity by 2030, increasing renewable electricity, cutting GHG emissions, and supporting energy security, climate neutrality, and biodiversity, while offering compensation to local communities. Although, Latvian state forest company Latvijas valsts meži AS exited the joint venture in 2024 to focus on the main business - forestry, the aim still remains.2

The financial support program "Reduction of greenhouse gas emissions in households - support for the use of renewable energy resources" has been available to residents since the spring of 2022. Taking into account the ever-active interest of citizens in purchasing electricity-producing equipment, in the early beginning of 2024 the Ministry of Climate and Energy has expanded the supported activities. Residents who plan to purchase and install solar panels or wind generators on their property will be able to apply for state support not only to purchase solar panels or a wind generator, but also to receive support for the purchase of an electricity storage facility. Moreover, until 2024 support could be received for the purchase of solar panels and wind generators with a capacity of up to 11.1 kW. With the amendments to the conditions of the support program, there will be no such restriction.

The financial support program for the purchase of electric cars and externally chargeable hybrid cars - Emission allowance auction instrument (EKII) - is available to Latvia's citizens from March 2022. Electric and hybrid cars, which were purchased with EKII financing make approximately 22% of the total number of electric cars in Latvia. Within two years, the program has provided a significant breakthrough in the development of electromobility. Based on that in 2024 the Ministry of Climate and Energy has improved the support program by providing possibilities of purchasing both new and used electric cars and new hybrid cars to a wider range of beneficiaries - including families with many children.

Energy communities are an important step towards the development of a sustainable and decentralized energy system in Latvia. They will promote public participation in the field of energy and increase energy independence. In Latvia, the concept of energy communities and the legal regulation developed for energy communities entered into force on January 1 in 2023. In May 2024, the Ministry of Climate and Energy announced for public consultation the draft regulations of the Cabinet of Ministers "Rules for registration and operation of energy communities", and the Ministry is committed to adopt the Cabinet rules by the end of 2024. The purpose of the regulations is to define the conditions of joint operation of energy communities and active users of energy obtained from renewable energy resources. They also include the conditions for sharing electricity, the procedure for exchanging information between market participants and the system operator, the information included in the contracts, etc. All those factors will promote further development of energy communities in Latvia.

WORLD ENERGY COUNCIL

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Latvia Member Committee