() RRAMEMBERS' NEWSLETTER

ENERGY REGULATORS REGIONAL ASSOCIATION (ERRA)



INTERVIEW WITH MR. HAMDI REFAT S. TAHBOUB, CEO of the Palestinian Electricity Regulatory Council (PERC)



Mr. Hamdi Refat S. Tahboub, CEO, PERC Palestine

Dear Eng. Tahboub, thank you for accepting our invitation to the Spring 2023 Newsletter interview. Palestine has recently made significant progress in terms of Renewable Energy Sources deployment. Could you please tell us how does PERC contribute to efforts to stimulate Renewable Energy investment in Palestine?

The evolution of renewable energy in Palestine depends on several factors, including the availability of lands, the legislative and regulatory framework, the financing tools, the data and technical expertise, and infrastructure. As a regulator, PERC focuses on creating an appropriate regulatory framework, including, but only, the existence of a dispute resolution mechanism and ensuring fair rights and obligations between parties engaged with the PPAs (power purchase agreements). As well as, and according to the general electricity law, PERC facilitates the workflow to connect new RE projects through issuing procedures and guidelines. In addition to the above the regulator monitors the electricity market to ensure the financial credibility of the bodies operating in the market.

Moreover, the current renewable energy schemes are subject to the review, and the regulator recommends amendments including tariffs according to changes in the market, such as the improvements on storage units.

What are the current RES roll-out figures, targets, and estimated RES potential in Palestine?

Currently, there are about 75 MW connected to the grid according to the key performance indicators report issued by the regulator for the year 2021, knowing that the expected figure for the year 2022 will be much higher.

According to the renewable energy strategy, it is expected that there will be 20% of the supply from renewable sources by 2030 (approximately 500 MW).

For the potential, I believe that this depends on the enhancements to the infrastructure, which is considered one of the most important challenges for the Palestinian electricity market.

2023/1

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How does PERC work towards strengthening the grid and preparing for the necessary expansion that would facilitate renewable energy dispatch?

The regulator continuously monitors the market and balances the costs allocated to the development of the grid, tariffs, and prices. For the coming years, the cost of developing the grid, especially the part related to transmission, is huge in comparison to the volume of the electricity sector in Palestine. It is estimated that we need around 200 million USD for the coming 10 years. However, the shift towards the smart grid in light of the global economic crises and their reflection on costs makes it more difficult to balance. Hence, we strive to mitigate the impact on the consumer as much as possible, knowing that the **Palestinian** government provided huge subsidies to the energy sector and is still providing.



PSRC Armenia

Recent Developments

- In 2022, based on the inflation and exchange rate changes, on the initiative of Public Services Regulatory Commission (PSRC) of Armenia, the tariffs for the sale of electricity delivered from power plants using renewable energy resources with a capacity of up to 30 MW were revised.
- At the end of 2022, the contractual and available capacities of the stations operating within the framework of the public-private sector partnership agreements, balancing, and secondary and tertiary reserve provisioning service stations for 2023 were approved by PSRC.
- At the end of 2022, on the initiative of PSRC, tariffs for large producers with a capacity of more than 30 MW, electric power transmission, distribution, electric power system operator, market operator services, as well as balancing services in the electric power market were revised. Moreover, for large producers with a capacity of more than 30 MW, electricity tariffs have been set in a single-rate tariff system, and for plants operating within the framework of public-private partnership agreements, electricity (capacity) tariffs have been set in a two-rate tariff system. For the purpose of and balancing frequency regulation, the secondary and tertiary backup service introduced, for which tariffs were also set. According to the results of the revision of the tariffs of the electric power system, there was no revision of the tariffs of the final consumers of electricity.
- Based on the application of the water supply company, PSRC has

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set the tariffs for drinking water supply, and drainage (wastewater treatment) services for the 7th year of the contract (2023), taking into account the change in the volume of retail water supply, the shortage, the change in the tariffs of the electricity supplied to the company, as well as the additional income obtained from the use for other purposes in the water system, the results of the monitoring of the actual volumes of retail water supply included in calculations the tariff adjustments. In addition, the total tariff for drinking water supply, drainage (wastewater treatment) services calculated by PSRC

consumers considered to be socially disadvantaged, which remains unchanged) compared to the previous calendar year increased by about 8 drams/m3 (including VAT). According to the statement of the Ministry of Territorial Administration and Infrastructure of RA, the increase will be subsidized by the RA Government, and drinking water will not become more expensive for subscribers in 2023.

(except for the tariffs

 Amendments have been made in the share (share, stake) of a person with a license in the field of energy approved by PSRC, the alienation, transfer, or pledging of the property necessary to carry out licensed activities, or the right to it in any other way, by which the requirements submitted to the content of the application have been clarified and updated, a regulation has been approved for the cases when, due to the type of transaction, the party is not yet known at the initial stage of its conclusion (for example, in the case of alienation of property through an auction), in addition, transactions that are not subject to the agreement have been added.

- According to the Resolutions of PSRC, the model forms of energy electrical producerdistributor (guaranteed supplier) contracts for plants with an installed capacity of 30 MW or up to 30 MW were drawn up in a new edition, which simplified the existing regulations have been simplified ensuring more efficient operation of the mechanisms provided by the new market model in the relations between the contracting parties.
- Amendments have been made to the procedure for licensing activities in the field of energy, approved by PSRC Resolution, according to which, taking into account the growing interest of individuals in building floating solar plants, specifics have also been defined regarding the documents necessary to obtain a license for the activity of electric energy production in floating solar plants.
- In accordance with the new model of the wholesale electricity market, one of the generating stations in the electricity system is obliged to provide a balancing service to the rest of the market participants. The provision of the balancing service is necessary in order to regulate the relations of

the market participants in case of deviations from the pre-planned electricity purchase and sale market quantities by the participants due to different circumstances. In addition, the basis of the transfer of electricity by the consumer to another person for the currently widespread electric car charging service has also been fixed by law.

Internal Projects

 PSRC representatives participated in many events organized in the framework of the Energy Community, NARUC, EU4Energy, USAID, and ERRA in online and offline formats.

Significant Energy News

- Taking into account the amendments in the Law on Energy that came into force on May 1, 2022, the wholesale and retail market rules of the electricity market have been updated.
 - The Law on Energy has been supplemented with new regulations related to autonomous energy production. In particular, the relations of the organization of autonomous energy production, accounting, and compensation of electricity flows were thoroughly revised, new limits of the installed capacity of autonomous energy producer installations were defined, the creation of an autonomous group consisting of different autonomous energy producers and consumers, as well as the ability to generate electrical energy at one or more points and consume it at the same or different points by the same autonomous energy producer was planned.
- With the aim of aligning the tariff calculation methodologies and the tariff setting (revision) procedure

- approved by PSRC's decisions to meet the requirements of the new market and to consolidate the tariff regulations the for companies of the sector in one single document, the tariff calculation methodology and definition and review procedure of tariffs in the electric power system were approved by No. 520-N Resolution of PSRC of November 29, 2022.
- As of December 31, 2022, 60 solar power plants have entered the electric energy production stage, as a result of which a total capacity of 204.8 MW has entered the system. At the same time, at the moment, the plants of 8 licensees with a total capacity of 41.0 MW are currently under construction. They refused the guarantee of the purchase of electricity defined by The Law on Energy RA. At the moment, there is 1 license for guaranteed electricity supply, 14 licenses for electricity supply, and 9 licenses for wholesale electricity trade issued by the commission.



AERA Azerbaijan

Recent Developments

- In accordance with the Law "On modification to the Law of the Republic of Azerbaijan "On Electricity" dated 27.12.2022, the Methodology on the fee calculus for the connection services of construction objects to the power network (a flat-charge calculation methodology) should be drafted.
- In accordance with the Law "On modification to the Law of the Republic of Azerbaijan "On Gas Supply" dated 23.12.2022, the Methodology on the fee calculus for the connection services (a flatcharge calculation methodology) should be drafted.

Internal Projects

- Various trainings and events organized by ERRA, including committee meetings;
- Workshops with UK energy regulatory office Ofgem;
- Meetings and workshops within the EU4Energy Activity Plan for Azerbaijan;
- 2nd Azerbaijan-Türkiye Energy Forum in Istanbul;
- Trainings on "Energy storage systems" and "Green hydrogen", organized by ACWA Power (Saudi Arabia);
- Workshops on mega-projects, organized by Masdar (UAE);
- Participation in the 3rd meeting of the working group on energy within the Azerbaijan-Hungary Intergovernmental Commission on Economic Cooperation in Budapest;
- Road Map on Cooperation in Energy was signed between the Energy Ministries of Azerbaijan and Uzbekistan. Azerbaijan Energy Regulatory Agency (AERA) is also involved in some clauses of the mentioned document.

Significant Energy News

The Law "On modification to the Law of the Republic of Azerbaijan "On 17.06.2022 Electricity" dated stipulated the norms concerning detailing heat supply issues (in Azerbaijan the Electricity Law also regulates the heat supply issues), according to which the draft of the Heat Energy Usage Rules prepared and submitted to the Cabinet of Ministers. The draft contains the regulations of the heat grid and distribution network. including, heated water supply issues, first time in the modern history of Azerbaijan (with the Soviet Union these issues were regulated by the different authorized governmental institutions).

In accordance with the Law "On modification to the Law of the Republic of Azerbaijan "On Gas Supply" dated 25.02.2022 the following normative legal acts have been approved:

- The Rules "On safety measures for chimneys utilization" approved by the Cabinet of Ministers;
- The Requirements concerning the construction, erecting, operation, and maintenance of gas installations approved by the Cabinet of Ministers;
- The Requirements for gas installations not to release gas into the atmosphere, as well as pressure, temperature, composition, and other indicators of gas approved by the Cabinet of Ministers;
- The Form of the technical services delivery act has been approved by the Ministry of Energy.

In accordance with the Law "On rational use of energy resources and energy efficiency," the following normative legal acts have been approved:

- "Procedure of conducting an energy audit, as well as submission of the report on the results of energy audit and form of such report ";
- "The form, of the validity period of specialty certificate for the implementation of energy audit, as well as the procedure for the provision of energy auditors and energy audit, as well as the procedure for conducting a register of energy auditors and energy audit and control over their activities";
- "Requirements for the energy manager (manager), as well as the procedure for conducting their attestation");

- "Rules for labeling products related to energy consumption";
- "Environmental design requirements for products that consume energy or affect energy consumption".

"Criteria for identification of economic entities and non-residential buildings to be held in compulsory energy audit" have also been approved.

The following normative legal acts have been drafted and submitted to the relevant authorities:

- "Procedure for the implementation of state control in the field of rational use of energy resources";
- "The procedure and evaluation criteria for the assessment of electrical and heat energy production and natural gas processing".

<u>Developments in Energy Transition</u> <u>process</u>

The 9th Ministerial meeting of the Southern Gas Corridor Advisory Council and the 1st Green Energy Advisory Council meeting held on 3 February in Baku. The event set common goals such as long-term energy security, sustainability, diversification of supply, and expanding cooperation on the energy transition agenda. ■



SERC Bosnia and Herzegovina

Recent Developments

At its regular session on 28 December 2022, State Electricity Regulatory Commission (SERC) passed a Decision determining the tariff for the operation of an independent system operator. According to this decision, the scope of the revenue requirement for the Independent System Operator in Bosnia and Herzegovina (ISO BIH) was set and the tariff for the operation

of an independent system operator which is paid by generators for electricity injected into the transmission system increased by 16.13% while the tariff for electricity withdrawn from the transmission network by customers increased by 12.52%.

In the same session, a Decision on tariffs for system and ancillary services was adopted defining the financial scope of the system service in 2023. Respecting the precautionary principle due to a high number of variables affecting the revenues and expenditure in the balancing mechanism, the tariff for system service was kept at the same level. Taking into consideration the fact that the balancing market in Bosnia and Herzegovina is one of the rare functional markets in the region of Southeast Europe and that the trends in the regional wholesale market have a significant impact on its operation and prices of services, SERC will continuously monitor the implementation of this decision and adjust the tariff for system service if needed.

Furthermore, at the session of the State Electricity Regulatory Commission held on 16 February 2023 in Tuzla, the decisions on tariffs for <u>distribution</u> services and electricity <u>supply</u> within the universal service in the Brčko District of BIH were passed, which will be applied as of 1 March 2023.

The average electricity price for the customers supplied within the universal service increased by 26.36%, while the average tariff for electricity distribution increased by 5.03%.

The price change was caused by an increase in the electricity purchase price, which is 33.6% higher in comparison to the price in 2022, which is the consequence of the global and regional energy crisis. To mitigate the financial consequences due to the purchase price increase, the

seasonal tariff rates have been equalized.

In the decision-making process SERC, taking into account the measures of the Brčko District Government under which a part of electricity costs for vulnerable customers is subsidized, which includes over 37% of households, and the possibility of other forms of assistance in line with applicable practice in the countries in the region and Europe during the current energy crisis.

Internal Projects

SERC staff actively participates in USAID Energy Policy Activity through the working groups established within this project covering various topics such as cyber security, network codes, energy efficiency, DSO unbundling, virtual power plants, and public outreach. Launched in September 2019, USAID's Energy Policy Activity is helping BIH coordinate, manage, and improve transparency in the gas and electricity sectors while providing targeted technical assistance to improve and simplify the energy policy environment and legal framework.

Furthermore, SERC representatives participate in the implementation of the regional World Bank project Supporting energy transition in coal regions and a project of the German Agency for International Cooperation (GIZ) titled Decarbonization of the energy sector in Bosnia and Herzegovina.

In addition, SERC staff are active in a number of regional projects organized by the United States Agency for International Development (USAID) and the National Asso-ciation of Regulatory Utility Commissioners (NARUC), inter alia:

- Women's Global Development and Prosperity Initiative: Advancing Women Leaders in Energy;
- Digitalization and Cybersecurity;

- Enhancing Market Performance;
- Improving Investment Planning through the Implementation and Enforcement of Quality of Service Standards.

The establishment of the Balkans Energy School (BES):

- On 16 December 2022, at the initiative of the Italian Regulatory Authority for Energy, Networks, and Environment (ARERA), the energy regulatory authorities of Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, and Italy established the Balkans Energy School (BES) in Milan, Italy.
- The Balkans Energy School will promote the harmonization of the regulatory framework at the regional level to support the development of the energy market and its effective integration at the EU level. Its activities will be mainly focused on the development of electricity and gas networks, integration, market coupling, and other relevant activities, under the umbrella of energy transition and through an intense activity of capacity building and know-how exchange.



FERK Bosnia and Herzegovina

Recent Developments

According to the Regulatory Commission for Energy in Federation of Bosnia and Herzegovina (FERK) on 27 October 2022, the Government of the Federation of Bosnia and Herzegovina adopted the decision on limiting the increase in electricity supply prices, which limits the increase in electricity supply prices for eligible customers to a maximum of 20% compared to the previous year,

and the same applies to contracts with an annual duration or longer.

<u>Developments in Energy Transition</u> <u>process</u>

The New Law on Electricity in FBIH, the Law on Energy and the Regulation of Energy Activities, and the Law on the Use of Renewable Energy Sources and Efficient Cogeneration were submitted to the parliamentary procedure by the Government of the Federation of Bosnia and Herzegovina on 8 December 2022. These laws are still in parliamentary procedure.



Recent Developments

Launch of The Register of Energy Intermediaries

- The Register of Energy Intermediaries launched on 1 July 2022 is the first real record of energy intermediaries; until now, precise figures on the number of intermediaries have been missing. The intermediaries were operating under the Trade Licensing Act based on so-called free trade.
- The transfer to the Energy Act created not only a register but above all the competence of the Energy Regulatory Office (ERO) to supervise the activities of intermediaries. On top of that, Energy had to prepare also for inspections of intermediaries.

Households make record energy savings

According to preliminary data, year-on-year electricity consumption decreased by 3.9%; while the total value of electricity consumption in the Czech Republic was 62.8 TWh in 2021, in 2022 it was 60.4 TWh. The biggest reduction in consumption occurred in October when the

- measured value was 7.6% lower than in the same period in 2021.
- Natural gas (NG) consumption has fallen even more in the past year. And not only year-round but also in every single month - from January to December. Overall, consumption was the lowest in eight years. In 2022 the NG consumption in the Czech Republic was 1 076 mil. m3 while in 2021 the NG consumption was 1 310 mil. m3.

Internal Projects

European energy regulators met in Prague

- On 20 and 21 September, on the occasion of the Czech Presidency of the Council of the European Union, the Energy Regulatory Office invited top representatives of European energy regulators to Prague for a regular meeting of the General Assembly of the Council of European Energy Regulators (CEER) and the Board of Regulators of Agency for Cooperation of Energy Regulators (ACER).
- The main topic of both meetings was the discussion of FU legislative proposals and contingency plans to address high energy prices. In addition to discussing proposals for emergency measures, representatives of the energy regulators also assessed the performance of European gas markets in 2022. The representatives also set up a new Rapid Reporting Team within CEER, where regulators can jointly and in a timely manner assess issues arising from the European energy crisis and high energy prices.

A representative of the Czech regulator became Vice President of CEER

When electing new Vice
 Presidents, the General Assembly

of CEER, elected Ms. Jana Haasová (ERÚ) along with Ms. Alda Ozola (PUC, Latvia) to the CEER Board of Directors. They joined existing Vice Presidents Mr. Koen Locquet (CREG, Belgium), Mr. Wolfgang Urbantschitsch (E-Control, Austria), and Mr. Pedro Verdelho (ERSE, Portugal), who were reelected to another term. The elections were held as the current Board reaches the end of its 2.5year mandate. The newly elected Board's term started on 12 November 2022.

 In this way, the Czech Republic gained a strong mandate in discussions on the future of the common European energy policy on an international platform.

Additionally, ERO contributed to the last publication of the <u>ECA Journal</u> in the article "The Czech Republic's Energy Regulatory Office and the Role of Regulation in Crises" put together by the Chairman of ERO Mr. Stanislav Trávníček.

Significant Energy News

Use it or lose it a principle in the Public Notice on the Gas Market Rules

- The amendment to the Public Notice on the Gas Market Rules introduces rules for a new type of storage capacity auctions, in which gas storage capacity taken from traders who do not use their reservations will be auctioned i.e. according to the "use it or lose it" principle.
- The fundamental changes to the Public Notice on the Gas Market Rules also concern the transfer of information between the gas storage operator and the transmission system operator on the capacity that has been released thanks to "use it or lose it". The amendment is thus aimed at enhancing efficiency not only from the point of view of the use

of storage facilities but also from the point of view of the transmission system.

Other changes aimed at reducing the financial security that gas traders have to deposit with the Market Operator. In particular, the Public Notice shortens the deadline for a quick change of supplier (from 3 to 1 day), partly in response to the negative experience of last year and the collapse of some suppliers. The shorter deadline will reduce the risk of damage to the Market Operator and thus reduce the value of the necessary hedging.

<u>Developments in Energy Transition</u> <u>process</u>

Concept of linking the new electricity market design with price control principles

The concept of linking the new market design in the electricity sector with the requirements for changes in price control principles and tariffs is the result of a project aimed at evaluating the current tariff system in the electricity sector. defining the basic principles and objectives of innovation in the area of the tariff system and specifying measures that will lead to the fulfillment of the set objectives.

Among the main objectives of the innovation of the price control principles are:

- a price for customers that is appropriate to the costs and benefits it generates and brings to the system;
- the long-term predictability of the tariff system and its orientation towards the new energy sector;
- higher utilization and efficiency of the operation and development of the electricity system.

The above objectives of system innovation will be reflected in

progressively introduced measures, including:

- enabling electricity sharing within residential buildings from 2023 implemented in the amendment to the Decree on Electricity Market Rules;
- the streamlining of regulated distribution tariff settings at medium and high voltage levels planned from 2024;
- verification of new distribution tariffs at the low voltage level planned from 2025.



CRE France

Recent Developments

Reversal of the Franco-German gas interconnection and additional FSRU

The existing interconnection point between France and Germany located in Obergailbach had been designed to operate only from Germany to France. In October 2022, in order to enable the French TSO to sell up to 100 GWh of exit capacity per day, CRE published two deliberations setting commercialization modalities as well as the tariff for the physical gas exit capacity. France's maritime coastline and its four LNG terminals have provided a prime entry point for liquefied natural gas (LNG) in Europe and have been used to channel part of these deliveries to neighboring countries. As of September 2023, an additional LNG import employing a Floating Storage and Regasification Unit (FSRU) will be operating.

Ensuring trust and fostering reasonable supply offers during Autumn 2022

For small and medium-sized businesses and for local authorities to be able to choose an electricity supply offer without doubting its merits, CRE services published from October 2022 to December 2022 a weekly electricity pricing table featuring the

price ranges of the offers according to their consumption profile.

Adjustment of the method for calculating regulated electricity supply tariffs

The very high and volatile wholesale electricity prices have prompted the need to fine-tune the method established in 2016. Changes aim at better reflecting the costs of supplying electricity for an efficient supplier and at easing consumption peaks in the coming winters bv providing consumers with a greater incentive to modulate their consumption in line with the needs of the electricity system. In its decision of January 2023, CRE insisted on securing the stability of the tariffs as they are an important means of protecting households and very small businesses from the volatility of wholesale prices.

Internal Projects

Publication of a roadmap for 2023-2024 following the appointment of a new chairwoman

ln August 2022. Emmanuelle WARGON took over chairing CRE's board. Noticing that the ongoing energy crisis is set to disrupt the ways of functioning of the sector in a lasting manner and that the French Energy Regulatory Commission (CRE), like other actors in the energy sector, has been faced with increased pressure and reinforced solicitations, she initiated a review of the regulators' missions, priorities, and interactions. For the first time, the process involved CRE's management and staff as well as feedback from stakeholders. The resulting roadmap was published in February 2023 and provides a reference framework and general objectives for the actions of CRE's board and departments for the years 2023 and 2024. It is articulated around 4 axes, the last one being internal:

 Using network regulation and the transformation of the energy

- system as a lever to accelerate the ecological transition.
- 2. Ensuring the continuous smooth operation of the wholesale and retail markets and contributing to their structural reforms.
- Conveying our economic and regulatory expertise and our values at the national, European, and international levels.
- Making CRE a top employer, modernizing and securing our processes.

Significant Energy News

Renationalization of Electricité de France (EDF)

The French State had remained the majority shareholder (84%) of the French utility that used to hold the monopoly on the electricity sector. In July 2022, the Government announced the complete renationalization of the group to ease financing new nuclear capacities. In January 2023, the State reached the threshold of 90% of the capital and voting rights. Due to the minority shareholders' legal appeal, operation is currently suspended.

Laws accelerate the commissioning of renewable and nuclear power plants

In early March 2023, the law to remove the administrative obstacles slowing down renewable projects, improve the planning of onshore and offshore installations, and speed up procedures, particularly regarding connections, has been published. This law gives Energy Regulatory Commission (CRE) new missions and responsibilities to further ensure the technical and economic relevance of grid planning and investments. The Parliament is now discussing the mirroring law that aims at easing the permitting of new nuclear power plants near existing nuclear plants. This second law will also allow for a greater part of nuclear in the electricity mix (until now, there was an objective to reduce the share of

nuclear to 50% of the French electricity mix by 2035).

<u>Developments in Energy Transition</u> <u>process</u>

Confirmation of the electricity interconnection projects with Ireland and Spain despite higher costs

The soaring price of materials substantially increased the cost of both projects. Still, their expected benefits have also been significantly rising due to changes in the energy mix and electricity consumption forecasts in European countries. In November 2022, CRE and the Irish regulatory authority (CRU) confirmed the cost-sharing agreement they had reached in 2019 for the "Celtic" project. In March 2023, CRE and the Spanish regulatory authority (CNMC) agreed on a revised cost allocation for the "Bay of Biscay" project. The commissioning of these two projects is expected in 2027 and 2028 respectively.



Recent Developments

According to the Georgian National Energy and Water Supply Regulatory Commission (GNERC) Georgia becomes the first Contracting Party to start using an electronic registry for guarantees of origin for renewables developed under the Energy Community project.

Internal Projects

Elections for the Chairman of the Georgian National Energy and Water Supply Regulatory Commission (GNERC) were held in GNERC. In accordance with the Law of Georgia on Energy and Water Supply, the GNERC members elected Davit Narmania as the Chairman of the GNERC for the second term by a secret vote. The voting results were approved at a public hearing.

The EU-funded Twinning Light project on assisting GNERC in Creating **Enabling** Environment for Digitalization and Developing Digitalization Strategy was implemented at GNERC. The leading objective of this 8-month project with an overall contribution of € 250 000 from the European Union was to assist the GNERC in the process of developing of digitalization strategy with due regard to the needs and challenges encountered by the GNERC. The Project was implemented by Gestore Servizi Energetici (GSE).

Upon the initiative of GNERC and with support of the EU-funded project on Green Energy Regulation in Georgia implemented at GNERC, the Georgian Energy Club was launched, that aims, on one hand, to support the of implementation the energy investment-related projects in Georgia and, on the other, to further strengthen the partnership between European and Georgian energy sectors.

The Memorandum of Cooperation was concluded among the GNERC, Elizbar Eristavi Energy Training Center, and the United Nations Children's Fund in Georgia. The tripartite Memorandum of Cooperation envisages informing children on energy and water supply, and environmental and climate challenges.

Within the framework of Advancing Women Leaders in Energy (AWLE) Women in Energy Internship Program and with support from the United States Agency for International Development (USAID) Bureau for Europe and Eurasia, the National Association of Regulatory Utility Commissions (NARUC) launched a paid internship program for girls at GNERC. The main objective of this project is to foster interest among young women in the energy sector implement gender-sensitive and policies.

Significant Energy News

Leading energy organizations in Europe and other countries supported the holding of the World Forum on Energy Regulation (WFER) in Georgia in 2026. Which will be hosted by GNERC.

Georgia, Azerbaijan, Hungary, and Romania signed the agreement for the development of the 1,100-kilometerlong Black Sea strategic submarine electricity cable aimed at transporting energy from Azerbaijan to the European Union through Georgia.

GNERC Resolution N3 of January 31, 2023, amended GNERC Resolution N10 of 2014 on the approval of the "Network Rules". According to the amendment, the person wishing to connect to the transmission network was given the opportunity to carry out the connection works himself, if he does not agree with the terms set by the transmission system operator for connection to the network.

According to GNERC Resolution N73 December 22. 2022. amendment was made to the "Rules of the Retail Electricity Market" approved by GNERC Resolution N47 of August 13, 2020. According to the amendment, independent suppliers non-household consumers, except for small enterprises, were given the opportunity to agree on the terms of payment for consumed electricity. In addition, the conditions for the supplier to reflect the deposit in the receipt have been redefined.

<u>Developments in Energy Transition</u> <u>process</u>

- GNERC has approved a new rule for connection to the electricity distribution network for small power plants up to 15 megawatts;
- The new regulation provides a non-discriminatory approach to investors and also allows investors to predetermine the costs and terms of connection to the distribution network;

- Transparent and fair principles of connection of small capacity power plants to the distribution network, conditions of connection to the network, and relevant fees were determined;
- According to the new regulation, the operator of the distribution system is obliged to ensure the readiness of the distribution network for the connection of a small power plant within the period stipulated by the contract (no more than 18 months), the information says.

ME

MEKH Hungary

Recent Developments

Auctions for guarantees of origin (GO)

The first auction of GOs was carried out in June 2022. In Hungary, Hungarian Energy and **Public** Utility Regulatory (MEKH) **Authority** issues electricity GOs and the TSO (MAVIR) is obliged to sell these via an auction platform operated by electricity exchange HUPX. In September 2022 other market participants became eligible to sell GOs via monthly auctions. The number of GOs sold through auctions in 2022 amounted to almost 2.9 TWh (MAVIR) and 107 GWh (other market participants), respectively.

Enhanced transparency of energy efficiency

- Hungary introduced an energy efficiency obligation scheme (EEOS) in 2021 in order to reach end-use energy-saving targets in line with the respective EU acquis.
- Since July 2022 MEKH, as the managing body of the scheme, operates an online database of all authenticated energy savings measures, which are reported under the scheme by obliged

companies. The scheme has considerably overperformed in the 2021-2022 period.

Internal Projects

Notable international activity of MEKH since May 2022:

- Discussion with NEURC of Ukraine on the alignment of the regulatory authority procedures required for the allocation of transmission capacity rights;
- Financial support to ERRA for implementing the Energy Transition Project;
- An agreement signed with the Council of European Energy Regulators (CEER) on MEKH's participation in the EU4Energy Project;
- MoU with ANRE of Romania to address the energy crisis and to facilitate the security of supply;
- Hosting the delegation of ERC of Thailand and representatives of Thailand's energy sector;
- Study visit of Regulatory Office for Network Industries (ÚRSO) of Slovakia in Budapest under a TAIEX programme.

Significant Energy News

The new management of MEKH

- In January 2023, the President of the Republic of Hungary appointed Ms. Edit Juhász Dr. as the new President of MEKH for seven years. In February 2023, President Juhász appointed Mr. Gábor Králik as Vice President for Energy for seven years.
- Further information on MEKH's management is available here:
 http://www.mekh.hu/manageme
 nt.

<u>Developments in Energy Transition</u> <u>process</u>

Regulatory sandbox and electricity storage

- In December 2022, the general legislative framework for operating regulatory sandbox projects was enacted in the Gas Law (following the adoption of rules on electricity earlier in 2022).
- In June, MEKH launched a public consultation on innovation, expecting to receive innovative ideas proposed for regulatory sandbox testing.
- Since December 2022, both the TSO and DSOs are enabled by law to establish and operate storage facilities of electricity in line with the applicable rules laid down in the "Clean Energy for All Europeans" legislative package (CEP) of the EU.
- In March 2023, the Ministry of Energy announced that a new support program is planned to encourage the establishment and operation of grid-scale batteries. The program plans to provide non-refundable investment aid and income support, while it is expected that the storage facilities are operated for at least ten years. ■

State Department, Kyrgyz Republic

Recent Developments

Department of the Fuel and Energy Complex Regulation under the Ministry of Energy of the Kyrgyz Republic has informed that in order to improve the procedure for the formation of wholesale and retail electricity tariffs, the Department is developing a new Methodology for Determining Electricity Tariffs, as a result of which a new reporting form will be developed on indicators of financial and economic activities of energy companies of the Kyrgyz Republic.

Internal Projects

Since May 2022, employees of the Department have participated in seminars on the following topics:

- "Renewable energy sources in Central Asia: possible small-scale and medium-scale solutions";
- "Legal and Regulatory Framework for Renewable Energy Investment";
- "New Renewable Energy and Solar Energy".

The USAID Energy in Central Asia project conducted a series of seminars and webinars on licensing issues in the fuel and energy sector.

In addition, employees of the Department took part in the Central Asian Forum on Clean Energy, as well as in introductory meetings on the regulation of the fuel and energy complex and district heating.

Significant Energy News

In accordance with the order of the Cabinet of Ministers of the Kyrgyz Republic dated February 8, 2022, No. 51-r, the reorganization of energy companies with a state share of participation by joining them was carried out.

The reorganization was carried out in two key areas:

- merger of distribution energy companies (OJSC "Severelectro", OJSC "Vostokelectro", OJSC "Oshelectro" and OJSC "Jalalabatelectro") OJSC with "National Electric Grid of Kyrgyzstan";
- merger of energy companies (OJSC "Electric Stations" and OJSC "Bishkekteploset").

In addition, the Ministry of Energy of the Kyrgyz Republic has developed a new Law of the Kyrgyz Republic "On Renewable Energy Sources" dated June 30, 2022, No. 49, in order to develop and use renewable energy sources, diversify energy resources, ensure energy security of the Kyrgyz Republic, protect the environment and sustainable development of the economy and provide tariff preferences that apply to new facilities using renewable energy sources.

Currently, a draft law has been developed and submitted for public discussion to amend the Resolution of the Cabinet of Ministers of the Kyrgyz Republic "On Approval of the Medium-Term Tariff Policy of the Kyrgyz Republic for Electric Energy for 2021-2025", which provides for a change in tariffs for end consumers.



Recent Developments

New tariffs for the captive consumers of gas

In the 1st half of 2023 (till May) gas tariffs for the captive consumers of gas are 1.7% to 3,2% higher, depending on the amount of consumption.

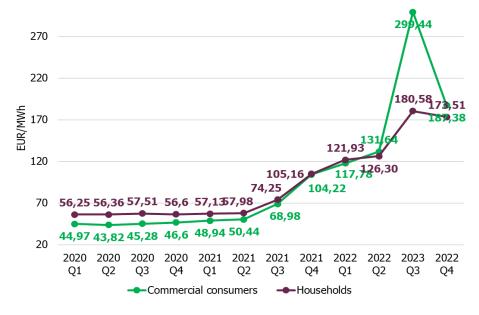
According to the amendments to the Energy Law, the natural gas market will be fully open to households from May 1 of this year, which means that the status of captive consumers, which allowed households to purchase natural gas at a regulated price, will no longer exist.

Energy price developments

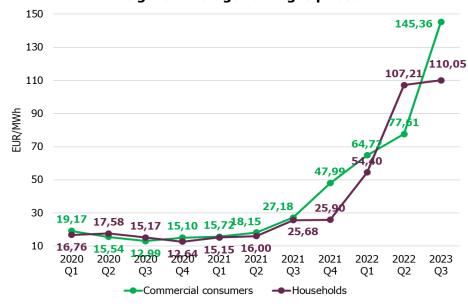
According to data gathered by the Public Utilities Commission (PUC):

- the weighted average retail electricity price without taxes and system services in 2022 Q4 was 187.38 EUR/MWh for commercial consumers (+80% compared to 2021 Q4) and 173,51 EUR/MWh for households (+65% compared to 2021 Q4);
- the weighted average retail gas price without taxes and system services in 2022 Q4 was 145,36

Weighted average retail electricity prices







The visit to Incukalns underground gas storage, March 2023



EUR/MWh for commercial consumers (+202,89% compared to 2021 Q4) and 110,05 EUR/MWh for households (+324,91% compared to 2021 Q4).

Internal Projects

The PUC participated in various ERRA and CEER training courses and internal activities such as media training to be prepared for interviews related to an energy crisis, the campaign on "How to choose the most appropriate electricity supplier for your consumption habits", together with Consumer Rights Protection Centre, or the site visit to Incukalns UGS.

Before the heating season 2022/2023, **PUC** communicated changes in the heating tariffs. including the impact of state aid, and the efficient use of heating to consumers. They also could compare tariffs in different municipalities at the beginning of the season through an interactive infographic and see the monthly tariff over the season.

In May 2022, PUC organized a workshop for traders to discuss and inform them about the situation in the energy sector, amendments to the regulation, and market challenges to ensure the security of supply.

Significant Energy News

In line with amendments to the Energy Law, the natural gas system operators must develop system development plans, and the regulator to approve them. Therefore, on 1st February, 2023, the PUC approved the Rules on Regulation of the Natural Gas Development Plan. The plan will include high-level information about the development of the natural gas system over the next 10 years (about the existing infrastructure, its technical characteristics, an assessment of system safety, and trends in the development of the natural gas market at the national and regional level, the impact on tariffs, a

The workshop with energy traders, 20 May 2022



detailed description of capital investments and other).

On 11 August 2022, amendments to the Electricity Market Law came into force determining the system capacity reservation fee to electricity producers who plan to connect a new production facility with a capacity > 50 kW to the transmission or distribution system. Accordingly, the PUC approved the amendments to the connection rules, according to which the system capacity reservation fee is calculated, and the procedure on how this fee will be used to cover the connection fee. On 12 January 2023, the capacity reservation fee in the amount of 21.63 EUR/kW was approved for a 5-year period. The capacity reservation fee will also apply to producers who have already reserved the system capacity but have not yet concluded a system service contract.

To reduce the negative impact of the electricity price increase on electricity users, on 6 September 2022, the Cabinet of Ministers approved the average rate of the mandatory purchase component of 0 EUR/MWh from 1 September 2023 to 31 December 2025. The costs of the public trader will be covered by the state budget.

<u>Developments in Energy Transition</u> process

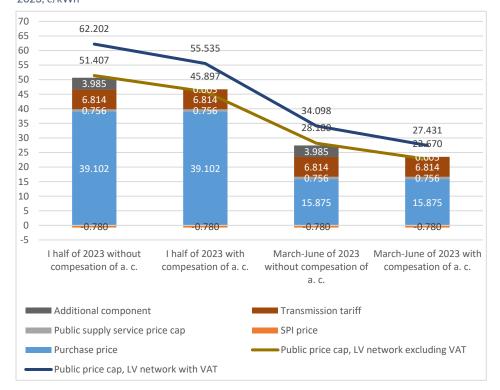
Amendments to the Electricity Market Law (August 2022) improve the net electricity accounting and settlement system, as well as determine the principles for the operation of electricity energy communities and active users strengthening the role of consumers.



NERC Lithuania

Recent Developments

Public electricity price caps for MV and LV network consumers in I half of 2023 and March-June 2023, c/kWh



Electricity tariffs

National Energy Regulatory Council (NERC) has approved the electricity tariffs of the public supplier UAB "Ignitis" for household consumers, which have not chosen independent electricity supplier for the I half of 2023. The change in the tariffs was mainly due to the cost of the purchase of electricity, prices of distribution, transmission, and public interest services (SPI), and price caps for the public supply service. In addition, NERC, having assessed the trends in the electricity market, in February 2023 recalculated the price of electricity purchased by the public supplier and the prices of public electricity supply household to consumers applicable in March-June 2023.

NERC approved tariffs of natural gas for household consumers for 1st half of 2023

NERC has set an additional component to the price of the natural gas distribution service for household customers, to be included in the tariff for household customers, to compensate for differences between

Natural gas tariffs for household customers (VAT included) in 2023

Group of household customers	Part of the tariff	2022 2 nd half		Variation,
For users of 1st subset	fixed part of the tariff, EUR/mo.	0.56	0.56	0
Q≤300 m³	variable part of the tariff, EUR/m³	1.02	1.40	37.25
For users of 2 nd	fixed part of the tariff, EUR/mo.	3.99	3.99	0
subset 300 <q≤20 m³<="" th="" thous.=""><td>variable part of the tariff, EUR/m³</td><td>0.77</td><td>0.92</td><td>19.48</td></q≤20>	variable part of the tariff, EUR/m ³	0.77	0.92	19.48
For users of 3 rd	fixed part of the tariff, EUR/mo.	3.99	3.99	0
subset Q>20 thous. m ³	variable part of the tariff, EUR/m³	0.75	0.88	17.33

the forecast and actual price of natural gas (product) and the NERC's estimated and forecasted natural gas (product) price, for a period during which apply the natural gas rates established in 2022, applicable from 1 January 2023 to 1 July 2023 - 44.632 Eur/MWh (0.471 Eur/m3) (excluding VAT). Partial compensation for the price of natural gas (excluding VAT) determined by the Government's resolution, which reduces natural gas tariffs for domestic consumers: the amount of additional component compensation - EUR 0.471/m3 (excluding VAT) and the amount of compensation for the part of the natural gas supply price related to the costs of natural gas acquisition EUR 0.818/m3 (VAT excluded), was estimated setting up tariffs.

NERC coordinated the investment project of UAB "Energy Cells" "Installation of Electricity Storage Facilities (200 MW)", with a total value of EUR 100.7 million. 83.3% of the project value will be financed from EU support, and the rest (16.7%) the company's own and/or borrowed funds. After the implementation of the project, the threat of a total accident due to unforeseen or uncoordinated actions/inaction of third parties will be reduced; reliable operation of the Lithuanian electricity system in the isolated mode will be ensured and in the longer term the project will contribute to the integration of renewable energy resources.

Postponement of Finland, Estonia, and Latvia (FinEstLat) and Lithuanian gas market merge. On 12 October

2022, the chairs of FinBalt NRAs agreed to postpone the merger of FinEstLat and the Lithuanian gas market, determining that a merger could happen no sooner than October 2024. This decision has been taken as the changes in the geopolitical situation in 2022 have resulted in significant changes in fundamentals of the region's gas market that have not encountered when developing the ITC mechanism.

As part of the obligation set in the Regulation on the Internal Market for Electricity (Referring to Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity) NERC in cooperation with the Latvian and Estonian NRAs have prepared a joint report on the availability of Latvian, Lithuanian and Estonian capacities for the day-ahead **electricity market.** The report includes an analysis of the volumes of transmission capacities of connections used for the market and concludes that the number of transmission capacities of connections available for the market meets the 70% criterion. In the amount of 100% in both directions, the transmission capacity Latvian-Lithuanian interstate connections is available to the market participants of the Baltic countries in 99% of the hours of the year.

NERC, following the FCA GL (Referring to Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation), together

with the Swedish Energy Markets Inspectorate, carried out a public consultation on the "Report on the hedging opportunities of the electricity futures market in the Lithuanian bidding zone". Following the evaluation of the hedging opportunities, Swedish and Lithuanian NRAs may take a decision to request TSOs to issue long-term transmission rights or other long-term cross-zonal hedging products as foreseen by Art. 30 of the FCA GL.

On August 17th the electricity price in the Baltic States rose to €4,000/MWh for one hour. Baltic NRAs opposed to the requirement that the harmonized maximum clearing price for Single Day-Ahead Coupling (SDAC) shall be increased by 1,000 EUR/MWh and reach 5,000 EUR/MWh following this price peak as the increase was not necessary and justified for the European electricity market to function properly and was even inappropriate in this period of energy crisis. Following the price peaks in France and the Baltics, ACER has approved changes in the HMMCP methodology for SDAC and the HMMCP methodology for Single Intraday Coupling (SIDC) aiming for a more gradual increase of the day ahead and intraday market price limits.

Internal Projects

On September 26-27, 2022, the director of ACER, Mr. Christian Zinglersen visited Lithuania. During the visit. meetings with the representatives of the NERC, the Office of the President of the Republic of Lithuania, and the Ministry of Energy took place, as well as a visit to one of the most important national energy security facilities - Klaipėda liquefied natural gas terminal - and a meeting with representatives of AB Klaipėdos nafta. During meetings, the energy market developments in the Baltic region, including the security of supply, as well as further cooperation of ACER with the NRAs of Lithuania,

Latvia, and Estonia were discussed with the director of ACER.

Significant Energy News

Following the decision of the electricity exchange operator Nord Pool, made by considering the settlement risk between the exchange and the Russian state electricity company "Inter RAO" group of companies, to stop the trading of Russian electricity "Inter RAO" group of companies, from the end of May 2022 Russian electricity is no longer imported to Lithuania.

In November 2022 with the adoption of the amendment of the Law on Drinking Water VlaguZ and Wastewater Management of the Republic of Lithuania aimed to ensure the safety and quality of water and wastewater services, as well as to promote efficiency and investment in the sector water and wastewater, tariffs previously assessed by the NERC and then approved by municipalities now are exclusively set by the NERC. Additionally, the NERC was granted the competency of setting the guarantee suppliers. One of the main changes in the legislation involves the introduction of an extraordinary review mechanism that operators can request when the purchase price of energy changes (increases or decreases) by more than 30% compared to the price used to calculate the current water and tariff. Between wastewater November and December. 30 companies were subject to a price revision due to an increase of more than 30% in electricity and gas tariffs.

On 30 December 2022, NERC approved the Methodology for Determining the Market Revenue and the Surplus Revenue Calculation, which regulates the procedure for determining the market revenue and calculating the surplus revenue, contributing to the goals of reducing prices for end users set in the Regulation 2022/1854 (Referring to

Council Regulation (EU) 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices). The inframarginal generators are subject to the revenue cap of 180 €/MWh from 1 December 2022 to 30 June 2023. On 23 February 2023, NERC revised the Methodology based on the provisions of Regulation 2022/1854 and the practicalities of the application of the Methodology.

NERC, following a request from UAB "Perlas Energija" – one of the largest independent electricity suppliers, and having assessed the uncontrollable changes in electricity prices and the risk of insolvency of "Perlas Energija" caused by this, has suspended the permit to carry out independent electricity supply activities from 1 September 2022.

<u>Developments in Energy Transition</u> process

NERC together with three Lithuanian ministries won the TSI 2023 Flagship technical support project on "Accelerating Permitting for Renewable Energy". The project aims to reduce the administrative burden in permitting process and contribute to the improvement of the investment climate and the implementation of RES development goals.

On December 29, 2022, NERC approved the Description of the Procedure for Trading Flexibility Services prepared by AB "Energijos skirstymo operatorius" (hereinafter -ESO), according to which the ESO shall be entitled to purchase and use flexibility services from January 1, 2023. The Description will for the first time regulate the procedure for the ESO's purchase of flexibility services in implementing the requirements of the Clean Energy Package of the European Union. The flexibility of the electric energy system makes it possible to adjust the volume of production electricity and consumption in response to expected unforeseen external factors,

including changes in the demand and supply of electricity and price changes in the electricity market, with the aim of uninterrupted and efficient provision of services in the electric energy system.



ANRE Moldova

Recent Developments

Regulation on the measurement of natural gas for commercial purposes

According to National Agency for Regulation (ANRE), adopted regulation establishes the conditions under which commercial measurement of natural gas is carried out. The regulation puts forth rules regarding the definition of commercial measurement points, the way to group them by categories, minimum technical requirements for various categories of measuring equipment, and rules regarding the measurement of volumes and flow rates of produced and/or supplied natural gas, including in the context of cross-border exchanges.

It also sets requirements for the collection and presentation of data by system operators concerning measuring equipment and data obtained from meter readings for billing purposes. Stricter principles are set for record-keeping, which are expected to increase transparency.

A new requirement promoted by the regulation concerns the conversion of billed quantities of natural gas from volume into energy units, as is currently the practice in the European natural gas markets. Thus, the natural gas suppliers will be obliged to inform final consumers through monthly invoices about natural gas consumption expressed in cubic meters, the value of higher calorific power used for billing, as well as the total amount of energy consumed.

Amendments to the Regulation on the connection to the natural gas networks and the provision of natural gas transmission and distribution services

According to the changes, the system users will have the obligation to conclude contracts for the provision of natural gas distribution services with DSO. Similarly, the mandatory clauses of the contract for the provision of natural gas distribution services have been modified to specify that natural gas distribution takes place from the entry into the natural gas distribution network (commercial delivery/receipt points) up to the place of consumption designated by the supplier or at commercial measurement points indicated by the supplier.

The amendment of the Regulation on a connection will further clarify the contractual obligations between the DSOs and the system users seeking to use their services.

Amendments to the Methodology for calculating, approving, and applying regulated prices for the supply of natural gas

The amendments to the Methodology were necessary to ensure prompt intervention for the adjustment of regulated prices in response to the quickly changing market conditions in the second half of 2022.

Given the natural gas supply difficulties, the Agency needed to intervene on behalf of the suppliers to help them meet their payment obligations in the volatile and quickly changing market conditions. Due to sharp upward trend (unprecedented situation in the natural gas market), natural gas suppliers who purchase natural gas from external suppliers faced a severe cash deficit, a fact that could have led to their inability to pay and halt the supply of natural gas to household consumers.

The amendments ensured that natural gas supply prices could be adjusted in a timely manner and cover all the minimum actual costs necessary for natural gas companies to carry out their activities on the natural gas market.

The methodology for calculating, approving, and applying the regulated tariffs for the natural gas distribution service

The amendments made to the methodology aimed to further establish objective, transparent, and unified rules and criteria for the determination and application of regulated costs and tariffs for the natural gas distribution service, by also incorporating a new approach for calculating technological consumption and natural gas losses in the distribution networks based on historical performance. The amendments ensure that justified expenses based on performance, objective criteria, and a reasonable rate of return are included in regulated tariffs.

Approval of interim balancing measures for Moldova's designated national Balancing Entity

The Republic of Moldova has made a significant step towards harmonizing its natural gas balancing rules with the EU network code on gas balancing of transmission networks. The National Agency for Energy Regulation has approved а report on the implementation of balancing measures by Moldovatransgaz LLC, the designated Balancing Entity for the Moldovan gas market. The report was submitted after a consultation process with stakeholders from neighboring countries Romania and Ukraine. that both share interconnections with Moldova. The report reflects the specific conditions of the Moldovan gas market, which is still considered non-competitive and dependent on a single supplier. The report also outlines the challenges and opportunities for improving the balancing regime and enhancing cross-border cooperation in the region.



Recent Developments

Energy price hikes continued to dominate the energy sector developments in 2022. Due to these circumstances, Energy and Water Services Regulatory Commission (ERC) had to set tariffs and prices on regulated electricity activities twice, in June and December 2022. Currently, there are in place ERC decisions from December 2022, by which the average electricity price decreased by 4.09%, but on the other hand VAT for electricity supply to households increased from 5 to 10%. To keep the price for households and small consumers at an acceptable level, there was a need for financial support by the Government of North Macedonia which subsidized stateowned ESM JSC Skopje for purchases of the needed electricity from the free market and additional purchases of coal and fuel oil. In the context of the energy crisis, declared by the Government on the 30th of April 2022 and extended by the Parliament until the 30th of April 2023, there were several electricity suppliers which stopped their commercial operations, but on the other hand, there are new entrants on the electricity market during 2022 which aim to gain better prospects from the recent electricity market developments.

On October 31st, 2022, the operators of both natural gas transmission systems, GA-MA Skopje and Bulgartransgaz, signed the Agreement on Intersystem connection for the supply and transmission of natural gas in the Interconnection point

Kyustendil-Zidilovo. This Agreement provides increased security of natural gas supply, i.e., it provides an increase of the current capacity of the natural gas transmission line with Bulgaria, as well as a possibility for North Macedonia to be supplied with gas from multiple sources through Bulgaria.

In July 2022 a new decision was adopted for district heating prices, with which the price for households increased by 14%, and this increase was not covered by Government subsidies.

Additionally, at the end of 2022, ERC adopted new regulated natural gas transmission and distribution tariffs for 2023. The average natural gas transmission tariff for 2023 increased by 13,05% compared to 2022, while the average distribution tariffs were increased by 21,77%.

Significant Energy News

2022 was marked by significant investments in RES. In 2022 in total new 144,4 MW generation capacity was installed, out of which 99,3 MW in PV, 36 MW in Wind, 7,2 MW in Small Hydropower Plants, and 2 MW in Biogas Power Plants. Regarding electricity market developments, in 2022 there were ongoing preparatory activities for the establishment of the Day-Ahead electricity market by procurement of a trading platform and settlement and clearing platform. The electricity market operator, which acts as an organized electricity market operator, prepared and submitted for approval to ERC organized electricity market rules. Electricity exchange is set to go live in May 2023.



State-owned natural gas TSO GA-MA JSC Skopje and the state-owned National Energy Resources Skopje, on December 14th, 2022, adopted Decisions for confirming the Treaty on Status Change - merging both joint-stock companies into one state-owned joint-stock company. Based on these Decisions, as well as on the Decision from the Central Registry of the Republic of North Macedonia, based on which status change was made, on December 30th, 2022, both companies were shut down and a new state-owned NOMAGAS JSC Skopje was formed with core energy activity - natural gas transmission.



ERO Poland

Recent Developments

In 2022, the President of Energy Regulatory Office (ERO) decided on procedures for interconnection points on the Polish-German and Polish-Ukrainian borders. With this decision, the President of ERO obliged the TSO, at least to apply contractual restrictions management procedures in terms of the limited ability of system users to change their initial nomination, who are not using their contracted capacity 100%. The decision also marks the end of the mechanism for providing day-ahead firm capacity on a "use it or lose it" basis.

This document sets the tasks for national regulators in terms of response in situations when contractual restrictions at interconnection points will appear.

The President of ERO has established the next operatorship agreement for the Yamal gas pipeline. The agreement established by this decision entered into force on January 1, 2023 and will remain in effect until December 6, 2068. The President of **ERO** has established the

agreement which entrusts the operatorship on the Yamal pipeline located on Polish territory and owned by SGT EuRoPol GAZ, to the gas transmission system operator - OGP GAZ-SYSTEM S.A.

The decision of 29 August 2022 was issued because eight months before the term of the end of the actual agreement the parties has not entered into a new agreement.

Internal Projects

25 years of the Energy Regulatory Office

- April marked the 25th anniversary of passing the Energy Law, which instituted the President of Energy Regulatory Office as a governmental administration authority.
- On this occasion the publication entitled Towards Secure and Clean Energy: How to Redesign the Market? 25 Years of Energy Market Regulation in Poland was issued, dedicated especially to the energy sector. It is a compendium of knowledge on a quarter of a century of the sector's regulation and challenges the Polish energy market has been facing.

As part of the many ERO projects underway a series of meetings with local media called "ToURE de OT URE" were organized. The purpose of the meetings was to expose the regional and local dimensions of ERO's activities and to discuss current and important topics of national and regional interest.

Where does electricity come from?

- It was another anniversary project, realized on the occasion of Children's Day.
- This initiative aimed to activate children and young people and raise consumer awareness.
 Children had to answer the question of where electricity comes from, while young people

painted a lot of posters related to this topic and they could win prizes in a contest.

Significant Energy News

On 8 June 2022, the mechanism integrating day-ahead markets in the Core capacity calculation region was put into operation (Flow-Based Market Coupling). This successful golive was the result of the close cooperation between all involved NEMOs, TSOs, and regulatory authorities.

The put-in-place mechanism was intended to enhance the operational security of electricity grids, especially for cross-border trade. At the same time enabled control and coordination of transit flows and capacity calculations for the entire Core region, not just individual zones, and was an important step in the market coupling process.

The project was carried out by transmission system operators and Nominated Electricity Market Operators (NEMOs) of the Core CCR. The Core region regulators and ACER were also involved in the implementation process. Flow-Based Market Coupling integrated dayahead markets in the Core capacity calculation region.

<u>Developments in Energy Transition</u> <u>process</u>

On 6 October 2021, the President of ERO inaugurated the Project Team to work out a Common Agreement between the Sectoral Regulator and the Distribution Sector known as the "Charter for the **Efficient** Transformation of Poland's Power Networks". Distribution November 2022, a Sector Agreement was signed between the regulator and 5 Distribution System Operators -Polish Electricity Distribution Grids -Effective Transformation Charter, which is an open initiative - any DSO, regardless of the scale of its distribution operations, can join it at any time. The signatories of the Charter have agreed that their intention is to incorporate the provisions of the document already in the distribution tariffs for 2023, to the maximum possible extent.

The main objective of this collaboration was to implement a transparent and predictable regulatory policy for long-term investments in distribution grids, that be acceptable government, enterprises, and society.

The beneficial effects of this document would be:

- Network development and adaptation to connect new sources, energy storages, EV and to increase the installed capacity of RES.
- Achievement of an approximately 50% share of electricity from RES in the domestic energy mix already in 2030.
- The number of customers connected to the grid is expected to increase by more than 2 million.
- Digitalization and automation of networks and services.
- Smart meters deployment 100% by the end of 2030.

It also identified that investments need at the level of PLN 130 billion by 2030.



AERS Serbia

Recent Developments

July 1, 2022 - During the session held on June 30, 2022, the Council of the Energy Agency of the Republic of Serbia (AERS) adopted amendments to the Methodology for Setting the Electricity Price of Guaranteed Supply. These amendments

- represent compliance with adopted amendments to the Energy Law by the introduction of the term prosumer which specified that this methodology also refers to these customers.
- Nov 10, 2022 In the session held on November 10, 2022, the Council of the Energy Agency of the Republic of Serbia approved rules regulating procedure and method of transmission capacity allocation on the border between bidding zones of the Transmission System Operator of the Republic of Serbia EMS AD and the transmission system operators of North Macedonia (MEPSO). Romania (Transelektrika), (MAVIR) Hungary and Montenegro (CGES) for 2023.
- Dec 22, 2022 During the session held on December 22, 2022, the Council of the Energy Agency of the Republic of Serbia adopted decisions on amendments in Methodologies: for setting electricity guaranteed supply price, for setting electricity distribution use-of-system charge, and for electricity transmission use-of-system charge.
- Dec 29, 2022 In the session held on December 29, 2022, in line with the provisions of the Energy Law harmonized with the third package of European regulations, the Council of the Energy Agency has adopted a Decision on the Adoption of Reports for 2022 on Necessity of Electricity Guaranteed Supply Price Regulation.

Internal Projects

 May 05, 2022 - Energy Community Workshops: Adapted Electricity Regulation, Guidelines, and Network Codes for the Energy Community.

- May 24, 2022 2nd Energy Community Technical Workshop on CEP Electricity Regulation, Guidelines, and Network Codes.
- May 31, 2022 June 02, 2022 CEER Training on Cybersecurity:
 Risk Management and
 Preparedness, Legal and Policy
 Developments.
- June 15, 2022 4th Trilateral ECRB-CEER-MEDREG Workshop.
- June 23, 2022 2nd ACER-ECRB workshop on the implementation of Regulation (EU) 1227/2011-REMIT.
- June 28, 2022 Final Workshop on flexibility options to support decarbonization in the Energy Community.
- October 18, 2022 ECRB-MEDREG Workshops.
- December 07-09, 2022 NARUC Regional Workshops in Vienna.
- February 01, 2023 Workshop "CESEC study on RES and LC gases".
- February 08, 2023 Energy Community Webinar "The new electricity package in the Energy Community".
- February 28, 2023 -USAID/NARUC Webinar on Solar Streamlining.
- March 07, 2023 USAID/NARUC
 Europe & Eurasia Webinar on
 Demand Response.

Significant Energy News

Integrated National Energy and Climate was presented at the meeting of the Working Group for the preparation of the Integrated National Energy and Climate Plan of Serbia for the period until 2030 with a vision until 2050 and following the comments and proposals to be provided by the members of the Working Group,

next steps are public consultations, public discussion, cross-border consultations and consultations with the Secretariat of the Energy Community. Draft Plan stipulates a reduction of greenhouse gas emissions in 2030 compared to 1990 by more than 40%, as well as the participation of RES in the generation of electricity by more than 40%, improvement of energy efficiency. diversification of supply sources, the level investments, total import energy dependence, changes in GDP, electricity supply costs.

<u>Developments in Energy Transition</u> process

July 7, 2022 - Prosumers are a new category of participants in the electricity market which was for the first time introduced in the Republic of Serbia under the Law on the Use of Renewable Energy Sources (RES). By introducing the Law on the Use of RES and amendments to secondary legislation, the procedure for acquiring the prosumer status has significantly simplified. Instead of having to carry out 20 steps that would require more than a year, nowadays it takes about 20 days to connect the solar panels on the grid, with the correct documentation and based on prior properly implemented connection. The Ministry Mining and Energy will continue to work on further narrowing this timeframe by the end of the year, with the goal that the entire procedure can be completed within five days, electronically.



ÚRSO Slovakia

Recent Developments

Flow-Based Market Coupling in the Core Capacity Calculation Region of the EU went live

The successful go-live of Core FB MC in June 2022 is the result of close cooperation between all involved TSOs, NEMOs, and regulatory authorities. Flow-Based Market MC) (FB mechanism Coupling optimizes the day-ahead European electricity market for 13 countries of the Core region: Austria, Belgium, Croatia, the Czech Republic, France, Germany, Hungary, Luxembourg, the Netherlands, Poland, Romania, Slovakia, and Slovenia. The harmonized capacity calculation methodology makes the system more efficient and robust and enhances the European grid's ability to manage fluctuations in the supply renewable energy. The project is another landmark step in the energy transition contributing to sustainable value for the population of 278 million in the region.

Slovakia part of the successful 4th wave of EU Single Intraday Coupling (SIDC) go-live

Slovakia and Greece, as part of the socalled fourth wave of SIDC, officially joined the EU electricity intraday coupling in November 2022. Intraday trading now extends across 25 European countries coupled through SIDC. The successful go-live integrated Slovak borders (SK-CZ, SK-HU, SK-PL) on which cross-border capacity is allocated, in the continuous trading through SIDC. The integration of the additional two countries into SIDC marks another important milestone and completion of the single integrated EU intraday market.

Concept of energy poverty approved by the Slovak Government

In January 2023, the Slovak Government approved the concept of

poverty developed bv energy Regulatory Office for Network Industries (ÚRSO). The main objective was not to propose and implement short-term, immediate measures to mitigate the effects of the ongoing energy crisis on households rather, it is a set of recommendations that are in the medium term expected to secure long-term sustainable affordability of energy and drinking water for socio-economically vulnerable households.

In the concept, ÚRSO proposes to amend the legislation to **implement the following measures**:

- special tariffs for energy and water; optimization of supply and network tariffs;
- offering free payment plans and energy consultancy;
- a cap on the application of additional price-listed services; a ban on disconnection of energy and water supplies during the winter season;
- a ban on door-to-door selling of energy.

ÚRSO proposes to create an interministerial committee that would focus on developing a specific definition of energy poverty, the identification and development of the necessary legislative amendments, and the securing of funds and resources for the implementation of selected measures.

Internal Projects

Based on the Regulation (EU) 2021/240 establishing a technical support instrument; a project "TAIEX TSI" is ongoing from 1.1.2022 to 2023 aiming at structural reform of the regulatory framework of our Office. The main aim of this project is to develop a strategy for a dynamic and adaptive regulatory framework based on the CEP requirements and considering the local specifics of the Slovak energy market. Based on this

framework, the project approach is divided into 3 main project streams:

- (i). EU legislation and regulatory best practices stream focusing on the analysis of the current EU legislation and the examples of its implementation in the EU countries, whose experience could be relevant for the Slovak Republic;
- (ii). National regulatory framework stream with focus on the new national regulatory policy, recommendations for its changes and improvements, sandboxes, including the issues of energy poverty and vulnerable customers and innovations in regulation;
- (iii). Processes and institutional setup stream, which will cover the audit of existing processes and identify the improvements and digitalization options, development of the Impact assessment methodology and the internal training of ÚRSO officials.

Significant Energy News

Amendments to the Energy Act and the Regulatory Act Transposing Clean Energy Package Approved

In June 2022, the Slovak Parliament approved the amendment to the Energy Act, which is part of the transposition of the EU legislative Clean Energy Package. amendment will enable the promotion self-generation selfconsumption of energy, and the establishment and operation of new electricity and gas market participants, such as prosumers, energy communities, electricity storage facilities operators, and aggregators. Another important change is the further strengthening of the position of the consumer in the energy market and support for the digitization of the energy sector.

The changes to the Regulatory Act extend the existing competencies of ÚRSO and strengthen its cooperation

with the regulatory authorities of other EU Member States. The amendment also extends the existing scope of non-tariff regulation, as well as the possibilities of the regulator in resolving and deciding disputes.

A new gas interconnector between Slovakia and Poland was completed and launched into operation

A new gas interconnector between Slovakia and Poland was successfully completed in August 2022 and since November has been in commercial operation. The pipeline is almost 170 km long, with 103 km running through Slovak territory. Via interconnector, up to 13.4 million m3 of gas could flow daily from Poland to Slovakia, and 15.6 million m3 in the opposite direction. For Slovakia and other Central and Eastern European countries, the project implementation means access to LNG terminals in Świnoujście (Poland) and Klaipėda (Lithuania), as well as to the Baltic Pipe pipeline from Norway. The strategic significance of the interconnector for pan-European energy security was confirmed by its repeated inclusion in the list of EU projects of common interest (PCI), meaning also that the project was co-financed by the Connecting Europe Facility.

The new unit of Mochovce NPP completed the power start-up phase of the operation

On 10 February 2023, Slovenské elektrárne, a.s., (SE), Slovakia's largest electricity producer, completed the power start-up phase at 20% of the reactor's rated power at Mochovce nuclear power plant Unit 3. From now on, Mochovce NPP Unit 3 should supply electricity to the grid continuously, with small interruptions due to planned tests. In its full functionality, the new nuclear unit in Mochovce will have an installed capacity of 471 MW at start-up, which will cover approximately 13% of the country's total electricity consumption. In terms of electricity generation, Slovakia should thus

become energy self-sufficient already this year. The lifetime of the new unit is planned to be at least 60 years.



EMRA Türkiye

Recent Developments

- Due to the earthquakes that occurred on 6 February 2023 in the Kahramanmaraş region and affected eleven towns in Türkiye (also where a state of emergency has been declared for three months). **Energy** Market Regulatory Authority (EMRA) has decided to implement some measures for the electricity markets through several Board decisions, including the postponement of generation, distribution, or supply licensee' administrative. periodic financial liabilities, the extension application processes for unlicensed generation facilities, and receiving no security deposit or cut-off fee during the state of retail emergency in sales agreement applications from earthquake victims.
- The amendment to the Electricity Market Law in July 2022, and the corresponding changes in secondary legislation in November 2022, gave investors the right to apply for the construction of electricity storage units integrated with wind or solar power plants without having to participate in the capacity allocation auction or conduct wind or solar measurement. This mechanism will help to improve system flexibility and provide a more stable electricity generation system by controlling intermittent nature of wind or solar resources. **EMRA** has received applications (currently exceeding 200 GW) for prelicenses or license amendments.
- A new market operation known "aggregation" became operational in December 2022 as a result of an amendment to the Electricity Market Law. Following the completion of secondary legislation pertaining to this market operation, aggregators will conduct aggregation operations by receiving either an aggregation license or a supply license. Aggregation activity is a method used by system operators for system security; as a result of this activity, electricity consumers' costs will be reduced, and the integration of small-scale renewable energy plants into the system will be increased. The "aggregator" company will create a portfolio of small producers, and through this portfolio, consumption of the companies in the portfolio will be reduced instead of increasing production during the peak hours, and the income from this transaction will be shared with the companies in the portfolio. More consumers will be included in the system as a result of the aggregation activity, the system's flexibility will be increased, demand-side participation will be achieved, and significant benefits will provided for maintaining the supply-demand balance.
- In order for people to meet their own electricity consumption from renewable energy, the relevant legislation (the By-Law Unlicensed Electricity Generation) has been simplified, increasing investment opportunities facilitating application processes. Currently, the installed power of generation the unlicensed facilities has reached 8.9 GW, and the share of these in the total installed power reached 8.5% by the end of February 2023. Following the amendments in the legislation, investments

- unlicensed generation facilities are expected to rise rapidly.
- In the second half of 2022, the distribution tariffs of the natural gas distribution operators for the period of 2022-2026 and connection fees valid for 2023 were determined by EMRA as well as the period of 2023-2025 natural gas transmission tariffs.
- In February and March 2023, four board decisions concerning the natural gas markets were issued as a part of the earthquake relief efforts after the Kahramanmaras Earthquake. With these board decisions. several fees are canceled temporarily, some obligations are postponed, and additional firms are authorized to control and build natural gas installations in the 11 cities that are affected by the earthquake.

<u>Developments in Energy Transition</u> <u>process</u>

Hydrogen

Hydrogen Technologies Strategy and Roadmap of Türkiye has been published in January 2023. According to the Roadmap, Türkiye has adopted targets to reduce the cost of green hydrogen production below US/kgH₂ by 2035 and below 1.2 US/kgH₂ by 2053, and for the electrolyzer capacity to reach 2 GW by 2030, 5 GW by 2035, and 70 GW by 2053. Moreover, detailed studies blending different hydrogen contents (2-20%) into natural gas pipelines will be carried out within the context of the aforementioned Roadmap. Besides, targets focusing on setting up a hydrogen backbone to carry hydrogen have also been set. In order to create a hydrogen backbone by 2053, it is stated that the existing natural gas pipelines should be planned by considering the regions where the industry is clustered, the areas where the renewable energy sources are concentrated, and the locations where the nuclear power

plants are deployed. Other policy objectives highlighted in the roadmap are as follows:

- To review the current legislation and make it suitable for "hydrogen production, transportation, storage, and use";
- To establish certification programs for "green hydrogen" and ensure the monitoring of these programs;
- To cooperate internationally on issues related to the industry, technology, standards and certification development, supply chain, and trade opportunities;
- To encourage the widespread use of green hydrogen especially in sectors (chemistry, steel, transportation, glass, ceramics, etc.) where it is difficult to reduce carbon emissions
- To contribute to the gradual decarbonization of the heating industry by blending hydrogen into existing natural gas pipelines;
- To use local resources, especially the boron mine, in hydrogen storage;
- To export surplus green hydrogen or ammonia to the world and especially to the European market through domestic technologies.

EV Charging Services:

EMRA has been working on electric vehicle charging service for a long time and held meetings with relevant Institutions and sector representatives. With the Law amendment, the first legal regulations were implemented and EMRA has been authorized to make secondary regulations in this area.

In this direction, EMRA has published the Charging Service Regulation for the establishment of EV charging stations, the development of the charging infrastructure, and the creation of an integrated countrywide charging network. Incentives were provided in order to increase the number of fast charging stations. With the regulations, it is aimed to provide continuous, quality, uninterrupted charging service to allelectric vehicle users. Companies will be able to operate a charging network with a charging network operator license obtained from EMRA. These companies can operate charging stations themselves, or they can have third parties operate charging stations with the certificates they will issue. Companies should serve all-electric vehicle models at charging stations and determine the price of the charging service as per unit energy (kWh). Charging service prices will be monitored by EMRA.

Regulations regarding electric vehicle charging stations have been met with interest by both sector international representatives, institutions, and organizations. Investors show great interest in this area. As of March 2023, 122 companies have been granted charging network operator licenses. Efforts to develop this new sector and the market will continue with all stakeholders.

In addition, electric vehicle users will be able to view the geographical locations of public charging stations, the number of charging units and sockets, types and powers, payment methods, and availability via a mobile application developed by EMRA, and thus, they will have the opportunity to travel more comfortably and economically with their electric vehicles.

Digital Transformation

EMRA is giving special importance to digitalization, which plays a facilitating role in energy transformation. A dedicated group called the Digital Transformation Group, was established within the Energy Transition Department. Global developments and best practices in the area are closely followed by this group. Developments are reported in

a monthly bulletin (14 issues have been released since the beginning of 2022) and other departments are informed in this way. EMRA provides incentives for digital transformation and new technologies to take place, especially in regulated energy companies. EMRA believes that the increase in digitalization in electricity and natural gas transmission and distribution companies will contribute to higher quality and cheaper access to energy for consumers.



NEURC Ukraine

Recent Developments

- National Energy and Utilities Regulatory (NEURC) has adopted the price cap methodology, which defines the concept of significant price volatility in the main segments of the energy market. It also outlines the procedure for assessing price volatility, as well as the grounds and principles for revising the price limit. The regulator has been working towards adopting this methodology for some time to ensure transparency and in predictability regulatory decisions. Therefore, the adoption of this methodology is considered a crucial first step that the market requires.
- The beginning of large-scale aggression coincided planned for the 24 February testing of the energy system of Ukraine in the isolated form of the energy systems of Russia and Belarus. With the support of the international partners the Ukrainian power system was urgently synchronized with the ENTSO-E; (The prerequisite for joining the ENTSO-E was the timely certification bv the Regulator of the transmission system operator according to the

ISO model in accordance with European legislation).

- The ability to offset mutual obligations and uniform monetary claims among participants in the electricity market has been introduced. This process is carried out in accordance with the Market Rules and under the terms of agreements related to the settlement of electricity imbalances and participation in the balancing market, commonly known as **Netting**.
- The regulator approved changes to the NEURC by-law, namely (Market Rules, and DAM/IDM rules) in accordance with the Law on Energy Storages Systems.
- The first auction for the allocation of cross-border capacities for electricity export to Poland was successfully conducted.
- To facilitate Ukraine's integration into the EU and comply with the EU Energy Directives, NEURC made changes to the Transmission Network Code and some NEURC by-laws. These changes were necessary for the introduction of the ITC mechanism.
- Following the attack on the energy infrastructure on December 16th, the system experienced a loss of over 50% of its consumption. In accordance with the network code and Market Rules, the Transmission System Operator (TSO) declared an emergency situation.
- In such a situation, the Regulator had to take urgent measures to minimize the total losses of market participants, and on 17 NEURC December. made decision regarding the special functioning of the electricity market in cases of emergency. The decision, in particular, stipulates that market all segments will suspend their work,

and bids will be canceled. Market participants whose accepted bids were canceled will be refunded. Electricity trading is carried out only on BM at the average market price of DAM for the last month.

- The TSO tariff for 2023 has been increased by 10%. The Regulator hopes, this will provide an opportunity to restore the operator's networks.
- Ukraine started importing electricity from European countries. The mechanism for electricity import from the EU, introduced by the Government's decision, will allow manufacturers to reduce their dependence on scheduled power outages and will contribute to strengthening Ukraine's energy security.
- NEURC initiated the procedure of certification of the operator of the gas storage facility with the method of confirmation of the conclusion of JSC "UKRTRANSGAZ" could take care of the risk for the safe supply of natural gas.

Significant Energy News

- In response to the full-scale invasion of Russia, the authorities made the first decision to protect consumers. These included a prohibition on disconnecting consumers, without imposing penalties or fines. Additionally, tariffs for household consumers were maintained at pre-war levels to ensure the availability of services. Despite any force majeure events, service quality standards were upheld.
- The Energy Support Fund of Ukraine was established in April 2022, and as of February 1, 2023, it has accumulated 144 million euros (5 billion UAH) for the purpose of providing material and technical assistance to energy companies in Ukraine. ERRA was

among the first organizations to make a monetary contribution to this fund. ■



Recent Developments

New Electricity Market Development Publication on Market Transparency Platforms (October 2022)

With funding support from the United States Agency for International Development (USAID), **National** Association of Regulatory Utility Commissioners (NARUC) published Electricity Market Development: Market Transparency Methodology for Europe and Eurasia Regulators, which focuses on assisting the national regulatory authorities (NRAs) of Europe and Eurasia in implementing effective market transparency and establishing transparency platforms.

New Mini Guide Focuses on Coordinated EV Infrastructure Planning and Implementation among State Officials (November 30, 2022)

The National Council on Electricity Policy announced the release of a new publication, Mini Guide Transportation Electrification: State-Level Roles and Collaboration among Public Utility Commissions, State Energy Offices, and Departments of Transportation, the eighth in its series promoting dialogue among state-level electricity decision makers highlighting examples of successful engagement. Each mini guide features collaborative approaches, lessons learned and interviews with leading state and local decision makers.

Approaches to Regulating Distributed Generation in Central America (December 2022)

With support from the U.S. State Department, Bureau of Energy Resources, Power Sector Program (ENR/PSP), NARUC published a <u>new</u> report that provides a high-level

overview of the current objectives, challenges, and considered solutions related to the development of DG in the national and regional contexts of the five Central American countries that take part in the ENR-NARUC Central America Regulatory Partnership. It also outlines high-level regional priorities in further promoting DG in Central America and the relevant DG experience of U.S. regulators.

New Report Helps Regulators Assess and Implement Pathways to Integrate Low-Carbon Fuels (December 14, 2022)

A new report from NARUC offers essential information to aid policymakers and regulators in navigating decarbonization goals. Potential State Regulatory Pathways Facilitate Low-Carbon Fuels, developed by NARUC's Center for Partnerships and Innovation with support from the U.S. Department of Energy, is part of the DOE-NARUC Natural Gas Partnership.

New Regulatory Training Initiative Paper Examines Best Practices for Sustainable Commercial EV Rates and PURPA 111(d) Implementation (December 23, 2022) A <u>new paper</u> provides examples for regulators and utilities to consider as they develop new rate models to support transportation electrification and encourage greater EV adoption. Suggestions for designing long-term, sustainable solutions for improving the economics of commercial EV charging, without subsidizing EV charging or shifting costs to other customers are offered to help guide practical decision making.

New Report Explores States' Performance-Based Regulatory Approaches for Incentivizing Demand Flexibility (February 28, 2023)

NARUC released a <u>new research</u> paper, Demand Flexibility within a Performance-Based Regulatory Framework, that presents the various components of performance-based regulation and explores how its applications can advance demand flexibility.

Maintaining Grid Stability with Increased Solar PV Integration in Vietnam (March 2023)

With support from the U.S. State Department, Bureau of Energy Resources, Power Sector Program (ENR/PSP), NARUC published a report titled "Maintaining Grid Stability with Increased Solar PV Integration in Vietnam." This report presents an overview of the existing requirements and directives with regard to voltage control in Vietnam's power distribution network and puts forth recommendations for enhancing the regulatory framework pertaining directly or indirectly to voltage control in light of increased photovoltaic (PV) penetration.

<u>Developments in Energy Transition</u> process

The Role of Nuclear Generation in the Clean Energy Transition Explored in New White Paper (August 26, 2022)

NARUC announced the release of a new white paper on the role of nuclear energy as a keystone clean energy resource. Authored by Energy Ventures Analysis, Inc. under subcontract to the NARUC Center for Partnerships and Innovation, Nuclear Energy as a Keystone Clean Energy Resource explores nuclear energy's role in providing carbon-free electricity and highlights kev considerations for regulators to keep in mind as decarbonization efforts continue across many states and utilities.