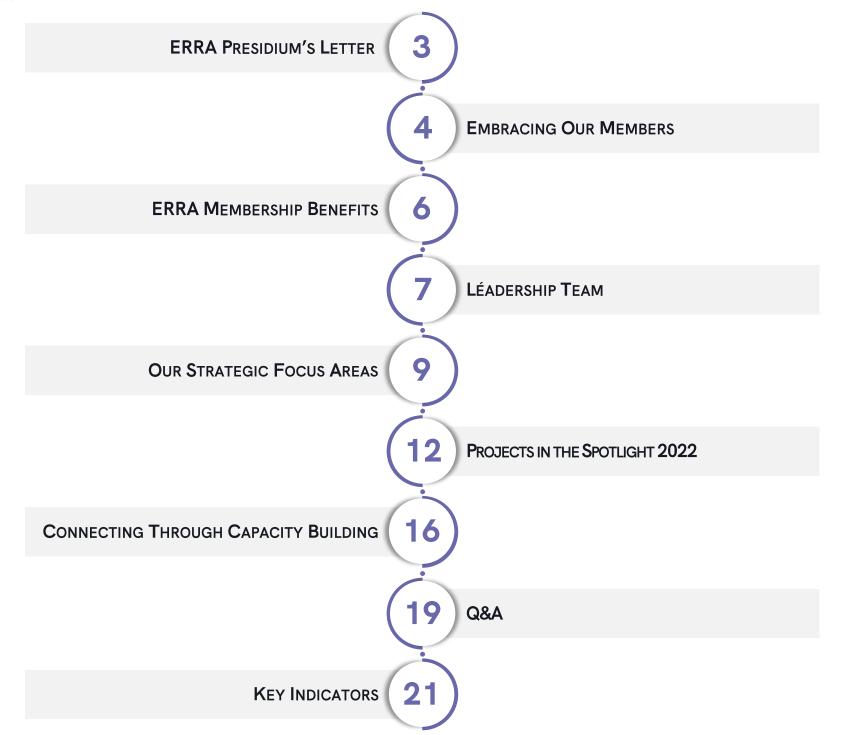


# ACTIVITY REPORT 2022

### CONTENT



### ERRA PRESIDIUM'S LETTER

It is hard to believe how many things changed in economic terms in the year 2022 that we are summarizing with this Activity Report. Two years ago, after the outbreak of the pandemic we had thought that there is nothing else that could surprise us or have an equally considerable effect on our lives – and we could not had been more wrong.

The new, major conflict in Europe has unleashed a number of lasting consequences for the global economy – affecting availability of many core commodities and products such as oil, gas, wheat or fertilizers – but also causing a major revision of policies and security of supply paradigms in the Old Continent. The war with its consequences had effectively sealed the short-term energy sector outlook as grim, which combined with other unfavourable developments (e.g., low U.S. LNG exports, problems with French nuclear capacities etc.), created a 'perfect storm' that rocked Europe with record gas and electricity prices peaking in August. These and other pitfalls in global economy and supply chains contributed to other difficulties that at the end of the day left nearly all ERRA member countries with very high inflation rates.

In all these challenging conditions that mounted pressure on regulators, ERRA had to adapt its activities to try to assist its members in the areas of key relevance. The result was the *Interim Review on policy responses to the Energy Crisis*, where the Secretariat interviewed 10 Member regulatory authorities on consumer and market protection measures they proposed or implemented as either advisers or executors in the crisis management process. We were glad to observe that the summary of findings, which was presented during an extraordinary High-Level Consultation on Energy Crises that took place on December 5 in Türkiye, stirred a lively and meaningful discussion among ERRA Member leadership.

Despite the aforementioned hurdles and priorities, ERRA did manage to implement its 2021-22 workplan in parallel. What deserves particular attention are the numerous physical events that the Secretariat managed to organize in 2022, with members and partners as co-hosts. Particular attention can be given to a number of trainings and meetings in Istanbul and Budapest (p. 15, p. 16) as well as the Renewable Energy Investment Conference in Tbilisi, where energy crisis questions were juxtaposed with the directions of energy transition advancement (pp. 13-14). The Association did not slow down with performing its research activities either – new areas were explored with the best example provided by the regulatory sandboxing workshop and the related summary report (p. 15).

We are very grateful to our Members who, despite an often critical situation and 'putting out fires' back at home, did not withhold their professional and logistical support to ERRA and also continued to participate in our programs and activities.

As year 2022 proved to be a very work-intense for a vast majority of us, the Presidium would like to wish all ERRA Members a calmer 2023, that will bring long-term answers to price stability and security of supply questions, as well as an accelerated and sustainable implementation of cleaner energy sources in line with the energy transition goals and ambitions.

Maia Melikidze ERRA Chairperson **Pál Ságvári** ERRA Vice-Chair Sajid Akram Presidium Member Ahmet Çağrı Çiçek Presidium Member Maria
Manicuta
Presidium Member

Andrijana Nelkova-Chuchuk Presidium Member Dietmar Preinstorfer Presidium Member

### **◆ EMBRACING OUR MEMBERS**

### **MISSION**

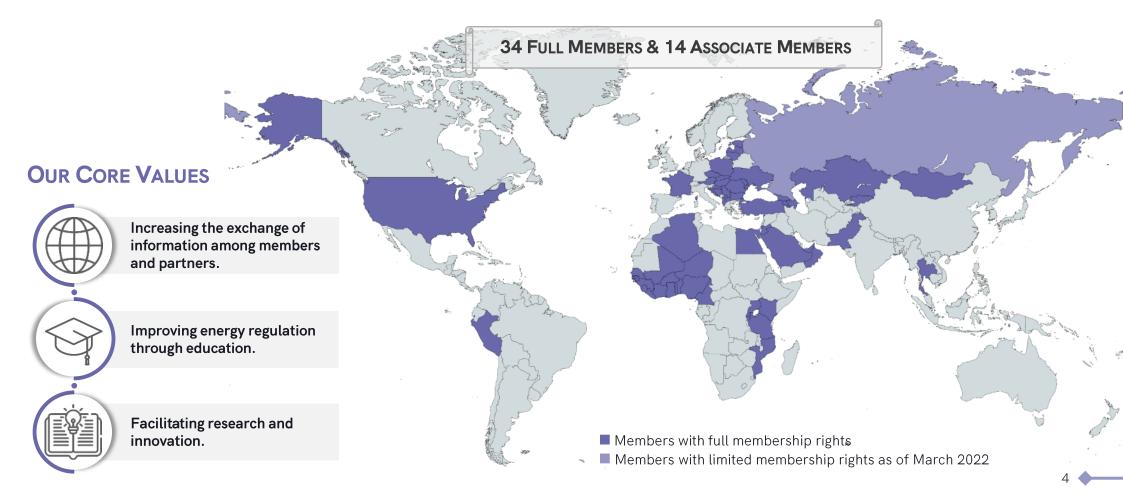
Support strengthening and improving the regulatory framework.





### **VISION**

Being a reference point for practice and knowledge in the constantly evolving regulatory environment.



### EMBRACING OUR MEMBERS

### **ERRA FULL MEMBERS**

- Albanian Energy Regulatory Authority
- Public Services Regulatory Commission, Armenia
- Energie-Control, Austria
- Tariff (Price) Council, Azerbaijan
- State Electricity Regulatory Commission, Bosnia and Herzegovina
- Energy and Water Regulatory Commission, Bulgaria
- Electricity Sector Regulatory Agency, Cameroon
- Croatian Energy Regulatory Agency
- Energy Regulatory Office, Czech Republic
- Estonian Competition Authority
- Georgian National Energy and Water Supply Regulatory Commission
- Hungarian Energy and Public Utility Regulatory Authority
- Committee on Regulation of Natural Monopolies of the Ministry of National Economy of the Republic of Kazakhstan
- Department of the Fuel and Energy Complex Regulation under the Ministry of Energy of the Kyrgyz Republic
- Public Utilities Commission, Latvia
- National Energy Regulatory Council, Lithuania
- National Agency for Energy Regulation, Moldova

### **ERRA ASSOCIATE MEMBERS**

- Electricity and Gas Regulatory Commission, Algeria
- **Azerbaijan** Energy Regulatory Agency
- Regulatory Commission for Energy in Federation of Bosnia and Herzegovina
- Regulatory Commission for Energy of Republic of Srpska, Bosnia and Herzegovina
- Gas Regulatory Authority, Egypt
- Energy Regulators Association of East Africa (EREA)
- ECOWAS Regional Electricity Regulatory Authority (ERERA)
- Energy Regulatory Commission, France

- Energy Regulatory Commission, Mongolia
- Energy Regulatory Authority, Mozambique
- Nigerian Electricity Regulatory Commission
- Energy and Water Services Regulatory Commission, North Macedonia
- Authority for Public Services Regulation, Oman
- National Electric Power Regulatory Authority, **Pakistan**
- Palestinian Electricity Regulatory Council
- Energy Regulatory Office, Poland
- Romanian Energy Regulatory Authority
- Federal Antimonopoly Service, Russian Federation (with limited membership rights as of March 2022)
- Water & Electricity Regulatory Authority, Saudia Arabia
- Energy Agency of **Serbia**
- Regulatory Office for Network Industries, Slovakia
- Energy Regulatory Commission, Thailand
- Energy Market Regulatory Authority, Türkiye
- National Energy and Utilities Regulatory Commission, Ukraine
- Abu Dhabi Department of Energy, United Arab Emirates

- Public Utilities Regulatory Commission, Ghana
- Energy and Mineral Regulatory Commission, Jordan
- Energy Regulatory Office, **Kosovo\***(\*This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.)
- Peru's Regulatory Agency for Investment in Energy and Mining
- Regulatory and Supervisory Bureau for Electricity and Water of Dubai,
   United Arab Emirates
- National Association of Regulatory Utility Commissioners, **United States of America**

### ERRA Membership Benefits

ERRA represents an excellent networking opportunity among 48 member organisations representing Europe, Asia, the Middle East, Africa, North and South America. It started as a collaborative initiative of 15 regulators in 2000 and by now it has grown to be the international association that has the largest geographic coverage in the world. ERRA's mandate is to support and strengthen regulators in very different jurisdictions. Given the very different background and stage of development of our member regulators our role is to share and educate rather than imposing any common rules or standards.

There are full and associate member categories in ERRA. Full members – as opposed to associate members – have all the rights to influence and determine ERRA's internal working, thus full members have a vote in the ERRA General Assembly and they are entitled to delegate representatives to the governing body of the Association, that is the 7-member Presidium. Other than that, members enjoy the same rights.

### **TECHNICAL MEETINGS**

Members are entitled to attend the internal technical meetings and workshops free of charge.



#### **CONFERENCES**

Full Members enjoy complimentary passes to ERRA's Annual Conference, while Associate Members pay a discounted fee.



#### **TRAINING COURSES**

Training courses are available for ERRA Members at a discounted rate.





#### **PUBLICATIONS**

All publications produced by the Association are available for Members.



#### **WEBSITE**

Members have access to all past and current training materials and conference proceedings - through password system.

### CONSULTANCY

In case of a technical request or a burning issue, all other members can be asked for a quick advise or exchange of practice.





#### **DATABASE**

All ERRA Members have access to the Tariff Database. The Database covers historic data of members' electricity and gas residential and non-residential tariffs for 10 years and market data of member organisations are also updated annually.





Watch the short interview with MR. SAMIR AKHUNDOV, Chairman of the Board, Azerbaijan Energy Regulatory Agency (AERA) talking about his experience about being a member of ERRA.

In case of any questions or membership interest please contact the ERRA Secretariat at <a href="mailto:secretariat@erranet.org">secretariat@erranet.org</a>.

### **◆ LEADERSHIP TEAM**

### **ERRA PRESIDIUM**





**PÁL SÁGVÁRI ERRA Vice-Chair** Hungary

SAJID AKRAM ERRA Presidium Member Pakistan





AHMET ÇAĞRI ÇIÇEK ERRA Presidium Member Türkiye

MARIA MANICUTA ERRA Presidium Member Romania





ANDRIJANA NELKOVA-CHUCHUK ERRA Presidium Member North Macedonia

DIETMAR PREINSTORFER
ERRA Presidium Member
Austria



### **ERRA STRATEGIC ADVISORY BOARD**

ALPARSLAN BAYRAKTAR
Chairman of the Board
Türkiye





WALTER BOLTZ Vice-Chairman of the Board Austria

ASHOK BHARGAVA Member of the Board the Philippines





COLETTE HONORABLE Member of the Board United States of America

MARIUSZ SWORA Member of the Board Poland



### **LEADERSHIP TEAM**

### **ERRA FINANCIAL COMMITTEE**







### ERRA COMMITTEES AND WORKING GROUP LEADERS









LIA GVAZAVA **EMER COM Vice-Chair** Georgia









**JELENA DILIENE RE COM Vice Chair** Lithuania









### Customer Protection Working Group







### **OUR STRATEGIC FOCUS AREAS**

### PUBLICATIONS BY THE ERRA COMMITTEES AND WORKING GROUP

Electricity Markets and Economic Regulation Committee (EMER COM)

Natural Gas Markets and Economic Regulation
Committee (NG COM)



**Customer Protection Working Group** (CP WG)

Renewable Energy
Committee (RF COM)

#### A STATUS QUO REPORT ON DEREGULATION OF ELECTRICITY MARKETS

17 EMER COM members shared data on current market structures characteristics of electricity market, unbundling and concertation, prices on wholesale market, cross-border trading, balancing and ancillary services.



### PRINCIPLES FOR CALCULATING TARIFFS FOR ACCESS TO GAS TRANSMISSION NETWORKS

The second of two benchmarking reports on gas transmission topics by the NG COM analyses the revenue setting methodologies and calculation unit charges.



### Unbundling and certification of gas transmission system operators in line with the EU acquis

The paper provides a refreshed perspective on gas TSOs unbundling and certification with 3 case studies on the certification process in EU and its neighbouring countries.



### REGULATORY INVOLVEMENT IN THE IMPLEMENTATION OF DIFFERENT RENEWABLE TECHNOLOGIES

The publication focuses on introduction of new technologies. regulators' involvement in new services/ technologies, market roles, financial support systems in place.



### E-MOBILITY: STATUS UPDATE, PLANS AND RELATED REGULATORY ISSUES

EVs have been on the radar of energy regulators for quite some time, that is why ERRA regularly monitors developments with regards to e-mobility regulations among its members.



### MITIGATING IMPACTS OF PANDEMIC AND HIGH ENERGY PRICES (2019 – 2022 Q1): MEASURES AND APPROACHES BY SELECT ERRA MEMBERS

The report explores various regulatory and policy responses to pandemic recovery-driven market and supply chain shocks as well as the early stage of the crisis in the energy sector.



#### SMART METER PENETRATION IN SELECT ERRA MEMBER COUNTRIES

The analysis is an update of the 2020 version and provides some new comparisons on the role of smart meters in different countries' electricity markets, leading to identify recommendations towards this hot topic.



### **OUR STRATEGIC FOCUS AREAS**



REGULATORY APPROACHES

**OF ELECTRICITY TSO & DSO NETWORK TARIFF STRUCTURES AMONG** 

**ERRA Member Organizations** 

Submitted to ERRA by:



## AND PROVIDES A THOROUGH ANALYSIS OF:

CONNECTION CHARGES

**USE-OF-SYSTEM CHARGES** 

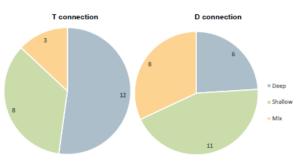


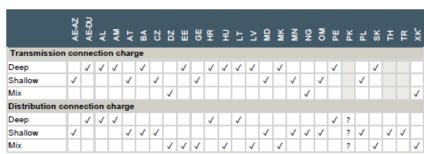
Unbundling of network charges in the tariff design | Regulations and principles for tariff designs | Customer categories | Locational signals in the tariff designs | Split of charges for generators and load for the use-ofsystem | Types of charges in the network tariff designs | Special tariff designs | Treatment of losses | Level of use-of-system charges

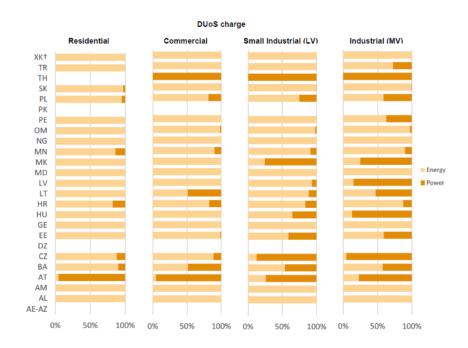
> Regulations and principles for connection charges | Customer categories for connection charges | Depth of charge and payment method for connection charges | Generators and load | Level of connection charges

PRESENT CHARGES

Transmission & distribution UoS charges | Equivalent UoS charges | Transmission & distribution connection charges







### OUR STRATEGIC FOCUS AREAS

### **SECTOR UPDATES**









Electricity

Energy Transition

Natural Gas

Customers

The Sector Updates section on the ERRA website presents latest updates from ERRA Electricity/ Natural Gas Markets and Economic Regulation, Renewable Energy Committees together with ERRA Customer Protection Working Group news on electricity and natural gas markets, renewables/ energy transition issues or customer protection issues as provided by our members or partners.

### **REGULATORY STORY OF THE QUARTER**

The purpose of this activity is to present and portrait a member organisation introducing a new (creative) regulatory policy, approach or practice that could be relevant to other members or which might has a strong impact on regulation.



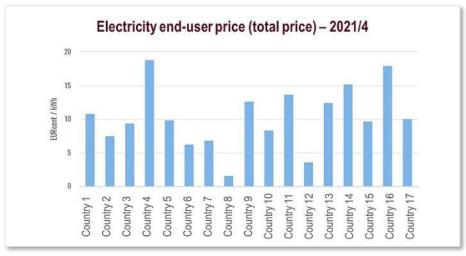
### PIONEERING ENERGY TRANSITION VIA A DEDICATED DEPARTMENT

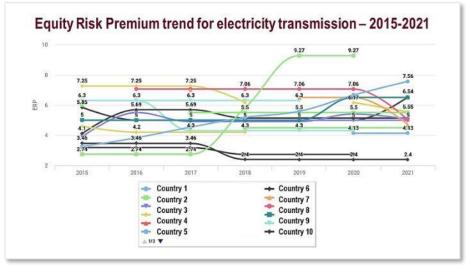
EMRA Türkiye has given a worthwhile example of how to adapt regulatory duties to the changing energy landscape. The newly created Energy Transition department, tackles issues such as electric vehicles charging services, digital transformation, R&D and innovation, complementary markets as well as alternative fuels.

The interview with Mr Zafer Korkulu, Head of the Energy Transition Department about the creation, synergies with other units at EMRA and first key tasks of the department can be accessed here.

### **ERRA TARIFF DATABASE**

The ERRA Tariff Database is an online platform consisting of **electricity and natural gas tariffs, revenue determinants and network tariffs data**. It is an excellent source of information for data on regulated prices and determinants submitted directly by energy regulators for each country, following a consistent calculation methodology that enables comparison between submissions. It has a built-in tool for clear and immediate data visualization in the form of charts.





### PROJECTS IN THE SPOTLIGHT 2022

ERRA continues to put emphasis on organization of webinars that allow the involvement of high-level technical speakers and are easy to reach for large number of members, partners and guest participants thanks to their all-virtual format. Webinar recordings are available on our Youtube Channel.

WEBINAR:
HYDROGEN OUTLOOK FOR
THE ENERGY SECTOR



WEBINAR I:
ELECTRIFICATION
CHALLENGES IN SUBSAHARAN AFRICA



WEBINAR II:
ELECTRIFICATION
CHALLENGES IN SUBSAHARAN AFRICA



In March, ERRA developed the 2nd webinar on Hydrogen with a twofold focus:

Session I discussed Policy and Regulatory Frameworks of Hydrogen in the Energy Industry and looked into hydrogen policymaking and regulation development, with insights into technical and economic/ financial aspects of introducing the fuel on industrial scale. Thoughts were also shared on the global energy geopolitics, and the implications of hydrogen on energy transition.

Session II on the other hand looked into Case Study Presentations by developers that showed pilot projects located in Abu Dhabi, Saudi Arabia and Chile based in energy, transportation and industrial production sectors.

The webinar was moderated by Mr. Attila Nyikos, former ERRA Vice-Chair and involved speakers from IRENA, DG ENER European Commission, U.S. Department of Energy, ACWA Power and HIF Global.

• • •

With the initiative ERRA aimed at providing a new format to its large member base in Sub-Saharan Africa – a series of webinars on the paramount challenge faced by the continent: electrification. The webinars were developed in collaboration with Economic Consulting Associates.

The first edition on June 2 looked into the status quo and ways forward for the fundamental development of electricity access in Sub-Saharan regions. Speakers from IEA, AfDB, NERC Nigeria, EREA and RAERESA presented and discussed via panel current developments, statistics and ongoing challenges that affect the process, paying much attention to the impact of the pandemic as well as to economic and financial factors. The event also shed light on the West Africa Regional Regulatory Partnership, which was shown as an example of regional regulatory cooperation that can significantly help to increase grid resilience and accessibility.

The second webinar on November 9th analysed financial, development and regulatory dimensions of mini-grids, which are increasingly becoming a key component of SSA region countries electrification plans. The discussed topics included e.g., how mini-grid markets are developing, how to ensure the allowance for the recovery of financing costs in tariff determinations, how to avoid setting cost of capital benchmarks that the market is unable to support, sustainable mini-grid procurement approaches for regulators and identifying who should bear currency risk. Speakers from ERA Uganda, Engie – Power Corner Zambia, Africa Grant Advisors, Infraco Africa, Sustainable Energy Fund for Africa by AfDB, NERC Nigeria, AFUR and Winch Energy Limited, safeguarded representation from all above-mentioned market segments, and thus explained the variety and complexity of interests to be met when developing, financing, and regulating mini-grid markets.

### Projects in the spotlight 2022



After three years of pandemic-related suspension, ERRA has successfully returned to the conference format in October 2022. The **Renewable Energy Investment Conference**, co-organized in partnership with the Council of European Energy Regulators, gathered regulators, policymakers, system operators, consultants, auditors, researchers and many more for a two-day program under the overarching theme: **Accelerating the clean energy transition through investments into renewable energy**.

### DAY 1

The first day of the conference was opened by the hosting organization – Georgian National Energy and Water Supply Regulatory Commission – represented by its Chairman **Mr. Davit Narmania**. The distinguished **opening keynotes** were given by **Mr. Levan Davitashvili**, Vice-Prime Minister and Minister of Economy and Sustainable Development of Georgia, followed by **Mr. Oliver Várhelyi**, EU Commissioner for Neighbourhood and Enlargement Negotiations.

After the introductory part, the main technical session of the day started with presentations on the following topics:

- Dynamic Regulation and Energy Transition (A. Groebel, President of CEER, BNetzA)
- Scaling up Renewables Investments in Developing Countries (M. Caron, First VP, NARUC)
- Renewable Energy Projects and Availability of EIB Assistance (M. Czura, Head of Regional Representation at the European Bank for the South Caucasus)
- The Role of a Harmonized and Coherent Regulation in promoting Renewable Energy in the Mediterranean Region (H. Özkoç, Director of MEDREG)
- Enabling Clean Energy Transitions through Cooperation: The Regulatory Energy Transition Accelerator RETA (A. Flagg, RETA Coordinator, IEA)
- Importance of Regulation for Investments What Improvements are needed? (P. Ságvári, ERRA Vice-Chair, VP for International Affairs, MEKH Hungary)
- Energy Community kicks off Renewables Certificates Project to help the Acceleration of Energy Transition (N. Taso, RE Expert, Energy Community Secretariat)

The second half of the day focused on case study presentations on Renewable Energy Investment Climate in Developing Countries, which allowed for a detailed look into legislation and regulation of renewables in Armenia, Azerbaijan, Georgia, Moldova, North Macedonia, Türkiye and Ukraine. The day was then concluded with a presentation on Scaling-up Investments in Renewable Energy in EaP Countries – Investor's Perspective (S. Molineus, Regional Director for South Caucasus, World Bank).



### PROJECTS IN THE SPOTLIGHT 2022

DAY 2

The second day of the event was **initiated by** ERRA Chair – **Dr Maia Melikidze**, followed by **Mr. Paweł Herczynski**, Ambassador of the EU to Georgia. The stage-setting keynotes on *Renewables Investments in the context of the Global Energy Crisis* (K. Petrov, Managing Consultant, DNV Energy Systems) and **45% Renewables by 2030? The EU Latest Investment Challenges for DSOs** (R. Garaude-Verdier, European Affairs Director, Enedis France) provided a necessary macroeconomic and technical context to discussions that followed later that day. The first session was concluded with a presentation shedding light on developer's perspective on *Criteria for Evaluating Potential Renewables Projects* (M. Shahrour, Senior Analyst, Business Development, MASDAR).

The main technical session of the day involved the following elements:

- Moderated roundtable on Potential Renewable Investment Projects Regulatory Country Case Studies with inputs presented by Armenia, Azerbaijan and Moldova
- Presentation on the *Importance of Digitalization in the Green Transition Process* (G. Dell'olio, Energy Efficiency Expert, GSE Italy)
- Auditors' roundtable on **Lessons Learned from Government Renewable Energy Policies** with presentations:
  - Results from Audit on Green Energy Support Policy and the Recovery and Resilience Mechanism Plan in Latvia (R. Irklis, Auditor General, SAO Latvia)
  - Advancing Renewable Energy Sources and Reducing the Dependence on Fossil Fuels (D. Bar, Senior Dept. Manager, Office of the State Comptroller, Israel)
  - How to Support Sustainable Investments: Recommendations from the EU's External Auditor (K. Bryan, Head of Cabinet, Europeans Court of Auditors)
- Roundtable on *Active Consumers for the Energy Transition and Economic Development* with presentations:
  - Consumer-centric Energy Market with perspectives by France and Austria (I. Faucheux, Commissioner, CRE France & H. Proidl, Director for Renewables and Energy Efficiency, E-Control Austria)
  - Policies and Regulatory Considerations for Renewable Energy Mini-Grids (A. Berisha, ERRA Regulatory Specialist)

DAY 3

The additional third day of the event served as the celebration of the **25**<sup>th</sup> **anniversary of GNERC**, where salutation addresses were given by inter alia, ERRA Vice-Chair, NARUC First VP and CEER Secretary General. The anniversary program included also signing the memorandum of understanding between ERRA and the Energy Training Centre supported by GNERC, as well as a video on the history of GNERC and the awards ceremony, where GNERC Chairman celebrated the most distinguished figures from the Georgian energy sector.

The program was concluded with a **site visit to Zhinvali Hydropower Plant**, Ananuri Fortress Complex and the Svetitskhoveli Mtskheta Cathedral.



ERRA would like to thank the Georgian National Energy and Water Supply Regulatory Commission for exemplary hosting of the Conference and securing excellent reception of international guests thanks to the welcome dinner as well as the closing gala dinner celebrating the 25<sup>th</sup> anniversary of GNERC.

### PROJECTS IN THE SPOTLIGHT 2022

As the global energy crisis radically reshaped the energy supply landscape, ERRA decided to address this burning issue via offering a high-level consultation meeting for member and partner regulators. The adverse impact on the security and cost of energy supply had triggered a number of fundamental governmental and regulatory responses in many ERRA member countries.

Due to this fact, in preparation to the meeting, ERRA Secretariat conducted an Interim Review exercise on *Policy Responses* to the *Ongoing Energy Crisis*, which focused on surveying the crisis counter-measures applied by member regulators from Austria, Hungary, France, Latvia, Nigeria, Pakistan, Poland Thailand, Türkiye and the U.S.

The meeting on December 5 served the twofold purpose of presenting the results of the Interim Review exercise as well as providing a discussion platform on supply and market considerations in the light of the policy and regulatory dynamics. The introduction was provided by excellent **keynotes by Dr. Alparslan Bayraktar**, Deputy Minister for Energy and Natural Resources of Türkiye, Chairman of the ERRA Strategic Advisory Board and Former ERRA and ICER Chairman and **Sir Dieter Helm**, Professor of Economic Policy, University of Oxford.

The program also included:

- case studies on crisis response:
- Tackling High Electricity Prices without Subsidies in Estonia,
- Response to the Energy Crisis in Poland,
- technical presentations on:
- Regulatory Challenges and Trilemma of Energy Markets: Towards Sustainability during the Energy Crisis,
- Electricity market organisational structures and their suitability to energy transition and to prevent crisis,
- and the *Regulatory Roundtable* which provided the much-needed space for the exchange of views on the energy crisis and sharing best-practice, which was joined by a variety of high-level regulators covering core ERRA regions.

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The last key event of ERRA in 2022 was a workshop on the regulatory sandboxing/ regulatory experimentation, which aim was to investigate scope of experimentation and derogations, responsibilities, and funding as well as to present key lessons learnt from the pioneering projects. The workshop allowed to have a detailed look into the setup that allows regulators to learn about particular innovations in practice and test new solutions, thus ultimately supporting a more adaptive regulation enabling energy transition without unjustified barriers.

The workshop and its key takeaways were described in a <u>summary report, which is available via ERRA website</u>.





WORKSHOP ON REGULATORY SANDBOXES



### CONNECTING THROUGH CAPACITY BUILDING

We constantly follow industry and regulatory trends and tendencies in order to be able to expand our offer with up-to-date topics and cases. The topics are rotating in 1,5-2 years, these training courses were organised in 2022. Check our full training portfolio here.



This course is a step-bystep practical overview of the measures regulators can employ to review and assess the reasonableness of capital expenditure projects proposed by regulated licensees.



ERRA's flagship event is a "must" for junior regulatory staff as it lays the foundations on the basic principles of regulation.



INTRODUCTION TO REGULATION OF FLEXIBILITY IN THE POWER GRID

REGULATORY TOOLS
FOR CAPITAL
EXPENDITURE (CAPEX)
REVIEW AND
ASSESSMENT

FUNDAMENTALS OF WATER UTILITY REGULATION

SUMMER SCHOOL: INTRODUCTION TO ENERGY REGULATION REGULATION OF HYDROGEN VALUE CHAINS



The course prepares participants for the power system of the future. It provides them with an indepth understanding of flexibility in its multiple forms, the barriers to its use, and how regulation can help remove these barriers.



The course is dedicated to the core responsibilities and activities of water utility regulatory authorities: theoretical lessons will be supplemented by case study examples and a tariff setting exercise.



The course allows participants to structure the proper regulatory framework for a functioning hydrogen economy across all the parts of its value chain from production to demand.



### CONNECTING THROUGH CAPACITY BUILDING

ERRA offers not only the standard regulatory trainings – our portfolio includes also **tailor-made capacity building programs** in all formats, including in-premise courses and tutoring. In 2022 we organised the below training courses on request.



May Online for the World Bank Group



September
Muscat, Oman
for
Authority for Public
Services Regulation (APSR)



November
Budapest, Hungary
for
Energy Regulatory
Commission (ERC) of
Thailand and Thai Utilities

WATER UTILITY
REGULATORY
COMPLIANCE

WHOLESALE
ELECTRICITY MARKET
DESIGN AND
CHALLENGES IN
DEVELOPING
ECONOMIES

PRICE CONTROL AND INCENTIVE REGULATION

INTRODUCTION TO WATER UTILITY REGULATION

INTRODUCTION TO ENERGY REGULATION

ELEMENTARY CONCEPTS
OF GAS SECTOR
LIBERALIZATION AND
LNG MARKETS

January Muscat, Oman for

Oman Water & Wastewater Services Company (OWWSC)



July Muscat, Oman for

Oman Water & Wastewater Services Company (OWWSC)



September Muscat, Oman for

Authority for Public Services Regulation (APSR)





### CONNECTING THROUGH CAPACITY BUILDING

ERRA commemorated the 20th anniversary of the ERRA Summer School: Introduction to Energy Regulation in 2022 and invited former alumni to speak about their memories and experiences.

Watch these short interviews with select former alumni about their perception of the Summer School and with impressions on how did it contribute to their dynamic careers.



MR. IMAMUDDEEN TALBA was the Administrator/ CEO of the Nigerian Electricity Regulatory Commission and today he is the Chairman of the Renewable Energy and Energy Efficiency Associations - Alliance.



Click here to watch the video.

Mr./Talba attended the ERRA Training Courses twice, first at the ERRA Summer School in 2009, where he met a group of students from different parts of the world and it brings always very good memories to him and they kept each other's contacts. His participation also established his knowledge and his confidence in his career.



MR. ROLANDS IRKLIS started his career at the Public Utilities Commission of Latvia, later on he became Chairman of PUC and today he is the Auditor General at the State Audit Office. of the Republic of Latvia.



Click here to watch the video.

The Summer School in 2013 was the very first course for Mr. Irklis regarding the energy field and it gave him a real new perspective. He understood deeper how the tariffs could be regulated and what and how things could be improved in his country. Later on he "got hooked" on ERRA trainings.

### MEET SOME OF OUR SPEAKERS



**A**RDIAN **BERISHA ERRA** 



**Z**SUZSANNA **P**ATÓ RAP



HANS-ARILD BREDESEN Conultant, Norway



**KONSTANTIN** PETROV **DNV Energy Systems** 



**CRISTIANO FRANCESE** Professor, Germany



**B**ORBÁLA TAKÁCSNÉ TÓTH REKK



NICK **HARALAMBOPOULOS FCA** 



FRANK WOLAK Professor, USA

### **ERRA CERTIFIED ENERGY REGULATOR PROGRAMME**

ERRA developed the Certified Energy Regulator (CER) training certificate to indicate that participants in ERRA courses have achieved a set level of fluency in the regulatory field.



The certification system is supposed to acknowledge those ERRA training participants who have successfully participated in minimum three different training programs organized by ERRA. In order to receive the certificate, participants should collect at least 30 credits within 3 years.



ERRA issued 43 CER diplomas since 2010 (5 in 2022).



### EUROPE HAS WITNESSED AN UNPRECEDENTED INCREASE IN PRICES OVER THE PAST 1.5 YEARS. WHAT IS THE MAIN LESSON LEARNED FOR REGULATORS AND POLICYMAKERS WORLDWIDE?





The main lesson we learned is that both regulators and policy makers must concentrate their efforts in order to move to low-carbon or zero-carbon economy by supporting renewable energy development and energy saving in all possible ways and levels. Those are the support schemes for renewable energy generators, education and engagement of public, encouragement of innovation and research in renewable energy and energy saving technologies.

**SERGEY AGHINYAN**, Armenia



The current commodity super cycle has resulted in an unprecedented increase in prices not only in Europe but throughout the world, especially for economies reliant on imported fuels. This has prompted policymakers to recognize that energy security can only be guaranteed by developing their energy sectors with indigenous resources. The biggest challenge for regulators is to ensure that energy remains affordable for consumers. As this is a dynamic and forward-looking issue, corrective decisions must be taken now.

SAJID AKRAM, Pakistan



Changes in international energy markets presented a wide range of challenges. Moving from supplying demand for fossil fuels on low prices to a more focused supply of energy sources and hydrocarbons, taking into consideration changes in geographical demand, market dynamics and political factors. Not as part of the statement to be published, generally as an exporting country there were new export destinations justified by combination of higher prices and good political relations which allowed achieving mutual benefit by exporting to countries facing shortage in energy sources.

**ABDULWAHHAB AL HINAI, Oman** 



In a well designed market price signals ensure that gas flows to where it needs to. The European market had to deal with an unprecedented disruption to supply, losing about one third of its usual supply. Inevitably prices rose but this encouraged alternative suppliers to send gas to the market, and for gas consumers to reduce demand, often without reducing their economic output. The price rises have been extremely painful but the market worked - the alternative would have been rationing and even greater physical gas shortages.

**ALEX BARNES**, United Kingdom



### EUROPE HAS WITNESSED AN UNPRECEDENTED INCREASE IN PRICES OVER THE PAST 1.5 YEARS. WHAT IS THE MAIN LESSON LEARNED FOR REGULATORS AND POLICYMAKERS WORLDWIDE?





Policymakers have tried to keep prices artificially lower, but have mostly failed to do this over a longer period of time. We all have seen that prices are vey effective in reducing consumption, and that Europe managed to successfully replace the biggest gas suppliers within 1 year. Regulators have learned, that our regulatory systems are rather robust, but still need significant adjustment to manage massive price fluctuations. We all can use the lessons learned to better manage the future energy transition.

WALTER BOLTZ, Austria



The unprecedented and brutal volatility of energy prices sparked unsustainable massive public interventions and a serious question mark over the market design. In my opinion, there are two main takeaways from this "black swan": the first lesson is the need to strongly reassert energy independence as a pillar of our strategy; the second one is the importance of enabling long-term market signals since they are key to protecting consumers from volatility and to investing in decarbonized production units.

IVAN FAUCHEUX, France



The weaponization of energy is the primary source of the current economic crisis in Europe. The crisis made countries and EU bodies enact emergency regulations on price caps, retake critical infrastructure, introduce state aid measures, and rethink the whole market design. While gradually eliminating short time measures like price caps, we have to ensure universal lessons have been learned this time, assuring the security of supply based on stable sources, diversification, affordability, and robust market design.

MARIUSZ SWORA, Poland

### Key Indicators





### annual conference

- hosted by GNERC Georgia
- co-organised with CEER
- **200+** participants from **35** countries



5 standard & 6 tailor-made

- **5** physical, **4** online and **2** hybrid trainings
- 350+ training participants from 31 countries
- 5 CER diplomas handed out

### Composition of Participants

Regulators 72%

Non-Regulators 28%

Members 53%

Non-Members 47%

Overall rating of ERRA training courses





### Women in the energy sector

- 3 women in the **ERRA** Presidium
- 51% women representation in 38 **ERRA** member organisions
- 4 Chairwomen leading ERRA member organisations
- 2 webinars with
  - **67** participants from
  - **22** countries



- 400+ participants from 79 countries



22 internal meetings\*

- 650+ participants
- \* General Assembly, Chairmen Session, ERRA Liaison Meeting, Meetings of the ERRA Committees and Working Group
- 11 hybrid, 9 online and 2 physical only meetings



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