1st ARIAE-NARUC Meeting

Conclusions

24 May 2018

Iberoamerican and North American energy regulators have initiated a procedure of biannual meetings to exchange views and discussion topics of common interest. In collaboration with the National Association of Regulatory Utility Commissioners (NARUC), ARIAE and NARUC held its first meeting on 24 May 2018 in Brasilia City, bringing together senior representatives, including the Presidents and Vice-Presidents of the two associations. In total 18 energy regulatory authorities from both associations were represented at the meeting. NARUC's participation in this important event was supported by the United States Agency for International Development (USAID).

During the meeting, energy regulators from ARIAE and NARUC exchanged best practices and experiences with respect to key developments and challenges facing both the energy sector and regulators, under four themes:

- Regulatory and policy considerations to develop clean and efficient energy
- The expansion of renewables using cost-efficient mechanisms: auctions
- The development of infrastructure, mainly to integrate regional energy markets
- The empowerment of energy regulators

These themes included a discussion by reference to the "Paris Agreement" on decarbonisation of the economy, mainly in the power sector. The topics are discussed in more detail below, including recommended regulatory policies and tools.

Clean and Efficient Energy

The Paris Agreement of December 2015 established that it is necessary to set national and multinational long-term targets in order to reduce greenhouse gas emissions (GHGs). To fulfil these targets, an energy transition plan toward clean energy integration by 2050 is needed.

From an energy perspective, climate change and security of supply are the most important challenges to Iberoamerican countries because both have a direct impact on the local environment and hydropower. Hence, most countries have set medium-long term targets to reduce GHGs, adding to the traditional energy policy targets such as universal access to energy, affordability, security of supply and competitiveness.

Renewable electricity is playing a major role in the energy transition. Solar and wind power have some environmental advantages and due to broader deployment, have become cost competitive.

On the other hand, increasing energy efficiency in a cost effective manner could allow for demand-side participation in wholesale electricity markets, which could provide opportunities to reduce bills and help network operators to adequately manage variations in renewable generation.

In recent years, regulators in the **United States** as well as industry leaders have been focused on navigating the dynamic shift toward clean and efficient energy production, delivery and consumption for many reasons, included but not limited to, economics, environmental to ensure resource diversity. In addition, energy storage is being more widely developed and federal regulators have begun the challenging task of implementing policies and directing process improvements at the regional level to remove barriers that impede the integration of this unique resource.

The case-study provided on **Costa Rica** is a good example of the major developments, benefits and challenges with respect to renewable generation. It shows how policy has facilitated a dramatic increase in renewable penetration.

The expansion of renewables using cost-efficient mechanisms: auctions

Iberoamerica is the most renewable region on the planet with 64% of electricity demand in 2014. On the regulation side, there are some examples of recent well-regulated auctions for new renewable capacity, with very successful results, such as: México, Argentina, Brazil, Perú and Chile.

The case study of **Chile** offers the following conclusions:

- ✓ Energy tenders give the opportunity to acquire 20 year PPA's and materialize new generation investments.
- ✓ This year's Tender Report will update the demand projection in order to define the best time and amount of energy to tender.
- ✓ Innovative hourly energy blocks, allow different generation projects and NCRE technologies to participate.
- ✓ Recent regulatory changes incorporate new elements to reduce risks faced by generators and improve investment conditions.

In the **United States**, renewable energy development has been quite prolific, bringing unprecedented amounts of wind onto the grid while maintaining reliability. Distributed energy resources, such as wind and solar, are being developed successfully at the retail/distribution level and are transforming regional transmission planning and energy market processes. Regional wholesale electricity markets have developed processes which are still evolving to ensure smooth continued integration of renewables, which in one regional transmission organization reached a renewable penetration record of 69.44% in 2018.

Most states, but not all, have competitive aspects to their procurement regime for renewables. However, there is a significant diversity in approaches to generation

procurement, which are largely a function of State policy. Early efforts to encourage renewable energy led to the development of U.S. policies that have mandatory purchase obligations on utilities and rely on administratively determined rates by state commissions. They act similarly to a feed-in tariff, but is conceptually limited to "avoided cost," or what the utility is otherwise projected to spend on an equivalent amount of energy and capacity. This approach became the traditional way but not necessarily the optimal way.

As a result, more states have moved toward competitive solicitations and auctions to procure renewable energy, although the experience is uneven because of the different business models for the utility industry that exist across the United States. Policymakers of vertically integrated states (the owners of transmission & distribution also have a monopoly or near-monopoly on retail supply of electricity, and thus either own or contract for all the generation) impose direct requirements on utilities to procure a certain percentage of renewable energy through Renewable Portfolio Standards (RPS). Tools like Integrated Resource Plans (IRP) are used to identify the least-cost approach to meeting customers' collective supply needs, within the constraint of public policy requirements. The results of the IRP are generally used as inputs for request for proposals for renewable energy procurement.

In restructured states the procurement process is influenced by the electricity market design and these markets usually rely on longer-term competitive processes to bring renewables online, as opposed to market pricing (regardless of whether carbon is priced).

States like New Jersey, Illinois, and New York are increasingly returning to a type of cost-of-service regulation for certain non-carbon emitting resources, and targeting mandates for particular technologies, such as off-shore wind and storage. In addition, regional transmission organizations are actively considering how or whether to accommodate or mitigate the effects of state subsidies to renewable energy sources in their wholesale markets, which are jurisdictional to FERC.

In conclusion:

- ✓ Most States, but not all, have competitive attributes to their procurement regime for renewables.
- ✓ No State (except Texas) relies on true auctions for renewable procurement, and carbon pricing is not sufficient to induce quantities of renewables satisfactory to policymakers elsewhere
- ✓ RFPs are not auctions, but they are widely used and a 2nd-best for least-cost procurement
- ✓ There is a significant diversity in approaches to generation procurement, which is largely a function of the diversity of States

The development of infrastructure, mainly to integrate regional energy markets

The development of infrastructure, mainly to integrate regional energy markets, permit to increasing the guarantee of supply, the developing of regional markets, and the integration of renewables.

In the **United States**, regulators have worked to align the robustness of renewable energy development with policies and practical application in regional transmission planning and cost allocation processes. State regulators continue to address challenges associated with security of supply and ensuring a diverse resource mix while serving as active stakeholders in regional transmission planning constructs to ensure reliability and affordability. At the Federal level, after the implementation of Order 1000, regulators are assessing whether this policy initiative has reaped the necessary results to ensure that regional transmission projects are being built to move renewable energy where it is needed most.

Two policy targets in Iberoamerica are security of supply and an increase in energy efficiency. Most countries have tried to reinforce their transmission lines and have regulations, which has introduced national wholesale power markets. However, there is a lack of robust international interconnections and there are no regional power markets, except the **Central American Regional Electricity Market** (MER), and some bi-nationals power plants.

MER is a regional energy market based on an international agreement of six countries: Guatemala, El Salvador, Nicaragua, Honduras, Costa Rica and Panama. This market uses the Central American Electrical Interconnection System,(SIEPAC) and functions as a seventh market in addition to the wholesale market of the individual countries. In order to gain efficiency, it is necessary to harmonize the national markets and integrate them into the MER.

Taking into account the other international experiences and the potential benefits, it is recommended that in the Iberoamerican region develop regional power markets, such as the following:

- Andean Community of Nations (**ACN**) using an interconnection project through the Andes mountains (SINEA); and
- **MERCOSUR** countries

The case study of **Mexico** reveals the importance of removing pricecontrols to developing storage and transport infrastructure. There was no other way to promote its development apart from opening the market to new participants and determining prices according to market conditions.

Given the fact that México is a net importer of fuels, these markets require the development of more kilometers of pipelines to interconnect to the United States since it is Mexico's main supplier of imports. There is also a need to develop more storage

infrastructure, which will allow the penetration of more suppliers. The Energy Regulatory Commission of Mexico is committed to this purpose and is looking for the best price determination, contract terms, and mechanisms to efficiently allocate capacity of this infrastructure. The goal is to maximize the benefit to all market participants and most importantly guarantee access to the fuels at efficient costs, quality and quantity.

Regulatory Institutions - Roles and Powers

Several countries have established multi-sector regulatory bodies, which are able to use synergies between regulated sectors and develop consistent regulatory approaches and measures through the close cooperation of experts from different sectors.

American and Iberoamerican energy regulators emphasised that regulatory independence, along with appropriate legislative oversight powers and human resources for regulators, are essential to achieving competitive energy markets that work in consumer interests. It is particularly important for delivering the major infrastructure investment and market changes that are needed to support the clean energy transition for consumers.

According to the OECD, there are a number of key elements to ensure regulatory independence, including: an independent mandate of the board; a clear and objective appointment criteria with fixed terms; accountability and transparency of the body's decisions and procedures; qualified and adequate staff; transparency; an autonomous budget; and appeal procedures in independent courts.

Equally important, it is crucial that the regulators' role be respected and remain free from undue pressures from industry or special interests, to ensure that all regulatory processes instill confidence in its stakeholders and that regulators are empowered to make decisions that are in the public interest based on the law, precedent and policy, and the record before them.

Regulation has had a long-standing role within the **United States** beginning in the late 1800s with the regulation of railroads and occurring primarily at the state level. . However, challenges with corruption and financial scandals undermined public confidence in network industries and in response there was the development of "sunshine commissions" to "name and shame," with few formal powers, but investigative authorities in order to increase transparency and accountability within the sector.

With the introduction of economic regulation, commissions eventually acquired new, coercive powers, to set prices and standard practices introducing laws that require rates to be just and reasonable and non-discriminatory. For energy regulators, with the primary responsibility of ratemaking, regulators now have authority of determining whether costs are 'used and useful' investment costs and 'prudently incurred' costs.'

While state commissions remain responsible for retail sales, the Federal Energy Regulatory Commission (FERC) was established and given authority over transmission across the country, energy sales for resale (e.g., wholesale), mandatory reliability standards, siting and licensing of certain infrastructure (e.g., gas pipelines, LNG, and

hydroelectric dams). The North American Electric Reliability Corporation (NERC) the "electric reliability organization," is also an essential regulatory body and is the FERC-appointed standards organization for reliability of the Bulk Electric System.

In summary, the U.S. loosely regulates certain industries that were once closely regulated (railroads) and centrally regulates some industries that were once regulated more dispersedly by states (communications). However, energy, and in particular electricity, remains in the hands of governments and their regulatory commissions. While some States have "restructured" their industry, many States exercise close and substantial regulation of electric utilities.

National organizations like NARUC work to represent the interests of State Commissions and exist to serve the public interest by improving the quality and effectiveness of public utility regulation. In line with the OECD, NARUC also believes that to establish a sustainable energy sector requires an independent and autonomous regulator with the authority to make decisions for the sector that are fair and reasonable, while promoting transparency to ensure that stakeholders, consumers are engaged with the decisions and changes within the sector that impact them.

Next Steps

ARIAE and NARUC participants welcomed the opportunity for a fruitful exchange on these timely issues and looks forward to continuing their dialogue on energy regulation developments and the approaches applied in their respective regions. Participants appreciated this international exchange and encourage its further engagement, in particular through the successful International Confederation of Energy Regulators (ICER). The 8th World Forum on Energy Regulation in Lima in 2021 will be a further occasion to pursue their collaboration. ARIAE and NARUC plan to continue this bilateral engagement in the near future.