



HLDE Virtual Side Event
“Energy Compact of the Global Sustainable Water and Energy Solutions Network”

Summary

24 September 2021

7:00 – 8:15 AM NY Time

1. The Global Sustainable Water and Energy Solutions Network held a side event of the High-Level Dialogue on Energy on 24 September 2021 from 7:00 to 8:15 AM. The event served to launch and discuss the Energy Compact of the network, which consists of voluntary commitments by Itaipu Binacional (the binational hydropower organization of Brazil and Paraguay), ASAZGUA (the Sugar Agroindustry Association of Guatemala), and Canal de Isabel II (the water company of the Community of Madrid).
2. The event was moderated by Mr. Manuel Menéndez Prieto, Special Advisor of the Cabinet of the Secretary of State for the Environment, Ministry for the Ecological Transition and the Demographic Challenge of Spain and the Vice-President of the UNESCO Intergovernmental Hydrological Programme. Mr. Menéndez began by giving an overview of the 2030 Agenda and SDG7. He also emphasized that today, with continuing crises in the areas of water and energy, as well as newer ones due to the COVID-19 pandemic, ambitious goals, such as the Energy Compacts, are vital. He thanked the attendees of the event and applauded the three members of the network whose commitments make up the Energy Compact.
3. Mr. Liu Zhenmin, Under-Secretary-General of the Department of Economic and Social Affairs and the Secretary-General of the High-Level Dialogue, gave opening remarks. He began by remarking that the HLDE is the first international conference on energy at this level in 40 years, and that the day was booked full of impressive speakers and commitments, including this Energy Compact by the network. The need for comprehensive energy solutions is evident, he said, from the frequency of natural disasters we have witnessed in the past months, many resulting in displaced populations. 80% of greenhouse gas emissions come from energy, and we need to transform the sector to improve this metric, while also helping the 760 million people who live without access to electricity and the 2.6 billion who lack clean cooking solutions. Energy is interconnected with both these issues and more – poverty, food security, and health, as a few examples – and illustrate the need for a transformative approach. Mr. Liu remarked that much of the discussion of the HLDE would revolve around the published roadmaps for 2030 Agenda and Paris Agreement goals. Those agreements lay out a 9-year journey for just, inclusive solutions leaving no one behind. The HLDE is not the end of this process, but it is the best chance for people to step up commitments. Energy Compacts are an important mechanism, which will allow scale-up and the implementation to be effective. Similarly, making the most of interlinkages between goals, like the network does, is necessary. The network’s

Energy Compact actively impacts multiple SDG goals and should help to dramatically raise ambitions in the coming years. Mr. Liu closed by thanking the attendees and the members of the network.

4. Ms. Isabelle Marantz of the Global Sustainable Water and Energy Solutions Network presented an overview of the Global Sustainable Water and Energy Solutions Network. The network was founded by UN DESA and Itaipu Binacional, and now consists of over 20 diverse members. The network primarily serves to share best practices, reports, and data and to assist members in capacity building, advocacy, communications, and mobilizing and scaling up multi-stakeholder actions. The network has a website which includes a knowledge platform and is also a place to share information on network activities, case studies and other useful resources. Ms. Marantz then spoke on the High Level Dialogue on Energy, which represents a historic opportunity to increase the scale and speed of sustainable energy solutions. She explained that the Energy Compact program consists of voluntary commitments from member states and other stakeholders, with the goal of increasing commitment to SDG7 and climate goals. The HLDE is a major opportunity to promote Energy Compacts, but more will be submitted in the coming years and will be monitored. The network's Energy Compact, she explained, includes commitments from 3 members: Itaipu Binacional, ASAZGUA, and Canal de Isabel II. These organizations all made separate, individual commitments, and the network itself also has committed to support "an integrated approach to water and energy," "access to energy, increase in renewable energy and increase in energy efficiency," "new partnerships supporting this Energy Compact," and "expansion of the Energy Compact with more commitments from other members." Overall, the network also recognizes the integrated need to achieve all SDGs.

Mr. João Francisco Ferreira, the Brazilian General Director of Itaipu Binacional, thanked the network and attendees. Itaipu Binacional was founded 47 years ago as a partnership between Brazil and Paraguay, and the Global Sustainable Water and Energy Solutions Network was founded in 2018 as a partnership with UN DESA. These developments highlight the importance of collaboration in the water and energy sectors. Mr. Ferreira emphasized Brazil's responsibility to be a leader in the dialogue, and how important is the access to energy services and the promotion of the SDGs. He also explained that Brazil has a large proportion of its energy in hydroelectric, renewables, and biofuel, making them a leader in the area. The Itaipu dam alone can prevent the emission of 94 million additional tons of CO₂, annually in a productive year. It is the largest generator of clean and renewable energy in the world, with more than 2,800 million MWh generated since the start of production. And despite this year droughts, is still setting records, this time productivity records. This is largely due to maintenance, operation management, and the increasing efficiency in the use of water resources. In order to advance the energy transition, emission reduction must go beyond energy, however. Mr. Ferreira emphasized nature-based solutions and ecosystem conservation. "Water is a raw material for energy," he said, and its preservation is key. To this point, Itaipu has several initiatives that focus on water security and the wellbeing of the surrounding ecosystems and communities. These communities are now active partners in much of Itaipu's work. Going forward, Itaipu is also dedicated to promote the use of renewable energy beyond hydroelectricity, contributing to the transition and UN discussions on energy, and taking a leadership role. Notably, Itaipu's Energy Compact commitments include dedicating \$200 million in Paraguay and \$200 in Brazil to upgrade power transmission systems associated with the Itaipu power plant. In Brazil, these upgrades to the outdated FURNAS owned system will benefit more than 50 million Brazilians.

5. Mr. Manuel Maria Cáceres, the Paraguayan General Director of Itaipu Binacional, thanked Mr. Ferreira and the network for their contributions. The investment in infrastructure and energy systems mentioned by Mr. Ferreira aims to modernize the high volt direct current system in Brazil, benefitting millions. Mr. Cáceres explained that Paraguay has a 100% renewable electricity grid and is a major exporter of electricity. Major planned investments aim to improve commercial management systems, reinforce transmission lines, and more. Overall, more than 6 million Paraguayans will benefit. Another program that Itaipu aims to develop is less focused on infrastructure and more on developing human capacity. This program is dedicated to building training programs related to energy efficiency and the energy transition, with a focus on the Latin American region (specifically Brazil and Paraguay), but it should reach around the world. Through educational courses and field visits, this capacity development program should directly help 2,500 people per year. The focus that Itaipu has on people in the nearby communities and the nearby ecosystem (Itaipu is surrounded by more than 100,000 acres of virgin forest) sets it apart from others and informs its focus on sustainability.

6. Mr. Pascual Fernández, the CEO of Canal de Isabel II, began by explaining that his company is 100% publicly owned, and manages water not only in the region of Madrid but in other parts of the world as well. Since its creation 170 years ago, Canal de Isabel II has come to be a leading company in the sector and has a proven business model. Sustainability is a core value, he explained, and is reflected in their strategic plan. Although Canal de Isabel II's scale of power production is much smaller than Itaipu's, they deal more in the entire integrated water cycle, and have plans to expand. They are also the number one producer of biogas in Spain and have 2 cogeneration plants to further their energy production. Throughout his talk, Mr. Fernández emphasized the importance interconnection and regional integration, which has played a major role in his company's success. Looking forward, Canal de Isabel II aims to be self-sufficient in terms of energy production. Through August of this year, they produced 92 of the energy needed to operate, and by 2030 they aim to be completely self-sufficient. In order to do so, they will increase installed capacity from 107 to 157 megawatts in 2030, reducing network consumption and mitigating greenhouse gas emissions in the process. Production can be maximized by taking advantage of existing available surfaces, such as rooftops, water tanks, and reservoirs, for solar installations. In addition, Canal de Isabel II plans to save 6.8% of current energy expenditure by 2025 (34,830 MWh in relation to base consumption). An improved Energy Hub, or data repository, will help this mission. Finally, Canal de Isabel II also aims to maximize circular economy. As Mr. Fernández said, they are "not managing waste, but managing resources." By repurposing waste products into biogas and agricultural products, as well as by developing a green hydrogen a system using reclaimed water, Canal de Isabel II can pave the way for a major energy transition in Europe and beyond. Mr. Fernández closed by reaffirming support for international cooperation projects such as the network and noted that participation in these partnerships leads to the development of projects such as previous SDG6 plans and the current Energy Compact. Canal de Isabel II releases yearly sustainability reports which are a good source for more information.

7. Mr. Luis Miguel Paiz, the General Manager of ASAZGUA, thanked the speakers and attendees and spoke on the role of ASAZGUA in Guatemala, where it is an industry leader and reliably plays a role

in innovation and investment, as well as production. In 2020, ASAZGUA produced 173 million liters of ethanol, covered up to 30% of the national electricity demand during harvest season, and used 100% of the biomass obtained after crushing sugarcane to produce energy. Using sugarcane biomass instead of coal avoided releasing over 4 million tons of CO₂. These processes were important, given the decades of power instability during dry season in Guatemala. Similarly to Canal de Isabel II, ASAZGUA plans to be self-sufficient in terms of electricity by 2030, which will all be renewable. In 2020, their baseline was 93%. In addition, they plan to increase the production of ethanol by 20% to cover local and international demand. ASAZGUA is also working on legislation for a 10% ethanol blend mandate on the internal market, which could eliminate 233,333 tons of CO₂ emissions per year and help the country reach its Paris Agreement goals. Finally, Mr. Paiz mentioned the planned commitments to innovation. Namely, ASAZGUA will increase its investment in research and development by 30%, especially relating to acquisition, efficient use, and management of energy. Resources will be directed to Cengicaña, the sugar cane research center of Guatemala, for, among other things, research into breeds of sugar cane that are resistant to climate change.

8. Ms. Radia Sedaoui, the Chief of the Energy Section of the Climate Change and Natural Resource Sustainability Cluster of UN ESCWA, thanked the speakers and posed a discussion question. All these organizations, she said, are models of collaboration with integrated approaches between sectors. She asked the speakers how to best address tradeoffs when it comes to these interconnected sectors.
 - a. Mr. Ferreira emphasized the importance of getting related stakeholders on board, such as was done with neighboring communities to the Itaipu dam. Potential tradeoffs are clear in the specific instance of the dam – erosion and waste, for instance. By engaging with those communities, Itaipu is able to offset the lack of sediment outflow with well-managed agriculture and treat waste where necessary in an integrated manner with stakeholders. These communities have received not only funding but training and support for years, and these investments have been hugely beneficial over time.
 - b. Mr. Fernández noted that, while they are primarily a water company, Canal de Isabel II has also expanded into energy, and by engaging across sectors, organizations can get a better sense of tradeoffs and synergies. In addition, increasing efficiency and reducing consumption can also help to offset tradeoffs.

9. Ms. Bianca Brasil, the Program Manager of the Business Engagement office of the Secretariat of the Convention on Biological Diversity, noted that energy reaches into other sectors, and that energy can also be responsible for improving livelihoods, ensuring economic growth, and protecting the environment. She asked about the social, environmental, and economic impact of Itaipu’s Energy Compact commitments.
 - a. Mr. Cáceres said that the Itaipu dam has generated some of the most energy in history – 2.8 billion MW since 1984, which is over 90% of Paraguay’s needs and 10% of Brazil’s, while being clean and renewable. In addition, the protected forest on the reservoir provides clean air for more than 28 million people every year and has been recognized by UNESCO. The energy commitments laid out in the Energy Compact today will serve to go beyond the sector and help further other goals and the 2030 Agenda overall.

10. Mr. Menéndez thanked the speakers and attendees again and noted that these concrete proposals will help to pave a way to our shared goals in 2030. He offered his congratulations to the participants of the network's Energy Compact and closed the virtual meeting.