We are a CEO-led alliance of leading global electricity companies at the heart of the electrification revolution. Our strength lies in our global membership, representing the world’s largest and most innovative utilities committed to sustainable electrification.
Our concrete actions promote zero-carbon electricity generation, energy efficiency and electrification as pathways to reach global development and climate goals.
Message from the Chairman

Enel has been proud to hold the chairmanship of the Global Sustainable Electricity Partnership (GSEP) for the year 2019–2020. As the power system becomes increasingly complex and intricate, we have chosen to lead GSEP’s work under the theme of “Building the electrification alliance: bridging along and across value chains”.

The most referenced global energy scenarios targeting the achievement of climate change goals rely on the increasing role that renewables and electrification will play in the future energy system. Focusing on possible cross-sectorial and value-chain partnerships that can be formed to jointly meet challenges, find common incentives and drivers, and accelerate the pace of electrification will be essential to achieve the Paris agreement goals. Well focused actions can create enabling environments and a systemic approach to electrification, by connecting different sectors and creating the conditions to make them work together.

As the COVID-19 outbreak hit communities throughout the world, it has become clear that nations have become increasingly dependent on electricity. It has become obvious that we need to come together to support the reliable, safe and clean electrification of society. Utilities have proved resilient through this crisis as, while ensuring the security of their employees, they powered hospitals and medical equipment necessary to save lives, as they allowed for authorities and communities to keep the communication channels open, and as they supported technologies for online businesses and telework to sustain economic activity.

Through the rapid evolution of the energy industry, GSEP has proved the importance of the electricity sector and the relevance of utilities as backbones of our society. We are excited to continue our collaboration with all members but also with other strategic partners outside the utility sector to discuss and identify concrete opportunities to accelerate the electrification journey.

Francesco Venturini
Chief Executive Officer, Enel X
GSEP Chairman, 2019–2020
Message from the Executive Director

The past year was marked by the achievement of a major milestone in our organization, as we transform into a global electrification hub dedicated to accelerating the pace of electrification worldwide. Now, together with our members and partners, we collect, examine, and promote the most efficient policy enablers that will allow all actors along the electricity value chain to further advance beneficial electrification. As a team, we are thrilled to have delivered, under the impulse of Enel, a robust work program which stands as a stepping stone towards a series of ambitious actions that will be led by the incoming chair AEP, all under the same vision of building a global electrification alliance.

Another highlight of the year was the introduction of the first electric bus and charging infrastructure into Lima’s municipal transit system. Our actions directly support the Peruvian government in forging an entry path for electric mobility technology in the country. The project’s inauguration gained significant momentum with media coverage reaching nearly 11 million people worldwide.

We are also proud to have awarded ten Master’s scholarships to outstanding students from developing countries and help build the next generation of globally-oriented practitioners and researchers in the field of sustainable electricity.

Although the outbreak of the pandemic in early 2020 forced us to transform a number of activities, we remain committed to supporting our forward-looking group of companies in ensuring communities around the world enjoy the social, environmental, and economic benefits of reliable, equitable, and affordable electrification.

Wishing you an insightful read.

Martine Provost – Executive Director, GSEP
Global utility CEOs agree that collaboration is key to accelerate efficient electrification of our societies

– OSAKA SUMMIT –

The GSEP CEOs issued a Summit Statement in which they agreed that progress in achieving climate and sustainable development goals can only be made if all energy providers, policymakers, customers, technology providers and other actors collaborate to strongly accelerate efficient electrification of our societies.

GSEP’s 28th annual CEO Summit was hosted on June 3–4, 2019 by Kansai Electric Power. This flagship event brought together CEOs and senior executives of the world’s largest electricity companies at a time of great transformation for the global energy sector.
All actors of the value chain will need to respond together to the world’s increasing demand for cleaner, affordable and reliable energy – both on the generation side and in end-use sectors such as transport, buildings and industry.

Our leaders reiterated that policy makers have a crucial role to play in fostering long-term investments in our electricity infrastructure, innovation, and advanced technologies while ensuring adequate remuneration mechanisms and security of supply. They also encouraged policy makers to be sensitive to the need for electricity to be affordable.

Transforming the energy industry

Discussions at the Summit centered on the mega-trends that are structurally transforming the electricity sector: decarbonization, decentralization, digitalization, and deregulation and changing market design (including investment and financing).

Several illustrious guest speakers shared their perspectives on the changing energy industry.

Click here to learn more about the speakers.
Coordinating efforts along the electricity value chain to accelerate electrification

BRUSSELS ELECTRIFICATION DIALOGUE

GSEP’s Electrification Dialogues are a series of global high-level roundtable discussions on electrification engaging stakeholders in the power industry in mutual learning experiences to accelerate electrification as a vital pathway for decarbonization.

Following a successful first edition held in San Francisco, GSEP and Eurelectric with the support of EDF, Enel, Hydro-Québec and State Grid Corporation of China, hosted an Electrification Dialogue on June 17, 2019 as part of the EU Sustainable Energy Week (EUSEW) in Brussels, Belgium.

This Electrification Dialogue brought together electric utilities, technology developers, policymakers, end-use industries, and other energy-sector players to openly share their learnings and perspectives on electrification. Discussions focused on the technological and policy enablers that could accelerate electrification’s progress, as well as how coordinated efforts along the whole electricity value chain can accelerate electrification as a key vector for decarbonizing the economy.
Introducing the first electric bus to Lima’s public transit system to support Peru’s achievement of its climate goals

LIMA E-BUS PROJECT

The project aims at demystifying electric public transportation technology to the city’s authorities and encouraging a progressive, large-scale integration of electric buses in Peru’s transportation system, which will support the country’s commitment to fighting climate change.

The government of Peru strongly supports GSEP’s project and has included it in its Nationally Appropriate Mitigation Actions (NAMAs), as it considers transportation electrification an important step towards meeting its commitment.

Peru committed to reduce its carbon footprint by 30% before 2030.
On December 12, 2019, GSEP and member companies Enel X and Hydro-Québec have inaugurated the first electric bus in Lima’s public transit system with the collaboration of Protransporte and the Peruvian Ministries of Energy and Mines, Transport and Communications, and Environment.

The electric bus and charging infrastructure donated by GSEP have been specifically designed for Lima. The bus is operated by a local operator on one of the busiest arteries in the city, collecting real-time data on speed, battery performance, operations and environmental impact. The data from the first year will be analyzed and compiled into a replicability report to be submitted to the Peruvian government by the end of 2020.

Developing expertise on electric transportation in Peru

As part of the project, GSEP’s international experts held a training session in Lima, Peru on September 23-25, 2019 with 10 bus drivers who will operate the bus and a technical workshop on operation and maintenance of electric buses attended by 56 local bus operators, which have resulted in transferring knowledge and developing expertise on electric transportation in Peru. This knowledge transfer is essential to facilitate the integration of electric buses into the Peruvian transit system.
Committed to decarbonization
GSEP has created an indicator to follow the evolution of the electricity sector’s decarbonization because its members believe that decarbonizing the electricity they generate is one of the key pillars for achieving climate goals. They have shared that the combined carbon intensity of their generation mix is lower than the current world average and its percentage of low-emission electricity is well above the world average.

Showcasing the benefits of electrification
Progress in achieving climate and sustainable development goals can only be made if we accelerate cleaner energy generation and efficient electrification of end-use sectors such as transport, buildings and industry, coupled with grid innovations. GSEP has developed and shared inspirational success stories showcasing the concrete benefits of electrification.

Sharing strategic data and information to scale up the use of low-carbon electricity

As the voice of the electric utility industry, GSEP has created the Electrification Hub with the aim of sharing strategic electrification data and information to foster the low-carbon electrification of society.

Fostering effective public policies
Public policies are playing a central role in enabling electricity to make economies more competitive, improve quality of life in a more urbanized world, and better protect the environment and climate. GSEP has identified five key enablers for effective policies regarding electrification of end uses.
Creating a learning experience on solar and storage technologies for Uruguay’s power utility

- URUGUAY’S SOLAR AND STORAGE PROJECT -

GSEP has launched a project involving the installation of distributed energy resource (DER) systems using photovoltaic panels and batteries in two typical dairy farms in the Colonia Delta community, in Uruguay. The project aims at reducing the farms’ operating costs and improving the quality of life of farmers, but also at creating a learning experience for the Uruguayan power utility (UTE) about these technologies’ benefits and applications.

Developing guidelines to scale up grid integration of renewable energy sources

- JOINT REPORTS WITH THE WORLD BANK -

In July 2019, GSEP and the Energy Sector Management Assistance Program (ESMAP) of the World Bank released four guidance reports to assist countries in scaling up grid integration of renewable energy sources. These reports cover diverse subjects related to successfully integrating variable renewable energy into the electricity grid, including forecasting systems, grid integration requirements, compensation devices, and the types of technical studies that need to be performed to ensure the viability of the grid system.

Cleaner, efficient, flexible, reliable and affordable electricity is indispensable for climate protection, and a major driver of development and economic growth. In continuity with GSEP’s mission of promoting electrification and sustainable energy development, these studies aim at allowing countries and populations around the globe to benefit from GSEP’s unique pool of expertise and reap the social, economic and environmental benefits of electrification.
Powering developing countries’ next generation of innovators

Since 2001, the Education for Sustainable Energy Development (ESED) scholarship program has supported 130 students from developing countries pursuing studies in fields related to sustainable energy. These scholars are dedicated, intelligent, and inspiring youth whose ideas and ambition are creating a bright future for the electricity industry.

“We are facing a sustainability revolution as climate change is happening, and development of sustainable energy technologies is one of the key solutions. I am glad to be part of the solution and to help provide better living conditions for the next generation.”

Stephanie Rawi
2019 scholarship recipient from Indonesia

“It is clear that our world cannot always depend on unclean energy sources. My master’s study will equip me with the necessary knowledge to contribute to a smooth transition from fossil fuels to clean and sustainable energy sources using the existing grid.”

Mussie Abraham
2019 scholarship recipient from Eritrea

2020 scholarship recipients

- Gemechis Adugna from Ethiopia will pursue a Master’s in Renewable Energy Utilization and Management at the Hawassa University in Ethiopia.
- Souryadeep Basak from India is pursuing an M.Tech. in Renewable Energy Engineering and Management at The Energy and Resources Institute (TERI) School of Advanced Studies in India.
- Meijun Chen from China will pursue a Master’s in Energy Science and Technology at ETH Zurich in Switzerland.
- Ahmed Mohamed Ahmed Mostafa Elsherif from Egypt will pursue a Postgraduate Programme Renewable Energy (PPRE) at the Carl von Ossietzky Universität Oldenburg in Germany.
- Omar Farhat from Lebanon will pursue a Master’s in Mechanical Engineering at the American University of Beirut in Lebanon.
- Francis Adesayo Katende from Nigeria will pursue a Master in Sustainable Energy Systems at the Namibia University of Science and Technology (NUST).
- Doorgeshwaree Jaggeshar from Mauritius will pursue an M.Sc. in Renewable Energy Systems Technology at the Loughborough University in the United Kingdom.
- Valeria Nuñez Andujo from Mexico will pursue a Master of Science in Sustainable Energy Systems at the University of Edinburgh in the United Kingdom.
- María José Parajeles Herrera from Costa Rica will pursue a Master of Science in Sustainable Energy Futures at Imperial College London in the United Kingdom.
- Muhammed Atif Saes from Afghanistan will pursue the Master of Science Engineers for Smart Cities at the Université Côte d’Azur in France.