



PRESS RELEASE



ENEL GRIDS DEVELOPS A NEW LOW-CARBON TRANSFORMER FOR INCREASINGLY SUSTAINABLE NETWORKS

- *Reducing waste, improving worker safety and radically reducing emissions are among the most important features of the new transformer developed by the Enel Group, a global leader in the management of electricity distribution networks*
- *Delivered in partnership with Hitachi Energy, a technology and market leader in transmission, distribution and grid automation solutions, the innovative system is part of Enel's Net Zero commitment to decarbonizing infrastructure*

Rome, July 14th, 2022 - The first Eco-design High Voltage/Medium Voltage (HV/MV) low loss transformer is insulated with natural ester, a totally biodegradable vegetable oil, and generates reduced CO₂ emissions. It is the result of the joint work of Enel Grids and Hitachi Energy, who have achieved a key result in terms of both environmental sustainability and safety. This is a significant engineering achievement in keeping with Enel's Net Zero strategy, which provides for a significant evolution of electricity distribution infrastructure towards the goal of carbon-free networks.

The joint work of the Enel Grids and Hitachi Energy teams has led to the approval of a transformer with a nominal power rating of 40 MVA, an innovative technological solution with the aim of gradually reducing the infrastructure's indirect emissions to zero (Scope 3): The use of natural ester as an insulator instead of traditional mineral oil results in a significantly reduced carbon footprint, from production to disposal. This natural dielectric liquid also has much better fire resistance qualities than mineral oil, and therefore also offers important advantages from the point of view of fire prevention. The development and implementation of the project took place at the Hitachi Energy plant in Monselice, in the province of Padua, Italy, while the actual commissioning of the transformer will take place at the Primary Substation in Caltagirone, in the province of Catania. This is a cutting-edge solution that, among other things, is another innovation first for the distribution networks.

*"Our goal of a zero-emission network is feasible and attainable and involves a technological innovation challenge to design and build electricity networks that combine environmental friendliness, efficiency and safety," commented **Antonio Cammisecra**, Head of Enel Grids. "Fostering the energy transition means striving for decarbonization across the Group's entire value chain. This is why we launched the Net Zero strategy for electricity networks, with the aim of progressively reducing the carbon footprint of our business to zero by working with like-minded partners such as Hitachi. It is therefore a source of great satisfaction to announce the approval of the first HV/MV Eco-design transformer, a significant step towards more sustainable and resilient networks.*

"We believe that partnership and the close involvement of all stakeholders is crucial for the energy transition. Hitachi Energy works with partners such as Enel Grids to build a sustainable energy future in which decarbonization, the protection of ecosystems, the safety of people and the responsible use of



resources play a crucial role. Sustainability is also driven by innovation, and these jointly developed eco-efficient power transformers, which are part of our EconiQ portfolio of outstanding environmental performance products, services and solutions, are an example of this,” said **Bruno Melles**, Head of the Transformer Business Unit at Hitachi Energy.

The transformer is designed to be fully interchangeable with conventional transformers, and therefore will not require any on-site adaptation. The transformer set up at the Monselice plant is just the first in a series of similar initiatives by Enel Grids: another 20 natural ester insulated transformers have already been commissioned, with the aim of installing them in Europe and South America. The transition of large power transformers takes longer and is therefore taking place more gradually, but for distribution network transformers, Enel Grids has already adopted a global strategy to supply 50% of them in natural gas.

Enel Grids is Enel's global division dedicated to the management of the electricity distribution service worldwide, through thirteen companies with offices in eight countries, employing more than 33,000 colleagues and around 60,000 people who everyday work on the Group's 2.2 million kilometers of electricity networks serving 75 million customers. The Enel Group is the largest private operator in this sector, and Grid Futurability, the Enel Grids Business Line's industrial and technological roadmap, is set to transform electricity networks into inclusive and participatory platforms, promoting the involvement and interaction of all categories of stakeholders, opening up new opportunities in terms of innovative business models, and putting the customer and the safety of communities, operators and natural ecosystems at the heart of the infrastructure. Enel Grids' aim is to ensure that the countries in which it operates have electricity distribution services based on an infrastructure that is resilient, sustainable, and open to the involvement of the many new players entering the energy world.

Hitachi Energy Ltd. is a global technology leader that is advancing a sustainable energy future for all. The company serves customers in the utility, industry and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, it pioneers technologies and enables the digital transformation required to accelerate the energy transition towards a carbon-neutral future. Hitachi Energy is advancing the world's energy system to become more sustainable, flexible and secure whilst balancing social, environmental and economic value. With a proven track record and unparalleled installed base in more than 140 countries, the company has its headquarters in Switzerland, employing around 38,000 people in 90 countries and generating business volumes of approximately \$10 billion USD.

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Hitachi drives Social Innovation Business, creating a sustainable society with data and technology. We will solve customers' and society's challenges with Lumada solutions leveraging IT, OT (Operational Technology) and products, under the business structure of Digital Systems & Services, Green Energy & Mobility, Connective Industries and Automotive Systems. Driven by green, digital, and innovation, we aim for growth through collaboration with our customers. The company's consolidated revenues for fiscal year 2021 (ended 31 March 2022) totaled 10,264.6 billion yen (\$84,136 million USD), with 853 consolidated subsidiaries and approximately 370,000 employees worldwide. For more information on Hitachi, please visit the company's website at <https://www.hitachi.com>



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