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Siemens completes Azores sustainable power project, creating a blueprint for other islands

- **Project on Terceira handed over to Portuguese energy company EDA – Electricidade dos Açores**
- **Software from Siemens Xcelerator portfolio and 15 MW battery storage boost share of renewables, improve flexibility and resilience of power grid**
- **Expected annual CO₂ savings of more than 3,600 tons**

Siemens Smart Infrastructure, in partnership with Fluence, a market leader in energy storage established in 2018 by Siemens and AES, has successfully completed and handed over a sustainable energy project on the Azores island of Terceira to the Portuguese energy provider EDA – Electricidade dos Açores. The project combines software that forecasts energy consumption and production with a powerful battery-based energy storage system, allowing for greater and more reliable integration of renewable energy sources such as wind or solar into the power grid. This combination is expected to reduce CO₂ emissions by more than 3,600 tons per year. The Spectrum Power Microgrid Management System (MGMS) software implemented for EDA is part of the Siemens Xcelerator portfolio which supports the digital transformation of power utilities worldwide.

“With the power of software and reliable energy storage, Siemens is helping customers like EDA sustainably transform the energy system on Terceira,” said Sabine Erlinghagen, CEO of Siemens Grid Software. “The project in the Azores demonstrates how to steadily expand renewables and integrate them into the power grid while reducing dependencies on fossil fuels and lowering CO₂ emissions. Expertise in connecting software and hardware plays a central role in the energy transition. We look forward to other challenging and successful projects in the Azores and around the world.”

“This project is an important step towards a sustainable future for Terceira island and the Azores,” said Nuno Pimentel, CEO of EDA. “The project allows us to better address the instability caused by fluctuating renewable resources like wind energy and can replace the diesel spinning reserve needed to cope with the challenges of maintaining grid stability and the power quality requirements of an isolated system like ours at all times.”

“Battery-based energy storage is critical to increasing the share of renewables and decarbonizing island power systems. Fluence is proud to have collaborated with Siemens to support EDA in their drive to innovate and lead the energy transition,” said Paul McCusker, SVP & EMEA President at Fluence.

The Azores have nine isolated autonomous energy systems with great potential for renewable energy, mainly from wind, solar, and geothermal sources. The challenge was to find the right balance between energy production and consumption in the face of sharply fluctuating feed-in and demand cycles. The project team worked with the customer with the goal of providing a more secure power supply for island residents while steadily increasing the share of renewables in the electricity mix to up to 50 percent.

Since 2018, based on their knowledge and experience in the field of Battery Energy Storage Systems (BESS), the consulting team of Siemens Power Technologies International (PTI) has performed several BESS sizing and integration studies for EDA. These studies aim to find the solution that is best suited technically and economically, assess viability, and specify the sizing and technical requirements as a basis for tenders. During the implementation stage, PTI is supporting EDA with BESS dynamic and integration studies. Different sets of scenarios are considered in order to evaluate BESS response and ensure reliability, stability and safety of the entire electrical system.

The Spectrum Power Microgrid Management System (MGMS) from Siemens deployed on Terceira ensures optimal interaction between all power generation assets, battery storage and power consumption. It enables real-time monitoring and control of the entire infrastructure as well as hourly or daily forecasts regarding production, consumption, and storage use. These forecasts are based on a variety

of data, including weather information and historical data. The software allows the operator to manage and optimize the complete microgrid.

The 15-megawatt battery-based storage system supplied by Fluence is one of the largest stand-alone projects of this type (on an island) in Europe. Fluence's Gridstack system will deliver grid forming, reactive power and short circuit capabilities. This allows excess renewable energy to be captured and then fed back into the grid when not enough power is available to meet demand, reducing the production of energy from fossil fuel sources. The modular battery storage system can be expanded as needed.

This press release as well as press pictures and an infographic are available at <https://sie.ag/3F8YFBw>

You can find more information about Spectrum Power MGMS here:

www.siemens.com/mgms

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Siemens Smart Infrastructure (SI) is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward protecting the planet. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland. As of September 30, 2022, the business had around 72,700 employees worldwide.

Siemens AG (Berlin and Munich) is a technology company focused on industry, infrastructure, transport, and healthcare. From more resource-efficient factories, resilient supply chains, and smarter buildings and grids, to cleaner and more comfortable transportation as well as advanced healthcare, the company creates technology with purpose adding real value for customers. By combining the real and the digital worlds, Siemens empowers its customers to transform their industries and markets, helping them to transform the everyday for billions of people. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a globally leading medical

technology provider shaping the future of healthcare. In addition, Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power.

In fiscal 2022, which ended on September 30, 2022, the Siemens Group generated revenue of €72.0 billion and net income of €4.4 billion. As of September 30, 2022, the company had around 311,000 employees worldwide. Further information is available on the Internet at www.siemens.com.