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EGAT deploys Siemens' software solutions for world's largest Hydro-Floating Solar Hybrid Project

- **First pilot project with a solar power generation capacity of 45 megawatts and hydroelectric capacity of 36 megawatts in Thailand**
- **Software enables use of real-time data for analytics and decision making**
- **Driving clean energy use and reducing carbon emissions**

The Electricity Generating Authority of Thailand (EGAT) has moved forward with its policy of using clean energy and reducing carbon dioxide emissions with smart technology by deploying Siemens' SICAM Microgrid Control and Photovoltaic Plant Control to balance the energy mix generated by the world's largest Hydro-Floating Solar Hybrid Project at Sirindhorn Dam, Ubon Ratchathani Province. The project with a solar power generation capacity of 45 megawatts and a hydroelectric capacity of 36 megawatts, capable of generating electricity from renewable sources day and night, recently began commercial operation, acclaimed as the first of its kind in Thailand.

The energy ecosystem in Thailand is changing rapidly as technological innovations transform energy management. Thailand has stepped up to increasingly generate electricity with renewable energy by using integrated hybrid technology to meet the needs for decentralization, decarbonization, digitalization and smart electrification. This will enable the country to transition to electric power generation in a new context that requires energy stability and security amid economic, social, and environmental changes.

Prasertsak Cherngchawano, EGAT Deputy Governor - Power Plant Development and Renewable Energy, said, "EGAT is committed to grid modernization by leveraging various technologies and innovations. Our main goal is to promote the

use of clean energy and reduce carbon emissions to net zero (Net Zero Emissions) in the future in accordance with the National Energy Plan.”

“EGAT plans to implement similar projects at other nine dams nationwide, with a total capacity of 2,725 megawatts and is in consideration to expand an addition of 5,000 megawatts. This plan is significant first step toward the true carbon neutrality society,” Prasertsak added.

Siemens is responsible for installing, testing, and commissioning the Microgrid Control that works together with Photovoltaic Plant Control systems for the Hydro-Floating Solar Hybrid Project at Sirindhorn Dam. The company deployed and fully activated the Control systems on October, 31 2021, and it has been in commercial operation since then. In addition, Siemens is installing DEOP, the cloud-based software for the optimization of distributed energy resources. DEOP 's capability to present real-time hybrid power distribution data on dashboard helps EGAT manage power distribution more efficiently.

Suwannee Singluedej, President & CEO of Siemens Thailand, said, “Siemens Thailand is excited to work with EGAT for the Hydro-Floating Solar Hybrid Project. As a global leader in smart energy management and one of the first companies to announce a commitment to achieving Net Zero Emissions by 2030, Siemens is positioned to support EGAT. While maximizing efficiency in managing electricity generated from the two sources and achieving its goals of reducing carbon emissions, EGAT increases the use of clean energy for the benefits of the country, community and general public.”

“Siemens' combination of Microgrid Control, Photovoltaic Plant Control and DEOP enables EGAT's control center to effectively use real-time data for analytics and decision making for appropriate energy management, for example, integrating various forms of electricity generation, such as renewable energy from solar panels and hydropower from dams, so as to increase the stability of the power system and cater to growing consumer demand,” Suwannee added.

The Hydro-Floating Solar Hybrid Project at Sirindhorn Dam is the first installation of Microgrid Control, Photovoltaic Plant Control and DEOP in Thailand. With the capabilities the controllers and the cloud-based DEOP software, operators can use a dashboard to monitor important parameters including status of electrical

equipment, electric power generation, weather measurement and electric power generation forecast. These solutions can properly address EGAT's needs for efficiently managing, forecasting, and supporting the commercial distribution of large amounts of electricity.

This press release and a press picture is available at <https://sie.ag/355QtCT>

For more information about Siemens Smart Infrastructure, see www.siemens.com/smartinfrastructure

For further information on smart grids, please see <https://new.siemens.com/global/en/products/energy/topics/smart-grid.html>

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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, 2021, the business had around 70,400 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 2021, which ended on September 30, 2021, the Siemens Group generated revenue of €62.3 billion and net income of €6.7 billion. As of September 30, 2021, the company had around 303,000 employees worldwide. Further information is available on the Internet at www.siemens.com.