PRESS RELEASE

The Dialogue on:
"Virtual power plant and Energy storage
Digital transformation trends for Vietnam's power system"

The energy transition is happening rapidly in Vietnam, demonstrating the ability to reach the target of 30% total power generation from clean and environmentally-friendly resources by 2030, as stated in Resolution 55-NQ/TW of the Politburo. However, despite advancements in the power grid infrastructure development, the growth of distributed power sources in a short period has brought challenges to the quality and stability of the national grid system's operation. Related issues include the variability of output capacity, exceeds of power generation compared to demand, substation overload, and pressure on the transmission and distribution grid…

Since February 2021, the documents issued by the National Load Dispatch Center of Vietnam have requested the generators to coordinate in operation to avoid regional grids overload. Aside from investment in upgrading infrastructures to operate the national power system in a safe, stable, and continuous manner, Vietnam should also consider and apply new technology and policy solutions for the power sector to avert the waste of social resources.

In this context, the Vietnam Initiative for Energy Transition (VIET) has conducted several related technology and policy studies, which are the basis for the Dialogue on **"Virtual power plant and Energy storage - Digital transformation trends for Vietnam's power system".**

At the Dialogue, MSc. Duong Viet Duc, Power Grid System Expert from the National Power Transmission Corporation (EVN NPT), presented the overview of the power transmission system in Vietnam. He provided the context and essential information on the issues faced by the current grid infrastructures and towards new technological solutions in the following presentations by Dr. Nguyen Duc Tuyen on energy storage systems and Dr. Tran Thai Trung on the virtual power plant.

With the view that the energy storage system should be seen as a solution to increase flexibility and support the power system's operation, the presentation on "Energy Storage System: Recommendation on Technology, Financial, and Legal Mechanism Support for Vietnam" highlighted policy recommendations on developing a roadmap for an energy storage system in the short, medium, and long term. From the policy's perspective, the research team suggests that the function of the energy storage system should be linked to the pricing of ancillary services to encourage investment and assure economic efficiency.

From the aspect that a competitive power market must operate flexibly to fulfill actual requirements, the research team has also offered solutions to deploy virtual power plant (VPP) technology to aggregate individual power generating sources with a capacity of less than 30 MW. These generators do not participate in the power market because of their small capacity. Applying VPP can balance supply and demand between distributed generators and consumers with various power use patterns. Dr. Tran Thai Trung, VIETSE's Power System Expert,

delivered a concise presentation on the concept, structure, and operation of VPP. He also presented analyses on the lessons learned from international experiences, the prospect of deploying VPP in Vietnam together with technical and policy requirements.

With the key message that digital transformation should occur concurrently with new technical solutions in the power sector, Mrs. Ngo To Nhien moderated the dialogue session with the participation of 250 attendees. The enlightening exchanges among policymakers, experts, and businesses in the energy sector brought a multi-dimensional analysis of the applicability of new technologies such as Virtual Power Plants and roadmaps for the development of electricity storage systems, ancillary services, solutions to increase system flexibility, and digital transformation in the power industry to apply IoT, AI, and blockchain. Distinctive panelists who participated in the discussion include:

- *Assoc. Prof. Nguyen Hong Phuong - Eindhoven University of Technology;*
- *Dr. Le Hong Lam - Power Market Expert, Danang University of Technology;*
- *Dr. Dinh Van Nguyen - Head of Hydrogen Department & Principal of OWC, AqualisBraemar LOC Group;*
- *Mr. Nguyen Quang Minh - Director of Power Market Development Research and Training Center (ERAV/CTED);*
- *Mr. Ngo Quoc Thai - Senior IT Expert, Independent consultant in E-GoV of The World Bank;*
- *Mr. Tran Tien Hoa - Smart Grids for Renewable Energy and Energy Efficiency (SGREEE), GIZ;*
- *Mr. David Surla - Deputy Director of EDF CIH (Centre d'Ingénierie Hydraulique).*

The participation of experienced experts has delivered a straightforward and insightful discussion with helpful information to all audiences. The presentations used in the Dialogue are available for download here.

Sincerely,