In order to reach the net zero target in Việt Nam and attract more investment in renewable energy, critical regulatory frameworks need to be developed and put in place to incentivise renewables and flexible assets, while creating a more competitive energy market. There should be additional mechanisms to continue the support for renewable energy development in Việt Nam, providing investment support for new projects and a clear pricing scheme. The increase in the share of renewables definitely will depend on the previously mentioned examples of successive policies. Flexible assets, such as grid balancing engines and energy storage, are critical for future power systems running on an increasing share of renewables. Therefore, it is crucial to develop mechanisms to ensure the financial viability of those assets.

In the long term, competitive wholesale markets with real time and short interval pricing should be developed, which better reflect the reality of the changing power market. As a result, instead of having fixed price contracts, power plants will have to compete by bidding into the power markets. This would provide incentives to invest in more renewable and balancing capacity to meet demand when supply is low.

According to Wärtsilä's new report "Rethinking Energy in South East Asia", renewable-based power systems can enable Việt Nam to reach Net zero by mid-century. What is the key basis for this statement?

The modelling in this report is based on optimisation of the power systems of Indonesia, the Philippines and Việt Nam and shows how the countries can transition to net zero and with a lower cost. Net zero is not a distant possibility. The modelling shows that it is now both technically and commercially feasible to increase renewable energy to meet almost all of the energy demand of the countries modelled, supported by a mix of technologies and sustainable fuels.

Through our power system modelling work, we have found that, in order to build a net zero power system, there are some similar key steps that regions worldwide should follow: (1) We need to rapidly increase the amount of renewables to become the main source of energy. (2) By adding flexible technologies, such as grid balancing engines and energy storage, we can support the integration of increasing amount of renewables. (3) The modelling shows that inflexible assets, such as coal, can be phased out. (4) There is a need for Power-to-X capacity to produce carbon neutral or zero carbon fuels and convert the balancing power plants to run on them. At this point remaining fossil fuel capacity can then be rapidly phased-out. The modelling shows that renewable power systems backed by grid balancing engines and energy storage can meet the energy demand while avoiding blackouts and creating the right conditions for future demand growth.

A variable renewable power system does not cost more than the current system. In fact, when factoring in the International Energy Agency's upper forecasted carbon prices, the levelised cost of electricity in net zero power systems can be 20% less in Việt Nam by 2050 – resulting in annual savings of US$28 billion.

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