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POWER DEVELOPMENT PLAN VIII (PDP8) HAS BEEN APPROVED

On 15 May 2023, Vietnam's Government announced that Prime Minister Pham Minh Chinh had approved the long-awaited Power Development Plan VIII (PDP8), which outlines the country's electricity generation and distribution strategy for the period 2021-2030 "with a vision to 2050".

Under PDP8, an estimated USD134.7 billion of funding will be necessary to develop new power plants and expand/enhance the grid between 2021 and 2030, of which USD119.8 billion (or USD12 billion per year) will be allocated to electricity generation projects. Given there is no foreign ownership limit for the power generation market, we expect the majority funding would be fulfilled by the private capital, especially in the form of foreign direct investment.

Key Highlights

- Electricity consumption is forecasted to **grow 8.5% - 9% from now to 2030**.
- The installed capacity **will more than double to over 150 GW by 2030** from c.69.4GW at the end of 2020.
- Over 2022-2030, **gas/LNG power plants and wind farms will account for c.61% of the additional generational capacity until 2030**, with LNG contributing c. 22.4GW, onshore wind accounting for c.21.9GW (**17.9GW addition**), and offshore wind of 6GW.
- The **government strongly encourages solar** (rooftop, solar farm, floating solar) **and wind projects for self-consumption** (i.e., not connected to the grid) for businesses and households to reduce the burden on the transmission system. Self-consumed projects can be constructed without limits.
- The construction of **new, large-scale solar projects will be limited** from now until 2030 (only c. 1.5GW **allocated** for vintage projects).
- Offshore wind will have a **slow initial implementation of only 6GW** before 2030 but can reach 70-91.5GW by 2050. However, the master plan also indicated that the offshore wind capacity before 2030 may be higher if technology and pricing allow.
- **Encourage investment into biomass**. Vietnam has potential capacity for 7GW, utilizing the by-products of agriculture/forestry activities.
- **Encourage storage systems**, with a plan to include up to c.30.7-45.6GW of pumped storage and battery storage by 2050.
- **Continue to import electricity**, at 5,000MW before 2030 (to a maximum of 8,000MW).
- **Unlimited development of new technologies** such as hydrogen and green ammoniac.

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Our Take: Picking up Momentum, We're Ready to Go

VinaCapital has been following developments closely over the past two years, and the guidelines and development direction in the approved PDP8 reflect the Government's commitment to be carbon neutral by 2050 as announced at COP26.

The finalized PDP8 has reinforced our existing platform strategy. We believe it fortifies the work we have been doing and we are well-positioned to grow our renewable platform to 1GW by 2025, with a strong pipeline for development further to 2030. Our focus will continue to align with our investments thus far. Given there is no cap on self-consumed solar rooftop energy, we will focus on expanding our rooftop solar business, SkyX Solar, to more C&I customers with potential expansion to office customers. SkyX's capacity doubled from 2021 to 2022 and we aim to grow to over 100MWp by the end of this year. Moreover, with the government's incentive towards the self-consumption model, VinaCapital will further expand the model to utility-scale solutions at strategic demand hubs in the Northern and Southern Vietnam.

Similarly, our wind platform has been focusing on developing greenfield assets and we have secured a pipeline of over 1GW. Wind power is expected to have a considerable capacity allocated for growth (from 4GW currently to c.22GW before 2030). Our main investment thesis for wind energy differentiates ourselves from other platforms for placing the highest technical standards in terms of wind resources, road accessibility, grid connection, construction efficiency, and ESG compliance and optimizing financing solutions. Together with our strategic partners whose expertise and professionalism in the field are established, the platform is primed to become one of the major wind platforms in Vietnam while attaining the highest quality standards.

At VinaCapital, we are committed to and fully aligned with the government's net zero target by 2050. However, we understand that there needs to be a transition process where the current coal-fired power will be gradually replaced by greener energy sources. Vietnam still needs a stable base load to support a growing population and huge manufacturing hotspots; therefore, we have determined to replace coal-fired power plant with a lower-carbon technology, LNG, to ensure baseload power while still being able to lower carbon emission. Our Long An 3,000MW LNG project marks the first successful conversion of coal to LNG power plant, and is now included in the PDP8 with trajectory to reach commercial operations before 2030. VinaCapital is pursuing to ensure the Long An project progresses on time and will be able to supply energy to important industrial regions in southern Vietnam.

The PDP8 also gave rise to new investment opportunities. We have been closely following the Direct Power Purchase Agreement (DPPA) developments with the expectation that the pilot program will be announced imminently. During his participation of the extended G7 summit in Hiroshima, Japan on May 19, Vietnam's Prime Minister emphasized that Vietnam would pilot and move towards building a DPPA mechanism in conjunction with the revision of Electricity Law to implement a competitive electricity market in Vietnam. The DPPA will encourage the development of new



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renewable energy projects and support the transition to a low-carbon economy because it allows renewable generation companies to seek alternative electricity buyers, thus enhancing their negotiation abilities. In the longer term, we will consider offshore wind and energy-related infrastructure investments such as battery storage systems, as these technologies will better facilitate the greater volume of renewable energy generated and connected to the national grid.

With PDP8 now approved and the framework set, the next step is for relevant ministries to complete a detailed implementation plan for the initiatives under the Master Plan, such as DPPAs, the self-consumption mechanism, offshore wind, and price guidelines for future renewable projects. These successive directives will ease uncertainties and help investors to refocus on the huge potential of Vietnam's power market. VinaCapital is excited to be able to move forward with our investors and partners and play a role in helping Vietnam achieve its power development goals.