

VIETNAM'S DRAFT MASTER PLAN VIII AND THE ENERGY TRANSITION

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The Master Plan serves as a basis for future power development in Vietnam, applicable to all investment in the sector. The most recent Master Plan is the Revised Master Plan VII from 18 March 2016 which adjusted the Master Plan for the period 2011-2020 with a vision to 2030 ("Master Plan VII Revised"). The new Master Plan is now due and, on 22 February 2021, the Ministry of Trade and Industry ("MOIT") issued a first draft of the National Power Development Plan for the period 2021-2030, with a vision to 2045 ("First Draft Master Plan VIII" or the "First Draft" see our previous article [here](#) for further information). On 11 October 2021, MOIT released a further draft of the Master Plan in order to seek opinions and approval from the Prime Minister ("Revised Draft Master Plan VIII" or the "Revised Draft").

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There are a number of changes in the Revised Draft Master Plan VIII, in particular regarding quotas for renewable energy. In this article, we focus on what the changes mean for the transition towards renewable energy in Vietnam. We also look at other developments, including the well-publicised announcement by Chinese President Xi to the United Nations on 21 September 2021 that China will cease to build coal-fired power projects overseas.

COAL

Electricity generation in Vietnam has traditionally been heavily reliant on coal-fired power stations. We set out below the proposed capacity for coal-fired power plants (in a base scenario) in the Master Plan VII Revised, the First Draft Master Plan VIII and the Revised Draft Master Plan VIII:

	Master Plan VII Revised (MW)	First Draft (MW)	Revised Draft (MW)
2030	55,300	37,573 – 40,033	40,899
2045	N/A	50,168 – 58,723	50,949

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Vietnam is not planning any new coal-fired power plants prior to 2030, however, the proposed capacity up to 2030 includes a number of projects that are in development or the advanced stages of planning, including some that are yet to achieve financial close. Due to the various challenges relating to LNG/gas and renewables in Vietnam, it remains clear that coal will continue to form a part of the country's energy mix in the future, despite various challenges and concerns discussed below.

It is well known that developed countries will no longer finance coal-fired power stations and, as a result, a number of coal projects currently being in developed were seeking Chinese financing. In this context, the recent announcement by President Xi that China will cease to support overseas coal-fired power projects will have a significant impact on developing and financing coal-fired power projects in Vietnam.

The exact details of the Chinese withdrawal are not yet clear. In particular, it is uncertain when the decision will take effect, what the grace period or transitional period will be if any, and whether there will be an exemption for existing projects that are in the planning or construction phase.

There are a number of key points to consider:

- While we understand that Vietnam remains committed to reducing its carbon dioxide output, it will, in common with other emerging jurisdictions, balance this against its requirements for affordable and reliable energy sources to run as its base load and fuel its growth as an industrial nation. As an emerging market, the electricity tariff is lower than those in developed countries. The global fluctuations in the LNG price this year have re-enforced concerns that Vietnam cannot solely rely on LNG as the only source for its thermal power plants due to the risk of said price fluctuations having a massive impact on the domestic tariff which is not yet linked to international price indices.
- One of the largest sectors for foreign direct investment in Vietnam is manufacturing. Dependable energy will be key to continuing to attract overseas manufacturers.
- With other nations reluctant to finance coal-fired power projects, if China also stops investing in overseas coal-fired power projects immediately, several projects in the Revised Draft Master Plan VIII will be adversely affected.
- It would be helpful to Vietnam if other nations were to support more advanced cleaner coal technologies (ultra-super-critical) as part of Vietnam's transition towards cleaner energy sources. It is noted that post-2030, the Revised Draft Master Plan VIII gives priority to coal-fired power plants that use advanced, cleaner technology.
- Converting planned coal-fired power stations to other sources (for example LNG or natural gas) will be costly and time consuming.

RENEWABLES

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The development of renewable energy sources is still prioritised in the Revised Draft Master Plan VIII. However, compared to the First Draft, the Revised Draft shows a significant decrease in quotas for wind power and solar sources. The projected amount for offshore wind is only 2,000 MW as of 2030 which is far below the capacity for offshore wind projects proposed in the First Draft. The figures are illustrated below:

First Draft (MW)		Revised Draft (MW)
Wind power (onshore and near shore)		
2025	11,320 – 18,480	11,458– 12,208
2030	16,010 – 24,294	11,820 – 12,470
2045	39,610 – 40,680	27,110 – 32,720
Wind power (offshore)		
2025	0	0
2030	3,000 – 5,000 or more where suitable	2,000 or more where suitable
2045	21,000 – 36,000	21,000 – 36,000
Solar Power		
2025	17,240 – 26,240	16,990 – 18,040
2030	18,640 – 31,664	18,390 – 21,390
2045	55,090 – 71,890	51,540 – 63,640

We note that this new Master Plan VIII sets out the total capacity for each renewable energy type allocated by region, rather than specifying projects to be approved into master plan.

Without unduly speculating on the reasons for this reduction, there are a number of important points to consider:

- It is understood that renewables alone cannot provide a base load to meet demand and the technology needed to mitigate this risk, such as batteries, remain under development. The Revised Draft includes provision for storage technology, as well as other technology such as LNG-fired I.C.E. power plants, that can be used flexibly on demand to meet shortfalls at peak times, but the necessary legislation is still under development.
- The feed-in-tariff ("FiT") for solar projects (which expired on 31 December 2020) was oversubscribed. A significant number of said projects are located in a small number of provinces with suitable meteorological conditions. This has compounded issues with the electricity grid and has resulted in high curtailment for solar projects in the south of Vietnam where most renewable projects are located.
- Grid connectivity issues will also impact offshore wind (where the majority of potential sites are located in southern provinces with good wind speed). Grid improvement work would be costly at a time when Vietnam Electricity (EVN) is under pressure to keep electricity prices low as a result of Covid-19 and to counter inflation. The private financing of grid connections is one potential option to promote development.
- International lenders do not think the standard PPA for renewables in Vietnam published by EVN and MOIT is bankable. Although bankable structures can be created for solar and onshore wind projects (for example by working with local banks or using limited recourse guarantees), this is not possible for large scale offshore wind projects.
- We also note that according to a press report 30 September 2021, the FIT for wind power projects, which is due to expire on 31 October 2021, will not be extended, despite the substantial risk of delays due to the impact of the Covid-19 pandemic. All projects commencing their construction after 31 October 2021 will likely to be subject to a bidding regime. According to the press report, there will be a transition mechanism for projects failing to achieve the Commercial Operation Date (COD) by 31 October 2021 due to Covid, though no FiT will be available. It is not known what the transition mechanism will entail.
- The proposed Direct PPA programme allowing consumers to purchase electricity direct from renewable energy producers shows promise, but this is still only a pilot and concerns relating to grid connectivity and dispatch priority remain. In addition, the short construction period permitted by the draft DPPA legislation (nine months to reach COD) means that the Direct PPA programme is at this stage only suitable for solar projects.

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GAS

The combined quota for LNG and natural gas in both the First Draft and the Revised Draft is set out below:

	First Draft (MW)	Revised Draft (MW)
2030	28,733	27,471 – 32,271
2045	66,504	61,683 – 88,533

LNG and natural gas will undoubtedly form a major part of the energy mix in Vietnam, but we note the following challenges:

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- as noted above, surging global gas prices have highlighted the risk of relying solely on one fuel source;
- there are press reports of delays to Vietnam's Blue Whale natural gas project; and
- to date there are no precedent LNG-to-power projects in Vietnam. Together with changes in the relevant Vietnamese laws as of 1 January 2021, agreeing a bankable framework for the development of LNG-to-power projects in Vietnam will be challenging (see our recent article linked to above).

CONCLUSIONS

The Revised Draft Master Plan VIII comes at a crucial juncture and will set the agenda at a time when Vietnam will be balancing the competing demands of expanding its industrial potential and transitioning from coal to renewable energy sources.

The challenges facing Vietnam are far from unique and are equally applicable to other emerging nations. As a fast-growing industrial nation generally considered as investable by major international players, many eyes will be on Vietnam and how it sets about addressing these issues.

It remains to be seen how Vietnam will navigate these challenges and the level of support provided by other nations will be important. In particular, it is not clear whether larger countries will consider the affordability of the source of energy and Vietnam's medium term energy demands and continue to support Vietnam financially in order to permit it to transition to greener energy sources in the longer-term.

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