

MONSOON – NO BORDERS, ONLY HORIZONS

IN THIS ARTICLE WE LOOK BACK ON CRITICAL POINTS OF THE MONSOON WIND DEVELOPMENT; PARTICULARLY THE NEGOTIATION OF THE KEY PROJECT DOCUMENTS IN LAOS AND VIETNAM AND NOTABLE FEATURES OF THE FINANCING PACKAGE. WE CONCLUDE BY CONSIDERING THE IMPLICATIONS OF THE MONSOON WIND PROJECT FOR THE FUTURE OF THE SOUTH-EAST ASIAN RENEWABLE MARKET. BY **SEAN CONATY, EDWARD KOEHLER AND NARUT BOAKAJORN, HUNTON ANDREWS KURTH.**

In late April 2023 the Monsoon Wind Power Company Ltd (MWPCCL) held the official ground-breaking ceremony for the construction of the 600MW Monsoon Wind cross-border power project. This was the latest milestone in a busy month; also in April, MWPCCL successfully achieved financial close and received funds from its first drawdown under its US\$692m non-recourse project financing package. These most recent achievements are the culmination of a decade-long effort to manifest the Monsoon Wind Project from a fancifully conceived idea to a real project.

Early days – An opportunity identified

Laos has long been a major centre for hydropower and has been exporting its hydropower electricity for several decades already, with most being exported to Thailand. The viability of continuing growth of electricity exports to Thailand has been less clear of late due to higher reserve margins in Thailand as domestic power plants under its second IPP round came online, as well as slower than expected demand growth in Thailand.

Against this backdrop, Impact Electronics Siam (IES), the founder sponsor of the Monsoon Wind Project, began to look into exporting power from Laos to the more rapidly growing Vietnam market. IES's additional innovation was to substitute hydropower for wind-power, which traditional analysis had not favoured for cross-border export due to its intermittent nature. In 2011, Impact Energy Asia Development (IEAD), the primary shareholder in the Monsoon Wind Project, secured an MoU with the Laos government for development of a wind farm within a defined 68,000-hectare area and then in 2012 IEAD set about doing the initial leg work of research, installation of met-masts and other surveys and concept-testing studies.

A site at an altitude of 1,000m above sea level was identified in a remote corner of the Dak Cheung Plateau, Dak Cheung District of Sekong Province, in the highlands of southern Laos that displayed promising wind potential. Despite there being no other wind projects in Laos, IEAD – never one to shy away from a challenge – thought the potential might be there for the largest onshore wind power project in South-East Asia.

IEAD's analysis of the wind data had shown that, from a holistic viewpoint, the wind patterns were

complementary to rainfall patterns; so transmission of a combination of wind and hydropower could increase the capacity factor of green power in Laos as well as improve the utilisation rate of the grid transmission system as a whole. IEAD confirmed its analysis through a grid impact study conducted with Vietnam's Institute of Energy (IOE). The results showed that the Monsoon Wind Project would be well coordinated with hydropower plants in Laos, as well as hydropower plants in the Central Highlands of Vietnam that account for 98% of installed capacity in that region. The Monsoon Wind Project is projected to have its highest output from October to February, and lowest output from April to September, broadly overlapping with the dry season and wet season respectively.

The concession agreement and the PPA

The suite of project documents necessary for development of the Monsoon Wind Project is extensive, including the concession agreement, the power purchase agreement, the EPC and O&M contracts, as well as land-related contracts. Each of the contracts was robustly negotiated and the final terms were bespoke to the requirements of the Monsoon Wind Project. Each of the documents has unique features worthy of discussion and that contributed to the success of the project as a whole. In this article we focus only on some of the more distinctive features of the Monsoon Wind Project encapsulated within the terms of the concession agreement and the power purchase agreement (PPA).

The concession agreement grants MWPCCL its licence to carry out the project. The Government of Laos has an extensive range of precedent concession agreements it was able to draw on, including for a number of cross-border projects sharing features in common with the Monsoon Wind Project. However, this would be the first concession agreement for the cross-border export of wind power to Vietnam. So existing templates needed to be substantially reinvented to accommodate a wide range of novel issues.

For example, when it comes to parsing the allocation of risks in the context of Laos hydropower projects exporting electricity to Thailand, there is a relatively well-worn path for the allocation of Lao political and governmental risks and Lao natural force majeure risks against Electricity Generating

Authority of Thailand (EGAT) and other Thai risks. These include carefully calibrated mechanisms for when an issue in Laos may spark off an issue in Thailand, or vice versa. There was no precedent for this type of arrangement in respect of power export from Laos to Vietnam, so fresh perspectives and approaches were needed.

The PPA is the only source of revenue for the project and so it is critical that the contractual terms of the PPA will, as much as possible, ensure stability of offtake and payment through nearly all conceivable situations. While the Laos government could draw on a library of precedent deals for the concession agreement (albeit requiring substantial reinvention for the unique circumstances of the Monsoon Wind Project) this was not the case for Vietnam Electricity (EVN) and the PPA.

Vietnam has experienced a remarkable period of exponential growth of its renewable capacity. This has been particularly evident for solar power but the wind power sector has begun to catch up. The surge in growth of wind and solar projects has been driven by positive technical considerations, including favourable solar irradiation and wind speed levels, and an attractive FIT regime. One compromise that developers have had to accept is with respect to the PPA, which is required to be based on a statutory template.

The templates for wind and solar projects in Vietnam are highly similar to each other and each has serious bankability issues. These issues have been commented on at length in several publications but, in brief, they include weak protection with respect to curtailment (which has been affecting some projects at quite high levels), force majeure, termination compensation and dispute resolution. While this did not seem to impede the growth of the sector, it remains to be seen to what extent the PPA will need to be revised as Vietnam graduates from the FIT regime. Another consideration is that the renewable power plants under the FIT regime have to our knowledge been either financed on balance sheet or financed with at least some degree of sponsor support, which would have been an outcome not in alignment with the goals of the sponsors to the Monsoon Wind Project.

Where else could EVN look to for its PPA with MWPCCL? The PPAs for the thermal power projects of Vietnam have – when considered together with the protections available under the build, operate transfer (BOT) contract with MOIT and the Government Guarantee and Undertaking (GGU) – proven bankable on several prior transactions. However, these would be technically incompatible with a cross-border wind project. Besides, EVN has clearly signalled to the market that future projects will no longer be implemented under this model. The successor PPA template that EVN has suggested using under MOIT Circular 57/2020 is widely considered to have a number of critical bankability issues.

For the Monsoon Wind Project it was necessary to go back to the drawing board and devise a new template. Through many hours of deliberations,

EVN came around to recognising that a scaling back of risk allocation along the lines of what it was able to achieve under its FIT programme would not be a commercially workable solution for a project of the scale and complexity of the Monsoon Wind Project. The PPA includes significant enhancements in contractual protections in respect of EVN's curtailment rights, force majeure and mitigation for certain delay scenarios and the final executed PPA represents a more balanced allocation of risks.

The financing

MWPCCL appreciated from the outset that financing this project would be a complex task, requiring a collaborative and creative approach with a capable and experienced group of lenders. Asian Development Bank (ADB), no stranger to complex project financings in Laos and Vietnam, was appointed as the mandated lead arranger and bookrunner, and worked together with MWPCCL and the sponsors to put together the lending group. It was critical that each lender had a flexible outlook and a thorough understanding of the industry and so would be capable of quickly coming to terms with some of the innovative features of the Monsoon Wind Project. The final bank group and US\$692.55m financing package comprised:

- US\$482.55m provided by ADB, JICA, AIIB, Thai Exim and Kasikorn Bank under a syndicated parallel loan structure;
- US\$150m provided by SMBC and Siam Commercial Bank as B Lenders under an ADB B Loan; and
- US\$50m in concessional loans provided by Canadian Climate Fund for the Private Sector in Asia (CFPS), Leading Asia's Private Infrastructure (LEAP) Fund, CFPS 2 and ADB's Asian Development Fund-Private Sector Window (ADB-PSW). This was augmented by an additional US\$10m grant from ADB-PSW.

A notable feature of the project financing package was the blending of concessional and commercial finance. This enabled a more finely calibrated allocation of certain risks, such as curtailment, that have proven a major hurdle to bankability in other renewable energy projects with EVN as offtaker.

With assistance from MWPCCL, the sponsors and their advisers, the lenders were able to, in a relatively short period of time, familiarise themselves on a range of complex issues. In many cases this required an understanding of both contractual and technical solutions. For example, coming back to the example of curtailment, there are considerable improvements in the PPA contractual treatment but a significant additional mitigant relates to the nature of the interconnection arrangements. Renewable plants in some parts of Vietnam have been experiencing high levels of curtailment; much of this has been at the level of local 220kV and lower grade interconnections. The Monsoon Wind Project will connect directly to the main 500kV North-South trunk transmission line of Vietnam; grid congestion at this grade of transmission has been far less frequent.

MWPCL and its lenders were able to negotiate a balanced treatment of these and other issues under the finance documents. The resulting debt financing package is essentially non-recourse, with no political risk insurance. This is a remarkable achievement when compared with prior Laos-based project financings and also when compared with recent power projects with EVN as an offtaker. This outcome is testament to the progress that MWPCL and the sponsors were able to make on the project documents, as described above, as well as the collaborative approach of the lending group.

Implications for South-East Asia

The Monsoon Wind Project is a project of historic significance for the South-East Asian renewable energy markets. Its list of “first of its kind” achievements is long and includes: the largest onshore wind project in South-East Asia; the first cross-border wind IPP in South-East Asia; and the first wind IPP in Laos.

These are laudable achievements. Moreover, the impacts of this project on the wider market are significant and far reaching. These include:

* PDP8 and novel contracting approaches with EVN – The approval of Vietnam’s 8th Power Development Plan (PDP8) on May 12 2023, with its further plans for a massive build-out of generation capacity up to 150GW by 2030, is a positive development for the Vietnam power sector. Encouragingly, PDP8 includes plans for further development of renewable energy such that it forms between 30.9% and 39.2% of Vietnam’s power, towards an upper limit target of 47% by 2030 and “orienting towards” a renewable energy rate of 67.5% to 71.5% by 2050. Certain of the higher range targets are linked to the availability of concessional aid funding, such as the US\$15.5bn of funding to be made available under the Just Energy Transition Partnership (JETP). In the near to mid-term, much of the renewable energy activity will be from wind-power, both onshore and offshore.

PDP8 has been long awaited, its approval coming approximately two years after its originally expected date. This will be a comforting affirmation of central government regulatory support for developers with a project pipeline and should, we hope, put some fresh wind in the sails of projects under development. However, more work is needed for the goals of PDP8 to be realised, including promulgation of implementing regulations and clarity on procurement and tariffs. The progress made by pioneering projects such as the Monsoon Wind Project is important in this regard. Over the last couple of years and until the approval of PDP8, the renewable energy market and, more broadly, the entire power sector of Vietnam had been at something of a cross-roads.

On the thermal front, EVN has clearly signalled that it has moved away from the bifurcated PPA and BOT, more recently PPP, contract approach underpinned by the Government Guarantee

and Undertaking that was successfully used for the mega-projects of the past and which has, from a structural perspective, remained largely unchanged since the initial power projects of Phu My 2.2 and Phu My 3, though with a notable shifting of risk away from the government and government entities under more recent projects. In this new post-BOT, PPA and GGU environment, developers have reportedly been finding it difficult to make meaningful progress within the confines of the suggested new contracting structures, such as the template form of PPA under Circular 57.

For renewable projects, the massive wave of investment in the sector was always largely driven by the attractive FIT and other incentives, with the PPA being more of an unpleasant aftertaste to an otherwise heady brew. As the FIT era has drawn to a close it is unclear to what extent the PPA will also need to change, particularly as Vietnam has ambitions for larger offshore wind projects – which, with larger debt requirements, will bring the bankability flaws of the PPA into sharper focus. The Monsoon Wind Project, unconstrained by these requirements, was able to demonstrate that EVN can be open to novel approaches and reach a sensible middle ground. This is a positive sign as Vietnam embarks on a new phase in the build-out of its (still rapidly growing) power requirements.

- Cross-border power export and build-out of the ASEAN power grid – Laos has long held itself out as the “battery of Asia”. This has traditionally been focused on export of Laos’ considerable hydropower resources. Large scale hydropower lends itself more easily as a baseload power source and so can be factored into load dispatch plans of the importing country with more simplicity. The Monsoon Wind Project has demonstrated that importing utilities can accommodate the flexibility of intermittent power sources. This is a significant achievement.

The ASEAN power grid has been talked about for decades but real progress has been modest. There are signs that the momentum may be quickening. A notable recent development is Singapore’s Energy Market Authority issuing a tender for the import of up to 4GW of power, which has attracted significant market interest. A number of ambitious early-stage developments in Indonesia and even as far afield as Australia seem predicated on further growth in the cross-border transmission of power in the ASEAN region.

Linkage of renewable energy generation centres to load demand centres will be a critical component of the energy transition and path to net-zero; cross-border transmission and the build-out of the ASEAN grid will have an important role to play here. The recently approved PDP8 makes allowance for an enhanced role for the import of cross-border energy into Vietnam, which is another positive step. The Monsoon Wind Project is an important and precedent-setting chapter in this regard, with lessons that will reverberate through many of the next chapters to come. ■