



Renewables in Vietnam

Opportunities for investment

Overview

The demand for electricity in Vietnam is rising rapidly to power the growing economy. Forecasts predict an annual growth rate for electricity of ‘near-double’ digits in the years to come. To keep pace with demand, the Government has envisioned substantial expansion to the national power generation capacity and introduced policies to cultivate the development of renewable energy.

Following an eventful 2020 this year has continued to witness significant developments for renewables. Last year the attention gradually shifted from solar to wind. On the regulatory front, after issuing the long-awaited regulatory framework for solar power, the Government remains busy dealing with other issues including master planning, transmission infrastructure and wind power.

In this section, we provide an overview of the Vietnamese renewable energy market and discuss recent developments, as well as the opportunities and challenges they bring about for investors.

RENEWABLE ENERGY

While the energy mix in Vietnam in the foreseeable future will still be dominated by traditional sources (including coal, gas and large hydro projects), renewable energy has gradually, but steadily, entered the limelight. The Government expects that renewables will account for 15% to 20% of the total capacity of all primary sources by 2030 and 25% to 30% by 2045.¹

In order to meet these targets, the Government has rolled out a series of regulations aimed at clarifying the legal framework and incentives for the development of renewable energy projects. These policy developments, combined with an overall decline in global manufacturing costs for the technology necessary to leverage renewable energy sources, have generated a wave of investment in recent years.

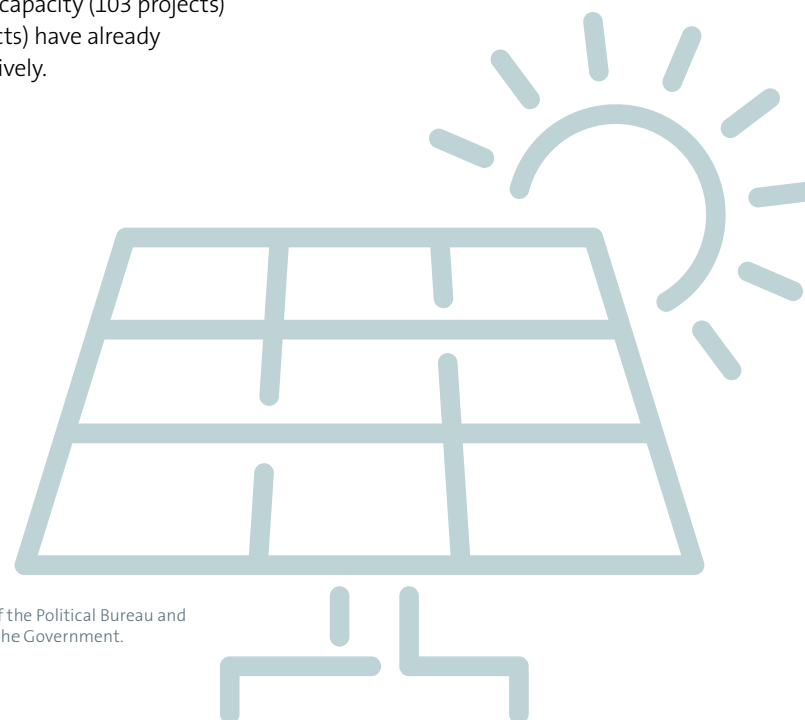
In terms of approved capacity, it is reported that as at the end of September 2020 a total of approximately 13.6 GW of solar capacity and 11.8 GW of wind capacity had been approved for inclusion in the master plans. Out of the total approved capacity, approximately 6.3 GW of solar capacity (103 projects) and 0.44 GW of wind capacity (11 projects) have already achieved commercial operation, respectively.

FOREIGN OWNERSHIP AND INVESTMENT FORM

There is no generally applicable limitation on foreign ownership in the renewable energy sector. At present, foreign investors can own up to 100% of equity in power projects in Vietnam.

Although some high-profile, foreign-invested, thermal power projects have been implemented in cooperation with the Government under the Build-Operate-Transfer (**BOT**) umbrella (a form of public private partnership), it does not appear that the Government will offer this kind of treatment for renewable energy projects as a general proposition (except, perhaps, for very prominent or large-scale ones).

Therefore, it is expected that most renewable energy projects will be carried out as independent power projects – the main implication being that there will be little room for investors to negotiate special terms or incentives or to obtain Government guarantees.



¹ Resolution 55-NQ/TW dated 11 February 2020 of the Political Bureau and Resolution 140/NQ-CP dated 2 October 2020 of the Government.

FINANCING

Power projects typically require significant capital investment and, as a result, are often financed with a significant portion of debt capital. It is unlikely that domestic Vietnamese banks alone will be able to provide sufficient funds to finance projects to meet the Government targets. However, international financiers are facing some challenges in participating in the financing of renewable energy projects. Firstly, foreign lenders cannot as a matter of law take security over land and other real property (even though land and other real property may be the most valuable project asset). Moreover, a number of issues persist that undermine a project's viability and bankability, including:

- the tariff levels (see further **Feed-in Tariff** below);
- concerns surrounding the financial capacity of Electricity Vietnam (**EVN**), the national utility and the lack of a Government guarantee of EVN's obligations (see further **EVN** and **Government guarantees and incentives** below);
- the form of the statutorily mandated power purchase agreements, which contain some core, non-negotiable terms that allocate significant risk to investors (see further **Power purchase agreement** below); and
- the 2021 deadline to secure the premium feed-in tariff for wind projects, and uncertainties surrounding new policies for solar projects after 31 December 2020 (see further **Feed-in Tariff** and **Hot topics** below).

SALE OF ELECTRICITY

Currently, EVN and its subsidiaries have the monopoly over the transmission and distribution of electricity in Vietnam, and act as the only wholesale purchasers of electricity from generators. The Government has set out its vision for a competitive power market, which is slated to undergo full implementation at the wholesale level by this year and at the retail level by 2023.

The current regulations provide that EVN will be the sole buyer responsible for purchasing all power generated from renewable sources. However, the MOIT has announced a pilot program for 'direct' power purchase agreements between renewable energy generators and customers, such as factories and industrial parks (see further **Hot topics** below).

EVN

Market observers have expressed concerns about EVN's creditworthiness, as EVN is the entity responsible for implementing massive levels of investment in electricity infrastructure, but currently struggles to make a profit from the low and highly regulated electricity retail tariffs. While this does not pose immediate problems, it could lead to long-term systemic risk.

To provide greater comfort for investors, the World Bank has assisted EVN to improve its financial standing and obtain its own credit rating. As a result, EVN and its power transmission arm, National Power Transmission Corporation, have been given a 'BB' rating with a stable outlook by Fitch for the last three years. This is consistent with Vietnam's sovereign rating of 'BB'.

FEED-IN TARIFF

EVN is currently required to purchase the power generated by renewable energy projects at the feed-in tariff set by law (**FiT**) set out as follows:

	Category	FiT (US cent/kWh)
1	Solar FiT1	9.35 US cents/kWh
2	Solar FiT2	Ground mounted: 7.09 US cents/kWh Floating: 7.69 US cents/kWh Rooftop: 8.38 US cents/kWh
3	Wind FiT	Offshore: 9.8 US cents/kWh Onshore: 8.5 US cents/kWh
4	Biomass FiT	Combined heat and power: 7.03 US cents/kWh Others: 8.47 US cents/kWh
5	Solid Domestic Waste FiT	Waste incineration: 10.05 US cents/kWh Combustion of landfill gas: 7.28 US cents/kWh

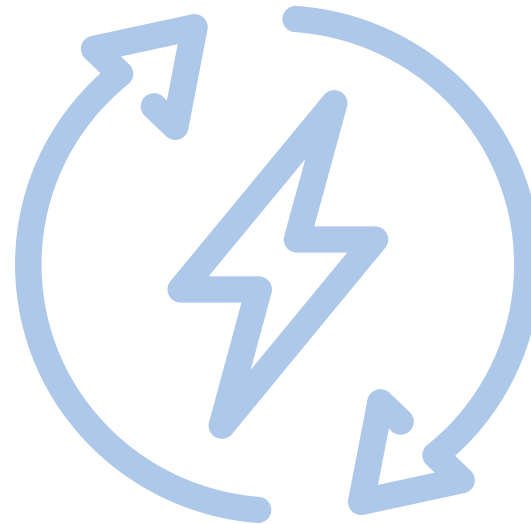
Specifically, the renewable projects that are eligible to enjoy the FiT by category above are:

- For (1), solar power projects achieving commercial operation date (**COD**)²
 - on or before 1 January 2021 in Ninh Thuan province and within a 2 GW capacity pool only, or
 - before 30 June 2019 in other provinces.
- For (2), grid connected solar power projects which have been issued investment policy decisions before 23 November 2019 and achieve COD from 1 July 2019 to 31 December 2020 (except for Solar FiT1 projects in Ninh Thuan as mentioned above); and rooftop solar projects selling power to EVN and commencing operation and settling meter reading from 1 July 2019 to 31 December 2020.
- For (3), wind power projects already in operation before 10 September 2018 or new wind projects achieving COD before 1 November 2021. The Government is in the process of considering proposals for a further extension of this Wind FiT (see potential FiT extension for wind power in **Hot topics** below); and
- For (4) and (5), all biomass and solid domestic waste projects respectively.

The Government is considering the adoption of competitive bidding models for new solar and wind power projects which are not eligible to enjoy the above FiTs (see the competitive bidding in **Hot topics** below).

The FiT is denominated in Vietnamese dong (and electricity purchased by EVN will be paid for in Vietnamese dong) and is linked to the Vietnamese dong-US dollar exchange rate announced by the State Bank of Vietnam (which goes some way towards protecting investors from currency depreciation).

Once obtained, the FiT is applied for 20 years. Neither the law nor the template power purchase agreements contain any adjustment mechanism for inflation or rising production costs, meaning there is no guarantee of a FiT increase during the investment term (other than as adjusted for foreign exchange).



POWER PURCHASE AGREEMENT

Renewable energy generators and EVN must negotiate and conclude their power purchase agreements (**PPAs**) on the basis of the standard agreement forms provided by law. The MOIT has issued standard agreement forms for small hydro, wind, biomass, solid waste and solar power projects. While the parties can agree on additional provisions to the standard form PPA to clarify their rights and obligations, they cannot vary the 'basic contents' of the wind standard form PPA and the additional provisions cannot be inconsistent or contradictory to the contents of the solar one. Market information also suggests that EVN does not entertain negotiation outside this scope.

The standard forms contain terms that allocate significant costs and risks to investors, and therefore potentially impacts bankability. Some key points of concern are:

- the seller (generator) must bear the cost and risk of connecting the plant to the transmission grid – this is seen as problematic, especially where the project is located in a more remote area or the connection line will need to run through land owned by a variety of owners;
- the agreements do not contain a 'deemed commissioning' clause to protect the seller when the plant is able to generate power but the purchaser (EVN) fails to accept the power (see curtailment risk in **Hot topics** below);
- the agreements do not contain a 'stabilisation' clause to expressly protect the seller against changes in law; and
- the governing law is automatically Vietnamese law, and the default position for dispute resolution is via the forum of the MOIT.

That said, domestic and international lenders have, through different innovative financing structures that aim to mitigate these bankability risks, accepted to lend to projects with the power purchase agreement executed based on the model form.

² The commercial operation date is the day on which a part or the entire grid-connected solar power plant is ready to sell power to the power purchaser and satisfies the following conditions: (i) initial testing has been completed for a part or the entire grid-connected solar power plant and interconnection facilities, (ii) the plant has a power operation licence in the power generation sector, and (iii) the seller and the purchaser have settled the meter reading to commence payment.

Government guarantees and incentives

GOVERNMENT GUARANTEES

Apart from the general assurances provided under the Law on Investment (such as no nationalisation, assurance of profit repatriation, protection of existing incentives in case of change of law, etc.), the Government does not provide specific guarantees for renewable energy projects.

For example, the Government does not guarantee the contractual performance of EVN as the power purchaser under the power purchase agreement or guarantee foreign currency availability to convert Vietnamese dong revenues into, for example, US dollars.

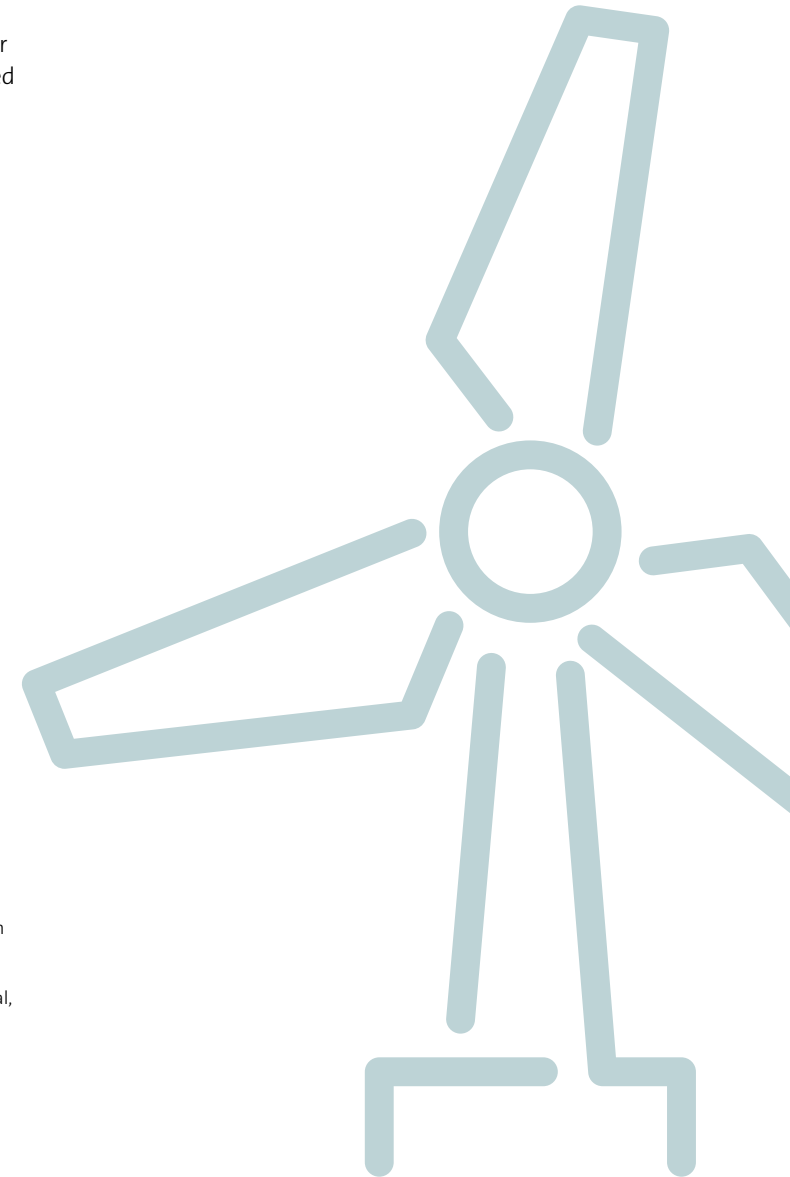
In theory it may still be possible to obtain guarantees for large-scale and important projects (such as an offshore wind project done on a PPP basis) under the applicable law. However, certain changes in the new Law on PPP and the new Law on Investment 2020, which came into force on 1 January 2021, seem to further limit the availability of guarantees.

INVESTMENT INCENTIVES

Renewable energy is classified as an especially encouraged sector and, therefore, some incentives are available for investors as listed below.

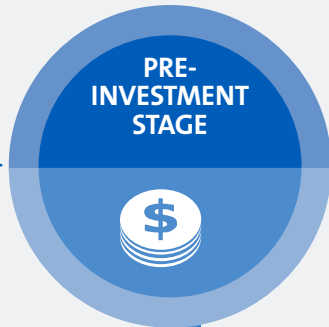
Category	Incentives
Import duty	<ul style="list-style-type: none">Exemption for:<ul style="list-style-type: none">goods imported to form fixed assets; andproject materials, components, and semi-finished products that cannot be domestically manufactured.
Corporate income tax	<ul style="list-style-type: none">Exemption for the first four years; ^(a)50% reduction for the following nine years;Preferred tax rate of 10% for the first 15 years; and ^(b)Accelerated depreciation and increased expenses as deductibles for calculation of taxable income. ^(c)
Land lease fees	<ul style="list-style-type: none">Exemption ranging from 14 years to the entire project life depending on the project location.

- a) Counting from the first year of generating taxable income or from the fourth project year, whichever comes first; new projects only.
- b) Counting from the first year of generating income; new projects only. Normal, non-preferred, tax rate is 20%.
- c) Newly provided under the new Law on Investment 2020 with effect from 1 January 2021. This awaits further detailed guidance for implementation.



RENEWABLE ENERGY PROJECT INVESTMENT PROCESS

- Conduct site study
- Gather data and measurements
- Prepare pre-feasibility study
- Apply for inclusion of the project in the power development plan (if it has not been included)



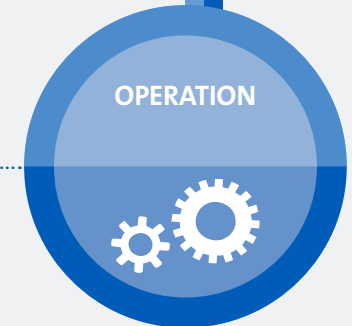
- Obtain investment decision (normally from provincial People's Committee)
- Investment Registration Certificate issued for project
- Establish project company by obtaining Enterprise Registration Certificate
- Make deposit (from 1% to 3% of project's required capital investment)

- EVN's agreement in principle to purchase power
- Grid connection agreement
- Metering agreement
- SCADA/EMS (or SCADA/ DMS) agreement
- Protective relay agreement
- Power Purchase Agreement with EVN



- Negotiate and obtain policy agreement for project location
- Land clearance (and reallocation of/compensation for existing land users) are undertaken
- Sign land lease agreement - the lease term cannot exceed the project term and is likely to be around 20 years
- Obtain Land Use Right Certificate
- Obtain a decision on sea area allocation to secure sea use right (if applicable)

- Prepare feasibility study and designs
- Evaluate basic design/ feasibility study
- Evaluate technical design
- Obtain fire prevention and firefighting approval
- Conduct environmental impact assessment
- Obtain construction permit
- Carry out construction works
- Undertake commissioning & acceptance



- Obtain electricity generation licence (for the power plant)
- Obtain operating licence (for employees holding certain operating positions)

Hot topics

RESOLUTION 55 AND NATIONAL POWER DEVELOPMENT MASTER PLAN

Resolution 55-NQ/TW issued by the Political Bureau (**Resolution 55**) was the highlight of 2020 in terms of Government policy in relation to renewables, providing strategic guidance on the development of the power sector, including renewables, in Vietnam towards 2030 with a view to 2045. Since then, the Government has issued Resolution 140/NQ-CP setting out a detailed action plan to implement Resolution 55. Generally, these documents emphasise the role of renewables in this coming period to replace as much as possible fossil fuel energy, with priority given to solar and wind power. In addition, they also discuss the development of a Law on Renewable Energy and development of a number of renewable hubs in certain regions with renewable development incentives to promote development in these hubs.

Separately, the Government is working on the draft national power development plan for the period from 2021 to 2030 with a view to 2045 (**PDP VIII**) to replace the current national power development plan. The new plan will be developed to achieve the following three major objectives:

- ensure power security for the country's socio-economic development;
- promote the use of renewable energy; and
- limit development of coal-fired power plants after 2030.

According to public sources, the MOIT has stated that all investors for projects under the new regime will be selected on a tender basis. As at the date of this document, the MOIT is still in the process of finalising the draft PDP VIII before its submission to the Prime Minister.

SOLAR POWER DEVELOPMENTS

New PPA template for grid-connected solar power

In July 2020, the MOIT issued a new template solar PPA to formalise the new FiT applicable to solar power projects (see **Feed-in Tariff** above). Although adopting some changes (including a more favourable compensation provision in case the seller terminates the PPA following a breach by the purchaser), the new template basically maintains the key terms and conditions in the previous template and generally adopts a more buyer (ie. EVN)-friendly position than the previous one.

Potential new pilot scheme for solar power

As a transition from a fixed FiT to bidding mechanism, the MOIT is proposing a pilot scheme applicable to solar power projects which have been approved for inclusion in the master plan but are not eligible to enjoy the solar FiT2. Accordingly, investors may propose the tariff to be applied to their project subject to a cap which is currently proposed by the MOIT to be the FiT2. Once approved, the successful bidders will enjoy the proposed tariff for 20 years. This scheme is projected to apply until June 2021. It is suggested that the total capacity selected for the pilot scheme until June 2021 will be a maximum of 60% of the total capacity applying for the scheme. The proposed timeline for project selection is between November 2020 and May 2021 with the selected projects required to complete all necessary procedures by 30 June 2022.

New developments for rooftop solar

Rooftop solar projects are now allowed to sell all or part of the generated power to EVN or directly to other purchasers who are not connected to EVN's grid. A rooftop solar system is defined to comprise solar panels installed on the rooftop of a construction work and has a capacity of no more than 1 MW, connected directly or indirectly to EVN's transmission line from 35kV and below. If the purchaser is EVN or its delegated entities, eligible generators can enjoy a statutory FiT and must sign a PPA following the template PPA. Otherwise, the tariff and the PPA will be agreed by the seller and purchaser in accordance with applicable Vietnamese law.

POTENTIAL FIT EXTENSION FOR WIND POWER

Currently, the MOIT is proposing to extend the wind FiT scheme for an additional two years to the end of December 2023. The underlying reasons include the need to ensure sufficient electricity supply due to the delay of thermal power plants coming into operation, uncertainties and difficulties in the regulatory mechanism applicable to wind power as well as the impact of COVID-19 on supply of wind power equipment and construction schedule. This proposal is still subject to approval of the Prime Minister. In the meantime, after obtaining the Prime Minister's approval for adding 7 GW more (91 projects) into the master plan and proposing to add a further 6.4 GW (74 projects), the MOIT has decided to cease evaluating any other wind power projects proposed to be included in the current master plan, pending the submission of the draft PDP VIII.

Specifically regarding offshore wind power, in line with the policies in Resolution 55, the MOIT has been working with the World Bank and the Danish Energy Agency to study and develop a roadmap and potential areas for offshore wind power. The outcomes of such study will be integrated into the PDP VIII. In addition, the MOIT has also proposed that the Prime Minister consider and assign the Ministry of Natural Resources and Environment to lead the permitting process for surveying large-scale offshore wind power projects beyond three nautical miles to avoid the ambiguity at law as to which competent authority has the authority to grant survey rights for offshore wind power.

DIRECT PPA

In January 2020, the MOIT put forward a proposal for a pilot program permitting direct PPAs between private renewable power generators and corporate customers to the Prime Minister for approval. The program was proposed for implementation from 2020 to 30 June 2022. Under this program, renewable power generators and consumer off-takers would be able to participate directly in Vietnam's wholesale electricity market and enter into contracts for difference with each other at agreed long-term prices. The MOIT currently plans to complete the relevant legal framework (including the wholesale electricity market operation regulations) to implement this programme by the end of 2021.

CURTAILMENT RISK AND PRIVATE INVESTMENT IN TRANSMISSION

The surge of 4 GW of solar capacity connected to the national grid in 2019, the size of which was not foreseen, and the concentration of new projects in a few provinces, created enormous pressure on the power system and threatened grid disruption. As a result, a number of solar and wind projects were reportedly requested to curtail output without compensation from EVN (pursuant to the terms of the standard form PPA).

Resolution 55 discusses development of a mechanism to attract non-State capital for investment in construction of the national power transmission system. During the past year, there have been indications that the Government is considering engaging private investors to assist with power transmission investments. 2020 also witnessed the completion of the first ever privately built transmission project in Vietnam within the framework of a project comprising a 450MW solar plant and a transmission system invested by Trung Nam Construction Investment JSC. While this sets a positive example in the market, the possibility of private investment in this area appears to be limited. Pending a more comprehensive resolution, curtailment risk remains a factor that needs to be considered carefully by investors.

COMPETITIVE BIDDING

At the request of the Prime Minister, the MOIT has been collaborating with other ministries to develop comprehensive competitive bidding mechanisms to apply to solar and wind power. There are two options which have been proposed so far for competitive bidding, depending on the project capacity:

- Bidding by substation will apply to solar power projects having capacity from 10MW to 100MW. Potential investors will propose projects (and applicable tariffs to such projects) to be connected to the substations and transmission lines within the list issued by the MOIT and based on the information on areas having solar potential in the national power master plan. Bidding proposals with the best tariff which will be subject to a cap will be selected until the load capacity of such substation is full.
- Bidding by project will apply to solar power projects having capacity above 100MW. Potential investors will bid on a specific project location as announced by the authority including the project name, location, coordinates, capacity and grid connection plan. EVN and the relevant People's Committee will be in charge of site preparation, transmission line direction, grid connection infrastructure, and infrastructure to access the site. Due to this involvement required from the State, it is projected that this will apply to large floating solar projects to save the costs required from the State budget at the local level for site preparation.

It is planned that based on the analysis of the impact and outcomes of the pilot scheme for solar power mentioned above, the MOIT will complete the competitive bidding mechanisms to be applicable to renewable energy as well as the implementation roadmap to propose to the Prime Minister for application nationwide.

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