

**Baker
McKenzie.**

**Update on Draft National Power
Development Plan #8 (PDP8)
under MOIT Report 3787
dated 4 July 2022**

Thanh-Hai Nguyen, Partner | 5 July 2022



Agenda

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The feasibility of the Draft PDP8

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Solar power

3

LNG-to-power

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Q&A

1

The feasibility of the Draft PDP8

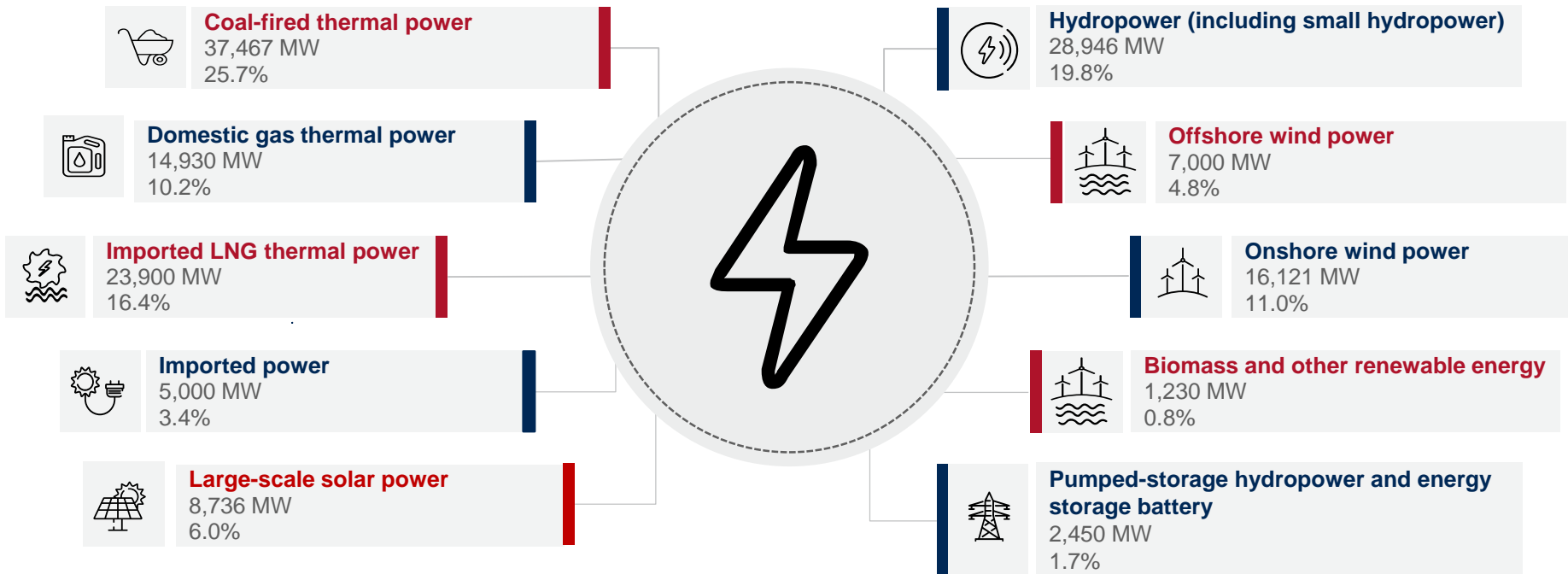
MOIT Report 3787 on the Draft PDP8 (4 July 2022)

Vietnam Power Mix by 2030



Installed capacity*: **145,930 MW**

**excluding rooftop solar power and cogeneration*



Volume of power transmission system to be newly constructed or upgraded in the period of 2021-2030

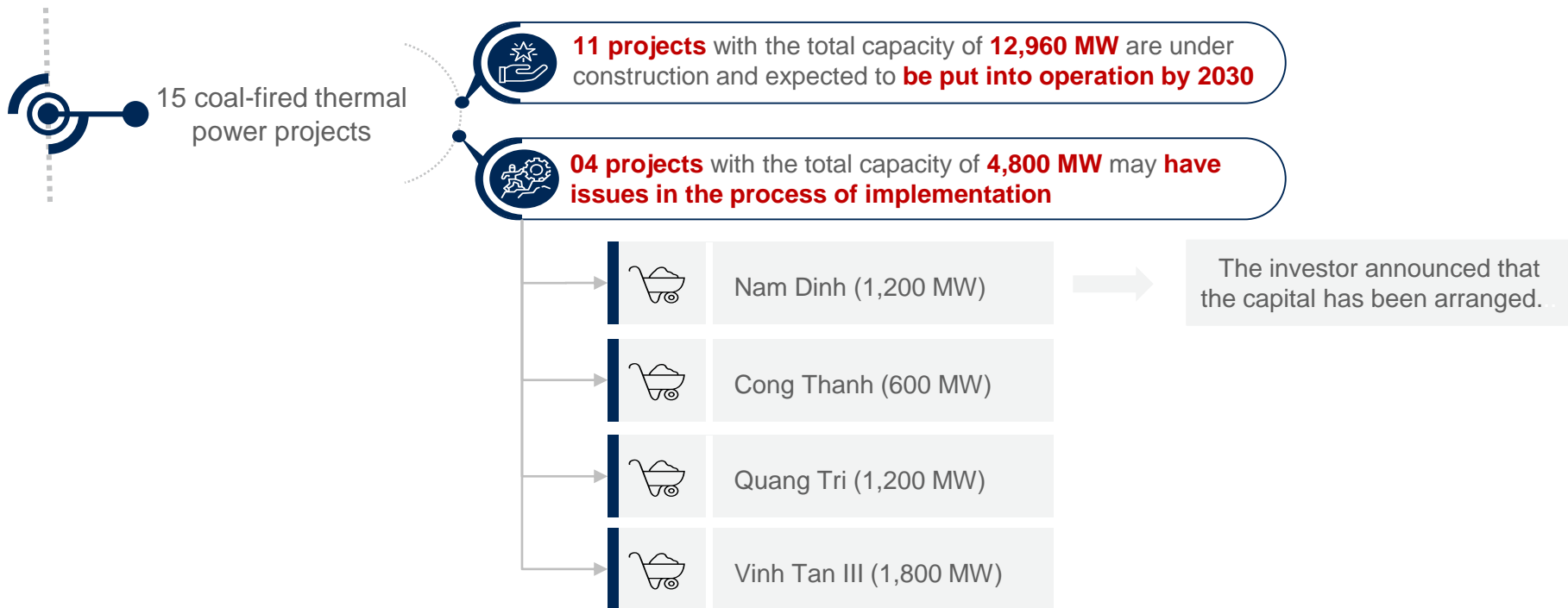
No.	Items	Unit	Total volume 2021-2030
1.	500 kV substation		
	New construction	MVA	46,650
	To be improved	MVA	37,800
2.	500 kV transmission line		
	New construction	km	12,490
	To be improved	km	1,324

Volume of power transmission system to be newly constructed or improved in the period of 2021-2030

No.	Items	Unit	Total volume 2021-2030
1.	200 kV substation		
	New construction	MVA	74,275
	To be improved	MVA	34,497
2.	200 kV transmission line		
	New construction	km	16,061
	To be improved	km	6,484

MOIT Report 3787: The feasibility of the Draft PDP8

Coal-fired thermal power



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Coal-fired thermal power projects

No.	Project Name	Capacity (MW)	Investor	Timeline under PDP8	Estimated timeline	Current status	Obstacles
1	Na Duong 2	110	TKV	2021-2025	2026 at the earliest	The FS was approved. Capital for the project has been arranged.	Difficulties in EPC contractor selection. The approved price is lower than the price reasonable to contractors due to the recent increase in the price of materials and equipment.
2	An Khanh – Bac Giang	650	An Khanh – BG	2021-2025	2025 at the earliest	The FS was approved. Some infrastructure items have been under construction. The capital for project is being arranged from domestic sources.	
3	Thai Binh 2	1200	PVN	2021-2025	Quarter IV - 2022	Total progress reached 94%.	
4	Cong Thanh	600	Cong Thanh	2021-2025	After 2030	The FS was approved.	Unable to arrange capital. The investor is proposing to switch to using LNG.
5	Quang Trach 1	1,200	EVN	2021-2025	Quarter IV – 2025	Capital mobilization and EPC contractor selection have been completed. The project is under construction.	

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Coal-fired thermal power projects

N o.	Project Name	Capacity	Investor	Timeline under PDP8	Estimated timeline	Current status	Obstacles
6	Long Phu 1	1,200	PVN	2026-2030	About 2027	Total progress reached 75%. The project implementation is on hold.	The US embargoes EPC general contractor (Power Machine). Power Machine has stopped performing the EPC contract and is suing PVN.
7	Song Hau 1	1,200	PVN	2021-2025	Quarter II/2022	The construction has been completed. The plant is being tested to be put into operation.	
8	BOT Nghi Son 2	1,330	Marubeni; Korea Electric Power; Tohoku	2021-2025	COD in August 2022 under the BOT contract	Under construction. Total progress reached about 99.82%. Unit 1 reached COD on Jan 2022 and Unit 2 is being tested.	
9	BOT Duyen Hai 2	1,320	Janakuasa SDN BHD	2021-2025		The project reached COD. Units 1 and 2 reached COD on June and December 2021 respectively.	
10	BOT Van Phong 1	1,420	Sumitomo Corporation	2021-2025	Under the BOT contract, planned COD of Units 1 and 2 is Quarter III/2023 and Quarter I/2024 respectively.	The project is under construction. Total progress reached about 70.52%.	

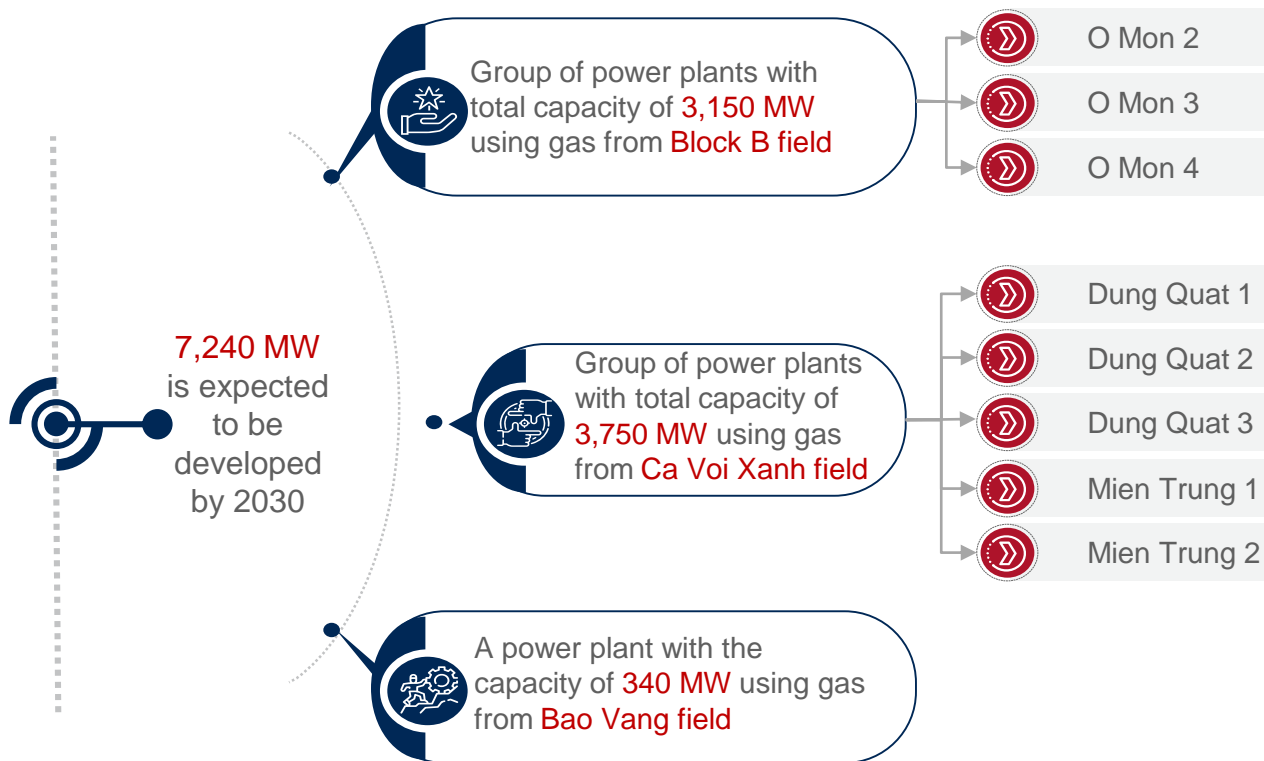
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Coal-fired thermal power

No.	Project Name	Capacity	Investor	Timeline under PDP8	Estimated timeline	Current status	Obstacles
11	BOT Vung Ang 2	1,330	OneEnergy Asia Limited	2026-2030	Under the BOT contract, planned COD of Units 1 and 2 is Quarter III/2025 and Quarter I/2026 respectively.	The project is under construction. Total progress reached about 10.9%.	
12	BOT Quang Tri	1,320	Electricity Generating Authority of Thailand (EGAT) International Company Limited	2026-2030	Unable to be determined	The negotiation of project contracts is in progress.	Difficulties in arranging capital
13	BOT Nam Dinh 1	1,200	Nam Dinh First Power Holdings Pte. Ltd	2026-2030	Unable to be determined	The negotiation of project contracts is in progress.	Difficulties in arranging capital
14	BOT Vinh Tan 3	1,980	OneEnergy Ventures Limited, EVN	2026-2030	Unable to be determined	In the process of finalizing project contracts.	Difficulties in arranging capital
15	BOT Song Hau 2	2,120	Toyo Ink Group Berhad	2026-2030	Under the BOT contract, planned COD of Units 1 and 2 is Quarter III/2026 and Quarter I/2027 respectively.	BOT contract was signed. The capital mobilization is in progress.	Difficulties in arranging capital

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Domestic gas thermal power

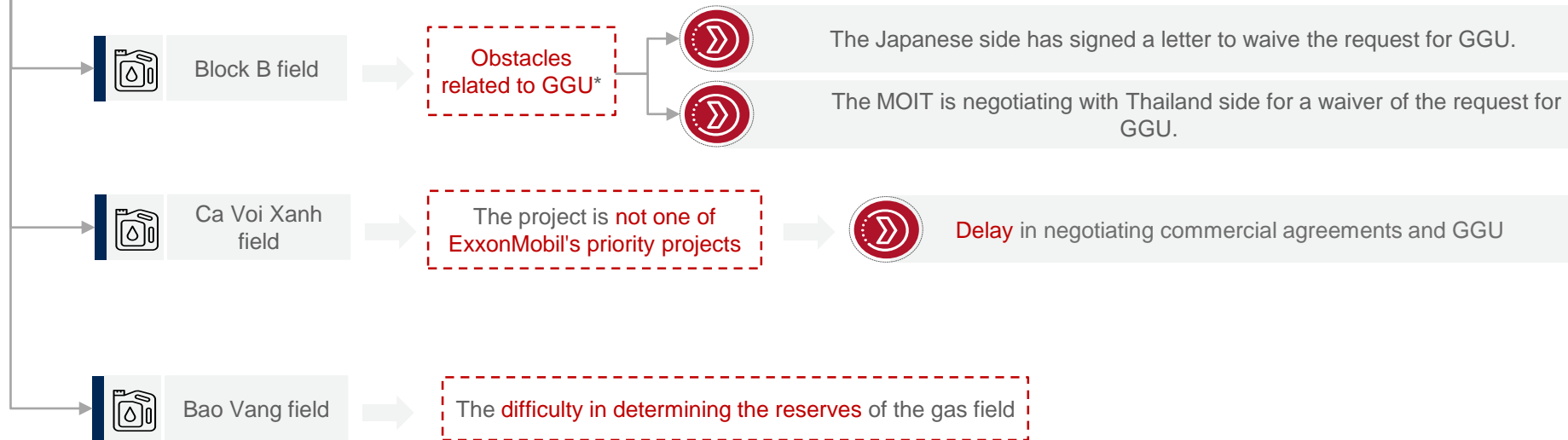


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Domestic gas thermal power



Obstacles in the upstream sector



*GGU: Government Guarantee and Undertaking

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Domestic gas thermal power

No.	Project Name	Capacity	Investor	Timeline under PDP8	Estimated timeline	Current status	Obstacles
1	Dung Quat 1 (CVX)	750	EVN	2026-2030	2028	FS was approved. The gas sale and purchase agreement is under negotiation.	Difficulties in negotiating CVX gas supply and synchronously implementing the CVX project chain
2	Dung Quat 3 (CVX)	750	EVN	2026-2030	2028	FS was approved. The gas sale and purchase agreement is under negotiation.	
3	Dung Quat 2 (CVX)	750	Sembcorp (BOT)	2026-2030	2028	FS was approved. The gas sale and purchase agreement is under negotiation.	Difficulties in negotiating CVX gas supply. Reserves and progress of gas sources have not yet been determined.
4	Mien Trung 1 (CVX)	750	PVN	2026-2030	2028	-	Difficulties in negotiating CVX gas supply and synchronously implementing the CVX project chain
5	Mien Trung 2 (CVX)	750	PVN	2026-2030	2028	-	

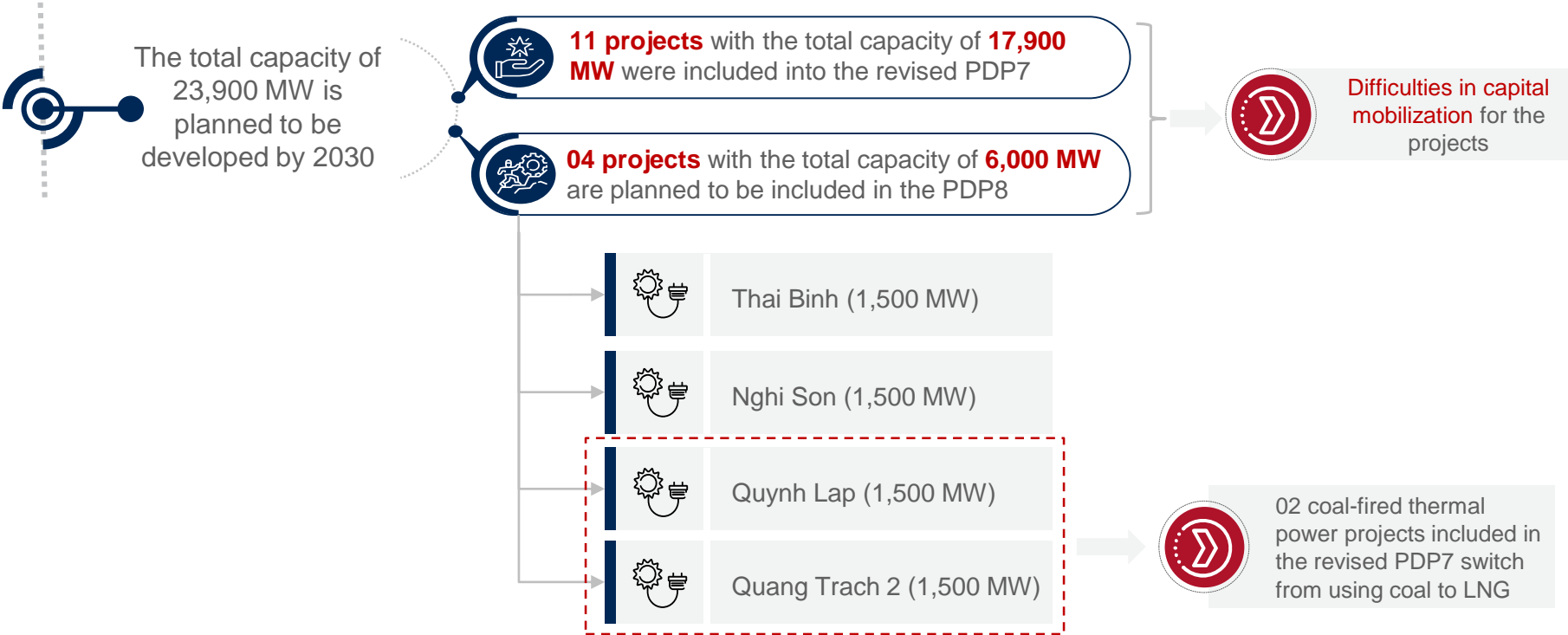
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Domestic gas thermal power

No.	Project Name	Capacity	Investor	Timeline under PDP8	Estimated timeline	Current status	Obstacles
6	O Mon 3 (Block B)	1,050	EVN	2021-2025	2027	The procedures for obtaining the approval of investment policy using ODA loans are in progress.	Difficulties in implementing investment policy, negotiating gas supply from Block B and synchronously implementing the project chain.
7	O Mon 4 (Block B)	1,050	EVN		2026	FS was approved. The preparation for EPC bidding is in progress.	Difficulties in negotiating gas supply from Block B and synchronously implementing the project chain.
8	O Mon 2 (Block B)	1,050	WTO-Marubeni	2021-2025	2026	The formulation of FS is in progress.	
9	Quang Tri	340	Gazprom EP International B.V.		After 2030	The investor has not yet implemented any works related to the power plant. The investor must drill additional well 6X to assess the gas reserves of Bao Vang field, the progress of the power plant and the efficiency of the gas-electricity project chain.	The investor is unable to assess the gas reserves of Bao Vang field, the progress of the power plant and the efficiency of the gas-electricity project chain.

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LNG-to-power



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LNG-to-power

No.	Project Name	Capacity	Investor	Timeline under PDP8	Estimated timeline	Current status	Obstacles
1	Nhon Trach 3,4	1,500	PV Power	2021-2025	2025	FS was approved and EPC general contractor was selected. The project is in progress.	Difficulties in negotiating PPA and arranging capital for the project.
2	Hiep Phuoc – Phase 1	1,200	Hiep Phuoc	2021-2025	2024	The FS was approved. The capital mobilization was completed. The construction of the project is in progress.	
3	Bac Lieu – Phase 1	800	DOE	2021-2025	2027 at the earliest	The finalization of the FS is in progress for approval and PPA negotiation with EVN.	Difficulties in negotiating PPA and arranging capital for the project.
4	Bac Lieu – Phase 2	2,400	DOE	2026-2030	2029 at the earliest		
5	Son My 1 (BOT)	2,250	EDF-Sojits-Kyushu	2026-2030	2028 at the earliest	The finalization of the FS is in progress.	Difficulties in negotiating project documents and arranging capital for the project.

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LNG-to-power

No.	Project Name	Capacity	Investor	Timeline under PDP8	Estimated timeline	Current status	Obstacles
6	Son My 2 (BOT)	2,250	AES	2026-2030	2028 at the earliest	The consideration for issuance of the project's investment policy approval is in progress.	Difficulties in negotiating project documents and arranging capital for the project.
7	Long An 1	1,500	Vinacapital – GS Energy	2026-2030	2028 at the earliest	FS formulation is in progress.	Difficulties in negotiating PPA and arranging capital for the project.
8	Long An 2	1,500		2031-2045	2028 at the earliest		
9	Ca Na	1,500	-	2026-2030	2028 at the earliest	The investor selection procedures by the Provincial People's Committee (PPC) is in progress.	Difficulties in negotiating PPA and arranging capital for the project.
10	Quang Ninh 1	1,500	PV Power – Lilama – Tokyo Gas – Marubeni	2026-2030	2028 at the earliest	FS formulation is in progress.	Difficulties in negotiating PPA and arranging capital for the project.

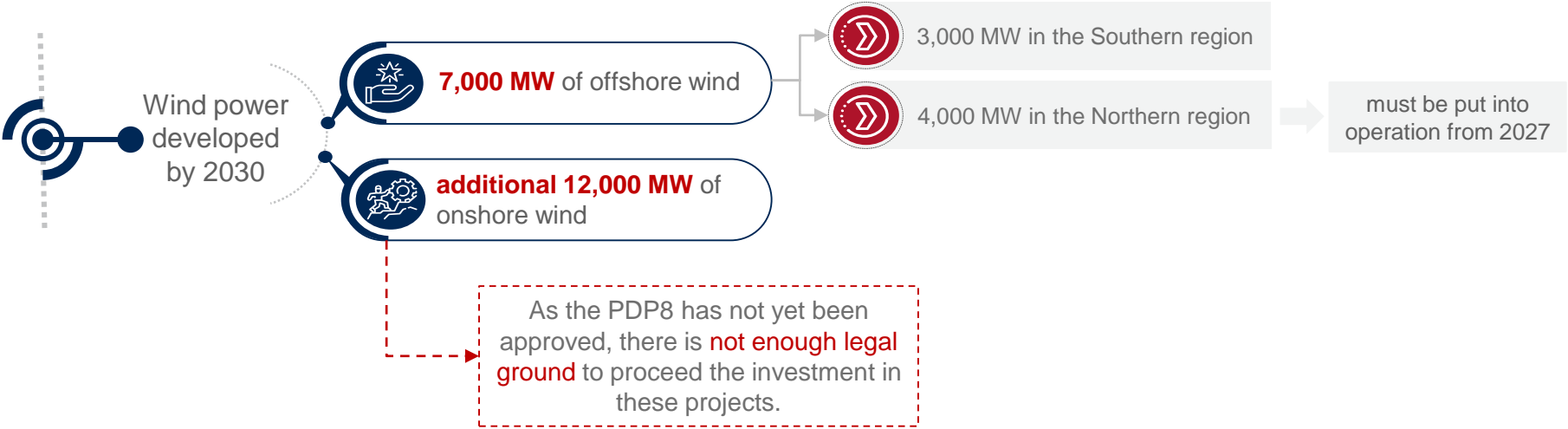
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LNG-to-power

No.	Project Name	Capacity	Investor	Timeline under PDP8	Estimated timeline	Current status	Obstacles
11	Long Son	1,500	-	2026-2030	2029 at the earliest	The investor selection procedures by the PPC is in progress.	Difficulties in negotiating PPA and arranging capital for the project.
12	Hai Lang	1,500	T&T – Kogas – Hanwha – KSPC	2026-2030	2028 at the earliest	FS formulation is in progress.	Difficulties in negotiating PPA and arranging capital for the project.
13	Thai Binh	1,500	-	2026-2030	COD within the period of 2028-2030	The investor selection and the implementation of the first investment steps are in progress.	Difficulties in negotiating PPA and arranging capital for the project.
14	Nghi Son	1,500	-				
15	Quynh Lap	1,500	-				
16	Quang Trach 2	1,500	-				

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Wind power

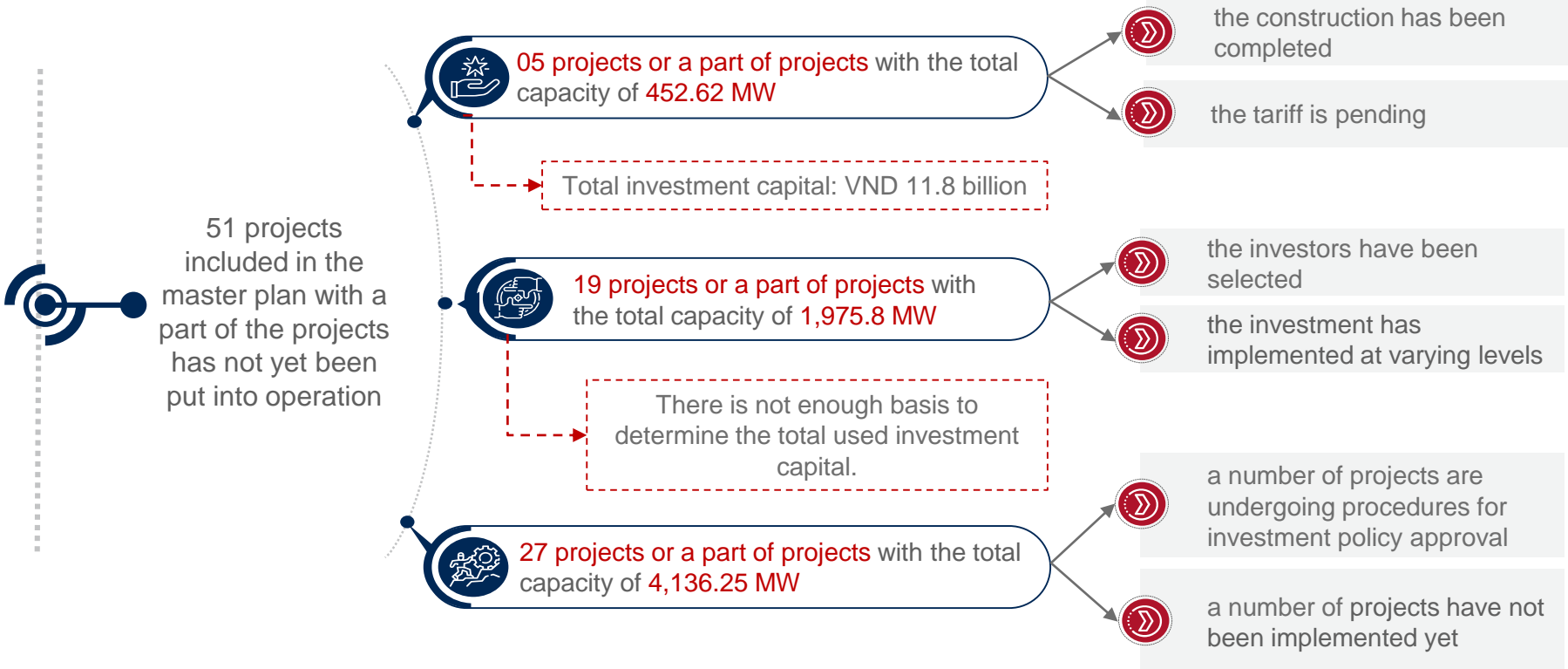


The background features a dark blue gradient with dynamic, glowing waves of red and blue particles. These particles form a series of undulating lines that create a sense of movement and energy, resembling a digital or scientific visualization.

2

Solar power

MOIT Report 3787: Solar power



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Proposals of the MOIT



To avoid legal risks, disputes, and Government's responsibilities to compensate investors:



2,428.42 MW of solar power projects for which the investors have been selected



To **continue developing** these projects



4,136.25 MW of solar power projects for which the investors have NOT yet been selected



To consider **pushing back on the implementation schedule** so that these projects will be carried out **after 2030**.

Up to 2030

IF



the **technical condition** of the national power system is **better**

or



There are **more tools** to safely and economically monitor and operate power sources in the system

or



There are power projects that are delayed and need **alternative solutions**



The MOIT will ask EVN to calculate, check and report to the Prime Minister.

MOIT Report 3787: Solar power

Proposals of the MOIT



To avoid legal risks, disputes, and responsibilities to indemnify investors:



To continue developing 2,428.42 MW of solar power projects for which the investors have been selected



Total installed capacity by 2030



Basic scenario: 133,878.5 MW



High scenario: 148,358.5 MW

these projects must:



comply with the laws



comply with the electricity price mechanism at the time of putting into operation



be consistent with the absorptive capacity of the national power system and capacity of the power grid

Wind and solar power



Projects that serve the purpose of **self-consumption**, serve **on-site loads**, and **not generate electricity to the national grid**



Projects that **serve the production of new forms of energy** such as green hydrogen and ammonia.



The development of these projects should be **prioritized**.



The capacity of these projects is **not limited** (e.g., by the sources structure under the PDP8).



These projects can **be supplemented to the PDP8**.

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
I. Solar power projects of which the construction has been completed and the tariff is pending (not yet determined)								
1	Phu My	Binh Dinh						
1.1	Phu My 1	Binh Dinh	120		31.25	64.75	The construction has been completed.	31.25 MW reached COD on 30 December 2020; the remaining capacity is waiting for the tariff
1.2	Phu My 2	Binh Dinh	110		93.75	0		93.75 MW reached COD on 30 December 2020
1.3	Phu My 3	Binh Dinh	100		56.25	23.75		56.25 MW reached COD on 24 December 2020
2	Thien Tan 1.4	Ninh Thuan	100		0	80	The construction has been completed, waiting for tariff to conduct acceptance test	The project is waiting for power generation because the construction of 220kV line has not yet been completed. The tariff is pending.

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
I. Solar power projects of which the construction has been completed and the tariff is pending (not yet determined)								
3	Thien Tan 1.3	Ninh Thuan	50		0	32	6.3 MW was put into operation. The tariff is pending.	8MWp reached the COD. The remaining capacity has not yet been recognized for the COD due to the lack of tariff.
4	Thien Tan 1.2	Ninh Thuan	100		0	80	37.8 MW was put into operation. The tariff is pending.	48.23 MWp reached the COD. The remaining capacity is waiting for the tariff.
5	450MW solar power project in Phuoc Minh, Thuan Nam	Ninh Thuan	-	450	277.88	172.12	277.88 MW was put into operation.	Electricity Operation License was issued. 277.88 MW reached the COD. 172.12 MW was put into operation without tariff.
Total						452.62		

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
II. Solar power projects of which the investors were selected and the construction for a part of the project has <u>not</u> yet been completed								
1	Chu Ngoc							
1.1	Chu Ngoc – Phase 1	Gia Lai	15		12.75	0	15 MWp was put into operation from 03 June 2019	The project reached COD on 04 June 2019. The project is currently in operation.
1.2	Chu Ngoc – Phase 2	Gia Lai	25		0	20	The project has not yet been put into operation	The contract on FS study was signed and 30% of contract price was paid in advance. The investor has registered for plan on land use.
2	Phuoc Thai							
2.1	Phuoc Thai 1	Ninh Thuan		50	42	8	The project has been put into operation.	The project is currently in operation.
2.2	Phuoc Thai 2	Ninh Thuan		100	0	100	The projects have not yet been put into operation.	The basic design was appraised. The bidding for EPC contractor selection was conducted.
2.3	Phuoc Thai 3	Ninh Thuan		50	0	50		

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
II. Solar power projects of which the investors were selected and the construction for a part of the project has <u>not</u> yet been completed								
3	Ngoc Lac	Thanh Hoa		45	0	45	The project has not yet been put into operation.	The basic design was appraised. PPA and Land lease agreement were signed. The project is expected to start generating electricity from Quarter IV/2022.
4	Krong Pa 2	Gia Lai	49		0	39.2	The project has not yet been put into operation.	The technical design was appraised. EPC contract was signed. The project is under construction.
5	Duc Hue 2	Long An	49		0	39.2	The project has not yet been put into operation.	The project is expected to be put into operation in June 2022. The project is waiting for PPA signing and tariff. The land use right (LUR) certificate was granted to the investor. The Environmental Impact Assessment (EIA) report was approved. Agreement on sale and purchase of solar panels, inverter, and transformer was signed.

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
II. Solar power projects of which the investors were selected and the construction for a part of the project has <u>not</u> yet been completed								
6	KN Ialy – Gia Lai	Gia Lai	500		0	400	The project has not yet been put into operation.	The consultant to prepare the FS report was hired. The contract on cadastral survey was signed. The contract for making report on adjustment of connection plan was signed. The contract for making EIA report was signed.
7	MT2	Binh Phuoc	30		0	24	The project has not yet been put into operation.	
8	MT1	Binh Phuoc	30		0	24	The project has not yet been put into operation.	The consultants to make a FS report, fire protection design, grid connection plan, etc. were hired. The investor was approved to lease land.
9	Chau Duc industrial park	Ba Ria – Vung Tau		100	58	42	58MW reached COD.	A part of the project has been put into commercial operation. The investor is requesting to remove the project from the list of projects that have not been operated yet.

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
II. Solar power projects of which the investors were selected and the construction for a part of the project has <u>not</u> yet been completed								
10	KN Srepok 3 – Phase 1	Dak Lak	380		0	304	The project has not yet been put into operation.	The consultant to prepare the FS report was hired. The investor planted site clearance landmarks.
11	Phu Thien	Gia Lai	40		0	32	The project has not yet been put into operation.	Contract on sale and purchase of solar panels, construction contract, and contract on making FS study report were signed. Basic design was submitted to the Department of Industry and Trade (DOIT) for appraisal. A number of LUR transfer agreements were signed.
12	Trang Duc	Gia Lai	49		0	39.2	The project has not yet been put into operation.	Contract on making FS study report was signed. List of land compensation was made. The investor purchased a part of the LURs. The PPC has agreed on the policy on contributing capital and renting lands.

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
II. Solar power projects of which the investors were selected and the construction for a part of the project has <u>not</u> yet been completed								
13	Son Quang	Ha Tinh	29		0	23.2	The project has not yet been put into operation.	The investor has not completed the procedures for agreement on grid connection and release of capacity with Huong Son Hydro Power JSC.
14	KN Ialy Kon Tum	Kon Tum	200		0	160	The project has not yet been put into operation.	Contract on measuring and drawing, extracting cadastral maps and planting site clearance landmarks was signed. Contract on conducting survey and consulting for making/appraising FS report was signed. Contract on making EIA report was signed.
15	Duc An	Dak Nong		30	0	30	The project has not yet been put into operation.	The land was allocated. The land use purpose was converted to energy land. The consultant to make the FS report was hired. EPC contract was signed.

MOIT Report 3787: Solar power

No.	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
II. Solar power projects of which the investors were selected and the construction for a part of the project has <u>not</u> yet been completed								
16	Dau Tieng							
16.1	Dau Tieng 1	Tay Ninh			150	0	The project has been put into operation.	The total capacity of Dau Tieng project is 2,000 MW. The investment in 500 MW of 03 solar power plants (i.e., Dau Tieng 1, 2, and 3) was conducted. For Dau Tieng 5, the consultant to make the FS report was hired. A map of the current land use status was made for land compensation and site clearance.
16.2	Dau Tieng 2	Tay Ninh			200	0	The project has been put into operation.	
16.3	Dau Tieng 3	Tay Ninh			150	0	The project has been put into operation.	
16.4	Dau Tieng 5	Tay Ninh		450	0	450	The project has not yet been put into operation	

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
II. Solar power projects of which the investors were selected and the construction for a part of the project has <u>not</u> yet been completed								
17	Thanh Hoa 1	Thanh Hoa	160		0	128	The project has not yet been put into operation	
18	Mai Son	Son La		10	0	10	The project has not yet been put into operation	The technical design has been appraised. The PPC is proposing to remove the project from the plan.
19	Thien Tan 1.3	Ninh Thuan	50		0	8	6.3 MW has been put into operation.	The technical design has been appraised.

Total: 1975.8

MOIT Report 3787: Solar power

No	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
III. Solar power projects of which the investors have NOT yet been selected								
1	An Cu	An Giang	50	-	0	40	The project has not yet been put into operation.	
2	Hong Liem 6.1	Binh Thuan	50	-	0	40	The project has not yet been put into operation	
3	Ayun Pa	Gia Lai	25	-	0	20	The project has not yet been put into operation	
4	Ninh Sim	Khanh Hoa	40	-	0	32	The project has not yet been put into operation	
5	Ia Rsuom – Bitexco – ToNa	Gia Lai	14.8	-	0	11.84	The project has not yet been put into operation	
6	Dam An Khe	Quang Ngai	50	-	0	40	The project has not yet been put into operation	
7	Dam Nuoc Man	Quang Ngai	50	-	0	40	The project has not yet been put into operation	

MOIT Report 3787: Solar power

No.	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
III. Solar power projects of which the investors have NOT yet been selected								
8	Loc Thanh 1-1	Binh Phuoc	50		0	40	The project has not yet been put into operation	The investor has proposed to PPC to implement the project. The investor is conducting procedures for investment policy approval. The consultants to make a FS report, fire protection design, grid connection plan, etc. were hired. The project has been approved to lease land.
9	Hai Ly Binh Phuoc 1	Binh Phuoc	50		0	40	The project has not yet been put into operation	Procedures for investment policy approval and investor approval are currently conducted. The investor has proposed to PPC to implement the project. The consultant to make a FS report was hired. The project has been approved to lease land.
10	Song Binh	Binh Thuan		200	0	200	The project has not yet been put into operation	EVN was assigned to become the investor of the project. The investment policy approval has not yet been issued by the PPC.

MOIT Report 3787: Solar power

No.	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
III. Solar power projects of which the investors have NOT yet been selected								
11	Tan Xuan	Binh Thuan	29.519		0	23.61	The project has not yet been put into operation	The investment policy approval has not yet been issued.
12	Easup 1	Dak Lak	50		0	40	The project has not yet been put into operation	The investment policy approval has not yet been issued.
13	Ia Lop 1	Dak Lak	50		0	40	The project has not yet been put into operation	The investment policy approval has not yet been issued.
14	Buon Tua Srah	Dak Nong	390		0	312	The project has not yet been put into operation	The investor is proposing for the investment policy and has submitted a written request to the PPC for the project implementation.

MOIT Report 3787: Solar power

No.	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
III. Solar power projects of which the investors have NOT yet been selected								
15	Cu Knia	Dak Nong	180		0	144	The project has not yet been put into operation	The investor is proposing for the investment policy. The investor has submitted a written request to the PPC for the project implementation. The Provincial People's Council has included these projects in the list of projects that need land recovery. On 07 March 2022, the PPC reported to the Standing Committee of the PPC to approve the investment policy. On 17 May 2022, the PPC submitted a written request to the Prime Minister and the MOIT for keeping the project progress in the period of 2021-2025.
16	Ea Tling	Dak Nong	95		0	76	The project has not yet been put into operation	
17	Xuyen Ha	Dak Nong	130		0	104	The project has not yet been put into operation	

MOIT Report 3787: Solar power

No.	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
III. Solar power projects of which the investors have NOT yet been selected								
18	KN Tri An floating solar	Dong Nai	1,160		0	928	The project has not yet been put into operation	Investors are preparing application for investment policy approvals for Tri An 1 (250 MWp), Tri An 2 (410 MWp) and Tri An 3 (500 MWp). FS report preparation consulting contract was signed.
19	Tri An	Dong Nai	126		0	101	The project has not yet been put into operation	The application for investment policy approval has not yet been made.
20	Phuoc Trung	Ninh Thuan	50		0	40	The project has not yet been put into operation	The DOIT reported under the annex attached to Letter No. 936/SCT-CN dated 09 May 2022.
21	Phuoc Huu 2	Ninh Thuan	230		0	184	The project has not yet been put into operation	
22	Xanh Song Cau	Phu Yen		150	0	150	The project has not yet been put into operation	The DOIT reported under the Letter No. 168/SCT-NLKT dated 09 March 2022.

MOIT Report 3787: Solar power

No.	Project Name	Province	Planned capacity		Capacity which has been put into operation (MW)	Capacity which has NOT yet been put into operation (MW)	Current status	Notes
			MWp	MW				
III. Solar power projects of which the investors have NOT yet been selected								
23	Ho Khe Go	Nghe An	250		0	200	The project has not yet been put into operation	The PPC has reported under the Official Letter No. 2963/UBND-CN dated 26 April 2022.
24	Ho Vu Mau floating solar	Nghe An	200		0	160	The project has not yet been put into operation	
25	Tam Bo	Lam Dong	50		0	40	The project has not yet been put into operation	The proposal for project implementation was submitted to the PPC on 21 March 2022.
26	Phong Hoa	Thua Thien Hue	50		0	40	The project has not yet been put into operation	A written request was submitted to the PPC for the investment policy approval on 20 November 2020. The PPC issued the decision on land recovery on 11 February 2020.
27	Remaining part of Dau Tieng project	Tay Ninh		1,050	0	1,050	The project has not yet been put into operation	
				Total:	0	4,136.25		

The background features a dark blue gradient with dynamic, glowing waves of red and blue particles. These particles form a series of undulating lines that create a sense of motion and energy. The overall aesthetic is futuristic and high-tech.

3

LNG-to-power

MOIT Report 3787: LNG-to-power

The compliance with the Resolution No. 55



Demands for imported LNG

Current PDP8 draft



2030: 14 - 18 billion m³

2045: 13 - 16 billion m³



The Policy under Resolution No. 55*

2030: 8 billion m³

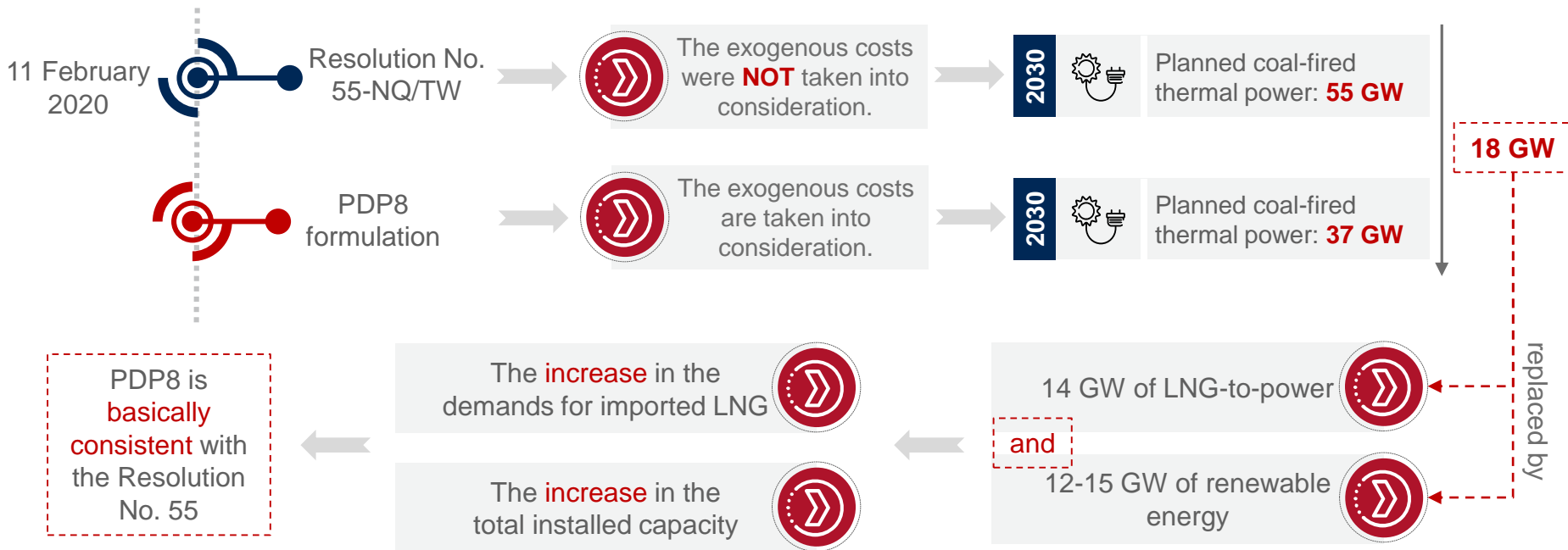
2045: 15 billion m³

Whether the PDP8 **contrasts with** the policy under the **Resolution No. 55?**

(*) Resolution No. 55-NQ/TW dated 11 February 2020 of the Central Committee of the Politburo of Vietnam on the orientation of the National Energy Development Strategy of Vietnam to 2030

MOIT Report 3787: LNG-to-power

The compliance with the Resolution No. 55



MOIT Report 3787: LNG-to-power

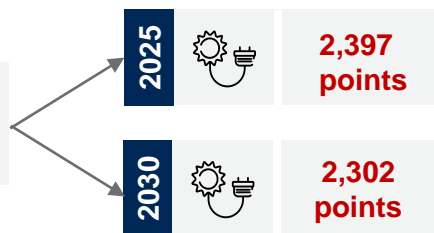
The compliance with the Resolution No. 55



The draft PDP8 satisfies the requirements on diversification of power sources under Resolution No. 55.



Herfindahl-Hirschman index (HHI) of power sources in Vietnam



MOIT Report 3787: LNG-to-power

The compliance with the Resolution No. 55



Next steps: The Prime Minister to seek guidance from



Politburo of the Communist
Party of Vietnam



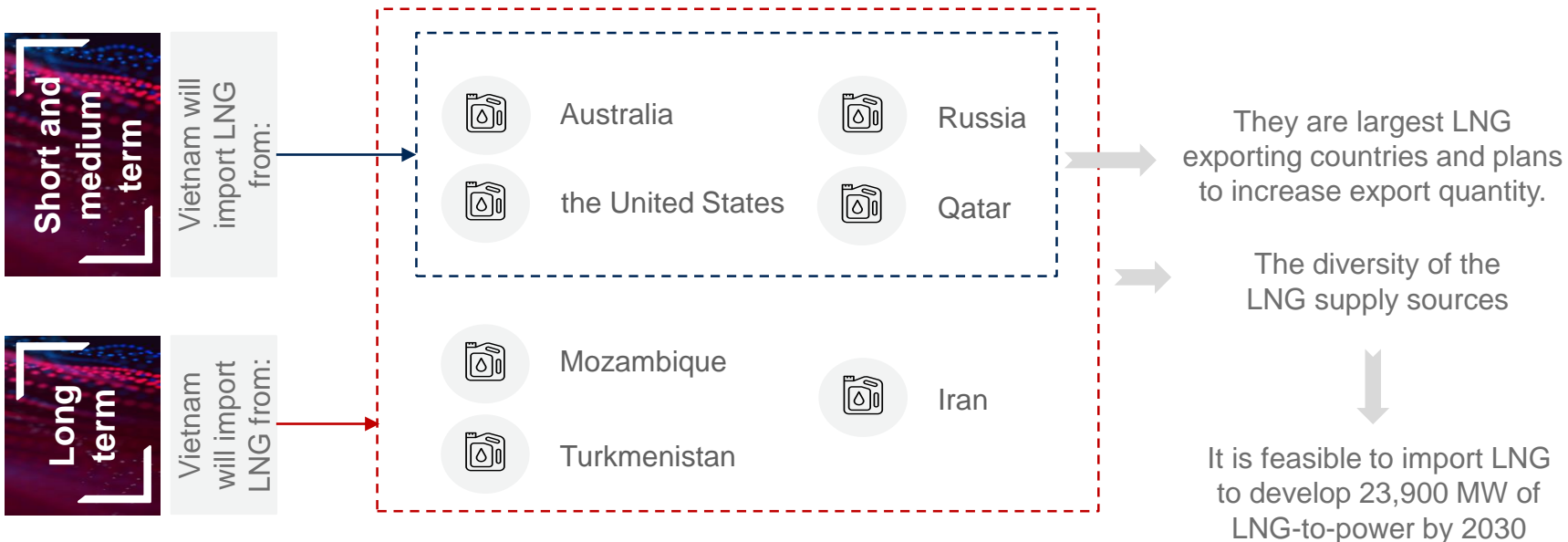
Central Economic Committee of
the Communist Party of Vietnam

MOIT Report 3787: LNG-to-power

The feasibility of importing LNG

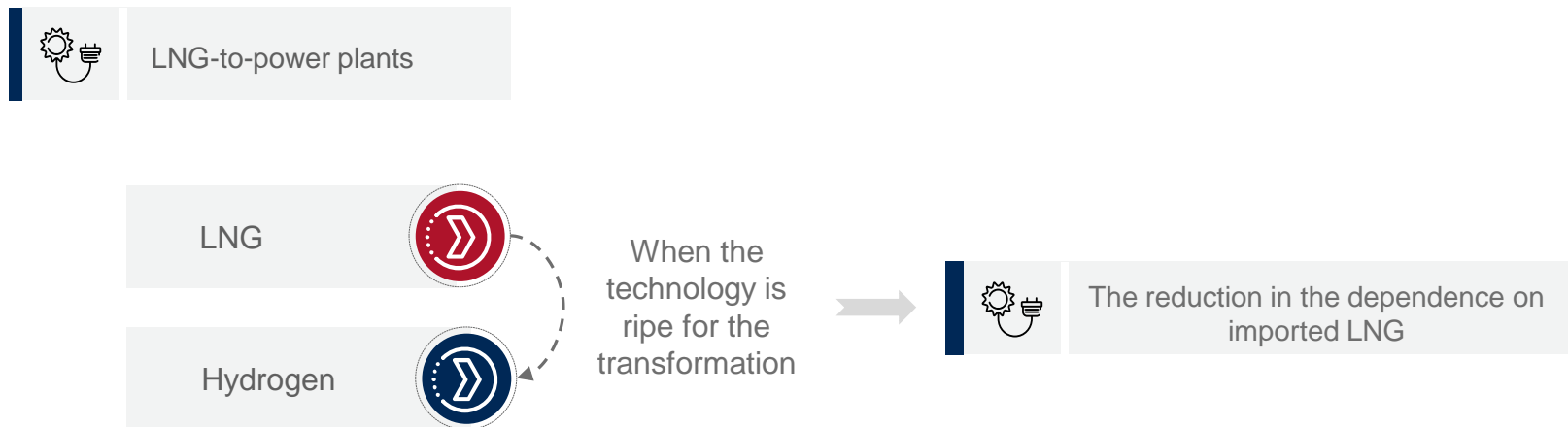
 Natural gas reserves are about **188 trillion m³** →  can be exploited in **50 years**

 Russia >> Ukraine →  The world LNG market is **highly competitive**.



MOIT Report 3787: LNG-to-power

The feasibility of importing LNG

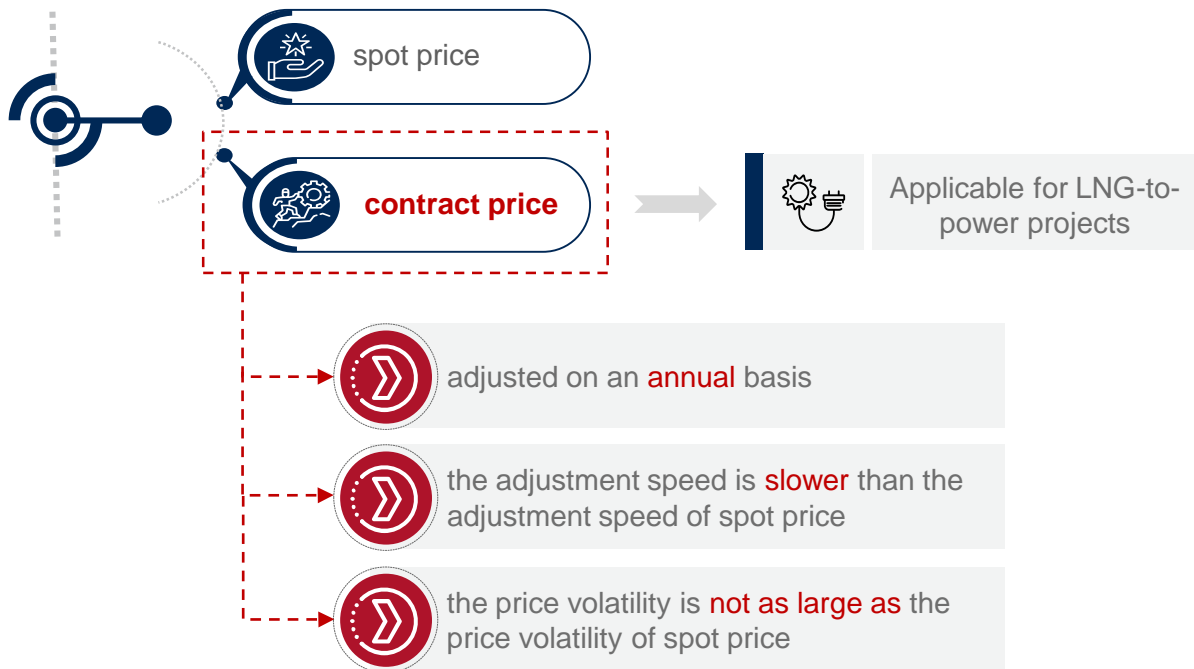


MOIT Report 3787: LNG-to-power

Fluctuations in the price of LNG

Example:

- Spot price: **USD32/MMBTU**
- Contract price: **USD15/MMBTU**



MOIT Report 3787: LNG-to-power

Fluctuations in the price of LNG



It is forecasted that LNG price will tend to decrease.

Time	Forecast of the price of LNG (USD/MMBTU)	
	World Bank	IHS Market
2022	19	15
2023	14	-
2024	13	-
2025	-	8.3
2030	8.5	8.05
2035	7.5	-
2045	-	8.27
2050	-	8.75

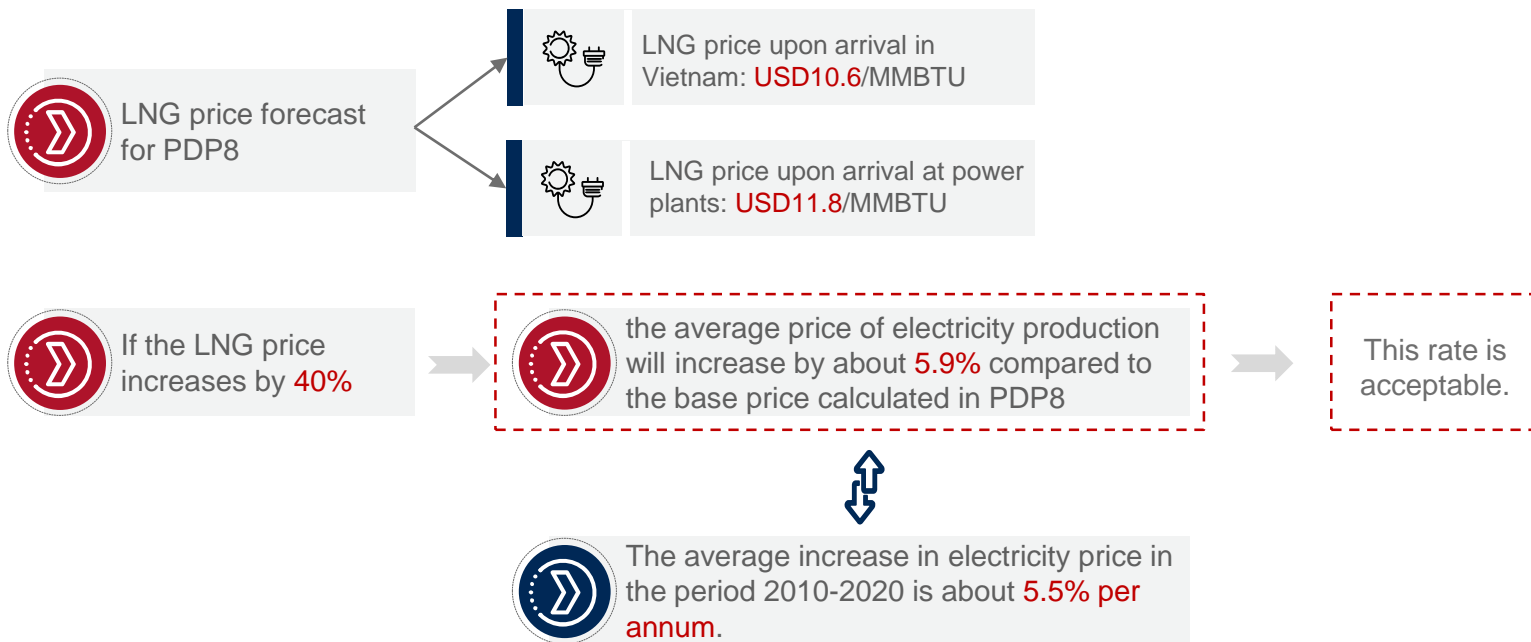


MOIT Report 3787: LNG-to-power

Fluctuations in the price of LNG



When there is an increase in the price of LNG, the increase in the average price of electricity production is still acceptable.



MOIT Report 3787: LNG-to-power

The roles of LNG-to-power source

1

PDP8 is developed on the principle of **minimum cost**



If there is a **decrease** in the planned capacity of LNG-to-power



to use other renewable energy and storage sources to replace



an **increase** in the **investment capital** and **electricity price**

2

23,900MW of LNG-to-power by 2030 **ensures the reliability** in the power supply



If there is a **delay** in the development of **coal-fired thermal power projects**



23,900MW of LNG-to-power will ensure the reliability of power supply

A large white speech bubble is centered on the left side of the image. The background is dark with glowing, wavy lines of red and blue particles that create a sense of motion and energy. The text 'Q&A' is written in a bold, dark blue font inside the speech bubble.

Q&A

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