



VIETNAM OIL AND GAS GROUP (PETROVIETNAM)



Petrovietnam - Overview

Vietnam National Oil and Gas Group, known internationally as Petrovietnam (“PVN”), is a 100% state owned enterprise operating across the entire oil and gas value chain



Established in 1977, PVN is now Vietnam’s largest economic group and a substantial contributor to Vietnam’s State Budget and GDP annually

The Group has a quasi-monopoly in the oil and gas sector in the country, and is also **one of 7 strategically important SOEs in Vietnam**

Mission

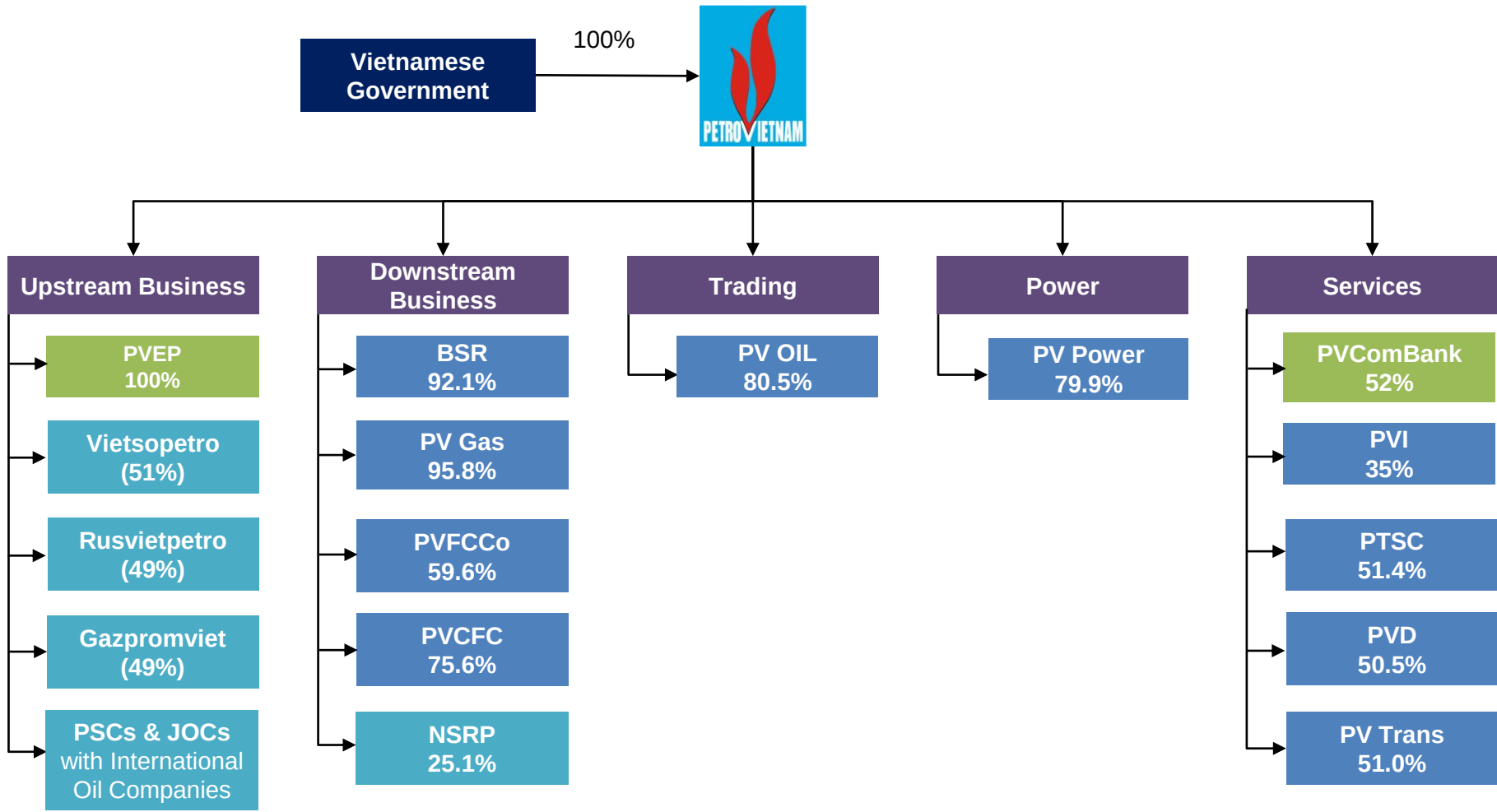
Contribute to ensure national energy security and, as a leading business group, help build and develop Vietnam economy

Strategic Vision through 2025

Be a leading petroleum group in the region – a pride of Vietnam



Petrovietnam – Group structure



 Public Listed Subsidiaries  Private Subsidiaries  Associates & Joint Ventures

Petrovietnam – Key Business Segments

Exploration and Production

- PVN Group is the only local company with access to the country's oil and gas reserves. PVN Group also acts as the **sole local partner** in PSCs, JOCs and JVs in Vietnam
- **Petrovietnam Exploration Production Corporation (PVEP)** is the upstream arm of PVN Group and conducts the core business of exploration and production. Currently, PVEP is operating over 53 projects, 11 projects are overseas

Refining and Petrochemical

- **Binh Son Refining and Petrochemical Co. Ltd. (BSR)** owns and operates Dung Quat Refinery, Vietnam's first domestic refinery which commenced operations in 2011. Total processing capacity of 6.5 million tons per year, meets over 30% of Vietnam's domestic demand for gasoline and oil
- **Nghi Son Refinery and Petrochemical LLC (NSRP)** is a Joint Venture between PVN (25%), Kuwait Petroleum Europe B.V. (35%) from Kuwait, and Idemitsu Kosan Co. Ltd. (35%) and Mitsui Chemical Inc. (5%) from Japan with total capacity of 10 million tons per year. Total supply from BSR and NSRP is to meet ~80% of market demand
- PVN Group dominates the local urea fertilizer market with more than 80% market share. The Group operates 2 fertilizer plants – Phu My Fertilizer Plant, operated by subsidiary PetroVietnam Fertilizer and Chemicals Corp (PVFCCo), and Ca Mau Fertilizer Plant, operated by subsidiary PetroVietnam Ca Mau Fertilizer JSC (PVCFC)

Power Generation

- **Petrovietnam Power Corp. (PV Power)** is the second largest power producer in Vietnam, with development focus on gas power plants. PV Power currently manages 8 power plants, with combined capacity of over 4,000 MW, and contributes around 13% of Vietnam's total electricity output

Gas

- **Petrovietnam Gas (PV Gas)** is involved in gathering, transporting, storing, processing and distribution of gas and gas products in Vietnam. PV Gas is the only company that engages in the gas pipeline business in Vietnam. PV Gas operates Dinh Co and Ca Mau Gas processing plants, which meet 21% of domestic demand for LPG. PV Gas makes up 60% of Vietnam's wholesale market for liquified gas, and 22% of domestic retail market

Trading and Distribution

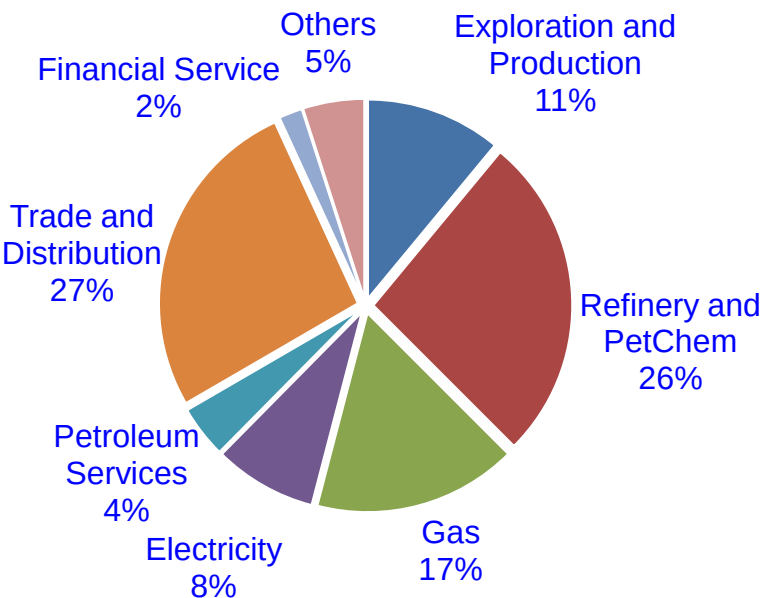
- **Petrovietnam Oil Corp. (PV OIL)** is the sole unit of PVN developing the downstream section of the oil and gas industry, especially in import/export, trading of crude oil, storing, marketing and distribution of oil products. PV OIL is the second largest player in the petroleum distribution business in Vietnam, accounting for 20% - 22% of domestic market. In Laos, PV OIL holds the second position with ~20% market share of retail business and 15% overall market share

Others

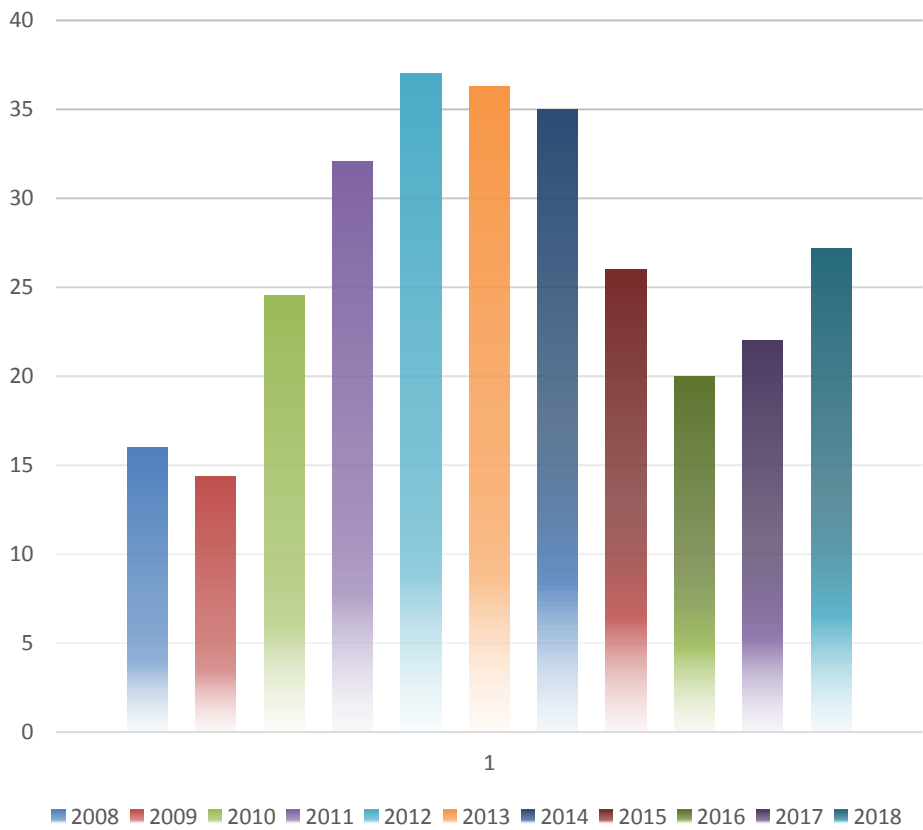
- PVN Group is also involved in providing services to the oil and gas industries – **Petrovietnam Technical Services Corp. (PTSC)** provides technical services such as EPC, FSO/FPSO, offshore support vessels, **Petrovietnam Drilling and Well Services Corp. (PV Drilling)** provides drilling and related services, **Petrovietnam Transportation Corp (PV Trans)** provides local sea transportation services

Petrovietnam - Overview

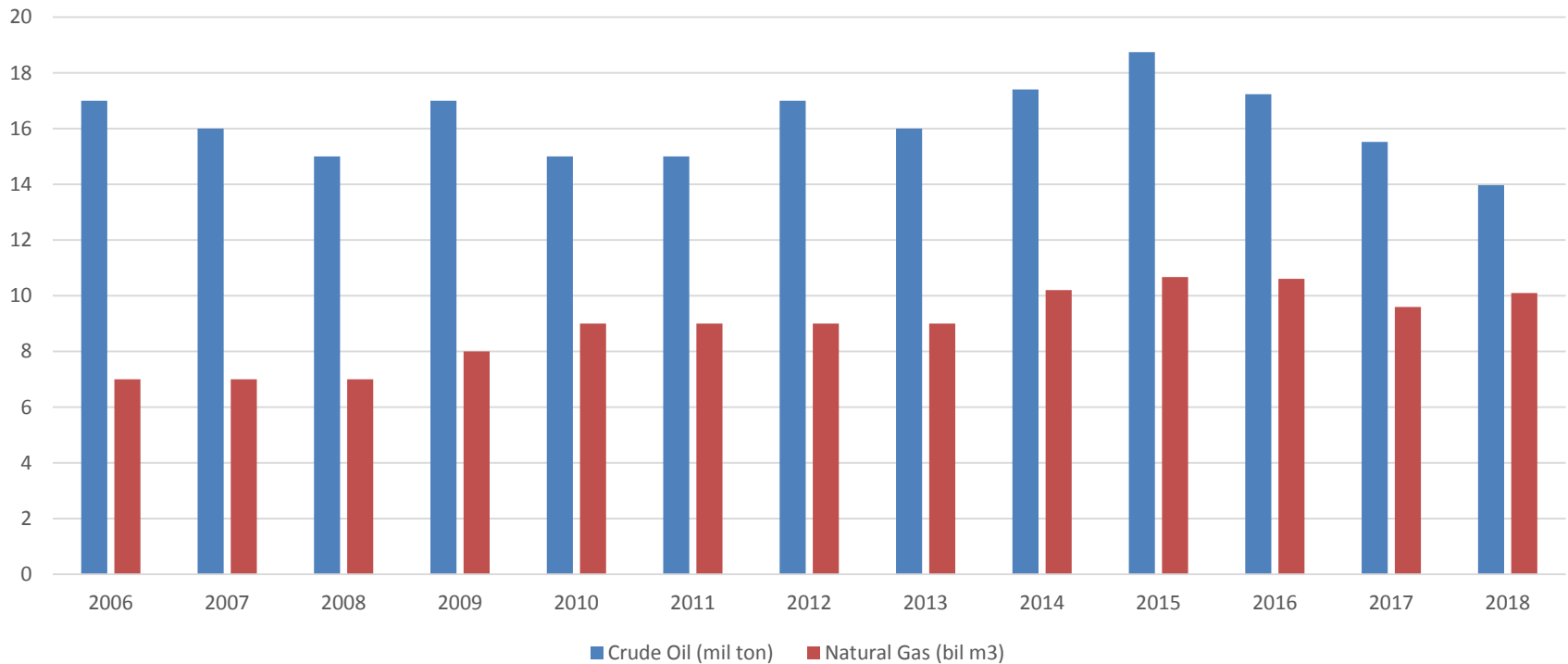
Breakdown of FY 2017 Net Revenue by Key Segments



Group revenue (USD bil)



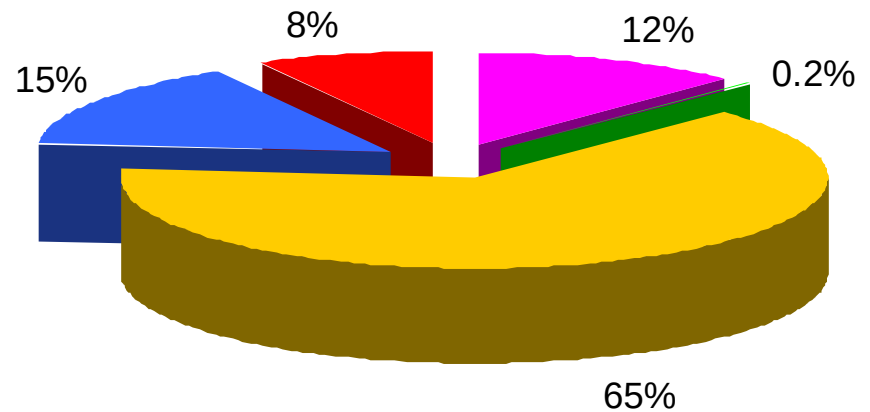
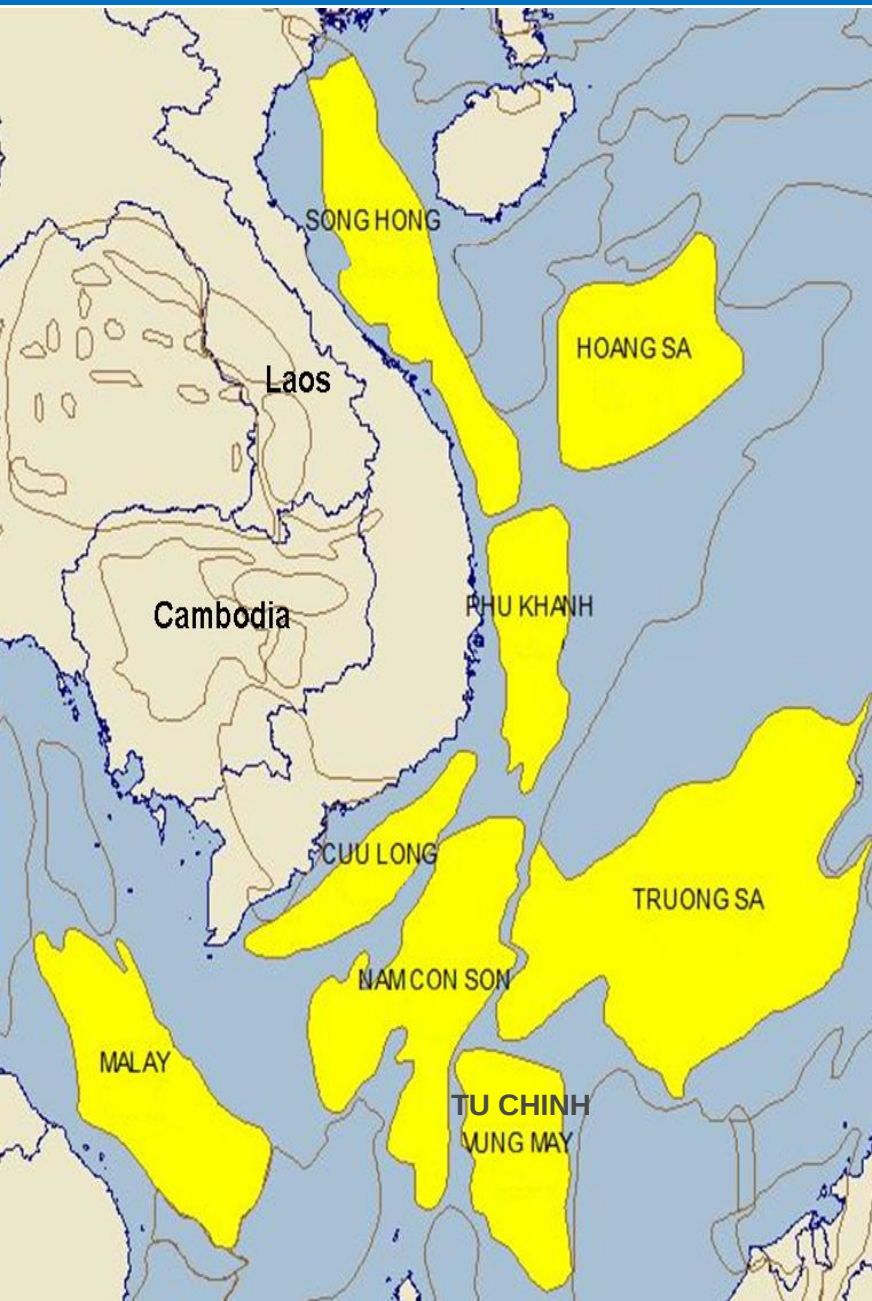
Production 2006 - 2018



2019 Production forecast

- Crude oil: 12.37 mil ton
- Nature gas: 9.69 bil m3

E&P: Vietnam Sedimentary Basins



 Song Hong	 Phu Khanh
 Cuu Long	 Nam Con Son
 Malay - Tho Chu	

More than 60 valid petroleum contracts

E&P: Projects/ Blocks calling for investment:

<i>Area</i>	<i>Name of block</i>	<i>Owner</i>	<i>Equity Ownership Offering</i>
Song Hong Basin	Blocks MVHN; MVHN-01KT, 02KT, 03KT	PVN	80%
	Blocks 102/10 & 106/10	PVEP	66%
	Block 101 - 100/04	PVEP	40%
Phu Khanh Basin	Blocks 148, 149	PVEP	60%
Onshore Mekong Delta	Blocks DBSCL-01, 02, 03, 04	PVN	80%
Nam Con Son Basin	Blocks 19	PVN	80%
	Block 05-2/10	PVEP	20%
	Block 10 & 11-1	PVEP	40%
Malay – Tho Chu – Phu Quoc Basin	Blocks 31, 32, 33, 34, 35, 36/03, 37, 38, 41, 43, 44	PVN	80%

Gas Industry - Pipeline System

Curent Gas pipeline systems:

- Cuu Long Basin gas pipeline system: 2 billion m3 of gas/year
- Nam Con Son gas pipeline system: 7 billion m3 of gas/year
- Ca Mau – PM3 gas pipeline system: 2 billion m3 of gas/ year
- Phu My – Nhon Trach gas pipeline system: 2 billion m3 of gas/year
- Phu My – My Xuan – Go Dau low-pressure gas pipeline system: 1 billion m3 of gas/year

Future key projects:

- Blue Whale (Ca Voi Xanh) gas field & pipeline
- B-Block gas field & pipeline
- Nam Con Son 2 pipeline

PVGas revenue in 2018: USD 3.28 bil

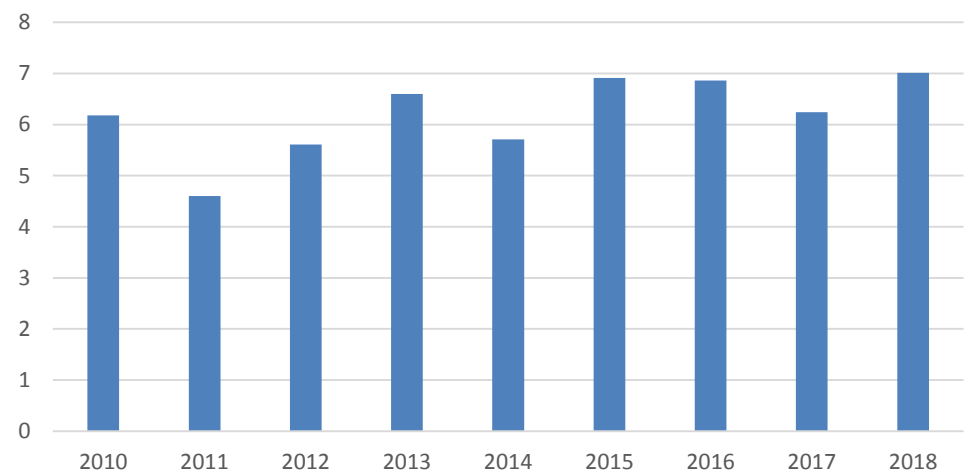


Gas Industry – Projects & Investment Opportunities

Company/Project Name	Investment Form	Curent Status	Total Investment Capital (million USD)	PVN's owner equity/Owner	Cooperation Opportunity
Petrovietnam Gas Joint Stock Corporation (PVGAS) <i>Stock code: GAS</i>	Company	Listed	832,130	PVN(96%)	Seeking for strategic investors: Offer up to 31% of owner equity
Son My LNG Terminal	Project	Under study	1,350	PV Gas	- Project Investment: Offer up to 49% of Equity ownership; - Equipment & Finance Supply
B-Block pipeline system	Project	Under construction	1,118	PVN & PV Gas	Equipment & Finance Supply
Nam Con Son 2 (phase 2) pipeline	Project	Prepare for construction	946	PV Gas	Equipment & Finance Supply
Thi Vai LNG Terminal	Project	Under construction	620	PV Gas	Equipment & Finance Supply
Su Tu Trang pipeline	Project	Prepare for construction	~ 160	PV Gas	Equipment & Finance Supply
Sao Vang – Dai Nguyet pipeline	Project	Under study	~ 150	PV Gas	Equipment & Finance Supply

Refineries & Petrochemicals – Overview

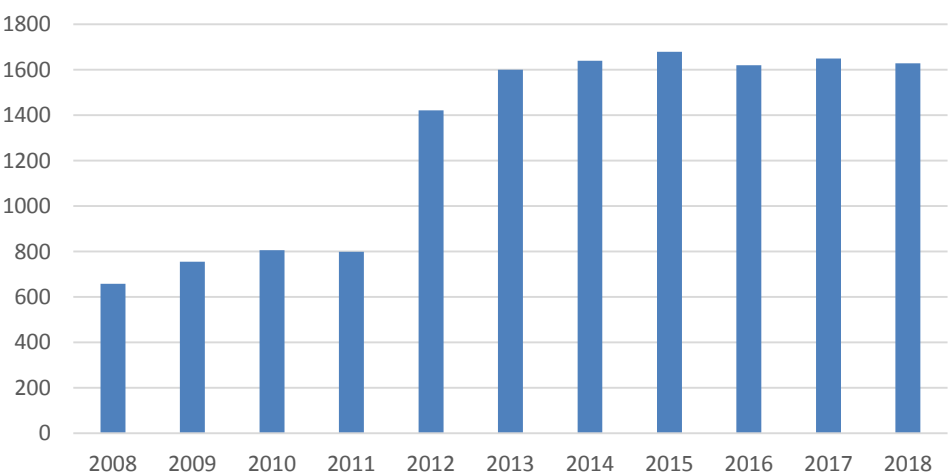
Gasoline Production (Million ton)



Refinery:

- Dung Quat Refinery: capacity of 7 million tons of crude/year
- The Condensate Processing Plant: capacity of 130,000 tons of condensate/year
- ***BSR revenue in 2018: USD 4.9 bil***

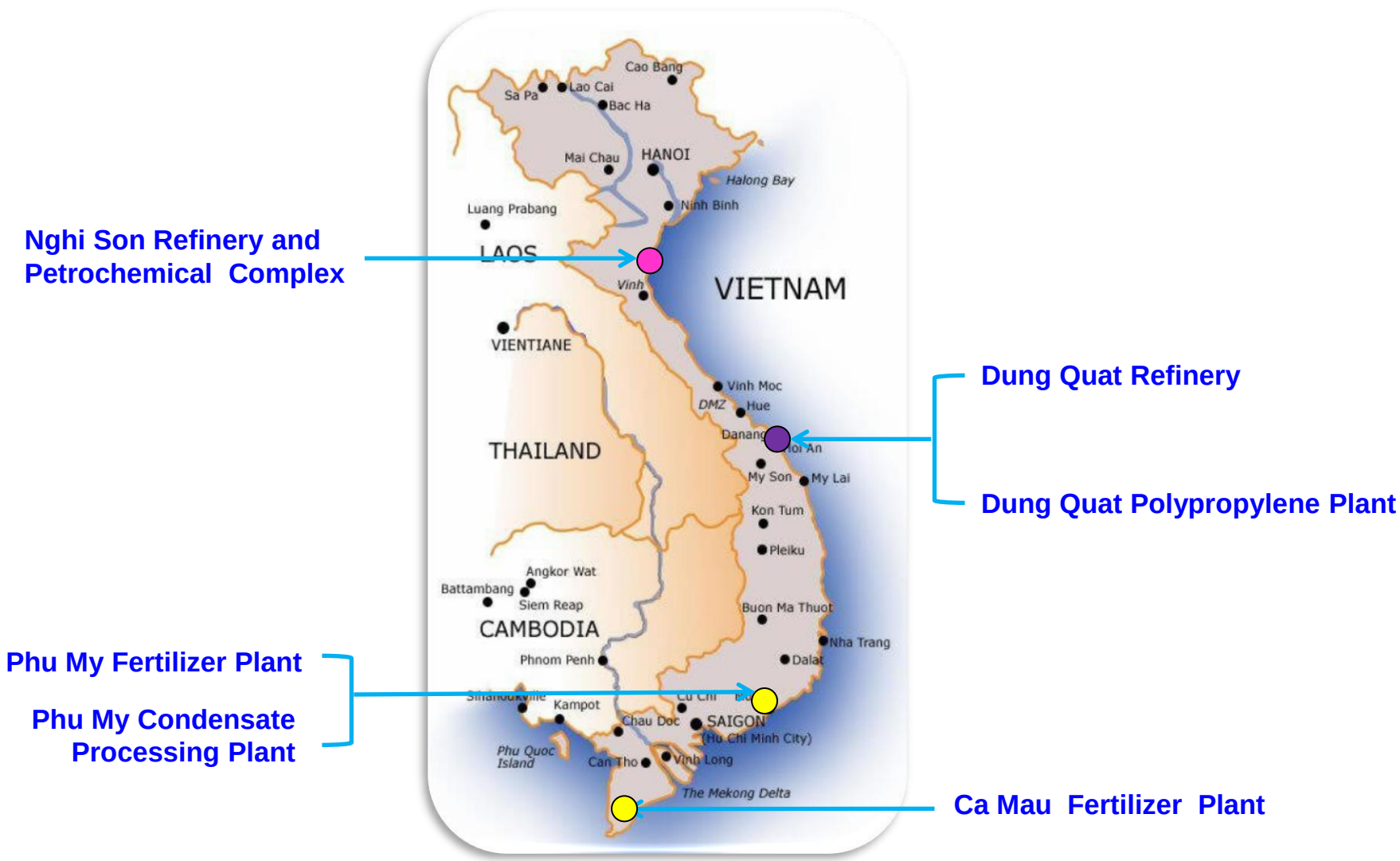
Urea Production (Thousand ton)



Fertilizer & Petrochemical

- Phu My Fertilizer Plant: capacity of 800,000 tons of urea/year
- Ca Mau Fertilizer Plant: capacity of 800,000 tons of urea/year
- Dung Quat Polypropylene: capacity of 150,000 tons of polypropylene products/year.
- ***PVFCCo revenue in 2018: USD 410 mil***
- ***PVCFC revenue in 2018: USD 304 mil***

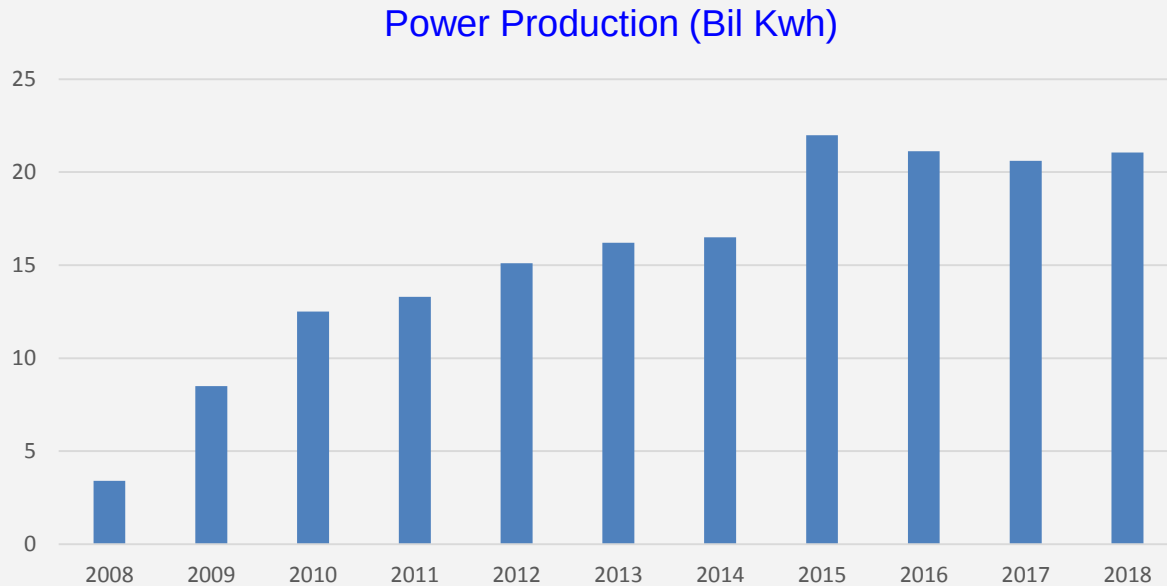
Refineries & Petrochemicals – Key projects



Refineries & Petrochemicals – Projects & Investment Opportunities

Company/Project Name	Investment Form	Curent Status	Total Investment Capital/ Charter Capital(million USD)	Owner	Cooperation Opportunity
Binhson Refining and Petrochemical Company (BSR) <i>Stock code: BSR</i>	Company	Under operation	1,400	PVN (92%)	Seeking for strategic investors: Offer up to 49% of owner equity
Dung Quat Refinery Expansion	Project	Under Study	1,800	BSR	Equipment & Finance Supply
Petrovietnam Camau Fertilizer Joint Stock Company (PVCFC) <i>Stock code: DCM</i>	Company	Under operation	252	PVN (75%)	Seeking for strategic investors: Offer up to 24% of owner equity
Petrovietnam Fertilizer & Chemicals Joint Stock Company (PVFCCo) <i>Stock code: DPM</i>	Company	Under operation	171	PVN (61%)	Offer up to 10% of owner equity

Power Generation - Overview



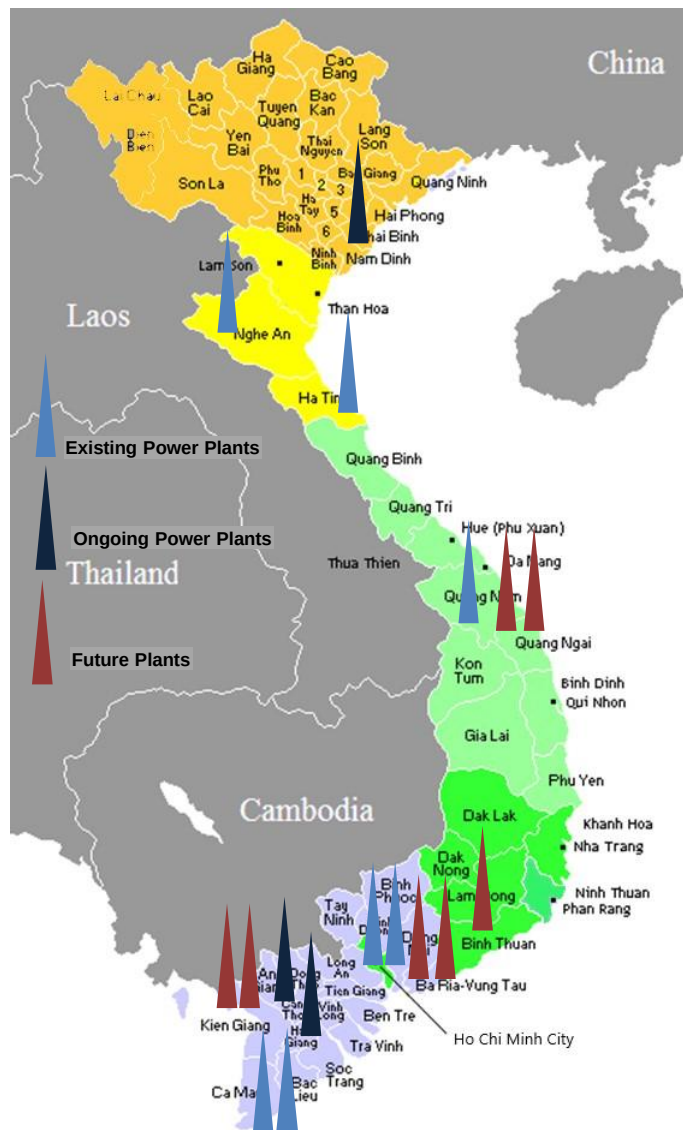
PVPower: the second biggest power generator in Vietnam; contribute to ~ 12% of national grid.

PVPower revenue in 2018: ~ USD 1.44 bil

Current ownership structure: PVN (80%), others (20%) -> PVN offers 28% of ownership

Stock code: POW

Power Generation – Major Plants



• 7 major operating power plants with total capacity ~ 4,200 MW

	Projects	Owner	Capacity
1	Ca Mau Gas-fired Power Plant No.1	PVPower100%	750 MW
2	Ca Mau Gas-fired Power Plant No.2	PVPower100%	750 MW
3	Nhon Trach Gas-fired Power Plant No.1	PVPower 100%	450 MW
4	Nhon Trach Gas-fired Power Plant No.2	PVPower 65%	750 MW
5	Hua Na Hydro	PVPower 82%	180 MW
6	Dakring Hydro	PVPower 93%	125 MW
7	Vung Ang No.1 Coal-Fired	PVN 100%	1,200 MW

• 3 major on-going power plants with total capacity: 3,600 MW

	Projects	Capacity	COD
1	Thai Binh No.2 Coal-Fired	1,200 MW	2018
2	Song Hau No.1 Coal-Fired	1,200 MW	2019
3	Long Phu No.1 Coal-Fired	1,200 MW	2019

• Future plan: 6,750 MW – Looking for partners

	Projects	Capacity	COD
1	Nhon Trach 3&4 Gas-fired Power Plant	1,500 MW	2020
2	Mien Trung 1&2 Gas-fired Power Plant	1,500 MW	2023
3	Son My 2 Gas-fired Power Plant	2,250 MW	2023
4	Kien Giang 1&2 Gas-fired Power Plant	1,500 MW	2021

Power Generation– Projects & Investment Opportunities

Company/Project Name	Investment Form	Curent Status	Total Investment Capital/ Charter Capital(million USD)	Owner	Cooperation Opportunity
Petrovietnam Power Corporation (PVPower) <i>Stock code: POW</i>	Company	Listed	1,100	PVN (80%)	Seeking for strategic investors: Offer up to 28% of owner equity

Petroleum Professional & Technical Services - Overview

G&G studies,
FPSO, FSO
supply



Logistics &
technical support



Materials &
equipments
trading



Crude oil &
petroleum
products trading



2018 service revenue
US\$ 8.65 billion



Operation &
maintenance



Transportation, storage,
distribution of petroleum products



Designs,
constructions,
installation

Petroleum Professional & Technical Services – Projects & Opportunities

Project Name	Service & Cooperation Opportunity	PVN's owner equity	Note
Petrovietnam Oil Corporation (PV Oil) Stock code: OIL	Crude oil & petroleum products trading; Distribution of petroleum products	PVN (79.8%)	PVN is seeking for strategic investors, offer up to 44.7% of owner equity
Petrovietnam Drilling & Well Services Corporation (PV Drilling)	Drilling & Well Services	PVN (51%)	
Petrovietnam Technical Services Corporation (PTSC)	FPSO, FSO supply Logistics & technical support Designs, constructions, installation	PVN (51%)	
Petrovietnam Transportation Corporation (PVTrans) Stock code: PVT	Transportation, storage of petroleum products	PVN (51%)	PVN is seeking for strategic investors, offer up to 15% of owner equity
Petrovietnam Insurance Corporation (PVI) Stock code: PVI	Finance - Insurance Service	PVN (35%)	PVN is seeking for strategic investors, offer up to 35% of owner equity
Petrovietnam Construction Joint Stock Corporation (PVC) Stock code: PVX	Designs, constructions, installation	PVN (55%)	PVN is seeking for strategic investors, offer up to 55% of owner equity
Petrovietnam General Service Joint Stock Corporation (Petrosetco)	Distribution & trading Supply chain services	PVN (25%)	PVN is seeking for strategic investors, offer up to 25% of owner equity

Thank you for your attention!

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