PETROVIETNAM POWER CORPORATION (HSX: POW)

Long-term outlook remains attractive

PetroVietnam Power Corporation (HSX: POW) is the second largest power producer in Vietnam with a portfolio of 4.2 GW, representing 9% of total capacity of the national power system. Gas-fired thermal power makes up the largest proportion of its activity with 64% of total capacity. Coal-fired thermal power accounts for 30% and hydropower for 6%. Having the majority of its capacity located in the South, a major consumption region, and mordern technology, the company has comparative advantages. This is especially true if the liberalization process in the power industry allows for more competition and offer opportunities for well run businesses to improve profitability.

*In the short term, despite risks of policy changes and input material prices, the decline in depreciation and debt oustanding will help POW improve its earnings and cash flow. Furthermore, the Nhon Trach 3&4 project is expected to become the long-term growth driver, given that the shortage of electricity in the South is inevitable when many big projects are behind progress. We combine discounted cash flow and comparable methods to value POW. Based on that, we come to a target price at VND 17,900 per share, anticipating a cash dividend of VND 300 per share in the next 12 months. This translates to a 41% total return from the closing price on September 3rd, 2019. Therefore, we have a **BUY** on this stock.*

Investment Rationale

- Stable growth in power demand and limited new supply are supporting factors for existing power plants in the middle term.
- POW owns huge plants concentrated in the key economic region in the South.
- New plants with advanced technology ensure stable operations.
- Low investment capex and strong cash flows will help POW strenghthen its financial position; while the firm still pays cash dividend.

Risks on our call

- Risks of input materials supply for thermal power plants
- Risks of volatility in the exhange rate

Key Financial Ratios

Y/E Dec (VND Bn)	FY2017	FY2018	FY2019F	FY2020F
Net revenue	29,710	32,663	34,243	40,326
%change	*5.3%*	*9.9%*	*4.8%*	*17.8%*
PAT	2,233	1,676	2,669	3,221
% change	*107.8%*	*-25.0%*	*59.2%*	*20.7%*
Net margin (%)	7.5%	5.1%	7.8%	8.0%
ROA (%)	3.7%	2.9%	5.0%	6.0%
ROE (%)	9.0%	6.8%	10.1%	11.2%
EPS (VND)	1,014	749	1,134	1,369
Book value (VND)	11,437	10,474	11,262	12,275
Cash dividend (VND)	0	0	300	300
P/E (x)	14.2	21.4	13.0	10.8
P/BV (x)	1.1	1.4	1.3	1.2

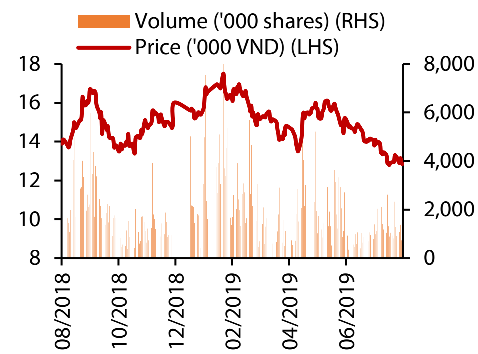
Source: POW, RongViet Securities

BUY **+ 41%**

CMP (VND)	12,900
Target price (VND)	17,900
Cash dividend in 12 months (VND)	300

Stock Info

Sector	Utilities
Market Cap (VND Bn)	34,660
Share O/S (Mn)	2,342
Beta	N/A
Free Float (%)	14.18
52 weeks high	17,500
52 weeks low	11,000
Average trading volume (20 sessions)	4,384,893



Performance (%)

	3T	1N	3N
POW	-3.6	49.1	N/A
Power	1.5	22.3	25.3
VN Index	-1.3	6.6	49.5

Major shareholders (%)

Vietnam Oil and Gas Group	79.94
Dragon Capital	5.88
Foreigner Investor Room (%)	*49%*

Son Phan

(084) 028 - 6299 2006 – Ext 1519

son.pnt@vdsc.com.vn

Vy Nguyen

(084) 028 - 6299 2006 – Ext 1528

vy.ntk@vdsc.com.vn

INVESTMENT RATIONALE

Stable growth in power demand and limited new supply are supporting factors for existing power plants in the near term

During the past two decades, power consumption growth rate in Vietnam has run almost in the double-digits and 1.5 to 2 times higher than GDP growth. This is because Vietnam is undergoing an industrialization process, leading to an acceleration in power demand. Moreover, the improvement in Vietnam's disposable income per capita has boosted power demand across the board, especially in the dry season.

Due to the continuous prospects of economic growth and in turn, high power demand, the 7th adjusted Power Development Plan (PDP7) targets to add new capacity of 21,651 MW, 38,010 MW and 36,192 MW in the 2016-2020, 2021-2025 and 2026-2030 periods respectively. However, according to a recent report by the Ministry of Industry and Trade (MoIT) on the actual implementation situation, total capacity that may come into operation in the 2018-2022 period could be 17,000 MW lower than in the adjusted PDP7 plan. Many projects, most of which are thermal power projects in the South, will be delayed to the 2026-2030 period.

Table 1: Estimated new power capacity in the 2019-2030 period

Year/Period	New operation capacity (MW)		Difference
	Adjusted PDP7	After reviewing	(MW)
2019	6,230	3,650	-2,580
2020	4,571	3,230	-1,341
2021 – 2025	**38,010**	**30,485**	**-7,525**
2021	9,435	4,520	-4,915
2022	10,290	3,890	-6,400
2023	7,185	6,635	-550
2024	5,250	8,170	2,920
2025	5,850	7,270	1,420
2025 – 2030	**36,192**	**34,382**	**-1,810**
2026	6,482	7,792	1,310
2027	5,660	6,270	610
2028	7,890	8,340	450
2029	8,950	7,310	-1,640
2030	7,210	4,670	-2,540

Source: MoIT

Therefore, the South will still likely be in a power shortage from 2020 onwards. In particular, the shortage in electricity output may increase from 3.7 billion kWh in 2021 to nearly 10 billion kWh in 2022. The MoIT forecasts that power shortage in the South will reach a peak of 12 billion kWh in 2023 and gradually decline to 7 billion kWh in 2024 and to 3.5 billion kWh in 2025.

If power systems face severe supply shortage, we believe that mobilizing capacity from existing power plants at the maximum level will be inevitable. At that time, ***competitive pressure among power plants will be low. The key is stable operations to meet demand.*** We believe that ***this situation will bring opportunities for POW to capitalize on its advanced technology***.

POW owns huge plants concentrated in the South of Vietnam

Among eight plants in POW's portfolio with total capacity of 4.2 GW, four gas-fired thermal power plants accounting for 64% of total capacity are located in the South. While the region consumes 47.2% of the country's total power demand, less than 40% of national capacity is located there. The uneven distribution in supply and demand makes the South dependent on power supply from the North and the Central regions. A 500kV transmission line provides 20% of its total power demand.

In light of the fact that many new power projects in Southern Vietnam are behind schedule, power shortages will not disappear for a while. Therefore, existing local power plants, especially the four large gas-fired power plants of POW, will be in the top priority to be mobilized at the maximum level in the dry season and even face low competitive pressure in the rainy season.

Furthermore, the Nhon Trach 3&4 thermal power projects with total capacity of 1.5 GW using liquefied natural gas (LNG) will break ground in 2020-2021 and are expected to come online in the 2023-2024 period. We believe that the projects will strengthen POW's advantage in this key economic region, given that the uneven distribution in supply and demand is likely to loom.

New plants with advanced technology ensure stable operations

All current four gas-fired power plants of POW came online 8-11 years ago and use outstanding combined cycle and cogeneration gas turbines of leading manufacturers such as Siemen and Alstom. Compared to aging other gas power plants such as Ba Ria (over 20 years) or Phu My plant cluster (14-19 years), plants of POW are relatively young with high power generation efficiency (51%-57%). Besides, the gas loss rate of POW's plants is lower than that of other gas power plants. While the gas loss rate of Nhon Trach 2 is 6,900 – 7,000 BTU/kWh, and that of Nhon Trach 1 and Ca Mau 1&2 is 7,200 – 7,400 BTU/kWh, the average level of Ba Ria and Phu My is up to 7,400 – 7,600 BTU/kWh.

In addition, Vung Ang 1 coal thermal power plant that came into operation in 2014-2015 uses turbines and generators of Toshiba and boilers of Babcock & Wilcox.

Low capex and strong cash flow support POW's new initiatives

Average capex per MW capacity is VND 16.4 billion/MW (0.8 mn USD/MW). Average capex of the four gas-fired power plants is just VND 10.5 billion/MW (0.5 mn USD/MW). Meanwhile, the current average capex per MW is around USD 2 million for hydropower, USD 1.5 million for coal-fired power and USD 0.9 million for gas-fired power plants, respectively. Therefore, new plants coming into operation in the coming years will not be competitive in comparison with POW's plants in terms of fixed cost.

Table 2: POW's Power Plants

Plant	Type	Capacity (MW)	Capex (VND bn)	Capex/MW (VND bn/MW)	COD	Ownership
Vung Ang 1	Coal-fired	1,200	28,739	23.95	2015	100%
Ca Mau 1		750	6,572	8.76	2008	100%
Ca Mau 2	Gas-fired	750	6,153	8.20	2009	
Nhon Trach 1		450	7,053	15.67	2009	100%
Nhon Trach 2		750	8,538	11.38	2011	60%
Hua Na		180	5,964	33.13	2013	84%
Dakdrinh	Hydropower	125	5,911	47.2	2014	95%
Nam Cat		3	131	43.6	2012	96%
Total/Average		**4,208**	**69,061**	**16.4**		

Source: POW

Besides low average capex, ***plants in the portfolio of POW are gradually repaying their debt and depreciating the machinery, which is driving earnings.*** For example, when Ca Mau 2 and Ca Mau 1 plants were fully depreciated in 1Q and 3Q 2018, respectively, POW's 2018 depreciation expenses decreased by VND 396 billion compared to that of 2017. In addition, machinery parts of Nhon Trach 1 plant will be fully depreciated in 3Q 2019, decreasing depreciation expenses of this plant by VND 130 billion in 2019 and a further VND 260 billion in 2020. In the longer term, we also expect that Nhon Trach 2 and Vung Ang 1 plants will be fully depreciated from 2025 onwards.

Compared to the PBT of VND 2,200 billion in 2018, the reduction in depreciation expenses will have a significant influence on the performance of POW. In our forecast, with a cash dividend of 300 VND/share in the following years, retained earnings of the company until 2023 may reach over VND 10,000 billion. This source of equity will be adequate for the investment in Nhon Trach 3&4 projects without raising additional equity.

RISKS ON OUR CALL

Our forecasts and valuations are based on conservative assumptions. However, due to gas and coal power accounting for 94% of POW's total capacity, input costs materially affect the business of the firm. In the coming years, the production of old gas fields could fall faster than plants of PetroVietnam Gas Corporation (GAS) or incidents of gas and coal supply can divert actual performance of POW from our forecast.

Furthermore, with more than 75% of debt outstanding denominated in USD and EUR, exchange rate fluctuations may have a significant influence on POW's performance. Although our projections took into account an appreciation of USD and EUR versus the VND by 2% annually, unexpected events, especially US-China Trade War, can cause the exchange rate to fluctuate even more.

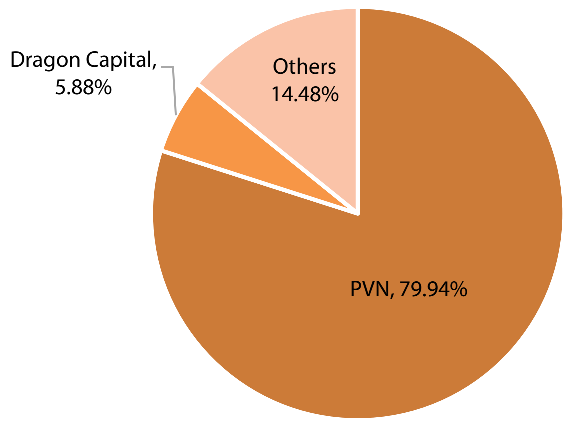
However, cost incurred by changes in the exchange rate is included in the contract price (PPA). If realized FX losses are different from the forecast, the extra FX losses will mostly be paid by EVN. As a result, although risks of exchange rate affect annual reported earnings of POW, overall, FX risks will gradually be added to revenues of the firm.

COMPANY OVERVIEW

PetroVietnam Power Corporation - PV Power (HSX: POW) was established in 2007 and entirely owned by Vietnam Oil and Gas Group (PVN). The company was successfully equitized through an initial public offering (IPO) in January 2018. POW is currently the second largest power producer in Vietnam with total capacity of up to 4.2 GW, making up 9% of the total national power system. The firm also plans to break ground Nhon Trach 3 & 4 gas thermal power plants with total capacity of 1.5 GW from 2020. In the 2014 – 2018 period, CAGR of revenue and gross profit of POW reached 8% and 3%, respectively.

PV Power has two major shareholders holding 85.8% of chartered capital- Vietnam Oil and Gas Group (79.9%) and Dragon Capital (5.9%).

Figure 1: POW's Shareholder Structure



Source: POW

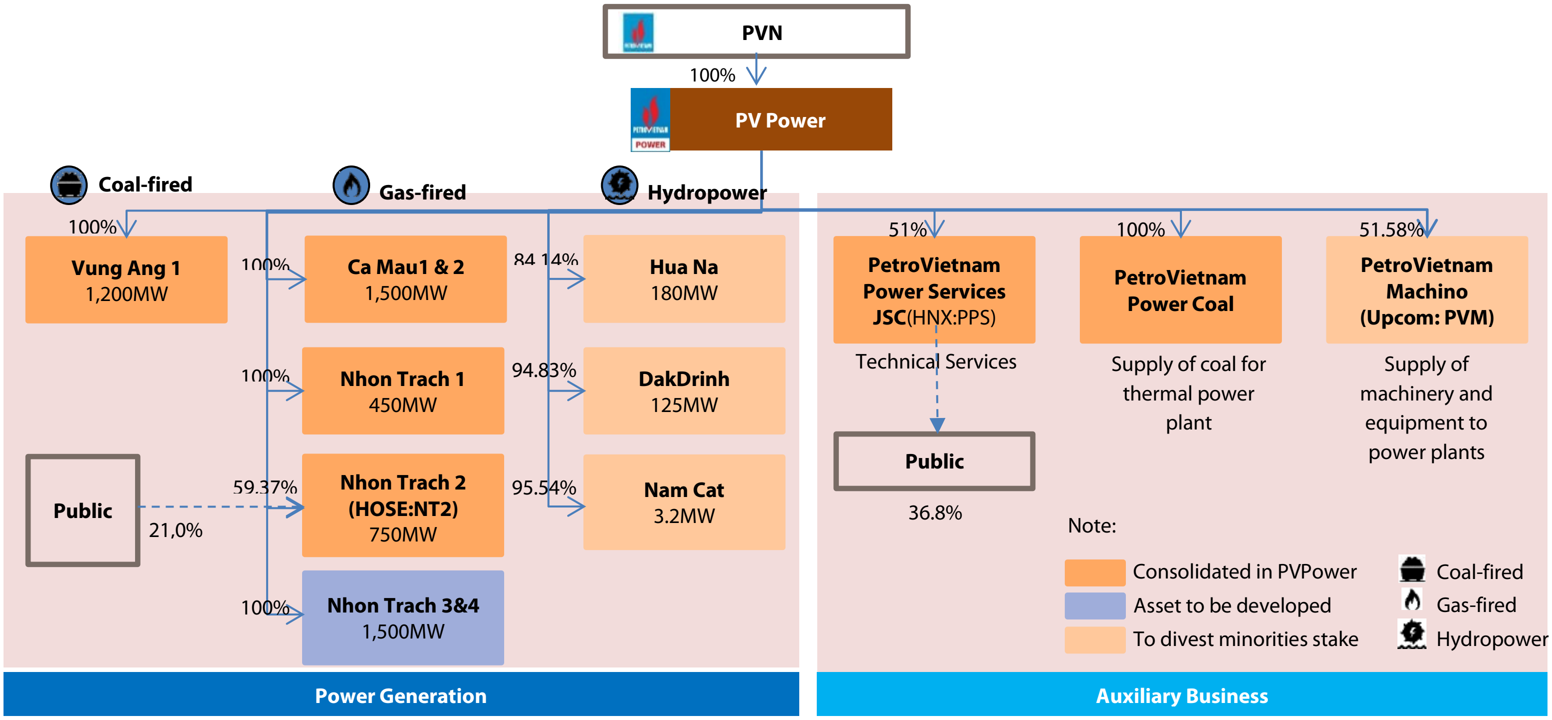
POW's core business is separated into two segments: power generation and auxiliary business.

(1) Power generation is the key business, which contributes more than 90% to revenue and earnings. Among its 4.2 GW portfolio, gas-fired thermal power makes up the largest proportion with 64% of total capacity, the remaining is coal-fired thermal power (30%) and hydropower (6%).

(2) The auxiliary segment of POW includes technical services and coal supply services. Technical services are delivered by POW's two subsidiaries in which it holds a 51% stake: PetroVietnam Power Services JSC (HNX: PPS) and PetroVietNam Machinery - Technology JSC (Upcom: PVM). These two companies provide installation of industrial machinery and equipment, technical inspection and analysis, operation and repair power plants, and related services such as consulting solutions to improve operation efficiency.

Regarding the coal supply services, POW's subordinate entity, PetroVietnam Power Coal Company, is in charge of this business. This company is responsible for insuring adequate coal supply for power plants as well as finding additional coal supply from the domestic and international markets.

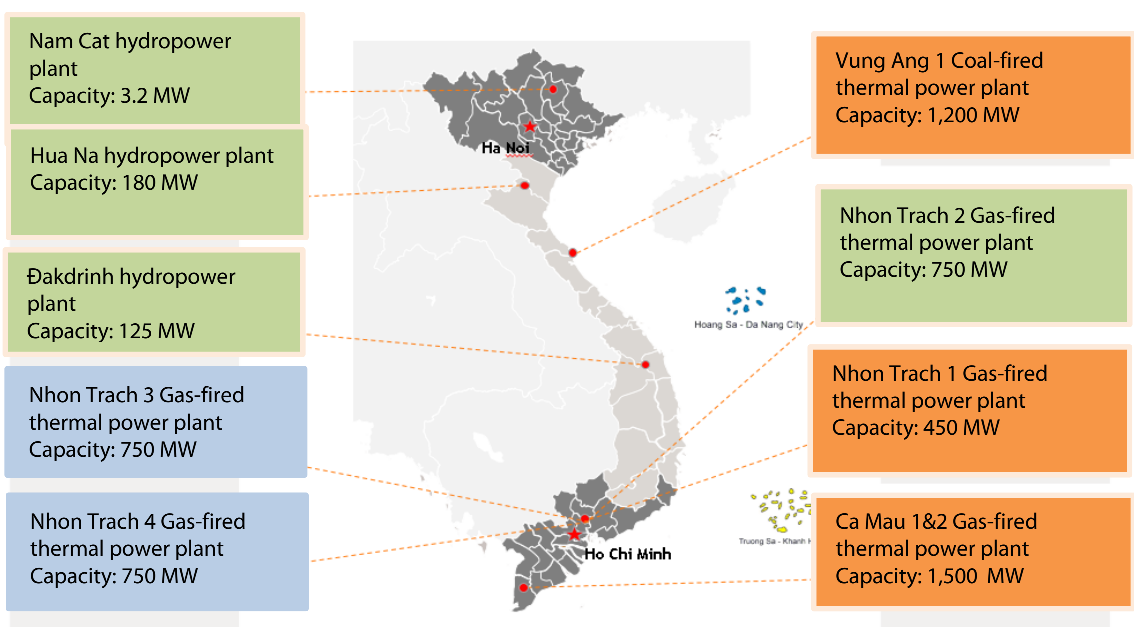
Figure 2: Organizational Structure



Source: POW

In the portfolio of POW, all four gas power plants with total capacity of 2,700 MW are located in the South. Nhon Trach 1& 2 plants are in Nhon Trach (Dong Nai province), while Ca Mau 1&2 plants are in U Minh district, Ca Mau province. Furthermore, Nhon Trach 3&4 projects, which are going to be implemented, are also in Nhon Trach, Dong Nai power center. In the hydropower portfolio, the two main plants, Hua Na (Nghe An) and Dakdrinh (Quang Ngai), are located in the Central region. Meanwhile, the coal power plant, Vung Ang 1, with capacity of 1,200 MW is in Ha Tinh and connected to the 500 kV North – South national transmission line.

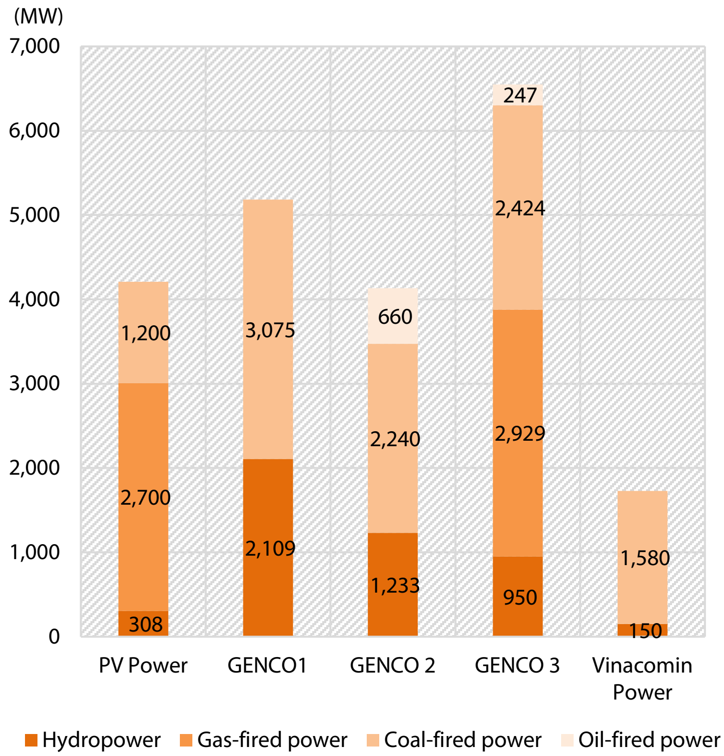
Figure 3: PV Power's plant locations



Source: POW

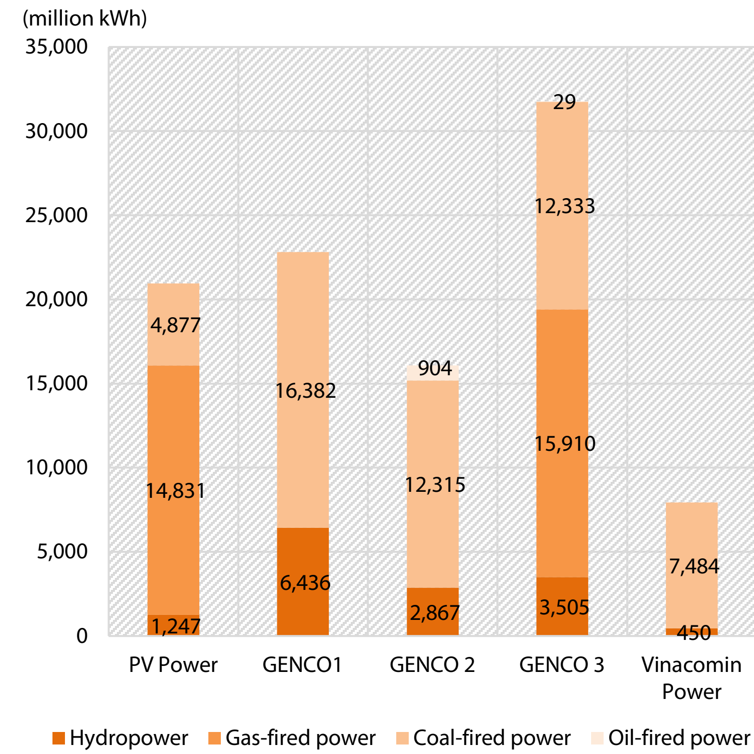
Regarding the capacity, gas-fired thermal power makes up the largest proportion with 64% of total capacity, the remaining are coal thermal power (30%) and hydropower (6%). The company is one of only two firms in Vietnam having gas-fired thermal power plants accounting for 80% of its annual total power output.

Figure 4: Capacity structure of power generation corporations



Source: POW

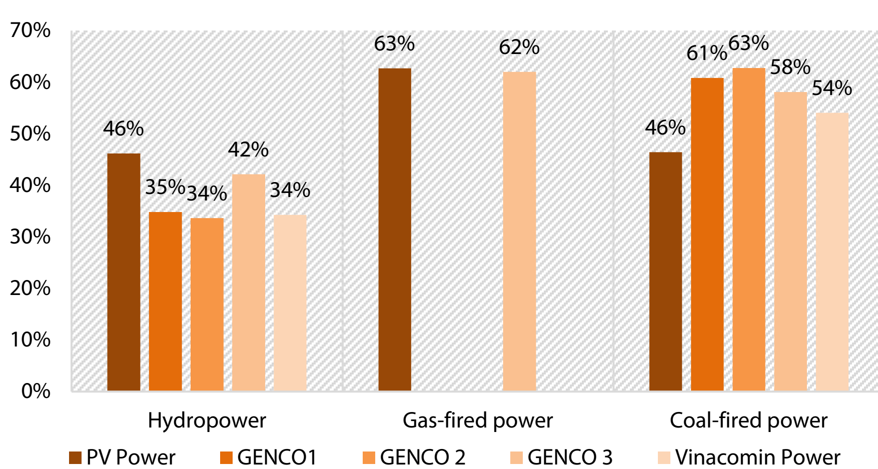
Figure 5: Sales volume structure of power generation corporations



Source: POW

In terms of installed capacity and annual sales volume, the scale of POW is smaller than that of Genco 1 and 3, but larger than that of Genco 2 and Vinacomin Power. However, considering the effectiveness in power generation compared to installed capacity, hydropower and gas-fired thermal power plants of POW operate more effectively than competitors.

Figure 6: Utilization rate of power plants



Source: RongViet Securities

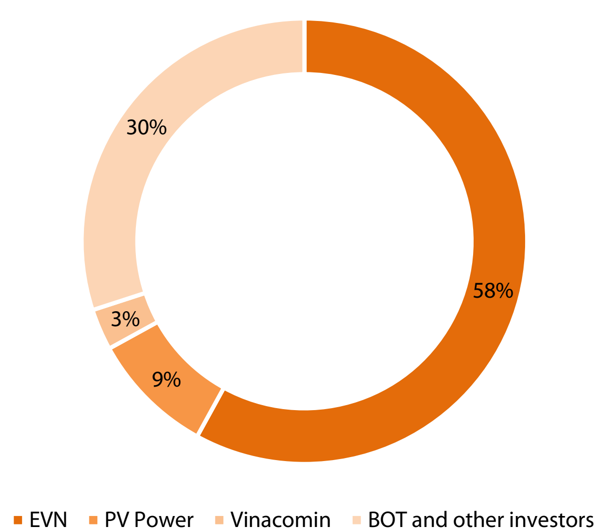
(*)Utilization rate is based on the sale volume of power plants in 2018

For coal-fired thermal power, Vung Ang 1 power plant faced technical problems and coal shortage in 2018. Hence, electricity output in 2018 was below designed capacity. However, once POW figures out the fundamental solutions for coal supply and stabilizes operations, we believe that electricity output of this plant will have ample room to grow.

Position of the company in the power industry

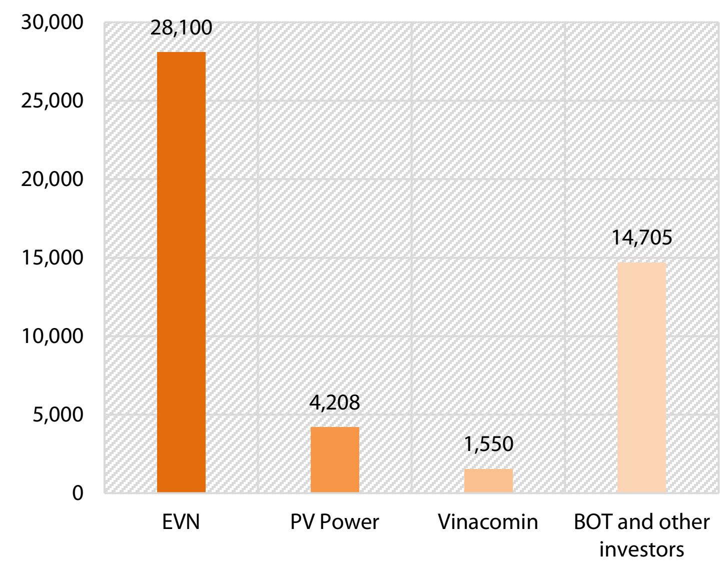
As a new player with relatively young plants, POW is currently the second largest power generator in Vietnam, just after Vietnam Electricity Group (EVN). Accounting for nearly 9% of total system capacity, POW's power plants produced 21 billion kWh in 2018, equivalent to 11% of the country's total commercial electricity output.

Figure 7: Market share of power producers at the end of 2018



Source: POW

Figure 8: Installed capacity (MW) of power producers at the end of 2018



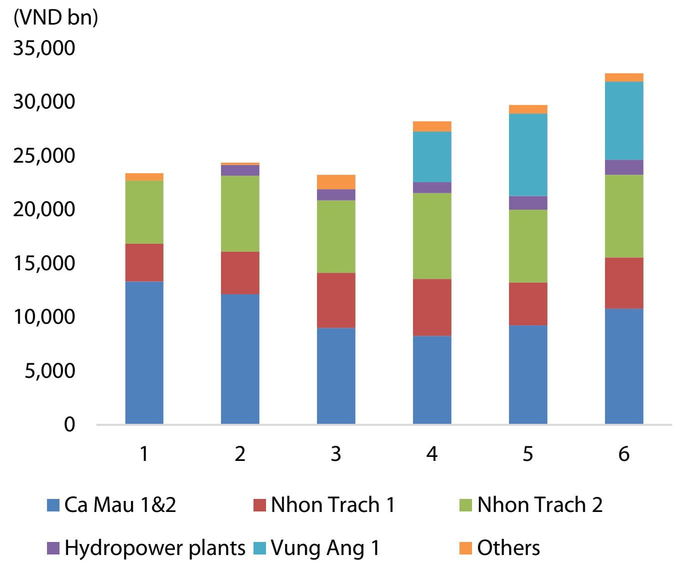
Source: POW

FINANCIAL ANALYSIS

Revenue of POW surged, but earnings saw a strong fluctuation when Vung Ang 1 plant came online

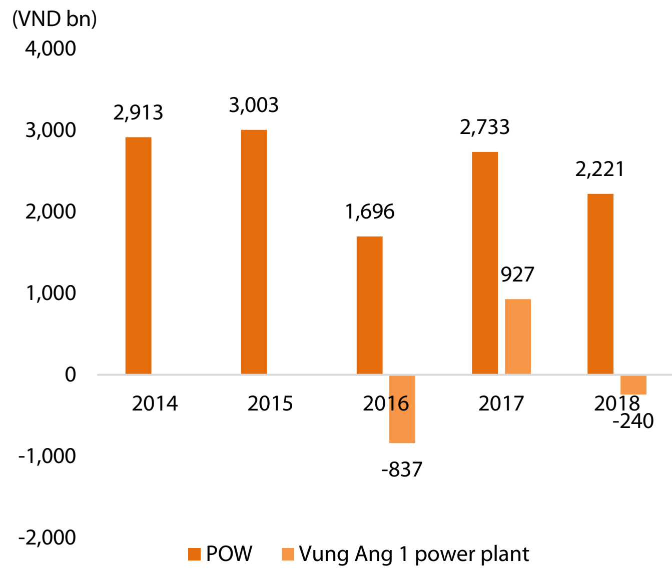
Revenues of POW were relatively stable during the 2013-2015 period. However, when in 2016 it took over Vung Ang 1 coal-fired thermal power plant from Vietnam Oil and Gas Group (PVN), revenues rose by 21% YoY. Although technical problems caused the first turbine of the plant to temporarily stop operating from November 2015 to late 2016, revenue of this plant still reached VND 4,692 billion. In addition, the recovery in electricity production of Vung Ang 1 plant helped its revenue grow by 63% YoY in 2017, improving total revenue of POW despite the decline in revenue of Nhon Trach 1&2.

Figure 9: POW's revenue growth



Source: POW's financial statement

Figure 10: NPAT of POW and Vung Ang 1 power plant



Source: POW, RongViet Securities

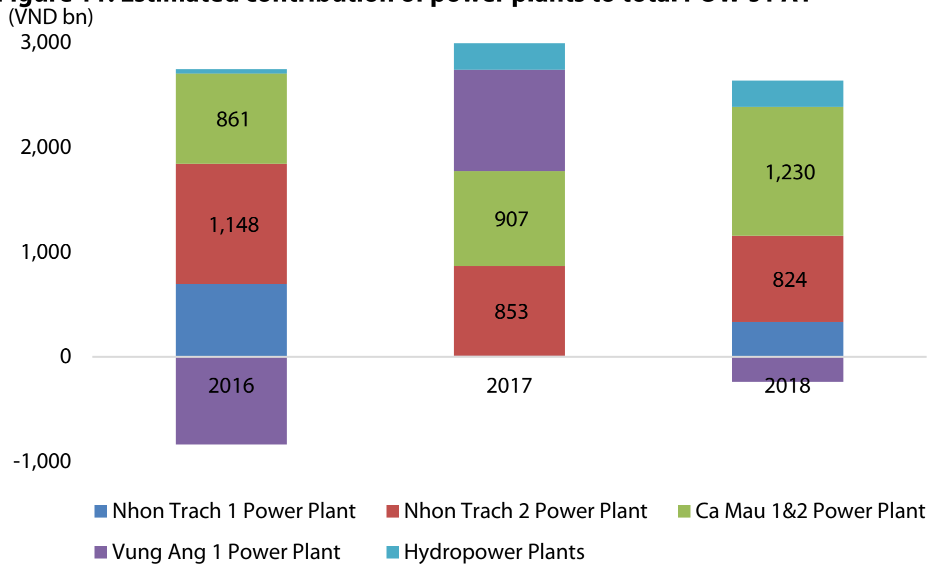
(*) PBT estimation of Vung Ang 1 power plant is based on information of POW, coal and oil prices data from MoIT

Although Vung Ang 1 made a positive contribution to revenues, earnings of this plant witnessed a strong fluctuation over the last three years. In fact, when PBT of this plant was negative in 2016 and 2018 (estimated), POW's PBT decreased by 44% YoY and 19% YoY, respectively. On the contrary, when PBT of Vung Ang 1 reached VND 927 billion in 2017, PBT of the company also increased by 62% YoY.

Ca Mau 1&2 and Nhon Trach 2 plants had the largest and stable contribution to earnings of POW

Using the same advanced technology of Siemen, Ca Mau 1&2 and Nhon Trach 2 plants proved its stability and high efficiency in operation during the last years. In addition, as Ca Mau 1&2 are service power plants and enjoy special electricity selling mechanism, most of their profits was driven by capacity fees. Therefore, when machinery parts of Ca Mau 1&2 plants were fully depreciated from 2018, these plants saw an impressive growth. In 2019-2020 period, the completion of equipment depreciation would keep boosting performance of Ca Mau 1&2 and Nhon Trach 1 plants, increasing business results of POW. Meanwhile, earnings of Nhon Trach 2 plant are expected to stay at the current level and gradually improve when financial expenses decrease.

Figure 11: Estimated contribution of power plants to total POW's PAT



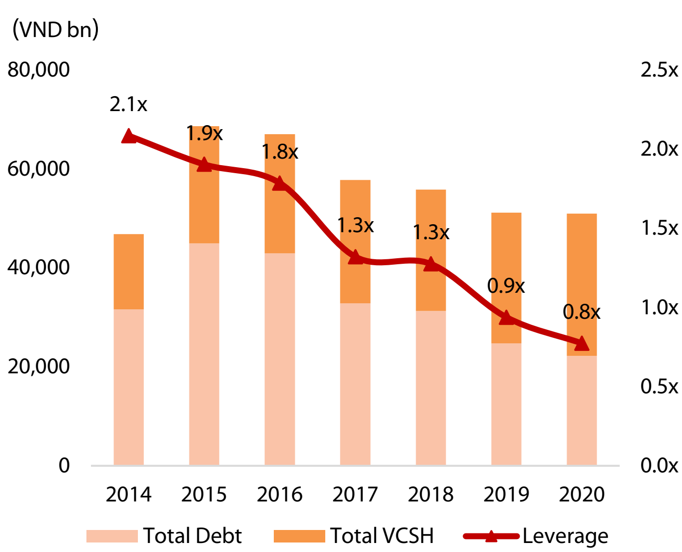
Source: POW, RongViet Securities forecasts

Healthy capital structure with rapid decline in financial leverage

As power plants after coming into operation often have stable cash flows and long-term debt repayment schedule, financial leverage (D/E) of POW gradually decreased over the last years, from 2.1x in 2014 to 1.3x in 2018. According to the debt repayment schedule of the company, we estimate that financial leverage will fall below 1.0x in late 2019 before increasing from 2020, when POW invests in Nhon Trach 3&4 gas-fired thermal power projects.

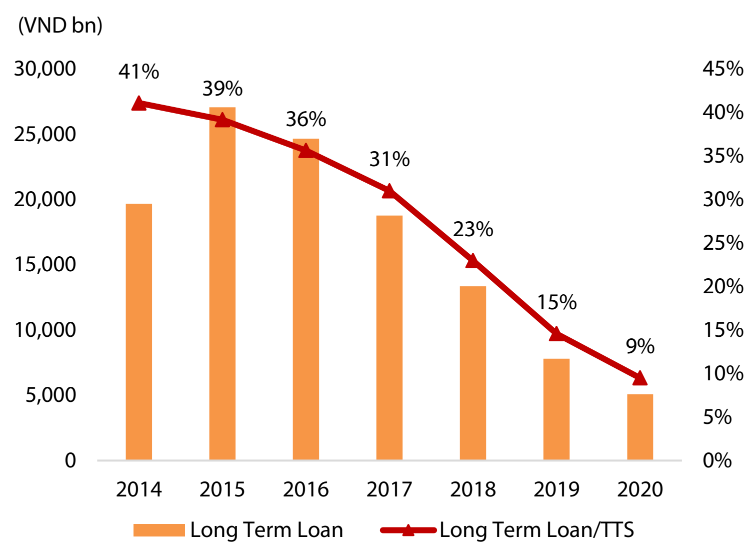
In terms of long-term borrowings, debt outstanding has fallen by over a half over the last three years from VND 27 trillion at the end of 2015 to VND 13 trillion at the end of 2018. This high repayment speed is expected to increase POW's financial soundness to prepare for new projects in the coming years.

Figure 12: Total debt vs total assets



Source: POW

Figure 13: Long-term loans vs total assets

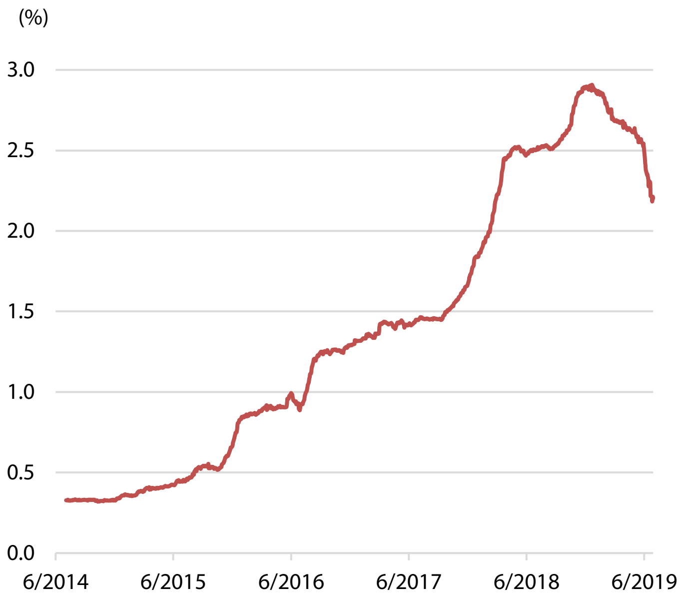


Source: POW

The majority of debt is based on LIBOR interest rate

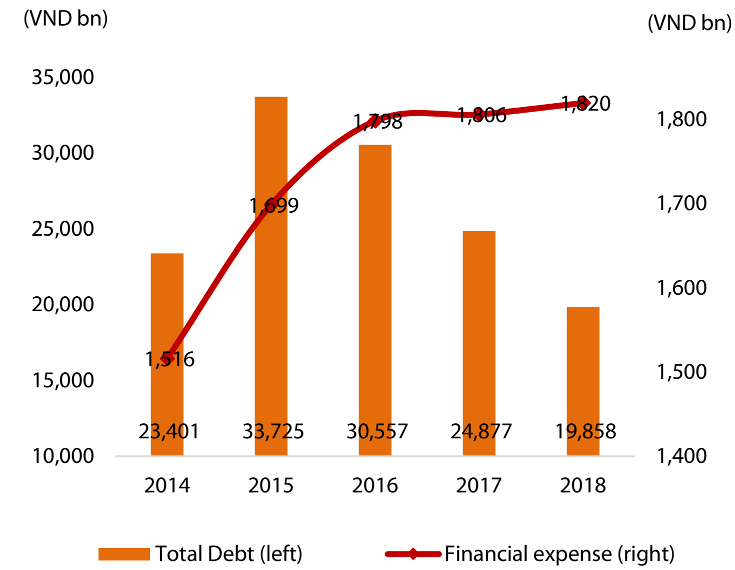
Although Figure 14 shows that total debt outstanding of POW saw a relatively rapid decline, financial expenses rose slightly in the 2015-2018 period. Over 80% of total debt outstanding was in USD based on LIBOR rates. Meanwhile, LIBOR rates surged from 0.3% in 2014 to 2.9% in 2019. However, from the beginning of 2019, LIBOR rates have tended to decrease.

Figure 14: 6-month-LIBOR rate over the last three years



Source: RongViet Securities

Figure 15: Total debt and financial expenses, 2014 – 2018 period



Source: POW, RongViet Securities

Free cash flow to equity (FCFE) was continuously negative and just reversed in 2018

In the 2014-2015 period, POW invested VND 16 – 18 trillion per year in power plants and received Vung Ang 1 power plant from PVN, resulting in negative FCFE. During the period of 2016-2017, FCFE of the company was still negative as it had to finance working capital. Turing to 2018, when working capital went down, FCFE of POW was positive. However, we believe that with high debt repayment speed in the following years and cash flows pressure on investing in Nhon Trach 3&4 coal-fired thermal power plant, FCFE is not likely to improve in the 2019-2023 period.

Table 3: POW's FCFE in 2014 – 2018 period

(billion VND)	2014	2015	2016	2017	2018
NPAT	**2,190**	**2,169**	**1,075**	**2,233**	**1,676**
+ Depreciation expense	2,932	2,825	4,316	4,316	3,918
- Financial income	1,064	523	459	414	516
- Working capital	2,137	-2,654	3,177	701	-2,188
- Capex	39,511	28,205	1,253	234	91
+ Net borrowings	23,401	10,324	-3,168	-5,680	-5,019
Free cash flow to equity (FCFE)	**-14,070**	**-10,730**	**-2,596**	**-436**	**2,184**

Source: POW, RongViet Securities

FORECAST

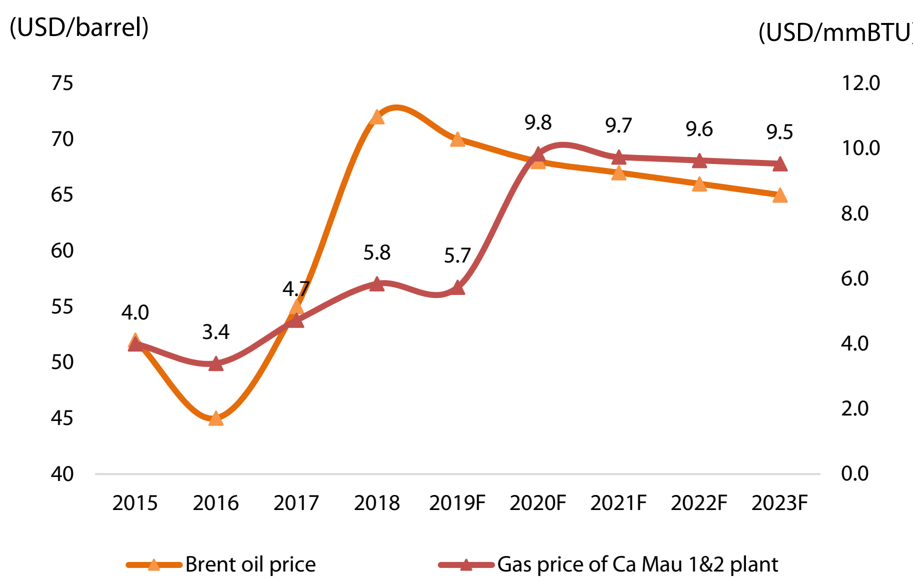
As power production has contributed to 95% of revenue and earnings, we will forecast the performance of the company based on projection of power plants: (1) Ca Mau 1&2 power plant, (2) Nhon Trach 1&2 power plant, (3) Vung Ang 1 power plant, (4) Hydropower plants: Hua Na, Dakdrinh and Nam Cat. Four plants under parent company, which are Ca Mau 1&2, Nhon Trach 1 and Vung Ang 1, will be allocated to administrative expenses of the company when calculating profits.

Ca Mau 1&2 power plant

Ca Mau 1&2 thermal power plant belonging to Ca Mau Gas – Power – Fertilizer industrial complex use natural gas from PM3CAA Lot in Vietnam and Malaysia offshore overlapping area with a demand of 2.2 billion cubic meters per year. From 2007 up to now, the gas supply to this area includes amount PVN has right to receive and amount from Petronas in accordance with the Petroleum Sharing Contract (PSC) of PM3CAA Lot (PSC PM3CAA).

Gas supply will be adequate, although gas price will be higher. It is expected that from late 2019 and early 2020, after Vietnam takes all the amount of gas from Petronas, Ca Mau Gas – Power – Fertilizer Complex will just be supplied gas according to the right of Vietnam, resulting in the lack of 1 billion cubic meters per year in the region. Therefore, on 3 March 2019, PetroVietnam and Petronas have agreed to sign Framework Agreement (HOA) on added gas purchase for Ca Mau area – Vietnam from amount that Petronas has the right to take in accordance with PSC PM3CAA and from other gas sources of Malaysia. With this change in gas supply, from 2020 onwards, gas well price of Ca Mau 1&2 would rise from 46% MFO to 90% MFO. MFO is Singapore-based oil product price. Therefore, gas price is forecasted to surge from 2020 onwards.

Figure 16: Projected gas input price of Ca Mau 1&2 plant



Source: POW, RongViet Securities forecasts

However, existing power selling mechanism ensures stable earnings for these power plants. With the characteristics of gas supply, Ca Mau 1&2 plant have been classified into service power plant and enjoyed specific revenue mechanism over the last years:

Total revenue = Variable revenue + Fixed revenue

In which:

- Variable revenue = Materials revenue (gas + oil) + Variable O&M revenue
- Fixed revenue = Capacity cost * Available capacity

With this mechanism, materials expenses and operation & maintenance (O&M) expenses will be transferred to revenue of power sold to EVN and not affect profits of the plants. It is rumored that EVN is negotiating power trading mechanism for Ca Mau 1&2 plants. According to this information, these plants will attend power competitive market from 2020 onwards. However, we have not seen any clear agreements between EVN and POW on this issue.

We use existing power trading mechanism to forecast performance of Ca Mau 1&2 power plants over the next five years.

Table 4: Business results forecast for Ca Mau 1 & 2 Power Plants in the 2019-2023 period

	Unit	2019	2020	2021	2022	2023
Price	*VNĐ/kW/th*	*189,307*	*193,589*	*198,503*	*203,554*	*208,748*
Average Capacity	*MW*	*1,439*	*1,429*	*1,441*	*1,474*	*1,483*
Fixed revenue	billion VND	3,270	3,321	3,433	3,601	3,714
Materials revenue	billion VND	*7,010*	*12,101*	*11,615*	*11,723*	*12,443*
O&M revenue	billion VND	*43*	*44*	*43*	*45*	*50*
Variable revenue	billion VND	7,053	12,145	11,659	11,769	12,492
Total revenue	**billion VND**	**10,323**	**15,466**	**15,092**	**15,369**	**16,206**
Variable cost	billion VND	7,043	12,134	11,646	11,754	12,476
Material expenses	billion VND	*7,010*	*12,101*	*11,615*	*11,723*	*12,443*
O&M Variable cost	billion VND	*33*	*33*	*31*	*31*	*33*
Fixed cost	billion VND	1,511	1,676	1,842	2,034	2,046
Capacity cost	billion VND	*151*	*143*	*144*	*145*	*146*
O&M fixed cost	billion VND	*1,350*	*1,534*	*1,699*	*1,890*	*1,901*
Total expenses	**billion VND**	**8,554**	**13,810**	**13,488**	**13,789**	**14,522**
PBT before excluding allocation costs	**billion VND**	**1,767**	**1,654**	**1,620**	**1,594**	**1,677**
PBT after excluding allocation costs	**billion VND**	**1,636**	**1,520**	**1,483**	**1,454**	**1,535**

Source: POW, RongViet Securities forecasts

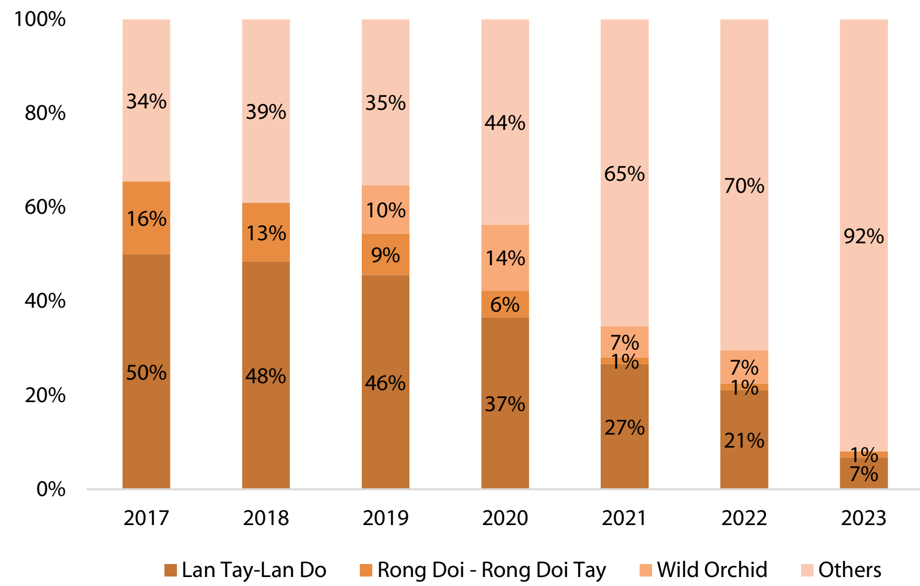
Nhon Trach 1 and Nhon Trach 2 power plants

Two these gas-fired thermal power plants are located side by side at Nhon Trach power center, Dong Nai province. Nhon Trach 1 power plant is the dependent accounting unit of POW, while Nhon Trach 2 power plant Is under the control of PetroVietnam Power Nhon Trach 2 JSC (HSX: NT2) which POW holds 59% stake. Due to the proximity of the geographical position, both these power plants use the same gas source from Nam Con Son (Lan Tay – Lan Do and Thien Ung – Dai Hung gas mines) with the same price mechanism.

Gas supply in the coming years will be adequate for operation of Nhon Trach 1&2 power plants. Although gas supply from old gas fields in Nam Con Son basin such as Lan Tay - Lan Do, Rong Doi - Rong Doi Tay is forecasted to gradually decrease from 3.9 billion m^3 in 2019 to 0.6 billion m^3 in 2023, new gas fields such as Phong Lan Dai, Sao Vang - Dai Nguyet and Su Tu Trang will compensate for this decline. In particular, Phong Lan Dai field would provide about 0.5 – 1.0 billion m^3 of gas per year in the 2019 – 2022 period, while gas supply from Sao Vang - Dai Nguyet and Su Tu Trang fields is expected to rise from 0.5 billion m^3 in 2020 to 3.2 billion m^3 in 2023. In addition, when LNG Thi Vai project comes online in 2023, it can add 1.5 billion m^3 of gas per year to the Southeast region. Hence, we estimate that gas-fired thermal power plants in the region will have sufficient fuel to operate in the coming years.

However, gas price in this region tends to rise. When gas supply from old gas fields with low price goes down, the Southeast area has to purchase gas from gas fields with higher price, leading to an increase in average gas price.

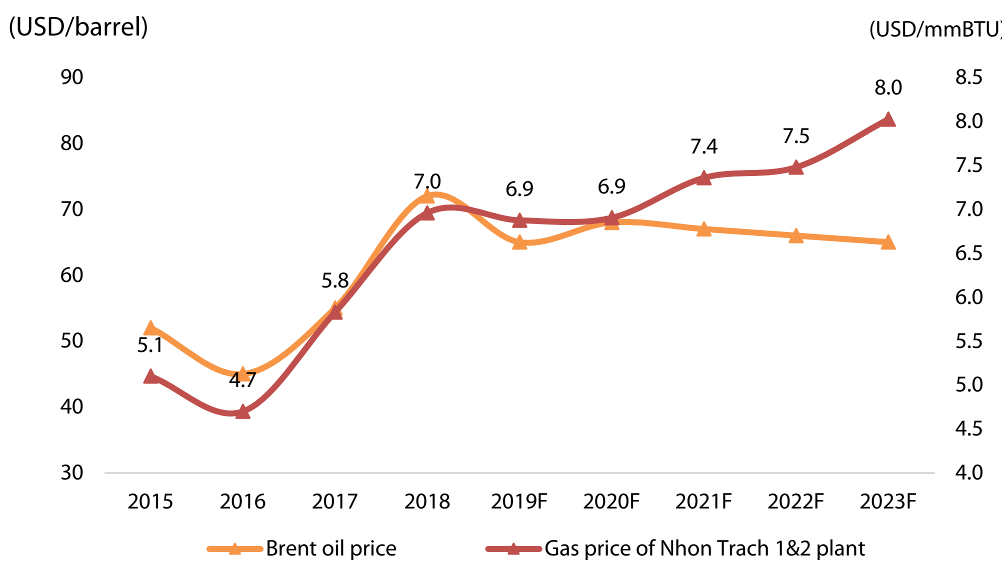
Figure 17: The proportion of some gas fields in total gas supply of the Southeast region



Source: GAS, RongViet Securities forecasts

Gas prices of Lan Tay – Lan Do field (Block 6.1) and Rong Doi – Rong Doi Tay field (Block 11.2) are relatively lower than average price of the region. Therefore, when supply proportion of these fields in total gas supply of the Southeast region decreases from 2020 onwards, we believe that average gas price sold to power plants in the region, including Nhon Trach 1&2 power plants would rise.

Figure 18: Projected gas input price of Nhon Trach 1&2 plant



Source: POW, RongViet Securities forecasts

Rapid decline in depreciation expense will be the growth driver for performance of Nhon Trach 1 power plant in the coming years. In our estimates, machinery parts of Nhon Trach 1 Power Plant will be fully depreciated from 3Q 2019, helping POW reduce VND130 billion in 2019 depreciation expense. Turning to 2020, we forecast that depreciation expenses will decrease by about VND 260 billion. Therefore, capacity expenses, mainly including interest expenses and depreciation expenses, will decline rapidly in 2018 – 2020 period, contributing significantly to profits growth of this plant.

Table 5: Projected business results of Nhon Trach 1 plant in the 2019 – 2023 period

	Unit	2019	2020	2021	2022	2023
Qm	million kWh	2,915	2,945	3,325	2,708	3,325
Qc	million kWh	2,301	2,588	2,588	2,588	2,588
Pc	VND/kWh	1,663	1,697	1,812	1,865	2,004
Average market price	VND/kWh	1,503	1,578	1,657	1,707	1,758
Total revenue	**billion VND**	**4,750**	**4,956**	**5,910**	**5,030**	**6,483**
Variable cost	billion VND	3,560	3,687	4,520	3,814	5,121
Material expenses	billion VND	*3,506*	*3,632*	*4,459*	*3,764*	*5,060*
O&M Variable cost	billion VND	*54*	*54*	*61*	*50*	*61*
Fixed cost	billion VND	954	699	704	709	504
Capacity cost	billion VND	*421*	*160*	*160*	*160*	*159*
O&M fixed cost	billion VND	*533*	*539*	*544*	*549*	*345*
Total expenses	**billion VND**	**4,514**	**4,386**	**5,224**	**4,523**	**5,625**
PBT before excluding allocation costs	**billion VND**	**324**	**659**	**780**	**596**	**955**
PBT after excluding allocation costs	**billion VND**	**259**	**592**	**711**	**525**	**882**

Source: POW, RongViet Securities forecasts

Higher gas supply and strong demand will be the driver for earnings growth of Nhon Trach 2 power plant. As in 2014, the company changed depreciation mechanism from 10 years to 14 years, we estimate that NT2 plant will be fully depreciated until 2025. However, thanks to NT2's strategic position in the Southern power system and forecasted severe power shortage in the region in the 2020 – 2025 period, mobilization demand of the system from Nhon Trach 2 power plant will be high. In addition, higher gas supply and stable operation will be the key for NT2 to reach sales volume of 4.8 – 5.0 billion kWh per year in the next five years.

Table 6: Projected business results of Nhon Trach 2 plant in the 2019 – 2023 period

	Unit	2019	2020	2021	2022	2023
Qm	million kWh	4,899	4,800	5,000	4,800	5,000
Qc	million kWh	3,788	3,788	3,788	3,788	3,788
Pc	VND/kWh	1,662	1,691	1,795	1,843	1,969
Average market price	VND/kWh	1,413	1,483	1,558	1,635	1,717
Total revenue	**billion VND**	**7,954**	**7,997**	**8,778**	**8,724**	**9,632**
Variable cost	billion VND	5,592	5,627	6,364	6,329	7,208
Material expenses	billion VND	*5,495*	*5,532*	*6,265*	*6,234*	*7,109*
O&M Variable cost	billion VND	*97*	*95*	*99*	*95*	*99*
Fixed cost	billion VND	1,513	1,481	1,427	1,386	1,392
Capacity cost	billion VND	*864*	*850*	*791*	*744*	*745*
O&M fixed cost	billion VND	*649*	*631*	*636*	*641*	*646*
Total expenses	**billion VND**	**7,105**	**7,107**	**7,791**	**7,715**	**8,600**
PBT	**billion VND**	**848**	**890**	**987**	**1,009**	**1,032**

Source: POW, RongViet Securities forecasts

Besides maintaining high sales volume, NT2 has also paid foreign borrowings rapidly with around VND 1,000 billion per year. Therefore, the continuing decline in financial expenses is expected to boost earnings growth of these plants in the 2019 – 2022 period. From 2022 onwards, free cash flow of NT2 for cash dividend will be strong due to no debt repayment pressure.

Vung Ang 1 power plant

POW took over Vung Ang 1 power plant (1,200 MW), the sole coal-fired power plant of the company, from Vietnam Oil and Gas Group (PVN) from the beginning of 2016.

During the first three years of operation, performance of Vung Ang 1 power plant fluctuated strongly, affecting earnings of POW. In 2016, technical problems caused the first turbine (600 MW) to suspend operation; hence, sales volume of the plant was below a half of designed capacity. Adding negative effect of exchange rate differences, this plant recorded negative PBT of VND 837 billion in 2016.

In 2017, after technical issues were solved, contract volume (Qc) rose to 5.3 billion kWh and USD/VND exchange rate was relatively stable, Vung Ang 1 plant recorded PBT of VND 968 billion. Turing to 2018, business of the plant faced some challenges as:

(1) Qc of thermal power plants was adjusted to decrease.

(2) The overhaul of the first turbine lasted longer than planned; hence, Qc kept decreasing to over 4 billion kWh (-25% YoY) and this situation directly affected output of the plant.

(3) In the end of 2018, coal shortage impacted many coal-fired thermal power plants, reducing the ability to take advantages of high market prices to increase the output of Vung Ang 1 plant.

(4) The USD appreciated by 2.2% compared to VND, and the FX loss was estimated to be nearly VND 230 billion.

Therefore, we estimate that this plant had negative earnings of VND 240 billion in 2018, not including administrative expenses allocated from the company.

When forecasting output of Vung Ang 1 power plant in the 2019 – 2023 period, we consider some key factors:

(1) Doubling capacity of transformer 500/220kV at 500 kV Vung Ang distribution yard from 450 MVA to 900 MVA from December 2017 helped this plant release all power capacity, especially at peak hours.

(2) Coal shortage will remain in 2019. To reflect the risk of finding additional coal sources, especially imported coal, it takes longer time to prepare and implement, we forecast that sales volume in 2020 will improve compared to that of 2019 but not much.

(3) Power shortage from 2020 onwards is inevitable. According to the report of MoIT, despite adding high-cost power sources such as oil-fired thermal power, the lack of power will become more serious until 2023. Therefore, the demand for mobilizing from Vung Ang 1 power plant to transmit to the South in the 2021 - 2023 period will be high.

(4) We assume that Qc will stay at 5.7 billion kWh as in 2019, except when the plant will be overhauled in 2021.

Table 7: Projected business results of Vung Ang 1 power plant in the 2019 – 2023 period

	Unit	2019	2020	2021	2022	2023
Qm	million kWh	5,194	5,500	6,000	6,000	6,000
Qc	million kWh	5,658	5,658	5,092	5,658	5,658
Pc	VND/kWh	1,549	1,599	1,652	1,707	1,764
Average market price	VND/kWh	1,162	1,186	1,209	1,209	1,209
Total revenue	**billion VND**	**8,226**	**8,862**	**9,509**	**10,069**	**10,394**
Variable costs	billion VND	4,854	5,401	6,166	6,457	6,763
Material expenses	billion VND	*4,671*	*5,186*	*5,934*	*6,224*	*6,529*
O&M Variable costs	billion VND	*183*	*215*	*232*	*233*	*234*
Fixed costs	billion VND	2,959	2,677	3,134	2,558	2,508
Capacity costs	billion VND	*2,075*	*1,899*	*1,739*	*1,660*	*1,598*
O&M fixed costs and financial expense	billion VND	*885*	*680*	*1,318*	*830*	*842*
FX loss	billion VND	129	56	21	12	4
Total expenses	**billion VND**	**7,943**	**8,133**	**9,320**	**9,027**	**9,275**
PBT before excluding allocation costs	**billion VND**	**386**	**833**	**295**	**1,151**	**1,230**
PBT after excluding allocation costs	**billion VND**	**283**	**729**	**188**	**1,042**	**1,119**

Source: POW, RongViet Securities forecasts

Regarding expenses forecast, overhaul and intermediate repair costs of two turbines are expected to reach VND 800 billion and VND 500 billion, respectively. In addition, assuming annual appreciation of 2% in USD/VND, foreign debt outstanding of Vung Ang 1 power plant was estimated to be USD 376 million (~ VND 8,700 billion) by the end of 2018. This debt outstanding will be paid quickly in 2019-2023 period, helping expense from FX loss in particular and financial expense in general go down strongly,

Hua Na, Dakdrinh and Nam Cat hydropower plants

Hydropower portfolio of POW includes three plants with total capacity of 308.2 MW. Nam Cat hydropower plant, which is small with capacity of 3.2 MW, enjoys avoidable cost tariff. Profits of this plant in the next five years are expected to be VND 2 – 3 billion.

Table 8: Projected business results of Hua Na hydropower plant in the 2019 – 2023 period

	Unit	2019	2020	2021	2022	2023
Qm	million kWh	780	734	734	734	734
Qc	million kWh	498	469	469	469	469
Pc	VND/kWh	900	900	900	900	900
Average market price	VND/kWh	1,083	1,115	1,149	1,183	1,219
Total revenue	**billion VND**	**832**	**792**	**801**	**810**	**820**
Capacity costs	billion VND	471	438	405	367	330
O&M fixed costs	billion VND	93	87	89	91	93
Natural resource tax and forest environment service fee	billion VND	79	74	74	74	74
Total expenses	**billion VND**	**642**	**600**	**568**	**532**	**497**
PBT	**billion VND**	**189**	**192**	**233**	**278**	**323**

Source: POW, RongViet Securities forecasts

In 2018, the contract price (Pc) of Hua Na power plant was adjusted to 900 VND/kWh according to project value. Furthermore, favorable hydrological conditions helped sales volume increase by 10% YoY from the high base of 2017, boosting NPAT of this plant from VND 16 billion in 2017 to VND 217 billion in 2018. In the 2019 – 2023 period, we assume that sales volume in 2019 will be higher than the average amount over the last years, and selling volume in the further years will return to the average level.

Table 9: Projected business results of Dakdrinh hydropower plant in the 2019 – 2023 period

	Unit	2019	2020	2021	2022	2023
Qm	million kWh	553	553	553	553	553
Qc	million kWh	473	442	442	442	442
Pc	VND/kWh	867	866	866	866	866
Average market price	VND/kWh	1,261	1,299	1,337	1,378	1,419
Total revenue	**billion VND**	**558**	**575**	**579**	**583**	**588**
Capacity costs	billion VND	302	292	281	270	259
O&M fixed costs	billion VND	81	81	81	81	82
Natural resource tax and forest environment service fee	billion VND	44	44	44	44	44
FX loss	billion VND	46	33	24	15	5
Total expenses	**billion VND**	**474**	**450**	**431**	**411**	**390**
PBT	**billion VND**	**85**	**125**	**148**	**173**	**198**

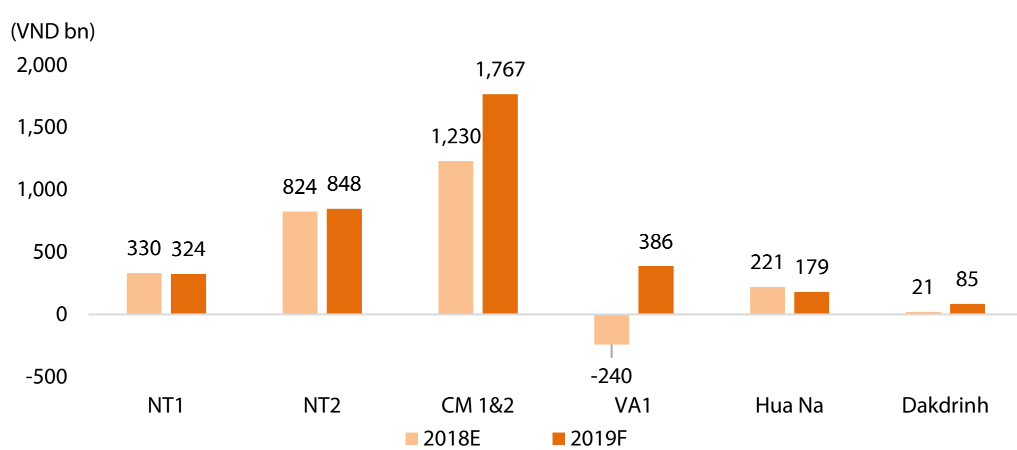
Source: POW, RongViet Securities forecasts

Performance of Dakdrinh hydropower plant in 2018 was in stark contrast to that of Hua Na hydropower plant as unfavorable hydrological conditions caused sales volume of Dakdrinh plant to decrease by 43% YoY. We forecast that output of Dakdrinh plant in the 2019 – 2023 period will stay at the average level. Therefore, the decline in debts and in turn, financial expense, will be the key earnings growth driver of Dakdrinh hydropower plant.

We project revenue and NPAT-MI to reach VND 34,243 billion (+5% YoY) and VND 2,660 billion (+59% YoY) in 2019.

From this forecast, we believe that POW will witness a peak in earnings growth in 2019. This improvement will be mainly driven by Ca Mau plant group when its machinery parts are fully depreciated and performance of Vung Ang 1 power plant recovers as Qc and Qm increase.

Figure 19: Projected BPT of power plants in POW's portfolio in the 2018 – 2019 period



Source: POW, RongViet Securities forecasts

Table 10: Projected P&L in the next two years

(billion VND)	FY2017	FY2018	FY2019F	FY2020F
Net revenue	29,710	32,663	34,243	40,326
COGS	-24,787	-28,445	-29,011	-34,432
Gross Profit	**4,923**	**4,218**	**5,232**	**5,894**
Selling expenses	-16	-20	-20	-20
G&A expenses	-799	-778	-905	-1,074
Financial income	414	516	136	120
Financial expense	-1,806	-1,820	-1,180	-855
Other income	-4	49	49	49
Gain/loss from JVs	22	56	56	56
PBT	**2,733**	**2,221**	**3,367**	**4,170**
Taxes	-132	-169	-310	-530
Minority Interest Expense	368	376	389	419
NPAT	**2,233**	**1,676**	**2,669**	**3,221**
EBIT	4,107	3,420	4,307	4,800
EBITDA	8,423	7,337	8,222	8,727

Source: POW, RongViet Securities forecasts

VALUATION

Valuation results of POW

We use three methods including discounted cash flow (DCF), P/E and EV/EBITDA with the proportion of 50%, 25% and 25%, respectively, to determine the fair value of POW, in which:

(1) DCF valuation method assumes an average cost of capital of 8.3% and FCFE long-term growth rate of 1.6%;
(2) P/E valuation method uses P/E of 13.1x, which is 30% higher than industry average;
(3) EV/EBITDA valuation method uses EV/EBITDA of 7.5x, which is 10% higher than industry average. POW has already prepared equity for the upcoming projects, which are Nhon Trach 3 and 4 power plants. However, these projects have not contributed to current EBITDA and profits of the company. Therefore, to reflect the contribution of these projects to POW's growth potential, we use P/E and EV/EBITDA higher than the industry average, given that most peers used for comparison have plants which came into operation and contributed to performance.

Table 11: Summarized valuation result of POW

Method	Target multiple	Proportion	Valuation
DCF		50%	19,400
EV/EBITDA	7.5x	25%	18,300
P/E	13.1x	25%	14,800
Target price (VND/share)			**17,900**
Dividend yield (%)			2.3%
Upside (%)			**41.1%**

Source: POW, RongViet Securities forecasts

Discounted free cash-flow to equity (FCFE) method

FCFE of the company in the 2020 – 2023 period could be reletively low due to high capital disbursement for Nhon Trach 3&4 gas-fired thermal power project. Therfore, to calculate terminal FCFE, we added owner's equity disbursing for NT3&4 in 2023 to FCFE of that year.

Table 12: Forecasted FCFE in the 2019 – 2023 period

(billion VND)	FY2019F	FY2020F	FY2021F	FY2022F	FY2023F
NPAT	**2,669**	**3,221**	**2,857**	**3,622**	**4,264**
+ Depreciation expense	3,915	3,927	3,939	3,951	4,406
- Financial income	136	119	162	240	301
- Working capital	476	173	-115	112	229
- Capex	371	1,414	3,681	9,086	12,497
+ Net borrowings	-5,810	-4,489	-1,151	4,234	5,432
Free cash flow to equity (FCFE)	**-210**	**951**	**1,918**	**2,369**	**1,074**
PV of FCFE	-201	831	1,532	1,729	717
PV of accumulated FCFE	**-201**	**630**	**2,162**	**3,891**	**4,607**
Adjusted FCFE in the last year					+3,633
FCFE to determine terminal value					**4,707**

Source: POW, RongViet Securities forecasts

According to the DCF valuation method, we estimate the fair value of POW at VND 19,400/share with details below :

Table 13: Valuation result by FCFE method

Cost of Capital		Valuation by DCF	
Market Risk Premium	5.7%	PV of FCFE in the next five years (billion VND)	4,607
Risk-Free Rate	3.7%	PV of Terminal value (billion VND)	40,787
Cost of Equity	9.4%	**Equity value**	**45,394**
Cost of Debt	7.8%	Share (million shares)	2,342
Total debt/Total asset	46%	**Target price (VND/share)**	**19,384**
Total equity/Total asset	54%		
Corporate Tax Rate	12.6%		
WACC %	**8.3%**		

Source: POW, RongViet Securities forecasts

Relative P/E and EV/EBITDA multiples

We only chose domestic peers to analyze multiples even though we admit that capitalization and liquidity of these firms are significantly smaller than those of POW. This supports our view to assign multiples for POW relatively higher than those of the industry.

Table 14: Industry Comparable

Company	Stock	Capitalization (billion VND)	P/E (x)	P/B (x)	EV/EBITDA (x)
Southern Hydropower JSC	SHP	2,160	11.3	1.8	6.0
Central Hydropower JSC	CHP	3,097	13.5	1.7	9.3
Hydro Power Joint Stock Company – Power No.3	DRL	503	10.2	3.9	7.3
Can Don Hydropower JSC	SJD	1,428	8.1	1.5	5.1
Thac Ba Hydropower JSC	TBC	1,616	9.4	1.8	5.5
PetroVietnam Power Nhon Trach 2 JSC	NT2	7,729	11.0	2.0	7.1
Pha Lai Thermal Power JSC	PPC	9,730	8.3	1.7	6.4
Average		**3,752**	**10.0**	**1.8**	**6.8**

Source: Bloomberg

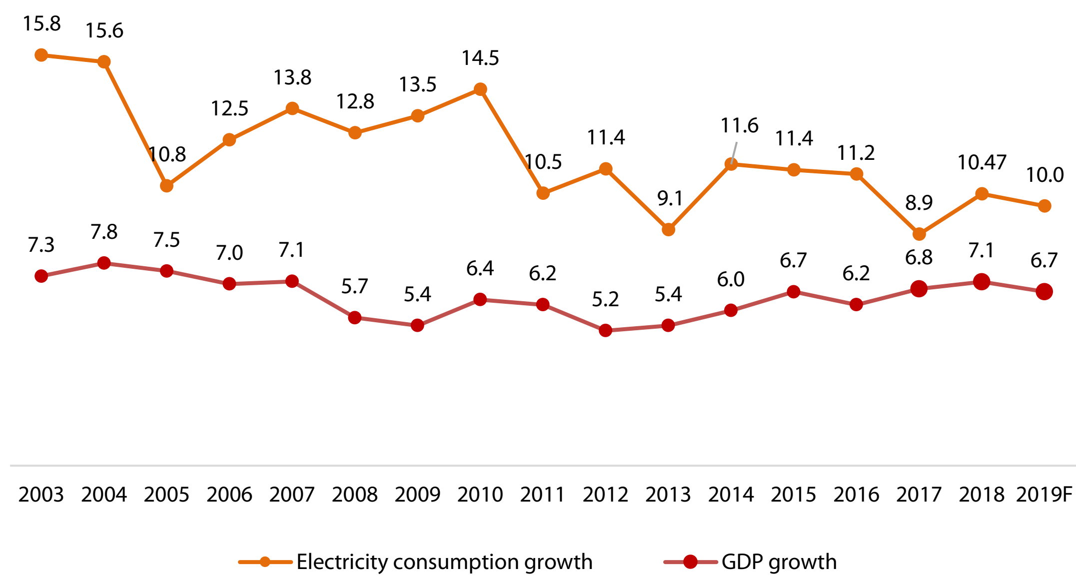
POWER INDUSTRY POTENTIAL

Power industry can still grow thanks to the surge in demand

During the past two decades, power consumption growth rate in Vietnam has run almost in the double-digits and 1.5 to 2 times higher than GDP growth. This is because Vietnam is undergoing an industrialization process, leading to an acceleration in power demand. Moreover, the improvement in Vietnam's disposable income per capita has boosted power demand across the board, especially in the dry season.

Over the past years, the electric elasticity coefficient (measured by the growth rate of electricity consumption compared to GDP growth) has ranged between 1.8x and 2.2x. Therefore, according to the estimation of the 7th adjusted Power Development Plan, Vietnam's electricity consumption growth rate would continue to stay at 10% per year from now until 2030.

Figure 20: Power consumption growth rate (%) and GDP growth (%)



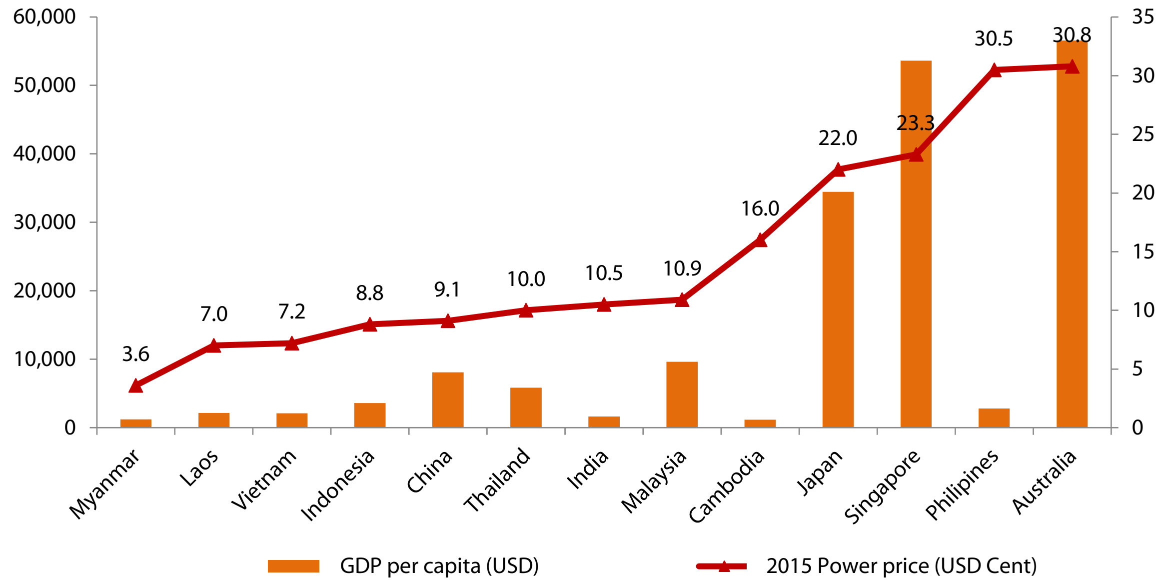
Source: GSO, RongViet Securities

Vietnam's electricity retail price is still lower than that of other countries

Besides the high consumption growth rate, Vietnam currently maintains relatively low electricity retail price compared to that of other countries and strictly controls the increase in power retail price. According to data from World Bank (WB), Vietnam's electricity retail price in 2015 was only higher than that of Laos and Myanmar, while lower than that of other countries in the region. So far, electricity retail price has been doubled to nearly 8 USD Cent/kWh, but still lower than that of most countries in the region.

The electricity retail price is strictly under the supervision of the Government as power is the input of most fields, greatly affecting inflation. Meanwhile, Vietnam's current policy priority is macroeconomic stability to attract investment and boost economic growth. However, low electricity price is also creating certain difficulties in attracting investment capital into this sector to meet the rapidly rising demands.

Figure 21: Electricity retail price and GDP per capita in some countries



Source: World Bank (WB)

(*)Electric retail price in Vietnam increased to 8 USD cent/kWh but it is still relatively low.

The transition to a competitive electricity market comes with many changes in policy

In order to encourage investment and increase competitiveness to optimize production costs of the system, Vietnam's electricity industry is conducting market liberalization with a roadmap consisted of three development stages:

(1) Competitive generation market (VCGM): operating from 2012

(2) Competitive wholesale market (VCWEM): operating from 2019

(3) Competitive retail market (VCREM): testing in the 2021 – 2023 period and operating from 2023 onwards

In the electricity liberalization progress, the related policies are also frequently adjusted to meet the deadline, increase the competitiveness between participants and control input costs of EVN. For example, contract volume (Qc) of power plants has experienced a downtrend according to the electricity liberalization progress. Meanwhile, the Government still limits the ceiling price of each turbine and overall market.

On the one hand, this action keeps EVN's electricity purchase price under control. On the other hand, this is not beneficial for power plants with high contract prices, especially thermal power plants. In addition, the regulation on minimum water level in hydropower plants also makes them, which often have low contract prices, difficult to increase sales volume to take advantage of high market prices.

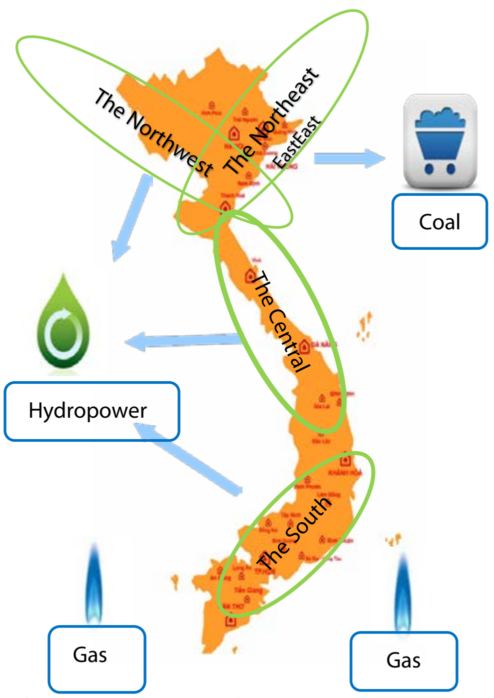
Although there are still certain risks on policy changes, we believe that in the long term, these policies will create a fairer market. Therefore, plants with high operating efficiency and favorable geographical location like POW will have many advantages to increase profits.

The power structure concentrates in the North and Central regions.

Besides policies factors, geographical conditions have great effects on the structure of Vietnam's electricity industry. Owning many mountains and rivers toward the East Sea, the North and Central regions have many resources to develop hydropower. Therefore, Vietnam's electricity system has a relatively high proportion of hydropower, with 35% of large hydropower and about 6% of small one.

In addition, the Northeast region has most of coal reserves. Therefore, coal-fried thermal power plants are mainly located in this area. Gas-fired thermal power plants are currently in the South due to many existing gas fields located in the area (Nam Con Son and Cuu Long gas basin).

Figure 22: Distribution of power sources by type



Source: MoIT, RongViet Securities

Table 15: Capacity structure of Vietnam power system at the end of 2018

Power type	Installed Capacity (MW)	Rate (%)
Hydropower	17,031	35.1
Coal-fired power	18,516	38.1
Gas-fired power	8,103	16.7
Oil-fired power	875	1.8
Wind power	135	0.3
Solar power	84	0.2
Small hydropower and Biomass	3,247	6.7
Importation	572	1.2
Total	**48,563**	**100**

Capacity proportion in accordance with PDP7 shifts to coal-fired and renewable energy

Although hydropower is relatively cheap, resources for developing new hydropower projects in Vietnam, especially large hydropower, are not much. Therefore, power capacity structure under the adjusted 7 National Power Development Plant will shift to coal-fired and renewable energy.

Figure 22: Target capacity structure according to the 7th National Power Development Plan

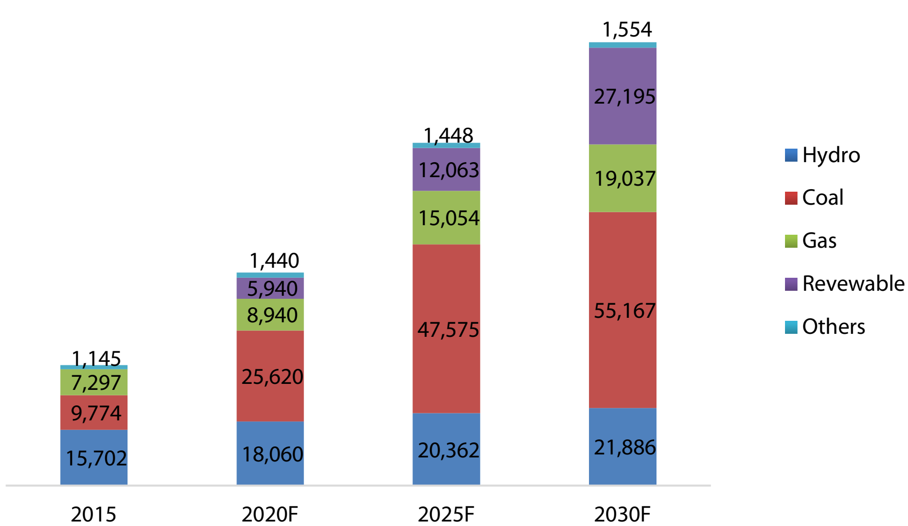
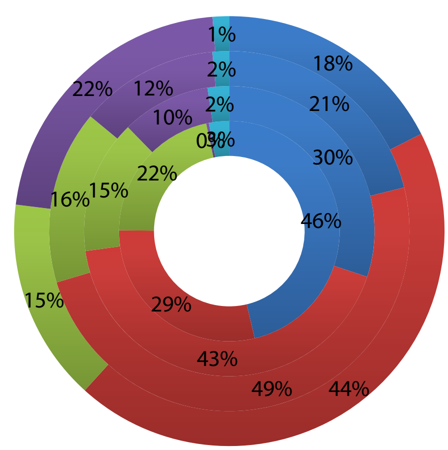


Figure 23: Target capacity structure according to the 7th National Power Development Plan



From the inside out: 2015, 2020F, 2025F and 2030F

Source: The adjusted 7th National Power Development Plan

Unit: VND billion

PROFIT & LOSS STATEMENT	2017	2018	2019F	2020F
Revenue	29,710	32,663	34,243	40,326
COGS	24,787	28,445	29,011	34,432
Gross profit	4,923	4,218	5,232	5,894
Selling expenses	16	20	20	20
G&A expenses	799	778	905	1,074
Financial income	414	516	136	120
Financial expense	1,806	1,820	1,180	855
Other income/loss	-4	49	49	49
Gain/(loss) from joint	22	56	56	56
Profit Before Tax	2,733	2,221	3,367	4,170
Tax expense	132	169	310	530
Minority interests	368	376	389	419
Profit After Tax	2,233	1,676	2,669	3,221
EBIT	4,107	3,420	4,307	4,800
EBITDA	8,423	7,337	8,222	8,727

Percentile changes	2017	2018	2019F	2020F
Growth				
Revenue	5.3	9.9	4.8	17.8
EBITDA	14.7	-12.9	12.1	6.1
EBIT	35.7	-16.7	25.9	11.5
PAT	107.8	-25.0	59.2	20.7
Total assets	-7.6	-4.1	-7.8	0.0
Total equity	2.299.3	-1.5	7.5	9.0
Profitability				
Gross margin	16.6	12.9	15.3	14.6
EBITDA margin	28.4	22.5	24.0	21.6
EBIT margin	13.8	10.5	12.6	11.9
Net margin	7.5	5.1	7.8	8.0
ROA	3.7	2.9	5.0	6.0
ROIC	8.8	8.4	11.6	13.0
ROE	9.0	6.8	10.1	11.2
Efficiency				
Receivables turnover	4.4	4.3	4.4	4.4
Inventories turnover	7.0	6.8	7.4	7.4
Payables turnover	3.3	2.6	2.8	2.8
Liquidity				
Current	1.0	0.9	0.9	1.0
Quick	0.7	0.6	0.6	0.7
Finance Structure				
Total debt/equity	103.5	136.9	116.0	79.8
ST debt/equity	24.5	26.6	22.5	14.5
LT debt/equity	79.0	110.4	93.5	65.3

Unit: VND billion

BALANCE SHEET	2017	2018	2019F	2020F
Cash and cash equivalents	2,266	3,185	2,180	2,540
Short-term investments	1,039	176	150	150
Accounts receivable	6,744	7,530	7,833	9,225
Inventories	3,533	4,187	3,937	4,673
Other current assets (inc. non-trade receivables)	196	170	192	202
Property, plant & equipment	44,216	40,479	36,804	34,225
Acquired intangible assets (Inc. Goodwill)	88	81	78	75
Long term investments	957	952	958	964
Other non-current assets	1,543	1,343	1,410	1,480
Total assets	**60,583**	**58,103**	**53,543**	**53,533**
Accounts payable	7,595	10,879	10,456	12,410
Short-term borrowings	6,099	6,516	5,923	4,169
Long-term borrowings	19,675	27,074	24,669	18,779
Other non-current liabilities	41	252	265	278
Bonus and Welfare fund	174	96	108	123
Technology-science development fund	171	169	169	169
Total liabilities	**32,859**	**31,255**	**24,733**	**22,226**
Common stock and APIC (additional paid in capital)	21,774	23,418	23,418	23,418
Treasury stock (enter as -)	0	0	0	0
Retained earnings / accumulated deficit	1,282	882	2,247	4,166
Other comprehensive income / (loss)	228	37	37	37
Investment and Development Fund	1,618	192	672	1,125
Total equity	**24,902**	**24,530**	**26,374**	**28,746**
Minority Interest	**2,822**	**2,319**	**2,436**	**2,559**

CASH FLOW STATEMENT	2017	2018	2019F	2020F
Profit before tax	2,733	2,221	3,367	4,170
Depreciation	4,316	3,918	3,915	3,927
Adjustments	1,373	1,213	-289	-293
Change in Working capital	-1,860	-904	-1,055	-713
Net Operating CFs	**6,563**	**6,447**	**5,939**	**7,090**
Change in Fixed Asset	-307	-206	-371	-1,415
Change in Deposit, equity investment	-1,004	867	26	0
Interest, dividend, cash profit	253	143	186	170
Net Investing CFs	**-1,058**	**805**	**-159**	**-1,244**
Change in Capital	31	0	0	0
Change in Debt	-5,926	-5,284	-5,810	-4,489
Dividend paid & other	10,566	7,549	-975	-996
Net Financing CFs	**4,671**	**2,266**	**-6,785**	**-5,485**
Beginning cash & equivalents	**4,671**	**2,266**	**3,185**	**2,180**
Change in cash & equivalents	10,175	9,517	-1,006	361
Ending cash & equivalents	**2,266**	**3,185**	**2,180**	**2,540**

Initial Coverage

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Ratings	BUY	ACCUMULATE	REDUCE	SELL
Total Return including Dividends in 12-month horizon	>20%	5% to 20%	-20% to -5%	<-20%

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ANALYSIS & INVESTMENT ADVISORY DEPARTMENT

Lam Nguyen
Deputy Manager
lam.ntp@vdsc.com.vn
+ 84 28 6299 2006 (1313)
- Banking
- Market Strategy

Duong Lai
Senior Analyst
duong.ld@vdsc.com.vn
+ 84 28 6299 2006 (1522)
- Real Estate
- Building Materials

Vu Tran
Senior Analyst
vu.thx@vdsc.com.vn
+ 84 28 6299 2006 (1518)
- Oil & Gas
- Fertilizer

Trinh Nguyen
Senior Analyst
trinh.nh@vdsc.com.vn
+ 84 28 6299 2006 (1551)
- Steel
- Construction

Tu Vu
Analyst
tu.va@vdsc.com.vn
+ 84 28 6299 2006 (1511)
- Macroeconomics

Son Tran
Analyst
son.tt@vdsc.com.vn
+ 84 28 6299 2006 (1527)
- Market Strategy
- Consumer discretionary
- Pharmaceuticals

Tung Do
Analyst
tung.dt@vdsc.com.vn
+ 84 28 6299 2006 (1521)
- Logistics
- Aviation

Thu Pham
Analyst
thu.pa@vdsc.com.vn
+ 84 28 6299 2006 (1520)
- Industrial Real Estate
- Infrastructure & BOT

Thao Dang
Analyst
thao.dtp@vdsc.com.vn
+ 84 28 6299 2006 (1529)
- Food & Beverage
- Textiles

Tam Pham
Analyst
tam.ptt@vdsc.com.vn
+ 84 28 6299 2006 (1530)
- Insurance
- Fishery

Anh Nguyen
Analyst
anh2.ntt@vdsc.com.vn
+ 84 28 6299 2006 (1531)
- Banking

Vy Nguyen
Analyst
vy.ntk@vdsc.com.vn
+ 84 28 6299 2006 (1528)
- Automobile & Parts

Hoang Nguyen
Analyst
hoang.nt@vdsc.com.vn
+ 84 28 6299 2006 (1538)
- Market Strategy

Bernard Lapointe
Senior Consultant
bernard.lapointe@vdsc.com.vn
+ 84 28 6299 2006

Ha Tran
Assistant
ha.ttn@vdsc.com.vn
+ 84 28 6299 2006 (1526)

Vi Truong
Assistant
vi.ttt@vdsc.com.vn
+ 84 28 6299 2006 (1517)

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