PETROVIETNAM POWER CORPORATION (PVPOWER) – IPO NOTE

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IPO information

Expected date of IPO	December 2017
Initial price (VND/share)	14,329
Shares on offer (mn shares)	468.4
% of current outstanding shares	20
Structure	Secondary
Asset valuation (VNDbn)	50,485
Equity Valuation (VNDbn)	33,556
Chartered Capital (VNDbn)	23,418

Key statistics

Market cap @ initial price(VNDbn)	33,556
2016 EPS (VND)	494
2016 ROE	4.1%
2016 P/E (*)	29.0x
Lastest P/B (*)	1.2x

(*) Calculated based on initial price

Expected ownership after IPO

IPO	20.0%
Strategic investors	28.9%
ESOP	0.1%
PetroVietnam (PVN)	51.0%

We visited PVPower at the end of October and gleaned some useful insights leading up to their IPO listing in December 2017. We were encouraged by the fact that 9M2017 business results were robust and PVPower is looking to expand their power generation capacity through Nhon Trach 3&4 plants. PVPower is currently awaiting the Prime Minister's approval on their IPO proposal and we expect this to go through soon.

IPO progress: Prime Minister's approval is around the corner

PVPower's valuation has been completed already and the total asset value currently stands at VND50,485bn (US$2.27bn), translating to an equity valuation of VND33,556bn (US$1.47bn) which works out to a value of VND14,329 per share based on the current number of shares outstanding.

Currently, the company is waiting for the government's approval on the IPO plan. Upon receiving the approval, PVPower will conduct roadshows at the end of November.

PVPower will IPO in December 2017, offering a 20% stake to the public (equivalent to 468.37mn secondary shares) at a tentative initial price of VND14,329/share. At present, the Ministry of Industry and Trade (MOIT) is pushing for approval to set the initial price at VND14,400/share. After the IPO, PVPower will offer another 28.9% stake to strategic investors who will be selected based on their financial ability, vision and industry expertise. PVPower has already reached out to interested strategic investors to prepare for this stage and is purported to be attracting interest.

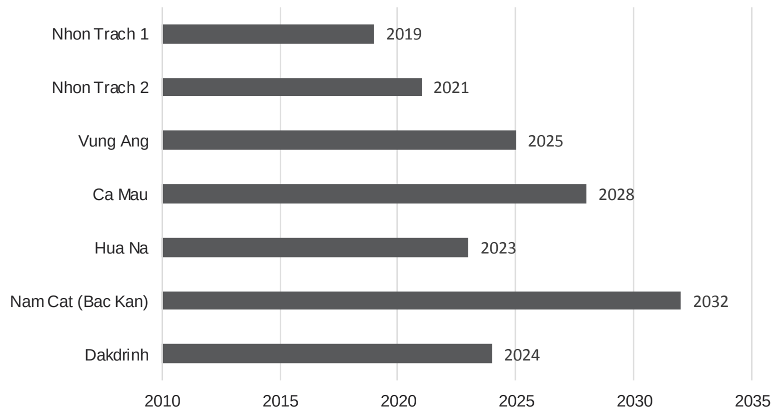
PV Power's IPO will provide investors a vehicle to bet on a multi-source power generation giant in Vietnam

With a total capacity of 4.2GW, the power plants under PVPower make up nearly 12% of total capacity nationwide and 11% of total electricity output in the country. PVPower is currently the second largest power generation player in Vietnam, after EVN. Majority of the capacity in PVPower is gas-based power plants (64.3%), 28.6% of total capacity is coal-based and the remaining is hydropower plants. Like other generation companies, PVPower can pass through 100% of the increase in input (coal, gas) prices to EVN as per the terms in its power purchase agreement (PPA). However, PVPower's multi-source generation mix is a key advantage versus other generation companies since it shields PVPower from volume and market share volatility stemming from changes in the relative competitiveness of different fuel sources.

PV Power has a secure supply of fuel for gas plants as well as guaranteed offtake volumes on power produced across all plants.

All of PVPower's gas plants are guaranteed input gas supply through contracts with GAS and committed electricity offtakes through long-term PPAs with EVN. On average, PVPower has guaranteed offtake commitments from EVN through PPAs equivalent to 90% of its total hydropower electricity output, and 80% of its gas and coal-based output each year.

Figure 1: PPA expiry date for each power plant



Source: PVPower

Nhon Trach 3&4 plants could boost generation capacity by more than a third once they come onstream

Following the success of NT1 & NT2, which are the first two gas thermal power plants with ROE above 30%, PVPower is considering proposals to build another 2 gas thermal power plants Nhon Trach 3 (750MW) and Nhon Trach 4 (750MW) in 2018 and 2019, respectively, with corresponding completion targeted for 2020 and 2021. This will lift total capacity of PVPower by more than a third from the current 4.2GW to 5.7GW.

Figure 2: Output scenarios for NT3 and NT4

Number of operation hours	Electricity output (kWh)	Estimated % of total current deficit in the South accounted for
6000	9,000,000,000	44.1
6500	9,750,000,000	47.8
7000	10,500,000,000	51.5

Source: VNDIRECT

The two plants have been approved by the Prime Minister for inclusion in the Power Development Plan VII as part of efforts to reduce the chronic power shortage in the South. The demand for electricity in the south currently exceeds its production capacity by approximately 26%. Therefore, we expect output from these two plants will be fully absorbed by the market due to the huge deficit in the South. Currently the information about these two plants is quite limited and the company has not provided any guidance on how much these two plants will add to total power output, once they come on-stream. However, based on the average number of operating hours of NT2 (~6,500 hours per year), we think that NT3 and NT4 could add anywhere between 9 billion KWh and 10.5 billion KWh of electricity annually to PVPower's current output of around 21 billion KWh per annum (Figure 2).

New gas-fired capacity should be shielded from the risk of more expensive LNG-based fuel inputs

NT3 and NT4 will consume liquefied natural gas (LNG) instead of dry gas since dry gas supply from existing offshore gas fields are on the decline and new oil and gas development blocks are yet to be developed. LNG will be imported through GAS in the future and will be more expensive than locally piped dry gas but this does not pose much risk to PVPower as the PPA price for these two new projects is also likely to be higher than PPA prices for existing gas plants in order to compensate for the higher input costs. Total investment cost in both plants is estimated at US$1.5bn, financed using 85% debt through ECA (Export Credit Agency), denominated in USD. The effective interest rate, according to management, will be between 4.5-5% p.a.

but forex movements do present a risk if the USD strengthens against the VND in the future.

With the revised Power Development Plan VII prioritizing gas thermal power expansion (second most important power source in terms of generation capacity growth after coal thermal power) the two new plants will become the main focus of PVPower in the future.

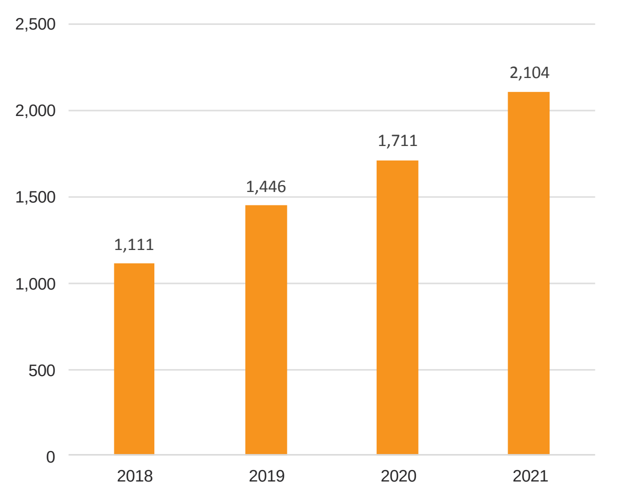
Positive 3Q2017 momentum leading into the IPO

In 9M2017, PVPower produced a total of 15.4bn kWh electricity output and recorded VND1,400bn (US$61.6mn) in profit, exceeding the nine-month target by a comfortable 29%. During 9M2017, gas thermal power plants were highly utilized while hydropower plants enjoyed higher reservoir levels, leading to overall good performance. In 2017, we estimate PVPower will produce 20.8bn kWh of electricity, generating VND30,976bn (US$1.36bn) in revenue. If we apply the 10M 2017 net margin to this full year revenue projected, we get VND2,199bn (US$96.8mn) in projected earnings after tax for the full year. Based on this rough projection, the initial offering price of VND14,329/share translates to a 2017FY P/E of 15.3x.

In 2018, PVPower will conduct intermediate maintenance operations for the Ca Mau 2 and Vung Ang plants. Intermediate maintenance is done when the turbine's operating hours reach 25,000 hours (approx. 2-3 years). The process takes 1-1.5 months based on the state of the engine. Maintenance operations are rotated across different plans each year and last year NT1 and NT2 saw major maintenance operations. Therefore, the impact of the maintenance operations this year will not impact volumes, relative to last year.

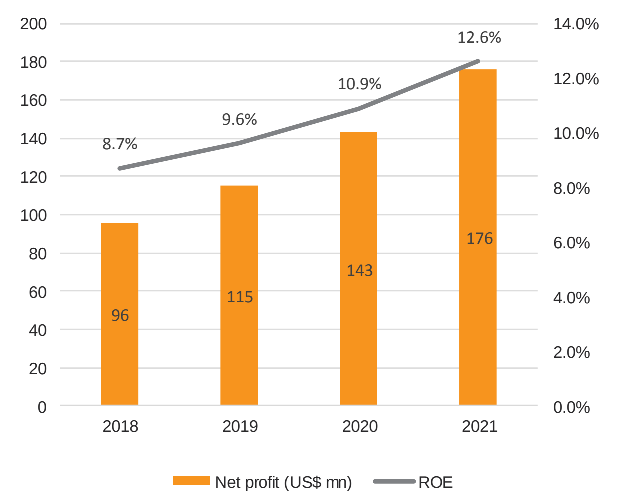
The company targets a 2018-2021 CAGR of 23.7% in revenue (including sales of coal from the subsidiary Petro Vietnam Coal Import and Distribution).

Figure 3: Targeted net revenue (US$ mn) 2018-2021



Source: VNDIRECT

Figure 4: Targeted net profit (US$ mn) and ROE for 2018-2021



Source: VNDIRECT

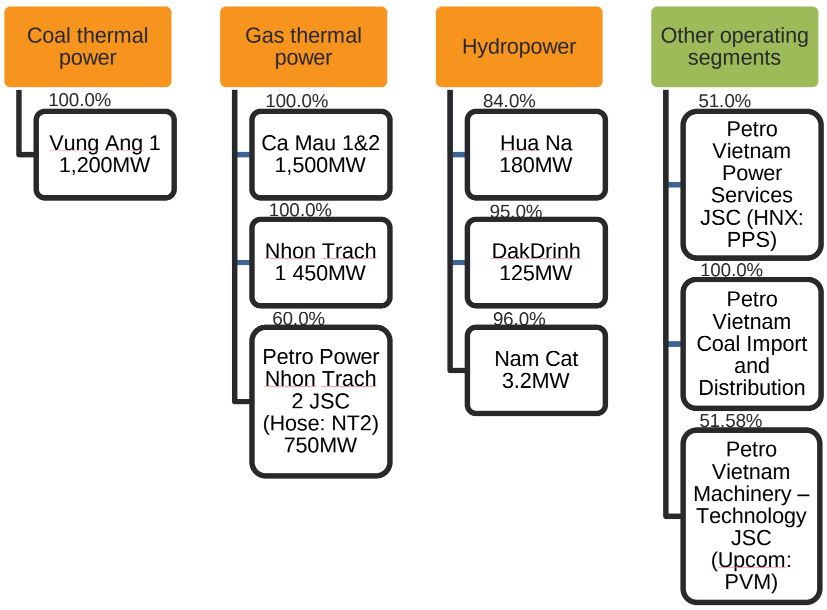
Temporary halt to Competitive Generation Market (CGM) for 1 month will benefit NT1 and NT2

At the beginning of 4Q2017, the Ministry of Industry and Trade (MOIT) ordered a temporary halt to the competitive generation market (CGM) for October 2017 and reactivated the market for the last two months of 2017. During this one month, the selling price to EVN followed the prices laid out on the PPA contracts for each plant. Currently 20% of the total output volume of PVPower's coal and gas thermal plants is sold to EVN through the Competitive Generation Market (CGM) (excluding Ca Mau 1 & 2 plants which sell all their output through the PPA channel) and the equivalent figure is 10% for hydropower plants. Overall, PVPower sells approximately 19.5% of its total output through CGM per year, on average, after excluding the output of Ca Mau 1&2.

For small hydro and thermal plants, PPA price is usually 20% higher than CGM price.

Temporary halt of CGM should benefit Nhon Trach 1&2 (NT1 & NT2) plants as these plants have higher prices on power purchase agreement (PPA) with EVN compared to the typical selling prices realized on CGM as these plants have higher cost of production due to high input cost (gas), which is passed on to EVN through the PPA contract. PPA prices for thermal power plants could be as much as 20% higher than CGM prices. As Ca Mau 1&2 plants do not participate in CGM, the event will not affect these plants.

Figure 5: PVPower structure



Source: PVPower

Future improvements in return on capital through strategic investor participation and massive size, justify the lofty P/E implied by the IPO price.

It is difficult to find a comparable peer in the current market since PVPower possesses various types of power generation plants and is much bigger compared with other listed power plants. Based on the 2016 P/E and the IPO price, PVPower looks expensive compared to peers, especially given that fact that PVPower has significantly lower ROE than peers. However, we believe that PVPower deserves to trade at a premium to peers given the following considerations:

1) PVPower is way larger than currently listed power generators that comprise the peer universe
2) It is the only generation player with a multi-source portfolio which shields it from changes in relative competitiveness due to commodity price fluctuations and weather.
3) The company has a good relationship with PVN (PVPower's input supplier GAS is also under PVN).
4) PVPower, unlike most peers, has sizeable capacity expansion plans in the pipeline.
5) PVPower currently realizes low returns on capital so even though the IPO valuation looks expensive on a P/E basis, it is far more reasonable on a P/B basis. Strategic investor participation could boost efficiency and returns on capital so current earnings are not the best predictor of future earnings potential.

Figure 6: Peer comparison

Ticker	Country	Market Cap (US$ mn)	2016 dividend yield (%)	2016 P/E	P/B current	2016 net debt/equity	2016 ROE (%)	2016 ROA (%)
Coal thermal power								
PPC	Vietnam	313.3	4.8	9.7	1.2	0.3	10.1	5.1
QTP	Vietnam	158.5	n/a	n/a	1.2	3.8	14.0	2.2
KHP	Vietnam	16.9	9.2	9.1	0.7	0.2	8.1	4.2
NBP	Vietnam	8.8	8.5	10.5	0.8	-0.5	8.1	5.7
Average		*124.4*	*7.5*	*9.7*	*1.0*	*1.0*	*10.1*	*4.3*
Median		*87.7*	*8.5*	*9.7*	*1.0*	*0.2*	*9.1*	*4.6*
Gas thermal power								
NT2	Vietnam	383.9	7.3	7.3	1.9	68.1	22.0	8.8
BTP	Vietnam	28.0	7.4	6.8	0.6	-0.3	11.1	6.3
Average		*205.9*	*7.4*	*7.1*	*1.3*	*33.9*	*16.5*	*7.6*
Median		*205.9*	*7.4*	*7.1*	*1.3*	*33.9*	*16.5*	*7.6*
Large hydropower plant								
CHP	Vietnam	155.3	7.7	10.6	2.0	0.7	14.9	8.1
VSH	Vietnam	150.7	6.5	12.7	1.2	0.7	8.9	4.6
TMP	Vietnam	101.7	10.4	17.6	2.3	-0.1	10.4	7.0
SHP	Vietnam	89.5	7.5	19.8	1.8	1.1	7.8	3.5
TBC	Vietnam	65.7	8.0	14.4	1.7	-0.5	12.8	12.6
SBA	Vietnam	41.3	8.8	10.7	1.4	0.9	9.4	4.5
Average		*100.7*	*8.2*	*14.3*	*1.7*	*0.5*	*10.7*	*6.7*
Median		*95.6*	*7.9*	*13.6*	*1.7*	*0.7*	*9.9*	*5.8*
Small hydropower plant								
GHC	Vietnam	32.5	8.9	9.5	2.4	-0.1	22.2	17.7
HJS	Vietnam	23.2	6.4	14.1	1.9	0.7	9.6	5.0
PIC	Vietnam	18.7	3.6	12.8	1.3	0.4	8.0	5.4
DRL	Vietnam	18.6	9.2	10.8	3.2	-0.5	27.1	25.5
Average		*23.2*	*7.0*	*11.8*	*2.2*	*0.1*	*16.7*	*13.4*
Median		*20.9*	*7.6*	*11.8*	*2.1*	*0.2*	*15.9*	*11.6*
PVPower	**Vietnam**	**1470 (*)**	**n/a**	**29.0 (*)**	**1.2 (*)**	**1.0**	**4.1**	**1.5**

(*) Market cap, 2016 P/E and P/B current are calculated based on the initial offering price of VND14,329/share

Source: VNDIRECT

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(d) MAS Notice on Recommendation on Investment Products [Notice No. FAA-N16];

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Stock Ratings	Definition:
Add	The stock's total return is expected to reach 15% or higher over the next 12 months.
Hold	The stock's total return is expected to be between negative 10% and positive 15% over the next 12 months.
Reduce	The stock's total return is expected to fall below negative 10% over the next 12 months.

The total expected return of a stock is defined as the sum of the:(i) percentage difference between the target price and the current price and (ii) the forward net dividend yields of the stock. Stock price targets have an investment horizon of 12 months.

Sector Ratings	Definition:
Overweight	An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation.
Neutral	A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
Underweight	An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation.

Country Ratings	Definition:
Overweight	An Overweight rating means investors should be positioned with an above-market weight in this country relative to benchmark.
Neutral	A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.
Underweight	An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.

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