

Sector note

26 May 2022



Power sector

Power demand surge underpin sector outlook

- Under the April 2022 PDP8 draft, gas-fired and RE power continue to be embraced while coal-fired might step in its end of era after stop developing from 2030F.
- We believe in the strong recovery of thermal power in 2022 after sharp cut down in 2021 and hydropower could remain its ideal position thanks to La Nina phase.
- Our stock picks include **POW**, **NT2**, and **REE**

Demand rise supported positive output results among energy sources

In 1Q22, total power consumption increased 7.8% yoy to 63.03bn kWh, as businesses returned to its working pace post Covid. Gas-fired power output reached 7.5bn kWh (+1.6% yoy), contributing for 12% of total output, improving 3.5% pts from modest level in 2H21. Hydropower enjoyed its favorable condition with output rose 18.9% yoy to 16.48bn kWh thanks to longer-than-expected La Nina phase. Coal-fired output declined 4.6% yoy due to coal shortage situation. RE output rose 28.4% yoy to 10.01bn kWh thanks to the additional 3,980MW wind power in Nov 21.

The new PDP8 embraces faster clean energy transition

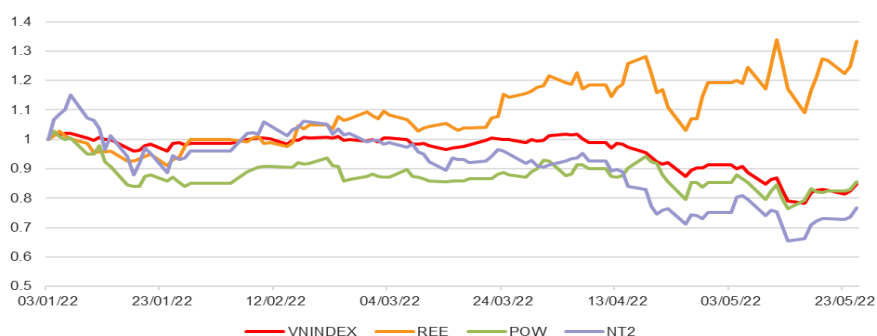
After four iterations of the Power Development Plan 8 draft (PDP8 draft), there have been major changes in capacity development. In particular, the newest draft stressed on more intense clean energy transition to meet the Vietnam “net zero” commitment. We look for a significant rise of RE power in long term and we prefer companies with ongoing renewable energy (RE) projects as we expect on continuous attractive price mechanism for RE power in near period.

2022F energy outlook and our stock picks

We expect gas-fired output to bounce back in 2022F from its low base of 2021, trailing the strong power consumption recovery, and we believe **POW**, and **NT2** will ride on this trend. We estimate the recent coal shortage to be short term risk, and coal-fired power output to benefit from demand recover and higher ASP in the CGM. We expect on another vibrant year of hydropower thanks to the La Nina phase to last for the rest of 2022. However, we stay conservative on the growth rate of this energy segment after strong rise in 2H21. We focus on company that has dense hydropower portfolio with new operated plants and **REE** is one of the heavyweight contestants.

Downside risks include: 1) Power consumption grows lower-than-expected, 2) The increasing trend of input price, putting pressure on thermal power plants, 3) Hydropower weather condition could shift in the next forecast.

Figure 1: Price performance of VND Research stock picks versus the VN-Index since 2022 to date (Dec 31, 2022 = 1)



Source: Bloomberg, VNDIRECT RESEARCH

Analyst(s):



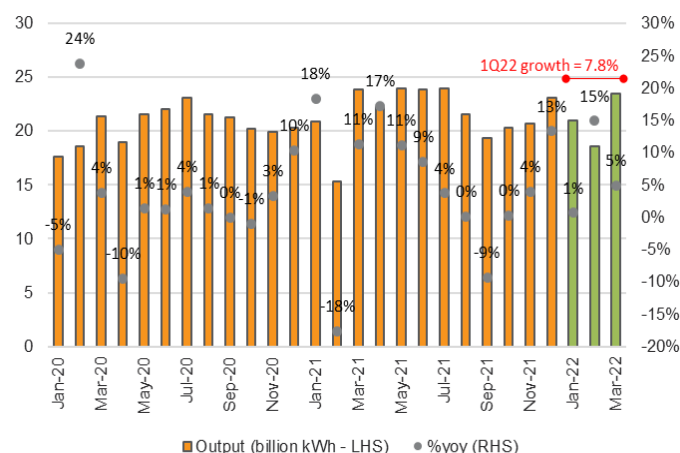
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VIETNAM POWER SNAPSHOT IN 1Q22

Electricity consumption recover sharply in 1Q22

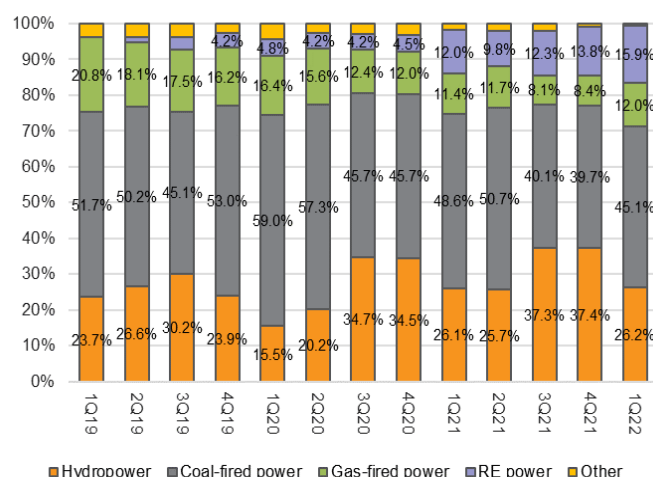
According to EVN, total power consumption reached 63.03bn kWh, increasing 7.8% yoy. Even though there was still a burst in Covid-19 cases at the beginning of 2022, the easing in distancing policy has gradually improved power demand when businesses return to its working pace. The 7.8% yoy in 1Q22 was not met the expectation of 8.5% in based-case scenario noted in the Power Development Plan (PDP8), however, we expected a higher growth rate in the upcoming hot weather thanks to electric-load surge.



Sources: EVN, VNDIRECT RESEARCH

Gas-fired power are mobilized at higher rate thanks to coal shortage in 1Q22 (Unit: %)

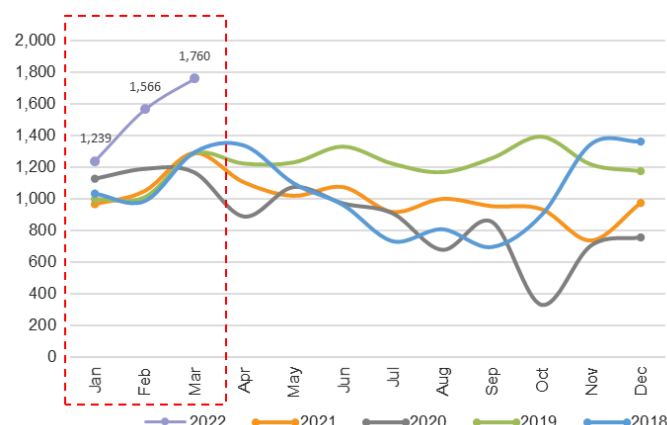
In 1Q22, hydropower continued to be mobilized at solid proportion of 26.2% total output, slightly higher than 26.1% in 1Q21 but lower than 4Q21 as hydropower plants has to stash water to serve the hot weather season. Coal-fired power also improved from 2H21, its output weight accounted for 45.1% total capacity and 3.5% pts lower than 1Q21 level due to the recent coal shortage. Gas-fired power started to be mobilized at higher rate of 12% (+0.6% pts yoy) and much higher than 2H21, taking advance from electricity demand recover and low coal-fired output. Renewable energy (RE power) recorded increasing trend in output weight thanks to additional 3,980MW wind power in Nov 21. Besides, solar power capacity cut down rate also dropped in 1Q22, helping RE to be mobilized at higher rate.



Sources: GENCO3, VNDIRECT RESEARCH

Full market price (FMP) in the Competitive Generation Market (CGM) has gradually recover from the beginning of 2022 (Unit: VND/kWh)

1Q22 FMP in the CGM reached average of VND1,521/kWh, 38% yoy higher than the price in 1Q21, in which, the FMP recorded an increasing trend from VND1,239/kWh in Jan 22 to VND1,760/kWh in Mar 22 thanks to higher mobilization from gas-fired power with higher ASP. In Jan 22, Electricity Regulatory Authority of Vietnam (ERAV) approved the 2022 electricity market operation plan, in which, system marginal ceiling price (SMP cap) are VND1,602.3/kWh, 6.5% higher than 2021 plan. Prescribed proportion of Qm for thermal power is 20%, hydropower 10%, similar as last year ratio.



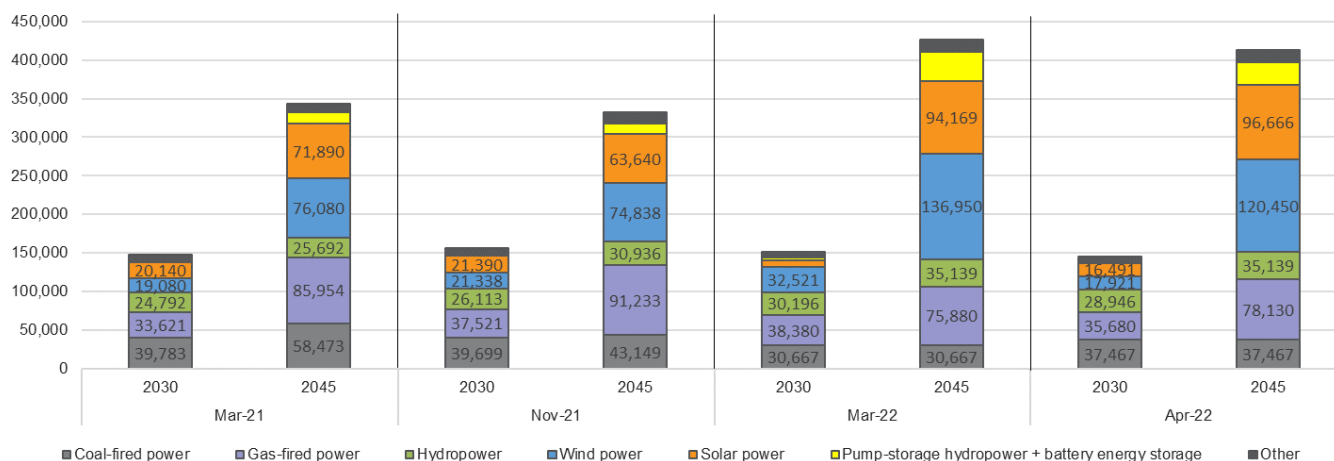
Sources: EVN, VNDIRECT RESEARCH

POWER DEMAND SURGE UNDERPIN SECTOR OUTLOOK

The new PDP8 stressed on a more intense growth for cleaner energies to meet Vietnam “net zero” commitment

After four iterations, various change in capacity structure has been made

Figure 5: There are various adjustments among four PDP8 draft (unit: MW, high-load scenario)



Source: PDP8 draft, VNDIRECT RESEARCH

After four iterations of the Power Development Plan 8 draft (PDP8 draft), there have been major changes in capacity development. Particularly, under the direction of the Government and the Ministry of Industry and Trade, the consulting unit calculated and updated the PDP8 to incorporate Vietnam's commitment to net zero emissions at COP 26:

- Overall, total capacity remains stable by a modest change from 147,522MW in the Mar 21 version to 145,185MW in the Apr 22 version. However, with expectation on the intense energy transition in the newest draft, total capacity in 2045F is 20% higher than the previous draft and reach 413,054MW in high-load scenario. To balance green transition trend as well as sufficient back up rate for power system, beside the solid raise in RE power, the new plan also significantly increases pump-storage power sources and battery energies to meet the adequacy of the system.
- There will be a modest change in **hydropower** development plan; in general, in all four iterations, hydropower will account for around 19.8% of total capacity in 2030 then reduce to 9.1% in 2045 when its potential is fully exploited.
- Unlike previous drafts, the newest will stop developing **coal-fired power** after 2030. Its total capacity will reach 37,467MW, with a weight reduction from 25.7% to 9.7% total capacity in 2030-45 period. It will not be possible to withdraw approved thermal power projects that are through investment procedures owing to legal issues. However, the government provided explicit roadmaps for reducing coal emissions, in which, after 20 years of operation, coal power facilities will have to progressively transition to biomass or methane.
- **Gas-fired** power maintained its position as the spearhead in 2030-45 period with capacity weight expected at 26.7% and 18.9% of total capacity in 2030-45F, respectively. Like coal-fired power, to meet Vietnam's COP26 commitments, the new gas-fired power plants must gradually convert to hydrogen (or raising the proportion of hydrogen

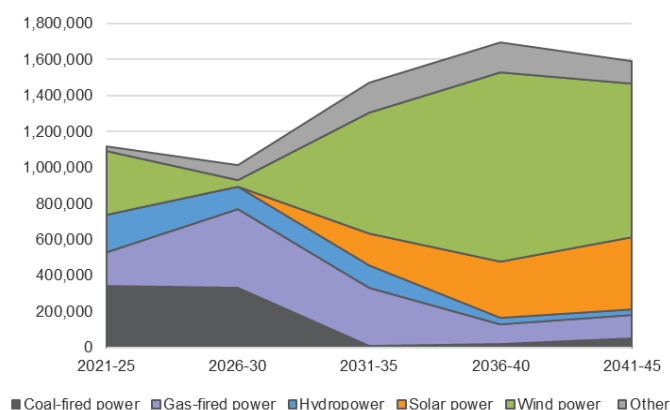
combustion), and eventually switch to hydrogen altogether after 20 years of operation.

- There have been positive adjustments in **RE power** capacity structure, especially wind power. Despite a lower capacity in 2030 compared to the previous version, 2045F wind power capacity in the new plan is 57% higher than the March version, reaching 120,450MW. Solar power after level off in 2030 will start to pick up after that. In particular, the total solar capacity in the new draft is 35% higher than the March 2021 version and reach 96,666MW in 2045, accounting for 23% of total power capacity.

Under the strong energy transition scenario, large financial pressure to meet demand for power development

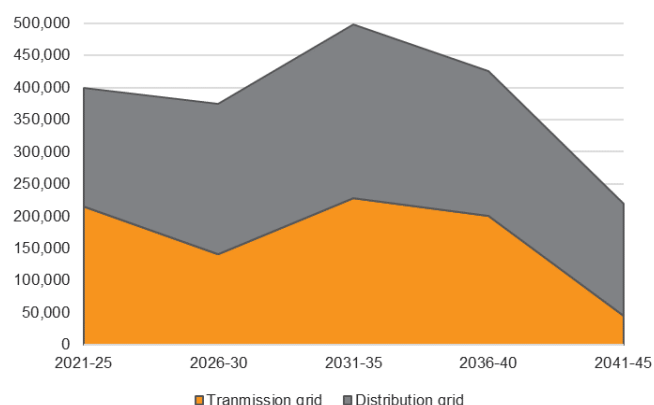
In comparison to the old scenarios, this scenario will dramatically cut fossil fuel imports, enhance electrical supply security, and minimize electricity import burden. However, the energy conversion scenario will raise the investment cost for power system by around 25-32% in 2021-45 period, depending on each load scenarios. In our perspective, the new PDP8 draft has concluded a “sufficient and green” plan, but it may be more difficult to implement than the amended Power Plan VII with strong emergence of gas-fired and RE power, while hydrogen, ammonia technologies for thermal plants are still being explore and not yet marketed.

Figure 6: Total estimated capital by energy type under strong energy transition scenario (Unit: VNDbn)



Source: PDP8 draft, VNDIRECT RESEARCH

Figure 7: Total estimated capital for transmission grids under strong energy transition scenario (Unit: VNDbn)



Source: PDP8 draft, VNDIRECT RESEARCH

In particular, total investment demand for power capacity reach VND1,120tr in 2021-25 period and VND1,012tr in 2026-30 by majorly allocating on thermal power (33% for coal-fired and 43% for gas-fired power). However, coal-fired power will stop developed after 2030 and the major capital will be using for conversion technologies (using methane and ammonia for combustion). From 2031-35 period, the demand for capital will reach to VND1,474tr then continue to surge to VND1,697tr and VND1,592tr in 2036-40 and 2041-45 period, respectively, due to the strong emergence of RE power. Particularly, after level off from 2021-30 period, solar power will return to development pace with increasing demand for investment, accounting for 12%/18%/25% in 2031-35/2036-40/2041-45 period, respectively. Wind power expected to claim the highest capital in 2031-45 period, in which, total capital need will reach 46% and 53% in 2031-35 and 2041-45 period, respectively.

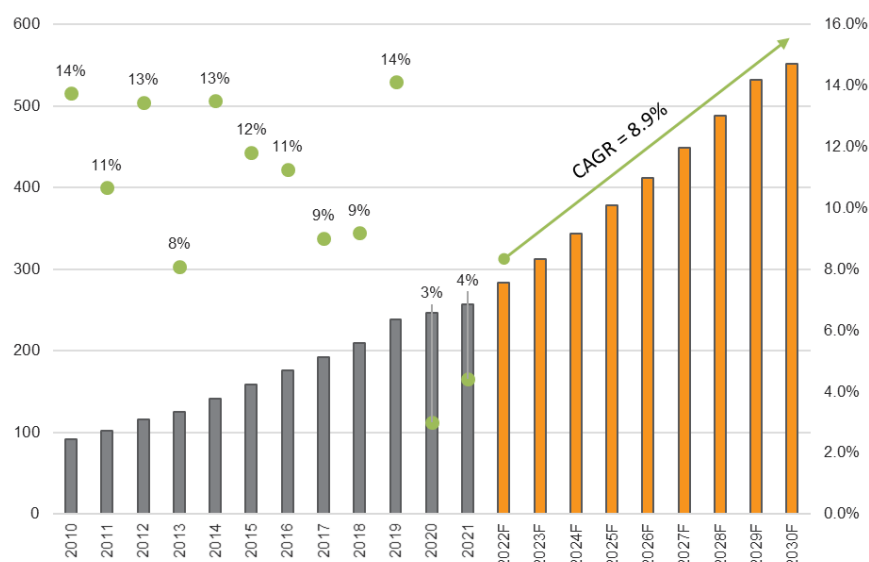
Capital needs for power grid development account for about 20-25% of the total power sector investment in 2031-45 period. In particular, total capital demand

for power grid reaches at VND399tr and VND425tr in 2021-25 and 2036-40 and allocating evenly for transmission grid and distribution grid.

Strong forecasted power consumption growth continues to underpin the positive outlook of power sector

Power consumption is expected to surge after two modest growth years of 2020-21 when Vietnam economic growth return to its growth momentum. The North is forecasted to have power shortage risk under high electric load day during hot season, and the recent coal supply shortage for thermal plant of more than 3,000MW. Under base-case scenario, the Power development plan (PDP8) draft estimated a power consumption CAGR of 8.9% in 2021-30F period (9.5% for best-case scenario), and we believe this is the driving force for the power industry to keep growing along with the expectation of Vietnam's fast economic recovery in the coming years.

Figure 8: Power consumption expected to rise at 8.9% CAGR in 2022-30F period (Unit: billion kWh)



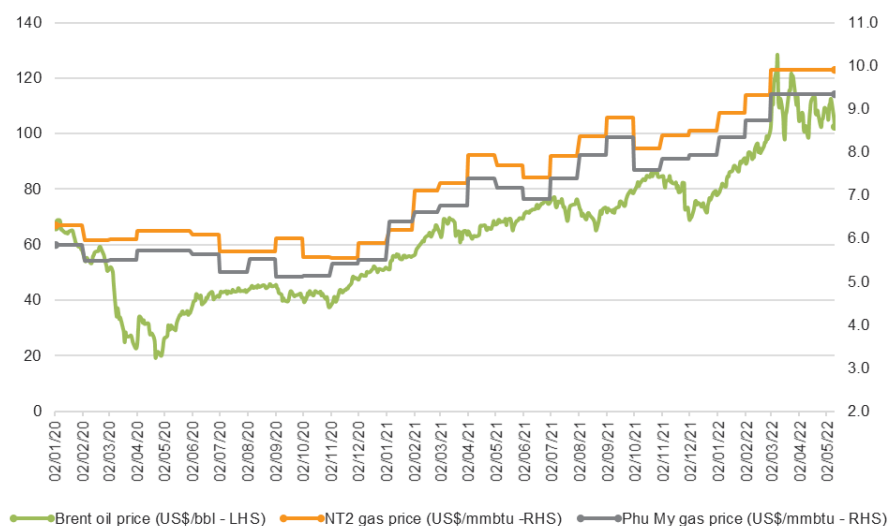
Source: PDP8, VNDIRECT RESEARCH

Given the fact that energy consumption demand is expected to increase dramatically in the upcoming years, developing an adequate power system to fulfill the rising demand is critical. In particular, as 1) hydropower has gradually run out potential for further exploitation (currently reach 91% of total potential and left only a small space for small hydropower (<30MW) to develop); 2) Coal-fired power faces challenging financial difficulties due to its negative environmental effect, whereas several investors have retreated from this energy source due to the global commitment of emission cut down under recent COP26. Hence, renewable energy (RE) receives huge attention due to its clean nature and massive capacity growth potential. However, because of its instability and low-capacity factor due to weather dependence, it is essential to develop additional background power source like gas-fired power to support the power system fullness.

Gas-fired power will recover from its low-base from 2022F onwards

We stay resilience on the recovery of gas-fired power in 2022 after positive result of this energy segment in 1Q22

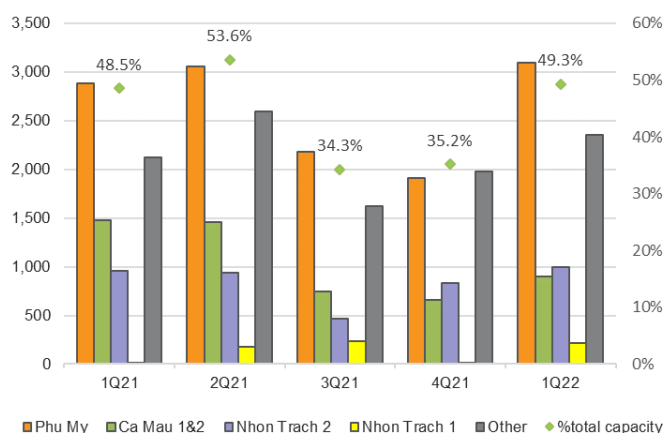
Figure 9: Gas price continue to surge in 1Q22 due to the Ukraine – Russia geopolitical issue



Source: GENCO3, VNDIRECT RESEARCH, Bloomberg

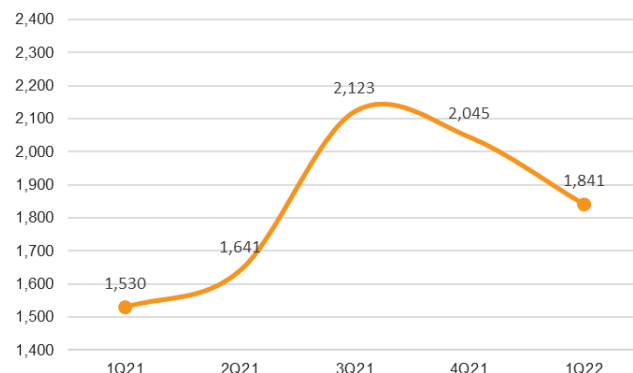
Brent oil price showed a rising trend from 2020, and surpassed the US\$100/bbl in 2022 due to the geopolitical issue of Ukraine – Russia. Since Vietnam domestic gas price is anchored to the Singapore Platts oil price and moves in the same direction as the Brent oil price, a same rising trend occurred in Vietnam outstanding gas-fired power plant, including Nhon Trach 2 (750MW) and Phu My cluster (2,540MW). In particular, NT2 gas price surged 66% yoy from US\$5.9/mmbtu in Mar 21 to US\$9.8/mmbtu in Mar 22. Phu My recorded the same trend as its gas price increased sharply from US\$5.5/mmbtu to US\$9.3/mmbtu.

Figure 10: Gas-fired power plant recorded positive output result in 1Q22 thanks to demand surge and coal shortage (Unit: million kWh)



Source: Company reports, EVN, VNDIRECT RESEARCH

Figure 11: The recent gas price surge has passed through the strong rise in ASP from 1Q21 (Unit: VND/kWh)

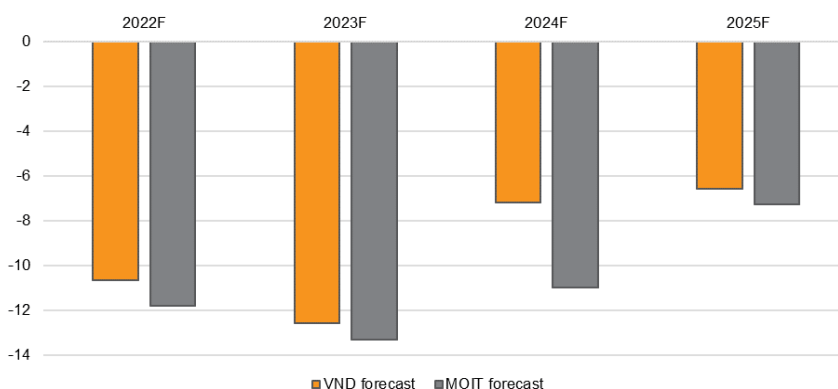


Source: Company reports, VNDIRECT RESEARCH

The gas price surge was greatly affected gas-fired power output mobilization due to electricity average selling price (ASP) surge especially in the context of low electric load during strict quarantine in the last two quarters of 2021 when Vietnam suffered from serious situation of Covid-19. It limited the power consumption growth when production and business activities are significantly reduced especially in the South. However, gas-fired power output recorded a solid recovery in 1Q22 despite ASP surged 20% yoy in 1Q22, in which, total gas-fired output edged up 1.7% yoy and 40% higher than 4Q21. The reason for rising gas price still leading to lower ASP from 3Q21 to 1Q22 as in 2H21, several gas-fired plants suffered from significant low output, severely affect plant operating efficiency, and have to offset with a higher ASP (at some point reach VND2,500-3,000/kWh). However, in 1Q22, several outstanding gas-fired power plants also recorded a strong recovery from modest output in 2H21, including Phu My cluster, Nhon Trach 1&2 and Ca Mau 1&2 thanks to:

- Power consumption rebounded sharply 7.8% yoy in 1Q22, leading to higher mobilization among power plants.
- In 1Q22, Ministry of Industry and Trade (MOIT) announced the shortage of coal for thermal power plants, and it may lead to very presented future risk of power shortage in hot weather. Hence, the proposal of additionally mobilize 3,700MW of other power sources has been made, including about 1,000MW of RE power, 300MW of hydropower, and 1,200MW of gas-fired power.

Figure 12: Power shortage will likely occur from 2022F, during hot weather, we expect higher capacity rate from power plants to catch up with the demand surge



Source: GENCO3, VNDIRECT RESEARCH, Bloomberg

We believe on the recovery of gas-fired companies in 2022F after its low-base in 2021 especially after the modest mobilization on 2H21 thanks to:

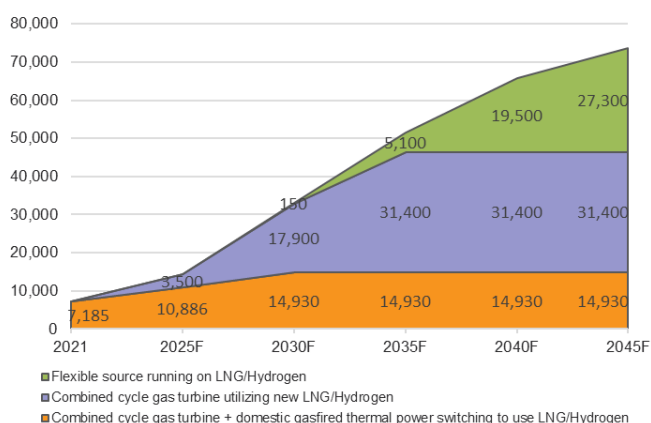
- Brent oil price is forecasted to stabilize and move around US\$95-85/barrel, reducing the stress for gas-fired price hike from 2022F.
- Gas-fired mobilization recorded a decreasing trend in two Covid year 2020-21 and reach a low-base of only 8-10% of total capacity in 2021, much lower than its portion of 15-20% in pre-pandemic level due to modest electric-load and ASP surge, causing weaker competitiveness of this energy.
- Power consumption will recover sharply, especially in upcoming hot weather, and the growth rate will return to the planned level after two modest growth year of 2020-21. Besides, we expected power shortage to occur from 2022, causing power plant to operate in more intense rate.

However, as EVN decided not to raise retail electricity price in 2022, owing to inflation concern, it might be the potential downside risk for gas-fired power mobilization as its selling price (ASP) are expected to linger at high level this year.

LNG-to-power remained as one of the most important sources under the newest PDP8 draft

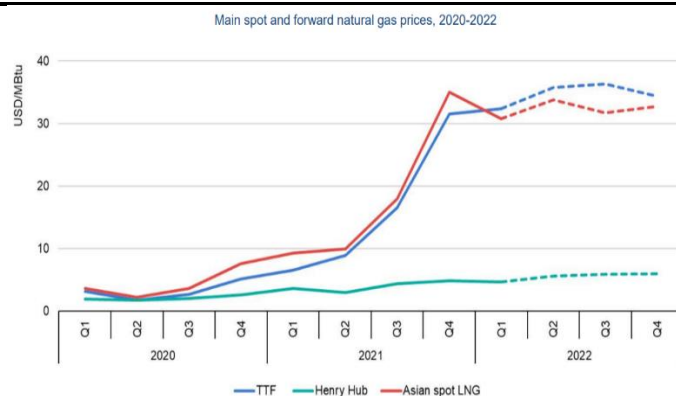
Along with RE power, the PDP8 stressed the importance of gas-fired power for Vietnam's capacity development plan in the 2020-45F period. Domestic gas input is exhausting over the year, while international LNG prices will decrease due to lower demand in the long-term. Therefore, it provides an excellent opportunity for Vietnam to develop gas-fired power using imported LNG - a more stable source. According to the high electric-load case of the newest PDP8 draft, the total capacity of gas-fired thermal power will increase from 7,185MW to 14,386MW in the 2025F, and start switching combined cycle gas turbine utilizing new LNG/Hydrogen. From 2035F, the new plan included 5,100MW flexible source running on LNG/Hydrogen. Overall, total gas-fired capacity will increase 10.6% CAGR to reach 73,630MW in 2045F. Notably, new developed gas-fired all have to gradually switch to use hydrogen after 20 years operation to actualize the "net-zero" commitment under the COP26.

Figure 13: Under the new PDP8 draft, gas-fired power plant will increase at 8% CAGR in 2021-45F period (Unit: MW)



Source: Company reports, EVN, VNDIRECT RESEARCH

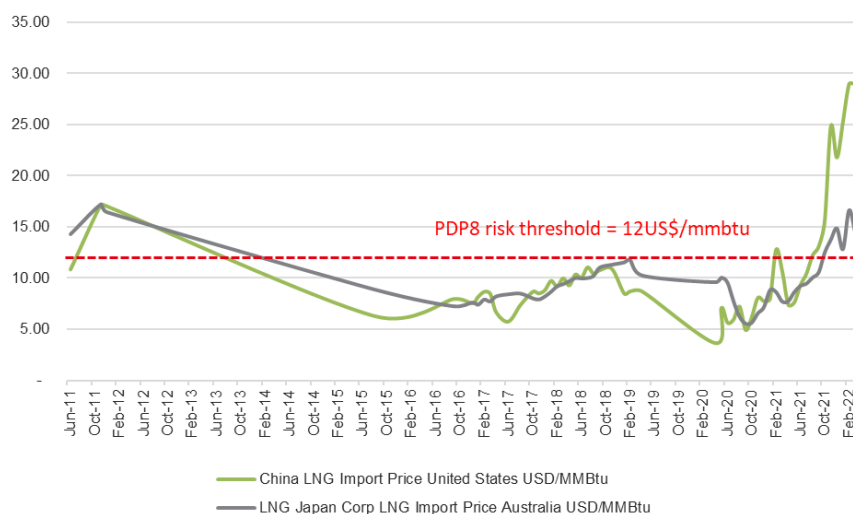
Figure 14: IEA forecast global gas price to linger at high level for the rest of 2022.



Source: IEA, VNDIRECT RESEARCH

According to IEA natural gas price 4M22 report, high gas price is set to linger through the rest of 2022. In particular, Asian spot LNG are forecasted at US\$32/mmbtu and Henry Hub at US\$5.5/mmbtu in 2022. Uncertainties surrounding Russian gas supply and high restocking needs in all key gas regions are set to provide strong support to gas prices in 2022. Although there is no specific information about Vietnam LNG upcoming suppliers, PVN is currently negotiating framework contracts with many suppliers from variety regions such as Asia-Pacific, America, Middle East, and the company expected to start importing LNG from 2023F, depending on the LNG price situation. Hence, the LNG price surge raises a concern about the financial viability of upcoming LNG projects. According to the Scientific council Vietnam Energy, in order for an LNG gas power plant to sell electricity for 8 to 9 cents per kWh, the input LNG price must be around US\$12/mmbtu. However, as the LNG price is expected to continue linger at US\$30-40/mmbtu in 2022, the electricity price cannot go below 15 UScents/kWh, which is unlikely to be sold to EVN anytime soon.

Figure 15: Global LNG price has dramatically surge, raising concern about the financial viability of upcoming LNG gas-fired power projects



Source: Bloomberg, VNDIRECT RESEARCH

However, in a longer term, we expect gas price to return to a more reasonable level when supply recover after the recent disruption, and we believe that gas-fired power will plays a vital role in Vietnam electricity. Notably, gas-fired power using LNG will become the primary trend, and Nhon Trach 3&4 are the pioneers as the first plants using imported LNG in Vietnam. Regarding its stable nature, we believe the new gas-fired plants will be prioritized, boosting up its power output, and gas-fired power plant investors will be benefited. In our perspective, POW is one of the leading companies who benefit from the LNG development trend as it owns two first gas-fired power using imported LNG. The plants are expected to come into operation from 2024-25 period.

Figure 16: Upcoming gas-fired power projects remains unchanged under the newest draft

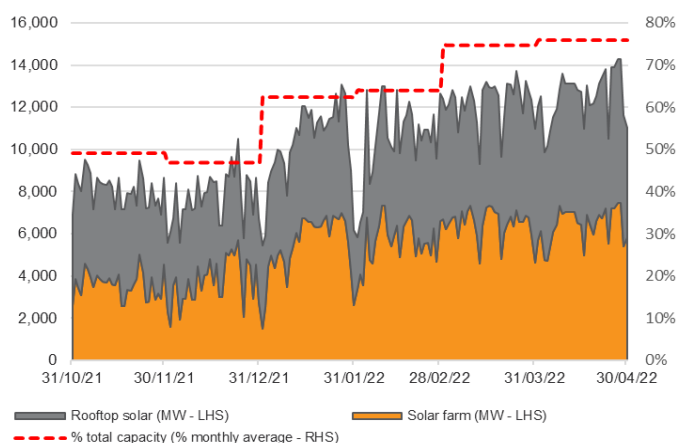
Project	Province	Capacity (MW)	Investment cost (US\$m)	Planned operation	Investor	Comment
Nhon Trach 3&4	Dong Nai	1,500	1,400	2023-24	POW	Using imported LNG from Thi Vai terminal
Son My 2 CCGT	Binh Thuan	2,200	4,000	2023-24	AES group	Using imported LNG from Son My port. BOT contract for 20 years
Son My 1 CCGT	Binh Thuan	2,000		2026-28	EDF, Sojitz, Kyushu, Pacific Group	Using imported LNG from Son My port
Bac Lieu CCGT	Bac Lieu	3,200	4,000	2025-27	Delta Offshore Energy	Independent Power Plant (IPP). Estimated ASP of 7UScent/kWh. First phase of 800MW expected to deploy in 2024
Long Son (Phase 1)	Ba Ria - Vung Tau	1,200	3,780	2025-26	Mitsubishi Corp, General Electric, GTPP	Using imported LNG from Long Son port
Ca Na 1	Ninh Thuan	1,500	3,850	2025-26	Trung Nam group	Building FS
LNG Long An 1&2	Long An	3,000	3,130	LNG Long An 1: 2025-26 LNG Long An 2: 2035	Vinacapital GS Energy Pte.Ltd	Approved all 3,000MW
LNG Hai Lang centre	Quang Tri	1,500	2,300	2025-27	T&T Group (VN), Hanwha, Kospo, Kogas (Korea)	Approved 1,500MW, Using imported LNG from Hai Lang terminal

Source: PDP8, VNDIRECT RESEARCH

Renewable energy contains a promising longer-term outlook

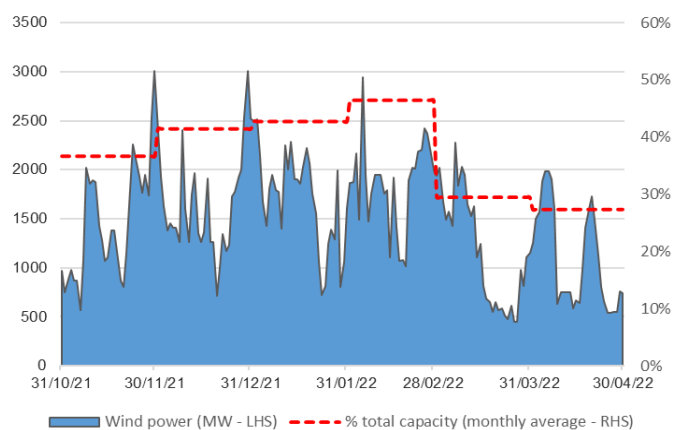
In 1Q22, solar power recorded higher capacity mobilization while wind power has shown weaknesses in terms of instability

Figure 17: Solar power mobilized capacity improve in 4M22 after sharp cut down in 2H21 (Unit: MW)



Source: ERAV, VNDIRECT RESEARCH

Figure 18: Wind power mobilized capacity showed its instability and reach a low level when come out of monsoon season in Mar 22



Source: ERAV, VNDIRECT RESEARCH

National power system dispatching center (EVN NLDC – A0) has started to publish data on mobilized capacity by energy types starting from October. Accordingly, solar power was mobilized at a modest capacity in 4Q21 due to sharp cut down rate of around 20% during low electric load of Covid-19. However, the situation has gradually improved in 1Q22 as solar power both solar farm and rooftop solar was mobilized at higher capacity of around 11,400MW (73% total capacity) and much higher than average 7,900MW in 4Q21.

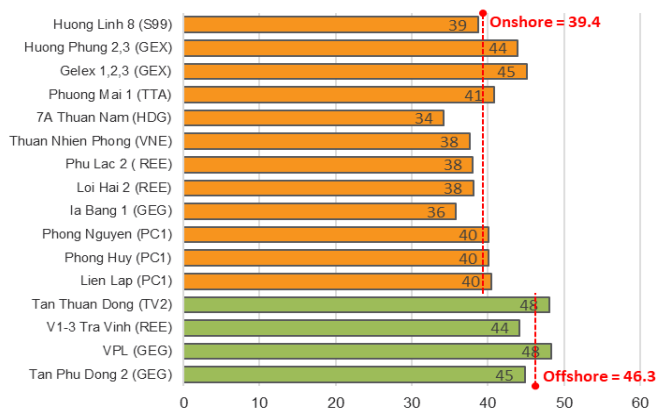
After five months of operation, there are initial data illustrating wind power performance, and it has shown limitations when mobilized capacity of this energy source is greatly volatile and at some point, provided a very humble capacity even during monsoon season – high wind speed season. In particular, average capacity mobilized of wind power recorded at around 1,500MW after 5 months (38% total capacity), the number reach a higher-level during monsoon season from end-November to February (around 1,700-1,800MW in peak time). However, from March, wind power recorded a modest capacity available as in peak-load at evening, wind power sometime only contributed 200-300MW available capacity compared to the installed capacity of almost 4,000MW, a very modest help for power system when solar power “goes to sleep”. We believe it will take a longer time to fully conclude the effectiveness of wind power.

The “FIT” race has finished, and RE power investors are looking for new price mechanism for new development pace

The wind power FIT race was over at the end of October, and EVN reported that among 106 wind power plants had submitted documents for registering COD before FIT deadline, with a total capacity of 5,655MW, there are 3,980MW of 84 operated plants has finished COD on time. Hence, by finishing COD before November 01, wind power investors will acquire a support FIT price of 8.5 cents/kWh for onshore wind projects and 9.8 UScent/kWh for offshore wind projects. With great ability and potential, several leading energy companies has proven their position by owning wind power plants that COD on time and acquire preferential FIT price. Some of the outstanding name, including REE, GEG, PC1, GEX by exposing strongly with large wind power portfolio, has climb

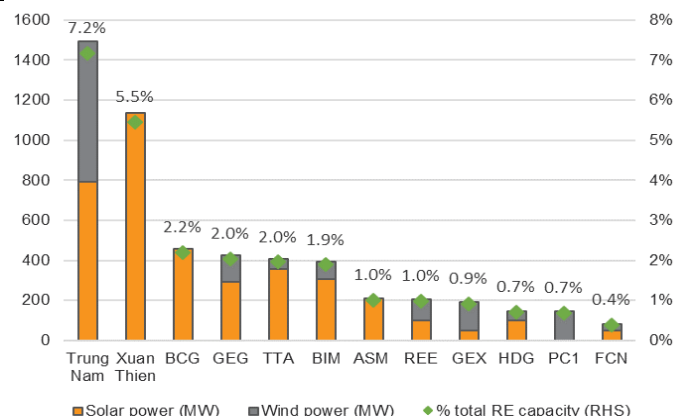
themselves onto the top 10 RE companies in the market. We believe these companies contain positive profit growth outlook thanks to its new additional wind power in 2022F.

Figure 19: Wind power plant that COD on time and acquired FIT price before Nov 01, 2021, of some listed companies (Unit: VNDbn/MW)



Source: Company reports, VNDIRECT RESEARCH

Figure 20: Thanks to large exposure in wind power several firm has climbed in the top 10 RE companies such as REE, GEG, GEX

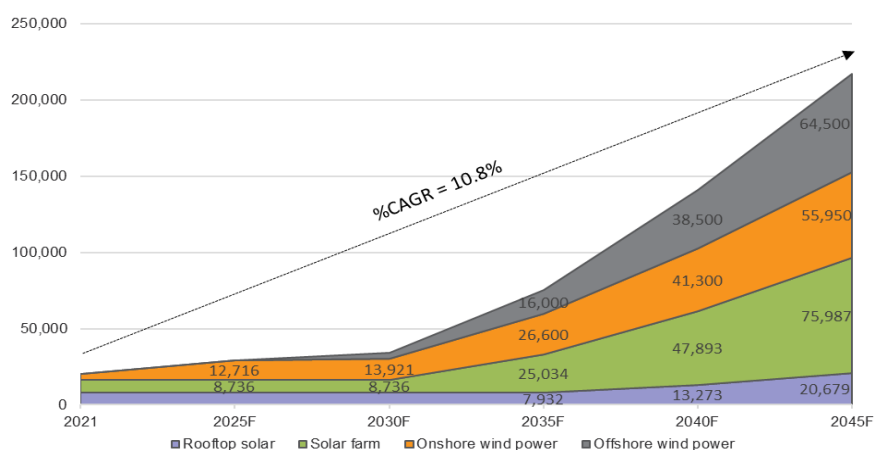


Source: Company reports, VNDIRECT RESEARCH

In our view, mechanisms, and policies to support the development of clean energy and renewable energy have not been continuous and are being interrupted like solar power has been slowed down (since Jan 01, 2021) and recently wind power (after Nov 01, 2021). This is also considered a bottleneck that needs to be cleared up and a continuous legal corridor is needed. The mechanisms and policies applied in recent times have not given a long-term orientation. Hence, despite being assessed as a key energy source in Vietnam's strong green energy transition scenario, RE power investors are still waiting for a new policy from the government when the FIT pricing policy is expired. Thanks to the bright outlook of RE power along with the clear orientation from the government, we hope on a new mechanism that is still preferential and long-term to continue encouraging investors, both domestic and foreign to participate in this energy source in the future.

Solar power capacity growth will level off until 2030 while wind power is expected to become the spearhead segment in 2022-45F period

Figure 21: Onshore wind power will be the spearhead for RE growth in 2022-30F while offshore and solar power will accelerate from 2031 (Unit: MW)

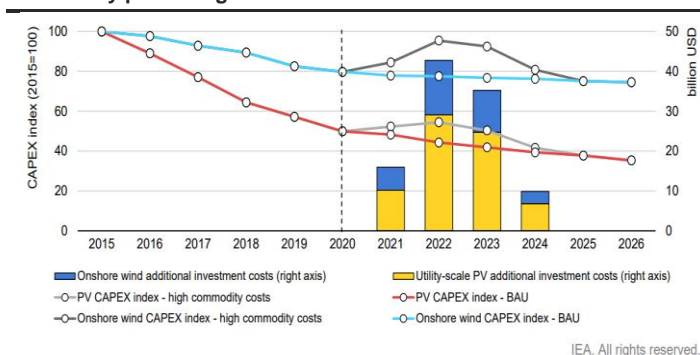


Source: PDP8, VNDIRECT RESEARCH

In 2021-45F period, RE power will grow at highest CAGR of 10.8% from 20,408MW to 217,116MW. However, after excessively growth in 2020, solar power capacity growth will level off in 2021-30F period and will start to surge from 16,491MW to 96,666MW in 2030-45F period. However, we note that 6,500MW approved solar power under the revised PDP7 has not yet included in the new PDP8 draft and are waiting for the conclusion of the Standing Government. Hence, we expect there still a growth momentum in 201-30 period for solar power whenever there is final decision.

On the other hand, wind power, begin with onshore wind power with become the main grow engine for RE power in 2021-30 period. In particular, onshore wind power capacity will be developed robustly in from 3,980MW to more than triple of 13,921MW in 2030. From 2035F, there will be the appearance 16,000MW offshore wind power, contributing for the fast growth of wind capacity. In 2045F, total wind power will reach 120,450MW, accounting for largest portion of 29% total power capacity.

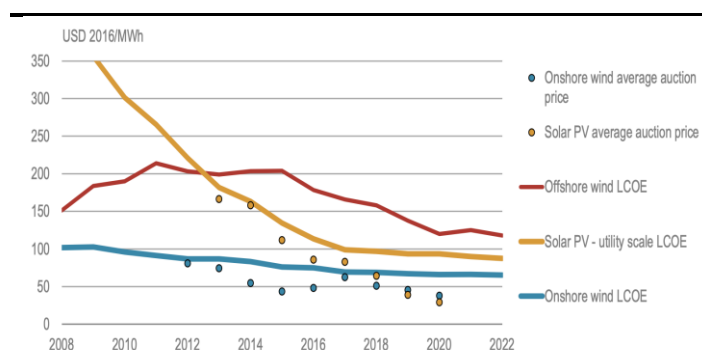
Figure 22: The downtrend of RE Capex will be interrupted by commodity price surge in 2022F but continue to decline from 2023F



Notes: BAU = business as usual. Onshore wind data exclude China.

Source: IEA, VNDIRECT RESEARCH

Figure 23: Renewable LCOE gradually decrease from 2008 to 2022



Source: IEA, VNDIRECT RESEARCH

According to IEA renewable energy report, the recent surge in commodity prices will break the renewable electricity Capex decreasing trend in 2022, influencing on higher building costs of new power plants. However, due to the high demand for this energy sources, the Capex reduction trend will continue in the longer term, particularly from now to 2026. Besides that, the levelized cost of energy (LCOE) for renewable plant has also significantly dropped thanks to the global development trend among this energy type. Hence, it will also benefit investors in the long-term thanks to lower investment cost for upcoming projects.

Coal-fired power is the most reliable background source in 2022F

We expected a solid recovery from coal-fired output in 2022 due to demand surge and power shortage concerns

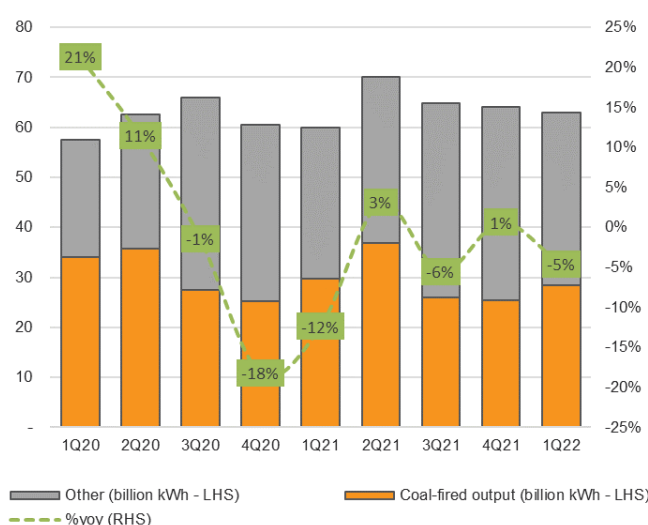
Figure 24: Several coal-fired power plants recorded positive result under coal shortage thanks to vibrant mobilization in the CGM and the modest output in 1Q21

Company	Market cap (VNDbn)	1Q22 Revenue (VNDbn)	% yoy Revenue	1Q22 NPAT (VNDbn)	% yoy NPAT
QTP	7,246.80	2,598.17	45%	345.89	195%
DTK	8,671.15	3,225.50	11%	381.74	83%
HND	8,107.00	2,539.43	28%	258.10	2402%
PPC	5,658.82	1,077.40	0%	80.44	-42%
NBP	272.75	150.83	-10%	(2.66)	-350%

Source: Company reports, VNDIRECT RESEARCH

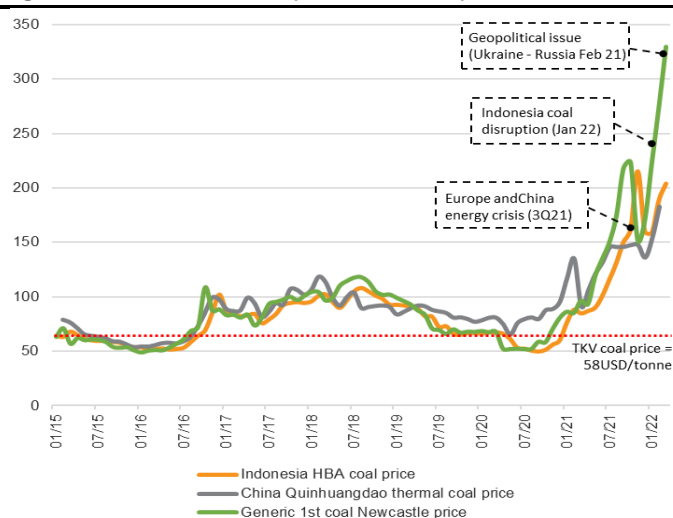
In 1Q22, although there is a solid improvement comparing to the last two quarters, coal-fired power output slightly dropped 5% yoy in 1Q22 due to coal shortage situation. According to EVN report, basing on updated data at Mar 30, 2022, the coal supply situation for EVN's thermal power plants is facing many difficulties with huge shortage compared to original coal supply signed contract. In 1Q22, total coal supplied volume to EVN's thermal power plants was 4.49m tonnes out of total 5.85m tonnes according to the signed contract (reach only 76% of total plan). Hence, due to lack of coal supply and low inventory, several coal-fired power plants had to deflated. Specifically: Nghi Son 1, Vung Ang 1, Vinh Tan 2, Duyen Hai 1 only had enough coal to operate 1 unit at 60 - 70% capacity; Hai Phong thermal power plant only has enough coal to operate for 1 out of 4 power units. However, coal-fired power plant business still recorded a positive outcome thanks to vibrant mobilization in the CGM as ASP surge 26% yoy from VND1,200/kWh to VND1,521/kWh

Figure 25: 1Q22 coal-fired power output drop 5% yoy due to coal shortage



Source: EVN, VNDIRECT RESEARCH

Figure 26: Global coal price surged from 3Q21 according to several negative events from end-21 (Unit: USD/tonne)



Source: Bloomberg, VNDIRECT RESEARCH

One of the major reasons for coal import drop relating on the recent surge of coal price under the geopolitical issue of Ukraine and Russia, result in the supply chain corruption of coal. Hence, although TKV has opened four international bidding packed to buy imported coal for 2Q22, the coal price spike, plus supply scarcity under Ukraine –Russia tension, leading to no winning bidder. At the moment, international coal price has surge up 2-3x and far higher than domestic coal price of US\$58/tonne. However, with drastic directions from the government, by all means do not let there be a shortage of coal especially in the upcoming hot season, TKV and its units are striving to increase domestic exploitation, making up for the shortfall in imported coal to ensure sufficient coal resources for power plants in the near future.

We believe the thermal coal shortage to be only a short-term issue, thanks to 1) The number of Covid-19 cases of TKV staff and workers has decreased significantly compared to the first quarter when there was a time the number of cases reached 40,000 people, greatly affecting the speed and ability of exploitation. 2) TKV is committed to ensuring coal compensation for power production in the coming months. In particular, at the end of 4M22, there are positive result in TKV business, in which, coal supply for electricity was 11.7 million tons, reaching 33% of the year plan, up 2% and up 300 thousand tonnes over the same period. Hence, we believe on the recovery of coal-fired power thanks to 1) Strong expected power consumption growth in 2022, 2) Coal-fired power continue to be the major background source for system stability, especially when wind power has shown its instability after 6 months into operation.

Hydropower outlook

The latest ENSO forecast expects a continuation of a bountiful year for hydropower in 2022F

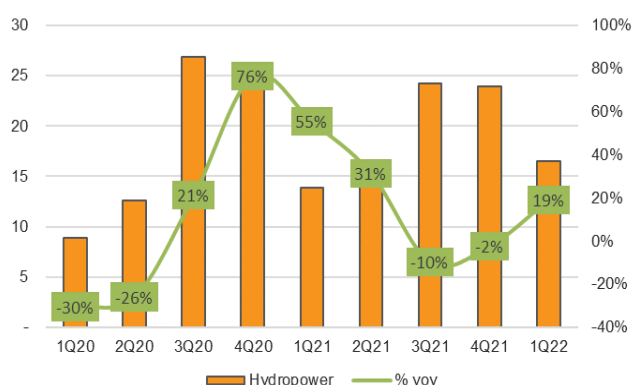
Figure 27: Several hydropower companies recorded positive result in 1Q22 thanks to ideal weather condition

Company	Market cap (VNDbn)	1Q22 Revenue (VNDbn)	% yoy Revenue	1Q22 NPAT (VNDbn)	% yoy NPAT
DNH	17,107.20	784.60	22%	510.67	49%
VSH	6,602.94	808.57	325%	403.85	298%
SBH	4,751.61	131.58	15%	52.77	41%
TMP	4,564.00	235.97	56%	122.48	78%
HNA	3,591.29	215.57	24%	76.02	125%
CHP	3,525.90	208.73	347%	78.08	224%
SHP	2,864.14	138.14	100%	61.48	1560%
AVC	2,701.87	184.37	10%	98.89	12%
TBC	1,892.30	167.47	8%	88.39	18%
S4A	1,413.70	52.66	6%	22.42	40%
GHC	1,270.25	77.66	9%	57.23	92%
SBA	1,208.72	95.20	29%	44.86	57%
SJD	1,186.78	78.88	57%	29.18	106%
BSA	1,071.34	58.74	5%	13.70	272%
ISH	869.90	41.54	76%	12.37	1994%

Source: PDP8, VNDIRECT RESEARCH

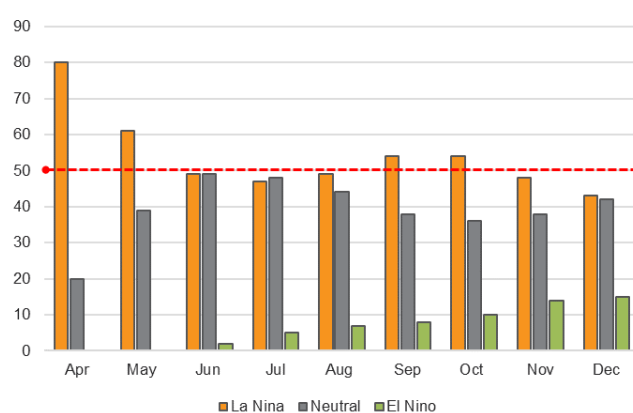
1Q22 hydropower output decreased significantly compared to the last two quarter of 2H21 but increase 18% yoy in 1Q22. Every year, the first quarter is usually the time when hydropower is mobilized the least as these plants (especially in the North) have to store water for high-load hot weather. Therefore, A0 will consider mobilizing from hydropower at a moderate level. However, 1Q22 still show a solid rise in hydropower output, it mainly due to the result of coal-fired shortage, forcing A0 to mobilize from additional power sources and hydropower is one. Hence, several hydropower companies took advance of the situation and recorded a positive profit result in 1Q22, including REE, VSH, DNH, SBH.

Figure 28: Total hydropower output rise 19% yoy thanks to demand surge and coal-fired shortage (Unit: billion kWh)



Source: EVN, VNDIRECT RESEARCH

Figure 29: The latest IRI ENSO forecast show La Nina phase might last to the end of 2022F with highest possibility



Source: IRI, VNDIRECT RESEARCH

According to the latest International Research Institute (IRI) ENSO forecast, La Nina phase will last through May 2022 and return from August 2022, staying at highest possibility for the last part of 2022. El Nino phase is also estimated with

lowest occurring possibility and in lower scenario Neutral phase will be more likely to happen which is still benefit hydropower. Hence:

- We expected hydropower segment will remain benefited for the whole 2022F resulting in high volume mobilization as hydropower always be the cheapest energy source, thus, A0 always considered to mobilized from hydropower at highest rate as possible, especially in the context EVN will not raise electricity retail price for 2022F.
- With the positive expectation about 2022F rapid electricity demand rise, as well as higher thermal output will mobilize in the CGM at higher SMP cap price, we believe hydropower will be benefited with maximum Qm output (10%) thanks to its cheap price.

Our top picks are POW, NT2 and REE

Vietnam's power sector is going through a major transition as government priorities to maintain the balance between macro-economic growth and environmental sustainability. Given the size and the faster-than-expected progress of this energy transition, we believe power stocks that focused on cleaner alternatives could outperform for a few years to come. We believe that selecting defensive stocks with growth prospects that tightly linked to economic growth, like power sector, is a secure and sensible option, especially in the wake of the recent market volatility. From 2022F onward, we are looking for a higher power consumption growth thanks to forecasted fast pace of economic recovery when Vietnam stepped out of the Covid-19 difficulties.

We expect gas-fired power output will bounce back since 2022F after cutting down sharply in 2021, trailing the recovery manufacturing activities and expected power demand surge. Additionally, due to the high possibility of La Nina phenomenon, we believe the hydropower will remain at high output mobilization in 2022F. Thus, we believe **POW**, **NT2**, and **REE** will ride on this trend. Besides, we positive on higher output outlook of coal-fired power in 2022F thanks to higher ASP price in CGM and demand surge, especially in the North.

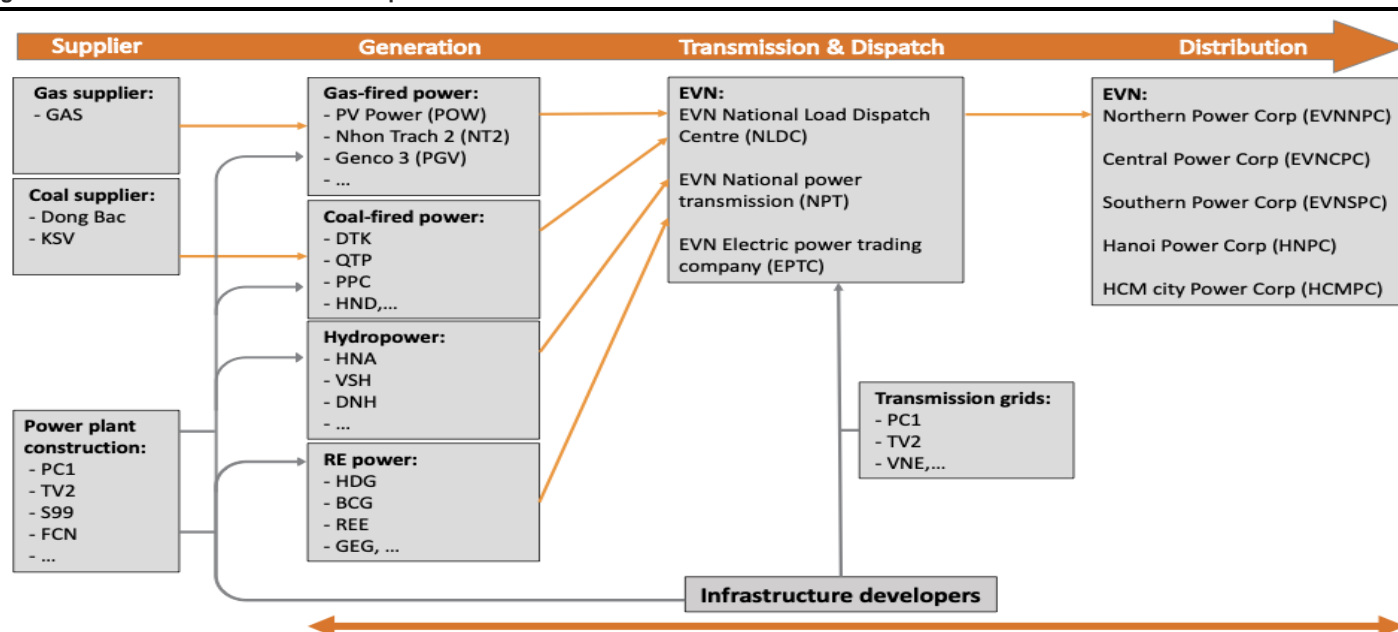
We find a substantial increase in ESG fund inflow in regional emerging markets. Even in Vietnam, we see ESG is expanding at the early stage of investment. We prefer companies with ongoing renewable energy (RE) projects that benefit from the attractive feeds-in-tariff and companies that enjoy RE infrastructure development. However, we believe RE power outlook will come in a longer-term future, and at the moment, investor need a clearer transitional price mechanism for this energy source. We expect on a transitional attractive policy to continue benefiting RE power investors to continue participating in this sector.

Figure 30: Peer comparison

Company name	Ticker	Price	Target price	Recom.	Mkt Cap	P/E(x)		P/BV(x)		EV/EBITDA (x)		ROE (%)	
	Bloomberg	LC\$	LC\$		US\$m	TTM	FY22F	Current	FY22F	TTM	FY22F	TTM	FY22F
Gas-fired power peer													
Nhon Trach 2	NT2 VN Equity	22,000	29,200	ADD	274.0	11.4	11.1	1.5	1.4	5.2	NA	13.1	14.9
Ba Ria Thermal Power JSC	BTP VN Equity	13,000	NA	NR	43.6	10.1	NA	0.8	NA	14.3	NA	7.7	NA
Average						10.7	11.1	1.1	NA	9.7	NA	10.4	14.9
Coal-fired power peer													
Vinacomin - Power Holding Corp	DTK VN Equity	NA	NA	NR	380.1	8.1	NA	1.1	NA	4.7	NA	13.8	NA
HAI Phong Thermal Power JSC	HND VN Equity	17,600	NA	NR	379.8	19.3	NA	1.4	NA	5.4	NA	6.9	NA
Quang Ninh Thermal Power JSC	QTP VN Equity	16,300	NA	NR	316.6	12.7	NA	1.2	NA	4.9	NA	9.4	NA
Pha Lai Thermal Power JSC	PPC VN Equity	17,400	NA	NR	240.8	35.3	17.9	1.1	NA	NA	NA	2.8	6.7
Average						18.9	17.9	1.2	NA	5.0	NA	8.2	6.7
Hydropower peer													
Ha Do Group JSC	HDG VN Equity	46,350	NA	NR	407.8	9.0	6.3	2.1	1.1	7.6	NA	25.7	23.4
Vinh Son - Song Hinh Hydropower JSC	VSH VN Equity	32,000	NA	NR	326.3	11.0	NA	1.7	NA	6.9	NA	16.9	NA
Hua Na Hydropower JSC	HNA VN Equity	NA	NA	NR	156.3	27.6	NA	1.3	NA	8.5	NA	4.8	NA
Thac Ba HydroPower JSC	TBC VN Equity	29,050	NA	NR	79.6	10.6	NA	2.0	NA	5.9	NA	18.5	NA
Average						14.5	14.5	1.8	NA	7.2	NA	16.5	23.4
RE power peer													
Gia Lai Electricity JSC	GEG VN Equity	21,700	NA	NR	284.4	18.8	17.3	1.9	1.7	10.6	NA	10.3	NA
Bamboo Capital JSC	BCG VN Equity	20,200	29,600	ADD	438.8	9.2	5.9	1.6	1.4	23.7	NA	19.2	NA
Average						14.0	11.6	1.7	1.6	17.1	NA	14.7	NA
Multi-sector peer													
GENCO 3	PGV VN Equity	29,750	NA	NR	1,442.5	10.4	NA	1.9	NA	8.2	NA	19.3	NA
PVPower	POW VN Equity	12,950	18,600	ADD	1,308.9	15.1	17.3	1.0	1.0	6.2	6.4	6.9	5.9
REE Corp	REE VN Equity	73,600	85,500	ADD	1,158.1	12.5	10.4	2.0	1.7	10.7	9.0	16.7	15.2
PC1 Group JSC	PC1 VN Equity	33,400	NA	NR	339.0	10.3	11.3	1.6	1.2	11.5	7.2	16.9	13.3
Average						12.1	13.0	1.6	1.3	9.1	7.5	14.9	11.4

Source: VNDIRECT RESEARCH, Bloomberg - data on May 23, 2022

Appendix

Figure 31: The value chain of Vietnam's power sector


Source: VNDIRECT RESEARCH

REFRIGERATION ELECTRICAL ENGINEERING CORP (REE) – INITIATION

Market Price	Target Price	Dividend Yield	Rating	Sector
VND73,500	VND85,500	0.39%	ADD	CONGLOMERATE

28 April 2022

Outlook – Short term: Positive
Outlook – Long term: Positive
Valuation: Positive

Consensus*: Add:4 Hold:1 Reduce:0

Target price / Consensus: 16.4%

Key changes in the report

➤ N/A

➤

Price performance



Source: VND RESEARCH

Key statistics

52w high (VND)	88,600
52w low (VND)	51,000
3m Avg daily value (VNDmn)	52,830
Market cap (VNDbn)	22,035
Free float (%)	38
TTM P/E (x)	12.5
Current P/B (x)	2.0

Ownership

Nguyen Thi Mai Thanh	12.2%
Platinum Victory Pte.Ltd	30.9%
Apollo Asia Fund Ltd	5.9%
Others	51.0%

Source: VND RESEARCH

Analyst(s):



Tung Nguyen

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Growing up with sustainability

- REE, a leading multi-utility holding company, will sustainably benefit from the country utilities consumption growth.
- We see the company's aim to expand its exposure to renewable energy (RE) will drive the earnings growth since 2022F going forward.
- Initiate coverage on REE with an Add rating of VND85,500.

Building up a multi-utility's portfolio with growing exposure to RE

REE owns a dense list of power plants with total capacity up to 1,005MW, of which hydropower (52.1%), thermal power (29.1%) and RE (18.8%). The company aims to expand its portfolio in RE by 500MW in 2024F. In 2022F, VSH new hydropower plant (220MW) and three wind power plants (102MW) will become the earnings growth engine. Water investment portfolio with four water treatment factories and four clean water suppliers will deliver about 8% yoy in earnings over 2022-23F thanks to stable demand growth.

M&E and property leasing businesses are warming up

As a leading M&E contractor, REE will ride on country's big story of infrastructure development. After a pull-back during last year pandemic, we expect M&E earnings to increase 165% yoy/23% yoy in 2022-23F thanks to VND3,757bn/VND4,508bn value of new-signed backlog. By managing seven offices for lease with high occupancy rates, property leasing is a cash-cow business, making up about 22% net profit in 2022F. We expect a sprint growth of property leasing in 2023F when the new office E.town 6 will be put into operation.

Net profit to grow sustainably in 2022-23F

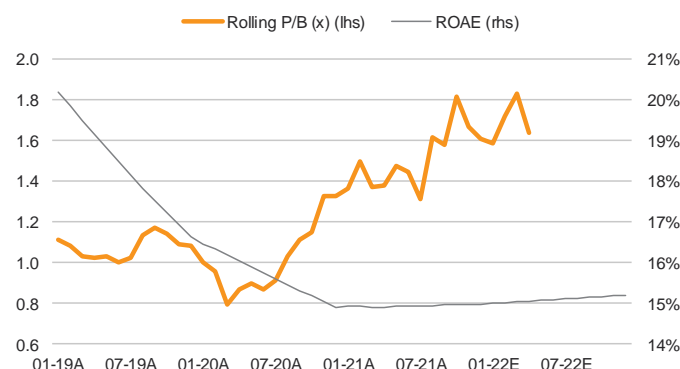
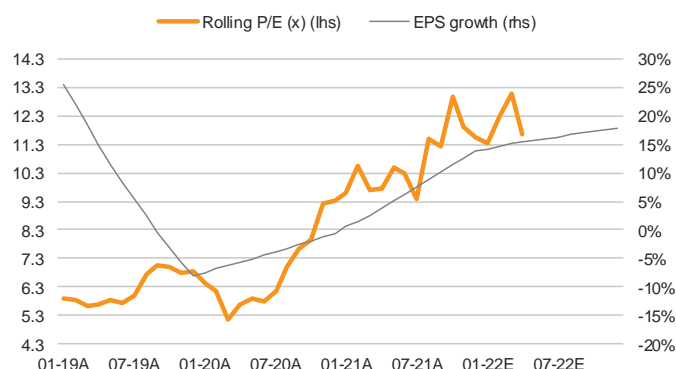
In 1Q22, REE revenue and NP reached VND2,045bn (+72% yoy) and VND693bn (+67%) thanks to solid contribution from VSH. REE put out quite conservative 2022F NP plan of VND2,061bn (+11% yoy). However, we expect 2022F NP to rise 18% yoy to VND2,183bn with the strong support from three new wind power plants, the new VSH plant Thuong Kom Tum and M&E sharp recovery, offsetting drop in real estate segment. In 2023F, we see positive growth in all segment, especially solid rise in real estate NP thanks to the appearance of E.town 6. Thus, 2023F net profit will increase 18% yoy to VND2,565bn.

Buy on the dip with STOP-based target price of VND85,500

The recent market-sell off has sent REE back to buy territory. We believe with an upside of 15%, the risk-reward profile is attractive to accumulate a defensive stock like REE. Re-rating catalysts include (1) Higher than expected hydropower output mobilization, (2) the announcement of new RE power price mechanism, and (3) excited public investment activities recover. Downside risks include (1) M&E GPM narrows higher-than-expected, (2) global commodity price highly volatiles longer-than-expected, and (3) water price adjustment proposal in Hanoi may not be executed due to inflation concerns.

Financial summary (VND)	12-20A	12-21A	12-22E	12-23I
Net revenue (bn)	5,640	5,810	8,939	10,659
Revenue growth	15.3%	3.0%	53.9%	19.2%
Gross margin	28.5%	39.8%	34.3%	33.7%
EBITDA margin	38.3%	47.4%	28.7%	28.9%
Net profit (bn)	1,628	1,855	2,183	2,565
Net profit growth	(0.7%)	13.9%	17.7%	17.5%
Recurring profit growth				
Basic EPS	5,251	5,982	7,042	8,273
Adjusted EPS	5,251	5,982	7,042	8,273
BVPS	36,938	42,897	49,824	57,124
ROAE	14.9%	15.0%	15.2%	15.5%

Source: VND RESEARCH

Valuation

Income statement

(VNDbn)	12-21A	12-22E	12-23E
Net revenue	5,810	8,939	10,659
Cost of sales	(3,498)	(5,869)	(7,070)
Gen & admin expenses	(372)	(462)	(536)
Selling expenses	(85)	(161)	(180)
Operating profit	1,855	2,446	2,872
Operating EBITDA	1,534	1,531	1,924
Depreciation and amortisation	322	915	948
Operating EBIT	1,855	2,446	2,872
Interest income	465	161	198
Financial expense	(706)	(691)	(753)
Net other income	13	23	26
Income from associates & JVs	774	846	930
Pre-tax profit	2,401	2,786	3,272
Tax expense	(265)	(268)	(317)
Minority interest	(281)	(335)	(390)
Net profit	1,855	2,183	2,565
Adj. net profit to ordinary	1,855	2,183	2,565
Ordinary dividends	(86)	(310)	(310)
Retained earnings	1,769	1,873	2,255

Balance sheet

(VNDbn)	12-21A	12-22E	12-23E
Cash and equivalents	1,831	2,246	2,799
Short term investments	864	921	1,397
Accounts receivables	2,986	4,185	5,163
Inventories	799	1,410	1,819
Other current assets	276	282	380
Total current assets	6,756	9,044	11,559
Fixed assets	16,464	16,202	15,908
Total investments	6,311	7,157	8,088
Other long-term assets	2,296	2,369	2,660
Total assets	31,826	34,773	38,215
Short-term debt	1,324	750	732
Accounts payable	860	861	1,076
Other current liabilities	2,173	2,817	3,354
Total current liabilities	4,356	4,428	5,162
Total long-term debt	10,650	10,718	10,589
Other liabilities	464	788	972
Share capital	3,101	3,101	3,101
Retained earnings reserve	8,962	10,862	13,124
Shareholders' equity	13,301	15,448	17,712
Minority interest	3,055	3,391	3,780
Total liabilities & equity	31,826	34,773	38,215

Cash flow statement

(VNDbn)	12-21A	12-22E	12-23E
Pretax profit	2,401	2,786	3,272
Depreciation & amortisation	895	915	948
Tax paid	(230)	(268)	(317)
Other adjustments	(1,045)	(749)	(1,228)
Change in working capital	(283)	(1,145)	(727)
Cash flow from operations	1,738	1,540	1,948
Capex	(3,912)	(654)	(654)
Proceeds from assets sales	1	0	0
Others	1,291	161	198
Other non-current assets changes	611	(65)	(483)
Cash flow from investing activities	(2,009)	(558)	(939)
New share issuance	121	0	0
Shares buyback	0	0	0
Net borrowings	1,416	(506)	(147)
Other financing cash flow	(1)	248	2
Dividends paid	(86)	(310)	(310)
Cash flow from financing activities	1,450	(568)	(456)
Cash and equivalents at beginning of period	652	1,831	2,246
Total cash generated	1,179	415	553
Cash and equivalents at the end of period	1,831	2,246	2,799

Key ratios

	12-21A	12-22E	12-23E
Dupont			
Net profit margin	31.9%	24.4%	24.1%
Asset turnover	0.22	0.27	0.29
ROAA	7.1%	6.6%	7.0%
Avg assets/avg equity	2.12	2.32	2.20
ROAE	15.0%	15.2%	15.5%
Efficiency			
Days account receivable	187.6	170.9	176.8
Days inventory	83.4	87.7	93.9
Days creditor	89.7	53.6	55.5
Fixed asset turnover	0.60	0.55	0.66
ROIC	6.5%	7.2%	7.8%
Liquidity			
Current ratio	1.6	2.0	2.2
Quick ratio	1.4	1.7	1.9
Cash ratio	0.6	0.7	0.8
Cash cycle	181.2	205.0	215.2
Growth rate (yoy)			
Revenue growth	3.0%	53.9%	19.2%
Operating profit growth	49.7%	31.9%	17.4%
Net profit growth	13.9%	17.7%	17.5%
EPS growth	13.9%	17.7%	17.5%

Source: VND RESEARCH

PETROVIETNAM POWER NHONTRACH 2 JSC (NT2) – UPDATE

Market Price

VND21,850

Target Price

VND29,200

Dividend Yield

9.59%

Rating

Add

Sector

POWER

18 May 2022

Outlook – Short term: Positive

Outlook – Long term: Positive

Valuation: Positive

Consensus*: Add:7 Hold:0 Reduce:1

Target price / Consensus: 4.3%

Key changes in the report

➤ N/A

➤

Price performance



Source: VND RESEARCH

Key statistics

52w high (VND)	27,050
52w low (VND)	18,350
3m Avg daily value (VNDmn)	19,156
Market cap (VND bn)	6,002
Free float (%)	9
TTM P/E (x)	15.8
Current P/B (x)	1.49

Ownership

PetroVietnam Power	59.4%
CFTD Technologies	8.3%
Others	32.3%

Source: VND RESEARCH

Analyst(s):


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Reboot the growth engine

- 1Q22 NP reached VND159bn in 1Q22 (+39.4% yoy) thanks to higher-than-expected output mobilization, reaching 25% of our forecast.
- NP 2022/23F expected to reach VND654bn (+22.6% yoy) and VND754bn (+15.1% yoy), respectively thanks to power consumption recovery.
- Reiterate Add with target price of VND29,200.

1Q22 recap: brilliant quarter thanks to higher-than-expected output

NT2 announced 1Q22 business results, in which, revenue and NP surge 16.4% yoy and 39.4% yoy to VND2,006bn and VND159bn. The reason for the positive result including 1) NT2 recorded an impressive 1Q22 output mobilization of 978m kWh (reaching 178% 1Q22 plan) and increasing 6.1% yoy as power demand return to higher level post-Covid and the recent coal-fired shortage; 2) NT2's average selling price (ASP) also reach high level of average VND1,980/kWh in 1Q22, resulting in higher revenue recorded. The recent surge of global Brent oil and natural gas price has effect on NT2 gas input price and the company reported a 66% rise in gas input price to US\$9.8/mmbtu from US\$5.9/mmbtu in 1Q21, passing through higher ASP; 3) Although there is only modest change in GPM, the financial expense reduction of 90% yoy to VND2.1bn as NT2 has fulfilled its long-term debt obligation, helped NP to reach VND159bn in 1Q22 (+39.4% yoy).

We expected NT2 output will recover in 2022F owing on demand surge

We believe NT2 output will bounce back in 2022F from a low-base of 2021 thanks to strong expectation of power demand recovery especially in the South post Covid-19. We expect gas price will linger and stable at a remained high level due to forecasted Brent oil price of US\$95/85 for 2022-23F. We also see the curtailment risk in gas-fired power from additional 3,980MW of wind power, however, the strong rise in power consumption will soon cover the excess capacity in upcoming years. Moreover, after 6 months of operation, wind power has shown its weaknesses of instability and gas-fired power will be the reliable background source for the safety of power system. Hence, we project revenue and NP to reach VND7,875bn (+28.1% yoy) and VND654bn (+22.6% yoy) in 2022F, after continuing to shift up to VND7,168bn (-9% yoy with expected gas price reduction) and VND754bn (+15% yoy), respectively.

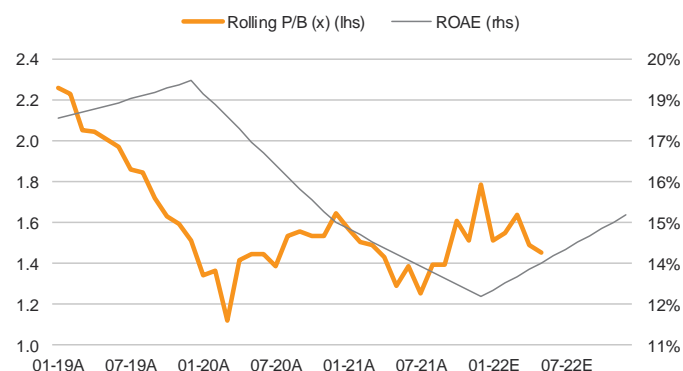
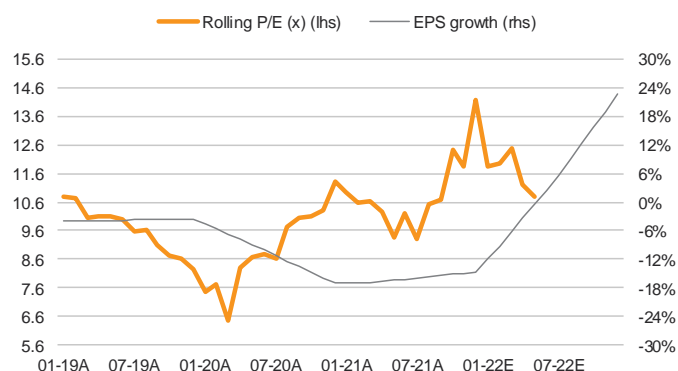
Reiterate Add with target price of VND29,200

We keep our TP of VND29,200 as we stay on the previous view about the recovery outlook of gas-fired power in 2022F. We think it's time to accumulate a defensive stock with limited downside risks but attractive dividend policy, especially after strong discount in its stock price recently. Downside risks is 1) fuel price remain high, hampering the output mobilization. Upside catalysts are 1) higher-than-expected power demand growth, 2) Coal-fired shortage stay longer than expected.

Financial summary (VND)	12-20A	12-21A	12-22E	12-23E
Net revenue (bn)	6,082	6,150	7,875	7,168
Revenue growth	(20.5%)	1.1%	28.1%	(9.0%)
Gross margin	14.7%	11.0%	10.4%	12.9%
EBITDA margin	22.3%	20.4%	18.0%	21.3%
Net profit (bn)	625	534	654	754
Net profit growth	(17.1%)	(14.6%)	22.6%	15.1%
Recurring profit growth				
Basic EPS	2,172	1,854	2,274	2,618
Adjusted EPS	2,172	1,854	2,274	2,618
BVPS	14,928	14,706	15,434	16,104
ROAE	14.8%	12.5%	15.1%	16.6%

Source: VND RESEARCH

Valuation



Income statement

(VNDbn)	12-21A	12-22E	12-23E
Net revenue	6,150	7,875	7,168
Cost of sales	(5,474)	(7,055)	(6,244)
Gen & admin expenses	(83)	(100)	(94)
Selling expenses	0	0	0
Operating profit	593	720	830
Operating EBITDA	1,283	1,413	1,520
Depreciation and amortisation	(690)	(693)	(690)
Operating EBIT	593	720	830
Interest income	18	14	14
Financial expense	(52)	(14)	(14)
Net other income	7	7	7
Income from associates & JVs			
Pre-tax profit	566	727	837
Tax expense	(32)	(73)	(84)
Minority interest	0	0	0
Net profit	534	654	754
Adj. net profit to ordinary	534	654	754
Ordinary dividends	(575)	(432)	(576)
Retained earnings	(42)	223	178

Balance sheet

(VNDbn)	12-21A	12-22E	12-23E
Cash and equivalents	1	815	1,547
Short term investments	0	0	0
Accounts receivables	2,230	2,224	2,132
Inventories	311	412	361
Other current assets	38	37	39
Total current assets	2,581	3,488	4,079
Fixed assets	3,497	2,813	2,130
Total investments	0	0	0
Other long-term assets	546	551	569
Total assets	6,624	6,852	6,777
Short-term debt	210	283	283
Accounts payable	1,034	752	585
Other current liabilities	1,147	1,359	1,255
Total current liabilities	2,390	2,394	2,123
Total long-term debt	0	0	0
Other liabilities	0	15	18
Share capital	2,879	2,879	2,879
Retained earnings reserve	1,196	1,418	1,596
Shareholders' equity	4,234	4,443	4,636
Minority interest	0	0	0
Total liabilities & equity	6,624	6,852	6,777

Cash flow statement

(VNDbn)	12-21A	12-22E	12-23E
Pretax profit	566	727	837
Depreciation & amortisation	690	693	690
Tax paid	(39)	(73)	(84)
Other adjustments	(12)	(94)	(9)
Change in working capital	(131)	(74)	(152)
Cash flow from operations	1,074	1,180	1,284
Capex	(3)	(6)	(6)
Proceeds from assets sales	0	1	2
Others	0	(3)	0
Other non-current assets changes	11	14	14
Cash flow from investing activities	8	6	9
New share issuance	0	0	0
Shares buyback			
Net borrowings	(568)	73	0
Other financing cash flow	0	(13)	15
Dividends paid	(575)	(432)	(576)
Cash flow from financing activities	(1,143)	(372)	(561)
Cash and equivalents at beginning of period	62	1	815
Total cash generated	(61)	814	732
Cash and equivalents at the end of period	1	815	1,547

Key ratios

	12-21A	12-22E	12-23E
Dupont			
Net profit margin	8.7%	8.3%	10.5%
Asset turnover	0.95	1.17	1.05
ROAA	8.2%	9.7%	11.1%
Avg assets/avg equity	1.52	1.55	1.50
ROAE	12.5%	15.1%	16.6%
Efficiency			
Days account receivable	132.4	99.4	104.9
Days inventory	20.7	21.3	21.1
Days creditor	68.9	38.9	34.2
Fixed asset turnover	1.60	2.50	2.90
ROIC	12.0%	13.8%	15.3%
Liquidity			
Current ratio	1.1	1.5	1.9
Quick ratio	0.9	1.3	1.8
Cash ratio	0.0	0.3	0.7
Cash cycle	84.2	81.8	91.8
Growth rate (yoy)			
Revenue growth	1.1%	28.1%	(9.0%)
Operating profit growth	(26.8%)	21.5%	15.3%
Net profit growth	(14.6%)	22.6%	15.1%
EPS growth	(14.6%)	22.6%	15.1%

Source: VND RESEARCH

PVPOWER CORP (POW) – UPDATE

Market Price

VND12,400

Target Price

VND18,600

Dividend Yield

1.15%

Rating

Add

Sector

UTILITIES

18 May 2022

Outlook – Short term: **Positive**
Outlook – Long term: **Positive**
Valuation: **Positive**

Consensus*: Add:4 Hold:2 Reduce:1

Target price / Consensus: -0.9%

Key changes in the report

➤ TP decreases 3.2%

➤

Price performance



Source: VND RESEARCH

Key statistics

52w high (VND)	20,150
52w low (VND)	10,100
3m Avg daily value (VNDmn)	215,509
Market cap (VND bn)	27,166
Free float (%)	65
TTM P/E (x)	15.1
Current P/B (x)	1.0

Ownership

PVN	79.9%
Others	20.1%

Source: VND RESEARCH

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Gas-fired power segment brings positive result

- 1Q22 NP rose 41.8% yoy to VND803bn, back by impressive surge in gas-fired and hydropower output, reaching 35% of our previous forecast.
- We expect gas-fired surge to offset coal-fired output loss in 2022, helping NP increase to VND2,345bn (+31.8% yoy), with several potential one-off.
- Reiterate Add with target price of VND18,600.

1Q22 recap: Gas-fired growth contributed majorly for the positive result

In 1Q22, POW gas-fired power recorded a positive output result, hydropower output also recorded an impressive growth thanks to ideal weather condition, offsetting output loss from Vung Ang 1 technical problems. Although 1Q22 revenue dropped 7.8% yoy to VND7,061bn, GPM increased 3.1% pts to 14.5% due to the elimination of low GPM segment after PVMachino divestment, helped gross profit rose 17.3% yoy to VND1,027bn. Financial expenses also drop 31.9% yoy to VND107bn thanks to 32% yoy drop in short-term debt. Overall, POW 1Q22 NP recorded a sharp rise of 41.8% yoy to VND803.4bn.

Gas-fired surge offsetting coal-fired output loss in 2022F

Thanks to demand rise in 2022, and Vietnam might step in power shortage phase in hot weather. We believe gas-fired power will contain several spaces to be mobilization at higher rate, after 2021 modest output. POW's gas-fired power segment output will increase 26.4% yoy to 10,381m kWh and ASP linger at high level of around VND1,894/kWh. Hydropower output will maintain its high mobilization of 1,154m kWh as La Nina phase stay longer-than-expected. Coal-fired output will suffer from sharp drop of 24.5% yoy due to coal-fired shortage situation and unit 1 Vung Ang 1 technical issue (until Sep 2022). Overall, the surge in gas-fired power will offset output loss of Vung Ang 1, helping revenue to increase 10.7% yoy to VND27,191bn in 2022F after rebound 19.9% yoy to VND32,614bn in 2023F when all the plants return to work in full capacity. NP will surge 31.8% yoy and 21.4% yoy in 2022-23F to VND2,345bn and VND2,846bn, respectively.

POW owns several potential one-off profits after divestments

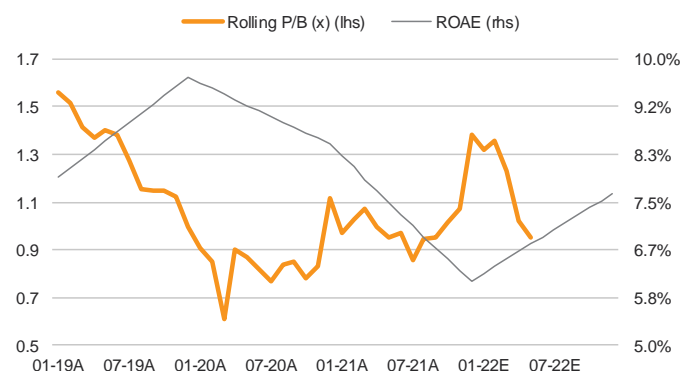
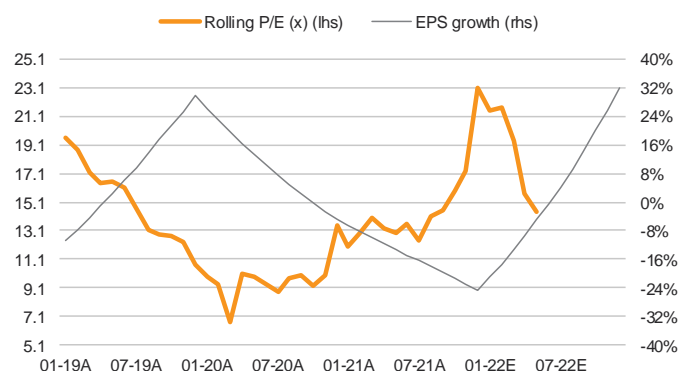
At the moment, POW is divesting Viet Lao JSC with a potential one-off of VND308bn, expected to finish the procedure in May 2022. The company also has a roadmap to divest EVN International JSC, along with the potential one-off profit from incident insurance and business interruption insurance for Vung Ang 1.

Reiterate Add with target price of VND18,600

We revise down our TP for POW by 3.2% versus our previous report to reflect the higher-than-expected of Vung Ang 1 incident. Re-rating catalyst is higher oil price and faster-than-expect Vung Ang 1 repair. Downside risks are longer-than-expected Nhon Trach 3&4 completion time and lower gas-fired output.

Financial summary (VND)	12-20A	12-21A	12-22E	12-23E
Net revenue (bn)	29,732	24,565	27,191	32,614
Revenue growth	(16.1%)	(17.4%)	10.7%	19.9%
Gross margin	15.4%	10.4%	13.3%	14.5%
EBITDA margin	21.9%	23.0%	23.3%	21.6%
Net profit (bn)	2,365	1,779	2,345	2,846
Net profit growth	(5.0%)	(24.8%)	31.8%	21.4%
Recurring profit growth				
Basic EPS	1,010	760	1,001	1,215
Adjusted EPS	1,010	760	1,001	1,215
BVPS	12,186	12,659	13,537	14,737
ROAE	8.5%	6.1%	7.6%	8.6%

Source: VND RESEARCH

Valuation

Income statement

(VNDbn)	12-21A	12-22E	12-23E
Net revenue	24,565	27,191	32,614
Cost of sales	(22,023)	(23,567)	(27,895)
Gen & admin expenses	(129)	(701)	(839)
Selling expenses	(9)	(19)	(23)
Operating profit	2,404	2,904	3,857
Operating EBITDA	5,222	5,558	6,512
Depreciation and amortisation	(2,818)	(2,654)	(2,654)
Operating EBIT	2,404	2,904	3,857
Interest income	334	464	494
Financial expense	(308)	(201)	(518)
Net other income	(120)	(13)	(17)
Income from associates & JVs	9	9	9
Pre-tax profit	2,319	3,163	3,825
Tax expense	(287)	(484)	(573)
Minority interest	(254)	(334)	(406)
Net profit	1,779	2,345	2,846
Adj. net profit to ordinary	1,779	2,345	2,846
Ordinary dividends			
Retained earnings	1,779	2,345	2,846

Balance sheet

(VNDbn)	12-21A	12-22E	12-23E
Cash and equivalents	8,224	4,383	7,574
Short term investments	531	2,389	2,389
Accounts receivables	5,802	6,898	8,540
Inventories	1,838	2,567	2,808
Other current assets	502	265	359
Total current assets	16,897	16,501	21,671
Fixed assets	32,264	35,376	43,263
Total investments	809	818	827
Other long-term assets	2,980	3,300	3,966
Total assets	52,950	55,995	69,726
Short-term debt	5,702	6,800	9,612
Accounts payable	7,228	5,520	6,780
Other current liabilities	3,783	3,785	4,869
Total current liabilities	16,712	16,104	21,261
Total long-term debt	2,756	4,681	9,785
Other liabilities	1,349	687	942
Share capital	23,419	23,419	23,419
Retained earnings reserve	4,018	5,838	8,160
Shareholders' equity	29,645	31,702	34,511
Minority interest	2,487	2,822	3,227
Total liabilities & equity	52,950	55,995	69,726

Cash flow statement

(VNDbn)	12-21A	12-22E	12-23E
Pretax profit	2,319	3,163	3,825
Depreciation & amortisation	2,818	2,654	2,654
Tax paid	(340)	(484)	(573)
Other adjustments	(1,186)	(1,485)	(970)
Change in working capital	1,778	(3,293)	367
Cash flow from operations	5,389	556	5,303
Capex	(274)	(5,767)	(10,541)
Proceeds from assets sales	339	0	0
Others	305	464	494
Other non-current assets changes	(49)	(1,858)	0
Cash flow from investing activities	320	(7,160)	(10,047)
New share issuance	0	0	0
Shares buyback			
Net borrowings	(3,845)	2,996	7,916
Other financing cash flow	0	236	488
Dividends paid	(710)	(468)	(468)
Cash flow from financing activities	(4,555)	2,764	7,935
Cash and equivalents at beginning of period	7,070	8,224	4,383
Total cash generated	1,154	(3,841)	3,191
Cash and equivalents at the end of period	8,224	4,383	7,574

Key ratios

	12-21A	12-22E	12-23E
Dupont			
Net profit margin	7.2%	8.6%	8.7%
Asset turnover	0.46	0.50	0.52
ROAA	3.3%	4.3%	4.5%
Avg assets/avg equity	1.84	1.78	1.90
ROAE	6.1%	7.6%	8.6%
Efficiency			
Days account receivable	86.2	92.6	95.6
Days inventory	30.5	39.8	36.7
Days creditor	119.8	85.5	88.7
Fixed asset turnover	0.73	0.80	0.83
ROIC	4.4%	5.1%	5.0%
Liquidity			
Current ratio	1.0	1.0	1.0
Quick ratio	0.9	0.9	0.9
Cash ratio	0.5	0.4	0.5
Cash cycle	(3.1)	46.9	43.6
Growth rate (yoy)			
Revenue growth	(17.4%)	10.7%	19.9%
Operating profit growth	(28.7%)	20.8%	32.8%
Net profit growth	(24.8%)	31.8%	21.4%
EPS growth	(24.8%)	31.8%	21.4%

Source: VND RESEARCH

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RECOMMENDATION FRAMEWORK

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.

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