Power industry

Entering a new phase

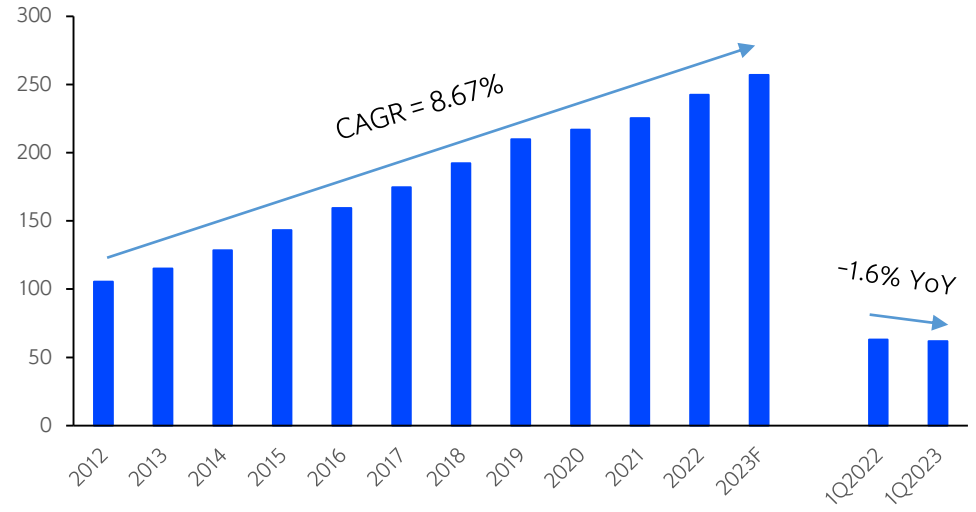
May, 2023

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Forecast electricity output of Vietnam in 2023

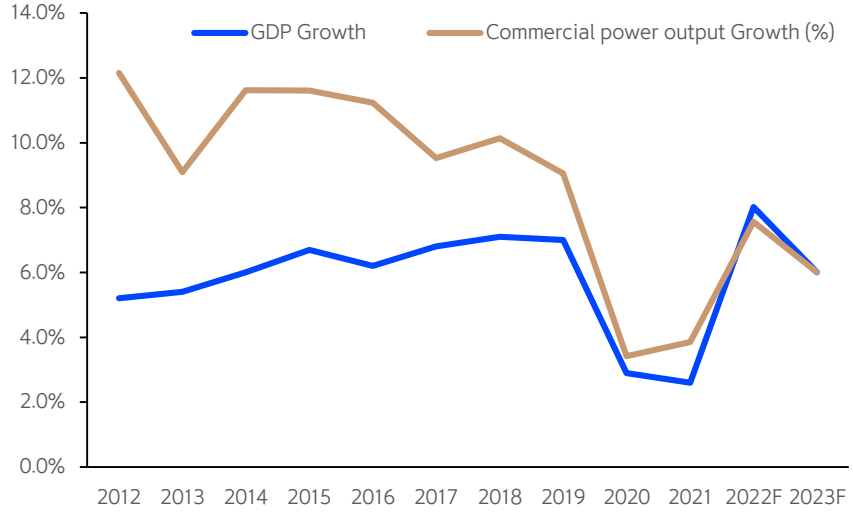
Electricity output will steadily grow by 6% in 2023

Electricity output of Vietnam (billion kWh)



Source: EVN, Shinhan Securities Vietnam

Electricity output growth & GDP growth (%)



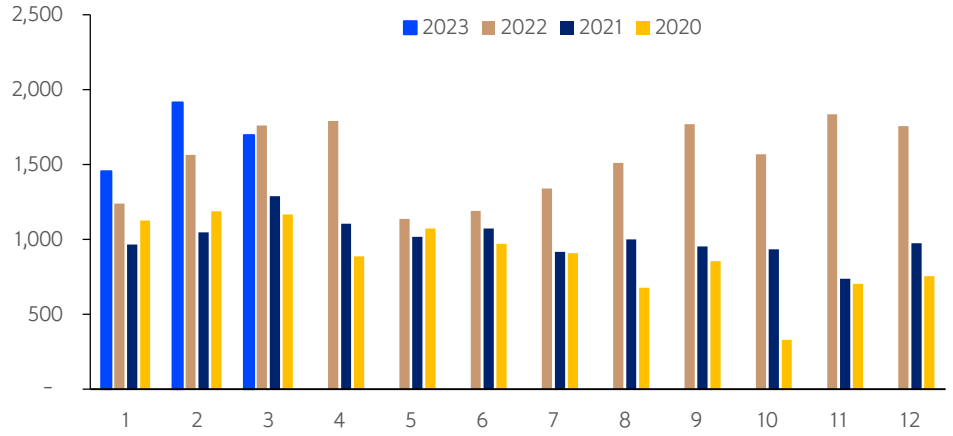
Source: EVN, GSO, Shinhan Securities Vietnam

- During the period 2012-2022, Vietnam's electricity consumption has a compound annual growth rate (CAGR) of 8.67%, showing a sustainable growth trend. However, in 1Q2023, the total commercial power output decreased by 1.6% YoY while GDP grew by 3.32%. Specifically, the electricity output of EVNNPC (North) increased by 2.05% YoY while that of EVNSPC (South) decreased by 5.81% YoY.
- In 2023, we expect Vietnam's electricity output to be recovered by 2H2023 when the weather is hotter plus the recovery of the economy boosts electricity demand, bringing the growth rate of electricity consumption to 6% equivalent to the GDP growth.

Electricity price in CGM market

Electricity price is expected to continue being high as the materials have not cooled down

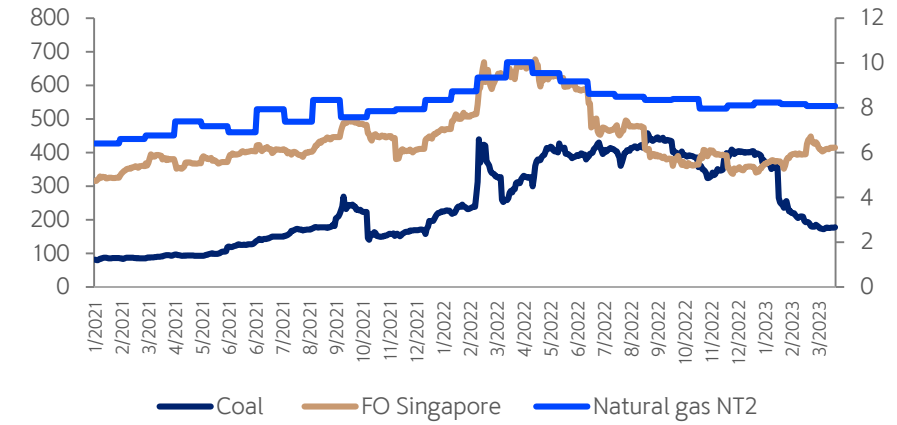
Full market price (FMP) in CGM[1] market (VND)



Source: PGV, Shinhan Securities Vietnam

CGM[1]: Thị trường phát điện cạnh tranh (Competitive Generation Market)

Newcastle coal price, Singapore FO oil price (USD) and natural gas of NT2 (USD/mmBTU)



Source: Bloomberg, Shinhan Securities Vietnam

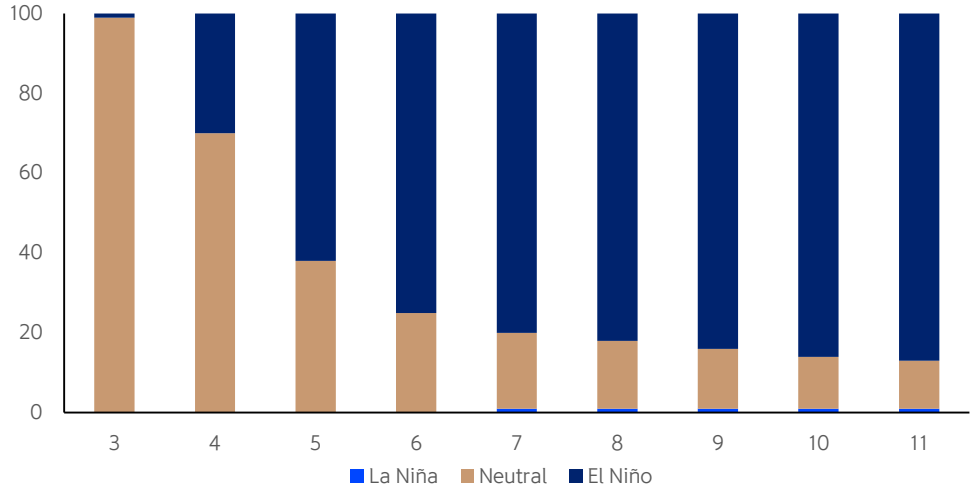
- The average FMP price in Q1/2023 was at VND 1,689/kWh (+11% YoY) in the context of mixed input material prices, imported coal prices tended to increase while gas prices leveled off. Singapore FO oil price (used as a reference to calculate gas input prices) has decreased by 30% YoY. However, Singapore FO oil price has increased 22% YTD.
- In May 2023, EIA forecast that the price of Brent oil would be at USD 79/barrel this year. Besides, the high price of imported coal causes the electricity production cost of the coal-fired thermal power group to increase, along with the output of hydropower (low cost) is forecasted to decline. We expect electricity prices in the CGM market to continue their upward trend in the coming months.

*CGM: Competitive Generation Market

Forecasting the mobilization rate of power sources

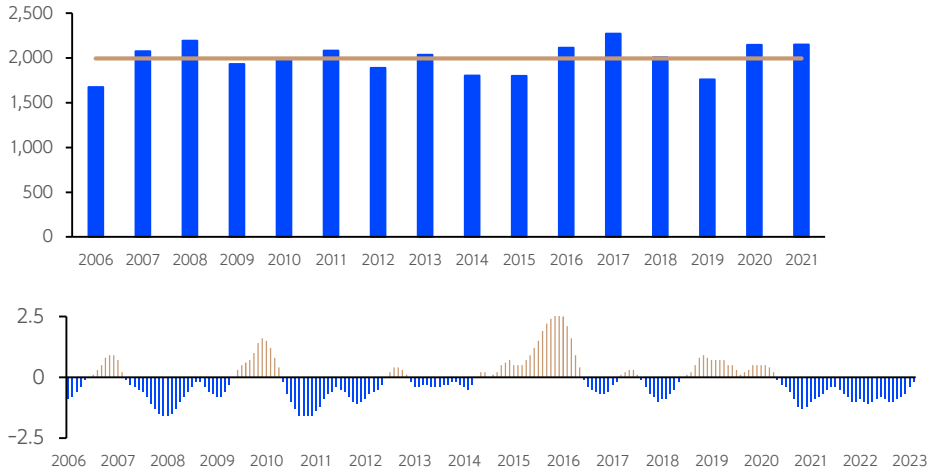
Hydropower ends the cycle of favorable weather

Probability La Nina, El Nino and neutral from March 2023



Source: IRI, Shinhan Securities Vietnam

Average rainfall of 15 monitoring stations (mm) and Oceanic Nino Index[2]



Source: GSO, NOAA, Shinhan Securities Vietnam

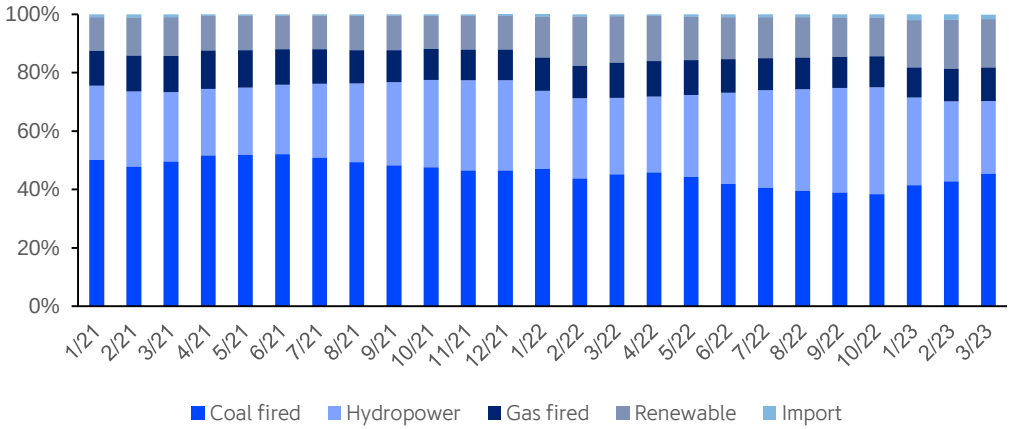
[2]Oceanic Nino Index (ONI) is an index that monitors climate patterns EL Nino-Southern Oscillation, ONI > 0.5 indicates El Nino, ONI <-0.5 represents La Nina

- According to IRI, the La Nina phenomenon ended in the spring of 2023 and the El Nino phenomenon will soonly return in 2H2023. According to National Centre for Hydro-Meteorological Forecasting, the total rainfall from June to August in the North and Central regions will be 5-15% lower than the average for many years. In the South, the total rainfall is expected to be approximately equal to the average of many years.
- Besides, the national average temperature is expected to be about 0.5-1 Celsius degree higher than the average for many years. The level of rainfall from August to October this year is expected to be 10-25% lower depending on the area. This will negatively affect the output of the hydropower group.

Mobilization rate of power sources

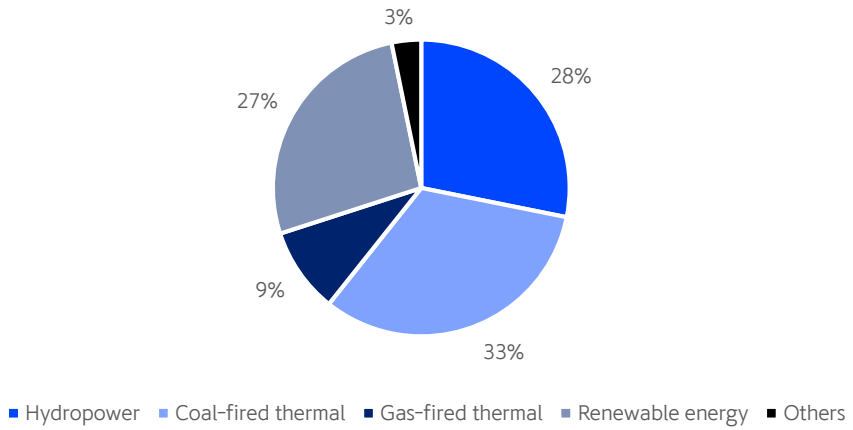
More thermal power will be mobilized in 2023 to compensatethe decline of hydropower

Mobilization rate of power sources from January 2021 to March 2023 (%)



Source: EVN, Shinhan Securities Vietnam

Total installed capacity of power sources of Vietnam in 2023 (%)



Source: EVN, Shinhan Securities Vietnam

- The hydropower segment has been highly prioritzed to mobilize in 2021 and 2022 thanks to the favorable weather. However, in 2023 with the reverseof the El Nino phenomenon, we believe that the hydropower group will be less mobilized. As mentioned in document 2187/EVN – KTSX – TTD by EVN the water flow in 4M2023 was only 70-90% compared to the average of previous years. The remaining output in the hydropower lake is 4.5 billion kWh, 1.6 billion kWh lower than the plan and 4.1 billion kWh lower than the same period last year.
- Therefore, we believe that thermal power (coal and gas) will be mobilized at a higher proportion in 2023 when it has stable performance and the highest total installed capacity (42%) to be play a main role.

Risks to the power industry in Vietnam

- ❑ Power consumption recovered lower than expected.
- ❑ Prices of input materials keep rising rise.
- ❑ Weather changes with extremes.
- ❑ Shortage of input materials.
- ❑ The rise of interest rates make interest expenses higher than expected.
- ❑ The USD/VND exchange rate increased sharply, causing businesses to realize losses from exchange rate.





New price for transitional power projects

The MoIT announced a new price range for transitional solar power and wind power projects

Unit: VND/kWh	Price for transitional projects	FIT[3] price	Change (%)
Ground solar power	1,184.9	1,673.4	-29%
Floating solar power	1,508.3	1,815.0	-17%
Wind power on-shore	1,587.1	2,006.2	-21%
Wind power off-shore	1,816.0	2,313.0	-21%

Source: MoIT, Shinhan Securities Vietnam

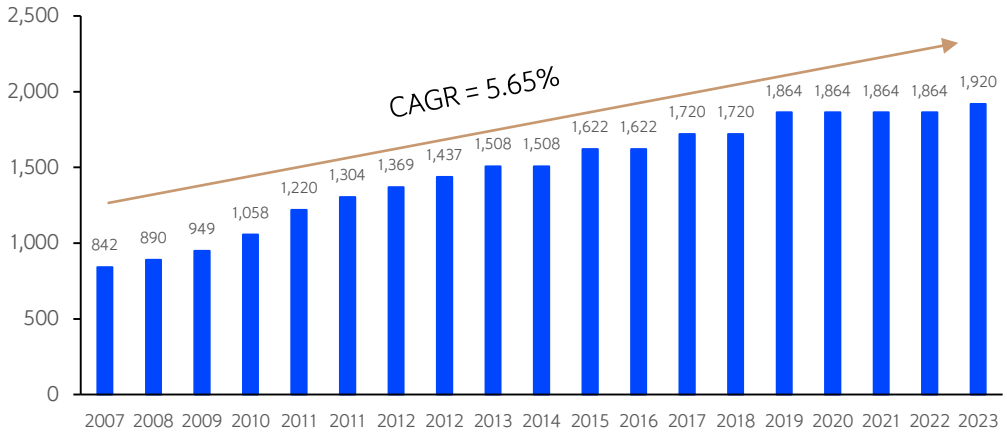
FIT[3]: Feed-in Tariff calculated based on the central exchange rate of the SBV on May 9th, 2023

- On January 7th, 2023, the Ministry of Industry and Trade (MoIT) issued Decision No. 21/QD-BCT promulgating the electricity price bracket for transitional solar and wind power plants. The new price for these projects is 17% to 29% lower than the FIR price, depending on the type of power source.
- Therefore, in our opinion, some transitional power projects may not meet the expected rate of return for investors. However, the new pricing mechanism makes transitional power projects of businesses to generate cash flow for businesses. Some notable projects can be mentioned as Tan Phu Dong 1 wind power plant (100 MW), Ben Tre 2 VPL (30 MW) of GEG, and Khai Long 1 (100 MW) of BCG.
- The new mechanism for transition projects is an important stepping stone in the renewable energy development of the electricity sector. A lower price mechanism will pick up those investors with effective management ability, who can take on a larger role in the future of the national power system. Besides, at this price level, businesses will be more and more motivated to reduce initial capital expenditure and seek more favorable capital sources.

EVN raises electricity prices by 3% in 2023

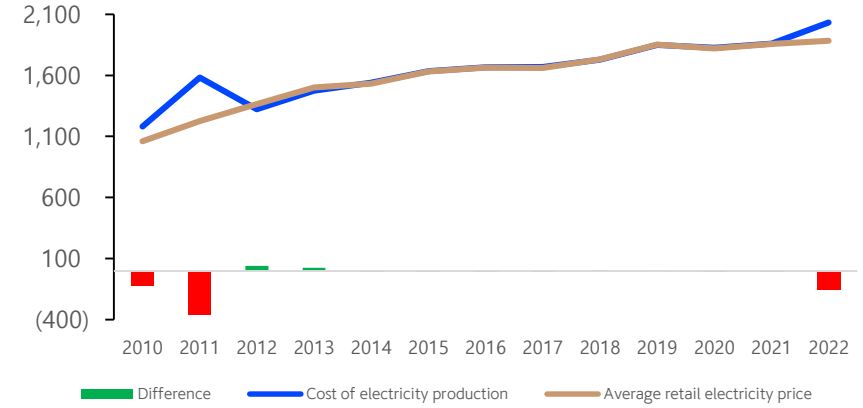
EVN raises electricity prices by 3% after 4 years of unchanged

Average retail electricity price from 2007-2023 (VND/kWh)



Source: EVN, Shinhan Securities Vietnam

Electricity production cost and electricity selling price (VND/kWh)



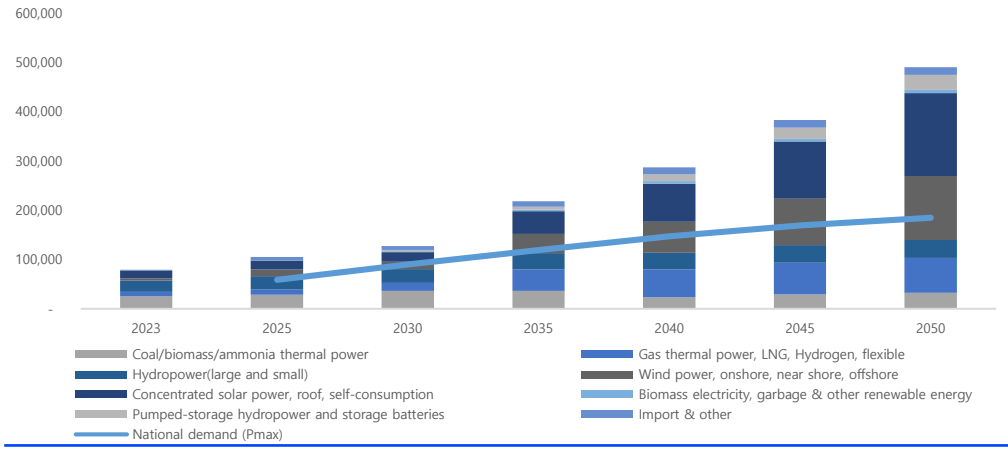
Source: EVN, Shinhan Securities Vietnam

- Since May 4, 2023, EVN has increased the average retail electricity price by 3% to VND 1,920.4/kWh, this is the first increase of EVN since 2019. This move of EVN is happened in the context of EVN's loss of more than VND 26,200 billion in 2022. At the beginning of 2023, EVN formerly said that if the electricity prices did not increase, EVN would run out of cash by the end of May 2023 and EVN would lose another VND 64,491 billion in 2023.
- Previously, the Ministry of Industry and Trade has informed the results of EVN's 2022 electricity production and business cost inspection. This cost of EVN increased by 9.27% YoY to 2,032 VND/kWh, and the average retail price of electricity was 1,864 VND/kWh. With the increase in the selling price, we believe that EVN has partially solve some of the liquidity problems and help EVN pay quickly to power producers.

Power Development Plan VIII officially approved

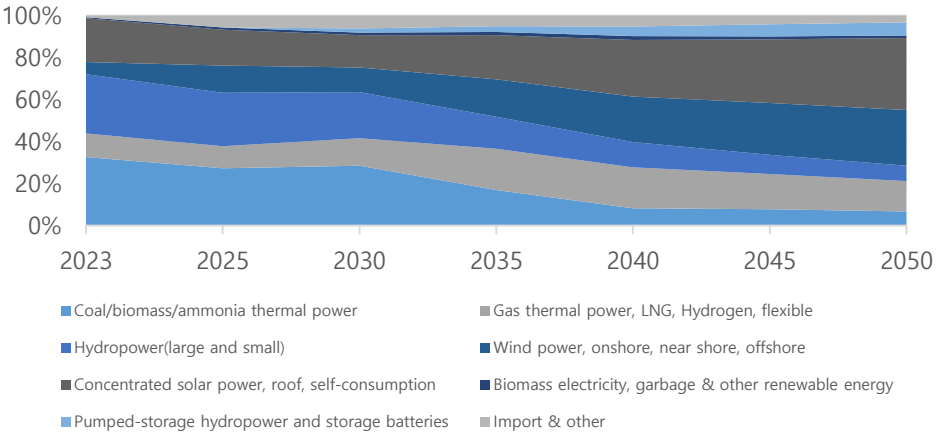
Power Development Plan VIII and its impact on the power industry

Capacity of power sources according to PDP8 (MW)



Source: Power Develpopment Plan VIII, Shinhan Securities Vietnam

Capacity of power sources according to PDP8 (%)



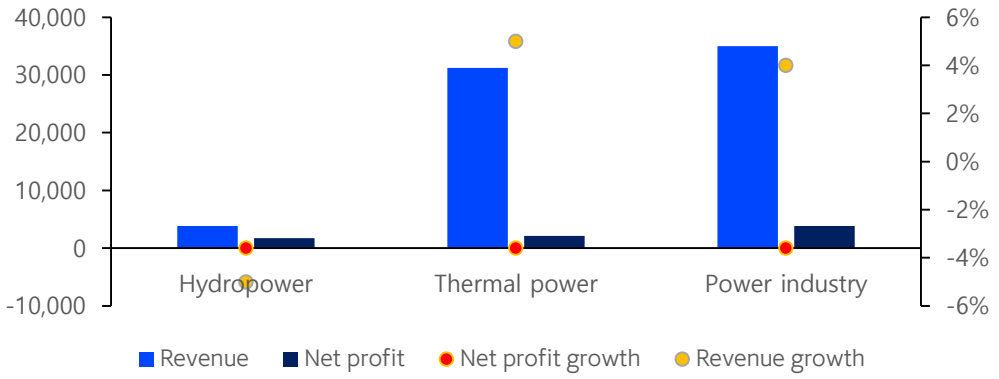
Source: Power Develpopment Plan VIII, Shinhan Securities Vietnam

- With the goal of bringing net carbon emissions to zero by 2050, wind power will be prioritized for development according to the power development plan VIII (PDP8) to 2030. According to the base scenario, wind power will contribute about 11% of the national power structure (+220% compared to 2023). Along with that, the gas-fired power segment (with a priority to switch to LNG) will contribute 12% of the national electricity structure (+85% compared to 2023). The hydropower segment will have a low growth rate because large hydropower plants reach their full exploitation potential, and the coal power segment will reduce its capacity and switch to burning biomass/ammonia. By 2050, the solar segment, rooftop, self-sufficient, and self-consumed electricity will account for 34% of the national electricity structure, wind power will account for 27%, and gas power (LNG, Hydrogen, and flexible) will account for 15%.
- The capacity of the gas-fired power segment will be developed strongly after PDP8 is approved. As a leading enterprise in the industry, we believe that POW will benefit from projects such as Nhon Trach 3 & 4 LNG Power Plant and Quang Ninh LNG. Besides, GAS will also benefit somewhat when supplying input materials for power plants. Meanwhile, we believe that enterprises with experience in design consultancy, and EPC contractors such as PC1, and TV2 will be noticed by the cash flow when the demand to invest in transmission lines, substations, construction electricity installation, and power plants increased sharply.

Business results of power enterprises

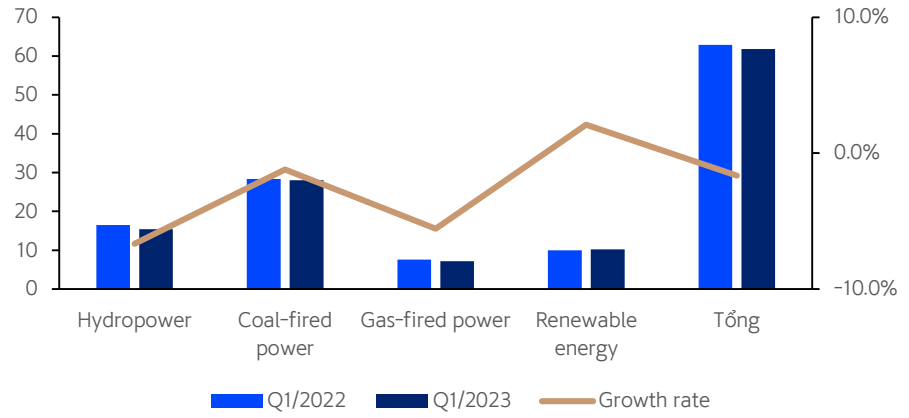
Q1/2023 business results were significantly affected by interest expenses, high COGS, and declining in output

Revenue and profit of the power industry Q1/2023 (VND billion)



Source: Fiinpro, Shinhan Securities Vietnam

Mobilized output from power sources (billion kWh)



Source: Fiinpro, Shinhan Securities Vietnam

- In 3M2023, the revenue of the whole power industry increased by 5% YoY, and profit slumped by 21%YoY, respectively. Hydropower tends to slow down when the rainy season is over, causing a decrease in output. Meanwhile, the thermal power group recorded an increase in revenue thanks to improved volume and selling price, but the jump in the cost of goods and interest expense has eroded profit.
- In terms of output, the total output of the industry recorded a decrease of 1.6% YoY, only the renewables segment recorded an increase in output while hydropower output fell deeply by 6.4% YoY, gas power decreased by 5.6% YoY, and coal power fell. 1.2% YoY. It is expected that in 2H2023, El Nino will return, and the thermal power group is expected to continue to be prioritized in mobilizing when covering the reduced output of hydropower.
- In 2023, 5 companies in the list of top picks (POW, PC1, NT2, QTP, REE) are forecasted to increase in revenue and net profit by 13.8% YoY and 9.2% YoY, respectively.

Top picks

- *POW*
- *PC1*
- *NT2*
- *QTP*
- *REE*



Business results of power enterprises

General info					Price			Key financial ratios [5]				Growth 3Q2022		Valuation 23F	
No.	Ticker	Sub-sector	Capacity (MW)	Mkt Cap (bn VND)	CP (VND)	TP[4] (VND)	Upside (%)	GPM (%)	D/E[6] (x)	ROA (%)	ROE (%)	Revenue (% YoY)	EPS (% YoY)	P/B (x)	P/E (x)
1	VSH	Hydropower	356	9,332	39,500	39,500	0.0	71.2	0.7	13.3	27.0	10.3	16.1	1.8	9.3
2	REE	Diversified	978	25,136	61,500	77,400	25.9	46.2	0.6	8.2	18.6	15.8	7.8	1.4	8.8
3	HDG	Renewable	444	8,561	35,000	38,350	9.6	61.8	0.8	7.5	22.6	39.7	22.1	1.3	6.0
4	POW	Gas-fired thermal	4,208	31,849	13,600	14,800	8.8	13.2	0.2	3.3	6.2	5.1	-26.0	1.0	11.1
5	NT2	Gas-fired thermal	750	9,457	32,850	33,400	1.7	12.3	0.1	12.4	20.9	8.8	47.3	1.8	9.9
6	PC1	Renewable	343	7,978	29,500	30,774	4.3	19.1	1.6	1.7	6.8	1.8	-90.0	1.6	12.9
7	GEG	Renewable	471	5,328	16,550	16,025	-3.2	48.3	1.7	1.6	5.7	-3.8	-55.1	1.1	18.2
8	PPC	Coal-fired power	1,040	4,921	15,350	14,450	-5.9	7.3	0.0	8.1	9.0	21.6	-50.4	n.a	20.4
9	PGV	Diversified	6,559	27,974	24,900	22,950	-7.8	11.5	2.1	3.4	12.8	5.0	-26.8	1.1	n.a

[4]Target price (fair value) for the next 12 months
[5]: Data for 12 months up to Q1/2023
[6]: FS Q1/2023

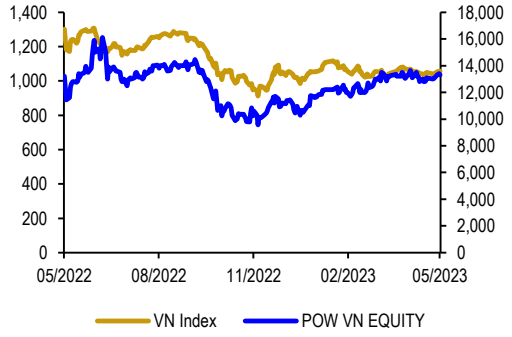
Source: SSV Research, Bloomberg
Data as of May 30, 2023

PetroVietnam Power Corporation (POW)

HOLD

Target price (12 months)			**VND 14,800**
Current price(30/05/22)			VND 13,600
Expected return (%)			8.8
VNINDEX			1,075
Market P/E (x)			10.6
Market Cap (bn VND)			31,849
Outstanding shares (mn)			2,342
Free-Floating (mn)			470
52-Wk High/Low (VND)			16,400/8,9100
90-day avg. trading volume (mn)			46
90-day avg. turnover (bn VND)			102
Foreign ownership (%)			4.24
Shareholders (%)		PVN	79.94
		Other	20.06

Performance	3M	6M	12M
Absolute (%)	10.8	25.5	0.8
Relative to VNIndex(%)	10.6	14.7	19.5



Investment thesis

- PetroVietnam Power Corporation (HoSE: POW) is the leading power generation company listed on the stock exchange with a total installed capacity of 4,208 MW. The most prominent POWs are Ca Mau & Nhon Trach 1 & 2 gas power plants (2,700 MW total), and Vung Ang 1 thermal power plant (1,200 MW). In addition, hydropower plants such as Hua Na and DakDrinh also contribute about 8% to POW's electricity output.
- In 2022, POW's output is estimated at 13.94 billion kWh, completed 100% of the year plan, POW revenue is VND 28,235 billion (+15% YoY), and profit after tax increased by 13% YoY to VND 2,323 billion. Nhon Trach 2 power plant contributes more than 30% of the POW's revenue, followed by Ca Mau 1&2, Vung Ang 1, and Nhon Trach 1 power plants. In Q1/2023, POW recorded a revenue of VND 7,424 billion (+5% YoY) and net profit reached VND 650 billion (-19% YoY). POW's revenue increased thanks to POW's output of 4,003 million kWh (+9.3% YoY), however, COGS increased faster due to higher coal price and heat loss rate in Q1/2023 compared to Q1/2022.
- In 2023, we expect POW's revenue and net profit to reach VND 33,995 billion (+20% YoY) and VND 2,522 billion (+9% YoY) respectively. The main growth driver comes from the total output forecasted to reach 17,373 million kWh (+22% YoY) with the return of Vung Ang Power Plant from the end of Q3/2023 and the return of El Nino.
- In the future, the long-term growth driver of POW will come from two LNG-using NT3 and NT4 plants with a total installed capacity of 1,500 MW that are expected to come into commercial operation between 2024 and 2025. In the power sector, POW is one of the enterprises has suitable development orientation in accordance with the power development plan VIII in the period of 2023-2030 in the thermal power segment.

Risks: (1) Risk of the high price of input materials; (2) Risks from repairing Vung Ang 1 factory; (3) NT3 & NT4 rollout slower than expected

Company report	2021	2022	2023F	2024F	2025F
Revenue (VNDbn)	24,561	28,235	33,995	38,230	51,577
OP (VNDbn)	2,459	2,504	2,831	2,812	2,762
NP (VNDbn)	2,052	2,323	2,522	2,558	2,499
EPS (VND)	757	809	915	907	896
BPS (VND)	12,228	12,983	13,884	14,791	15,687
OPM (%)	10%	9%	8%	7%	5%
NPM (%)	8%	8%	7%	7%	5%
ROE (%)	9%	10%	11%	11%	11%
PER (x)	14.8	14.8	14.5	14.7	14.8
PBR (x)	1.8	0.9	1.0	0.9	0.8
EV/EBITDA (x)	6.0	9.8	11.1	12.4	10.2

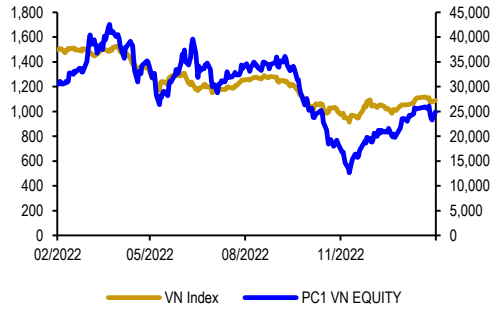
PC1 Group JSC (PC1)

HOLD

Target price (12 months)	**VND 32,100**
Current price(30/05/22)	VND 29,500
Expected return (%)	8.8%
VNINDEX	1,058
Market P/E (x)	10.3
Market Cap (bn VND)	6,909
Outstanding shares (mn)	288
Free-Floating (mn)	93
52-Wk High/Low (VND)	32,600/20,000
90-day avg. trading volume (mn)	1.7
90-day avg. turnover (bn VND)	46
Foreign ownership (%)	26.43

Shareholders(%)		
	Trinh Van Tuan	21.4
	BEHS	17.3

Performance	3M	6M	12M
Absolute (%)	-8.7	6.9	3.9
Relative to VNIndex(%)	11.7	31.9	35.4



Investment thesis

- PC1 Group JSC (HoSE: PC1) is a multi-industry enterprise focusing on the construction and power sector. PC1 is expanding its production and business activities in many industries with strong growth potential. In the power sector, the total capacity of power plants owned by PC1 stands at 313 MW with two types of wind power and hydropower.
- In 2022, PC1's revenue decreased by 15% YoY to VND 8,333 billion, and the net profit reached VND 527 billion (-31% YoY) due to the slowdown in the construction. In 2023, we forecast PC1's revenue to grow 14% YoY to VND 9,557 billion. The result above comes from the assumption that the mobilization rate of the hydropower segment will decrease due to the passing of the La Nina phenomenon, the stable operation of wind power, the return of the real estate segment, and the new cash flow from the Nickel mine.
- In Q1/2023, PC1 recorded revenue of VND 1,505 billion (+2% YoY), an operating profit was VND 307 billion (-12% YoY), and a net profit of VND 79 billion (-56% YoY). For the power construction segment, the backlog of PC1 is VND 4,000 billion, the new backlog is expected to be about VND 5,000 billion. PC1 estimates this segment's revenue in 2023 at VND 4,600 billion. For the mining segment, the Nickel factory is expected to export about 38,000 tons this year at LME prices with revenue of VND 900-1,000 billion from May, and a net profit of VND 160 billion.
- PC1's real estate segment has three main projects including Gia Lam, Dinh Cong, and Vinh Hung, PC1 said total revenue is expected at VND 2,500 billion, net profit of VND 400 billion will be handed over according to schedule from 2023 to 2027. Besides, industrial park real estate from Nomura Hai Phong is expected to contribute VND 650 billion in revenue and VND 110 billion in net profit. PC1 is one of the leading companies in the field of power construction. Therefore, we expect that PC1 will benefit strongly after PDP8 is approved.

Risks: (1) Legal risks of projects; (2) Risk of diversification; (3) Deceleration of electric construction and installation; (4) Financial costs are higher than expected..

Company report	2021	2022	2023F	2024F	2025F
Revenue (VNDbn)	9,828	8,357	9,557	11,392	13,311
OP (VNDbn)	905	647	742	1,114	1,361
NP (VNDbn)	764	537	612	913	1,138
EPS (VND)	2,858	1,519	2,292	3,338	4,209
BPS (VND)	19,987	18,894	18,155	17,979	18,039
OPM (%)	9%	8%	8%	10%	10%
NPM (%)	8%	6%	6%	8%	9%
ROE (%)	12%	7%	8%	11%	12%
PER (x)	14.8	19.5	12.9	8.8	7.0
PBR (x)	1.8	1.6	1.6	1.6	1.6
EV/EBITDA (x)	6.0	13.6	12.2	8.9	7.6

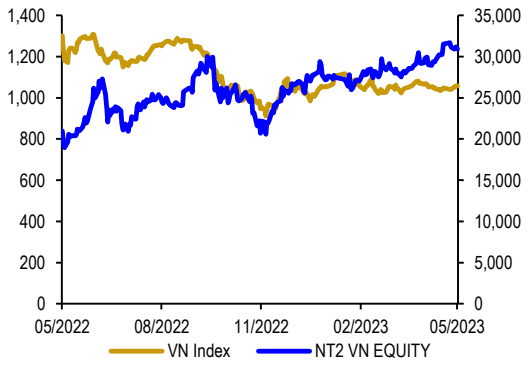
PetroVietnam Power Nhon Trach 2 JSC (NT2)

HOLD

Target price (12 months)	**VND 33,400**
Current price(11/05/22)	VND 32,850
Expected return (%)	1.7%
VNINDEX	1,075
Market P/E (x)	10.6
Market Cap (bn VND)	9,457
Outstanding shares (mn)	288
Free-Floating (mn)	93
52-Wk High/Low (VND)	32,600/20,000
90-day avg. trading volume (mn)	0.6
90-day avg. turnover (bn VND)	18
Foreign ownership (%)	26.43

Shareholders (%)		
POW	59.37	
Other	40.63	

Performance	3M	6M	12M
Absolute (%)	10.0	34.6	38.9
Relative to VNIndex(%)	9.7	23.8	57.6



Investment thesis

- Nhon Trach 2 Petroleum Power JSC (HoSE: NT2) is one of the gas-fired thermal power enterprises with the largest capacity listed on the stock exchange (750MW). The outstanding features of NT2 is its stable operation and business activities, healthy financial health, and attractive dividend payout, which the company has maintained for many consecutive years. Thanks to the absence of long-term loans, NT2 has significantly reduced interest expenses, helping the company to pay more abundant cash dividends in the coming years.
- In 2022, NT2 recorded revenue of VND 8,785 billion (+42% YoY), and the net profit increased by 37% YoY to VND 729 billion. In 2023, NT2 targets revenue at VND 8,299 billion (-6% YoY), and the net profit at VND 473 billion (-46% YoY). The BoD said that the production situation has not yet fully recovered due to political and economic uncertainties in the world that may reduce power demand, increase input gas prices, and compete with other power sources (renewable power sources) as well as the plant's overhaul in 2023 are reasons for the company to plan cautiously.
- In Q1/2023, NT2's revenue reached VND 2,183 billion (+8.8% YoY), net profit reached 234 billion (+46% YoY) thanks to the output of 1,073 million kWh (+10% YoY), and the decrease in average selling price. light 1.3% YoY. In 2023, NT2 will overhaul a 44-day factory overhaul during September-October (NT2's low season). Total cost is estimated at VND 407 billion and amortized over 3 years. Besides, NT2 said that the billion exchange rate difference recorded in 2023 is expected to be VND 155 billion.
- In 2023, we forecast NT2's revenue to drop by 4% YoY to VND 8,454 billion and net profit at VND 815 billion (-8% YoY). With the return of El Nino status, we estimate that NT2's output will increase slightly by 3% YoY when NT2's selling price drops slightly by 6% YoY as gas prices start to cool down. Cash dividend is planned by NT2 at 15%

Risks: (1) Input materials; (2) La Nina lasted longer than expected; (3) Shortage of gas supply; (4) Competition from other sources; (5) Electricity demand growth is lower than expected.

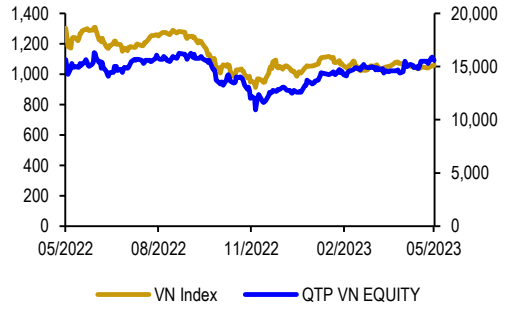
Company report	2021	2022	2023F	2024F	2025F
Revenue (VNDbn)	6,150	8,788	8,454	9,286	9,534
OP (VNDbn)	559	957	867	1,041	1,109
NP (VNDbn)	534	883	815	979	1,042
EPS (VND)	1,778	2,992	2,831	3,400	3,619
BPS (VND)	14,707	14,630	15,950	15,669	16,068
OPM (%)	9%	11%	10%	11%	12%
NPM (%)	9%	10%	10%	11%	11%
ROE (%)	13%	19%	18%	21%	22%
PER (x)	14.8	9.4	9.9	8.3	8.2
PBR (x)	1.8	1.8	1.8	1.8	1.6
EV/EBITDA (x)	6.0	4.6	4.8	4.2	4.0

Quang Ninh Thermal Power JSC (QTP)

BUY

Target price (12 months)	**VND 18,200**
Current price(11/05/22)	VND 15,700
Expected return (%)	15.9%
VNINDEX	1,075
Market P/E (x)	10.6
Market Cap (bn VND)	7,065
Outstanding shares (mn)	450
Free-Floating (mn)	398
52-Wk High/Low (VND)	17,800/10,400
90-day avg. trading volume (mn)	0.39
90-day avg. turnover (bn VND)	6
Foreign ownership (%)	26.43
Shareholders (%)	EVN GENCO1 42.00
	PPC 16.00

Performance	3M	6M	12M
Absolute (%)	6.1	23.8	-8.2
Relative to VNIndex(%)	5.9	13.0	10.5



Investment thesis

- Quang Ninh Thermal Power JSC (UPCOM: QTP) is one of the coal-fired power companies with the largest installed capacity on the stock exchange (1200MW). Quang Ninh 1&2 Thermal Power Plant operates very stably for many consecutive years with the leading high mobilization rate in the system.
- Quang Ninh 1&2 Thermal Power Plant (QN1&2) directly supplies electricity to the northern key economic region with stable demand. In addition, this plant is also located in the prime area with the most abundant coal reserves in the country. This is a favorable premise for QN1&2 to play the main role of running in the background to help QTP's capacity factor maintain at a high level and stable.
- QTP is about to complete its debt obligations lasting nearly 10 years, helping businesses reduce pressure from interest expenses. Besides, with no plans to invest in new projects, we expect that QTP will pay a cash dividend of about 20% in 2023 and continue to maintain an abundant cash dividend policy in the coming years.
- In Q1/2023, QTP recorded revenue of VND 2,995 billion (+15% YoY) and net profit of VND 151 billion (-58% YoY). The sharp increase in raw material cost 37% YoY was the main reason for QTP's gross profit margin to decrease from 16% in 1Q2022 to 6% in 1Q2023.
- In 2023, when El Nino returns, we expect QTP's revenue to grow 5% YoY to VND 10,946 billion, and net profit to reach VND 997 billion (+29% YoY) in 2023. We assume the selling price is around average, it will be flat in 2023, helping with improved output, QTP's revenue will increase by 5%. Besides, assuming that QTP will gradually complete its debt obligations by 2024, QTP's net profit margin will also gradually improve from 7% to 10%.

Risks: (1) Risk of raw materials; (2) The demand for electricity consumption is lower than expected; (3) Adverse weather; (4) Risks from other competing power sources; (5) Risk of incidents at factories.

Company report	2021	2022	2023F	2024F	2025F
Revenue (VNDbn)	8,571	10,417	10,946	10,240	10,672
OP (VNDbn)	621	815	1,049	1,043	1,140
NP (VNDbn)	578	770	997	991	1,083
EPS (VND)	1,284	1,712	2,216	2,202	2,407
BPS (VND)	13,713	13,709	13,916	14,136	14,376
OPM (%)	9%	9%	9%	9%	10%
NPM (%)	7%	7%	9%	10%	10%
ROE (%)	9%	13%	16%	16%	17%
PER (x)	14.8	8.5	6.5	6.6	6.0
PBR (x)	0.9	0.9	0.9	0.9	0.9
EV/EBITDA (x)	3.4	3.2	3.0	3.2	3.0

Refrigeration Electrical Engineering Corporation (REE)

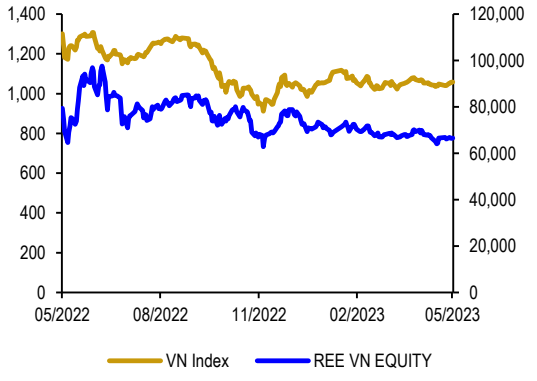
Shinhan Securities

BUY

Target price (12 months)	**VND 77,400**
Current price (30/05/22)	VND 61,500
Expected return(%)	25.9%
VNINDEX	1,058
Market P/E (x)	10.3
Market Cap (bn VND)	23,634
Outstanding shares (mn)	355
Free-Floating (mn)	126
52-Wk High/Low (VND)	100,000/59,400
90-day avg. trading volume (mn)	0.3
90-day avg. turnover (bn VND)	16
Foreign ownership (%)	26.43

Shareholders		
	Platinum Victory PTE. Ltd	30.9
	Nguyễn Thị Mai Thanh	12.2

Performance	3M	6M	12M
Absolute (%)	-7.0	-3.9	-17.4
Relative to VNIndex(%)	-7.2	-14.7	1.3



Investment thesis

- Refrigeration Mechanical and Electrical JSC (HoSE: REE) is a leading enterprise in the utility industry listed on the stock exchange. In the power segment, REE owns plants with an installed capacity of up to 978 MW. Of which 697 MW comes from renewable power including wind power, solar power, and hydropower.
- In 2022, REE's revenue and profit are VND 9,372 billion (+61% YoY) and net profit is VND 3,513 billion (+65% YoY). In 2023, we forecast REE's revenue to increase by 14% YoY, and NPAT to decrease by 1% YoY, due to the influence of the La Nina phenomenon, the hydropower segment is expected to have a lower volume than in 2022, however, the decrease will be compensated by the real estate group.
- For the real estate segment, REE is implementing a project in Bo Xuyen, Thai Binh, with a total area of about 2 hectares, about 45 commercial houses, and one building. REE said that it will start construction of low-rise apartments in May 2023 and complete construction in two quarters, starting from Q3/2023 and bringing in VND 800-900 billion in revenue in 2023. For the segment. For real estate leasing, REE owns nearly 150,000 m2 of floor space for lease. The Etown6 project with 40,000 m2 of floor space for lease is expected to come into commercial operation by the end of 2023. In terms of rental rates, it is expected to range from USD 24/m2 to USD 29/m2 with an initial occupancy rate of 30%. In Q1/2023, REE recorded revenue of VND 2,372 billion (+16% YoY), and net profit of VND 1,054 billion (+10% YoY). The electricity segment plays a pivotal role when contributing 65% of REE's revenue and 75% of REE's profit after tax.
- The M&E segment is also expected to increase revenue by 20% in 2023 with new backlogs expected to be signed at VND 5,000 billion. In addition, REE also participated in the bidding for Long Thanh airport and expansion at Tan Son Nhat and Noi Bai airports with a total backlog of up to VND 10,000 billion.

Risks: (1) Risk of an earthquake near Thuong Kon Tum hydropower plant; (2) El Nino risks cause the output of hydropower to decrease; (3) Revenue from M&E segment recovers slower than expected; (4) Real estate project progress is slower than expected.

Company report	2021	2022	2023F	2024F	2025F
Revenue (VNDbn)	5,810	9,372	10,729	10,148	10,596
OP (VNDbn)	2,387	3,984	4,095	4,113	4,558
NP (VNDbn)	2,135	3,513	3,601	3,563	3,991
EPS (VND)	6,003	7,569	7,759	7,677	8,599
BPS (VND)	42,896	43,513	49,290	54,989	61,611
OPM (%)	41%	43%	38%	41%	43%
NPM (%)	37%	37%	34%	35%	38%
ROE (%)	16%	23%	20%	18%	18%
PER (x)	11.5	9.0	8.8	8.9	7.9
PBR (x)	1.6	1.6	1.4	1.2	1.2
EV/EBITDA (x)	9.5	6.3	6.7	6.3	5.3

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