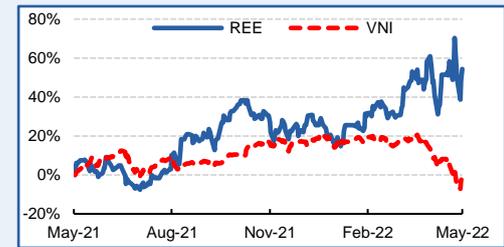


# Refrigeration Electrical Engineering (REE) [OUTPERFORM +14.5%] Update Report

Industry:	Utilities		2021	2022F	2023F	2024F
<b>Report Date:</b>	<b>May 20, 2022</b>	Rev Y/Y	3.0%	60.4%	10.6%	14.0%
Current Price:	VND76,500	Rpt EPS Y/Y	14.0%	30.6%	8.4%	20.8%
Target Price:	VND86,000	NPAT-MI (VND bn)	1,855	2,423	2,626	3,173
Last Target Price*	VND73,900	EBITDA Y/Y	76.2%	60.9%	14.5%	19.4%
Upside to TP:	+12.4%	EV/EBITDA	13.0x	8.1x	7.1x	5.9x
Dividend Yield:	2.1%	P/B	1.8x	1.5x	1.4x	1.2x
TSR:	+14.5%	Rpt P/E	14.7x	11.3x	10.4x	8.6x



		REE	VNI
Market Cap:	USD940mn	11.2x	13.6x
Foreign Room:	USD0	2.0x	2.1x
ADTV30D:	USD1.9mn	52.7%	N/A
State Ownership:	0%	19.0%	15.8%
Outstanding Shares:	309 mn	8.2%	2.6%
Fully Diluted Shares:	357 mn	(*) Adjust for 15% stock dividend	
3-year PEG:	0.6		

## Company Overview:

REE is a holding company with three main business lines: power (~1,000 MW and nearly half of its total earnings), mechanical and engineering installation (M&E) and office leasing. REE is a leading M&E player and possesses 150,000 sqm of office leasing space. Other segments include water & real estate.

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## Hydropower benefits from strong CGM prices, volume

- We raise our target price (TP) for REE by 16% to VND86,000/share and maintain OUTPERFORM rating. We view REE as a leading player in Vietnam's green energy sector due to its profitable projects that are driven by its cost control and low financing costs.
- Our increased TP is due to a 20% higher valuation for the power segment (especially hydropower) and the positive impact of rolling our TP to mid-2023. We raise our 2022-2026 aggregate earnings forecast by 7% as we believe REE's hydropower portfolio will benefit from potentially high competitive generation market (CGM) prices in the forecast period (due to high gas & coal prices).
- We raise our 2022 NPAT forecast by 16% as we increase REE's power earnings by 34% due an upward revision to our earnings forecast for the hydropower portfolio outweighing a downward revision in our earnings forecast for PPC (see [our PPC Update Report](#), dated April 28, 2022).
- We forecast 2022 NPAT to grow 30% YoY as it will be driven by the hydropower segment (+23% YoY), contributions from three new wind power projects that came online in late 2021, and 162% YoY and 12% YoY NPAT growth for the M&E and office leasing segments, respectively.
- We forecast a 17% EPS CAGR for 2021-2026F that is driven by contributions from 500 MW of wind power capacity, 473 MWp of rooftop solar capacity and 500 MW of hydropower capacity as well as the commercial operation of the Etown 6 building in late 2023F.
- We view REE's valuation as attractive at a 2022F PER of 11.3x, implying a PEG of 0.6 on a 2021-2026 EPS CAGR.
- **Upside risk:** Faster-than-expected wind and hydropower M&A; new capacity included in Power Development Master Plan VIII. **Downside risk:** Lower-than-expected M&E profit.

**We increase our aggregate hydropower earnings forecast by 20% for 2022-2026**, which is mainly due to our higher CGM price assumption. We believe that hydropower plants will benefit the most from the potential for high CGM prices in our forecast period due to high gas and coal prices. In 4M 2022, the average CGM price surged 44% YoY to VND1,590/kWh. We forecast an average CGM price of VND1,280/kWh (+28% YoY) for 2022 and higher prices in future years (see pages 6-7). We raise our 2022 volume assumptions for most of REE's hydropower plants. The weather forecast illustrated in **Figure 11** (as of April 2022) predicts that the probability of La Niña (heavy rainfall in Vietnam) is 50%-80% in April - August 2022 vs 20%-50% forecast as of December 2021.

**VSH's Upper Kon Tum hydropower plant's new price was approved by Vietnam Electricity Group's (EVN) CEO and is waiting for approval from EVN's board of directors.** We maintain our expectation that Upper Kon Tum can successfully raise its power purchase agreement (PPA) price to VND1,308/kWh in 2022F. Moreover, we double our 2022 NPAT forecast for VSH to VND769bn due to higher-than-expected volume.

## Q1 2022 recap: Hydropower drives earnings growth

Figure 1: Q1 2022 result

VND bn	Q1 2021	Q1 2022	YoY	as % of previous 2022F	VCSC's comments on Q1 2022 results
<b>Revenue</b>	<b>1,183</b>	<b>2,045</b>	<b>73%</b>	<b>23%</b>	
M&E	566	349	-38%	9%	
Office leasing & real estate	245	251	2%	25%	
Power	372	1,439	287%	46%	
Water	0	6	N/A	N/A	
<b>Reported NPAT-MI</b>	<b>416</b>	<b>693</b>	<b>67%</b>	<b>33%</b>	<b>* REE announced impressive Q1 2022 results with NPAT-MI surging 67% YoY thanks to a jump in earnings from hydropower plants — especially Vinh Son Song Hinh Hydropower (HOSE: VSH) as REE consolidated VSH in Q2 2021 — and additional earnings contributions from new wind plants that came into operation in Q4 2021.</b>
M&E	35	13	-63%	5%	* The M&E segment remained weak in Q1 2022. REE's M&E NPAT-MI plunged 63% YoY in Q1 2022 as M&E projects were still under construction.
Office leasing & real estate	119	134	13%	23%	
Power	215	477	122%	50%	<b>* Power NPAT-MI more than doubled vs Q1 2021 as strong earnings from the hydropower portfolio outweighed weak earnings from PPC.</b> Earnings from REE's hydropower portfolio amounted to VND343bn (USD21mn; +183% YoY) thanks to sufficient rainfall for hydropower plants as well as strong CGM prices. * REE's coal-fired power earnings were low due to a plunge PPC's earnings that was driven by lower dividend income and no more reversal provision for financial investments in Quang Ninh Thermal Power JSC and EVNFinance JSC. Furthermore, rooftop solar earnings declined 15% YoY as REE recorded full depreciation expenses for projects that it developed in 2021.
Water	62	81	30%	29%	
Other	-15	-11	-24%	N/A	

Source: REE, VCSC

## 2022F: Strong earnings recovery, growth across all segments

Figure 2: 2022F forecast

VND bn	2021	2022F	YoY	New vs old 2022F	VCSC's comments on (1) YoY growth (2) Changes in 2022F forecast
<b>Revenue</b>	<b>5,810</b>	<b>9,317</b>	<b>60%</b>	<b>6%</b>	<b>(1) Due to consolidation of VSH from Q2 2021. (2) Due to higher forecast revenue from hydropower segment.</b>
M&E	1,816	3,867	113%	0%	
Office leasing & real estate	939	991	6%	0%	
Power	3,055	4,459	46%	12%	
<b>NPAT-MI</b>	<b>1,855</b>	<b>2,423</b>	<b>31%</b>	<b>16%</b>	<b>(2) We raise our 2022F forecast by 16% mainly due to our higher earnings forecast for the power segment.</b>
M&E	98	257	162%	0%	(1) 2022F M&E revenue and earnings will benefit from the recognition of projects that were delayed in 2021 and new contracts signed in 2021.
Office leasing	461	517	12%	0%	(1) We expect the office leasing segment to increase from a low base in 2021 — especially in Q3 2021 when the company lowered rents to support tenants.
Real estate	169	70	-58%	0%	(1) 2021 was high base as REE recorded a one-off gain from divestment in real estate company VIID.
Power	872	1,282	47%	34%	(1) Mainly driven by: - The full-year operation of the Tra Vinh (48 MW), Phu Lac 2 (26 MW) and Loi Hai 2 (30 MW) wind power projects, which should contribute ~VND202bn (USD9mn) or ~8% of REE's 2022F NPAT-MI. - VSH successfully negotiating a higher PPA price at the Upper Kon Tum hydropower plant, which should materially lift VSH's standalone NPAT to VND769bn (USD33mn) vs VND301bn (USD13mn) in 2021. - REE installing 70 MWp of new rooftop capacity in 2022F to raise its total capacity to 175 MWp. (2) We raise our 2022 earnings forecast for the power segment by 34% because our higher earnings forecast for the hydropower portfolio outweighs our earnings forecast cut for PPC. - We increase our earnings forecast for the hydropower portfolio (mainly from VSH) to VND975bn (USD42mn) thanks to our higher CGM price and volume assumptions in 2022. - We lower shared profits from PPC by 20% (VND17bn) as we now expect the Pha Lai 2 plant to fully return online in mid-2023 vs Q3 2022 as previously.
Water	274	277	1%	0%	(1) Projected to recover after tariff cut in 2021.
Others	-19	20	N/A	49%	(2) thanks to higher interest income

Source: REE, VCSC

## 2021-2026F forecast summary

We forecast an NPAT-MI CAGR of 17% in 2021-2026F that is mainly driven by:

- Contributions from the Tra Vinh (48 MW), Phu Lac 2 (26 MW) and Loi Hai 2 (30 MW) wind power projects that came online in October 2021 and an additional 100 MW p.a. of wind power capacity coming online in 2023-2026F, bringing REE's total wind capacity to 500 MW by 2026F.
- Our expectation for REE Solar Energy to bring ~70-100 MWp p.a. of rooftop solar power capacity online in 2022-2025, lifting its total rooftop solar capacity to 473 MWp by 2025F.
- Profit contribution from Upper Kon Tum hydropower starting from 2021. We also believe REE will be able to finish its PPA negotiation with EVN and get a price of VND1,308/kWh beginning in 2022F.
- A full-year contribution of Etown 6 in 2024F that would increase REE's office leasing earnings to VND715bn (USD31mn) — ~55% higher vs 2021.
- Other items, mainly including net interest income/expenses at the holdco level that are forecast to jump from an expense of VND20bn (USD1mn) in 2021 to income of VND274bn (USD12mn) in 2026F thanks to a robust cash dividend from REE's power portfolio.

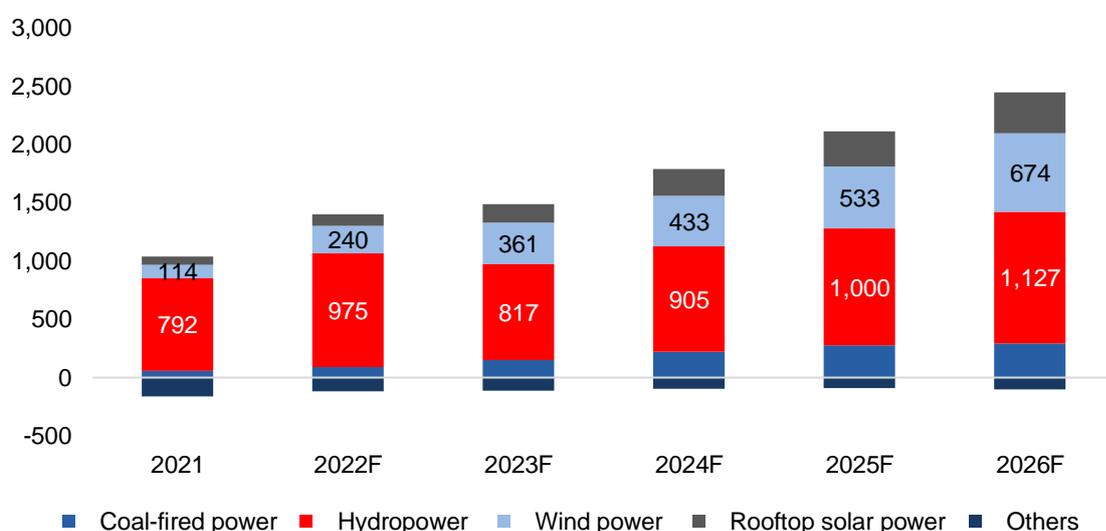
We revise up our 2022-2026F aggregate earnings forecast for REE by 7% as we increase our hydropower earnings forecast by 20% over forecast period.

Figure 3: Summary of VCSC's 2022-2026 forecasts for REE

VND bn	2022F	2023F	2024F	2025F	2026F
<b>NPAT-MI (new)</b>	<b>2,423</b>	<b>2,626</b>	<b>3,173</b>	<b>3,642</b>	<b>4,129</b>
M&E	257	304	338	376	418
Office leasing	517	562	715	749	784
Real estate	70	0	0	0	0
Power	1,282	1,374	1,696	2,023	2,342
Water	277	289	300	308	311
Others	20	97	124	185	274
<b>NPAT-MI (old)</b>	<b>2,094</b>	<b>2,627</b>	<b>3,034</b>	<b>3,384</b>	<b>3,757</b>
<i>Change (%)</i>	<i>15.7%</i>	<i>0.0%</i>	<i>4.6%</i>	<i>7.6%</i>	<i>9.9%</i>

Source: REE, VCSC forecast

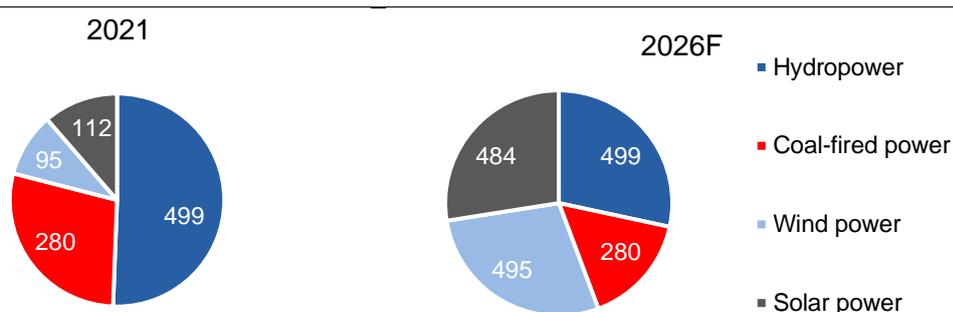
Figure 4: Summary of VCSC's 2021-2026 NPAT-MI forecasts for REE's power segment (VND bn)



Source: REE, VCSC

## Power Segment

Figure 5: Breakdown of REE's power capacity (MW) by type; adjusted for ownership



Source: REE, VCSC

As of December 2021, we estimate that REE had a total 987 MW of power generation capacity (adjusted for REE's ownership) from a wide range of hydropower, wind power, rooftop solar power and coal-fired thermal power projects. Per our understanding, REE's strategy for this segment is to ramp up its green energy portfolio and reduce exposure to coal-fired power generation. The company successfully divested the Quang Ninh coal-fired power plant (QTP) in 2021.

### We maintain our forecast for 400 MW of wind power to be added from 2023F

In Q1 2022, wind power NPAT surged 62% YoY to VND34bn (USD1.5mn) thanks to additional earnings contributions from new wind plants (Tra Vinh V1-3, Phu Lac 2 and Loi Hai 2) that came online in October 2021. Q1 2022 NPAT-MI completed 15% of our full-year forecast; however, we expect earnings from wind plants will accelerate in future quarters thanks to higher wind speeds in Q3 and Q4. As such, we maintain our wind power earnings forecast for 2022.

We maintain our forecast for an additional 100 MW p.a. of wind power projects in 2023-2026F in our model with our assumption for a feed-in-tariff (FIT) of 6.81 US cents/kWh — 20% lower than the previous FIT. In 2026F, we forecast these expansion projects with a total capacity of 400 MW will contribute VND358bn (USD16mn) p.a. or 10% to REE's NPAT-MI.

Figure 6: VCSC's earnings forecasts for REE's wind power in 2022-2026F

VND bn	2022F	2023F	2024F	2025F	2026F
Capacity (MW, adjusted for ownership)	95	195	295	395	495
Revenue	811	1,339	1,822	2,304	2,823
<b>VCSC's forecast for contribution to REE's consolidated NPAT-MI</b>	<b>239</b>	<b>361</b>	<b>433</b>	<b>533</b>	<b>674</b>
<b>In which, earnings contribution from 400 MW of new capacity</b>		<b>71</b>	<b>148</b>	<b>235</b>	<b>358</b>

Source: REE, VCSC

Figure 7: REE's guidance for three wind power projects that came online in late 2021

	Tra Vinh	Phu Lac 2	Loi Hai 2
Capacity (MW)	48	25	29
Annual power production (million kWh)	158	70	100
Feed-in tariff (US cents/kWh)	9.8	8.5	8.5
<b>VCSC's forecast for contribution to REE's consolidated NPAT-MI (VND bn)</b>	<b>113</b>	<b>35</b>	<b>55</b>

Source: REE, VCSC

## Rooftop solar power capacity to jump post COVID-19

In Q1 2022, REE developed 15 MWp of rooftop solar power capacity (+3x YoY) — in line with our expectation. Therefore, we maintain our assumption that REE can install 70 MWp of new rooftop solar capacity in 2022F as the pace of new investment should accelerate as the pandemic fades. We expect that REE's total rooftop solar capacity will reach 473 MWp by YE2026.

**Figure 8: Summary of 2022-2026 forecasts for rooftop solar capacity**

VND bn	2022F	2023F	2024F	2025F	2026F
Year-end capacity (MWp)	173	273	373	473	473
Sales volume (million kWh)	181	292	424	555	621
<b>Contribution to REE's NPAT-MI (VND bn)</b>	<b>96</b>	<b>156</b>	<b>230</b>	<b>304</b>	<b>350</b>

Source: REE, VCSC compilations

## VSH's profit to double in 2022

In Q1 2022, VSH delivered NPAT of VND403bn, quadrupling from VND101bn in Q1 2021. This surge was mainly due increased volume as a result of high rainfall and the contribution of the newly-operational Upper Kon Tum hydropower plant in April 2021. As such, we revise up our 2022 NPAT forecast for VSH by 114% due to higher-than-expected volume, strong CGM prices and slightly lower depreciation expenses. VSH's capex for Upper Kon Tum capex was VND9.4tn — lower than our previous assumption of VND10tn.

We also raise our earnings forecasts for 2023-2026 by 13% on average, which is due to our higher CGM price assumption.

According to VSH and REE, Upper Kon Tum's new PPA price was approved by EVN's CEO and is waiting for approval from EVN's board of directors.

We maintain our expectation that Upper Kon Tum can successfully raise its PPA price to VND1,308/kWh in 2022F. Our forecast is based on REE's target to negotiate for a base PPA price of VND1,090/kWh. In addition, Upper Kon Tum will ask for a price multiplier (profile ratio) of ~1.2x for the first 10 years of operation to create sufficient profit in order to ensure interest and principal debt repayment. After these 10 years, a penalty multiplier (less than 1.0x) will be applied to Upper Kon Tum's base PPA price to ensure that its project IRR would be the same as in a scenario in which the base PPA price is applied for the full lifecycle of the project.

**Figure 9: Summary of forecasts for VSH**

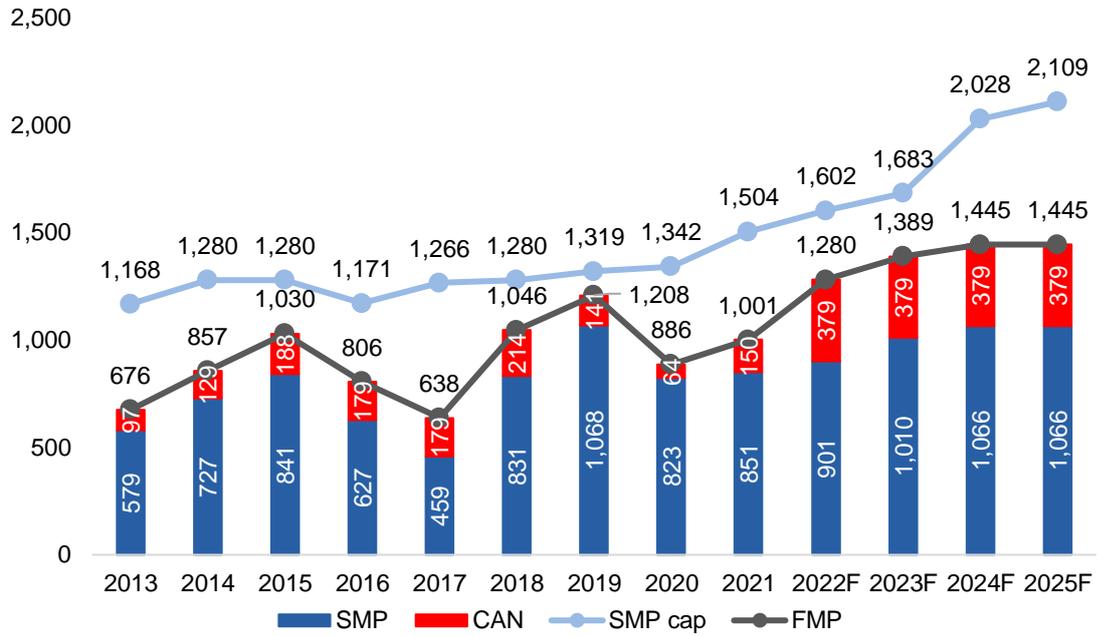
VND bn	2021	2022F	2023F	2024F	2025F	2026F
Revenue	1,611	2,204	2,063	2,085	2,085	2,085
NPAT	388	769	692	751	791	831
Contribution to REE's NPAT-MI (Previous forecast)		176	277	324	368	368
Contribution to REE's NPAT-MI (Revised forecast)		377	339	368	388	407
Revised vs Previous		114%	22%	14%	5%	11%

Source: VCSC, REE

## We expect CGM price to increase 28% in 2022.

The monthly CGM price in April 2022 surged to VND1,793/kWh (+62% YoY and +2% MoM). We attribute this higher price to high gas and coal prices despite low electricity consumption. In 4M 2022, the average CGM price was VND1,590 (+44% YoY). We forecast an average CGM price of VND1,280/kWh (+28% YoY) for 2022.

Figure 10: CGM (also known as FMP) price outlook (VND/kWh)



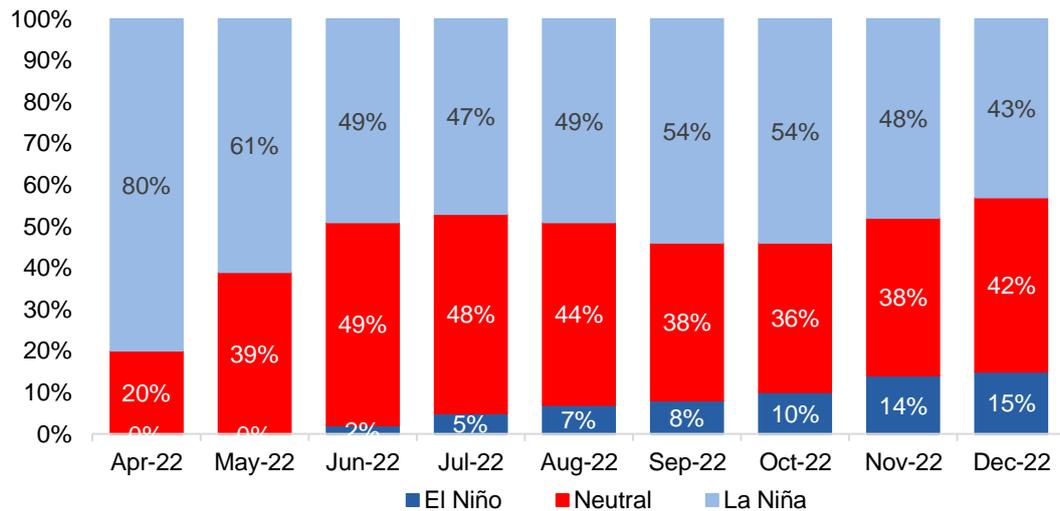
Source: EVN, Ministry of Industry and Trade, VCSC estimates. FMP = full market price.

Note:  $CGM/FMP = SMP + CAN$ ; SMP: the highest auction price needed to be employed in order to balance with the system supply/demand; CAN: the extra price paid for the best new entrant power plant to break even.

### Weather forecast suggests slight probability of La Niña for 2022

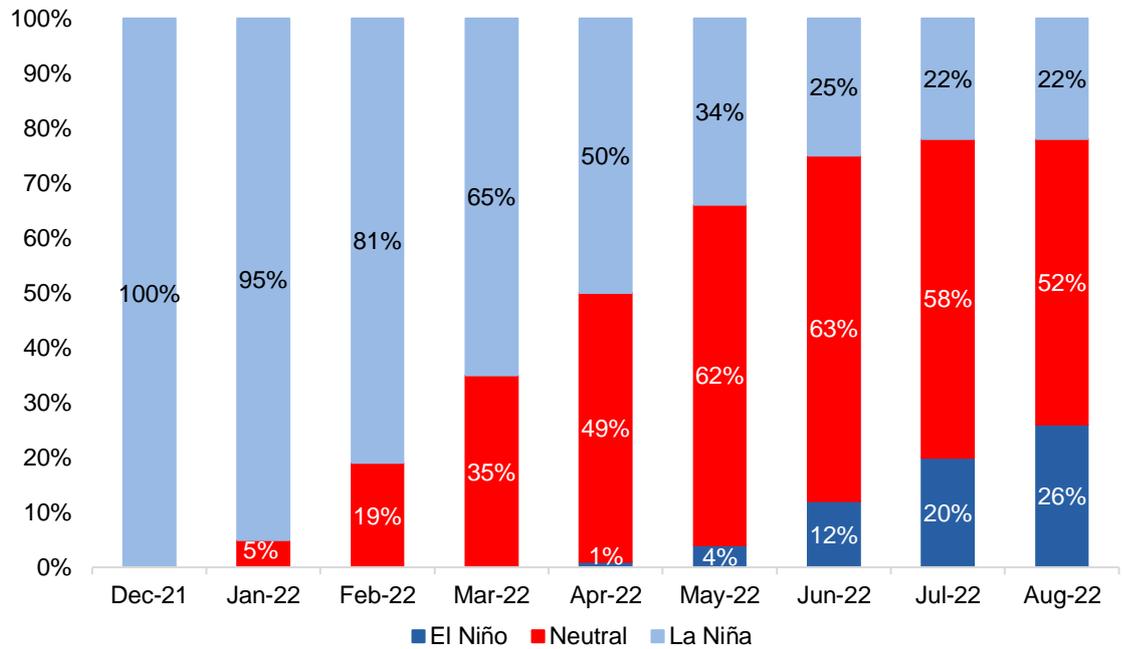
The weather forecast illustrated in Figure 11 (as of April 2022) predicts that the probability of La Niña (heavy rainfall in Vietnam) is 50%-80% in April - August 2022 compared to 20%-50% forecast as of December 2021 (Figure 12).

Figure 11: Probability of weather conditions as of April 2022



Source: International Research Institute for Climate and Society, VCSC

Figure 12: Probability of weather conditions as of December 2021



Source: International Research Institute for Climate and Society, VCSC

## Office Leasing Segment: Occupancy rate remains 98% in Q1 2022

**REE’s occupancy rate remained solid at 98% in Q1 2022.** In 2020, REE’s occupancy rate dropped from 99.5% in Q1 2020 to 98.5% in Q2 2020 and 97.4% in H2 2020 as a result of COVID-19. In 2021, the occupancy rate marginally improved to 98%. In Q1 2022, REE’s office buildings maintained their occupancy rate at over 98%, and the Etown 5 tower’s occupancy rate was 100%.

**REE is pushing the construction progress of the new Etown 6 office building.** This new office building will have a net floor area of 40,000 sqm vs REE’s existing 150,000 sqm of total leasable office space. The building’s diaphragm wall was completed on March 31. REE targets to finish the pile foundation by April 30 and underground construction by December 31. Overall, the company aims to put this building into operation by Q4 2023.

Figure 13: REE’s guidance for Etown 6 construction timeline

	Timeline
Construction permit	August 2021
Foundation and diaphragm wall	October 2021
Full completion	Q4 2023

Source: REE, VCSC compilation

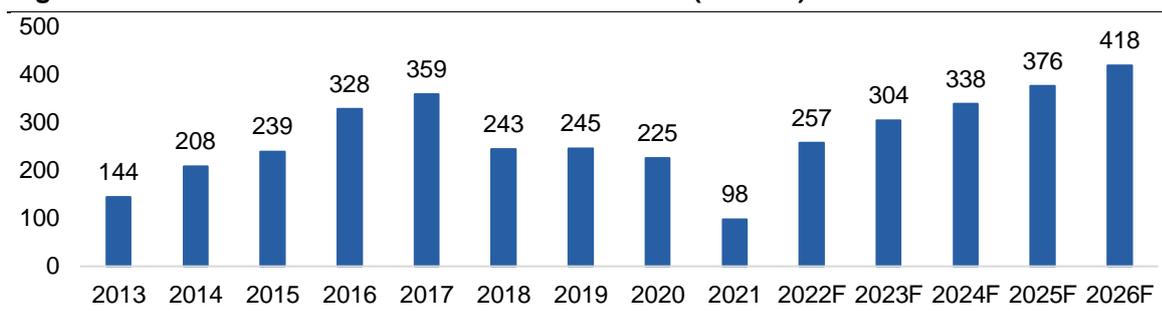
## M&E Segment: We expect a 34% NPAT CAGR for 2021-2026F

**The M&E segment remained weak in Q1 2022, but its backlog reached a new high.** REE’s M&E NPAT-MI plunged 63% YoY to just VND13bn (USD0.6mn) in Q1 2022 as M&E projects were still under construction. Meanwhile, REE’s newly signed project value was VND4.7tn (USD204mn; +85% YoY) in Q1 2022. We expect the company will start to record earnings after finishing these projects in future quarters. Therefore, we maintain our earnings forecast for this segment in 2022

**The fast-tracked construction of Tan Son Nhat International Airport’s terminal 3 and Long Thanh International Airport represents potential upside to our forecast.** REE posted record high M&E earnings in 2016-2017 after supplying and installing the M&E system for Tan Son Nhat

International Airport's terminal upgrade project. In the next five years, we believe that REE will have a competitive advantage to win M&E contracts for Tan Son Nhat terminal 3 and Long Thanh International Airport, both of which are materially larger than Tan Son Nhat's terminal 2 upgrade.

**Figure 14: VCSC's forecasts for REE's M&E NPAT-MI (VND bn)**



Source: REE, VCSC

## Valuation

### Sum-of-the-parts target price derivation

We continue to value REE using a sum-of-the parts approach. Our target price derives from:

- **Power generation:** We choose a DCF approach to value REE's investee companies in the power generation segment as it is best suited to measure the cash generation capability of each power plant and renewable energy project, in our view. For smaller investments such as Ninh Binh Thermal Power and Tra Vinh Electricity Transmission Company (DTV), we use REE's investment cost as the contributing value due to these companies' insignificant scale and/or lack of information disclosure. We use our PPC valuation as published in our [PPC Update Report, dated April 28, 2022](#).
- **Office leasing:** For REE's existing portfolio of office buildings (150,000 sqm), we apply a cap rate of 8.5% to our net operating income (NOI) forecast. We value REE's Etown 6 office building using a DCF method.
- **M&E and water treatment:** We choose to value REE's M&E and water treatment segments using the PER approach. Our target PERs of for the M&E and water treatment segments are derived from a four-year average PER of our respective peer group samples.
- **Real estate:** As REE has established REE Land — a holding subsidiary specialized in managing REE's real estate investments — we continue to use the investment cost of REE Land as our valuation for this segment instead valuing each real estate asset separately.
- **We maintain a 10% conglomerate valuation discount to REE total's equity value.**

**We increase our target price by 16%** due to a 7% increase in our aggregate NPAT forecast for 2022-2026 and 20% higher valuation for the power segment as we believe REE's hydropower portfolio could benefit from potentially high CGM prices across the forecast period. In addition, our higher target price is thanks to the positive impact of rolling it forward to mid-2023.

**Figure 15: VCSC's assumptions for WACC**

Cost of capital	Previous report	Revised
Beta	1.0	1.0
Market risk premium	7.0%	7.0%
Risk free rate	5.5%	5.5%
Cost of equity	12.5%	12.5%
Cost of debt	8.0%	8.0%
Target debt/capital	20.0%	20.0%
Corporate tax rate	20.0%	20.0%
<b>WACC</b>	<b>11.6%</b>	<b>11.6%</b>

Source: VCSC

**Figure 16: VCSC's sum-of-the-parts valuation of REE**

VND bn	Method	Projected NAV	Ownership	Attributed value	2022F PER at TP	2023F PER at TP	Peer 4-yr-avg PER
<b>Power generation*</b>				<b>22,649</b>	<b>17.7x</b>	<b>16.5x</b>	<b>12.6x</b>
Hydropower portfolio (499 MW)	DCF			13,645			
PPC - thermal power (280 MW)	Mixed	6,388	24%	1,542			
Solar power portfolio (500 MWp)	DCF	1,667	100%	1,667			
Tra Vinh wind farm (48 MW)	DCF	1,556	100%	1,556			
Thuan Binh wind power (50 MW)	DCF	1,603	61%	972			
NBP - thermal power (29 MW)	Book value**	66	29%	66			
DTV - power transmission	Book value**	56	66%	56			
New wind power projects (400 MW)		3,145	100%	3,145			
<b>Office leasing</b>				<b>8,448</b>	<b>16.4x</b>	<b>15.0x</b>	<b>14.2x</b>
Existing Towers	Cap rate	7,967	100%	7,967			
Etown 6	DCF	481	100%	481			
<b>M&amp;E</b>				<b>2,412</b>	<b>9.4x</b>	<b>7.9x</b>	<b>8.6x</b>
2022F earnings		280					
Target PER		8.6					
<b>Water</b>				<b>3,084</b>	<b>11.1x</b>	<b>10.7x</b>	<b>10.9x</b>
2022F earnings		283					
Target PER		10.9					
<b>Real estate **</b>		<b>209</b>	<b>100%</b>	<b>209</b>			
Saigon Res	Book value						
<b>Total enterprise value</b>				<b>36,802</b>			
Minus holdco net debt at Q4 2021				-2,375			
<b>Total Equity value</b>				<b>34,428</b>			
Conglomerate discount				10%			
<b>Net Equity value</b>				<b>30,985</b>			
Share count (million)				357			
<b>Target price (VND/share)</b>				<b>86,000</b>	<b>12.7x</b>	<b>11.7x</b>	
Market price (VND/share)				76,500			
Upside				12.4%			
Dividend yield				2.1%			
<b>TSR</b>				<b>14.5%</b>			

Source: REE, VCSC

(\*) Capacities shown are ownership-adjusted power generation capacities.

(\*\*) REE's investment cost as stated in Q1 2022 financial statements, already adjusted for ownership.

## Comparable peers

Due to its diversified investment portfolio, we recognize that there are no true comparable peers for REE. As such, we pick companies that are comparable to REE's investee companies in each business segment that will provide a good reality check to our SOTP valuation for the power and office leasing segments and produce a target PER multiple for our PER valuation for the M&E and water treatment segments, in our view.

Our peer group has four-year average PERs:

- **12.6x for power generation peers** vs the implied target 2022F PER of 17.7x for the power generation segment. Due to the diversified contributions of both hydropower and thermal power, we compare REE's power portfolio with regional power holding companies that manage or own stakes in multiple power plants.
- **14.2x for office leasing peers** vs the implied target 2022F PER of 16.4x for the office leasing segment. We choose regional players that have exposure to office and retail leasing.

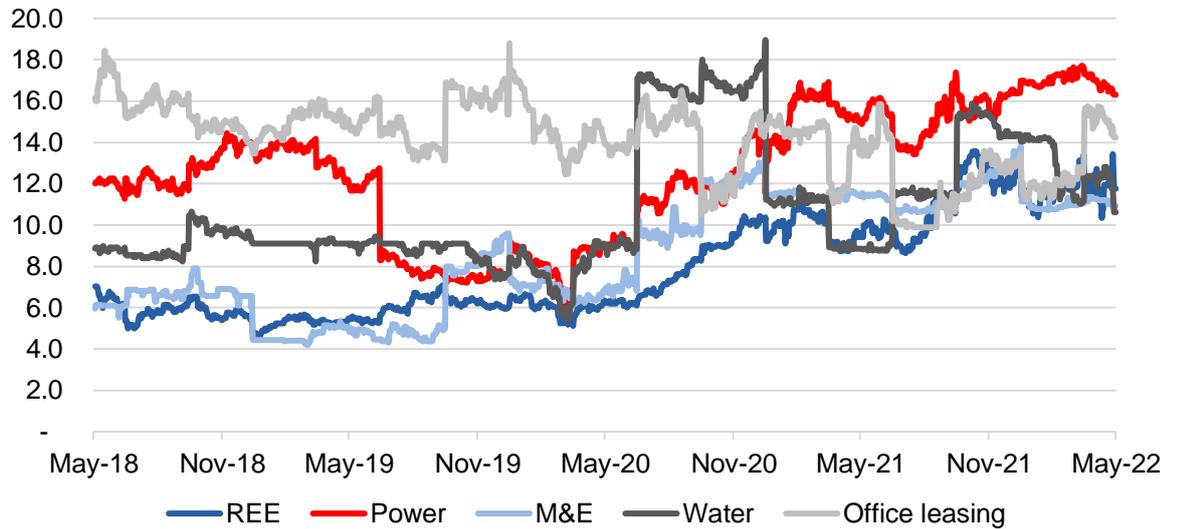
- **8.6x for M&E peers**, which we choose as a target PER for our valuation for REE's M&E segment. We select Vietnamese companies in the air conditioning control and refrigeration engineering segments, which are similar to REE's core M&E segment.
- **10.9x for water treatment peers**, which we choose as a target PER for our valuation for REE's water treatment segment. We have selected regional peers, including listed water supply companies in Asia.

**Figure 17: Peer comparison**

USD mn	Market Cap	TTM Net sales	YoY %	TTM NPAT	YoY %	Net D/E (%)	ROE (%)	ROA (%)	Div yield (%)	TTM PER (x)	LQ PBR (x)
<b>POWER</b>											
MER PM	7,094	6,786	25.8	477	37.1	17.2	26.9	5.4	4.6	15.0	3.9
GPSC TP	5,041	2,619	25.9	229	-28.4	80.4	5.3	2.1	2.4	30.8	1.6
TPWR IN	9,565	5,747	31.9	234	54.5	169.6	7.8	1.6	0.7	33.6	3.3
RATCH TB	1,637	1,443	48.6	243	3.6	65.9	10.5	5.3	6.1	8.2	0.8
2380 HK	5,245	5,386	22.2	-80	N/A	200.0	-1.5	-0.3	4.1	N/A	1.0
9507 JP	1,354	5,717	-10.7	-56	N/A	245.5	-2.0	-0.4	3.8	N/A	0.5
BPP TB	1,421	271	61.4	98	33.2	29.5	10.9	7.7	4.0	9.8	1.0
FPH PM	618	2,644	25.0	203	-1.9	39.8	8.4	2.5	3.3	3.3	0.3
KEL PA	360	N/A	N/A	-19	N/A	72.4	N/A	N/A	N/A	N/A	0.3
NBVL IN	294	449	32.3	69	22.3	48.4	11.1	5.1	1.6	4.5	0.5
<b>Median</b>	<b>1,529</b>	<b>2,644</b>	<b>25.9</b>	<b>150.6</b>	<b>22.3</b>	<b>69.1</b>	<b>8.4</b>	<b>2.5</b>	<b>3.8</b>	<b>9.8</b>	<b>0.9</b>
<b>OFFICE LEASING</b>											
600007 CH	2,277	569	13.8	159	22.7	-1.6	12.3	8.3	2.6	14.5	1.7
RLC PM	1,763	531	-18.1	164	30.2	23.4	5.7	3.0	4.1	14.3	0.7
034810 KS	276	1,902	206.0	43	-94.0	36.0	7.6	2.8	1.3	15.1	0.5
CMC TB	44	33	-18.2	1	N/A	86.6	-0.9	-0.4	2.7	N/A	0.6
AKH IN	3	-	N/A	-3	N/A	-26.7	-26.3	-25.3	N/A	N/A	0.3
<b>Median</b>	<b>276</b>	<b>531</b>	<b>-2.2</b>	<b>43.2</b>	<b>22.7</b>	<b>23.4</b>	<b>5.7</b>	<b>2.8</b>	<b>2.7</b>	<b>14.5</b>	<b>0.6</b>
<b>M&amp;E</b>											
SRF VN	21	41	-33.0	1	-25.1	91.9	6.0	1.5	N/A	17.0	1.0
MCG VN	5	11	-0.4	1	6.1	2.7	7.5	4.8	8.1	9.6	0.7
DHP VN	4	4	333.6	1	N/A	-1.9	20.0	18.3	N/A	4.6	0.8
KSD VN	12	7	33.0	-2	-266.3	-4.4	-16.6	-4.5	N/A	N/A	1.4
<b>Median</b>	<b>8</b>	<b>9</b>	<b>16.3</b>	<b>0.7</b>	<b>-25.1</b>	<b>0.4</b>	<b>6.7</b>	<b>3.2</b>	<b>8.1</b>	<b>9.6</b>	<b>0.9</b>
<b>WATER</b>											
MWC PM	968	410	0.5	75	-23.1	98.2	4.6	2.2	3.0	14.3	0.5
EASTW TB	430	66	14.4	23	18.0	92.8	5.4	2.6	6.5	22.8	1.2
WHAUP TB	315	139	6.1	33	14.9	86.6	N/A	N/A	6.4	11.5	1.0
TWK MK	425	73	-4.9	19	32.0	-3.2	8.4	3.9	7.1	23.8	2.1
3768 HK	216	359	20.8	52	-2.9	103.9	7.8	3.0	12.4	4.3	0.3
RAHH MK	147	369	4.3	7	-18.6	81.9	5.1	1.1	N/A	19.1	0.9
6136 HK	191	453	-12.4	64	-12.3	169.8	8.1	2.3	N/A	3.1	0.2
6839 HK	71	819	-37.1	-138	22.3	372.1	-21.8	-1.9	15.4	N/A	0.1
PBAH MK	61	81	-0.4	9	48.4	14.5	5.1	2.5	2.8	7.3	0.4
<b>Median</b>	<b>216</b>	<b>359</b>	<b>0.5</b>	<b>23.0</b>	<b>14.9</b>	<b>92.8</b>	<b>5.3</b>	<b>2.4</b>	<b>6.5</b>	<b>12.9</b>	<b>0.5</b>
<b>Median for all segments</b>	<b>507</b>	<b>886</b>	<b>10.1</b>	<b>54.4</b>	<b>8.7</b>	<b>46.4</b>	<b>6.5</b>	<b>2.7</b>	<b>5.3</b>	<b>11.7</b>	<b>0.7</b>
<b>REE VN</b>	<b>1,078</b>	<b>292</b>	<b>18.3</b>	<b>80.9</b>	<b>19.3</b>	<b>56.4</b>	<b>16.7</b>	<b>8.0</b>	<b>1.2</b>	<b>11.3</b>	<b>2.0</b>

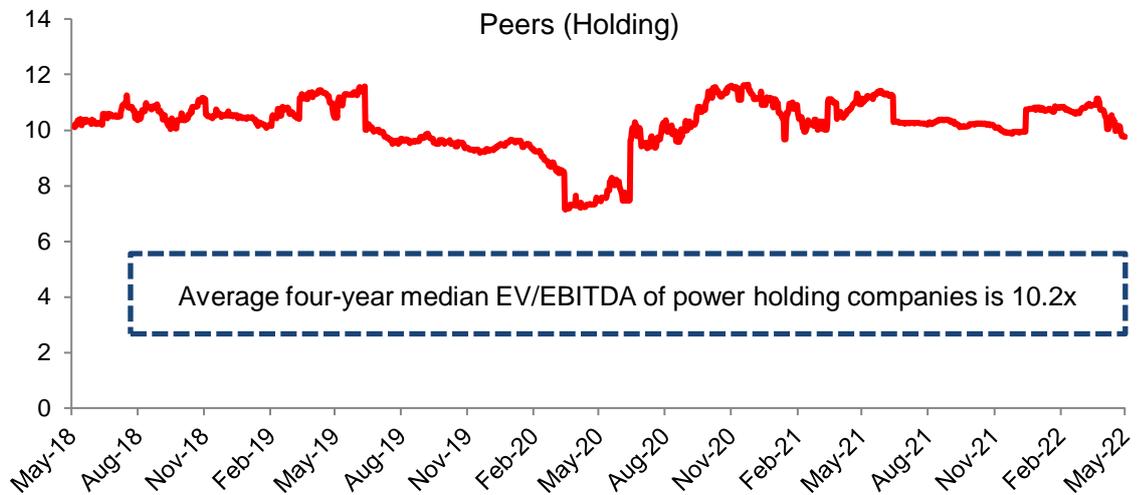
Source: Bloomberg, VCSC (data as of May 19, 2022)

Figure 18: REE's historical PER vs peers (x)



Source: Bloomberg, VCSC

Figure 19: Historical median trailing EV/EBITDA of power peers (x)



Source: Bloomberg, VCSC

## Recommendation History

Figure 20: Historical target price and recommendation (VND/share)



Source: Bloomberg, VCSC

## Appendix 1: REE’s business restructuring plans

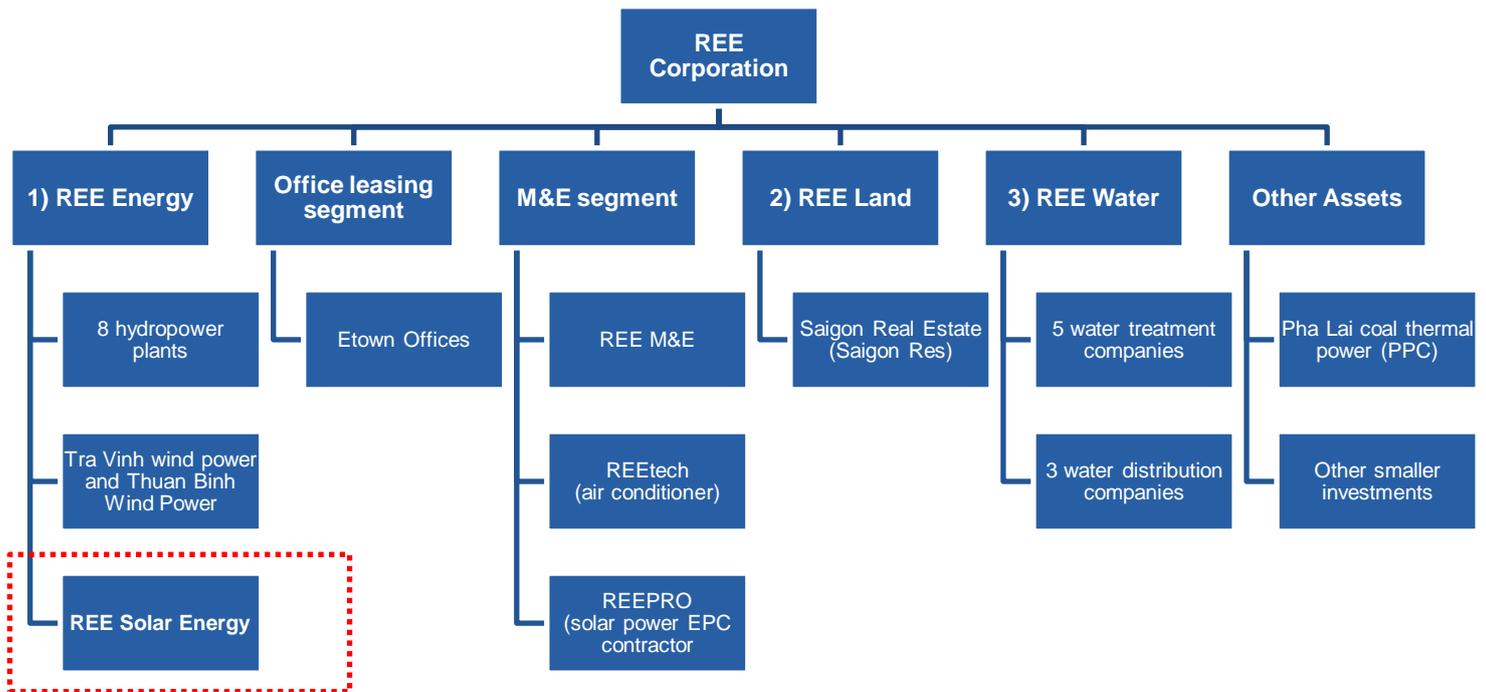
On September 30, 2020, REE’s BOD approved plans to set up three holding companies that will directly own and manage REE’s assets in each of the company’s business segments. These holding companies include: 1) **REE Energy Ltd** in the power generation segment (charter capital: VND5tn-6tn / USD217mn-273mn); 2) **REE Water Ltd** in the clean water treatment and distribution segment (charter capital: VND1.6tn / USD70mn) and 3) **REE Land Ltd** in the real estate segment (charter capital: VND912bn / USD39mn). Meanwhile, **REE’s M&E segment** will continue to be managed by two subsidiaries: REEtech (book value: VND150bn / USD6mn) and REE M&E (book value: VND150bn / USD6mn). The **office leasing segment** will continue to be owned and managed at the holdco level.

We believe the new holding structure adds value for existing shareholders as it (1) allows each business segment to raise capital/debt more efficiently and independently from the parent company, (2) simplifies the process of forming strategic or R&D partnerships at each business segment and (3) prepares for the possibility of spinning off and listing each holding company, if necessary.

**REE Energy manages all of REE’s power assets.** We understand that REE Energy’s portfolio is comprised of 100% green energy and does not include Pha Lai Thermal Power, which is REE’s largest legacy investment in coal-fired power generation. However, for easy restructuring, this investment is still under REE Energy. REE divested its stake in QTP and we expect that it will also divest PPC over the long term.

**REE Solar Energy is an environmental, social and governance (ESG)-friendly company.** This implies a potential spin-off if REE and its partner so desire. This company is completely investable for foreign institutions with strict ESG investing mandates.

Figure 21: REE’s new holding structure



Source: REE, VCSC

**Figure 22: REE's subsidiaries and associates**

Company name	Company code	Exchange	Ownership	Book value (VND bn)
<b>REE Energy</b>				<b>5,318</b>
Central Hydropower JSC	CHP	HOSE	22.68%	616
South Hydropower JSC	SHP	HOSE	11.09%	204
Thac Ba Hydropower JSC	TBC	HOSE	60.42%	655
Thac Mo Hydropower JSC	TMP	HOSE	42.63%	382
Vinh Son – Song Hinh JSC	VSH	HOSE	49.52%	1,973
Pha Lai Thermal Power JSC	PPC	HOSE	24.14%	826
Ninh Binh Thermal Power JSC	NBP	HNX	29.45%	66
IDICO Srok Phu Mieng Hydropower JSC	ISH	UPCoM	34.30%	173
Ba Ha River Hydropower JSC	SBH	UPCoM	25.76%	368
Binh Dien Hydropower JSC	BDH		25.47%	60
Muong Hum Hydropower JSC *	MHP		49.06%	325
Thuan Binh Wind Power JSC	TBW		60.65%	146
<b>REE Solar Energy JSC</b>	<b>REE SE</b>		<b>99.99%</b>	<b>350</b>
<b>M&amp;E segment</b>				<b>300</b>
REE M&E JSC	REE M&E		99.99%	150
REE Electricity Appliances JSC	REEtch		99.99%	150
<b>REE Land</b>				<b>262</b>
Saigon Real Estate JSC	Saigon Res		28.87%	54
<b>REE Water</b>				<b>1,614</b>
Thu Duc Water Supply JSC	TDW	HOSE	44.17%	68
Gia Dinh Water Supply JSC	GDW	HNX	20.05%	25
Nha Be Water Supply JSC	NBW	HNX	20.02%	40
Khanh Hoa Supply SJC	KHW	UPCoM	43.88%	257
Song Da Water Investment JSC	VCW	UPCoM	35.95%	691
BOO Thu Duc Water JSC	BOO		42.07%	410
Tan Hiep Clean Water Investment JSC	THW		32.00%	78
Saigon Clean Water Business & Inv JSC	SWIC		30.00%	45

Source: REE, VCSC. (\*) TBC owns another 50.94% of MHP, bringing REE's effective ownership at MHP to 79.84%. Ownership and book value was as in September 2020 — the time of REE Energy's and REE Water's inception.

## Appendix 2: Capacity expansion potential

**Wind power.** REE acquired a controlling stake in Thuan Binh Wind Power (TBW) in November 2019. REE raised its ownership in TBW from 25% to 49% after purchasing 24% from Electricity Vietnam (EVN) at a valuation of VND300bn (USD13mn) via a public auction. Per REE, it holds more than 50% of voting rights at TBW and thus has consolidated the company into the group. We estimate that REE's effective ownership at TBW is 61% thanks to 50% direct ownership and 25% ownership from TMP (REE's 43%-owned associate) as of YE2020. TBW plans to apply for licenses for 1,000 MW wind power in Binh Thuan, Ninh Thuan, Gia Lai and Dak Lak provinces.

In March 2021, REE's chairman shared that the company was working with a foreign partner to seek licenses to develop a giant wind offshore power project with a capacity of 2,000 MW.

We note that further capacity expansion — such as the second phase of the Tra Vinh offshore wind farms (48 MW) and Thuan Binh Wind Power's 400 MW of wind power pipeline projects in Dak Lak, Gia Lai and Binh Thuan — is highly dependent on the attractiveness of Vietnam's next wind power FiT, in our view.

**Figure 23: REE's upcoming projects**

	Projects	Location	Landbank (ha)	Wind power Capacity (MW)	Solar power capacity (MW)
1	Phu Lac	Binh Thuan Province	400		100
2	Loi Hai	Ninh Thuan Province	523		70
3	Vinh Hao	Binh Thuan Province	600	60	
4	Ea H'Leo	Dak Lak	1,920	150	200
5	Kong Chro	Gia Lai	3000	200	200
	<b>Total</b>		<b>7,315</b>	<b>410</b>	<b>480</b>

Source: REE, VCSC

**Hydropower and floating solar.** REE's 40%-owned associate Thac Mo Hydropower (TMP) will raise its hydropower capacity by 50% to 225 MW. TMP is in the process of purchasing the Thac Mo expansion project (75 MW) from EVN for USD50mn (we have not modeled in this acquisition). In addition, TMP plans to increase its solar capacity 8x to 400 MWp over the next five years vs 50 MWp in 2021F

## Financial Statements

P&L (VND bn)	2021	2022F	2023F	2024F	B/S (VND bn)	2021	2022F	2023F	2024F
<b>Revenue</b>	<b>5,810</b>	<b>9,317</b>	<b>10,306</b>	<b>11,749</b>	Cash & equivalents	1,831	4,035	4,221	5,195
COGS	-3,500	-5,650	-6,348	-7,149	ST investment	914	0	0	0
<b>Gross Profit</b>	<b>2,310</b>	<b>3,667</b>	<b>3,958</b>	<b>4,600</b>	Accounts receivables	2,987	2,553	2,824	3,219
Sales & Marketing exp	-85	-112	-124	-141	Inventories	800	1,316	1,478	1,665
General & Admin exp	-370	-302	-314	-341	Other current assets	275	275	275	275
<b>Operating Profit</b>	<b>1,854</b>	<b>3,253</b>	<b>3,520</b>	<b>4,118</b>	<b>Total Current assets</b>	<b>6,806</b>	<b>8,179</b>	<b>8,798</b>	<b>10,354</b>
Financial income	466	189	226	255	Fix assets, gross	24,252	26,559	31,859	37,159
Financial expenses	-707	-905	-1,060	-1,138	- Depreciation	-6,218	-7,384	-8,922	-10,842
- o/w interest expense	-663	-905	-1,060	-1,138	Fix assets, net	18,034	19,175	22,937	26,317
Associates	774	755	780	907	LT investment	6,261	6,498	6,772	7,157
Net other income/(loss)	13	13	13	13	LT asset other	726	726	726	726
<b>Profit before Tax</b>	<b>2,400</b>	<b>3,306</b>	<b>3,479</b>	<b>4,156</b>	<b>Total LT assets</b>	<b>25,021</b>	<b>26,399</b>	<b>30,434</b>	<b>34,199</b>
Income Tax	-264	-330	-358	-452	<b>Total Assets</b>	<b>31,827</b>	<b>34,578</b>	<b>39,232</b>	<b>44,553</b>
<b>NPAT before MI</b>	<b>2,135</b>	<b>2,976</b>	<b>3,121</b>	<b>3,704</b>	Accounts payable	1,682	2,012	2,261	2,546
Minority Interest	-280	-552	-495	-531	Short-term debt	1,234	791	1,760	1,956
<b>NPAT less MI, reported</b>	<b>1,855</b>	<b>2,423</b>	<b>2,626</b>	<b>3,173</b>	Other ST liabilities	1,147	1,147	1,147	1,147
<b>NPAT less MI, adjusted<sup>(1)</sup></b>	<b>1,523</b>	<b>2,423</b>	<b>2,626</b>	<b>3,173</b>	Total current liabilities	4,062	3,951	5,168	5,649
EBITDA	2,747	4,420	5,059	6,038	Long term debt	10,740	11,094	12,079	13,891
EPS reported, VND	5,203	6,796	7,364	8,899	Other LT liabilities	667	667	667	667
EPS adjusted <sup>(1)</sup> , VND	4,254	6,771	7,338	8,867	<b>Total Liabilities</b>	<b>11,407</b>	<b>11,761</b>	<b>12,746</b>	<b>14,558</b>
EPS fully diluted, VND	4,254	6,771	7,338	8,867	Preferred Equity	0	0	0	0
DPS, VND	1,000	1,600	1,600	1,600	Paid in capital	3,101	3,566	3,566	3,566
DPS/EPS (%)	19%	24%	22%	18%	Share premium	1,050	1,050	1,050	1,050
(1) Adjusted for one-off gains/losses					Retained earnings	8,964	10,565	12,621	15,224
<b>RATIOS</b>	<b>2021</b>	<b>2022F</b>	<b>2023F</b>	<b>2024F</b>	Other equity	187	187	187	187
<b>Growth</b>					Minority interest	3,056	3,498	3,894	4,319
Revenue growth	3.0%	60.4%	10.6%	14.0%	<b>Total equity</b>	<b>16,358</b>	<b>18,867</b>	<b>21,318</b>	<b>24,346</b>
Op profit (EBIT) growth	49.8%	75.4%	8.2%	17.0%	<b>Liabilities &amp; equity</b>	<b>31,827</b>	<b>34,578</b>	<b>39,232</b>	<b>44,553</b>
EPS growth, adjusted	-8.1%	59.2%	8.4%	20.8%	Y/E shares out, mn	310	357	357	357
EPS growth, reported	14.0%	30.6%	8.4%	20.8%	Y/E treasury shares, mn	1.0	1.0	1.0	1.0
<b>Profitability</b>					<b>CASH FLOW (VND bn)</b>	<b>2021</b>	<b>2022F</b>	<b>2023F</b>	<b>2024F</b>
Gross Profit Margin	39.8%	39.4%	38.4%	39.2%	<b>Beginning Cash Balance</b>	<b>652</b>	<b>1,831</b>	<b>4,035</b>	<b>4,221</b>
Op Profit, (EBIT) Margin	31.9%	34.9%	34.2%	35.1%	Net Income	1,855	2,423	2,626	3,173
EBITDA Margin	47.3%	47.4%	49.1%	51.4%	Dep. & amortization	893	1,166	1,538	1,920
NPAT-MI Margin, reported	31.9%	26.0%	25.5%	27.0%	Change in Working Cap	-1,109	249	-185	-297
ROE	15.0%	16.9%	16.0%	16.9%	Other adjustments <sup>(2)</sup>	-115	-203	-284	-376
ROA	7.1%	7.3%	7.1%	7.6%	<b>Cash from Operations</b>	<b>1,525</b>	<b>3,636</b>	<b>3,695</b>	<b>4,420</b>
<b>Efficiency</b>					Capital Expenditures, net	-3,912	-2,308	-5,300	-5,300
Days Inventory On Hand	91	68	80	80	Investments, net <sup>(3)</sup>	1,900	1,432	506	522
Days Accts, Receivable	153	108	95	94	<b>Cash from Investments</b>	<b>-2,013</b>	<b>-875</b>	<b>-4,794</b>	<b>-4,778</b>
Days Accts, Payable	162	119	123	123	Dividends Paid	0	-357	-571	-571
Cash Conversion Days	82	58	53	51	Δ in Share Capital	0	0	0	0
<b>Liquidity</b>					Δ in ST debt	0	-443	969	196
Current Ratio x	1.7	2.1	1.7	1.8	Δ in LT debt	1,632	354	985	1,812
Quick Ratio x	1.5	1.7	1.4	1.5	Other financing C/F	35	-110	-99	-106
Cash Ratio x	0.5	1.0	0.8	0.9	<b>Cash from Financing</b>	<b>1,667</b>	<b>-556</b>	<b>1,285</b>	<b>1,331</b>
Debt / Assets	37.6%	34.4%	35.3%	35.6%	<b>Net Change in Cash</b>	<b>1,179</b>	<b>2,204</b>	<b>185</b>	<b>974</b>
Debt / Capital	42.3%	38.6%	39.4%	39.4%	<b>Ending Cash Balance</b>	<b>1,831</b>	<b>4,035</b>	<b>4,221</b>	<b>5,195</b>
Net Debt / Equity	56.4%	41.6%	45.1%	43.8%					
Interest Coverage x	2.8	3.6	3.3	3.6					

(2) Deduct income from associates, (3) Including dividend from associates

Source: Company data, VCSC

## VCSC Rating System

**Stock ratings** are set based on projected total shareholder return (TSR), defined as (target price – current price)/current price + dividend yield, and are not related to market performance.

Equity rating key	Definition
BUY	If the projected TSR is 20% or higher
OUTPERFORM	If the projected TSR is between 10% and 20%
MARKET PERFORM	If the projected TSR is between -10% and 10%
UNDERPERFORM	If the projected TSR is between -10% and -20%
SELL	If the projected TSR is -20% or lower
NOT RATED	The company is or may be covered by the Research Department but no rating or target price is assigned either voluntarily or to comply with applicable regulation and/or firm policies in certain circumstances, including when VCSC is acting in an advisory capacity in a merger or strategic transaction involving the company.
RATING SUSPENDED, COVERAGE TERMINATED	A rating may be suspended, or coverage terminated, if fundamental information is deemed insufficient to determine a target price or investment rating or due to a reallocation of research resources. Any previous investment rating and target price are no longer in effect.

Unless otherwise specified, these performance parameters are set with a 12-month horizon. Movement in share prices may cause a temporary mismatch between the latest published rating and projected TSR for a stock based on its market price and the latest published target price.

**Target prices** are generally based on the analyst's assessment of the stock's fair value over a 12-month horizon. However, the target price may differ from the analyst's fair value if the analyst believes that the market will not price the stock in line with assessed fair value over the specified time horizon.

**Risks:** Past performance is not necessarily indicative of future results. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument mentioned in this report. For investment advice, trade execution or other enquiries, clients should contact their local sales representative.

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