

SNOWCAP

Adani Green Energy

May 2024

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Executive Summary

- Adani Green Energy Ltd (“AGEL”, or the “Company”) is the largest owner of renewable power in India, with 10.9 GW of operating capacity.
- AGEL claims that it will grow its capacity nearly five-fold by 2030 without needing to raise equity, and that it is able to achieve exceptional unlevered returns on its renewable projects as high as 17%.
- In our presentation we outline the following key findings:
 - 1 Obfuscated to investors, AGEL’s key Run-rate EBITDA metric appears to be inflated by hidden accounting add-backs and aggressive generation forecasts.
 - 2 Adjusting for accounting gimmicks, we calculate AGEL has achieved an average unlevered return on its projects of just 11-12% in the past 3 years.
 - 3 We estimate AGEL can meet just 50% of its 50GW target funding requirement by 2030 without raising equity, despite claiming this target is “fully funded”.
 - 4 Several of AGEL’s key operating assets appear to have underperformed their generation forecasts. These include AGEL’s key RG1 US bond solar assets and its flagship Jaisalmer Four hybrid power plant.
- AGEL’s stock trades at nearly 34x EV/EBITDA (NTM), vs 8-10x for renewable peers implying as much as 90% potential downside to AGEL’s equity value on a multiple basis.

Key Findings (1/3)

① Inflated Run-rate EBITDA

- Due to its rapid growth, AGEL points investors to its self-reported “Run-rate EBITDA”.
- Obscured to investors, AGEL appears to add back “other income” to its Run-rate EBITDA. This includes interest earned on loans, one-off late payment surcharge, and non-cash accounting gains.
- Not only is this seemingly inconsistent with AGEL’s reporting of its headline EBITDA number¹, we believe it is nonsense to include one-off items and non-cash accounting gains in a “run-rate” metric.
- AGEL’s Run-rate EBITDA also appears to have been buoyed by aggressive load factor estimates and high short term power prices.
- Based on disclosed project tariffs for individual projects, we estimate AGEL’s Run-rate EBITDA as of March 2024 is as much as 14-19% lower than reported.

② Declining Project Returns

- AGEL claims that it is able to earn attractive returns on its projects above those of its competitors and as high as 17%.
- Adjusting for accounting gimmicks, we estimate that AGEL has achieved an average ~11-12% Return on Capital on projects completed in the past 3 years. For context, AGEL’s cost of debt is 9.5%.
- AGEL’s lackluster Return on Capital has largely been obscured by its rapid growth, aggressive run-rate EBITDA projections, and infirm revenue accounting which has flattered capex numbers.

(1) EBITDA as per AGEL’s FY24 Annual Report. Also referred to as “EBITDA from Power Supply”.

Key Findings (2/3)

③ 50GW Funding Concerns

- AGEL claims that it will grow its capacity nearly five-fold to 50GW by 2030 and that this growth is “fully funded”.
- AGEL has produced limited free cash flow in recent periods due to its high debt servicing burden and falling project returns.
- By our own modelling, we estimate AGEL can meet just 50% of its 50GW target funding requirement by 2030 – even with the announced equity injection from promoters.
- AGEL has a history of claiming that its pipeline is fully funded, only to raise more capital. To date the Company has built less than 50% of its 2025 capacity target.

④ Mixed Operational Performance

- AGEL claims that its operational projects have “consistently outperformed”.
- Footnotes reveal that AGEL’s key RG1 assets missed even their most conservative generation forecasts, causing AGEL to revise these downwards.
- Supposed EBITDA outperformance of key bond subsidiaries has been driven mostly by growing related party interest income.
- Official power generation data from the Indian government appears to show that AGEL’s flagship hybrid portfolio has not met its minimum CUF target of 50%.

Key Findings (3/3)

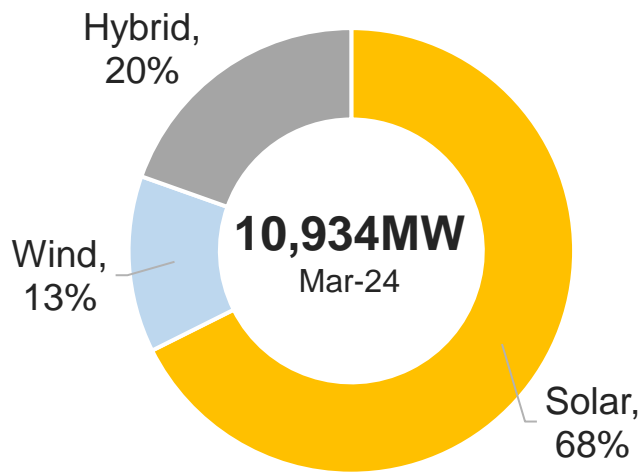
⑤ Related Party Merchant Power Sales

- AGEL has sold a growing proportion of its power on the open market and tells investors that it expects this to form a meaningful part of its strategy in the coming years.
- Indian renewable developers have historically avoided taking merchant exposure due to low trading volumes and power price uncertainty.
- Amidst high short term power prices, AGEL has been able to achieve upwards of 2x its PPA prices for these merchant power sales. As a result, they have made an outsized contribution to AGEL's EBITDA and cash flow generation.
- We think AGEL is less upfront about its dependence on related Adani entities for these sales. In FY23, disclosures in AGEL's annual report reveal that 81% of the Company's infirm revenues (the bulk of its merchant power sales in the year) were to Adani Enterprises and Adani Energy Solutions.

Introduction

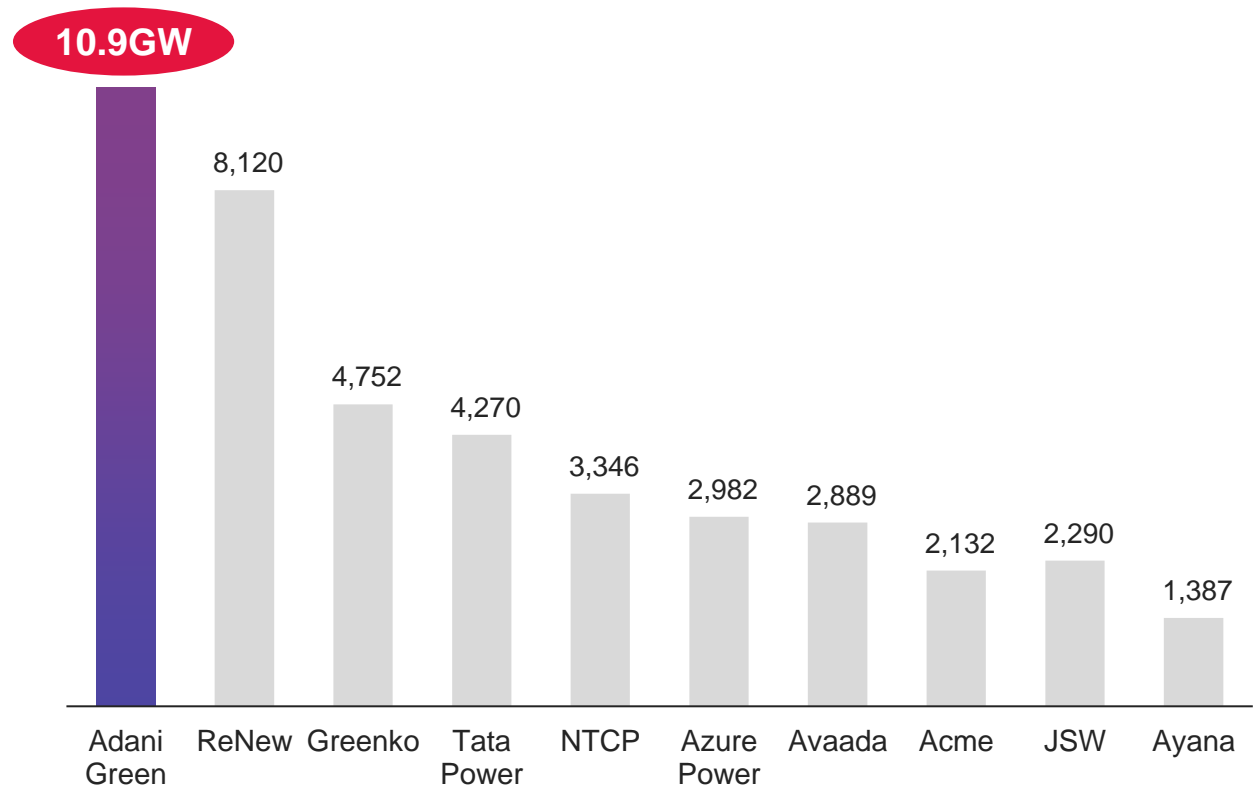
Adani Green is the largest owner of renewables in India, with 10.9GW of operational capacity

AGEL Installed Capacity (MW)



India Renewable Capacity (MW Operating)

Source: BNEF

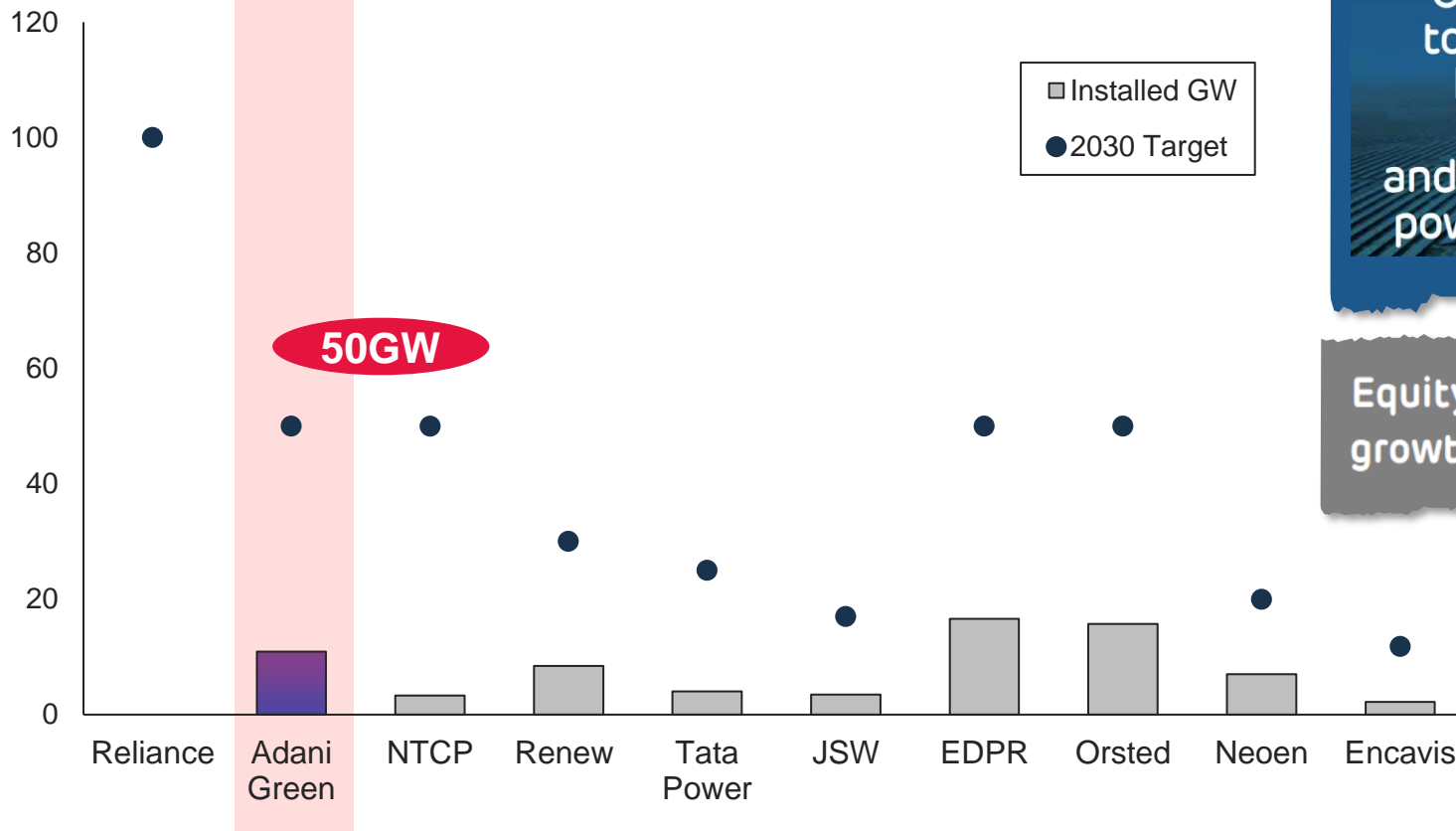


Source: Company Filings
 Note: Hybrid combines wind and solar to achieve higher load factors.

AGEL claims it will grow its capacity 5x by 2030, and that this growth is "fully funded"

2030 Renewable Targets - GW

Source: Company Filings



Our Company aspires to become the world's largest solar power company by 2025 and the largest renewable power company by 2030

Equity infusion for fully funded growth up to 45 GW by 2030

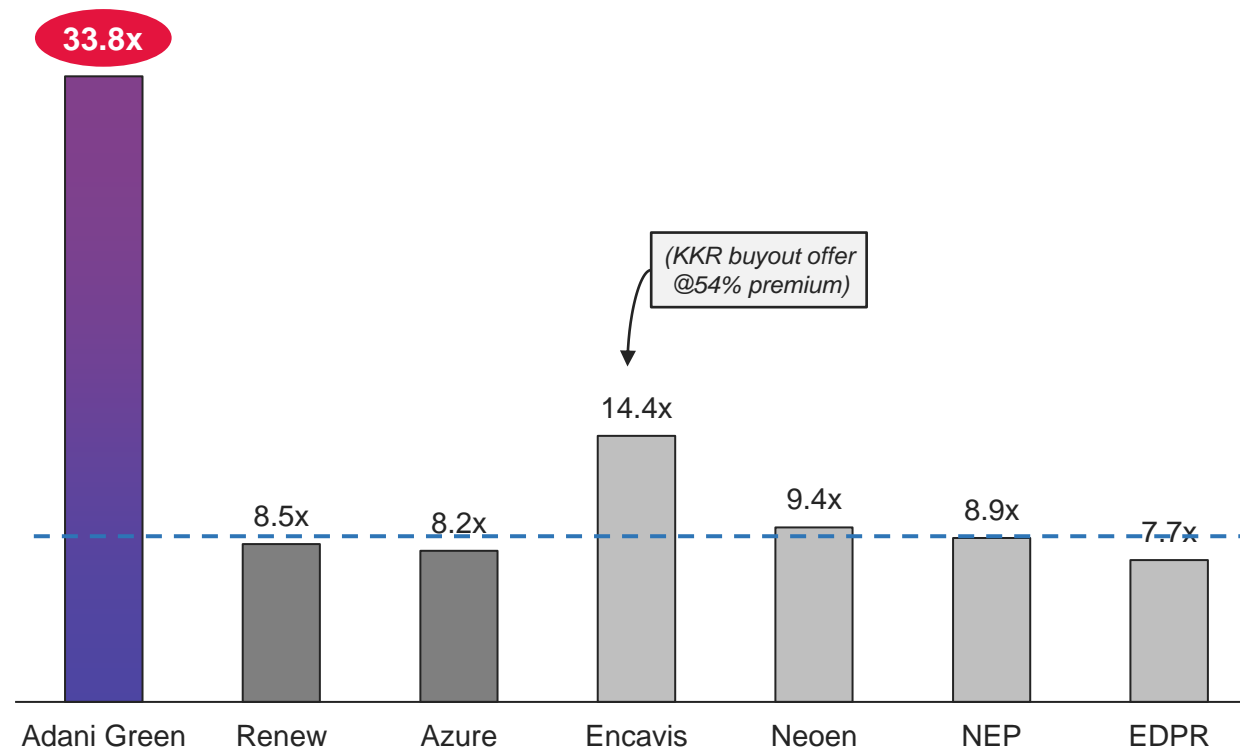
Source: Adani Green Annual Reports, [Adani Green Presentation July 2022](#)

AGEL trades at a significant premium to its renewable peers

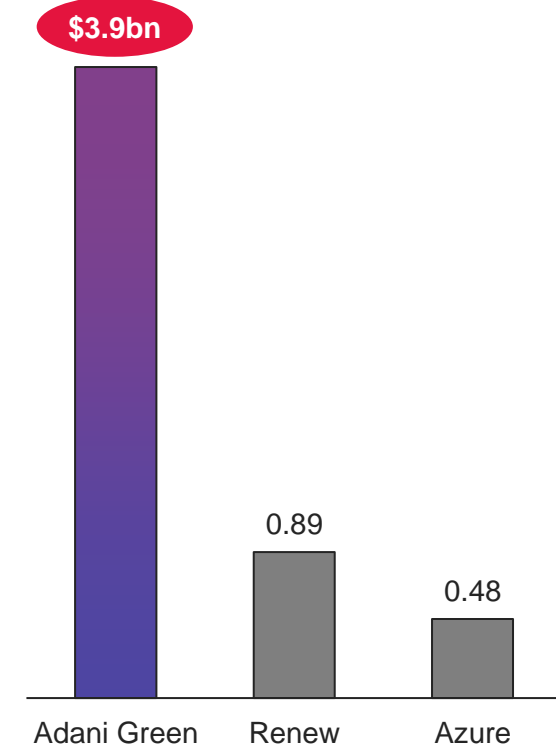
AGEL trades at more than 34x EV/EBITDA vs renewable peers which trade at c. 8-9x, implying as much as 90% potential downside to AGEL's equity value on a multiple basis.

TEV/Fwd EBITDA – Renewable Peers

Source: Capital IQ



TEV/GW (\$bn) – India Peers

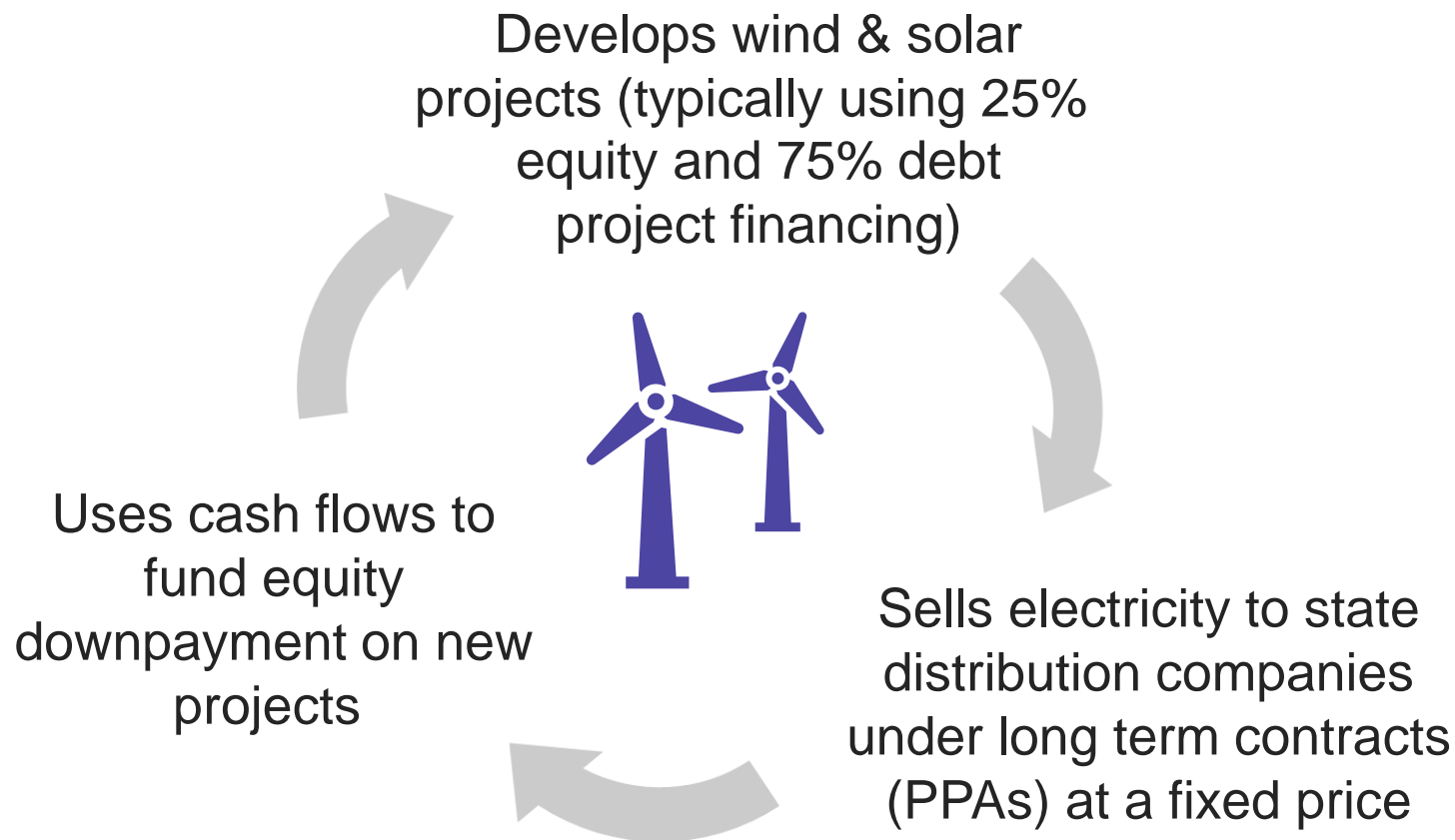


Note: Total Enterprise Value adjusted for Capital Work in Progress. Dark grey denotes Indian peers. Azure Power multiple uses LTM EBITDA.

AGEL's business model is predicated on reinvesting cash flows to fund its growth

Illustrative Business Model

Source: Snowcap



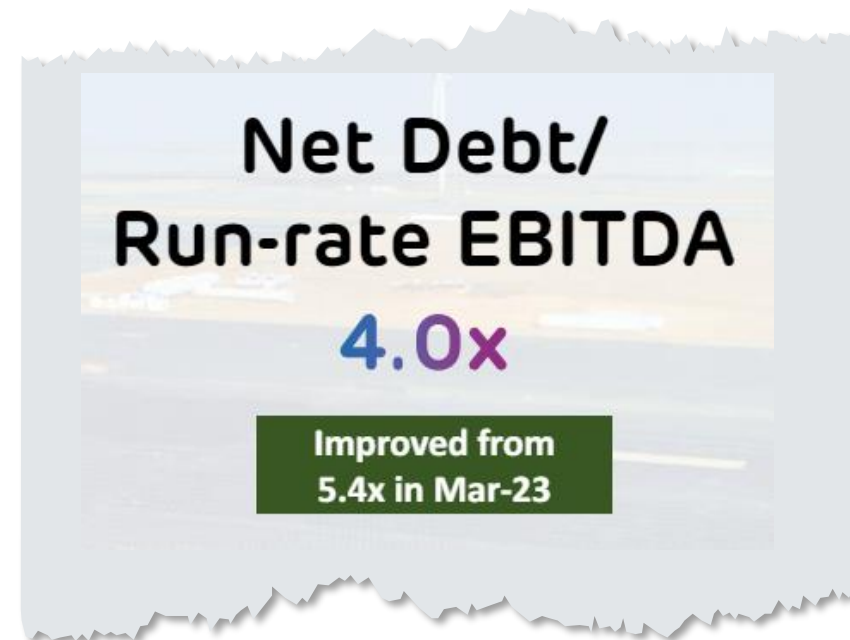
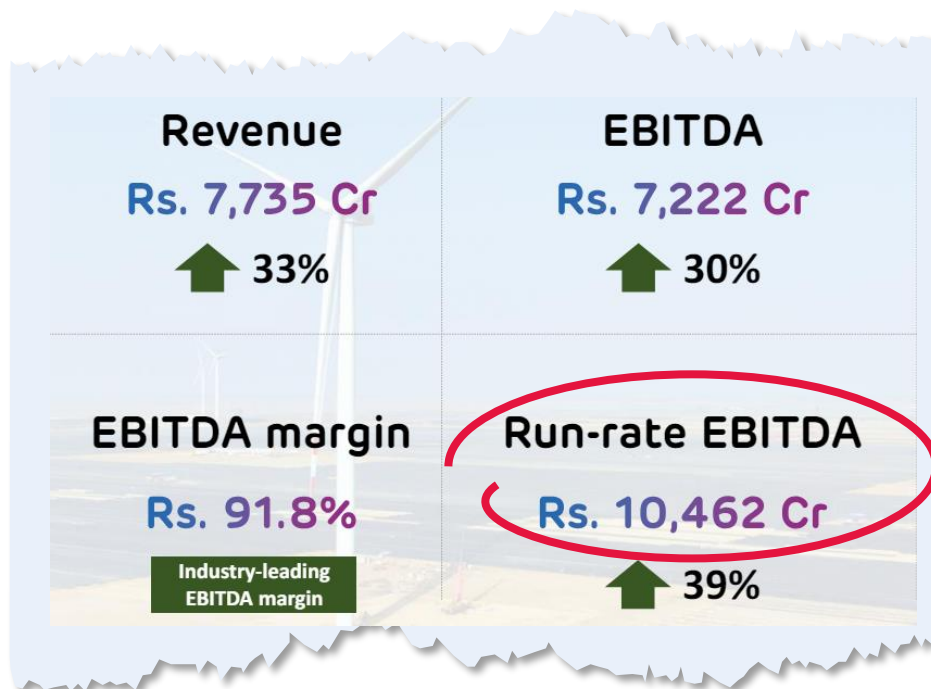
1. Inflated Run-rate EBITDA

Due to its rapid growth, investors rely heavily on AGEL’s self-reported “Run-rate EBITDA” metric

AGEL points investors to its self-reported “Run-rate EBITDA” metric as a proxy for the run-rate economics and leverage of its business, as well as its return on capital.

FY24 Results Presentation

AGEL claims that its leverage is moderate and improving based on its Net Debt / Run-rate EBITDA multiple



Source: [FY24 Results Presentation](#)

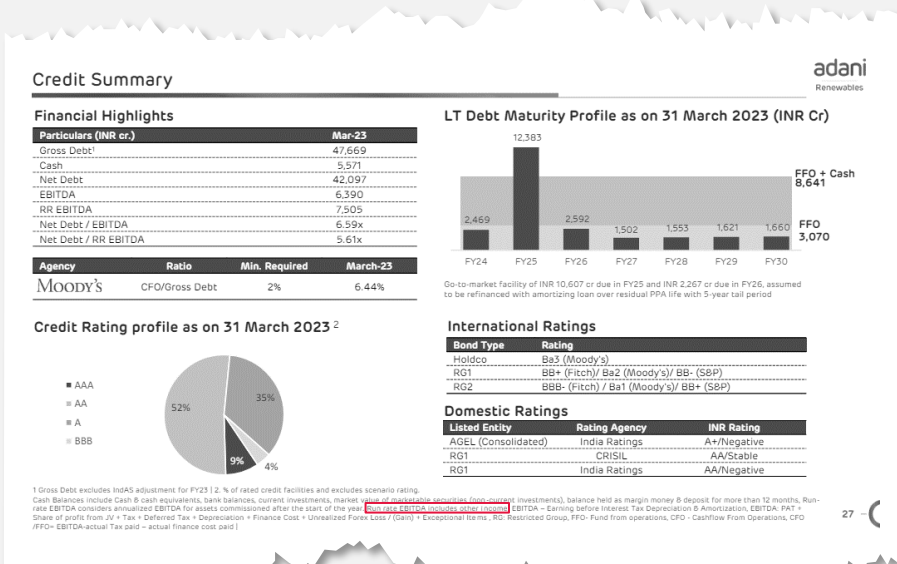
Yet obfuscated to investors, AGEL's Run-rate EBITDA appears to include interest income and one-off / non-cash accounting gains

Buried on page 27 of its credit presentation, AGEL discloses that its reported run-rate EBITDA includes "other income".

Other income includes interest earned on cash and loans, one-off late payment charges, and non-cash accounting gains.

Credit Presentation November 2023

Source: [AGEL Credit Presentation November 2023](#),



Run rate EBITDA includes other income.

Other Income Breakdown

Source: [Annual Report FY24](#), Page 494

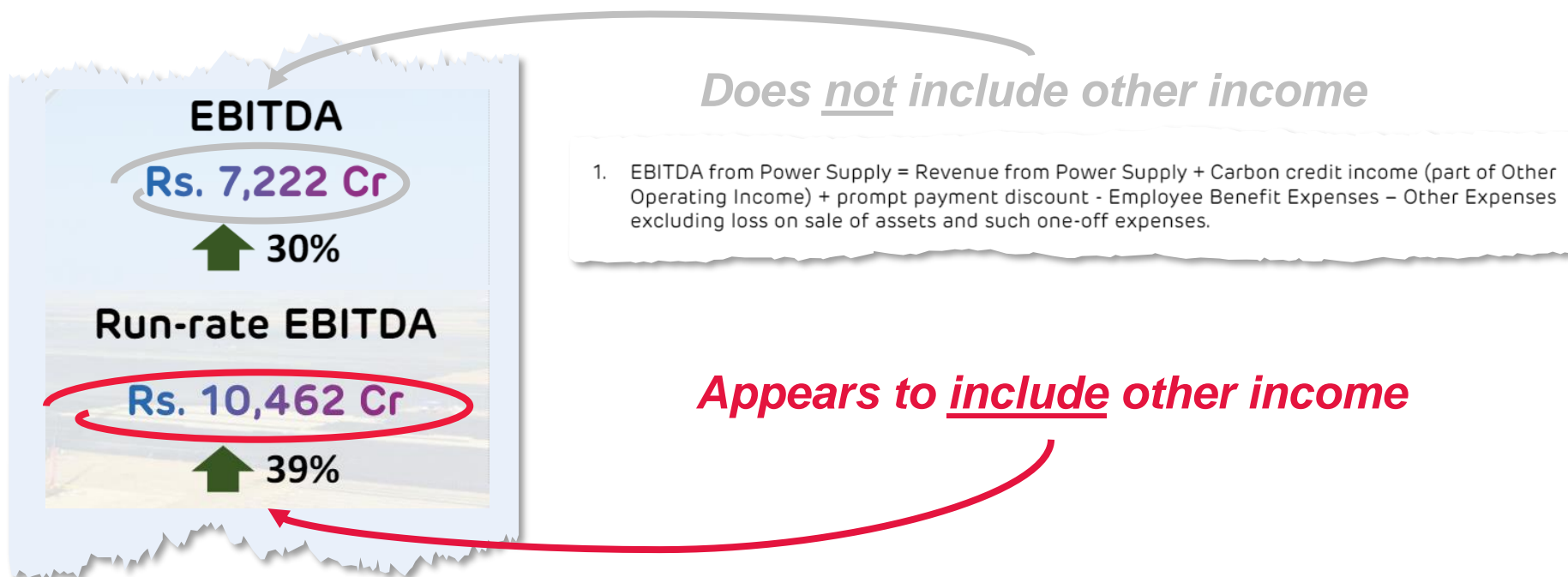
Other Income

| INR Crore | FY23 | FY24 |
|-------------------------------------|------------|-------------|
| Interest on Intercorporate Deposits | 8 | 13 |
| Interest on Bank Deposits | 181 | 448 |
| Late Payment Surcharge | 324 | 353 |
| Interest Income (Other) | 94 | 103 |
| Service Income | 15 | 24 |
| Gain on Sale | 35 | 87 |
| Sale of Scrap | 1 | 5 |
| Liabilities written back | 51 | 97 |
| Accounting gains (non-cash) | 132 | 110 |
| Other Income | 841 | 1240 |

AGEL does not include these items in its headline EBITDA¹, yet *includes* them in Run-rate EBITDA?

Not only is this inconsistent with AGEL’s reporting of its headline EBITDA, we believe it is nonsense to include one-off items and non-cash accounting gains in a “run-rate” metric.

FY24 Results Presentation



! We think investors reasonably assume that these two numbers are apples to apples.

Source: [Results Presentation FY24](#)

(1) EBITDA reported in AGEL’s [FY24 Annual Report](#) – also referred to as “EBITDA from Power Supply”.

AGEL's Run-rate EBITDA has also been buoyed by aggressive forecasts and high merchant prices

AGEL appears to use aggressive load factor estimates with just a 50% probability of occurring. Furthermore, AGEL's EBITDA is increasingly sensitive to merchant power prices.

! AGEL calculates Run-rate EBITDA is using **P-50 solar estimates** (expected to be met in at least 50% of years).

4 Estimated EBITDA for full year of operations; Solar at P50; Wind at P75

S&P note that projects assuming P50 estimates typically have 18% lower cash flows than estimated.

S&P Global
Ratings

- Projects assuming P50 generation (typically solar) have about **18% lower cash flows** than company estimates.

! Increasing exposure to merchant power price assumptions.

Asset Level Details – Operational (contd.)

| SPV | Project Location | Type | Contracted Capacity (AC) | Capacity (DC) | Tariff | COD/ Capitalization | Counterparty Name | PPA Term |
|----------|------------------|-------|--------------------------|---------------|--------|---------------------|-------------------|----------|
| ASEKANPL | Karnataka | Solar | 200 | 300 | 2.82 | Dec-19 | SECI | 25 |
| ASEAPSP | Andhra Pradesh | Solar | 350 | 455 | 4.63 | Jul-17 | NTPC | 25 |
| ASERJOP | Rajasthan | Solar | 300 | 453 | 2.48 | Jun-21 | NTPC | 25 |
| VEIPL | Odisha | Solar | 40 | 40 | 4.24 | Dec-19 | SECI | 25 |
| | Rajasthan | Solar | 150 | 215 | 2.61 | Nov-22 | SECI | 25 |
| ASEJA2PL | Rajasthan | Solar | 62 | 87 | NA | Mar-23 | Merchant | NA |
| | Rajasthan | Solar | 88 | 125 | NA | Oct-23 | Merchant | NA |
| AGE24AL | Gujarat | Solar | 351 | 481 | 2.42 | Feb-24 | SECI | 25 |
| | Gujarat | Solar | 149 | 204 | 2.42 | Mar-24 | SECI | 25 |
| AGE24BL | Gujarat | Solar | 200 | 274 | 2.42 | Feb-24 | SECI | 25 |
| | Gujarat | Solar | 300 | 411 | 2.42 | Mar-24 | SECI | 25 |
| ASERJ2PL | Rajasthan | Solar | 180 | 247 | 2.65 | Mar-24 | SECI | 25 |
| | Rajasthan | Solar | 150 | 213 | 2.65 | Mar-24 | SECI | 25 |
| AGE25AL | Gujarat | Solar | 225 | 308 | 2.42 | Mar-24 | SECI | 25 |
| AGE25BL | Gujarat | Solar | 500 | 685 | 2.42 | Mar-24 | SECI | 25 |
| AGE26BL | Gujarat | Solar | 100 | 137 | 2.42 | Mar-24 | SECI | 25 |
| ARE95L | Gujarat | Solar | 13 | 17 | NA | Mar-24 | Merchant | NA |
| AHEJ5L | Gujarat | Solar | 25 | 34 | NA | Mar-24 | Merchant | NA |
| AGE24L | Gujarat | Solar | 25 | 34 | NA | Mar-24 | Merchant | NA |
| AGE25CL | Gujarat | Solar | 25 | 34 | NA | Mar-24 | Merchant | NA |
| ARE96L | Gujarat | Solar | 25 | 34 | NA | Mar-24 | Merchant | NA |
| ASEJ6PL | Gujarat | Solar | 25 | 34 | NA | Mar-24 | Merchant | NA |
| ARE97L | Gujarat | Solar | 13 | 17 | NA | Mar-24 | Merchant | NA |
| ARE41L | Gujarat | Solar | 13 | 17 | NA | Mar-24 | Merchant | NA |
| AGE26AL | Gujarat | Solar | 13 | 17 | NA | Mar-24 | Merchant | NA |

40% of AGEL's new capacity in FY24 is "open" i.e. merchant.

Based on disclosed individual project tariffs and achieved load factors, we estimate AGEL's Run-rate EBITDA is circa 14% lower than reported

We estimated AGEL's Run-rate EBITDA using individual project tariffs disclosed by the Company, LTM load factors, and applying an EBITDA margin of 92%.

FY24 Run-rate EBITDA Estimate

Source: Snowcap calculation based on Company Filings

| | MW | Weighted Avg Tariff INR/MWh | CUF (LTM) | Revenue (INR Cr.) |
|---|---------------|-----------------------------|-----------|-------------------|
| Solar | 7,395 | 3.95 | 24.5% | 6,271 |
| Wind | 1,401 | 3.45 | 29.4% | 1,244 |
| Hybrid | 2,140 | 2.85 | 40.7% | 2,177 |
| Total | 10,936 | | | 9,691 |
| <i>% EBITDA Margin</i> | | | | 92% |
| Run-rate EBITDA from Power Supply (Snowcap est.) | | | | 8,955 |
| Reported Run-rate EBITDA | | | | 10,462 |
| <i>Delta</i> | | | | -14% |

Key Assumptions

- FY24 LTM achieved load factors

Consistent high Solar portfolio CUF at 24.5%
 Wind portfolio CUF at 29.4%
 Hybrid portfolio CUF at 40.7%

- 92% EBITDA margin
- 5 INR per kWh merchant power prices

Source: Company Filings

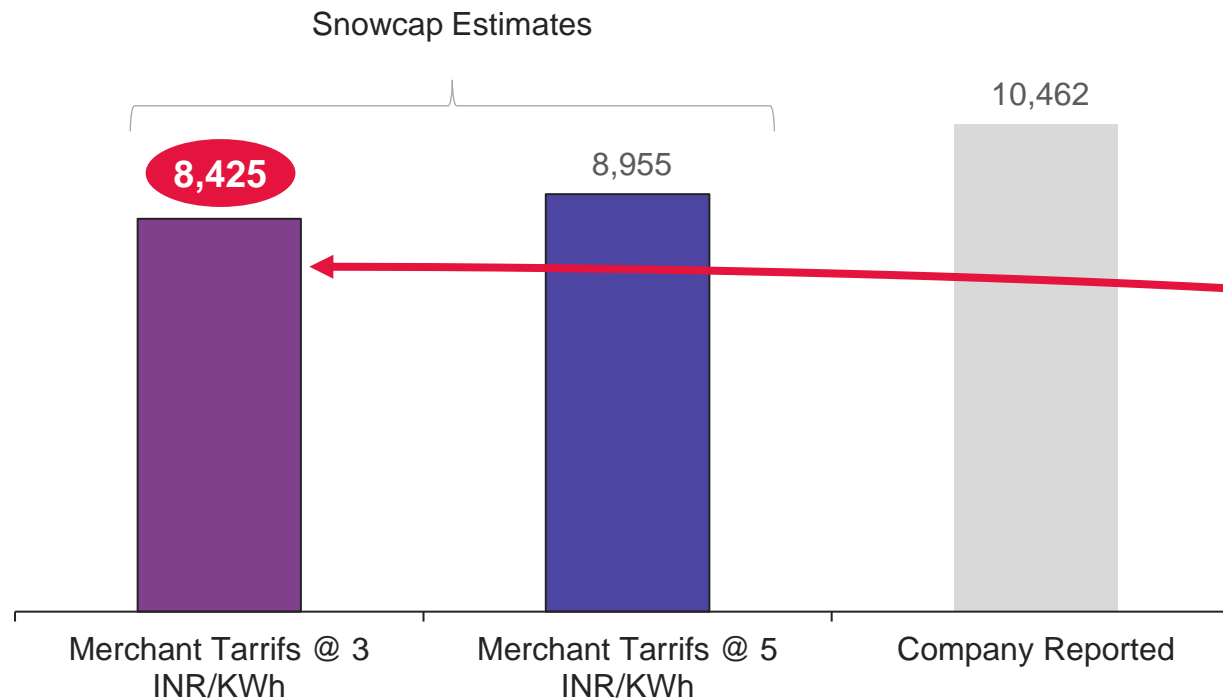
Note: Assumes average sales price for AGEL's merchant assets of 5 INR / kWh. AGEL's EBITDA margin from Power Supply in FY23 was 92%.

And as much as 19% lower if we adjust for normalised power prices...

Assuming a merchant power price of 3 INR/kWh, we estimate AGEL's Run-rate EBITDA as of March 2024 is circa 8,425 crores; 19% lower than reported.

FY24 Run-rate EBITDA Estimate vs Merchant Power Price

Source: Snowcap calculation based on Company Filings



Base Case Power Price

Source: [CARE Edge Ratings](#)

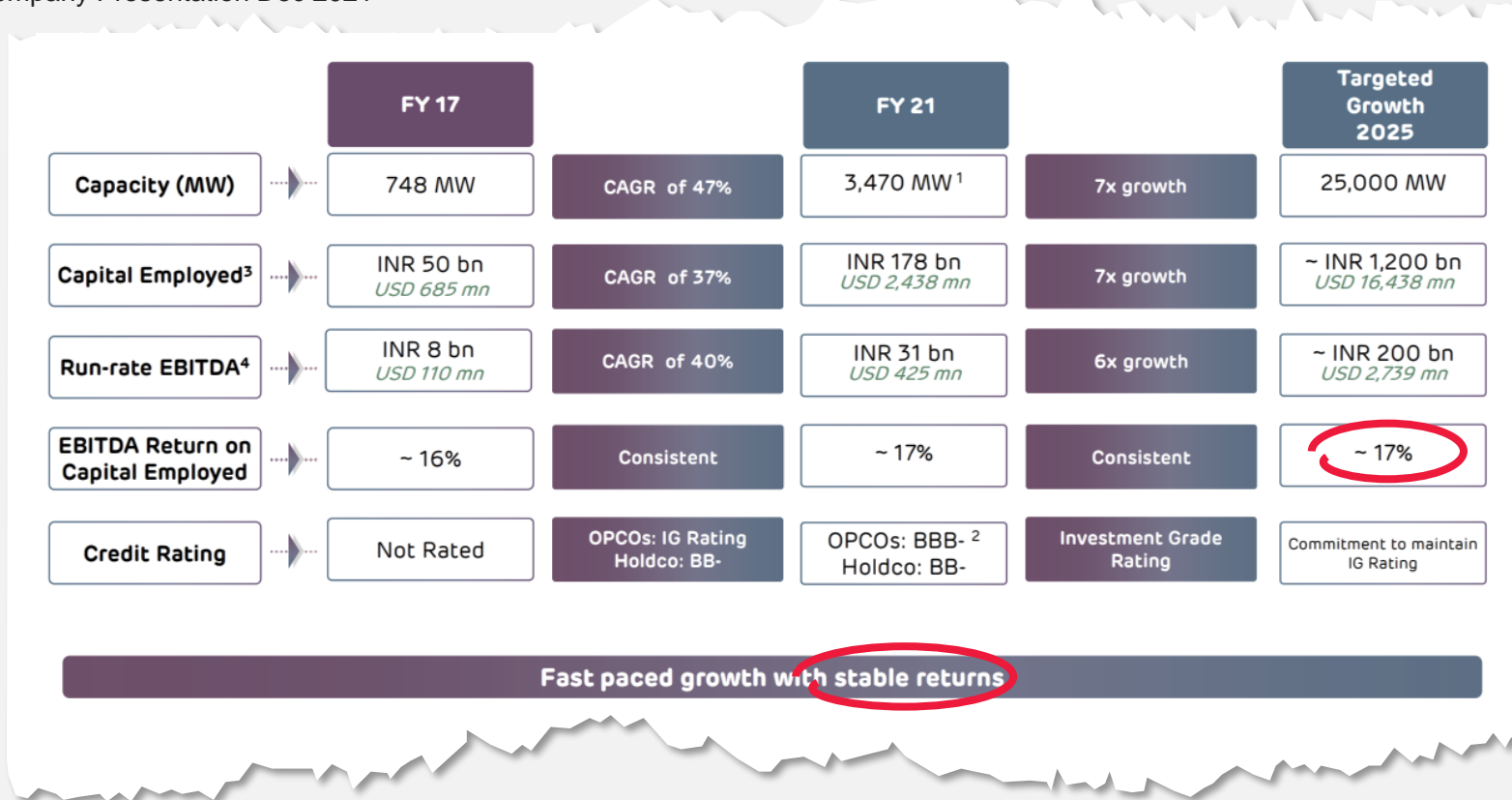


2. Declining Project Returns

AGEL tells investors that it is able to achieve attractive unlevered returns on its projects of up to 17%

Adani Green 2025 Targets

Source: Company Presentation Dec 2021



Source: [Company Presentation December 2021](#).

Even in recent guidance, management continue to imply high-teen returns for projects

Adani Green Earnings Call Q1 2024

Source: [Earnings Call Transcript](#)

Puneet (HSBC): Your capex EBITDA, what kind of gross block to EBITDA would you be targeting?

Phuntsok Wangyal (CFO): I think our run rate EBITDA for this – for corresponding to these 8,316 megawatts, we are talking about run rate EBITDA of around INR7,645 crores actually. And adding to 2.8 to 3 gigawatts of incremental capacity, which we will be adding in this financial year, we are talking about approximately INR10,800 crores of run rate EBITDA.

Puneet (HSBC): And the gross block for this?

Phuntsok Wangyal (CFO): Yes. So I think what we are -- capex cost per megawatt, excluding BCD for solar projects is between INR4.8 crores to INR5 crores actually. .. for wind. (Raj Kumar Jain): It will be close to INR6.3 crores to INR6.5 crores per megawatt. And so this, again, is industry leading in terms of the cost of power,

Implied Return on Capital

Source: Snowcap calculation, INR Crore

Run-rate EBITDA

Q1 FY24 Operating Assets 7,645

End of FY24 Guidance 10,800

Incremental EBITDA 3,155

Capex

Capacity Addition (MW) 3.0

Cost per MW (INR Cr) 6.0

Estimated Capex 18,000

Implied ROC 18%

Note: In historical [presentations](#), AGEL explicitly calculated Return on Capital Employed as Run-rate EBITDA / Gross Block.

By comparison, competitors describe ~10% returns as typical for the Indian renewables sector

ReNew Power Commentary

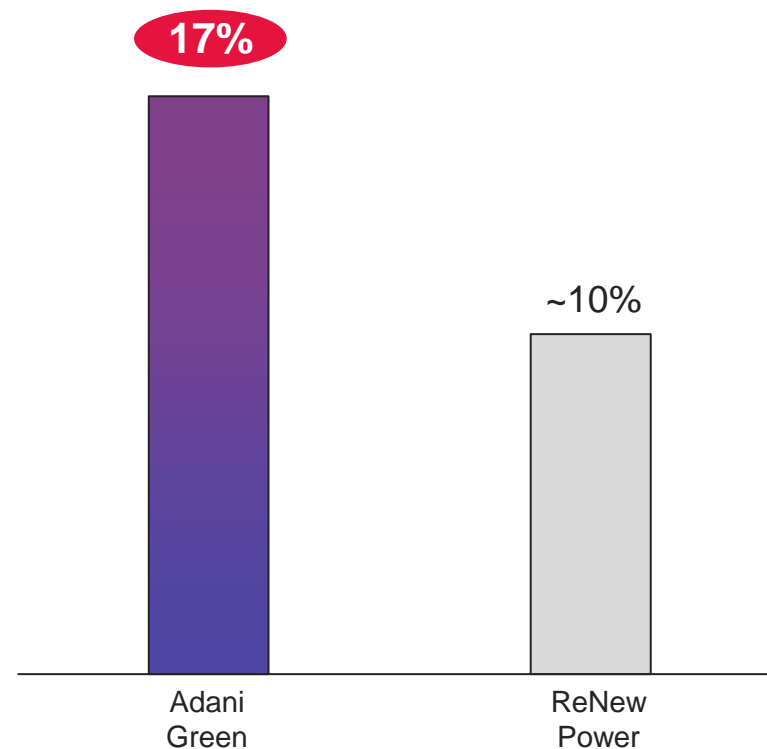
Source: Absolute Return Podcast with Sumant Sinha June 2021

“The total cost required to set up a one-megawatt project is approximately about \$850,000 per megawatt. For solar it’s about half of that. And the EBITDA that you make on a one-megawatt project is close to about 80 to \$90,000 per megawatt per year. And again, half that for solar. And so that’s how the economics work out.”

Sumant Sinha
CEO ReNew Power

Return on Capital Target (%)

Source: Company Presentation Dec 2021, Sumant Sinha (ReNew Power CEO) commentary June 2021



Source: [Absolute Return Podcast Interview with Sumant Sinha and Bob Mancini June 2021](#)

Not only is AGEL's Run-rate EBITDA seemingly inflated, its capital expenditures have been flattered by infirm revenue accounting

In the past 3 years, AGEL has netted a total of INR 2,442 crores of revenues earned from selling electricity prior to commissioning from its capital expenditures.

Infirm Revenue Disclosures - Annual Report FY23

*The above revenue as reported in Statement of Profit and Loss excludes Infirm Revenue of ₹1,724 Crores (31st March, 2022 ₹540 Crores) earned during construction of renewable power projects. The same has been netted off in Capital work-in-progress from cost incurred for construction of renewable power projects.

FY22 Earnings Transcript – May 2022

Nikhil Nigania



So wanted to understand what is the impact on returns on the project, especially given the case of the environment, whereas wind turbine prices are going up

We're able to recoup a lot of these additional costs by additional power sales in either exchanges or otherwise, which offset the increase in cost of construction of the plant.

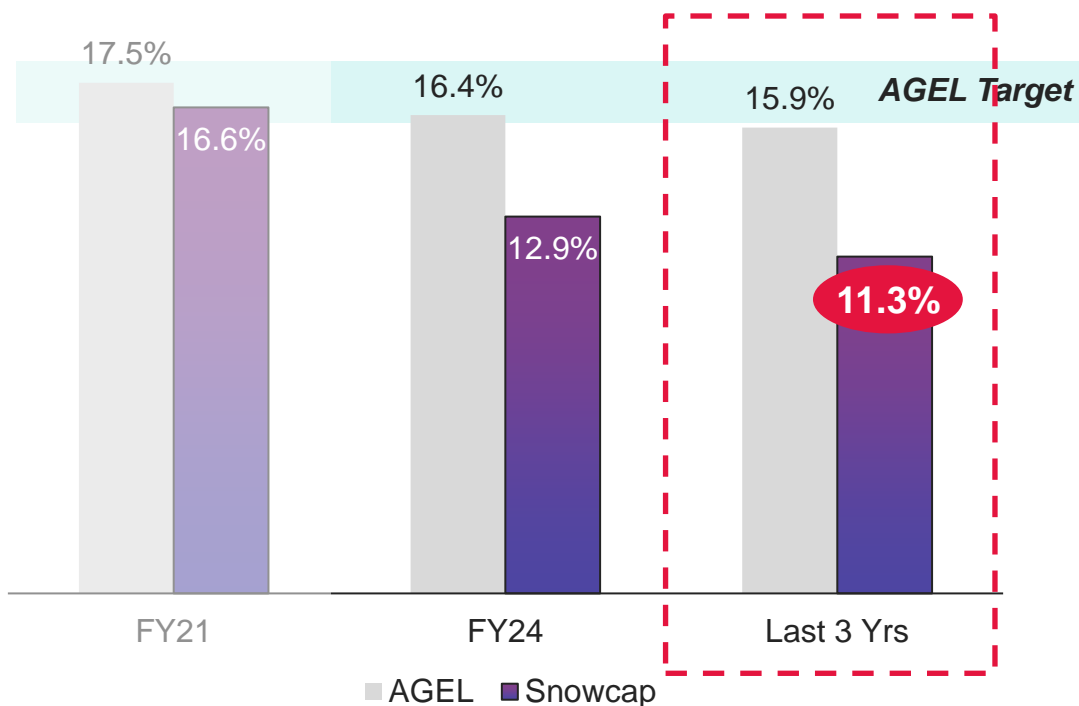
Sagar Adani
AGEL

Adjusting for both, we calculate AGEL has achieved an average return on capital of just ~11-12% on its projects completed in the past 3 years

In our calculation we use our own estimate of AGEL's Run-rate EBITDA and adjust AGEL's gross block (gross PP&E ex. CWIP) to reflect infirm revenues.¹

Stabilised Return on Capital (Cumulative) – Snowcap Estimate

Snowcap Calculation. Adjusted Run rate EBITDA (Snowcap) / Adjusted Gross Block (inc. infirm revenues). See Appendix for Run-rate EBITDA calculations..



| | FY21 | FY24 | Last 3 Yrs |
|--------------------------|--------------|--------------|--------------|
| Company | | | |
| Reported Run-rate EBITDA | 3,100 | 10,462 | 7,362 |
| Gross Block | 17,753 | 63,971 | 46,218 |
| Return on Capital | 17.5% | 16.4% | 15.9% |
| Snowcap | | | |
| Snowcap Run-rate EBITDA | 2,950 | 8,425 | 5,475 |
| Snowcap Gross Block | 17,753 | 66,413 | 48,660 |
| Return on Capital | 16.6% | 12.7% | 11.3% |

Source: Company Filings.

Note: We have defined gross block as gross Plant and Machinery. Run-rate EBITDA numbers exclude income from carbon credits. AGEL return on capital as implied by reported Run-rate EBITDA / Gross Block.

(1) Snowcap Gross Block adjusted to include cumulative infirm revenues of INR 2,442 crore (see appendix for calculation).

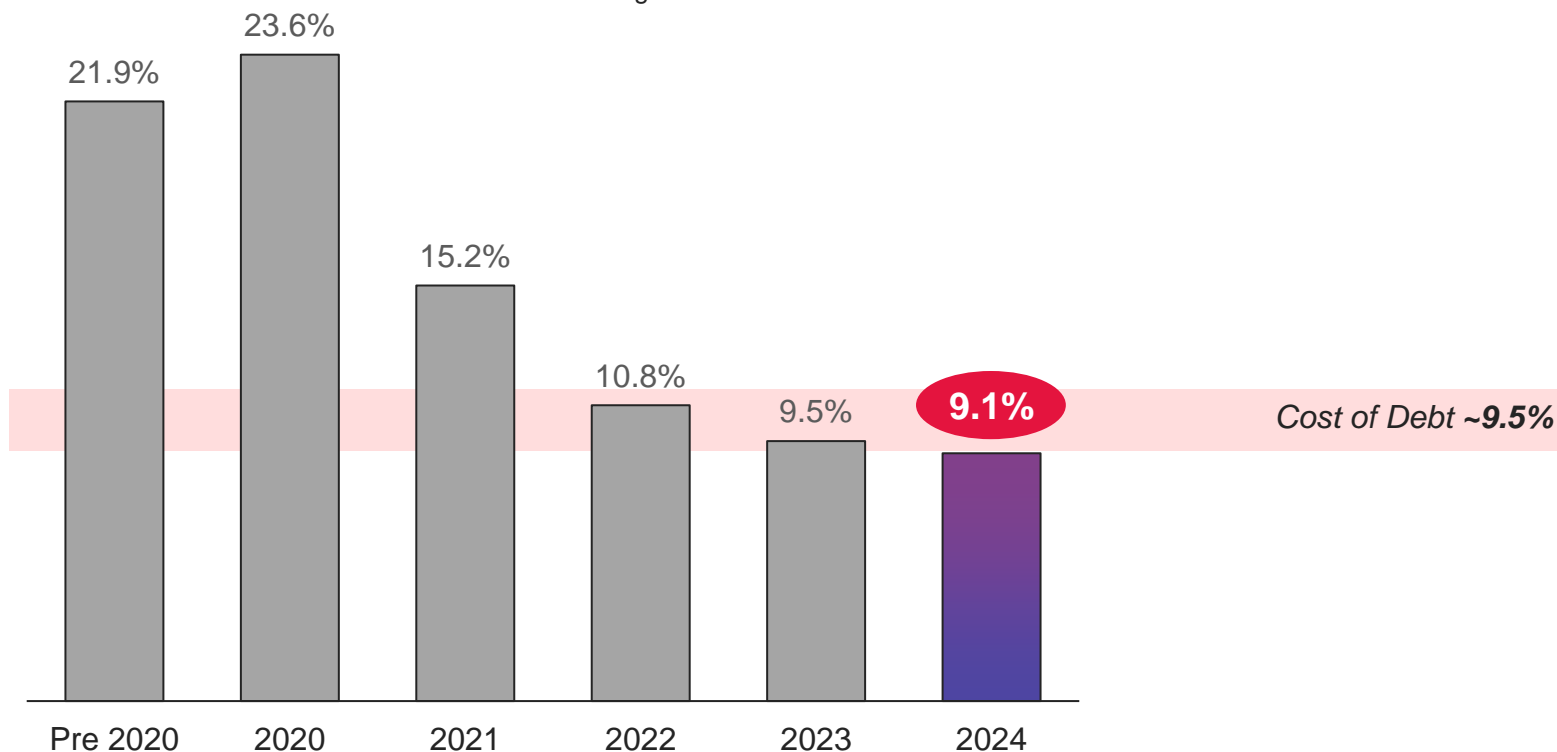
(2) Run-rate EBITDA estimate as per slide 17 assuming an average merchant tariff of 3 INR/MWh

While IRRs for these recent projects may - by our calculation - be even lower...

After factoring in degradation and applying a terminal value, we estimate that AGEL's unlevered IRR for projects completed in FY23 and FY24 may be as low as ~9%.

Estimated Project IRRs by Vintage – Snowcap Estimate

Snowcap calculation using estimated INR/MW development costs for each vintage (detailed in Appendix). Assumes Terminal Value of 3.0x EBITDA at end of 25-yr PPA term and LTM Utilisation Factors / EBITDA margin.



Note: Project IRRs calculated on an unlevered basis assuming LTM EBITDA margin (92%) and CUFs (25% for solar, 30% for wind, and 41% for hybrid), terminal value in year 26 (end of PPA) of 3.0x year 1 RR EBITDA (similar to values used by AGEL in RG1 forecasts), 0.5% degradation p.a., and 3.0 INR/kWh flat tariff for merchant projects. Development costs for each vintage of operational projects are estimated using the INR/MW values calculated in the Appendix. For the purposes of estimating project IRRs, we have assumed development costs are incurred in their entirety at the COD date.

3. 50GW Funding Shortfall

AGEL says it can fund its growth pipeline using its “astronomical” free cash flows

AGEL management have consistently claimed that AGEL will be able to fund its pipeline using organic cash flows, ruling out the need for further equity raises.

AGEL Earnings Call – May 2022

Mohit Kumar
DAM Capital

Is this INR 38 billion [of debt issuance] sufficient, do you think, for developing your entire portfolio of 20 gigawatt? Or do you think you need to raise equity at some point of time?

““”

Sagar Adani
Adani Green

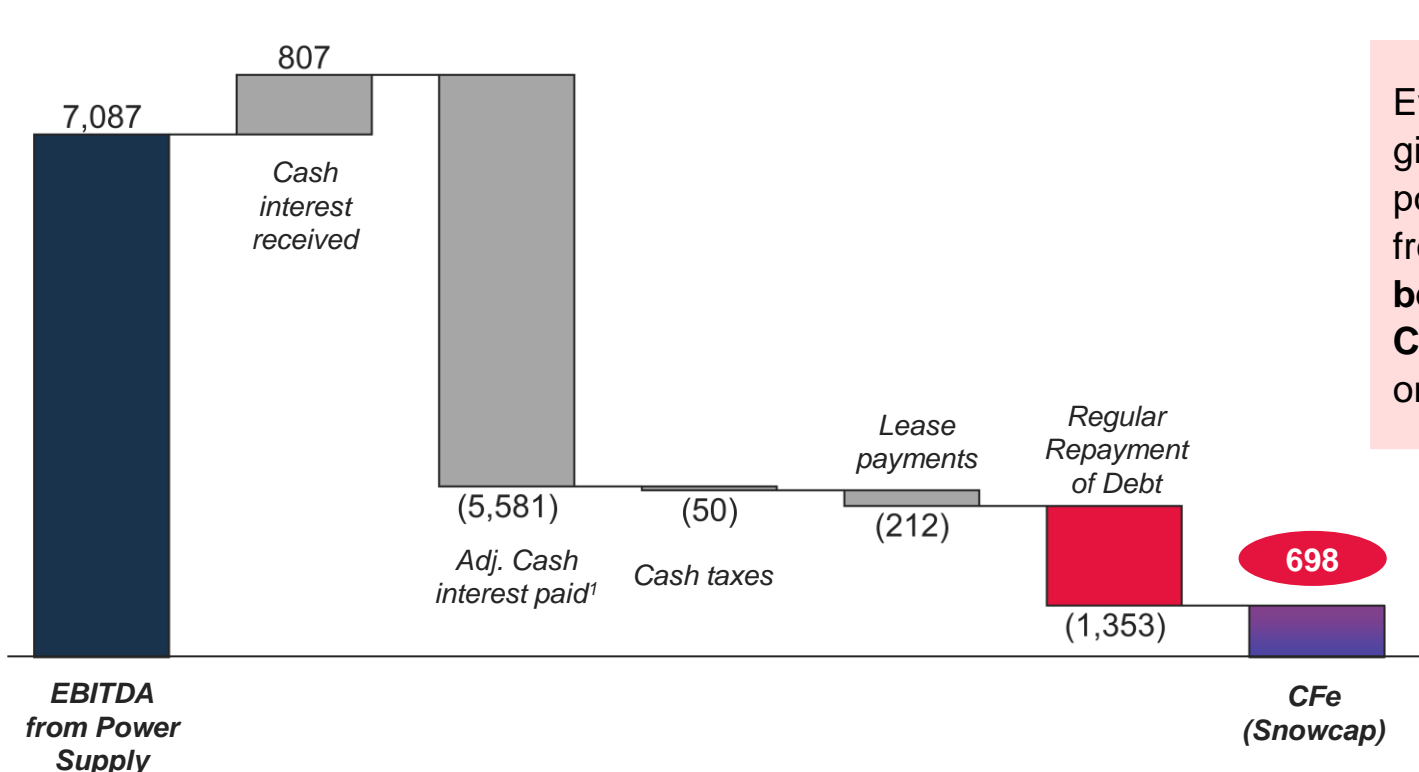
No, the INR 38 billion will be **fully funded** because as you very well would be aware, INR 38 billion is in addition to the capacity that we have for raising Holdco debt and the **significant free cash flow to equity coming from our plants every single year, which number rises astronomically year-on-year**. So, we have quite – **we don't expect or foresee any equity raises after this.**

In reality, AGEL has generated limited cash flow due to its high debt servicing burden

By our calculation, AGEL's free cash flow to equity in FY24 was circa 700 crore; substantially lower than previous guidance provided by management.

Cash Flow to Equity ("CFe") – FY24 INR Crore

Source: Company Filings, Snowcap calculation. As per ReNew Power's CFe methodology we exclude working capital movements.



“““
 Even looking at around 8.1 gigawatt of current operational portfolio... we are looking at free cash flow to equity of **between Rs. 1,600 to 1,800 Crore**... And this is also slightly on a conservative side

Phuntsok Wangyal (CFO),
[February 2023 Earnings Call](#)

Source: Company Filings.

Note: Regular Repayment of Debt as per AGEL's FY24 earnings presentation, Excludes working capital movements as per ReNew Power's CFe definition. Includes income from carbon credits. Excludes any maintenance capital expenditures. Interest income excludes one-off late payment surcharge. Cash interest payments adjusted for hedging gain rollover in H1 of 982 crores ([H1 FY24 earnings call transcript](#) page 9).

This has been masked to some extent by an unusual spike in AGEL’s working capital

In FY23, AGEL’s cash flows were inflated by a massive spike in its contract liabilities; which made a significant contribution to AGEL’s levered cash from operations in the year.

Working Capital Contribution to Cash Flows

Source: Company Filings

“““

“On your consolidated cash flow statement. I can see on the working capital side, two large inflows. One is current asset inflow of INR609 crores, and then current liability inflow of INR1,277 crores. **Can you elaborate on, what exactly these are?**”

– Bharat, Standard Chartered
([Earnings Call Q4 FY23](#))

| Working Capital Changes: | | |
|---|------------|--------------|
| (Increase) / Decrease in Operating Assets | | |
| Other Non-Current Assets | 56 | (98) |
| Other Non-Current Financial Assets | 192 | 15 |
| Inventories | (252) | (27) |
| Trade Receivables | 893 | (450) |
| Other Current Assets | (206) | 609 |
| Other Current Financial Assets | (28) | (57) |
| Increase / (Decrease) in Operating Liabilities | | |
| Non - Current Provisions | 5 | 7 |
| Other Non-Current Liabilities | (108) | 87 |
| Trade Payables | 122 | 316 |
| Current Provisions | 4 | 2 |
| Other Current Liabilities | (245) | 1,277 |
| Other Current Financial Liabilities | (16) | 2 |
| Net Working Capital Changes | 417 | 1,683 |

Phuntsok Wangyal (Adani Green CFO)

So I think may be what, this is not readily available with me

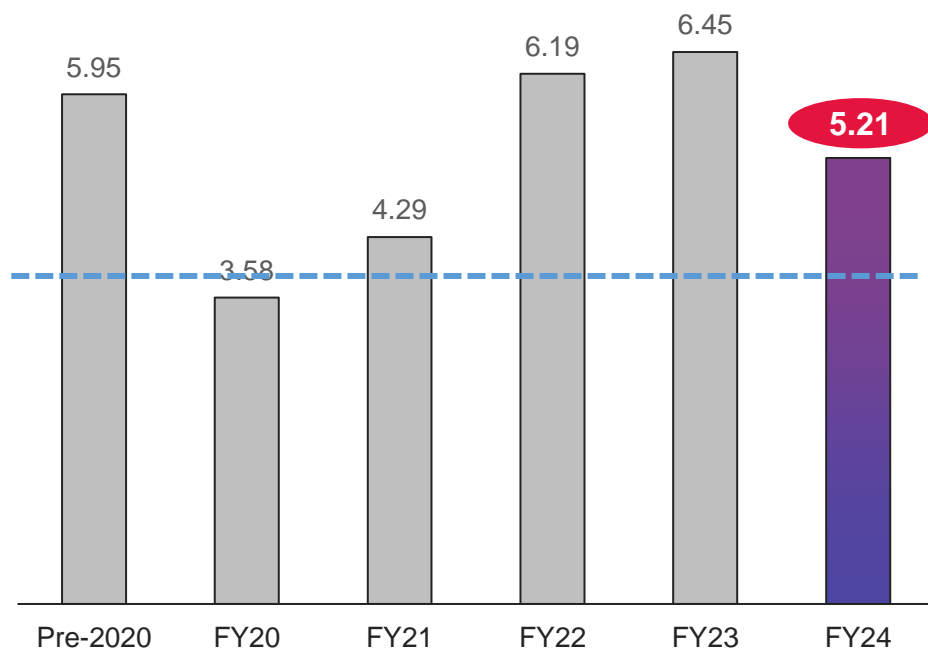
AGEL's development costs have risen meaningfully since it first set its 2030 targets

AGEL's reported gross PP&E implies an average development cost of 5.24 Core per MW in FY24.

Implied Development Cost – ₹ INR Cr / MW

Source: Snowcap analysis of Company Filings
 Calculated as change in Gross Plant & Machinery/ change in operational capacity in the period. Adjusted to reflect infirm revenues and full AC hybrid built capacity. See Appendix for calculation.

AGEL's cost per MW is substantially higher than assumed by the Company when it made its 45GW target in 2021...



“”
 At an average ₹ 4Cr per MW capital cost (as in 2021), [achieving 45GW] will require capex of ₹166,000 Crore or US \$22.13 billion.

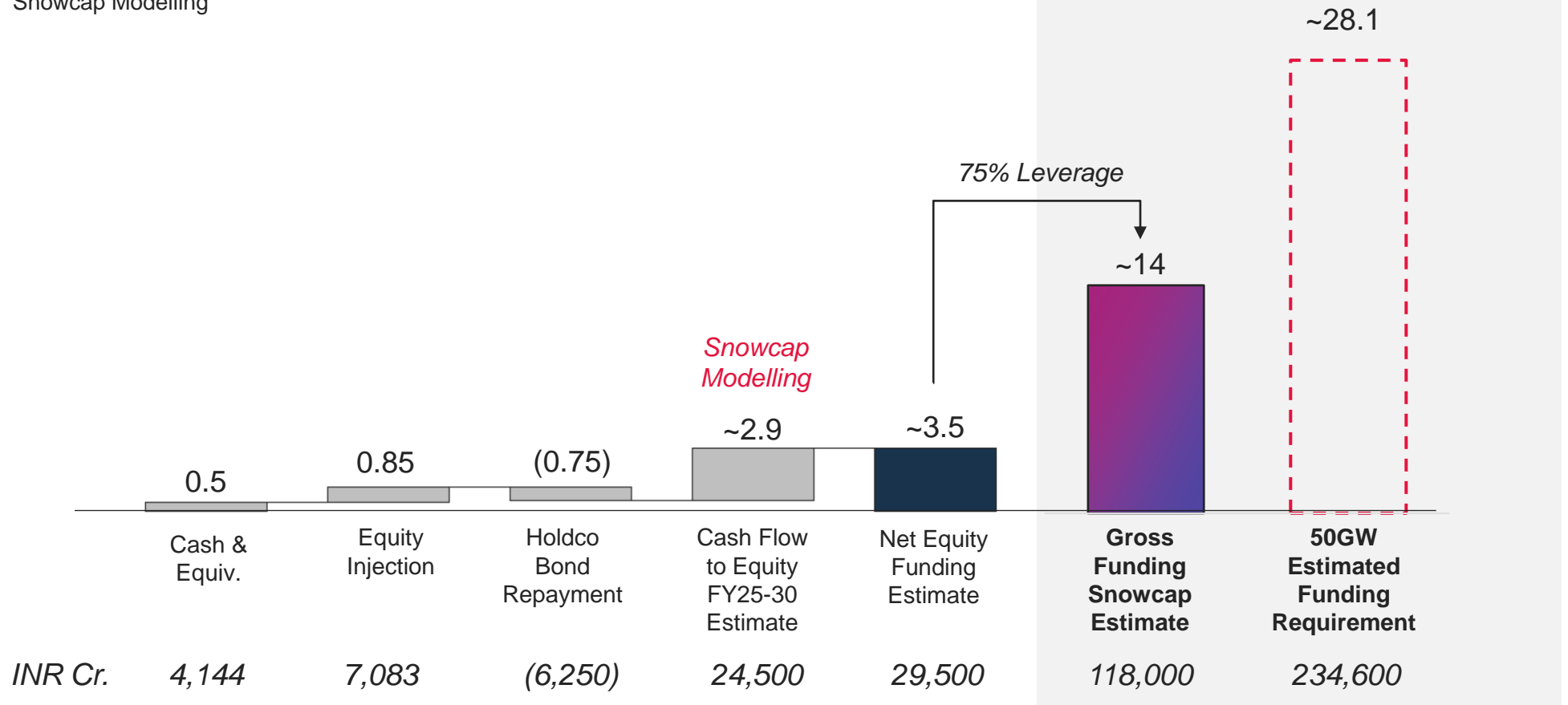
Adani Green, [UN Development Compact Agreement 2021](#)

Source: Company Filings,
 Note: Gross PP&E excludes capital work in progress. Assumes that AGEL does not capitalise maintenance expenses.

Even with the announced equity injection by the Adani family, we estimate AGEL can meet just 50% of its 50GW funding needs by 2030

AGEL 2030 Funding Bridge (USDbn)

Snowcap Modelling



Source: Company Filings

Note: Cash and equivalents excludes cash held as margin money on loans. In February 2023, AGEL guided that it would spend ₹14,000 – 14,500 crore of capex to build 2.2-2.4GW of greenfield capacity; implying an average build cost of more than ₹6 crore per MW. CFe Modelling assumes 12% Return on Capital on new projects built. 6 Crore per MW average build cost. 3% gross debt repaid per year, 100% of prior year CFe reinvested in new projects.

Sell-side analysts appear to have reached a similar conclusion...

FY24 Earnings Call

““”

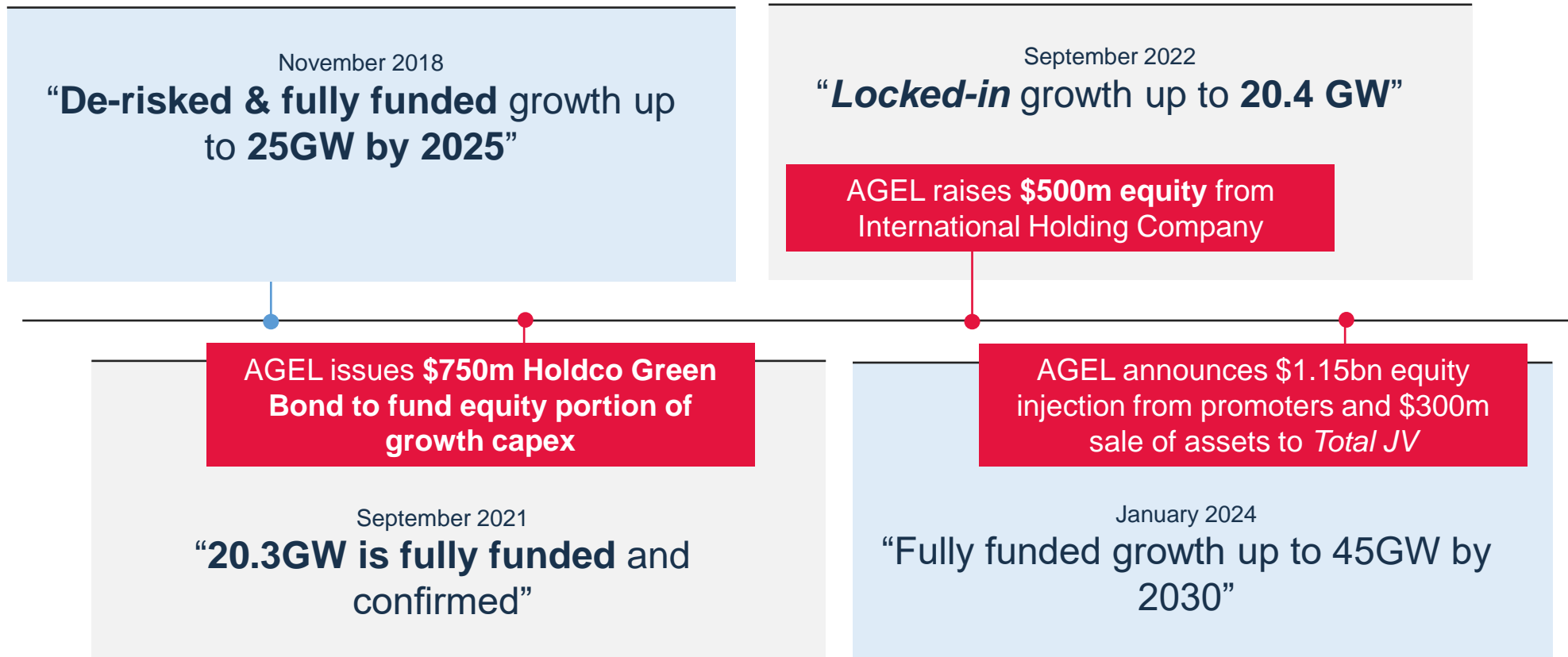
But when we do the math, I see from the equity standpoint, **we see a need for equity raise to reach that kind of scale**, assuming we're not divesting assets, which I think is not the plan. So just wanted some clarification on that from the 50 GW, **the equity requirement would be quite substantial**. So without any additional fundraise, you see the ability to fund it from existing or operating cash flows?



BERNSTEIN

Nikhil Nigania,
Bernstein

AGEL has a history of claiming its pipeline is fully funded, only to raise more equity capital



Note: As of FY24, AGEL has commissioned less than half of its 2025 25GW target

Source: Company Presentations [November 2018](#), [May 2020](#), [January 2024](#), [Economics Times](#)

(1) Includes \$500m IHC equity investment and \$750m Holdco Bond (used to finance equity downpayment on new projects) – which is expected to be refinanced via an equity injection by promoters.

Indian peers appear to have robust cash flows / capital commitments with which to pursue their growth targets

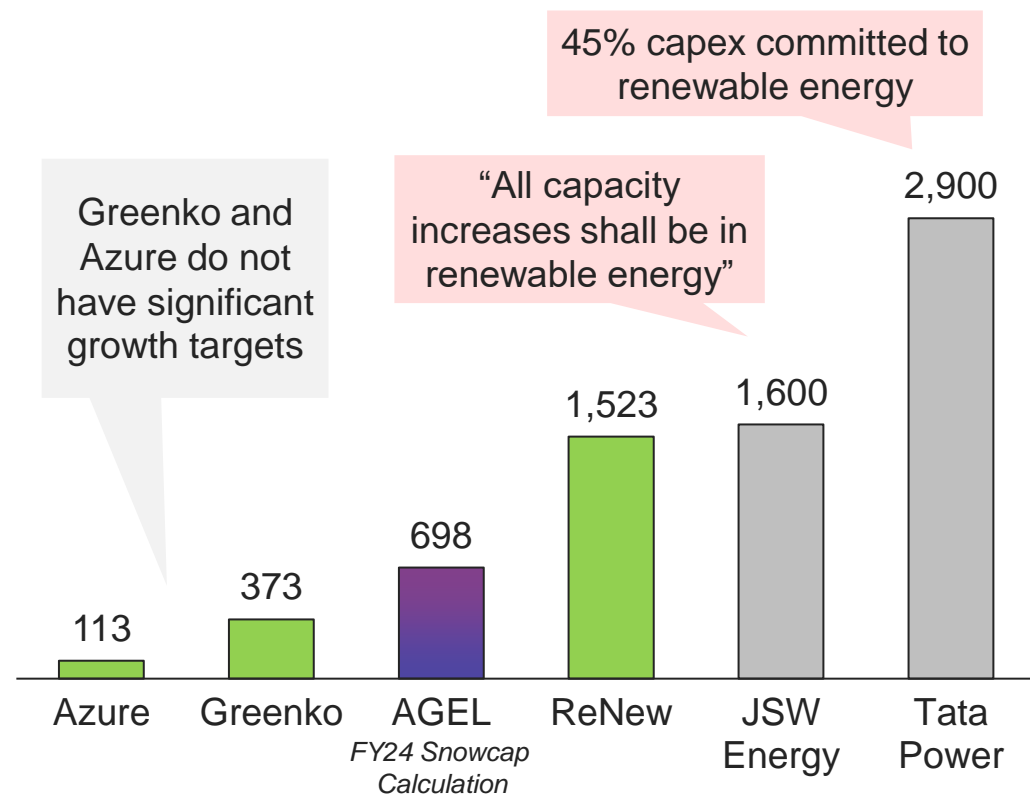
Reliance Renewables Commitment

Source: [Forbes](#), January 2022



Cash Flow to Equity – FY23 (INR Crore)

Source: Company Filings, Snowcap estimates



Note: ReNew and Azure both report CFe. For other peers, CFe has been estimated by assuming 3% gross debt amortisation.

4. Mixed Performance at Operational Assets

AGEL tells investors that its operational assets have consistently “outperformed projections”

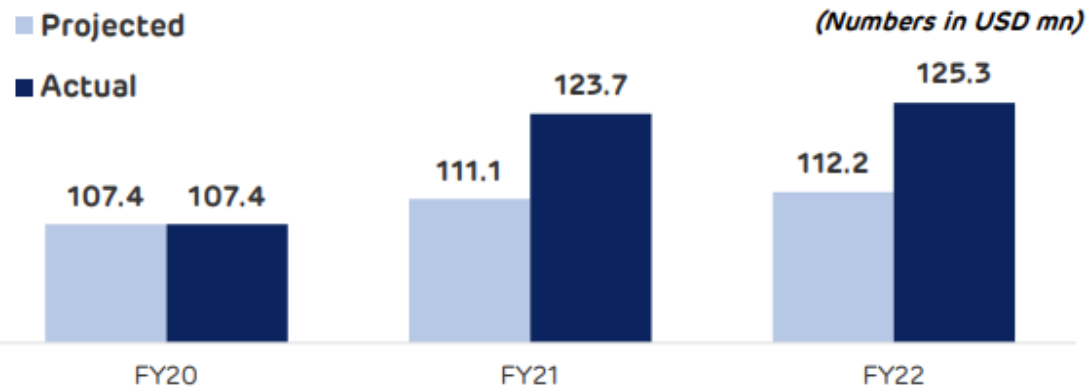
AGEL’s key RG1 and RG2 bonds are secured by ringfenced portfolios of solar assets; which AGEL says have “consistently outperformed”.

AGEL Investor Presentation

Track record of high growth coupled with actual performance consistently higher than projections

AGEL has consistently outperformed projections for its operational assets

Restricted Group 1 (930 MW) – EBITDA (Projected vs. Actual)



Yet footnotes reveal the opposite; key RG1 assets persistently produced less electricity than even the most conservative projections

AGEL's RG1 assets did not achieve P90 generation levels for three years consecutively; leading AGEL to revise its forecasts for the portfolio downwards.

3. Revision in Energy Yield Assessment for RG1 Portfolio

In last three years, the company has not achieved P-90 level of generation compared to Energy Yield Assessment done at the time of financing which is mainly due to shortfall in radiation but the EBITDA has always been above the projected level. However, on prudent basis the company has done the revised Energy Yield Assessment considering radiation factor for last three years, it is to be noted that considering revised CUF number, there would be no impact on debt sizing. International Rating Agency have assessed the same

S&P Global Ratings

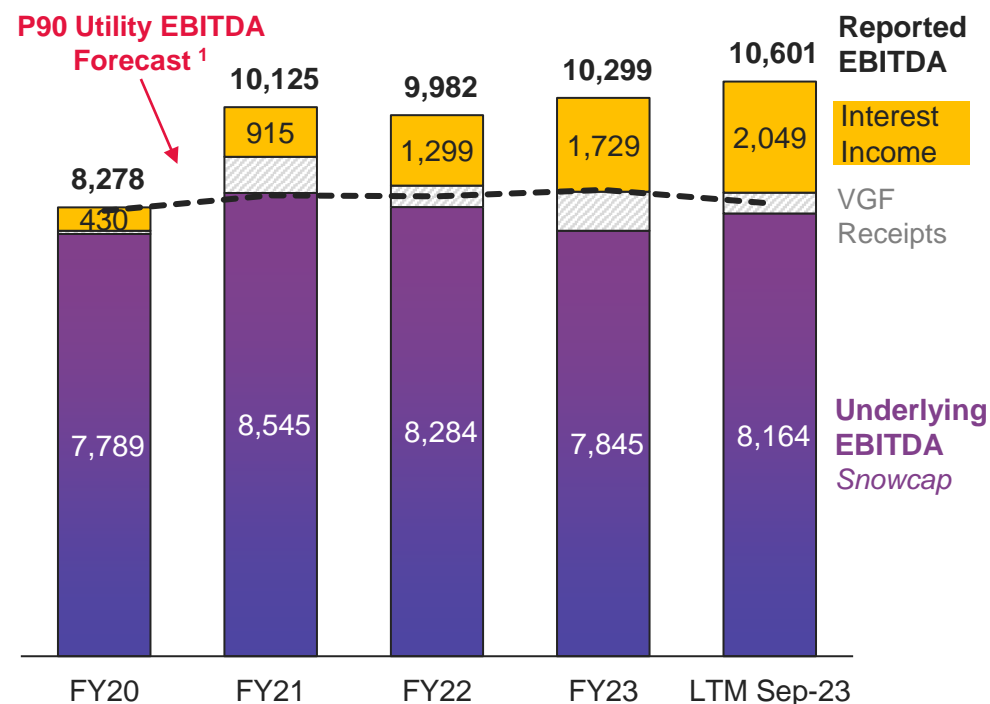
- The industry uses probability estimates for generation meeting certain levels of production:
 - **P90 (1-year):** Generation level expected to be met in at least 90% of years, a conservative approach.
 - **P75 (1-year):** Generation level expected to be met in at least **75% of years.**
 - **P50 (1-year):** Generation level expected to be met in at least **50%**, a more aggressive estimate.

Claimed EBITDA outperformance at RG1 has been driven mostly by interest earned on loans to related entities and cash

Excluding Interest Income, we calculate that RG1 would have underperformed its P90 EBITDA forecasts from FY22 onwards.

RG1 Reported EBITDA (INR Cr)

Source: [RG1 Bond Compliance Certificate Sep-23](#)



26 Other Income

30th September, 2023
(₹ in Millions)

| | |
|--|--------------|
| Interest Income (refer note (i) and (iii) below) | 2,049 |
| Gain on sale / fair valuation of investments th | 84 |
| Sale of Scrap | 8 |
| Liabilities No Longer required written back | 168 |
| Miscellaneous Income | 23 |
| Total | 2,332 |

Notes:

(i) Interest income includes ₹ 1,084 millions from inter corporate deposits and ₹ 456 millions from Bank deposits

| Interest Income on Loan | - | - | 1,084 |
|--|---|---|-------|
| Adani Green Energy Six Limited | - | - | 316 |
| Adani Renewable Energy Holding One Limited (Formerly known as Mahoba Solar UP Private Limited) | - | - | 390 |
| Wardha Solar (Maharashtra) Private Limited | - | - | 379 |

Source: Company Filings, Bond Compliance Certificates

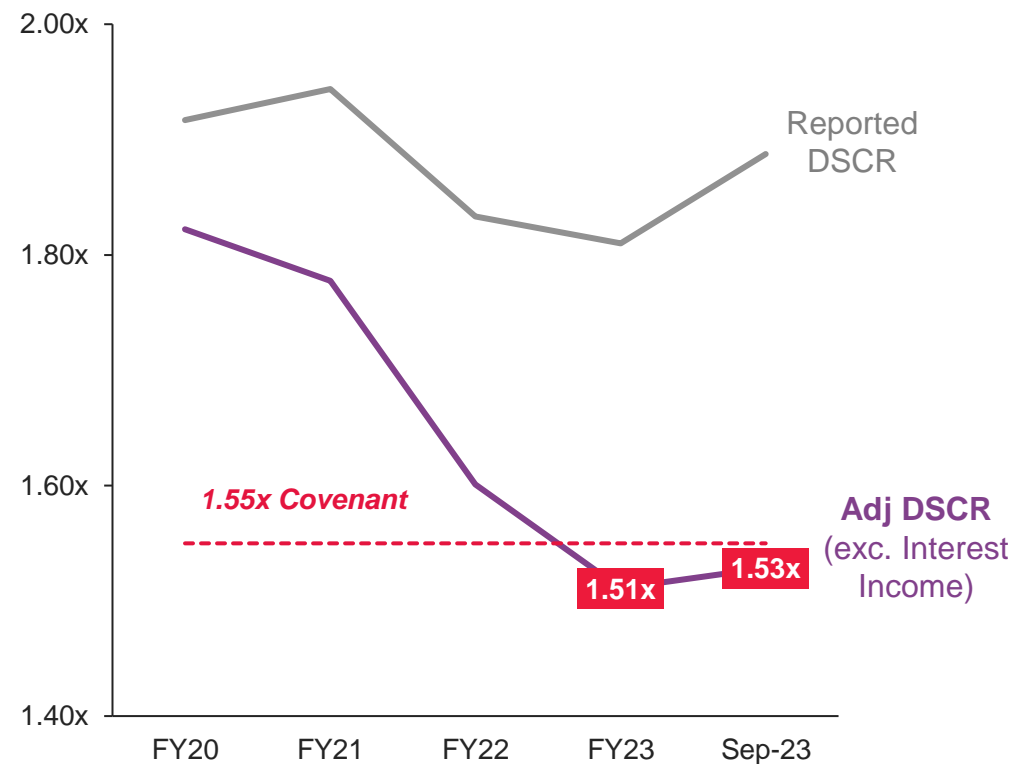
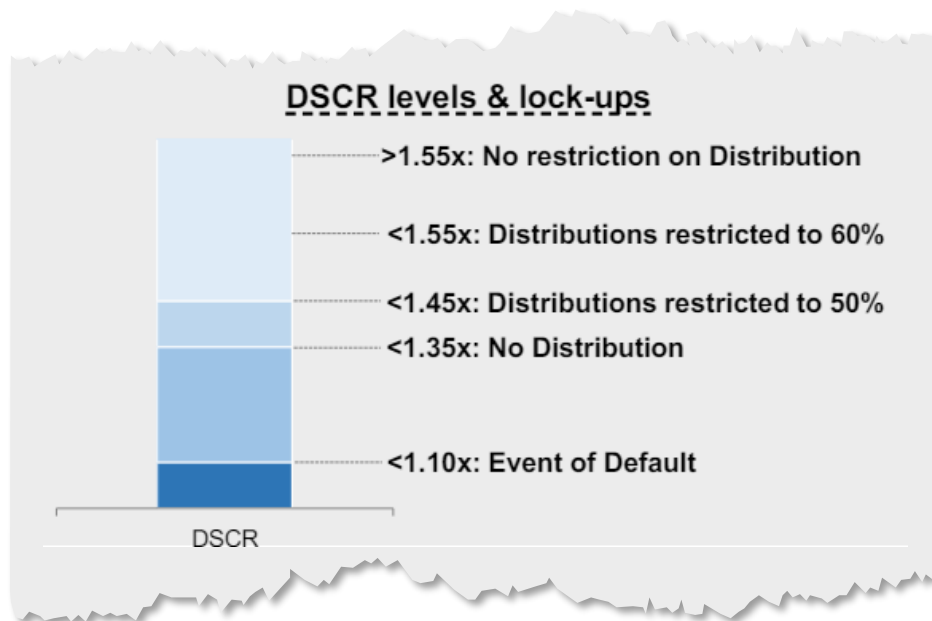
1. Mar-22 RG1 Bond Compliance Certificate. Forecast Utility EBITDA shown calculated as AGEL's P90 EBITDA forecast (p22) minus expected VGF receipts.
2. Underlying EBITDA is defined by Snowcap as Reported EBITDA less Interest Income and VGF receipts.

Were it not for this Interest Income, we think RG1 may have struggled to meet its debt service coverage covenants

AGEL's RG1 bond contains a coverage ratio lock up covenant which restricts distributions in the event its DSCR falls below 1.55x.

RG1 Debt Service Coverage Ratio

Source: [RG1 Roadshow Feb 2024](#), Snowcap Calculation



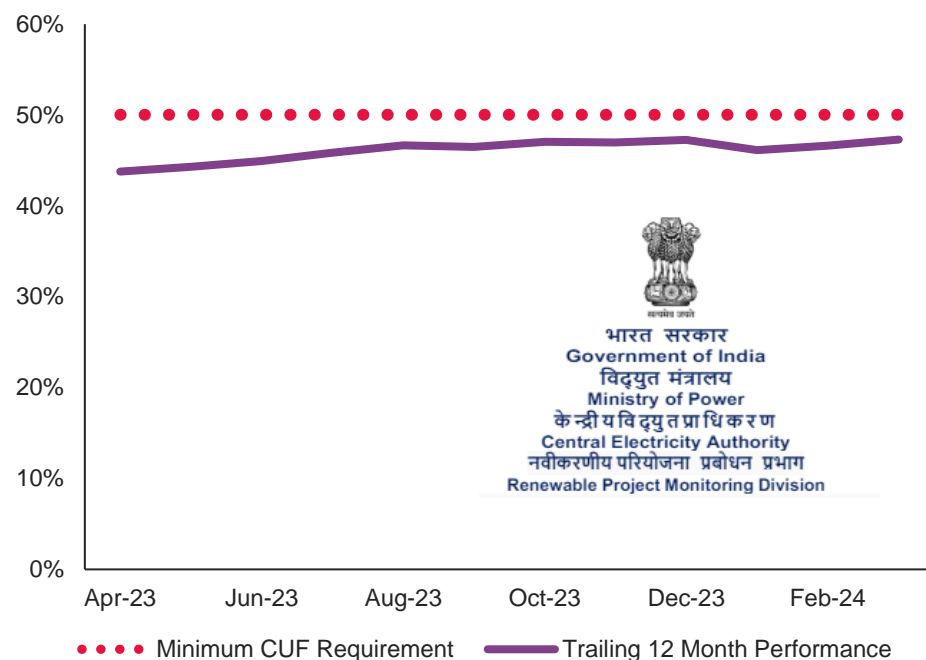
Source: Company Filings, Bond Compliance Certificates.
Adj. DSCR calculated by deducting reported Interest Income in each period from reported CFADS.

Government data appears to show AGEL's flagship hybrid plant has not met its minimum 50% CUF

Official data appears to show that AGEL's 700MW Jaisalmer Four wind-solar project has not met its minimum CUF of 50% - stipulated in its PPA with Adani Electricity Mumbai Ltd.

CUF – Trailing 12 Months Hybrid Jaisalmer Four Limited

Source: [India Central Electricity Authority](#)



700MW Hybrid Portfolio Minimum CUF

Source: [AGEL Press Release](#), [AGEL Announcement 2020](#)

Ahmedabad, 3 March 2023:

- AGEL's 700 MW wind-solar hybrid plant becomes fully operational at Jaisalmer, Rajasthan
- The hybrid plant is designed to deliver CUF of minimum 50% solar energy. The plant is co-located and is designed to deliver CUF of minimum 50%, the highest CUF of any renewable project in India. The plant

The fixed PPA tariff is ₹3.24/ kWh for a period of 25 years with minimum CUF requirements of 50%. The tariff is approved by Maharashtra Electricity Regulatory Commission.

Note: As of March 2024, AGEL Hybrid Jaisalmer Four has been fully operational for 12 months.

We believe that the official data is accurate because it closely ties with AGEL's disclosures for the hybrid portfolio performance at the portfolio level in the most recent quarter.

5. Merchant Power Sales to Related Parties

AGEL has sold a growing proportion of its power on the open market in recent years

40% of AGEL's new capacity in FY24 was designated for merchant power. The Company has also sold power from plants not yet commissioned on the open market.

AGEL Earnings Call Q4 FY24

Sagar Adani
[AGEL Earnings Call Q4 FY24](#)

““”

We see a very clear three to four year runway where we'd be able to make substantially better margins, if we have additional capacities that are catered towards the merchant market.

AGEL Earnings Call Q2 FY23

““”

Just wanted to understand how are we doing this because a lot of our **competitors actually struggle in securing open access for transmission** especially for plants which have not been commissioned yet.”

 Investec

Apporva Bahadur
[AGEL Earnings Call Q2 FY23](#)

Source: Company Filings, Earnings Call Transcripts

- (1) In AGEL's FY23 Earnings [Call for FI Investors](#), Head of BD Raj Jain stated that the PPAs for the infirm revenue assets “will be between at least 2.6 to 3”.
- (2) [Report on Short-Term Power Market in India: 2022-23](#), Green Day Ahead Market.

Indian renewable developers have historically avoided merchant exposure due to low trading volumes and power price uncertainty

Bloomberg New Energy Finance “Financing India’s Renewables Ambition

June 2022

BloombergNEF

Financing merchant renewable projects in India

- Power plants that sell their electricity output via the wholesale power market instead long-term power purchase agreements are referred to as merchant plants. In India, there are currently no renewable merchant plants due to low trading volumes and lack of credible wholesale power price projections. There are also fears of regulatory intervention if wholesale power price rises.

- Due to high merchant revenue uncertainty hence ability to service debt, the first merchant renewable plants will only be financed if the following conditions are met:
 - Reputed and **experienced sponsors** having a large portfolio of operational assets.
 - **Stringent covenants** attached to the loan such as parent guarantees and higher DSCR
 - **Conservative debt sizing** compared to current PPA projects. Sponsors will have to lower their equity IRR expectations as debt may only cover 50-60% of project cost.
 - **Merchant exposure limited** to 10-20% of project capacity with the rest tied-up in long-term PPA
 - **Higher cost of debt** compared to standalone wind, solar or hybrid projects

Amidst high short term power prices, AGEL has achieved upwards of 2x PPA prices for these sales

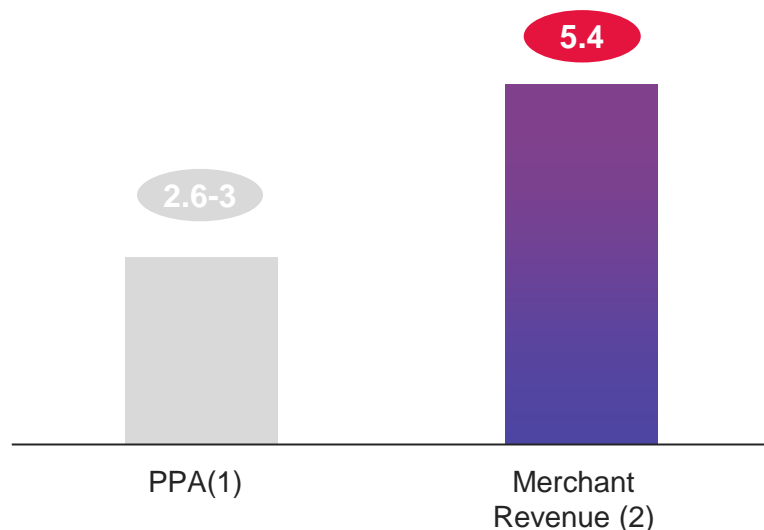
In FY23, we calculate AGEL achieved an average rate of circa 5.4 INR/kWh for its merchant sales; which is circa 2x higher than the contracted PPA price for the plants.

Average Sales Price

₹ INR per kWh



We have been able to sell a lot of that power at Rs. 10 per unit, Rs. 12 per unit, Rs. 7 per unit – [AGEL earnings call FY22](#)



Major Sellers in Green Day Ahead Market IEX

Source: [CERC](#)

Table-25(b): Major Sellers of Electricity in the Green Day Ahead Market of IEX, 2022-23

| S.No. | Name of Seller | State/Regional Entity | Sell Volume (MU) | Percentage of the Total Volume Transacted in IEX | Weighted Average Sell Price (₹/kWh) |
|-------|--|-----------------------|------------------|--|-------------------------------------|
| 1 | APSPDCL | Andhra Pradesh | 779.62 | 20.43% | 4.79 |
| 2 | Adani Hybrid Energy Jaisalmer Four Limited | Rajasthan | 231.41 | 6.06% | 5.17 |
| 3 | TSSPDCL | Telangana | 191.58 | 5.02% | 3.76 |
| 4 | Adani Wind Energy Kutchh Five Limited | Gujarat | 165.16 | 4.33% | 6.26 |
| 5 | APCPDCL | Andhra Pradesh | 157.03 | 4.11% | 5.21 |

Source: Company Filings, Earnings Call Transcripts

- (1) In AGEL's FY23 Earnings [Call for FI Investors](#), Head of BD Raj Jain stated that the PPAs for the infirm revenue assets "will be between at least ₹2.6 to 3".
- (2) [Report on Short-Term Power Market in India: 2022-23](#), Green Day Ahead Market.
- (3) In its Q3 2023 earnings call AGEL said it had earned ₹1,600 crore of infirm revenues from the sale of approximately 3,000 units.

The bulk of AGEL’s merchant sales appear to have been made to related Adani companies

In FY23, 81% of AGEL’s infirm revenues (merchant sales from plants under commissioning) were to Adani Energy Solutions and Adani Enterprises.

AGEL FY23 Earnings Call

Okay. And we sold this [infirm power] all on the exchange, right?

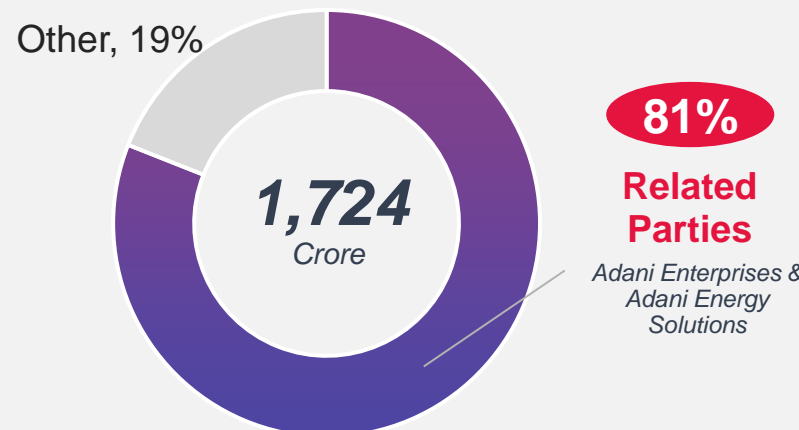
“”

So while it is primarily exchange, but it is not necessary. **We look at opportunities with various buyers in the market and identify where we get the best money.**

Raj Jain, Adani
AGEL Earnings Call Q3 FY23

AGEL Infirm Revenues

Source: Annual Report FY23



| | | | |
|----------------------------------|---|---|-------|
| Sale of Power* | - | - | 1,537 |
| Adani Electricity Mumbai Limited | - | - | 710 |
| Adani Enterprises Limited | - | - | 816 |

* This includes infirm revenue of ₹1,396 Crores as on 31st March, 2023 (₹451 Crores as on 31st March, 2022) incidental income during the construction of renewable power plants.

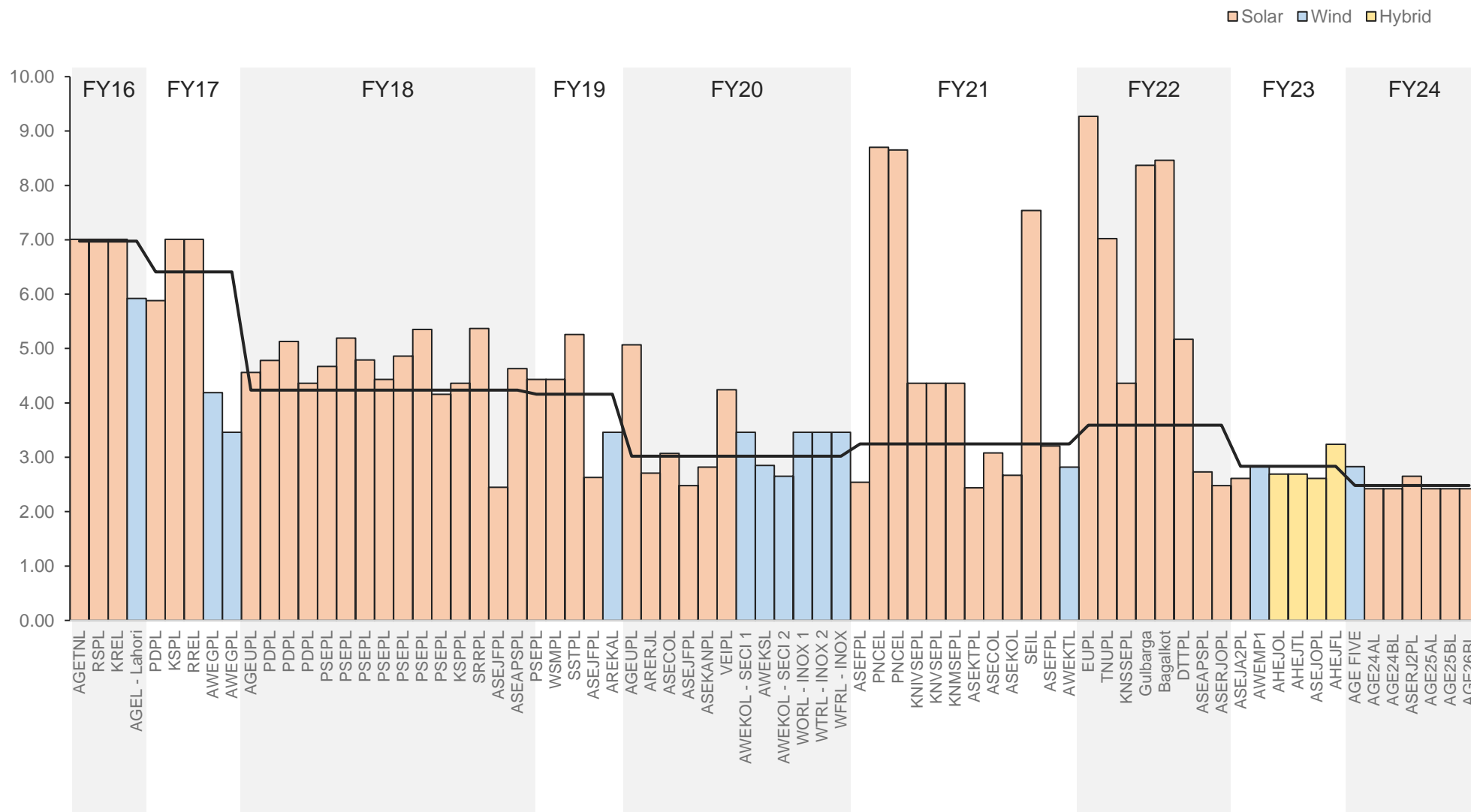
Source: Company Filings, Earnings Call Transcripts.

Note: Adani Electricity Mumbai Limited is a subsidiary of Adani Energy Solutions. Adani Enterprises houses the power trading arm of the Adani Group.

Appendix

PPA Tariff (₹ INR/MWh) – AGEL operational portfolio

Source: Company Filings, Black line represents weighted average for the year. Note, excludes merchant projects.

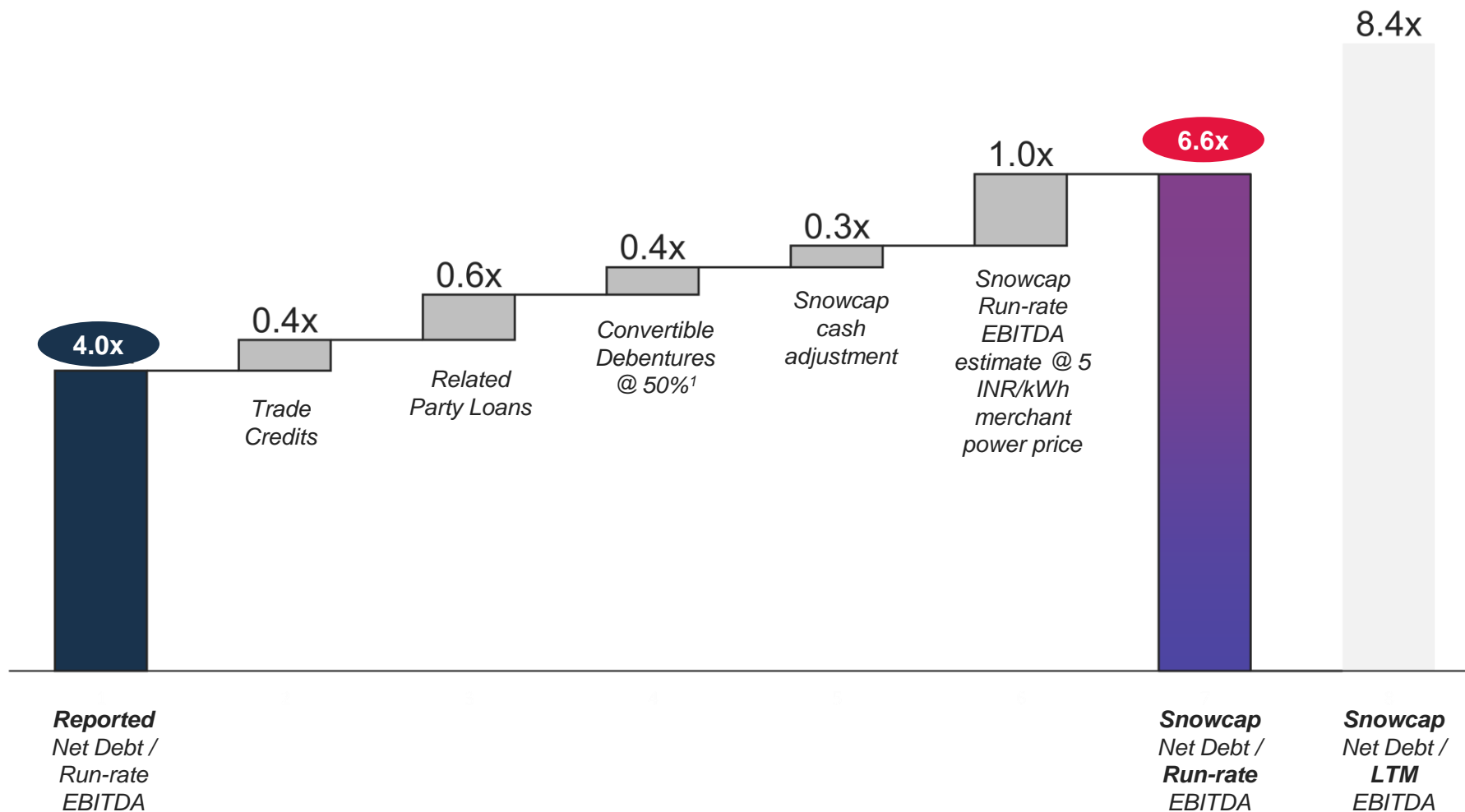


Source: Company Filings.

Note: High tariffs in FY21 and FY22 represent a small proportion of capacity added in those years on a MW basis.

Snowcap Net Debt / EBITDA Bridge

Source: Company Filings, Reported Net Debt as per AGEL's FY24 Results Presentation



Source: [AGEL Credit Summary Nov-23](#)

Note: Consistent with Orsted's treatment of its hybrid instruments, we have included 50% of AGEL's convertible debentures in our Net Debt calculation. Snowcap Run-rate adjustment is based on our estimate of AGEL's run-rate EBITDA assuming merchant power prices of 3 INR/KWh. Snowcap cash calculation includes cash and equivalents, other bank balances and short term investments.

Build Cost per MW

Source: Company Filings,

| ₹ INR Crore | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Gross Equipment & Machinery | 11,729 | 13,788 | 17,753 | 29,228 | 49,309 | 63,971 |
| (+) Cumulative Infirm Revenues | - | - | - | 541 | 2,265 | 2,442 |
| Adj. Gross Block | 11,729 | 13,788 | 17,753 | 29,769 | 51,574 | 66,413 |
| <i>Delta</i> | | 2,059 | 3,965 | 12,016 | 21,805 | 14,839 |
| Operating Capacity (MW) | 1,970 | 2,545 | 3,470 | 5,410 | 8,086 | 10,934 |
| (+) Hybrid Adjustment | - | - | - | - | 705 | 705 |
| Adj. Operating Capacity (MW) | 1,970 | 2,545 | 3,470 | 5,410 | 8,791 | 11,639 |
| <i>Delta</i> | | 575 | 925 | 1,940 | 3,381 | 2,848 |
| Gross Block per MW | 5.95 | 3.58 | 4.29 | 6.19 | 6.45 | 5.21 |

Run-rate EBITDA Estimates

Source: Company Filings, "Average Tariff" is a weighted average. Assumes merchant tariff of 3 INR/kWh

FY21

| | MW | Avg Tarrif INR/MWh | CUF (FY24) | Revenue (INR Cr.) |
|---|--------------|-----------------------|---------------|----------------------|
| Solar | 3,023 | 4.75 | 24.5% | 2,828 |
| Wind | 497 | 3.26 | 29.4% | 381 |
| Hybrid | - | NA | 40.7% | - |
| Total | 3,520 | | | 3,209 |
| <i>% EBITDA Margin</i> | | | | <i>92%</i> |
| Run-rate EBITDA from Power Supply (Snowcap est.) | | | | 2,965 |
| Reported Run-rate EBITDA | | | | 3,100 |

FY24

| | MW | Avg Tarrif INR/MWh | CUF (LTM) | Revenue (INR Cr.) |
|---|---------------|-----------------------|--------------|----------------------|
| Solar | 7,395 | 3.69 | 24.5% | 5,852 |
| Wind | 1,401 | 3.02 | 29.4% | 1,089 |
| Hybrid | 2,140 | 2.85 | 40.7% | 2,177 |
| Total | 10,936 | | | 9,118 |
| <i>% EBITDA Margin</i> | | | | <i>92%</i> |
| Run-rate EBITDA from Power Supply (Snowcap est.) | | | | 8,425 |
| Reported Run-rate EBITDA | | | | 10,412 |

Load Factor Calculation – Hybrid Portfolio

Source: [India Central Electricity Authority](#),

| | MW | Apr-23 | May-23 | Jun-23 | Jul-23 | Aug-23 | Sep-23 | Oct-23 | Nov-23 | Dec-23 | Jan-24 | Feb-24 | Mar-24 | Total |
|---|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| Solar | | | | | | | | | | | | | | |
| Adani Hybrid Energy Jaisalmer Four Limited | | 139 | 250 | 163 | 156 | 98 | 152 | 148 | 98 | 118 | 117 | 134 | 170 | |
| Adani Hybrid Energy Jaisalmer One Limited | | 83 | 85 | 103 | 77 | 63 | 79 | 78 | 60 | 70 | 70 | 72 | 87 | |
| Adani Hybrid Energy Jaisalmer Three Limited | | 76 | 80 | 82 | 74 | 63 | 74 | 69 | 46 | 54 | 54 | 60 | 79 | |
| Adani Hybrid Energy Jaisalmer Two Limited | | 79 | 80 | 85 | 76 | 18 | 75 | 72 | 51 | 58 | 60 | 65 | 83 | |
| Adani Jaisalmer One SEPL Solar | | 100 | 102 | 105 | 89 | 73 | 90 | 89 | 70 | 83 | 85 | 82 | 99 | |
| Wind | | | | | | | | | | | | | | |
| Adani Hybrid Energy Jaisalmer Four Limited | | 118 | 41 | 138 | 99 | 157 | 80 | 98 | 77 | 92 | 57 | 91 | 107 | |
| Adani Hybrid Energy Jaisalmer One Limited | | 23 | 30 | 29 | 24 | 37 | 14 | 22 | 15 | 19 | 9 | 22 | 24 | |
| Adani Hybrid Energy Jaisalmer Three Limited | | 19 | 27 | 21 | 18 | 29 | 12 | 18 | 11 | 14 | 7 | 19 | 18 | |
| Adani Hybrid Energy Jaisalmer Two Limited | | 20 | 27 | 21 | 17 | 75 | 11 | 16 | 11 | 14 | 7 | 16 | 15 | |
| Adani Jaisalmer One SEPL Solar | | 25 | 31 | 26 | 28 | 45 | 21 | 25 | 15 | 20 | 12 | 23 | 29 | |
| Hybrid Portfolio | 2,140 | 681 | 754 | 774 | 657 | 657 | 609 | 635 | 454 | 542 | 479 | 583 | 709 | |
| % Load Factor | | 44% | 48% | 50% | 42% | 42% | 39% | 41% | 29% | 35% | 31% | 37% | 45% | |
| Combined | | | | | | | | | | | | | | |
| Adani Hybrid Energy Jaisalmer Four Limited | 700 | 257 | 292 | 301 | 255 | 255 | 232 | 246 | 174 | 211 | 174 | 225 | 277 | 2900 |
| 12 Month Average Load Factor | | | | | | | | | | | | | | 47% |

AGEL Run-rate EBITDA Breakdown FY23

Source: [Holdco Bond Compliance Certificate March 2023](#)

Annexure 5

Working Notes (Trailing 12 months ended 31st March 2023)

| i | Run-Rate EBITDA | INR Cr | Reference |
|---|---|--------------|-------------------------|
| | A. EBITDA as per financials | | |
| | Consolidated Profit before Tax | 1,561 | Consol P&L |
| | add: | | |
| | Depreciation and Amortization | 1,300 | Schedule 4.1, 4.2 & 4.5 |
| | Finance costs | 2,911 | Schedule 27 |
| | Add: Foreign exchange fluctuation and derivative (gain)/ loss from Non-financing activities (Regrouped to Finance Cost) | 559 | Schedule 28 of FS |
| | Total A | 6,331 | |
| | B. EBITDA for projects commissioned / Acquired not forming part of above A | 1,174 | |
| | Grand Total | 7,505 | |

₹ INR Crore

FY23

| | |
|--|--------------|
| EBITDA from Power Supply | 5,538 |
| (+) Other income | 841 |
| (-) Other non-cash expenses | (48) |
| EBITDA used in Run-rate calculation | 6,331 |

- EBITDA from Power Supply = Revenue from Power Supply + prompt payment discount + carbon credit income (part of Other Operating Income) - Employee Benefit Expenses - Other Expenses excluding loss on sale of assets & such one off expenses.