

South And Southeast Asia Infrastructure:

All Clear For Takeoff

S&P Global
Ratings

Neel Gopalakrishnan
Mary Anne Low
Cheng Jia Ong
Daye Park
Charmaine Koh

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This report does not constitute a rating action

Meet Our South and Southeast Asia Infrastructure Team



Abhishek Dangra

Managing Director,
Analytical Manager

abhishek.dangra@spglobal.com

+65 6216 1121



Neel Gopalakrishnan

Director,
Sector Lead

neel.gopalakrishnan@spglobal.com

+65 6239 6385



Mary Anne Low

Director,
Lead Analyst

mary.anne.low@spglobal.com

+65 6239 6378



Cheng Jia Ong

Associate Director,
Primary Analyst

chengjia.ong@spglobal.com

+65 6239 6302



Daye Park

Associate Director,
Primary Analyst

daye.park@spglobal.com

+852 2533 3581



Charmaine Koh

Rating Analyst

charmaine.koh@spglobal.com

+65 6216 1140



Liying Wong

Rating Analyst

liying.wong@spglobal.com

+65 6597 6171



Vernice Tan

Rating Analyst

vernice.tan@spglobal.com

+65 6216 1145



Portfolio Overview

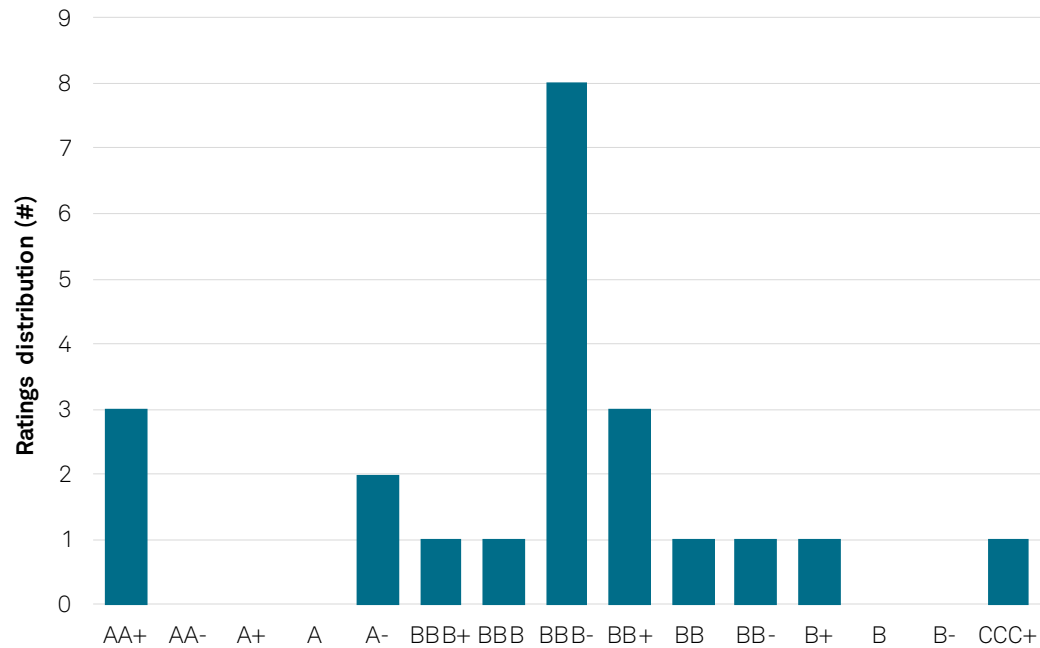


Deep Dive By Rated Issuers

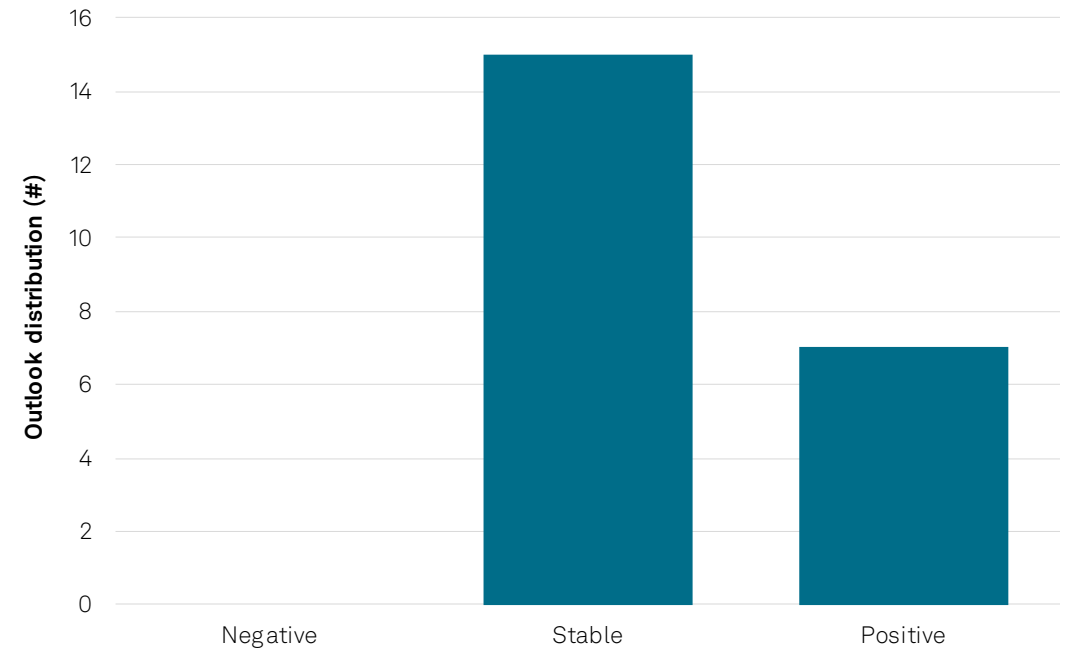
High Positive Rating Bias

Solid operating performance, improving regulatory environment, positive outlook on Indian sovereign drive improving credit trends.

SSEA infrastructure portfolio is skewed toward investment-grade issuers with...



Positive outlooks largely reflect improving financials

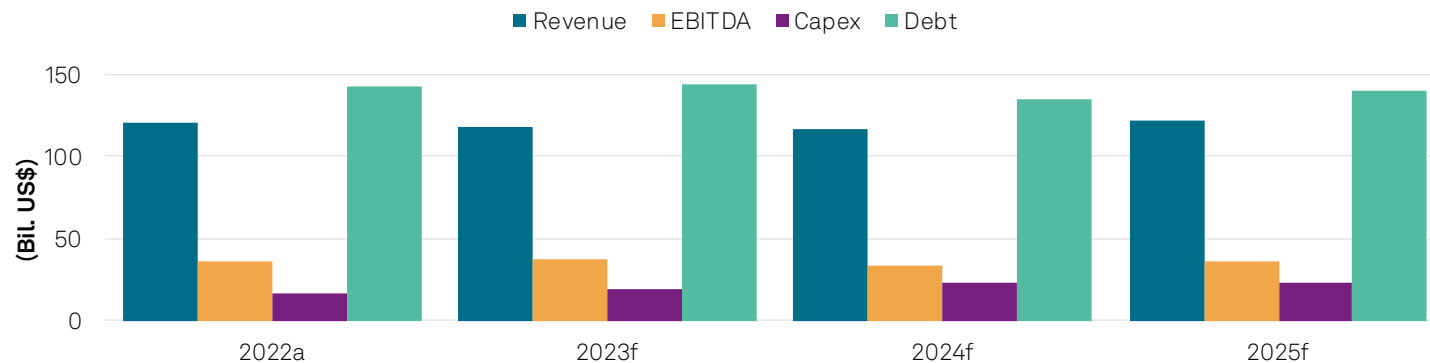


Ratings and outlooks as of Jun. 3, 2024. Outlook chart includes CreditWatch Positive as Positive outlook. Source: S&P Global Ratings.

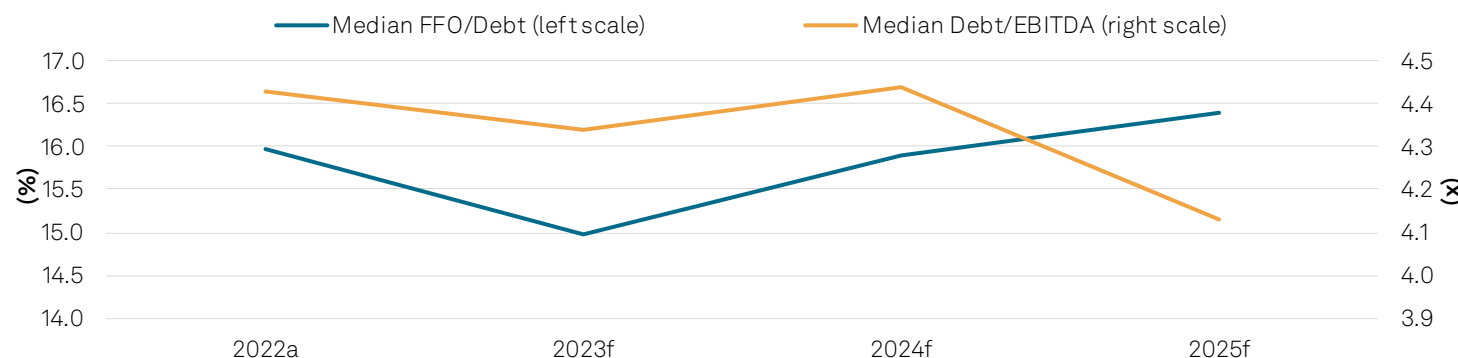
Power Sector: Continuing Regulatory Support, But Elevated Leverage

- We expect policy continuity in India and Indonesia post recent elections.
- Power demand over 2024-2025 will grow 5%-7% in India, Indonesia, and the Philippines, about 3% in Singapore, Malaysia and Thailand.
- Regulatory frameworks have normalized for most countries, allowing for tariff recovery deferred during the pandemic. Tariff interventions in Thailand will be key watchpoint.
- Moderating fuel costs provide some relief to lagging generation and distribution firms.
- Increasing investments for energy transition will keep capex and leverage elevated.
- Relatively competitive domestic financing to continue to reduce risks from dollar funding. Elusive Fed rate cuts remain a watchpoint.

SSEA Power: Improving profits support higher capex and...



Largely stable leverage

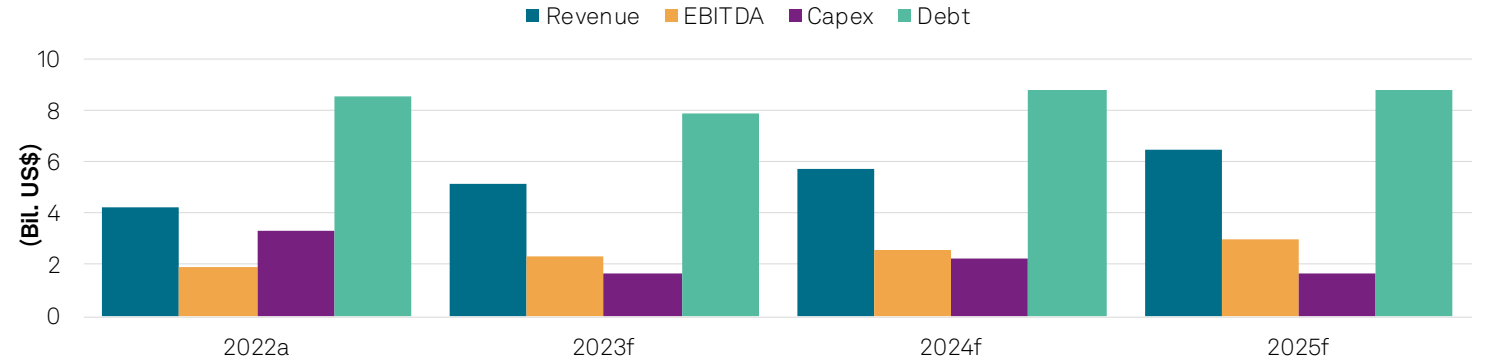


S&PGR adjusted figures. Charts cover issuers rated under our corporate methodology. 2022 implies fiscal year 2023 in case the year-end is March or June. Financials are as of Jan. 31, 2024. Capex--Capital expenditure. FFO--Funds from operations. Source: S&P Global Ratings.

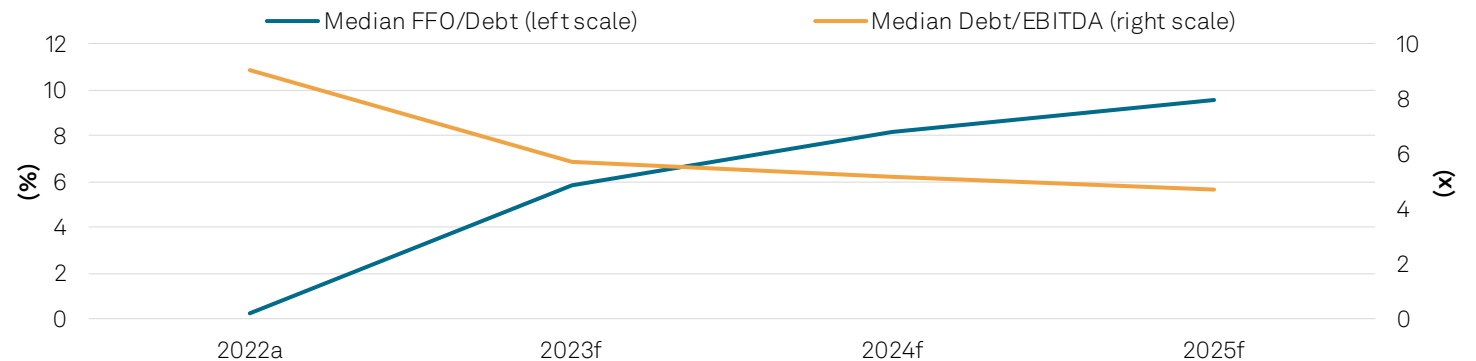
Transportation Sector: Largely Above Pre-Pandemic Levels

- India's robust airport traffic will continue to grow by 8%-15% after surpassing pre-pandemic levels in fiscal 2024. EBITDA margins should normalize by March 2025.
- Ports cargo volumes will be healthy; while operating efficiency will support stable margins.
- Rising geopolitical risk is a watchpoint. High capex in riskier international markets can hurt credit profiles.
- Leverage will improve but remain elevated given recent debt-funded capex.
- Singapore rail ridership should be back to 2019 levels by March 2026.
- Incentive income, grants (in case of inadequate fares) and cost management remain key to rail operators.

Reducing capex intensity to support financial profile



Leverage trending lower while still elevated



S&PGR adjusted figures. Charts cover issuers rated under our corporate methodology. 2022 implies fiscal year 2023 in case the year-end is March or June. Financials are as of Feb. 28, 2024. Capex--Capital expenditure. FFO--Funds from operations. Source: S&P Global Ratings.



Portfolio Overview



Deep Dive On Rated Issuers

Adani Electricity Mumbai Ltd. (AEML)



Issuer credit rating: BBB-/Stable/-- | Stand-alone credit profile: bbb-

Analyst: Cheng Jia Ong

Regulated returns balance capex and leverage risks at parent AESL

Key watchpoints

- Cash flow recovery over FY24-FY25 on approved “true-up” of Indian rupee (INR) 15.7 billion with continued strong power demand and stable tariff collections.
- We expect timely tariff resets for the next regulatory period (Apr. 2025 – Mar. 2030).
- Parent AESL’s riskier growth strategy and its higher leverage could weigh on AEML’s credit quality.

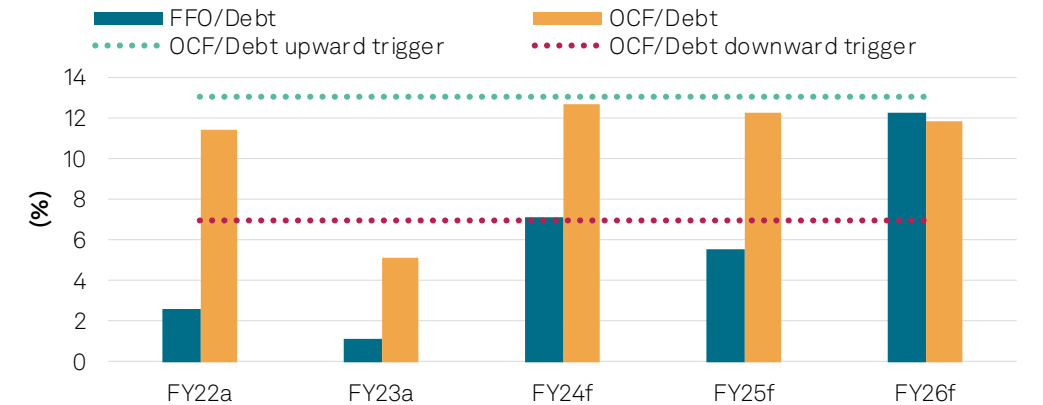
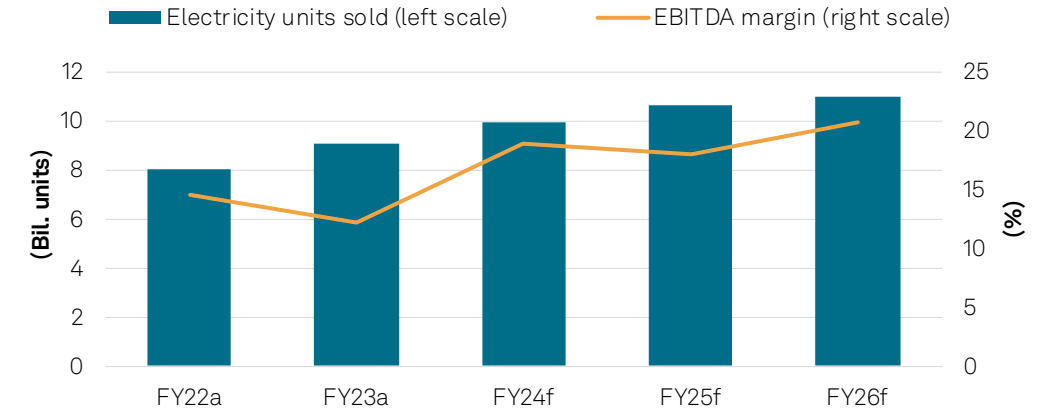
Key rating drivers

- Availability-based regulatory framework with timely cost passthrough, guaranteed returns.
- Capitalization of six months and high reliability for the distribution network.
- One-notch insulation from parent, AESL due to strong structural protections.
- Elevated leverage due to high capex plans.
- AESL’s controlling stake exposes AEML to governance risk, related-party transactions.

Snapshot of rating triggers

- | | |
|---|--|
| <ul style="list-style-type: none"> • Upgrade of the sovereign rating--provided AEML’s OCF to debt stays above 13% and its FFO to debt above 9%; and AESL’s FFO/debt remains above 13%. | <ul style="list-style-type: none"> • Parent AESL’s FFO/debt remains below 9%. • Ineffective insulation from AESL. • AEML’s SACP is lowered due to negative regulatory developments or if its OCF/debt stays below 7%. • Downgrade of the sovereign rating. |
|---|--|

Business risk: Strong | Financial risk: Aggressive



S&PGR adjusted numbers. INR—Indian rupee. SACP—Stand-alone credit profile. AESL--Adani Energy Solutions Ltd. Capex--Capital expenditure. FFO--Funds from operations. OCF--Operating cash flows. PPA--Power purchase agreement. a--Actual. f--Forecast. Latest financial year ends March 31, 2023.

Latest Report: [AEML](#), Apr. 22, 2024. Source: S&P Global Ratings.

Adani Green Energy Ltd. Restricted Group 2



Issue credit rating: BB+/Stable/-- | Project stand-alone credit profile: bb+

Analyst: Cheng Jia Ong

Closed pool of assets supports stability; counterparty credit is a watchpoint.

Key watchpoints

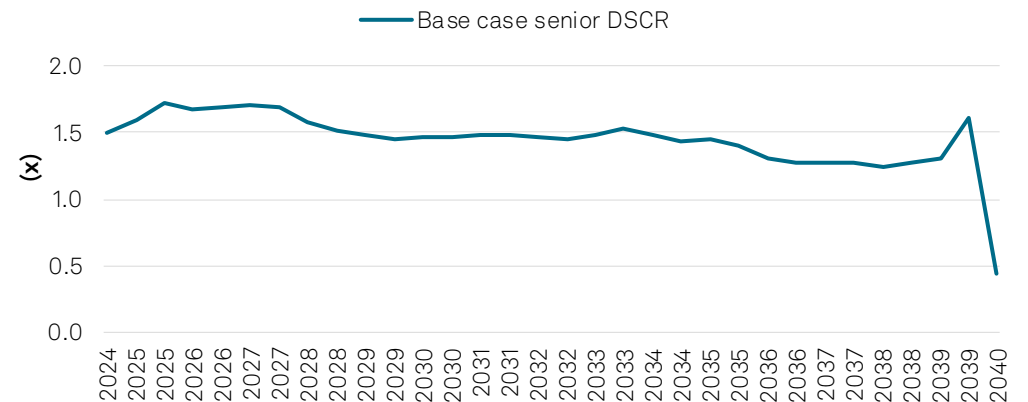
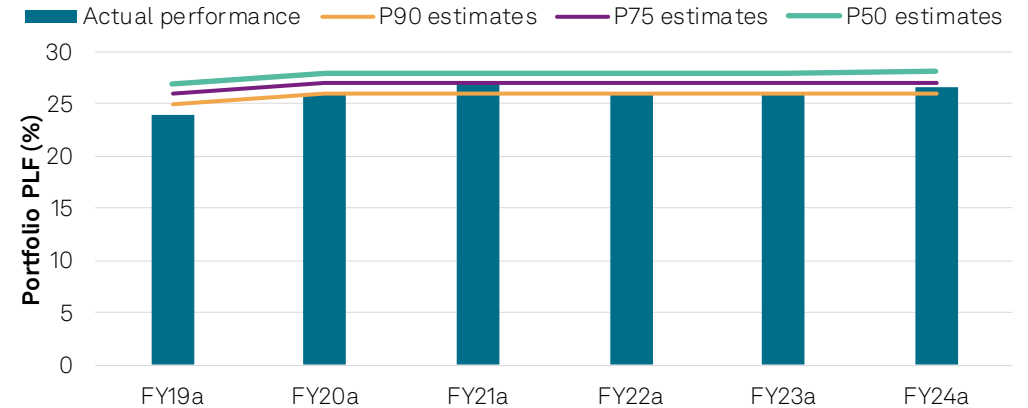
- Electricity generation to be in line with P90 estimate at portfolio level.
- Timely cash collection from revenue counterparties to continue. 100% of total receivables at end-FY24 were collected within 60 days.
- Currency risk and hedge renewal risk given hedges are three years--shorter than debt tenor.

Key rating drivers

- Fixed-price long-term PPAs limits cash flow volatility. Must-run dispatch status of renewables.
- Diversified pool of solar assets across India and majority offtake by strong counterparty.
- Strong covenant structure with largely amortizing debt supports downside resiliency.
- Resource risk could weaken operating performance and cash flow.
- Possible delays in receivables from weak state distribution utilities.
- Currency risk, higher hedge costs and renewal risks given shorter hedge tenor than debt tenor.

Snapshot of rating triggers

- ▲ Upgrade is unlikely, constrained by counterparty risk with Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)'s and hedge renewal risk.
- ▼ Minimum DSCR lower than 1.15x.
- If MSEDCL is downgraded by one notch or if we remove one-notch insulation from the weakest off-taker. Lower likelihood of support from the government for off-takers.
- Resiliency under downside analysis reduces to modest.



S&PGR adjusted numbers. PPA--power purchase agreement. P90--Meeting power generation probability of at least 90% of time. DSCR--Debt service coverage ratio. a--Actual. Latest financial year ends March 31, 2024. Latest Report: [AGEL RG2](#), May. 23, 2024. Source: S&P Global Ratings.

Adani International Container Terminal Pte. Ltd.

Issuer credit rating: BBB-/Stable/-- | **Stand-alone credit profile:** bbb-

Analyst: Mary Anne Low

Stable operations and cash flows support investment grade rating.

Key watchpoints

- Cargo volumes resiliency, tariff increases, operational efficiency support cash flows.
- Project SACP unlikely to improve, given forecast financial metrics constrained by large balloon payment at maturity.
- Moderately resilient under our downside analysis—with timely debt service for at least five years and DSCR at above 1.0x throughout life of the project.

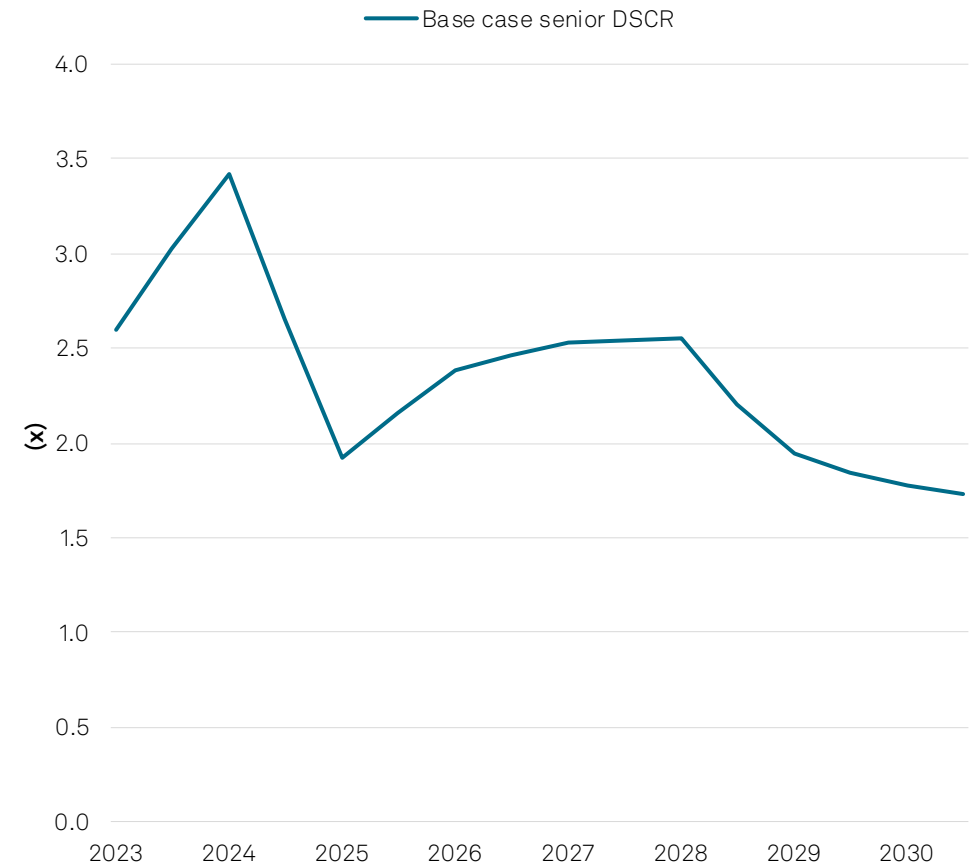
Key rating drivers

- Prime location, rail and road connectivity to India’s industrial hinterland.
- Resilient operating cash flow leading to a minimum DSCR of 1.73x.
- Three separate debt reserves to support debt servicing including final balloon repayment.
- Fully exposed to market risk given we are unable to assess Mediterranean Shipping Co. SA’s creditworthiness.
- 20.5% balloon payment at maturity weakens DSCR in the last repayment period.

Snapshot of rating triggers

- Upgrade of the sovereign rating and upward revision in SACP.
- If the issuer can be rated higher than the sovereign, and SACP is revised up to ‘bbb’.
- SACP: Minimum DSCR is above 1.75x and downside resilience is high.

- Minimum DSCR is lower than 1.60x.
- Downgrade of the sovereign rating.



S&PGR adjusted numbers. SACP—Stand-alone credit profile. DSCR—Debt service coverage ratio. Latest compliance certificate & financials March 2024.

Latest Report: [AICTPL](#), Mar. 21, 2024. Source: S&P Global Ratings.

Adani Ports and Special Economic Zone Ltd. (APSEZ)



Issuer credit rating: BBB-/Positive/-- | **Stand-alone credit profile:** bbb-

Analyst: Cheng Jia Ong

Business risk: Strong | **Financial risk:** Intermediate

Upside potential reflects improving scale and diversification, earnings growth.

Key watchpoints

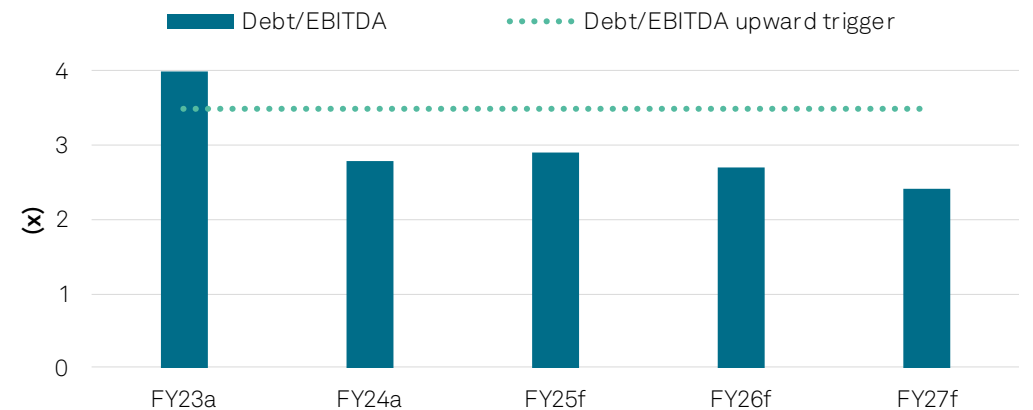
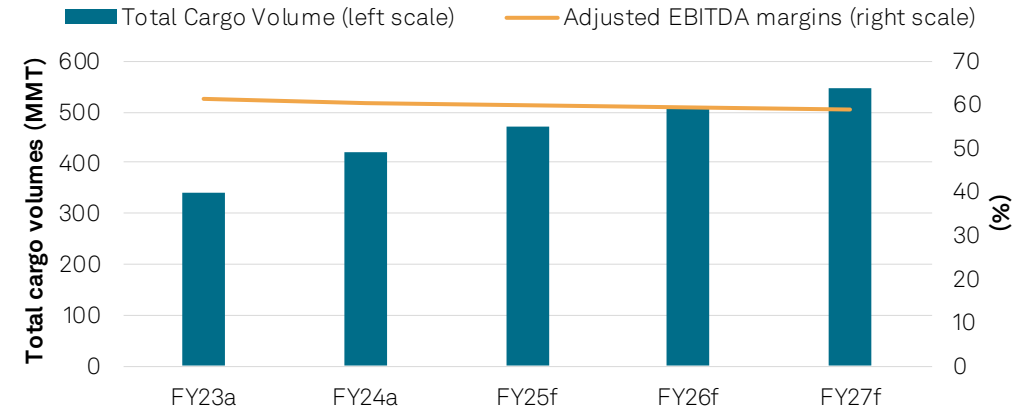
- More clarity on concession renewal prospects for Gujarat-based ports, including Mundra port.
- Improving financials will depend on growth appetite. Capex spending and acquisitions to remain high at about INR166 billion in FY25 and INR125 billion in FY26.
- Event risk from acquisitions in riskier markets and any significant loans or advances to parties (related or suppliers) outside the normal course of business.

Key rating drivers

- Well-located pan-India origin and destination ports. The largest private port operator in India.
- Sticky cargo and resilient container volumes. Healthy EBITDA margins of 58%-60%.
- Growth aspirations may lead to high capex, with acquisitions in potentially riskier markets.
- Adani Group’s controlling ownership exposes the company to some governance risks and related-party transactions.

Snapshot of rating triggers

- | | |
|--|--|
| <ul style="list-style-type: none"> • Renewal risk of Mundra port is manageable. • Refrains from any related-party transactions outside the normal course of business. • No material governance risks or new regulatory investigations for the Adani group. • APSEZ clears our sovereign default stress test or we raise the sovereign rating on India. | <ul style="list-style-type: none"> • Outlook could be revised to stable if concession renewal risk for the Mundra port is greater than we expect. • Rating could be lowered if net debt to EBITDA increases sustainably above 3.5x, or APSEZ undertakes any related-party loans or advances outside the normal course of business. |
|--|--|



S&PGR adjusted numbers. Capex--Capital expenditure. INR--Indian rupee. a--Actual. f--Forecast. Latest financial year ends March 31, 2024.

Latest Report: [APSEZ](#), June. 25, 2024. Source: S&P Global Ratings.

Continuum Green Energy Ltd. (CEPL)



Issuer credit rating: B+/Positive/-- | **Stand-alone credit profile:** b+

Analyst: Cheng Jia Ong

New capacity, protection from cash-flows upstreaming are key to upgrade.

Key watchpoints

- Rating upside intact with 1 GW of projects to be operational by Q1 FY25 after some delays. Cash flow from 2.3 GW capacity will support FFO cash interest cover to stay above 1.5x in FY26.
- Upstreaming of project cash flows to service CEPL’s loan will be limited over the next few years. Interest servicing at CEPL is manageable as cash interest on promoter loan is pre-funded.
- Expansion plan and capex to be shaped by potential equity raise or domestic listing.

Key rating drivers

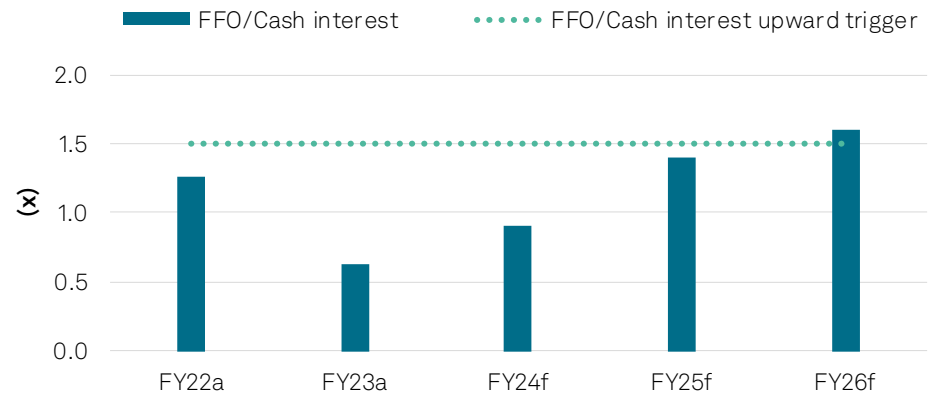
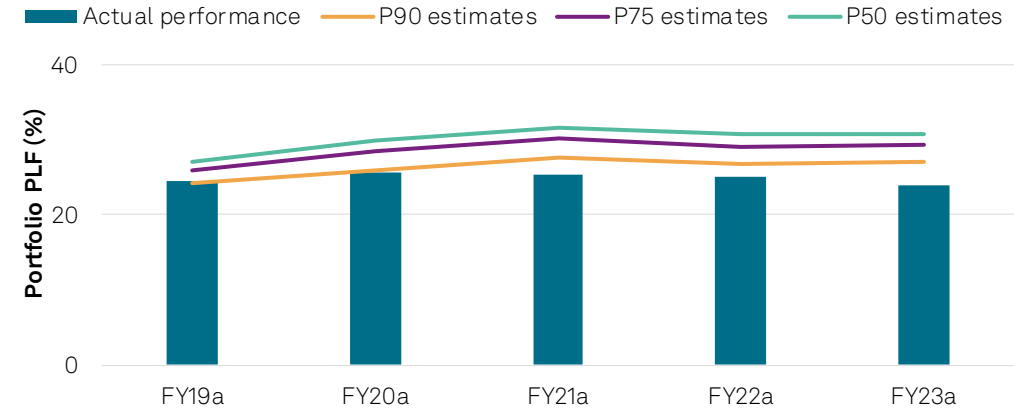
- Differentiated focus on the profitable C&I market supports higher returns and earnings.
- C&I customers with better credit quality provide cash flow visibility.
- High leverage and tight interest-servicing ratios.
- Resource risk for wind assets and further execution delays could lead to lower cash flows.
- Smaller scale with limited project diversity compared with peers.

Snapshot of rating triggers

▲ FFO cash interest cover sustains above 1.5x

▼ Outlook to be revised to stable if FFO cash interest cover is unlikely to sustain toward 1.5x.

Business risk: Satisfactory | **Financial risk:** Highly Leveraged



S&PGR adjusted numbers. Capex—Capital expenditure. C&I—Commercial and industrial. Forecast P90—Meeting power generation probability of at least 90% of time. GW—Gigawatt. FFO—Funds from operations. a—Actual. f—Latest financial year ends March 31, 2023.

Latest Report: [Continuum](#), Apr. 30, 2024. Source: S&P Global Ratings.

Delhi International Airport Ltd.

Issuer credit rating: BB-/Positive/-- | **Stand-alone credit profile:** bb-

Analyst: Cheng Jia Ong



Leverage improvement will depend on higher CP4 tariffs and dividends.

Key watchpoints

- Dividends will be key as capital spending tapers. Likely to resume dividends of INR2 billion-INR4 billion per year from FY26.
- CP4 tariffs to be implemented from April 1, 2025, following a one-year delay. Higher tariffs of INR360-INR370 per passenger to drive stronger cash flow.
- Further upside to CP4 tariffs on favorable ruling by TDSAT can lead to stronger ratios (if approved).
- Robust traffic growth of 10% in FY2025 (Domestic/International: 59 million/22 million).

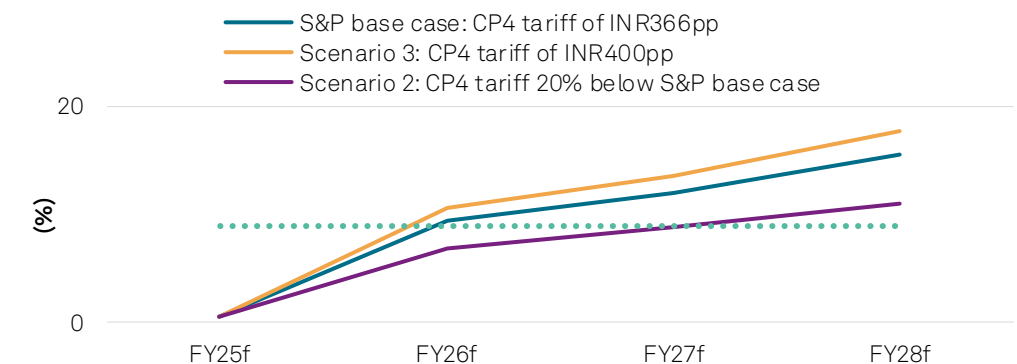
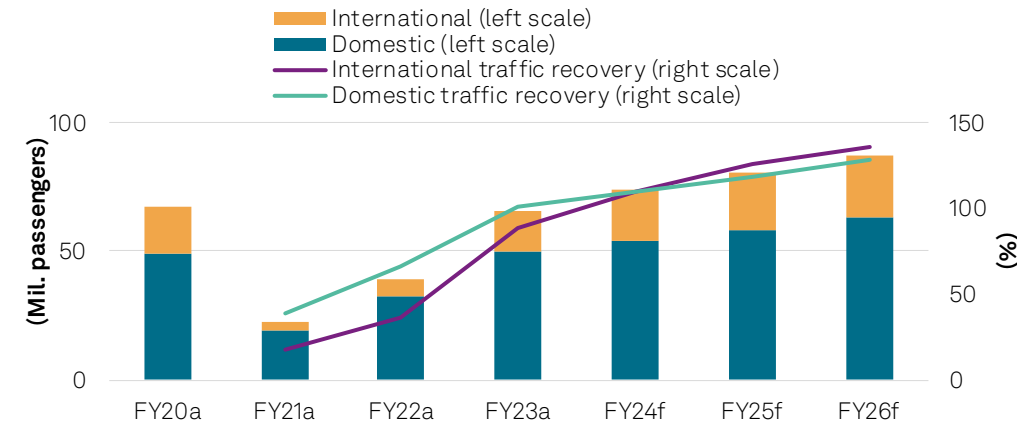
Key rating drivers

- Strategic gateway airport in India's National Capital Region.
- Assured returns on its regulatory asset base. Base airport charges provide a floor for revenue.
- Credit quality is independent of the credit profile of parent, GMR Airports Infrastructure Ltd.
- Past regulatory delays create higher cash flow volatility than global peers.
- Weaker profitability than peers. Inflexible cost structure with high concession fees.

Snapshot of rating triggers

- OCF to debt sustainably exceeds 9% ▲
- Outlook could be revised to stable if OCF to debt is unlikely to sustain toward 9% ▼

Business risk: Satisfactory | **Financial risk:** Highly Leveraged



S&PGR adjusted numbers. Recovery is calculated as percentage of the pre-pandemic level. INR—Indian rupee. CP4—Control period 4 (April 1, 2024, to March 31, 2029). FFO—Funds from operations. OCF—Operating cash flow. TDSAT—Telecom Disputes Settlement and Appellate Tribunal. a--Actual. f--Forecast. Latest financial year ends March 31, 2023.

Latest Report: [DIAL](#), May. 7, 2024. Source: S&P Global Ratings.

EGAT International Co. Ltd.



Issuer credit rating: BBB+/Stable/-- | **Stand-alone credit profile (EGAT):** Investment Grade

Analyst: Daye Park

Clarity on energy policy, regulated returns with full cost pass-through are key.

Key watchpoints

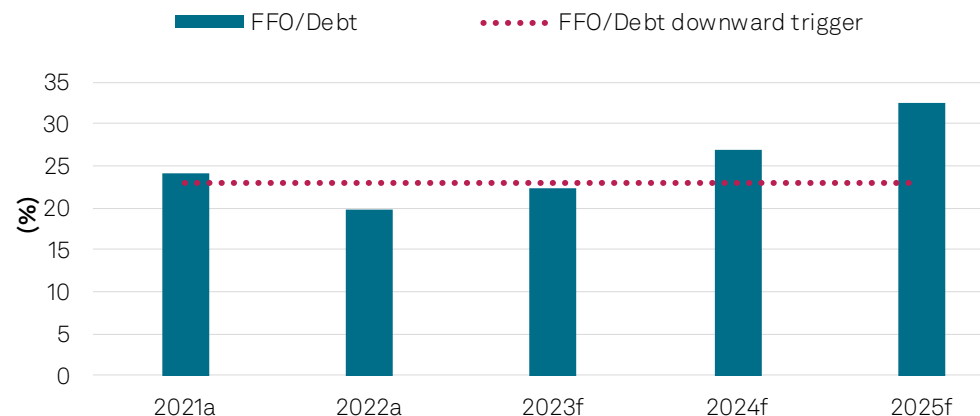
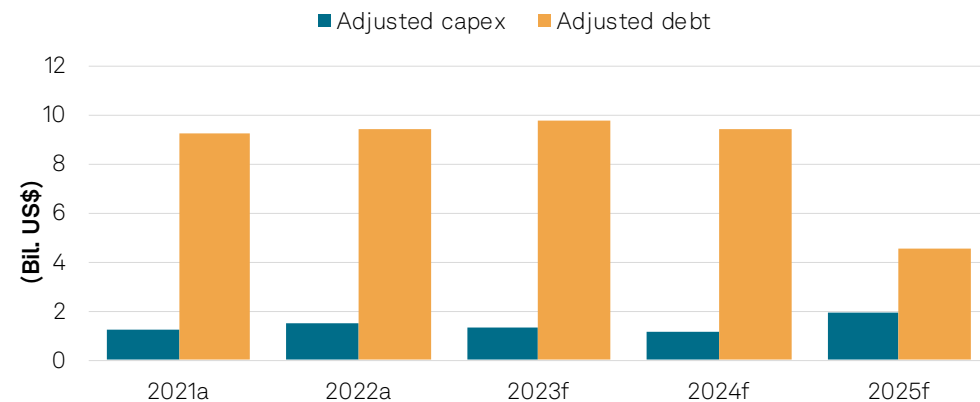
- Unclear energy price policies of government and consistent delays in full fuel and power purchase costs passthrough may lead us to re-evaluate our assessment of the regulatory framework.
- Ability to collect accrued electricity sales revenue from automatic tariff adjustments (Ft) by 2026.

Key rating drivers

- Core subsidiary of parent, EGAT. Timely government support likely via EGAT.
- Benefits from EGAT’s dominant position in power generation and status as the sole transmission services provider in Thailand.
- Established transparent tariff regulatory framework.
- Increased leverage due to electricity tariff subsidies provided during 2021-2022, while recovery timeline and mechanism remains unclear.
- EGAT’s smaller size relative to its peers. Exposure to fuel and customer concentration risk.

Snapshot of rating triggers

- Upgrade of the sovereign’s foreign currency rating and EGAT’s SACP remains at least ‘bb’, while EGAT maintains its strong ties with the government. ▲
- Weakening of EGAT’s ties with EGAT or government support for EGAT.
- EGAT’s downgrade if sovereign ratings fall.
- EGAT’s SACP falls to ‘b+’.
- SACP: FFO to debt remains below 23%, or regulations or business and earnings quality change adversely. ▼



S&PGR adjusted numbers. EGAT--Electricity Generating Authority of Thailand. Capex—Capital expenditure. FFO—Funds from operations. a--Actual. f--Forecast.

Latest Report: [EGAT International](#), Dec. 14, 2023. Source: S&P Global Ratings.

GMR Hyderabad International Airport Ltd.



Issuer credit rating: BB/Stable/-- | **Stand-alone credit profile:** bb

Analyst: Cheng Jia Ong

Largely stable metrics as higher tariffs help offset hefty capex needs.

Key watchpoints

- Capex for its next phase of expansion in FY28 may limit significant improvement in cash flow ratios. Spending could increase to INR16 billion in FY28, from INR5 billion in FY26-FY27.
- Tariff to increase to INR440 per passenger in FY25 and INR420 in FY26 (FY23: INR300).
- Dividends to resume with INR2 billion in FY25, and further rise to INR3 billion-INR5 billion in subsequent years. Greater clarity on dividend policy needed.
- Robust traffic growth of 15% in FY25 (Domestic/International: 24 million/5 million).

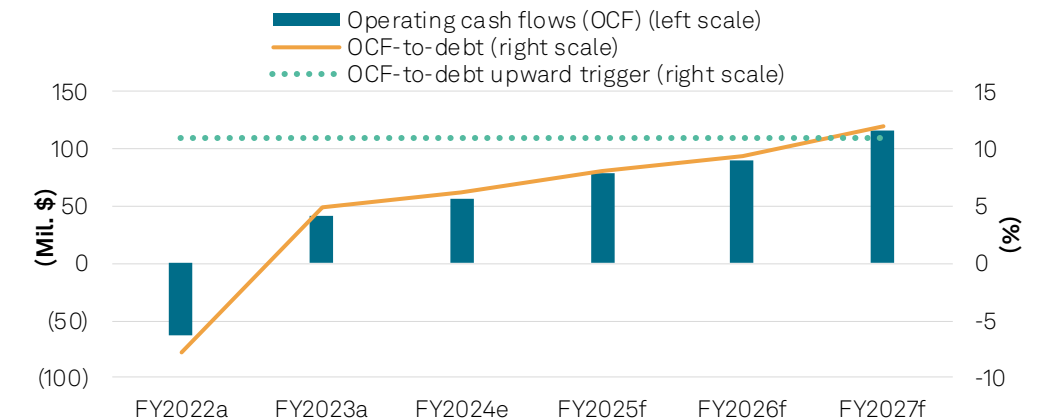
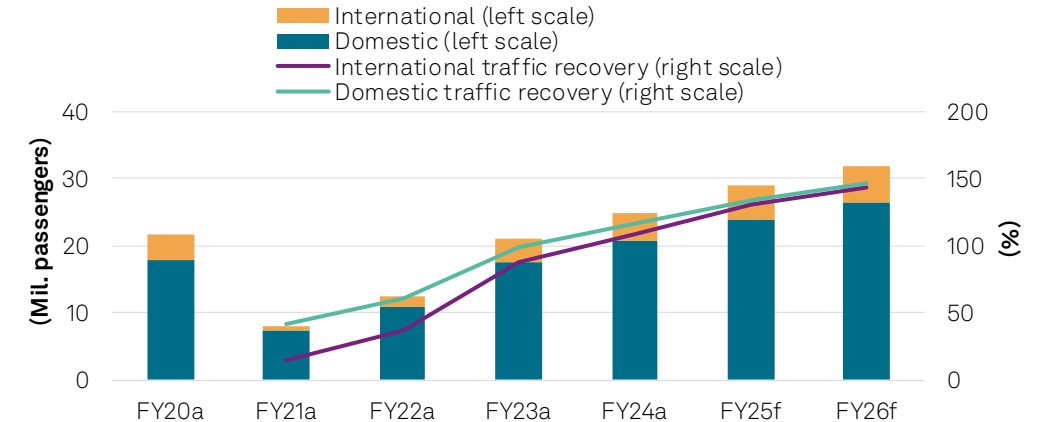
Key rating drivers

- Strategic central location in India underpins good market position and solid traffic recovery.
- Lower concession fees, higher approved tariffs support cash flows.
- Credit quality is independent of the credit profile of parent, GMR Airports Infrastructure.
- Past regulatory delays lead to higher cash flow volatility than global peers.
- High fixed costs and lack of base airport charges could pressure margins during downturns.

Snapshot of rating triggers

- OCF to debt increases to above 11% on a sustainable basis. ▲
- OCF to debt falls below 9% and looks set to stay there. ▼

Business risk: Satisfactory | **Financial risk:** Aggressive



S&PGR adjusted numbers. Recovery is calculated as a percentage of the pre-pandemic level. Capex—Capital expenditure. INR—Indian rupee. OCF—Operating cash flow a—Actual. f—Forecast. Latest financial year ends March 31, 2023.

Latest Report: [GHIAL](#), May. 7, 2024. Source: S&P Global Ratings.

Manila Electric Company



Issuer credit rating: BBB-/Positive/-- | **Stand-alone credit profile:** bbb-

Analyst: Daye Park

Upgrade hinges on strong ratios being sustained despite delays, higher capex.

Key watchpoints

- Predictable cash flow from regulated distribution business and visible cash flows from unregulated businesses.
- Continuing supportive regulatory philosophy of allowing full cost passthrough of distribution charges, despite further delays in regulatory tariff reset.
- Upcoming license renewal expiring in June 2028.

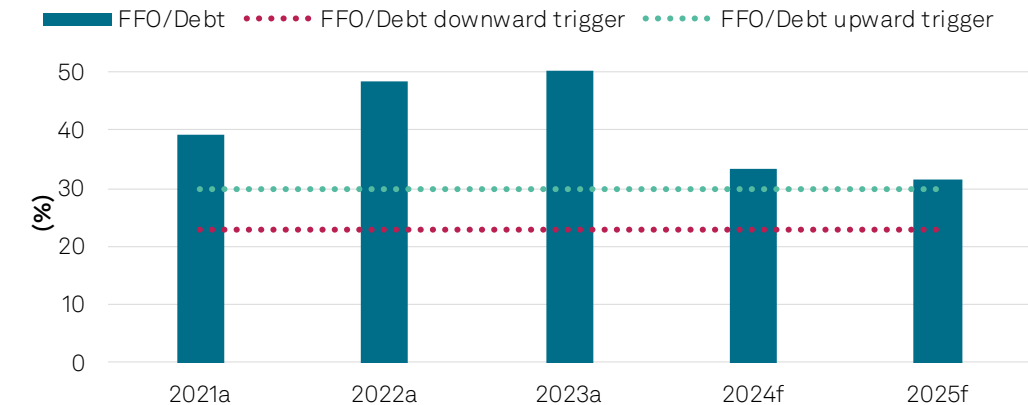
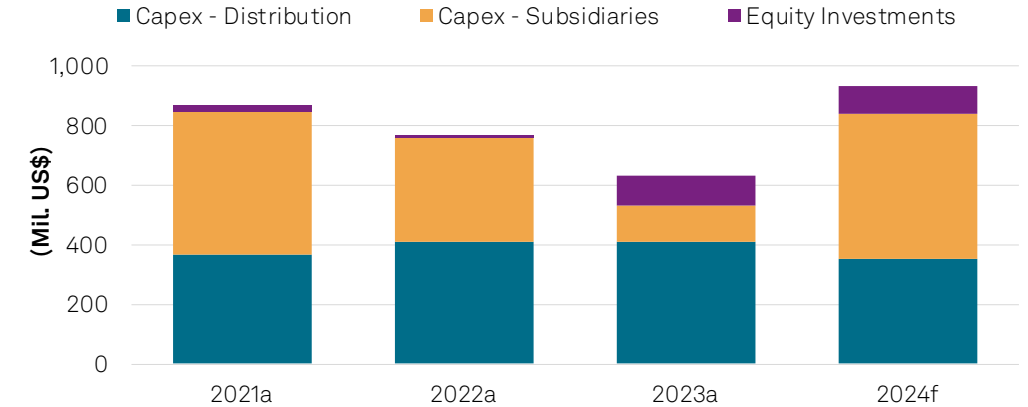
Key rating drivers

- Stable cash flows. Regulatory framework that supports cost recovery.
- Dominant market position in power distribution in Philippines.
- Moderate leverage relative to peers.
- Significant delays in regulatory tariff reset.
- Increasing leverage and execution risks due to high capex, including rising investments in generation assets.

Snapshot of rating triggers

- FFO to debt remains above 30%. ▲
- Regulatory tariff reset remains supportive and visibility is good for the renewal of Meralco's franchise license.
- FFO to debt sustains below 23% or if financial policy becomes more aggressive. ▼

Business risk: Satisfactory | **Financial risk:** Intermediate



S&PGR adjusted numbers a--Actual. f--Forecast.
 Latest Report: [Meralco](#), Nov. 17, 2023. Source: S&P Global Ratings.

NTPC Ltd.



Issuer credit rating: BBB-/Positive/-- | **Stand-alone credit profile:** bbb-

Analyst: Neel Gopalakrishnan

Financials can strengthen if capex and dividends are under control.

Key watchpoints

- Large dividends or oversized capex could weaken financial risk profile.
- About 3.5GW of thermal and 1.5GW of renewable yearly capacity addition.
- Profitability track record of renewables business to be established.

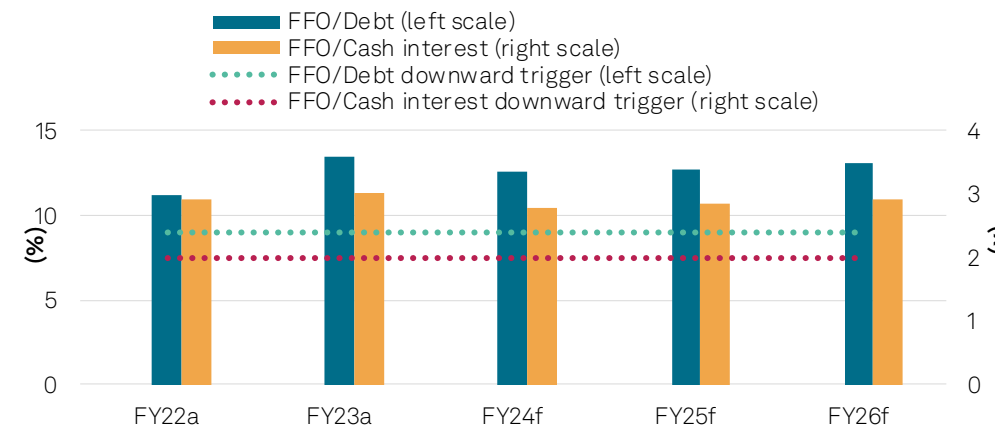
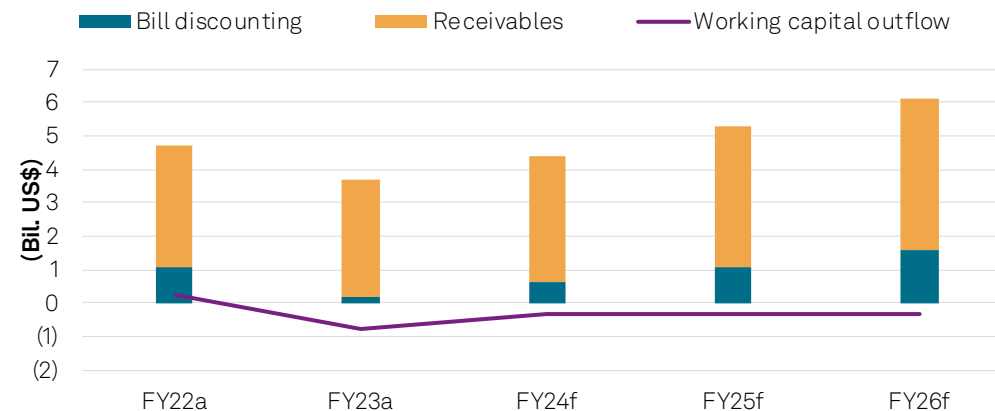
Key rating drivers

- Established availability-based regulations framework with timely cost passthrough and guaranteed returns. Mostly long-term contracts.
- India's largest power generator with a nationwide generation and diversified customer base.
- Strong links with the government of India.
- High leverage amid heavy capex.
- Exposure to weak Indian state distribution utilities.
- Increasing capex on renewables and new technologies which lack regulated returns and face execution risks.

Snapshot of rating triggers

- ▲ Upgrade on the sovereign rating to 'BBB' and NTPC maintains an SACP of 'bbb-'.
- ▼ Outlook on sovereign rating revises to stable.
- SACP: FFO to debt remains below 9%.

Business risk: Strong | **Financial risk:** Aggressive



S&PGR adjusted numbers. FFO--Funds from operations. a--Actual. f--Forecast. Latest financial year ends March 31, 2023.

Latest Reports: [NTPC Ltd.](#), Dec. 15, 2023; [Positive outlook](#) May 29, 2024. Source: S&P Global Ratings.

Pakistan Water and Power Development Authority



Issuer credit rating: CCC+/Stable/-- | Stand-alone credit profile: CCC+

Analyst: Mary Anne Low

Developments on the sovereign rating is the key driver.

Key watchpoints

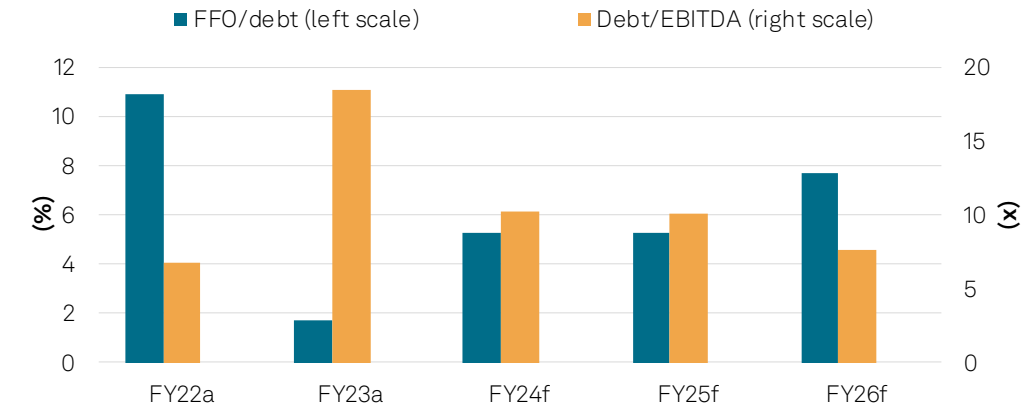
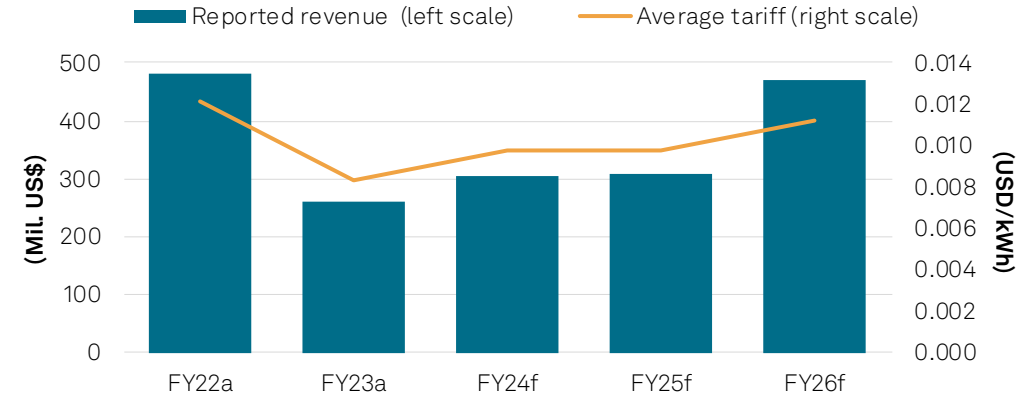
- Adequate unrestricted cash to service debt over the 12 months to end-2024. Accessible cash balance as of Dec. 31, 2023: PKR 138 billion. Debt obligations: PKR 78 billion.
- Continued flexibility to defer interest and principal payments on government-related loans, as allowed by Pakistan government.

Key rating drivers

- Strategic importance and ties with the Pakistan government.
- 95% of cash flows linked to capacity payments. Minimal volume risk.
- High profitability owing to low marginal cost of hydro power generation.
- Creditworthiness linked to Pakistan government’s credit profile.
- Payment delays from single customer due to circular debt problem.
- Less established regulatory framework. Inadequate, untimely returns.
- Elevated leverage. Execution risks for complicated large-scale projects.

Snapshot of rating triggers

- | | |
|---|---|
| <ul style="list-style-type: none"> • Upgrade of the sovereign. | <ul style="list-style-type: none"> • Downgrade of the sovereign. • The risk of negative government intervention heightens. • Lack of any positive development with specific default scenarios envisioned for the next 12 months. |
|---|---|



S&PGR adjusted numbers. PKR--Pakistan rupee. Capex--Capital expenditure. FFO--Funds from operations. a--Actual. f--Forecast. Latest financial year ends June 30, 2023.

Latest Report: [WAPDA](#), Apr. 23, 2024. Source: S&P Global Ratings.

Perusahaan Perseroan (Persero) PT Perusahaan Listrik Negara (PLN)



Issuer credit rating: BBB/Stable/-- | Stand-alone credit profile: bb-

Analyst: Mary Anne Low

Business risk: Fair | Financial risk: Aggressive

Rating driven by sovereign; timely compensation improving cash flows.

Key watchpoints

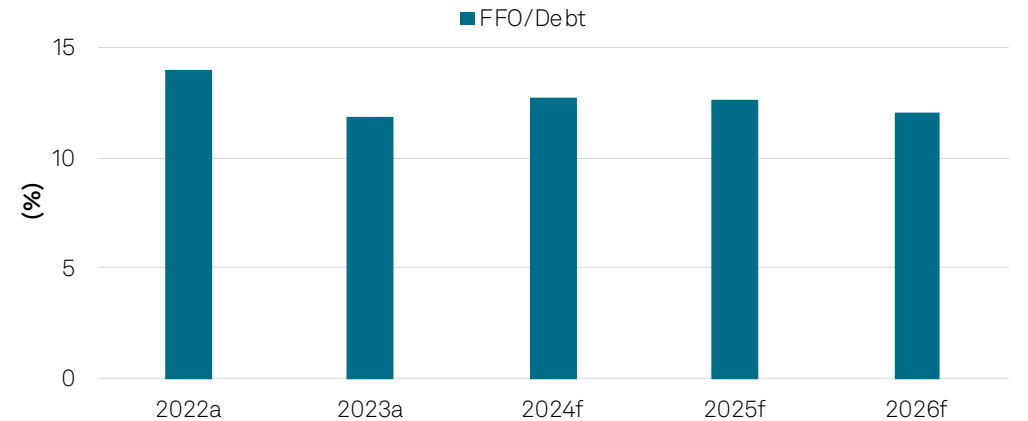
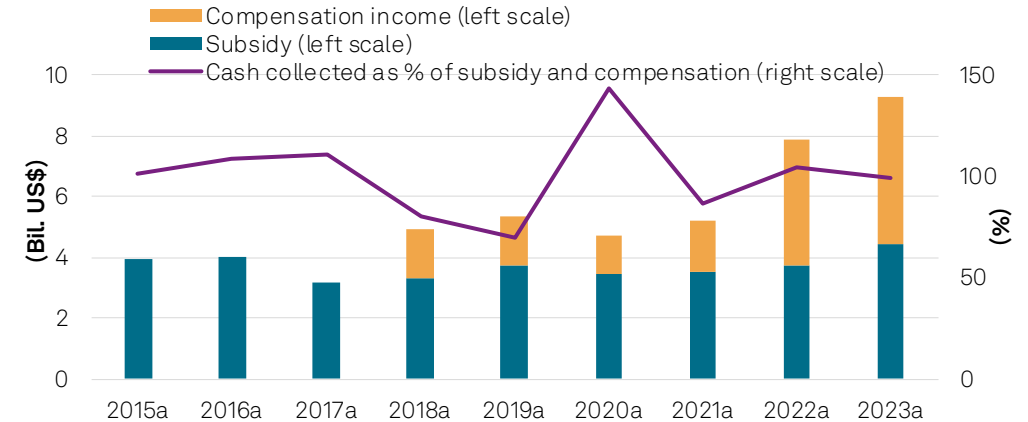
- Timely monthly subsidy and quarterly compensation income receipts critical for cash flows. Estimate IDR145 trillion-IDR150 trillion annually.
- High capex of IDR 84 trillion-IDR96 trillion annually. Impact on PLN depends on funding approach, including government subsidies/compensation income given flat electricity tariffs.

Key rating drivers

- Almost certain likelihood of timely government support.
- Dominant integrated power generator, monopoly transmission & distribution company in Indonesia.
- Weak tariff framework, inadequate ad-hoc tariff adjustment and price caps.
- Significant reliance on subsidies and compensation, even for servicing debt. But good recent record of timely compensation of receipts.
- High leverage with significant capex, exposure to energy transition risk as a thermal major.

Snapshot of rating triggers

- ▲ Upgrade on the sovereign rating while government support remains intact.
- ▼ Downgrade on the sovereign rating.
- ▼ Weakening of the government's support.



S&PGR adjusted numbers. a--Actual. f--Forecast.
Latest Report: [PLN](#), Jul. 12, 2024. Source: S&P Global Ratings.

Power Grid Corp. of India Ltd.



Issuer credit rating: BBB-/Positive/-- | **Stand-alone credit profile:** bbb+

Analyst: Mary Anne Low

Strong credit fundamentals and financials but constrained by sovereign rating.

Key watchpoints

- Positive outlook mirrors that on the India sovereign.
- Robust cash flow profile, significant financial flexibility and headroom.
- Higher-than-expected dividends.

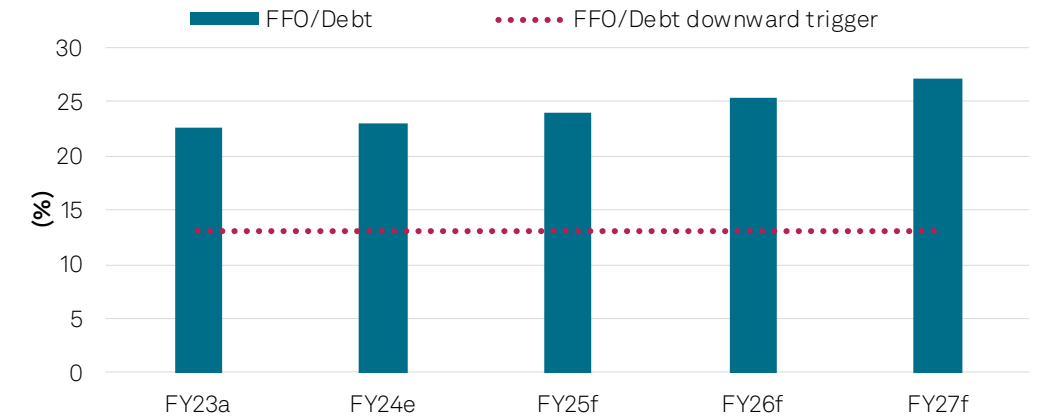
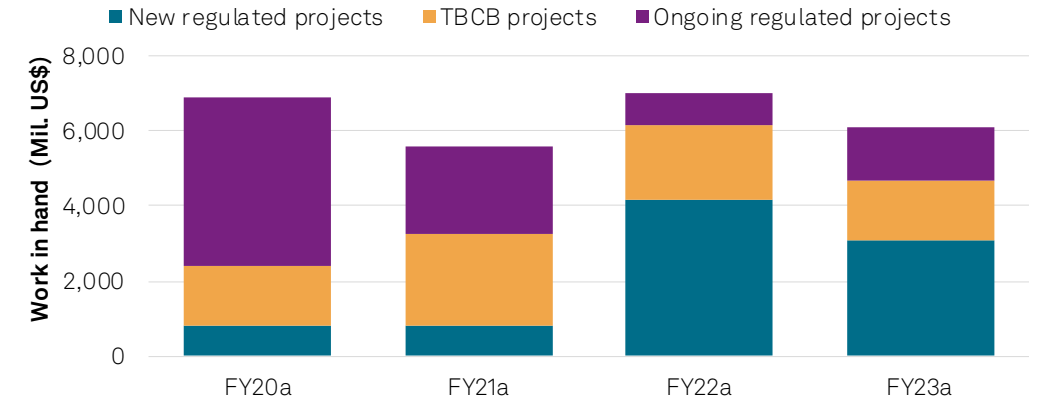
Key rating drivers

- Established availability-based regulatory framework, timely full cost passthrough and guaranteed returns.
- A near monopoly in interstate transmission.
- Extremely high likelihood of extraordinary government support.
- Exposure to weak distribution utilities and payment delays, despite pooling mechanism.
- Moderate exposure to execution risk for large-scale projects.

Snapshot of rating triggers

- | | |
|--|--|
| <ul style="list-style-type: none"> • Upgrade of the sovereign rating while SACP is at least 'bbb-'. | <ul style="list-style-type: none"> • Outlook on sovereign rating revises to stable. • SACP: FFO to debt remains below 20%. |
|--|--|

Business risk: Strong | **Financial risk:** Intermediate



S&PGR adjusted numbers. FFO—Funds from operations. A--Actual. E--Estimate based on preliminary audited financial statements. F--Forecast. TBCB--Tariff based competitive bidding. Latest financial year ends March 31, 2023

Latest Report: [Power Grid](#), Jul. 23, 2024. Source: S&P Global Ratings.

PT Cikarang Listrindo Tbk



Issuer credit rating: BB+/Stable/-- | **Stand-alone credit profile:** bb+

Analyst: Mary Anne Low

Business risk: Satisfactory | **Financial risk:** Intermediate

Business scale and diversity constrain rating upside despite strong financials.

Key watchpoints

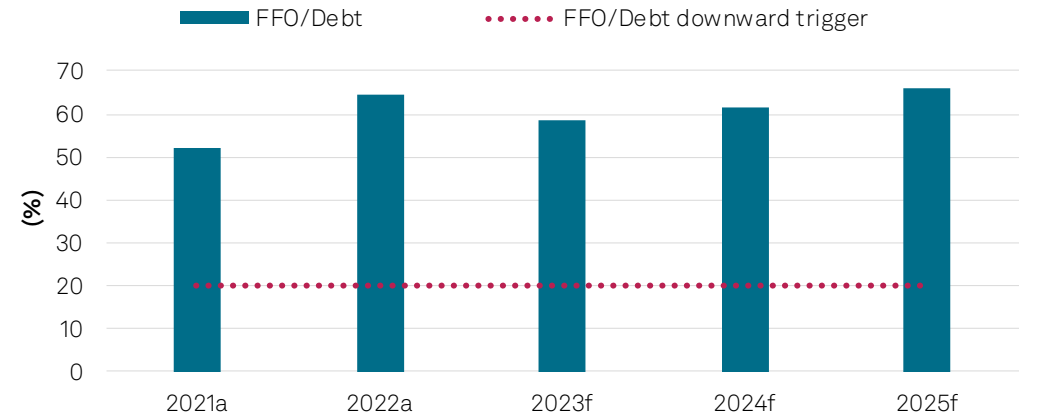
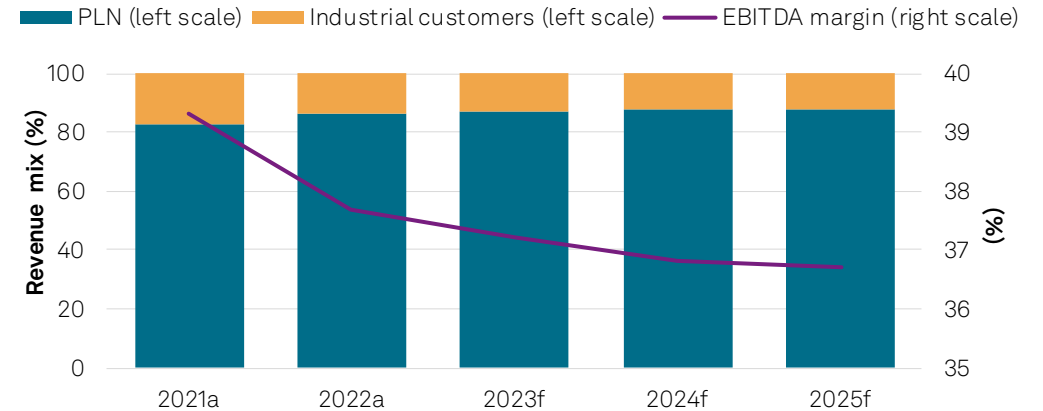
- Management appetite for leverage while refinancing the 2026 bond.
- Use of cash if bond is refinanced – e.g. capex, dividends, etc.

Key rating drivers

- Steady cash flow with contractual fuel cost passthrough supporting resilient margins.
- Protected franchise in a captive catchment area, with a diverse customer base.
- Lower leverage than many global and regional utilities.
- Asset concentration and smaller scale than peers.
- Volume risks from exposure to cyclical industrial customers.
- Event risk related to sizeable future shareholder distribution.

Snapshot of rating triggers

- Significant expansion and diversification of capacity with a greater share of renewables while maintaining a conservative capital structure.
- FFO to debt approaching 20% on a sustained basis.



S&PGR adjusted numbers. FFO--Funds from operations. a--Actual. f--Forecast.

Latest Report: [Cikarang](#), Aug. 16, 2023 Source: S&P Global Ratings.

Ratch Group Public Co. Ltd.



Issuer credit rating: BBB-/Stable/-- | **Stand-alone credit profile:** bb-

Analyst: Daye Park

Capex and acquisitions are key watchpoints; operating cash flows are stable.

Key watchpoints

- Favorable PPAs with EGAT limits volume and fuel-cost risks, but Ratch faces moderate renewal risk (20% of equity operating capacity due for renewal by 2025).
- Earnings quality also supported by international investments. e.g. Paiton's favorable contract terms and healthy operating performance, largely contracted Nexif's operational portfolio.
- Potential off-balance sheet risk in rising reliance on dividend income (~30% of adjusted EBITDA).
- High leverage due to debt-funded growth aspirations. Still healthy interest-servicing ability, in contrast to similar highly-leveraged peers.

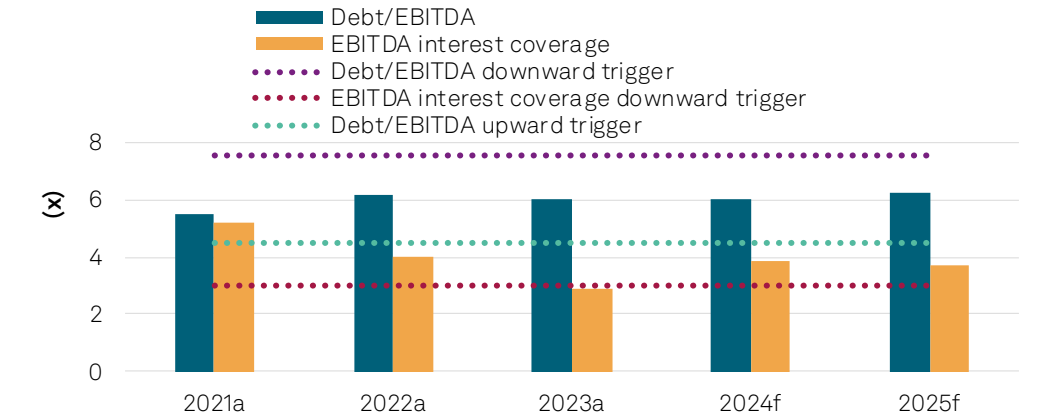
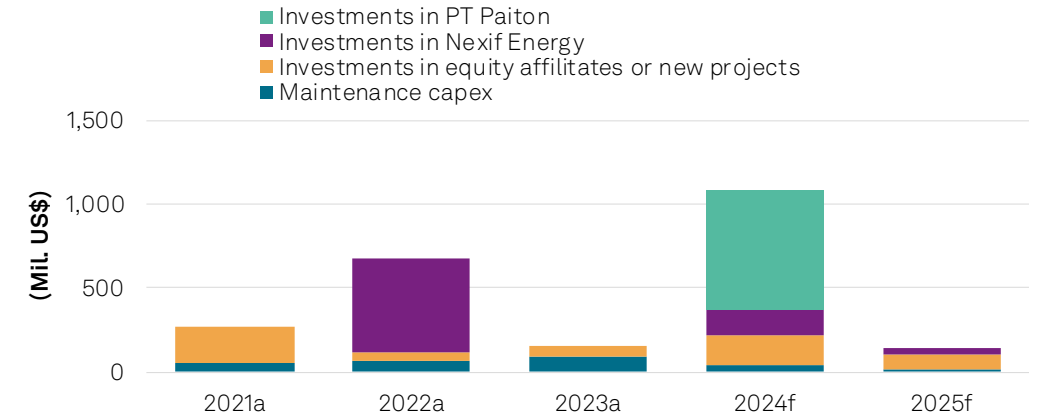
Key rating drivers

- Solid market position in Thailand's power sector.
- Shareholder support from parent, EGAT.
- Elevated leverage from growth investments, and materially higher debt tolerance.
- Earnings volatility from non-energy infrastructure-related investments.

Snapshot of rating triggers

- | | |
|---|---|
| <ul style="list-style-type: none"> • Debt to EBITDA sustains below 4.5x. ▲ | <ul style="list-style-type: none"> • Debt to EBITDA weakens to and stays above 7.5x and EBITDA interest cover falls below 3.0x. ▼ • Importance to parent, EGAT, diminishes. |
|---|---|

Business risk: Satisfactory | **Financial risk:** Highly Leveraged



S&PGR adjusted numbers. PPA--Power purchase agreement. EGAT--Electricity Generating Authority of Thailand. a--Actual. f--Forecast.

Latest Report: [Ratch](#), Nov. 24, 2023. Source: S&P Global Ratings.

Sarawak Energy Bhd.



Issuer credit rating: A-/Stable/-- | Stand-alone credit profile: b+

Analyst: Mary Anne Low

Business risk: Fair | Financial risk: Aggressive

Almost certain likelihood of support from Sarawak state drives the rating.

Key watchpoints

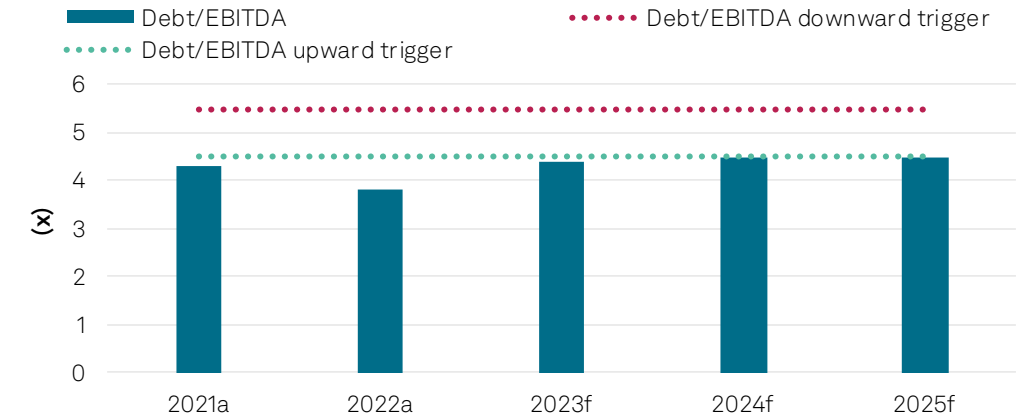
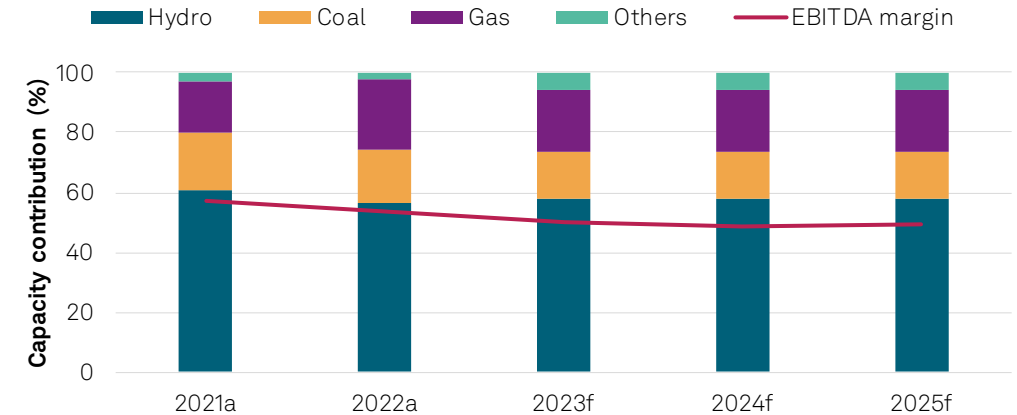
- Energy demand in Sarawak Corridor of Renewable Energy.
- Capital expenditure plans of MYR3.2 billion-MYR3.7 billion annually over 2024 and 2025.

Key rating drivers

- Almost certain likelihood of timely government support due to critical role to the Sarawak state government.
- Strong position as the state's sole power generator, electricity provider.
- Stable profitability due to low-cost hydropower generation and good visibility on fossil-fuel costs.
- Weak regulatory framework with no formal tariff-setting mechanism.
- Limited pricing power under PPAs to bulk customers.
- High leverage with sizeable capex plans.

Snapshot of rating triggers

- | | |
|---|--|
| <ul style="list-style-type: none"> • Upgrade on the State of Sarawak. • SACP: Debt to EBITDA stays below 4.5x or if there are supportive changes in tariff regulations. | <ul style="list-style-type: none"> • Downgrade on the State of Sarawak. • The government's support weakening. • SACP weakens to 'b-'. • SACP: Debt to EBITDA stays above 5.5x. |
|---|--|



S&PGR adjusted numbers. PPA--Power purchase agreement. a--Actual. f--Forecast. Latest Report: [SEB](#), Aug.21, 2023. Source: S&P Global Ratings.

Singapore Power Ltd.



Issuer credit rating: AA+/Stable/-- | **Stand-alone credit profile:** aa-

Analyst: Daye Park

Significant rating headroom on predictable cash flows, financial policy.

Key watchpoints

- Large headroom to our downside triggers; regulated businesses contribute bulk of revenue.
- Higher annual capex of S\$2.4 billion to S\$2.5 billion over next two years (FY23: S\$1.1 billion), including still nascent renewable energy, unregulated business and international markets.
- Capex spending could be lower than current plans. Management has conservative risk appetite and carefully evaluates international investment opportunities.

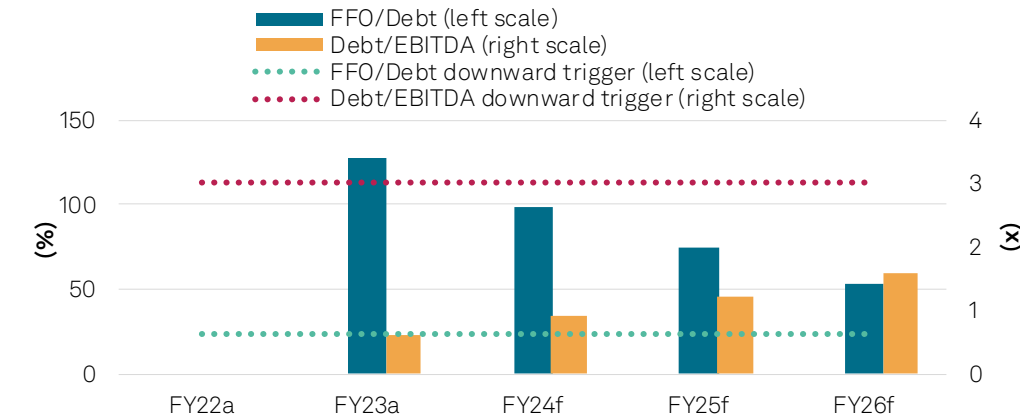
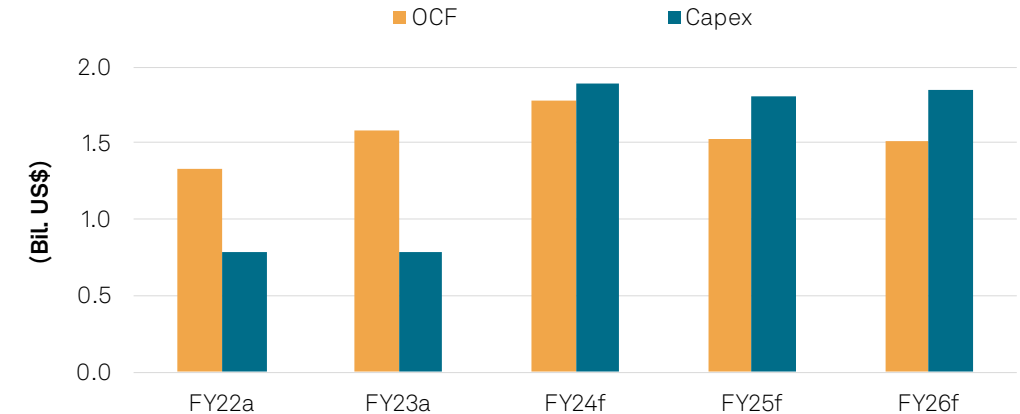
Key rating drivers

- Predictable cash flows underpinned by portfolio of mostly regulated assets with strong regulatory framework.
- Monopoly over Singapore’s electricity T&D networks.
- Sizeable capex likely to result in negative free operating cash flows.
- Earnings and geographical concentration in Singapore, partly mitigated by investments in regulated Australian T&D assets.

Snapshot of rating triggers

- FFO to debt remains above 50% and debt to EBITDA below 2.0x with positive free cash flows, while the government’s support remains unchanged. ▲
- SACP: FFO to debt falls below 23% and debt to EBITDA stays above 3.0x; or deterioration in earnings quality. ▼
- Downgrade of the sovereign to ‘AA’.
- The government’s support has weakened.

Business risk: Excellent | **Financial risk:** Modest



S&PGR adjusted numbers. T&D--Transmission and distribution. Capex--Capital expenditure. OCF--Operations cash flow. a--Actual. f--Forecast. Latest financial year ends March 31, 2023.

Latest Report: [Singapore Power](#), Mar. 19, 2024. Source: S&P Global Ratings.

SMRT Corp. Ltd.



Issuer credit rating: AA+/Stable/-- | **Stand-alone credit profile:** bbb

Analyst: Mary Anne Low

Debt-free and stable outlook despite uncertainty on grant income.

Key watchpoints

- Timely receipt of Rail Reliability Incentive and grant income key to SMRT’s credit profile,.
- Net cash position in FY25 and FY26.
- Ridership to recover to 95% of pre-pandemic levels in FY25. Full recovery in FY26.

Key rating drivers

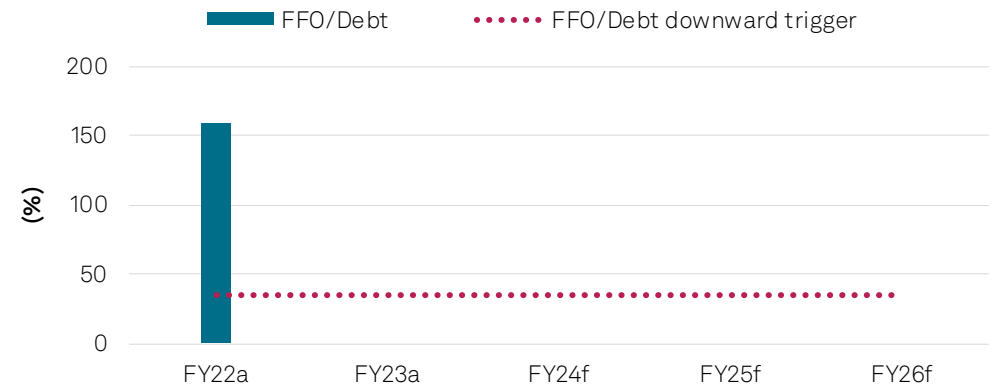
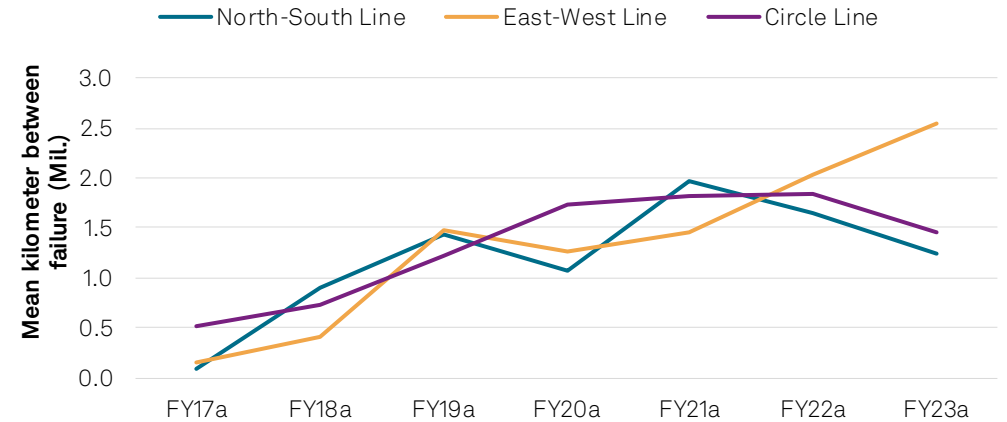
- Singapore’s dominant public transport operator. High barriers to entry.
- Extremely high likelihood of government support. Critical sociopolitical role.
- Cash flow visibility from gross-cost business segments and incentives.
- Government grant critical to the credit profile. Insufficient fare hikes.
- High opex in meeting rail reliability target.

Snapshot of rating triggers

- Unlikely in the next 12-24 months. A further strengthening of the relationship with the government is remote.

- Downgrade of the sovereign.
- Weakening likelihood of extraordinary government support.
- Downward revision of SACP to ‘bb’.
- SACP: Inadequate or untimely reimbursement of operating costs or FFO to debt falls below 35% on a sustained basis.

Business risk: Satisfactory | **Financial risk:** Modest



S&PGR adjusted numbers. Net debt free from FY23a to forecast periods. Capex--Capital expenditure. SACP--Stand-alone credit profile. Opex--Operating expenditure. FFO--Funds from operations. a--Actual. f--Forecast. Latest financial year ends March 31, 2023.

Latest Report: [SMRT](#), Mar. 20, 2024. Source: S&P Global Ratings.

SP PowerAssets Ltd. (SPPA)



Issuer credit rating: AA+/Stable/-- | Stand-alone credit profile: a+

Analyst: Daye Park

Stable regulatory return and profitability offset rising capex.

Key watchpoints

- Cash inflow to increase further with recovery of deferred tariff increases by end-FY25.
- Robust credit metrics despite higher annual capex of S\$1.1 billion to S\$1.4 billion in FY24 and FY25 (FY23: S\$800 million), primarily to replace ageing T&D assets.
- Supportive regulatory framework to continue in the next five-year regulatory period from April 2025.

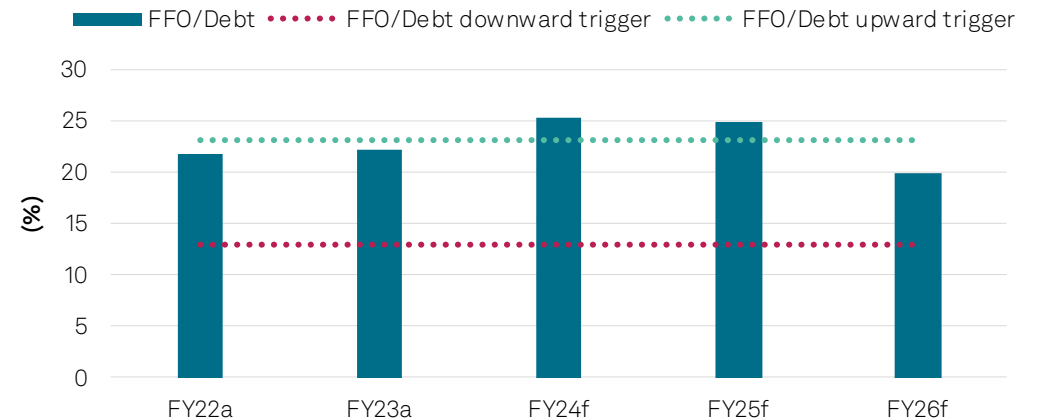
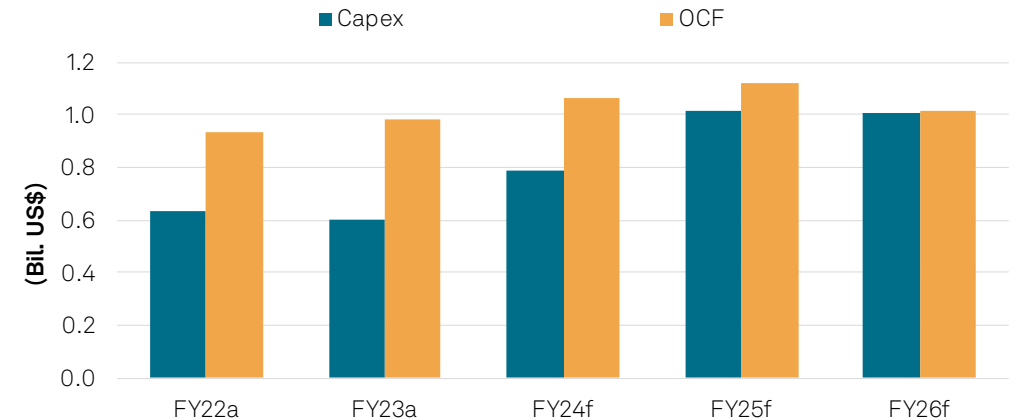
Key rating drivers

- Stable and predictable cash flow from electricity T&D, supported by an established regulatory framework.
- Sole owner and operator of Singapore’s electricity T&D networks.
- Core subsidiary of parent, Singapore Power Ltd.
- Increasing capex due to aging transmission network.
- Geographical concentration, with T&D assets only based in Singapore.

Snapshot of rating triggers

- | | |
|--|---|
| <ul style="list-style-type: none"> • Upgrade of Singapore Power Ltd and SPPA remains core subsidiary to group. • SACP: FFO to debt sustains above 23%. | <ul style="list-style-type: none"> • Downgrade of Singapore Power Ltd. • Weakening of ties with the parent. • SACP: FFO to debt weakens below 13%. |
|--|---|

Business risk: Excellent | Financial risk: Intermediate



S&PGR adjusted numbers. T&D--Transmission and distribution. SACP--Stand-alone credit profile. Capex--Capital expenditure. a--Actual. f--Forecast. Latest financial year ends March 31, 2023.

Latest Report: [SP PowerAssets](#), Mar. 22, 2024. Source: S&P Global Ratings.

Tata Power Corp. Ltd.



Issuer credit rating: BB+/CreditWatch Positive/-- | **Stand-alone credit profile:** bb

Analyst: Neel Gopalakrishnan

Business risk: Satisfactory | **Financial risk:** Aggressive

Review of group support could raise rating to investment grade.

Key watchpoints

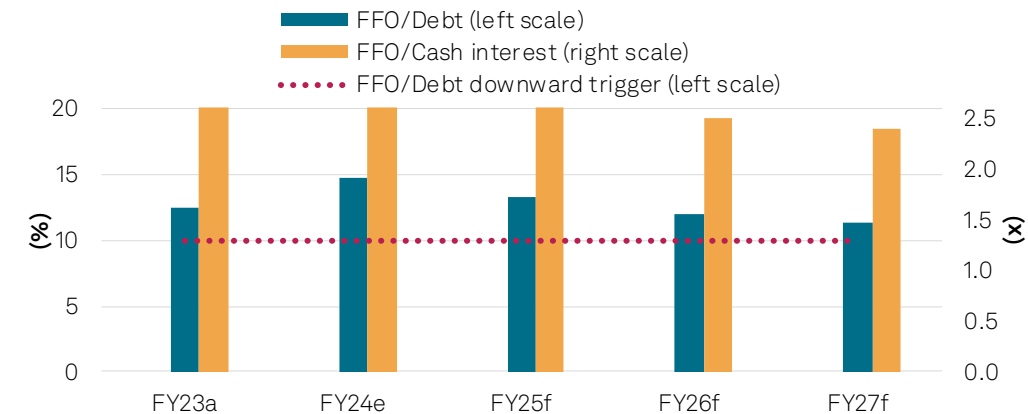
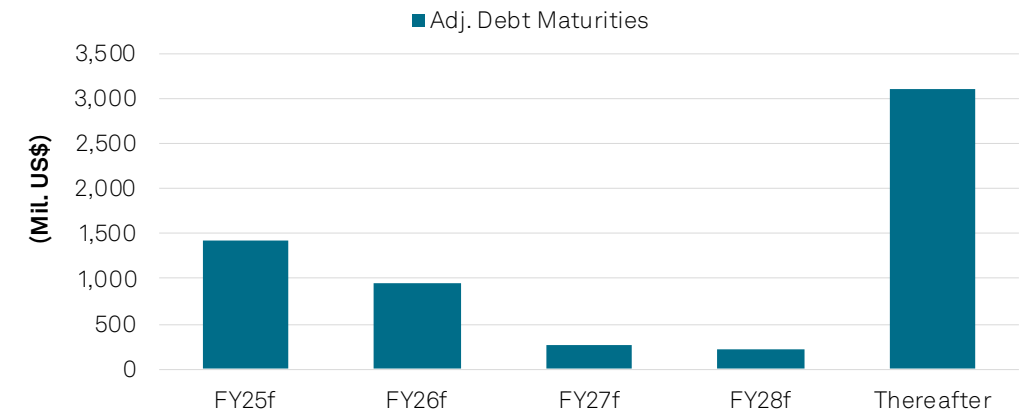
- Potential change in group support assessment.
- Extent of reliance on short-term debt with high proportion of commercial paper (INR30 billion as of March 2024), which constrains our liquidity assessment.
- Level of capex, and investment in renewables.

Key rating drivers

- Good scale and presence across power sector value chain across India.
- Stable cash flow from regulated and renewable businesses. Long-term contracts.
- Financial support from Tata group in times of need.
- Heavy capex to expand renewable business will limit deleveraging.
- Reliance on short-term funding puts pressure on liquidity.
- Absent compensatory tariffs, Mundra power plant could lose money when coal prices are high.

Snapshot of CreditWatch ▲

- Reassessment of group support – if we view the expected level of support is likely to be higher than currently factored, we expect to raise the rating at least a one notch.



S&PGR adjusted numbers. FFO--Funds from operations. a--Actual. e--Estimate. f--Forecast. Latest financial year ends March 31, 2024

Latest Report: [Tata Power](#), June 5, 2024. Source: S&P Global Ratings.

Tenaga Nasional Bhd.



Issuer credit rating: A-/Stable/-- | **Stand-alone credit profile:** bbb

Analyst: Mary Anne Low

Improving regulatory record behind recent rating upgrade.

Key watchpoints

- Regulatory reset from January 2025; it's unlikely to be negative.
- Maintaining track record of passing through fuel and generation costs.

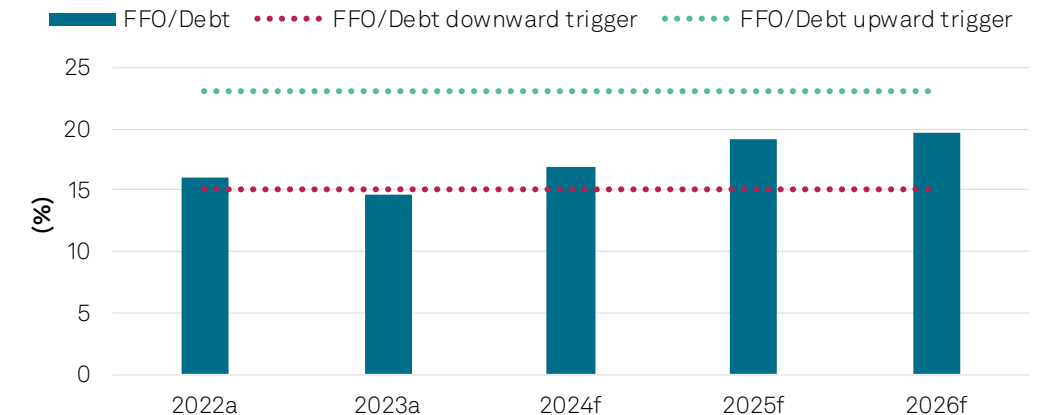
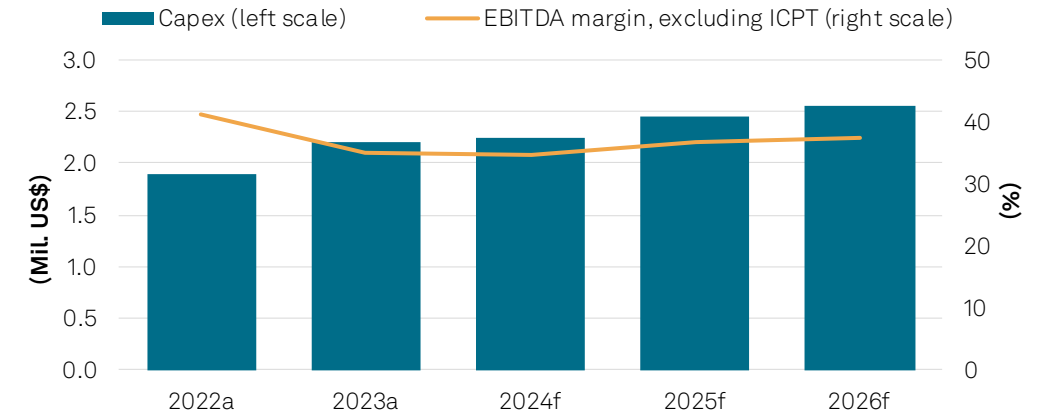
Key rating drivers

- Strong market position in Malaysia.
- Generally supportive regulations that underpin predictable cash flows.
- High likelihood of extraordinary government support.
- High capex and risks from international investments.
- Credit metrics could weaken if cost recovery is not timely, or dividends or acquisitions are greater than we expect.

Snapshot of rating triggers

- | | |
|---|--|
| <ul style="list-style-type: none"> • SACP: FFO to debt sustains above 23%. • SACP: New tariff regulations with independent regulator establish a track record of timely and full recovery of all costs. | <ul style="list-style-type: none"> • Downgrade of SACP to 'bbb-', if FFO to debt sustains below 15%. • Weakening of government support. • Downgrade of local currency sovereign rating to 'A-'. |
|---|--|

Business risk: Strong | **Financial risk:** Significant



S&PGR adjusted numbers. ICPT—Imbalance cost pass-through. MYR—Malaysian ringgit. Capex—Capital expenditure. FFO—Funds from operations. a—Actual. f—Forecast. Latest Report: [TNB](#), May. 30, 2024. Source: S&P Global Ratings.

Vena Energy Capital Pte. Ltd.



Issuer credit rating: BBB-/Stable/-- | **Stand-alone credit profile:** bbb-

Analyst: Daye Park

Long-term fixed contracts, stable operating performance support the rating.

Key watchpoints

- Committed to maintain adjusted debt to EBITDA at about 2.5x at holdco level and willingness to walk away from defaulting projects.
- Stable operating performance. Electricity volumes in line with P75 (solar) and P90 (wind) estimates. Performance is stronger and more stable than that of peers in the region.

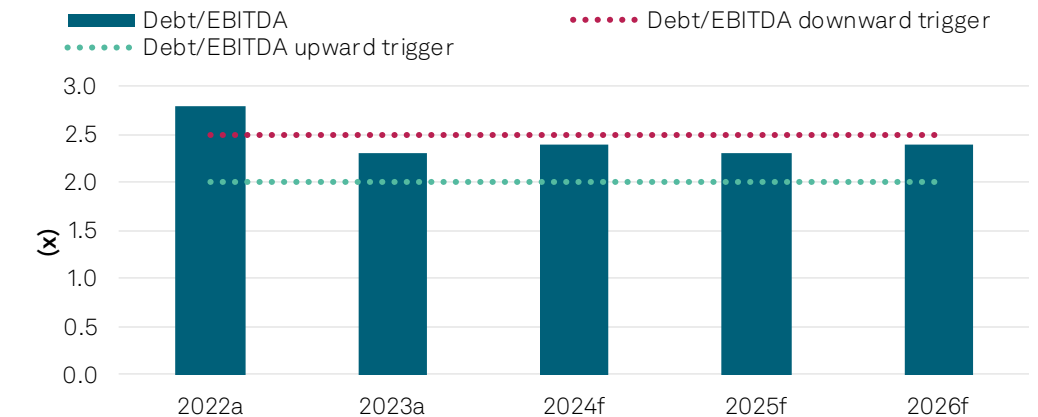
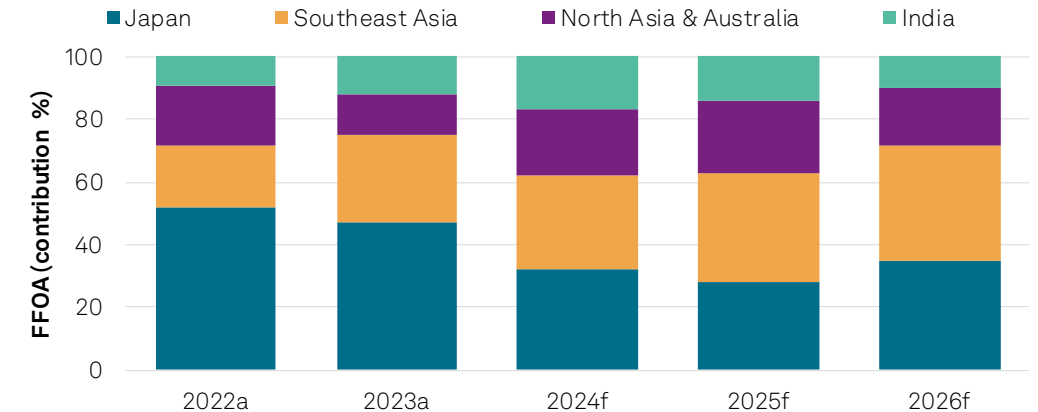
Key rating drivers

- Cash flow resilience from a diversified portfolio of small projects across geographies, resources, and counterparties.
- Non-recourse project financing. Willingness to walk away from project defaults.
- Fixed/indexed prices and long-term PPAs underpin cash flow stability.
- Inherent resource risk as a renewable energy generator, short track record of portfolio.
- Increasing exposure to construction risk as portfolio expands.
- Country and counterparty concentration risks.

Snapshot of rating triggers

- Limited upside over the next 12-24 months.
- Beyond that timeframe, if adjusted debt to EBITDA goes below 2.0x and adjusted FFO to debt remains above 45%. ▲
- Adjusted debt to EBITDA sustains above 2.5x. ▼

Business risk: Satisfactory | **Financial risk:** Intermediate



S&PGR adjusted numbers. FFOA—Funds from operational assets. P90/P75--Meeting power generation probability of at least 90% or 75% of time. a--Actual. f--Forecast. All amounts in US\$ unless otherwise stated. Latest Report: [Vena Energy](#), Jun. 5, 2024. Source: S&P Global Ratings.

Appendix

Portfolio | Ratings Snapshot

| Issuer | Country | Sector | Corp./Project | SACP | Rating | Outlook |
|---|-------------|----------------|-------------------|------------------------|--------|----------------------|
| Adani Electricity Mumbai Ltd. | India | Power | Corporate | bbb- | BBB- | Stable |
| Adani Green Energy Ltd. Restricted Group 2 | India | Power | Project Finance | bb+ | BB+ | Stable |
| Adani International Container Terminal Pte. Ltd. | India | Transportation | Project Finance | bbb- | BBB- | Stable |
| Adani Ports and Special Economic Zone Ltd. | India | Transportation | Corporate | bbb- | BBB- | Positive |
| Continuum Green Energy Ltd. | India | Power | Corporate | b+ | B+ | Positive |
| Delhi International Airport Ltd. | India | Transportation | Corporate | bb- | BB- | Positive |
| EGAT International Co. Ltd. | Thailand | Power | Corporate | EGAT: Investment Grade | BBB+ | Stable |
| GMR Hyderabad International Airport Ltd. | India | Transportation | Corporate | bb | BB | Stable |
| Manila Electric Company | Philippines | Power | Corporate | bbb- | BBB- | Positive |
| NTPC Ltd. | India | Power | Corporate | bbb- | BBB- | Positive |
| Pakistan Water and Power Development Authority | Pakistan | Power | Corporate | ccc+ | CCC+ | Stable |
| Perusahaan Perseroan (Persero) PT Perusahaan Listrik Negara | Indonesia | Power | Corporate | bb- | BBB | Stable |
| Power Grid Corp. of India Ltd. | India | Power | Corporate | bbb+ | BBB- | Positive |
| PT Cikarang Listrindo Tbk | Indonesia | Power | Corporate | bb+ | BB+ | Stable |
| Ratch Group Public Co. Ltd. | Thailand | Power | Corporate | bb- | BBB- | Stable |
| Sarawak Energy Bhd. | Malaysia | Power | Corporate | b+ | A- | Stable |
| Singapore Power Ltd. | Singapore | Power | Corporate | aa- | AA+ | Stable |
| SMRT Corp. Ltd. | Singapore | Transportation | Corporate | bbb | AA+ | Stable |
| SP PowerAssets Ltd. | Singapore | Power | Corporate | a+ | AA+ | Stable |
| Tata Power Co. Ltd. | India | Power | Corporate | bb | BB+ | CreditWatch Positive |
| Tenaga Nasional Bhd. | Malaysia | Power | Corporate | bbb | A- | Stable |
| Vena Energy Capital Pte. Ltd. | Singapore | Power | Project Developer | bbb- | BBB- | Stable |

Ratings and outlook as of Jul. 23, 2024. SACP—Stand-alone credit profile. Source: S&P Global Ratings.

Portfolio | Ratings Construct

| Issuer | Business Risk | Financial Risk | Anchor | SACP | Rating | Outlook |
|--|---------------|------------------|--------|------------------------|--------|----------------------|
| <u>Adani Electricity Mumbai Ltd.</u> | Strong | Aggressive | bb+ | bbb- | BBB- | Stable |
| <u>Adani Green Energy Ltd. Restricted Group 2</u> | N/A | N/A | N/A | bb+ | BB+ | Stable |
| <u>Adani International Container Terminal Pte. Ltd.</u> | N/A | N/A | N/A | bbb- | BBB- | Stable |
| <u>Adani Ports and Special Economic Zone Ltd.</u> | Satisfactory | Intermediate | bbb | bbb- | BBB- | Positive |
| <u>Continuum Green Energy Ltd.</u> | Satisfactory | Highly Leveraged | b+ | b+ | B+ | Positive |
| <u>Delhi International Airport Ltd.</u> | Satisfactory | Highly Leveraged | b+ | bb- | BB- | Positive |
| <u>EGAT International Co. Ltd.</u> | N/A | N/A | N/A | EGAT: Investment Grade | BBB+ | Stable |
| <u>GMR Hyderabad International Airport Ltd.</u> | Satisfactory | Aggressive | bb | bb | BB | Stable |
| <u>Manila Electric Company</u> | Satisfactory | Intermediate | bbb- | bbb- | BBB- | Positive |
| <u>NTPC Ltd.</u> | Strong | Aggressive | bb+ | bbb- | BBB- | Positive |
| <u>Pakistan Water and Power Development Authority</u> | - | - | - | - | CCC+ | Stable |
| <u>Perusahaan Perseroan (Persero) PT Perusahaan Listrik Negara</u> | Fair | Aggressive | bb- | bb- | BBB | Stable |
| <u>Power Grid Corp. of India Ltd.</u> | Strong | Intermediate | a- | bbb+ | BBB- | Positive |
| <u>PT Cikarang Listrindo Tbk</u> | Satisfactory | Intermediate | bbb- | bb+ | BB+ | Stable |
| <u>Ratch Group Public Co. Ltd.</u> | Satisfactory | Highly Leveraged | b+ | bb- | BBB- | Stable |
| <u>Sarawak Energy Bhd.</u> | Fair | Aggressive | bb- | b+ | A- | Stable |
| <u>Singapore Power Ltd.</u> | Excellent | Modest | aa | aa- | AA+ | Stable |
| <u>SMRT Corp. Ltd.</u> | Satisfactory | Modest | bbb+ | bbb | AA+ | Stable |
| <u>SP PowerAssets Ltd.</u> | Excellent | Intermediate | a+ | a+ | AA+ | Stable |
| <u>Tata Power Co. Ltd.</u> | Satisfactory | Aggressive | bb | bb | BB+ | CreditWatch Positive |
| <u>Tenaga Nasional Bhd.</u> | Strong | Significant | bbb | bbb | A- | Stable |
| <u>Vena Energy Capital Pte. Ltd.</u> | Satisfactory | Intermediate | bbb- | bbb- | BBB- | Stable |

6- point Business Risk scale—Excellent, Strong, Satisfactory, Fair, Weak and Vulnerable. 6-point Financial Risk scale—Minimal, Modest, Intermediate, Significant, Aggressive and Highly Leveraged. Ratings and outlook as of Jul. 23, 2024. SACP—Stand-alone credit profile. Source: S&P Global Ratings.

Portfolio | Key Financials

| Issuer (mil. US\$) | Period | Revenue | EBITDA | Capex | Debt | Debt/EBITDA | FFO/debt |
|--|----------------|---------|--------|-------|--------|------------------|--------------------|
| <u>Adani Electricity Mumbai Ltd.</u> | FY25 | 1,260 | 227 | 556 | 1495 | 6.6x | 5.5% |
| <u>Adani Green Energy Ltd. Restricted Group 2</u> | FY25 | | | | | Min. DSCR: 1.25x | Median DSCR: 1.47x |
| <u>Adani International Container Terminal Pte. Ltd.</u> | FY25 | | | | | Min. DSCR: 1.73x | Median DSCR: 2.20x |
| <u>Adani Ports and Special Economic Zone Ltd.</u> | FY25 | 3,564 | 2,127 | 1,986 | 6,227 | 2.9x | 25.6% |
| <u>Continuum Green Energy Ltd.</u> | FY25 | 306 | 232 | 152 | 1,502 | 6.5x | 4.6% |
| <u>Delhi International Airport Ltd.</u> | FY25 | 613 | 184 | 66 | 1,700 | 8.9x | 0.5% |
| <u>EGAT International Co. Ltd.</u> | 2024 | 21,835 | 4,087 | 1,118 | 10,512 | 2.6x | 27.0% |
| <u>GMR Hyderabad International Airport Ltd.</u> | FY25 | 374 | 189 | 145 | 971 | 5.1x | 8.2% |
| <u>Manila Electric Company</u> | 2024 | 8,130 | 1,394 | 1,373 | 2,720 | 2.0x | 37.7% |
| <u>NTPC Ltd.</u> | FY25 | 19,639 | 4,393 | 3,467 | 27,613 | 0.3x | 308.3% |
| <u>Pakistan Water and Power Development Authority</u> | Jul. 23-Jun.24 | 377 | 269 | 306 | 3,169 | 11.8x | 4.0% |
| <u>Perusahaan Perseroan (Persero) PT Perusahaan Listrik Negara</u> | 2024 | 31,135 | 8,649 | 5,129 | 39,850 | 4.6x | 12.7% |
| <u>Power Grid Corp. of India Ltd.</u> | FY25 | 5,784 | 5,053 | 2,395 | 14,353 | 2.8x | 24.0% |
| <u>PT Cikarang Listrindo Tbk</u> | 2024 | 579 | 213 | 45 | 220 | 1.0x | 63.8% |
| <u>Ratch Group Public Co. Ltd.</u> | 2024 | 1,138 | 387 | 976 | 2,580 | 6.7x | 9.7% |
| <u>Sarawak Energy Bhd.</u> | 2024 | 1,523 | 743 | 674 | 3,360 | 4.5x | 14.6% |
| <u>Singapore Power Ltd.</u> | FY25 | 4,969 | 1,817 | 1,806 | 2,154 | 1.2x | 74.1% |
| <u>SMRT Corp. Ltd.</u> | FY25 | 1,194 | 106 | 71 | 0 | - | - |
| <u>SP PowerAssets Ltd.</u> | FY25 | 1,455 | 1,255 | 1,016 | 4,636 | 3.7x | 24.7% |
| <u>Tata Power Co. Ltd.</u> | FY25 | 8,059 | 1,610 | 1,561 | 7,147 | 4.4x | 12.7% |
| <u>Tenaga Nasional Bhd.</u> | 2024 | 12,754 | 3,985 | 2,235 | 17,102 | 4.3x | 16.8% |
| <u>Vena Energy Capital Pte. Ltd.</u> | 2024 | 168 | 140 | NA | 319 | 2.3x | 40.0% |

S&PGR adjusted figures. Financials as of Jul. 23, 2024. FY25—Fiscal year ending March 2025. Data used in charts for credits with fiscal year ending March 2024 is a mix of actuals and estimates. Source: S&P Global Ratings.

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