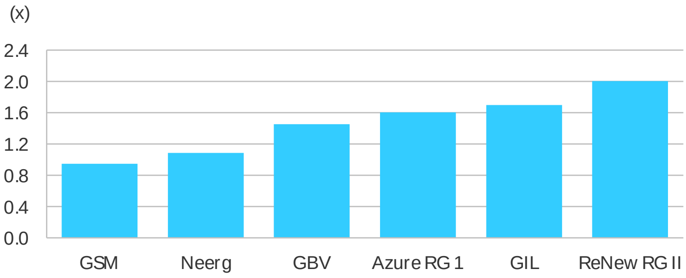
Test of Indian Renewables RGs' Liquidity

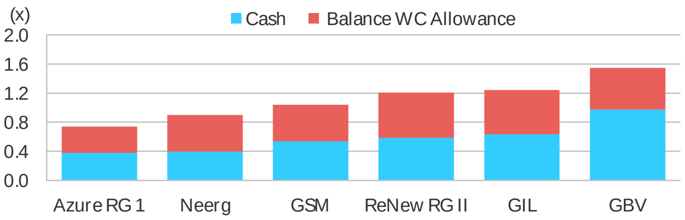
Weaker Net Interest Cover for Greenko Solar Mauritius and Neerg Due to Rising Receivables

Adjusted CFO Net Interest Cover (FY20)



Source: Fitch Ratings

(Adjusted Cash (End-FY19) + Balance Working Capital Allowance)/Interest Expense



Note: End-FY19 cash balance adjusted for scheduled debt repayments, asset drop-downs, capital expenditure etc. in FY20; ReNew RG II's FY20 senior interest expense estimate is netted off by covenanted interest income
Source: Fitch Ratings

Greenko Solar (Mauritius) Limited (US dollar notes rated BB-) and Neerg Energy Ltd (US dollar notes rated B+) are likely to be most affected by the continued delay in payments from state-owned power distribution utilities in Andhra Pradesh, among Fitch Ratings' corporate portfolio of rated restricted groups (RGs) of Indian renewable energy producers.

Greenko Dutch B.V (GBV, US dollar notes rated BB) has a moderate buffer while Greenko Investment Company (GIL, US dollar notes rated BB-) and Azure Power Energy Ltd. (Azure RG 1, US dollar notes rated BB-) will be least affected. ReNew RG II (US notes rated BB) will be unaffected as it does not sell electricity to the state.

Adjusted Net Interest Cover-Based Analysis

Fitch's scenario analysis looks at the adjusted CFO to net interest expenses. The CFO considers zero collections from Andhra Pradesh in the financial year ending March 2020 (FY20). We stress the CFO further by assuming additional delays in payments – in multiples of 30 days – from other state-owned counterparties for which receivable days were significantly higher than 60 at FYE19.

Adjusted CFO to net interest cover of above 1.0x indicates an RG has some cushion through recurring cash collection before it has to turn to its cash balance, working-capital facilities or sponsor to manage liquidity. ReNew RG II, GIL and Azure RG I top the chart, given the quality and diversification of their counterparties.

Benefits from Counterparty Diversification

Diversification across counterparties provides benefits to the RGs' credit profiles, as a state-owned distribution company's ability or willingness to make timely payments can change over time.

For example, Andhra Pradesh's average payable days to the RGs rose to more than 200 by FYE19 from around 100 at FYE18. Karnataka recorded payable days of less than 100 to the RGs in FY17, but performance deteriorated to around 250 by FYE19. Telangana's record worsened to more than 280 payable days by FYE19 from under 190 at FYE18.

In comparison, the average payable days to the RGs from Maharashtra and Rajasthan improved to around 100 by FYE19 from above 360 and 180, respectively, at FYE17.

PPA Tariff Revision Not Expected

Fitch's rating cases do not expect attempts by the Andhra Pradesh government to renegotiate tariffs in its power purchase agreements (PPA) to be successful. Any tariff revision will be treated as event risk in our credit assessment of the RG's bonds.

While higher receivable days would put pressure on cash flows and liquidity, Fitch expects cash collections from other counterparties, existing cash balances and carve-outs to incur working-capital debt to support liquidity. We also expect sponsors of these RGs to be forthcoming with liquidity support, if required.

Related Research

What Investors Want to Know: ReNew Power Limited (October 2019)

India Power Watch – 1H19 (May 2019)

Indian Renewables – Peer Review (September 2018)

Analysts

Rachna Jain
+65 6796 7227
rachna.jain@fitchratings.com

Girish Madan
+65 6796 7211
girish.madan@fitchratings.com

Muralidharan R
+65 6796 7236
muralidharan.r@fitchratings.com

Adjusted CFO to Net Interest Cover

For this analysis, Fitch focuses on operating cash receipts during the year. We adjust revenue by netting off cash operating expenses and taxes, and delays in cash receipts from certain counterparties.

In the first scenario, we have assumed no cash collections from distribution companies in Andhra Pradesh in FY20 as receivables for most renewable projects exceed 10 months and the companies have not started making payments yet.

The financial position of some state-owned distribution companies in other states has also deteriorated significantly in the last few years, with the cost-revenue gap widening and less-than-commensurate or delayed subsidies from the state authorities. The RGs's receivables from states other than Andhra Pradesh have also increased significantly.

Hence we also assess the RGs' recurring cash headroom by stressing the receivables days – in multiples of 30 days - from other state-owned counterparties for which the receivable position was higher than 60 days in FY19. The effect of lower cash receipts due to the extended receivable days from other counterparties is reflected in the respective scenarios.

We look at the ratio of adjusted CFO to net interest expense to assess the buffer of recurring cash that an RG has before it has to tap its cash balance, working capital or sponsors.

Definitions:

Scenario 1:

- Adjusted CFO = Revenue – Cash Operating Expenses – Cash Taxes - Revenue from Andhra Pradesh

Other Scenarios:

- Adjusted CFO = Revenue – Cash Operating Expenses – Cash Taxes - Revenue from Andhra Pradesh – Graded Increase in Receivable Days from other Counterparties which had more than 60 receivable days at end-FY19

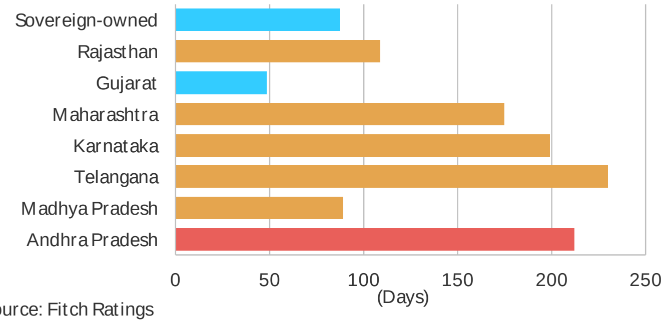
Adjusted CFO to Net Interest Expense Ratio: Adjusted CFO/(Interest expense + Hedging costs – Interest income)

Greenko Solar (Mauritius) Limited

Fitch expects Andhra Pradesh to account for 40% of GSM's FY20 revenue. GSM's adjusted CFO to net interest expense ratio is already expected to be under 1.0x for FYE20. GSM will have to tap additional resources for business continuity. The liquidity crunch will increase if payments from other weak counterparties - Telangana, Karnataka, Rajasthan, Madhya Pradesh and Maharashtra are delayed further.

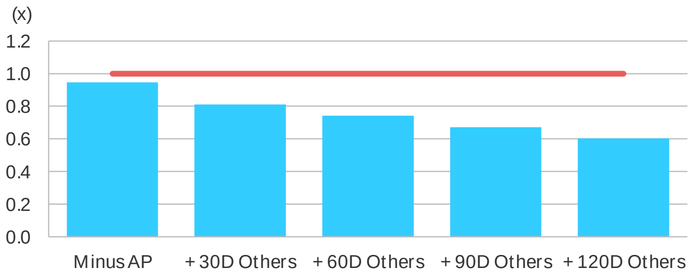
We estimate GSM's cash balance at FYE19 – adjusted for scheduled INR1.6 billion of capital expenditure and INR1.2 billion of incremental cash accumulation from issuance - plus its working capital allowance of USD50 million are about 1.0x of the RG's annual interest expense. GSM's US dollar notes are guaranteed by its parent Greenko Energy Holdings (BB-/Stable).

GSM: FY19 Receivable Days



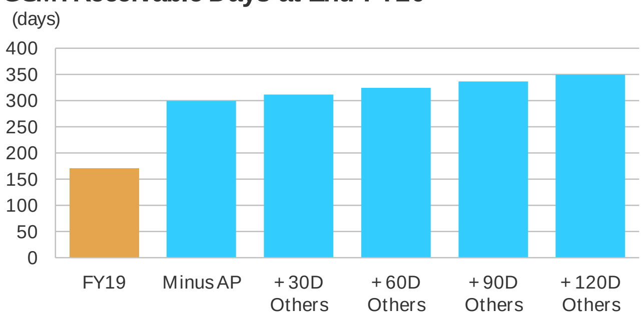
Source: Fitch Ratings

GSM: Adjusted CFO to Net Interest Ratio (FY20)



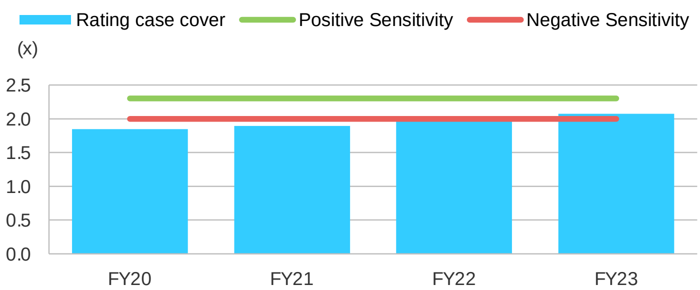
AP: Andhra Pradesh
Source: Fitch Ratings

GSM: Receivable Days at End-FY20



Source: Fitch Ratings

GSM: Rating Case EBITDA to Net Interest Ratio



Source: Fitch Ratings

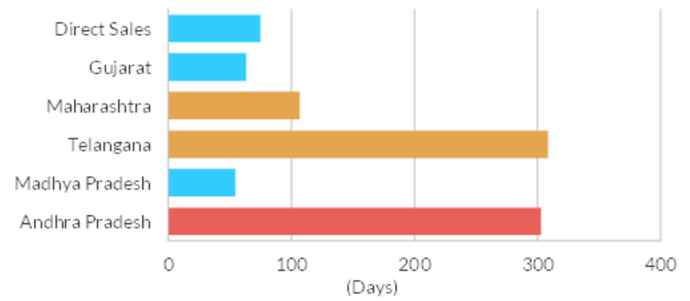
Neerg Energy Ltd

Andhra Pradesh will account for 29% of Neerg's FY20 revenue, based on Fitch's estimates. Neerg's adjusted CFO to net interest expense ratio is forecast to be 1.1x at FYE20, slightly better than that of GSM. The RG will have to tap additional resources if payments from Maharashtra and Telangana are delayed by more than 30 days. This is assuming other counterparties in Gujarat, Madhya Pradesh and direct customers maintain their good payment records over FY20.

Fitch estimates that Neerg's cash balance at FYE19 and its working capital allowance of USD30 million together are about 0.9x of the RG's annual interest expense. The guarantee by parent ReNew Power Limited (BB-/Stable) on Neerg's dollar bond fell off in the middle of this year.

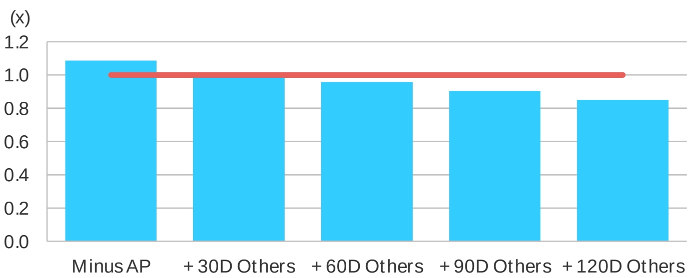
Although Neerg itself is an orphan entity, the rating of its US dollar bonds reflects the credit profile of the restricted group, which comprises certain operating subsidiaries of ReNew Power. The parent's US dollar bond has cross-default provision with operating subsidiaries that have outstanding debt of USD75 million or more. However, we believe a default at one or more of the operating entities that form Neerg's restricted group may not automatically trigger the cross-default provision.

Neerg: FY19 Receivable Days



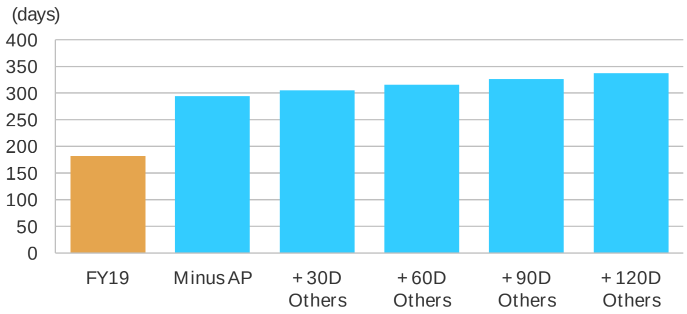
Source: Fitch Ratings

Neerg: Adjusted CFO to Net Interest Ratio (FY20)



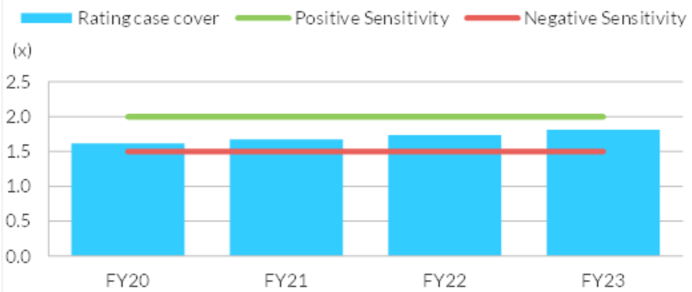
Source: Fitch Ratings

Neerg: Receivable Days at End-FY20



Source: Fitch Ratings

Neerg: Rating Case EBITDA to Net Interest Ratio



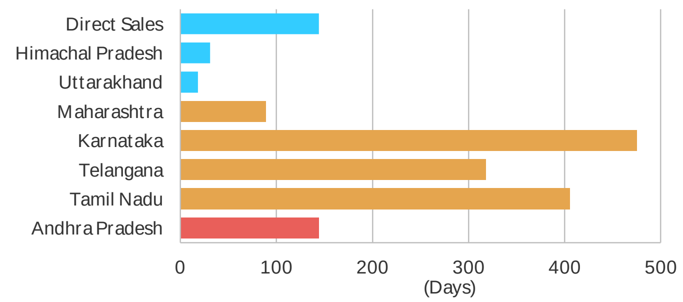
Source: Fitch Ratings

Greenko Dutch B.V

Like Neerg and GSM, GBV's liquidity may be affected if payments from Andhra Pradesh continue to be delayed. Andhra Pradesh will account for 20% of GBV's FY20 revenue, Fitch estimates. GBV's adjusted CFO to net interest expense ratio is expected to be 1.5x by FYE20. The RG would need to tap additional resources if payments from Tamil Nadu, Karnataka, Maharashtra and Telangana are further delayed by more than 120 days. This is assuming that direct customers, Uttarakhand and Himachal Pradesh, will maintain their existing receivable days in FY20.

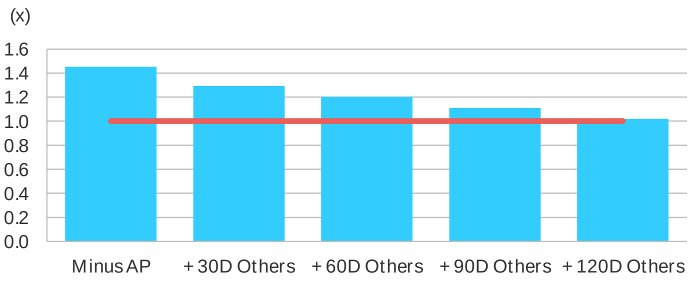
GBV's cash balance at FYE19 and its working-capital allowance of USD50 million is about 1.5x the RG's annual interest expense, Fitch estimates. Greenko Energy Holdings, the parent, guarantees GBV's US dollar notes.

GBV: FY19 Receivable Days



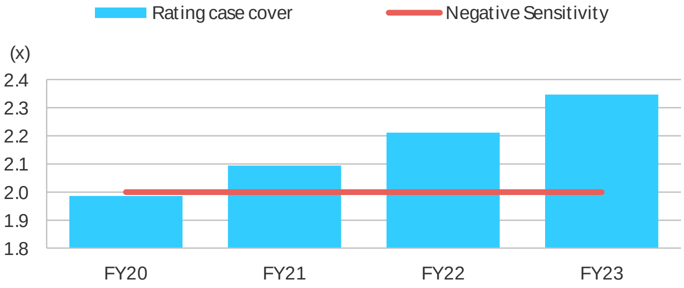
Source: Fitch Ratings

GBV: Adjusted CFO to Net Interest Ratio (FY20)



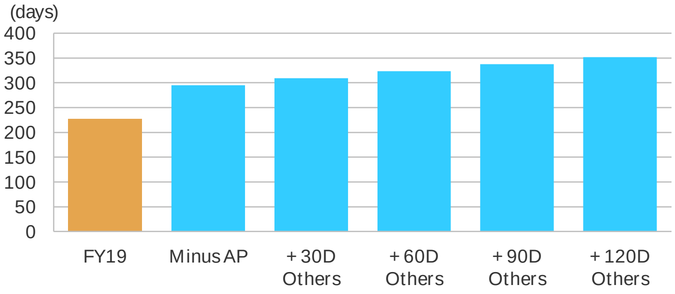
Source: Fitch Ratings

GBV: Rating Case EBITDA to Net Interest Ratio



Source: Fitch Ratings

GBV: Receivable Days at End-FY20



Source: Fitch Ratings

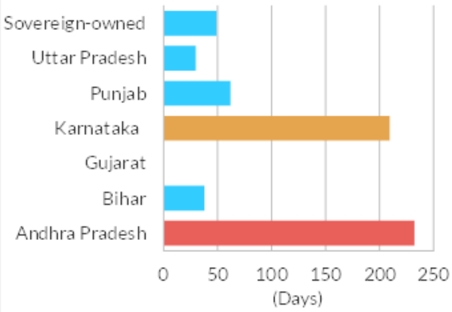
Other Rated Restricted Groups

Azure RG 1 (excluding any capacity addition in FY20), GIL and ReNew RG II are expected to maintain adjusted CFO to net interest expense ratio of over 1.4x even if we assume Andhra Pradesh will not make any payments in FY20 and delayed receipts from other counterparties with receivable days of more than 60 at FYE19 add another 90 days to their outstanding receivable days by FYE20. The high cushion is driven by a combination of low exposure to Andhra Pradesh (zero in the case of ReNew RG II) and better payment track record of other counterparties. GIL's solid stable cushion across scenarios is driven by around/under 60 receivable days at FYE19 from all counterparties other than Andhra Pradesh.

GIL's FYE19 cash balance and working capital allowance of USD30 million amount to about 2.0x of annual interest expense. However, the ratio falls to 1.2x after adjusting for scheduled debt repayment and asset drop-down in FY20. For Azure RG 1 and ReNew RG II, the ratio is around 1.0x (Azure RG 1: 0.7x and ReNew RG II: 1.2x). Azure RG 1 drew USD14 million of working capital facilities by FYE19 against total allowance of USD30 million. For ReNew RG II, we adjust the reported FYE19 cash balance to account for potential upstreaming of cash in line with the indenture on the US dollar notes given the RG was constructed only towards the end of FY19.

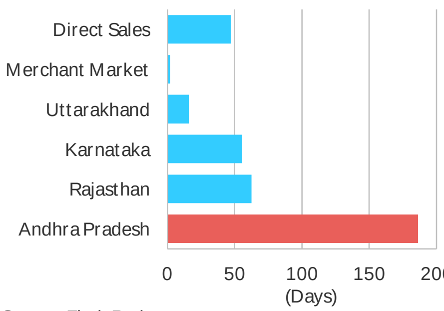
GIL's US dollar notes are guaranteed by parent Greenko Energy Holdings for the tenor of the bonds. However, guarantees by Azure Power Global Limited and ReNew Power Limited for the US dollar bonds of Azure RG 1 and ReNew RG II, respectively, will fall away in case the restricted group's consolidated gross debt/EBITDA drops below 5.5x.

Azure RG 1: FY19 Receivable Days



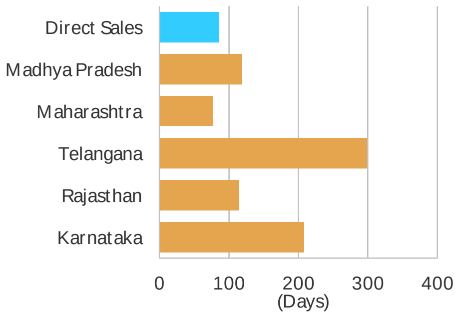
Source: Fitch Ratings

GIL: FY19 Receivable Days



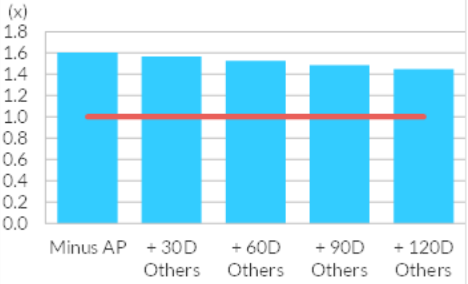
Source: Fitch Ratings

ReNew RG II: FY19 Receivable Days



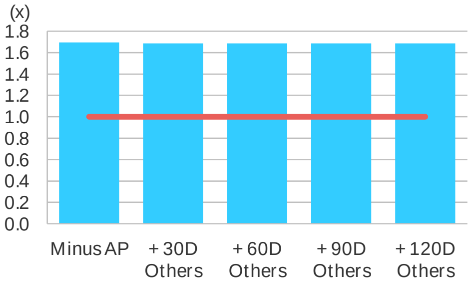
Source: Fitch Ratings

Azure RG 1: Adjusted CFO to Net Interest Ratio (FY20)



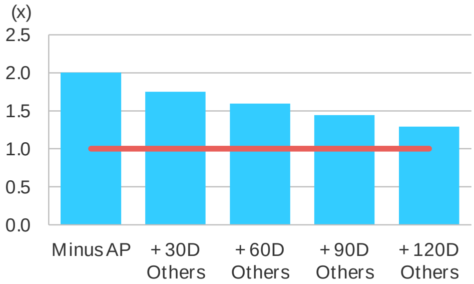
Source: Fitch Ratings

GIL: Adjusted CFO to Net Interest Ratio (FY20)



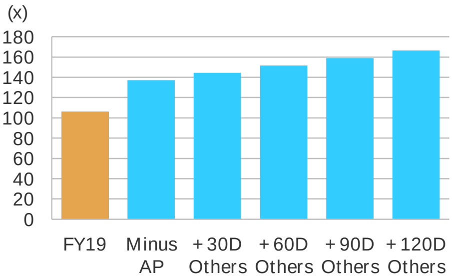
Source: Fitch Ratings

ReNew RG II: Adjusted CFO to Net Interest Ratio (FY20)



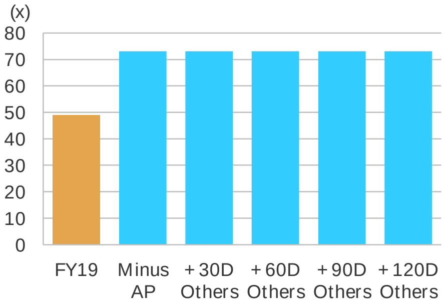
Source: Fitch Ratings

Azure RG 1: Receivable Days at End-FY20



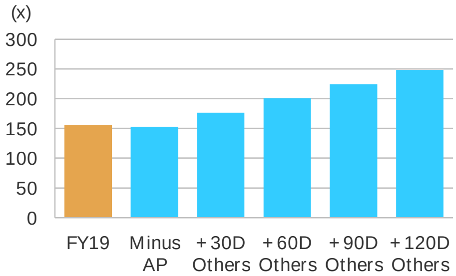
Source: Fitch Ratings

GIL: Receivable Days at End-FY20



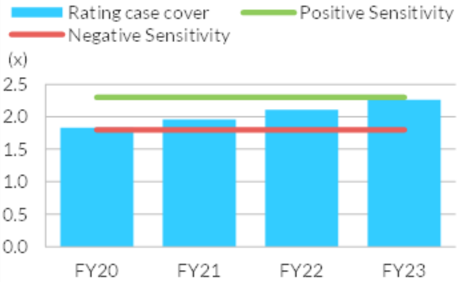
Source: Fitch Ratings

ReNew RG II: Receivable Days at End-FY20



Source: Fitch Ratings

Azure RG 1: Rating Case EBITDA to Net Interest Ratio

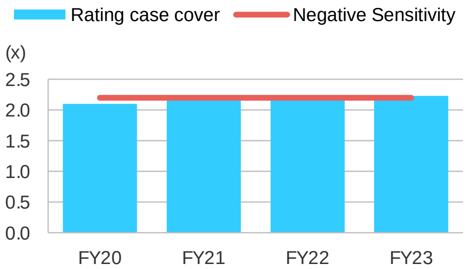


Source: Fitch Ratings

GIL:

Sensitivities are not applicable as the ratings are equalised with that of the parent, Greenko Energy Holdings

ReNew RG II: Rating Case EBITDA to Net Interest Ratio



Source: Fitch Ratings

Benefits from Diversity of Customers

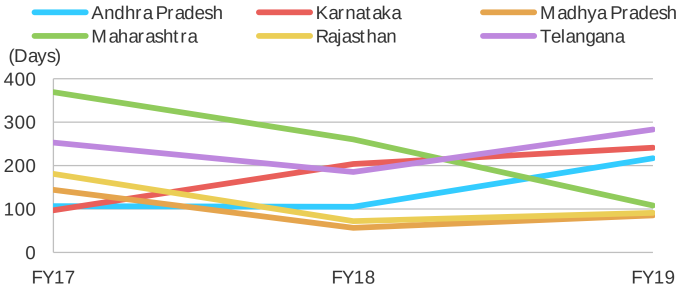
The ability or willingness of a state-owned distribution company to make timely payments to electricity suppliers can change over time, as payments from the customers of the rated RGs show. The change can be driven by various factors including state elections, measures from a new state government or change in a utility's financial position – be it deterioration from an increase in the cost-revenue gap or improvement through subsidy release from the state government.

Most of the state-owned power distribution companies have accumulated large losses and are financially stressed following purchases of expensive power in comparison to their tariffs, less-than-commensurate increases in tariffs and very high technical and commercial losses over the years. Hence, in the absence of meaningful exposure to sovereign-owned entities or direct customers, Fitch views considerable diversification across state-owned counterparties as credit positive.

Out of the six rated RGs' total capacity of 4.5GW, 78% is contracted with various state-owned electricity distribution companies. Another 13% is contracted with direct customers and the rest with sovereign-owned entities.

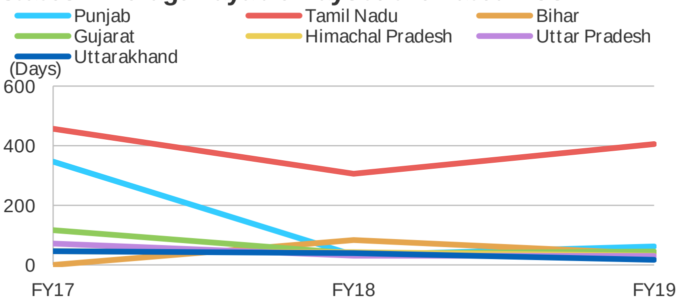
State-owned distribution companies in Andhra Pradesh, Karnataka and Telangana top the chart with 19%, 15% and 8% share of the RGs' total capacity, respectively. Average payable days to the combined portfolio increased to 159 by FYE19 from 120 at FYE18. A significant delay in payments by Andhra Pradesh, Telangana and Tamil Nadu partly offset the better cash recovery from Maharashtra. Payments from Karnataka worsened, with payable days rising to over 240 by FYE19 from under 100 at FYE17 (FYE18: around 200).

States' Average Payable Days to the Rated RGs



Note: Each of these states account for more than 5% of the 6 RGs' total capacity
Source: Fitch Ratings

States' Average Payable Days to the Rated RGs



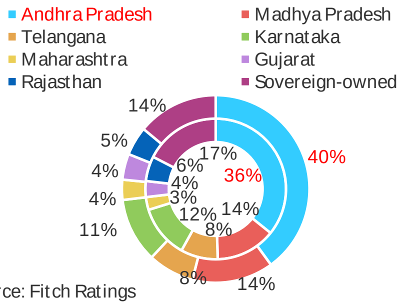
Note: Each of these states accounts for less than 5% of the 6 RGs' total capacity
Source: Fitch Ratings

Revenue Broadly Mirrors Capacity Exposure

The exposure of each rated RG's contracted capacity to different counterparties and the effect on revenue are presented in the charts below. The rated RGs' exposure to Andhra Pradesh in terms of contracted capacity is similar to their exposure by revenue. There is minimal deviation on account of varying load factors or tariffs across assets within the portfolios. The only one with noticeable deviation is GSM, which had 36% of capacity contracted with Andhra Pradesh, but about 40% of revenue from the state due to higher average tariffs at which assets are contracted.

GSM FY20 Split

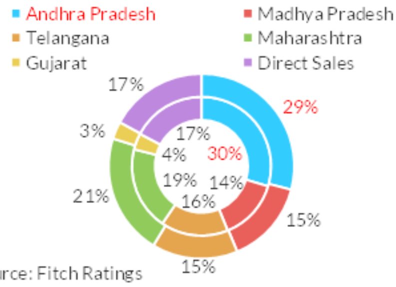
Inner ring: Capacity; Outer ring: Revenue



Source: Fitch Ratings

Neerg FY20 Split

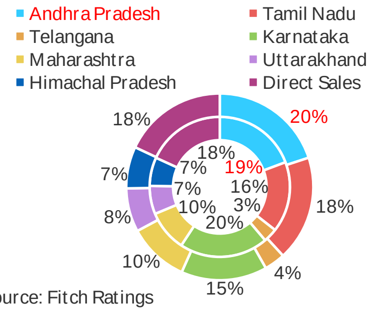
Inner ring: Capacity; Outer ring: Revenue



Source: Fitch Ratings

GBV FY20 Split

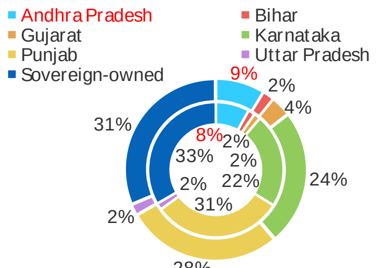
Inner ring: Capacity; Outer ring: Revenue



Source: Fitch Ratings

Azure RG 1 FY20 Split

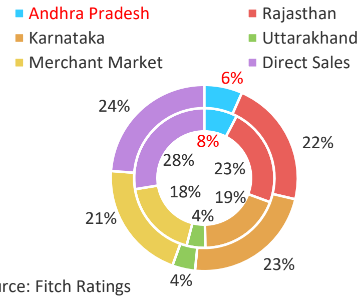
Inner ring: Capacity; Outer ring: Revenue



Source: Fitch Ratings

GIL FY20 Split

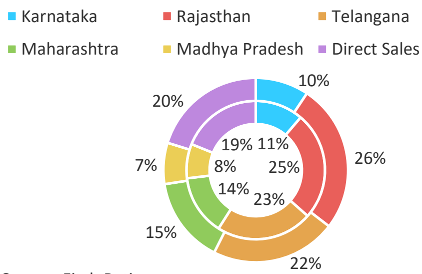
Inner ring: Capacity; Outer ring: Revenue



Source: Fitch Ratings

ReNew RG II FY20 Split

Inner ring: Capacity; Outer ring: Revenue



Source: Fitch Ratings

PPA Tariff Renegotiation Not a Base Case

Fitch's rating cases does not expect the Andhra Pradesh government to be successful in renegotiating its PPAs. Any revision of tariffs will be treated as event risk in our credit assessment of bonds issued by the RGs. The agency's view is supported by various judiciary and regulatory orders passed in this regard over many years.

In a case filed by Tata Power Company Limited against Uttar Pradesh's regulatory commission, the Appellate Tribunal for Electricity in India in September 2019 made an order against any reduction in PPA tariff determined through competitive bidding.

Indian state distribution companies in other states, including Karnataka, Uttar Pradesh, Gujarat, Tamil Nadu and Madhya Pradesh, have also previously tried to renegotiate PPAs to capitalise on falling solar and wind tariffs, according to press reports. However, the central government, supported by legal judgements, has instructed the companies to abide by the PPAs.

In a case filed by a renewable player with the Andhra Pradesh High Court against renegotiation attempts by the state's distribution utilities, the court has directed renewable energy developers to approach the state's regulator first for resolution. Meanwhile, the court has directed the distribution companies to make interim payments based on tariff of INR2.43/kWh to INR2.44/kWh. The court has further given the regulator up to six months for the resolution.

Rating Sensitivities and Headroom

Issuer	Rating	Outlook	Up	Down	Headroom
Greenko Dutch B.V	USD notes: BB	n.a.	• Positive rating action is unlikely over the medium term as the rating reflects anticipated improvement in credit metrics. The business profile is also not expected to change materially due to the restricted nature of the pool.	• Failure to reduce net leverage, measured by net adjusted debt/operating EBITDAR, to around 3.5x by FY23 • Failure to improve EBITDAR net fixed-charge cover to above 2.0x on a sustained basis • Significant sustained deterioration of the restricted group's receivable position • Significant increase in refinancing risk, including that caused by major weakening of the parent's credit profile.	Low
ReNew RG II	USD notes: BB	n.a.	• Positive rating action is unlikely over the medium term as the rating reflects anticipated improvement in credit metrics. The business profile is not expected to change either due to the restricted nature of the pool.	• Failure to reduce net leverage, measured by net adjusted debt/operating EBITDAR, to below 4.0x by FY24 • EBITDA net fixed-charge coverage of below 2.0x on a sustained basis, or failure to improve it towards 2.2x or higher by FY22. • Significant increase in refinancing risk, including that caused by major weakening of the parent's credit profile. • Failure to adequately mitigate foreign-exchange risk	Low
Azure Power Energy Ltd.	USD notes: BB-	n.a.	• We do not expect positive rating action on the US dollar notes issued by APEL in the near term. Nevertheless, a sustained improvement in APEL's leverage, as measured by net adjusted debt/operating EBITDAR, to below 3.5x and EBITDAR net fixed-charge coverage of 2.3x or more may result in a positive rating action, assuming the consolidated credit profile of parent Azure Power Global Limited does not deteriorate materially. Fixed charges include the cost of foreign-exchange hedging.	• EBITDAR net fixed-charge coverage falling below Fitch's expectation of 1.8x on a continuing basis over the medium term. • Significant, prolonged deterioration of the restricted group's receivable position. • Significant increase in refinancing risk, including on account of any significant weakening of parent's credit profile. • Failure to adequately mitigate foreign-exchange risk.	High
Greenko Solar (Mauritius) Limited	USD notes: BB-	n.a.	• We do not expect positive rating action on the US dollar notes in the near term. Nevertheless, a sustained improvement in net leverage, measured by net adjusted debt/operating EBITDAR, to below 3.5x and EBITDAR net fixed-charge coverage to 2.3x or more may result in a positive rating action. Fixed charges include the cost of forex hedging.	• Failure to reduce net leverage to below 4.5x by FY23 • Failure to improve EBITDAR net fixed-charge cover to above 2.0x on a sustained basis • Significant sustained deterioration of the restricted group's receivable position • Significant increase in refinancing risk, including that caused by major weakening of the parent's credit profile. • Failure to adequately mitigate foreign-exchange risk	High
Greenko Energy Holdings	IDR: BB-	Stable	• EBITDAR net fixed-charge coverage of 2.5x or more on a sustained basis, provided there are no adverse changes to the shareholding of Greenko or an increase in risk appetite. The fixed charge includes the cost of foreign-exchange hedging.	• Any shareholder changes that adversely affect the company's risk profile, including its liquidity and refinancing, risk-management policies or growth risk appetite • Weakening in assets' operational or financial performance or aggressive investments that are not sufficiently supported by equity, which lead to net leverage, measured by net adjusted debt/operating EBITDAR, that is higher than 5.5x during the group's capacity expansion phase	High

Rating Sensitivities and Headroom (continued)

Issuer	Rating	Outlook	Up	Down	Headroom
Greenko Investment Company[a]	USD notes: BB-	n.a.	• A strengthening of Greenko's credit profile	A weakening of Greenko's credit profile	High (Same as above)
Neerg Energy Ltd	B+	n.a.	• EBITDAR net-fixed charge coverage sustained above 2.0x. The fixed charges includes the cost of forex hedging. • Improvement in leverage, as measured by net-adjusted debt/operating EBITDAR, to below 4.5x for a sustained period.	• EBITDAR net-fixed charge coverage not meeting Fitch's expectation of above 1.5x over the medium term • Significant, sustained deterioration of the restricted group's receivable position • Failure to adequately mitigate foreign-exchange risk • Significant increase in refinancing risks, including on account of a significant weakening of parent ReNew Power Limited's credit profile	Low

a Greenko Investment Company's Standalone Credit Profile is 'b+' and the rating on its USD notes are equalised with that of parent Greenko Energy Holdings, which provides a guarantee to the notes.

Source: Fitch Ratings