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The Green Disclosure of the Indian Distribution Sector

Hybrid Rating to Meet Decarbonisation Goals

Executive Summary

India's aspiration for a renewable energy (RE) future is already bubbling as the country progresses to meet its 2030 RE targets. Bringing that aspiration to reality will strongly depend on the trajectory that the Indian distribution sector takes to help decarbonise the power sector.

India will need to deploy US$500bn in investments to reach its target of 450 gigawatts (GW) of renewable energy capacity by 2030. Of this, US$300bn would be directed to wind and solar infrastructure, US$50bn to grid firming investments and US$150bn to expanding and modernising transmission.[1] For state utilities, financial stability is a significant challenge to attracting the necessary investment.

The importance of finance is undeniable, given the developed world's promises of vast sums to developing countries – US$100bn for climate finance since 2009 and, very recently, the India-US Climate and Clean Energy Agenda 2030 Partnership,[2] which aims to mobilise finance to de-risk decarbonisation.

India will need to deploy US$500bn in investments to reach its 450GW capacity target by 2030.

But given the slowdown in the implementation rate due to the COVID-19 pandemic, it is necessary to understand how to attract and utilise this finance to create sustainable and transformational impact.

India's central and state governments have launched schemes and initiatives aimed at improving the operations and financial health of the distribution sector. However, the sector continues to be a resource drain on the Indian economy. Most distribution companies (discoms) are making major losses as a result of expensive legacy thermal power purchase agreements, poor infrastructure and inefficient operations, among other factors.

[1] ETEnergyWorld. India needs $500-bn investment to reach 450-GW RE target by 2030: IEEFA. 16 February 2021.
[2] Ministry of External Affairs. India-US Joint Statement on Launching the 'India-US Climate and Clean Energy Agenda 2030 Partnership'. 22 April 2021.

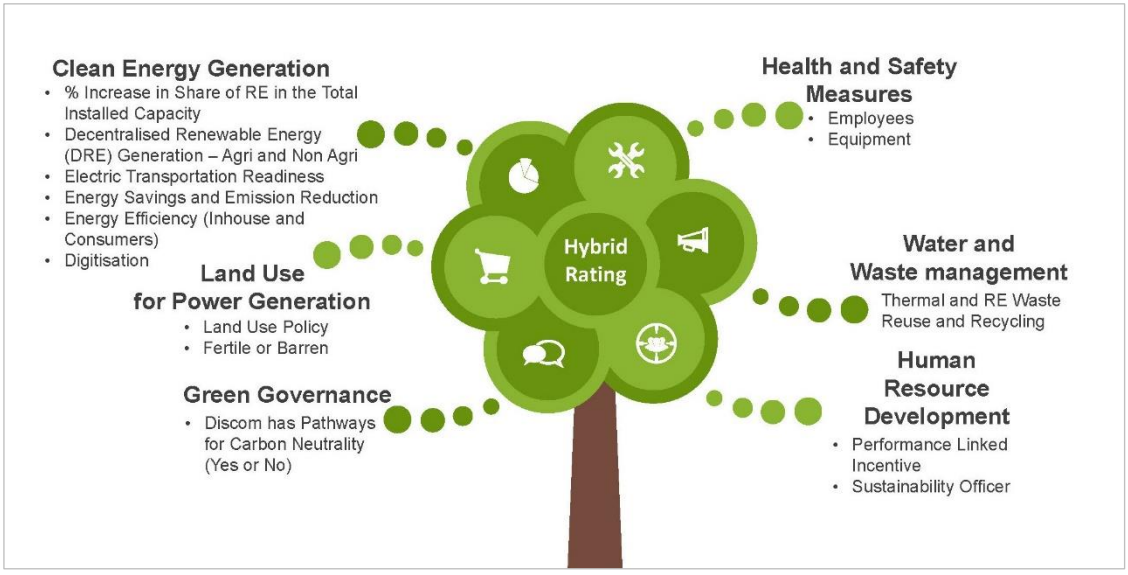
Since a low carbon economy would rely on a strong backbone of clean energy transition, financial outlay for such a development becomes crucial. A key inhibiting factor is limited tracking and monitoring of discoms' decarbonisation plans and green performance.

The Power Finance Corporation (PFC) and Rural Electrification Corporation (REC) conduct a yearly process of rating the public distribution companies in India. The Ministry of Power's designated credit rating agencies are the Investment Information and Credit Rating Agency of India Limited (ICRA) and Credit Analysis and Research Limited (CARE Ratings).

The arrival of several alternate financial instruments (green bonds/guarantees), combined with massive decarbonisation goals, shows the need to update the rating methodology to include parameters that help quantify green initiatives undertaken by the discoms, listed in the Figure below.

'Green' refers to the decarbonisation goal of India's power sector, which trickles down to discoms. The overall goal is to enhance RE uptake; electrify the transport sector via electric vehicles (EV); increase tail-end generation and utilisation through decentralised renewable energy (DRE) solutions; and enhance usage of energy efficiency (EE) equipment and design, solar pumps for improving agricultural efficiency, energy efficiency etc. Hence, a hybrid rating that incorporates both green and credit performance of discoms will provide a true picture of the sector's green disclosure and readiness.

Hybrid Credit Rating Tree

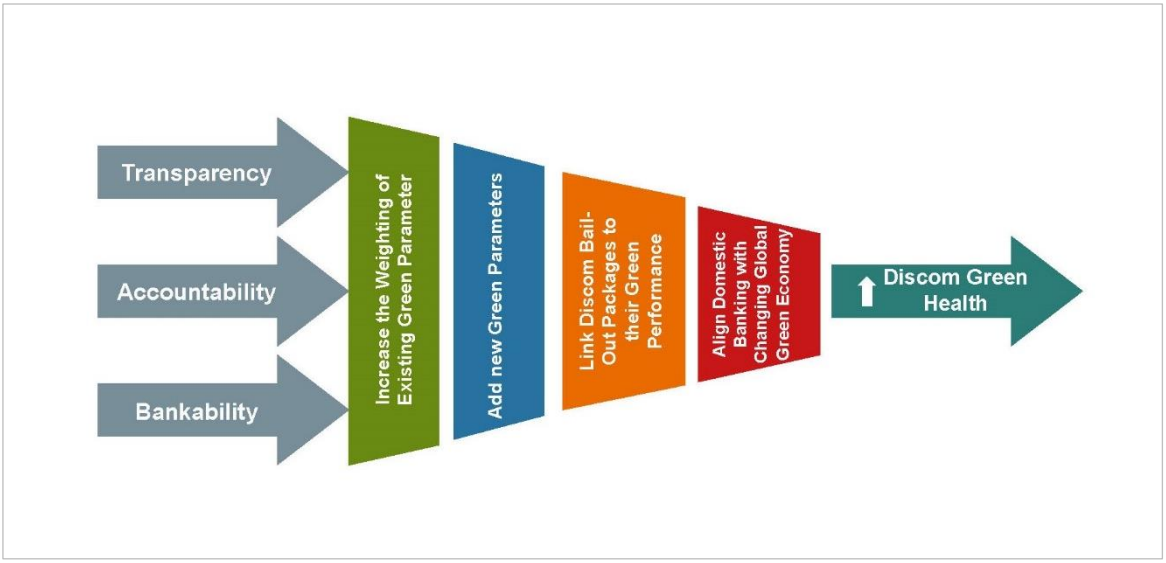


Source: Author's analysis.

With the global push to fight climate change and the domestic mandate to decarbonise the power portfolio, there is an urgent need to increase the understanding of the financial risks of high-carbon portfolios, integrate green criteria in the lending decisions and credit risk analyses.

Establishing hybrid rating (green + credit) information systems is a fundamental task at the heart of green finance. Going forward, an integrated rating scheme would be necessary to incorporate environmental impacts into the credit rating assessment. This report aims to take a deeper look into the rating methodology and recommend potential steps to make it green.

Discom Green Finance Funnel



Source: Author's analysis.

1. **Increase the Weighting of Existing Green Parameter:** The renewable purchase obligation (RPO) is the only green factor included as part of the current rating mechanism and it carries the least weight. As a first step, there is merit in increasing the weight of the RPO.

2. **Add New Green Parameters:** Considering the time and effort required to re-engineer a separate green rating, the more logical next step is to strengthen the existing integrated rating methodology, drawing from the environmental, social, and governance (ESG) framework used for corporate ratings. New parameters can be added in a phased manner.

3. **Link Discom Bail-Out Packages to their Green Performance based on Hybrid Rating:** Central and State government financial support to be distributed amongst discoms depending on their hybrid credit rating. Discom to track the usage of the financial support and its impacts on company performance.

4. **Align Domestic Banking with Changing Global Green Economy:** As the Reserve Bank of India's (RBI) late entry to the Network for Greening the Financial System (NGFS) club demonstrates, the bank has been slow to recognise climate risk and to adapt its operations to the transition away from carbon. The RBI now has the opportunity pick up the pace by creating green frameworks to contribute to global efforts on green finance, learning

from the NGFS. In addition, the Ministry of Power (MoP) should mandate allocation of a fixed percentage of PFC and REC funding to discoms to be utilised for decarbonisation initiatives.

A hybrid credit rating is a necessary step to increase disclosure, transparency, and accountability of the Indian distribution sector.

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Introduction

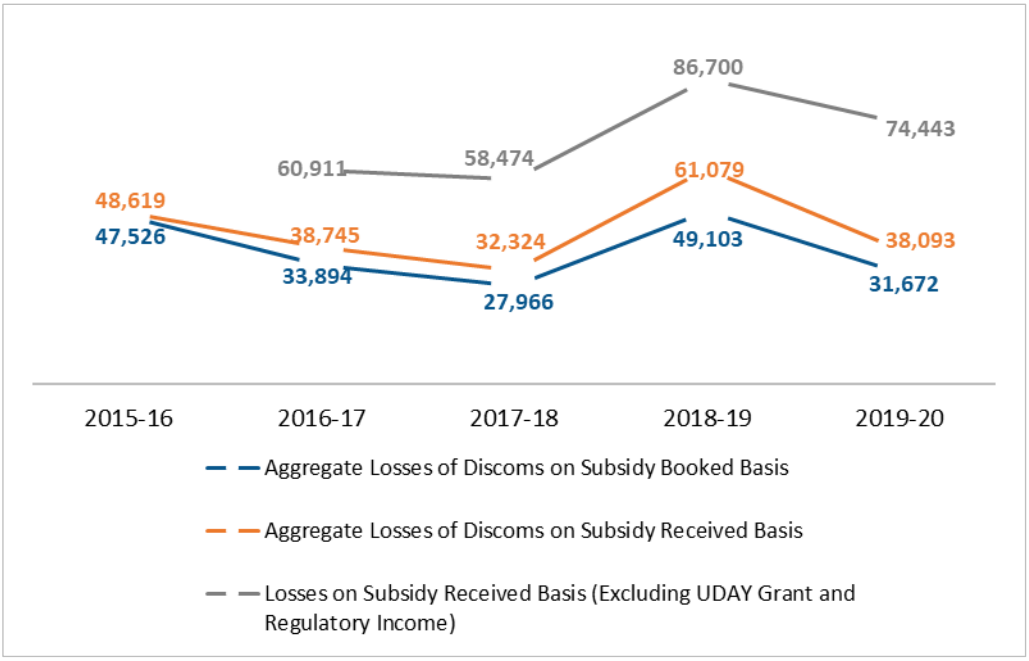
Distribution Companies: The Bleeding or the Breathing Organ of the Power Sector?

Distribution is the most important link in the entire power sector value chain. As the connecting thread between consumers and distribution companies (discoms), it is the revenue-generating, breathing organ of the power sector. However, over the years, the depleting financial health of the discoms has left the sector bleeding.

The result is that the discoms are unable to invest in transmission and distribution infrastructure, augment investment to enhance renewable energy deployment and provide good quality power to all. There are ripple effects – the poor financial health of discoms further hampers the ability of power producers to sell power in the market, thereby incurring losses and defaulting on their loan obligation.

The distribution sector choked while aiming to fulfil the goal of providing reliable, clean, affordable and quality power to all.

Figure 1: Aggregated Losses of Discom in Rs. Crore (2015-16 to 2019-20)



Source: Author's analysis, PFC Report on Performance of Power Utilities, 2015-16, 2016-17, 2017-18, 2018-19, 2019-20.

Reforms carried out over the past two decades have included policy changes, liberalisation, privatisation, regulatory developments, growth of power markets and much more.

As a result, the aggregate losses for distribution utilities decreased from Rs47,526 crore (US$6.4bn) in 2015-16 to Rs27,966 crore (US$3.7 bn) in 2017-18. But the losses surged by 75% in 2018-19. They again decreased to Rs31,672 crore (US$4.3bn) in 2019-20. The changing trajectory highlights that the financial support to discoms provided only temporary relief, not durable financial sustainability.

There is a similar fluctuating trajectory in losses excluding regulatory income and revenue grant under UDAY. These losses increased from Rs58,474 crore (US$7.8bn) in 2017-18 to Rs86,700 crore (US$11.7bn) in 2018-19. The losses then dropped to Rs74,443 (US$10bn) crore in 2019-20.[3]

Even with financial support to discoms, progress is slow. The distribution sector has financially choked while aiming to fulfil the goal of providing reliable, clean, affordable, and quality power to all. The pandemic further exacerbated the situation by lowering demand.

Also, lower GST collections have led to an increase in the compensation requirement from the Centre, creating a challenge for its funding. Further risks have emerged as a result of the persistent poor financial situation of state-owned power distribution companies.[4]

As of June 2021, the discoms had accumulated massive overdue payments to generators of Rs119,185 crore (US$16bn), creating an immense liquidity crunch across India's entire power sector.[5]

Objective: Enhance Accountability, Transparency and Bankability of State Discoms through Hybrid Rating (Green + Credit)

Distribution is the revenue-generating arm of the power sector, handling the inflow of finance or income from consumers and the outflow of electrons – which makes tracking and monitoring the performance of discoms of the utmost importance.

In July 2012, the Ministry of Power (MoP) mandated the Power Finance Corporation (PFC) and Rural Electrification Corporation (REC) to evaluate performance of state power distribution utilities on a range of parameters covering operational, financial, regulatory and reforms based on an Integrated Rating Methodology.

The objective of this note is to understand the existing methodology and parameters used to rate the discoms and highlight the need to strengthen the rating process to meet the power sector's decarbonisation goals.

A credit rating is among the most commonly used methods to assess the creditworthiness of a company. Generally, such methods do not consider environmental aspects that affect a company's risk position and are not conducive

[3] PFC. Report on Performance of Power Utilities. 2019-20.
[4] PRS. State of State Finances: 2021-21.
[5] MoP. PRAAPTI. September 2021.

to the development of green finance and the green economy. Therefore, establishing a hybrid rating or green rating model for overall assessment of the green performance of the discoms in line with the decarbonisation goals is crucial.

At present, the credit rating techniques emphasise the importance of financial indicators but do not include social and environmental factors. Adding these types of indicators can result in great differences in the credit assessment of companies.

This note assesses the virtue of adding green parameters to the existing credit rating methodology. 'Green' refers to the decarbonisation goal for India's power sector which trickles down to discoms. The overall goal is to: enhance renewable energy (RE) uptake; electrify the transport sector via electric vehicles (EV); increase tail-end generation and utilisation through decentralised renewable energy (DRE) solutions; and enhance usage of energy efficiency (EE) equipment and design, solar pumps for improving agricultural efficiency, energy efficiency etc. A hybrid rating that incorporates both green and credit performance of discoms will provide a true picture of the sector's green disclosure and readiness.

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Tracking the Financial Support to Discoms

Since India gained independence in 1947, the central and state governments have launched several schemes and initiatives aimed at improving the operations and financial health of discoms. Despite these steps, their success has been limited and the distribution sector continues to be a resource drain on the Indian economy. Most distribution utilities are making major losses because of expensive legacy thermal power purchase agreements, poor infrastructure, and inefficient operations, among other factors.

The distribution companies need financial support to meet decarbonisation targets while improving operational and technical efficiency. The Government of India announced a Rs90,000 crore (US$12bn) liquidity boost for discoms, through PFC and REC. The huge chunk of money is to support discoms in getting back on track and building a stronger foundation, though the rationale and decision matrix behind distribution of the funds among the various states' discoms are unclear.

To support discoms further, the Cabinet Committee on Economic Affairs (CCEA) recently approved a five-year reform-based result-linked power distribution scheme worth Rs3 lakh crore (US$40bn) to financially assist discoms to create

infrastructure, upgrade systems, build capacity and improve internal processes.[6]

Existing power sector reform schemes would be subsumed into this umbrella program. It is estimated that Rs2 lakh crore (US$27bn) has already gone to the states.

This one-time liquidity infusion against state guarantees has led to limited improvements in discom performance. Even post-UDAY, discoms continue to present a significant downside risk (leading to higher liabilities for states) with no visible signs of turnaround. States' outstanding liabilities increased by 1.5% of GDP due to UDAY in 2015-16 and 2016-17; however, despite this steep fiscal cost, since then discom losses reached the pre-UDAY level of 0.3% of GDP in 2018-19.[7]

Considering the history of discom financial reforms, 'one-time' support seems a false reality.

Figure 2: Guarantees Issued by State Governments

Year	Guarantees Outstanding		Accretion during the Year	
	₹ lakh crore	In per cent of GDP	₹ lakh crore	In per cent of GDP
1	2	3	4	5
2013-14	3.79	3.4	0.80	0.4
2014-15	4.28	3.4	0.49	0.1
2015-16 (UDAY year)	3.64	2.6	-0.64	-0.8
2016-17(UDAY year)	3.12	2.0	-0.52	-0.6
2017-18	4.30	2.5	1.18	0.5
2018-19	5.38	2.8	1.08	0.3
2019-20 Provisional *	6.00	3.0	0.62	0.2
2020-21 (as per fiscal package)**			**0.90+**	**0.42+**

Note: * Based on actual reported for 20 states and last year's value for balance states.
** States' own guarantees given to SPSEs available only for few states as given in Statement 28.

Source: RBI. Fiscal Position of State Governments. pg. 33.

Hence, considering the history of discom financial reforms, 'one-time' support seems a false reality. This further highlights the crucial importance of tracking discom performance to understand the utilisation of the funds.

[6] Financial Express. CCEA approves Rs 3.03-lakh cr scheme for power discoms. June 2021.
[7] RBI. Fiscal Position of State Governments. pg. 33.

The MoP formulated an 'Integrated Rating Methodology' in July 2012 with the objective of evaluating the performance of all utilities in the power distribution sector and their ability to sustain the performance level.

The MoP mandated PFC to co-ordinate the rating exercise. The annual exercise presently covers 41 state distribution utilities spread across 22 states. Investment Information and Credit Rating Agency of India Limited (ICRA) and Credit Analysis & Research Ltd (CARE) are the designated credit rating agencies and have been assigned 21 and 20 utilities respectively. The Integrated Rating Methodology is reviewed by MoP periodically.

Green Disbursements by PFC and REC

PFC and REC are the largest lenders to the Indian power sector. They are also group companies – PFC bought a controlling stake in the state-run peer REC Ltd in 2019. PFC is essentially a state-run non-banking financial company that focuses on power infrastructure, while REC is an implementation and finance company with a focus on generation.

Keeping in view the government's push for clean energy sources, PFC is focusing increasingly on finance for clean/renewable energy projects. During FY2020-21, PFC sanctioned Rs29,261 crore (US$4 bn) for hydro generation (>25MW) and disbursed Rs161 crore (US$0.02bn). Further, PFC sanctioned Rs14,159 crore (US$2bn) for renewable energy projects and disbursed an amount of Rs4,330 crore (US$0.6bn) during the same period.[8]

Recently, the power ministry asked the finance ministry to advise banks to stringently follow prudential norms laid down by sectoral financiers PFC and REC when lending to electricity distribution utilities. The move is aimed at stopping distribution companies from bypassing the guidelines when they approach banks instead of REC and PFC.[9]

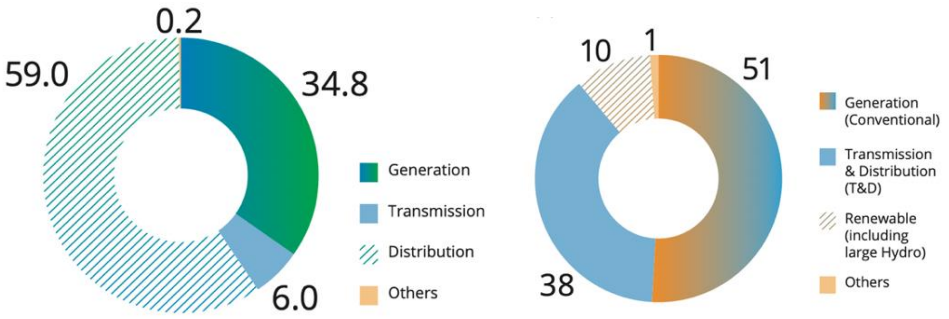
To date, PFC still disburses only 10% of its overall funding towards RE projects.

This highlights the need to look at the rating process with a strategic lens and assess the need for new parameters. Global investors keep a close watch on companies whose debt they subscribe to and in which they are investors, and they are increasingly calling out and forcing financial institutions to cut down funding for thermal energy projects. A case in point is the State Bank of India (SBI), which faced pressure from investors such as Blackrock over its funding to the Adani Group's Australia coal project.[10] To attract global investors to provide ultra-low-cost financing, it is imperative to get your house in order first – which means, if the

[8] PFC. *35th Annual Report*. 2020-21.
[9] The Economic Times. Power Ministry wants Finmin to advise banks on Discom reforms. 13 July 2021.
[10] Bloomberg. India's Biggest Bank Torn Between BlackRock and Funding Coal. June 2021.

target is decarbonising the power sector, increasing exposure to RE and EVs along with EE interventions.

Figure 3: PFC Performance in %



Ratings

International Agency Rating		Domestic Agency Rating	
Agency	**Rating**	**Agency**	**Rating**
• Moody's	Baa3	• CRISIL	AAA
• Fitch	BBB(-)	• ICRA	AAA
		• CARE	AAA

Source: PFC. 35th Annual Report.

In addition, the IEEFA report, "India's Power Finance Corporation Continues to Fund Non-Performing Coal Assets", states that PFC's lending to existing or new thermal power developments is extremely risky in light of the expected tariffs on these projects being 60-70% above the prevailing renewable energy tariffs of Rs2.50-2.80/kWh.[11]

Considering the poor market share and the speed of the global energy transition, PFC should strategically pivot to lend more to support to decarbonisation of the power portfolio and strengthen the rating methodology with the addition of green parameters to track discoms' performance.

During FY2020-21, REC sanctioned total loan assistance of Rs154,821 crore (US$21bn) towards various power sector projects/schemes. This included Rs39,613 crore (US$5.4bn) towards generation projects, Rs17,171 crore (US$2.3bn) towards renewable energy projects, Rs19,493 crore (US$2.6bn) towards T&D projects, Rs60,191 crore (US$8bn) towards the liquidity infusion scheme of the Government of India under the 'Atmanirbhar Bharat' scheme and Rs4,750 crore (US$0.6bn)

[11] IEEFA. India's Power Finance Corporation Continues to Fund Non-Performing Coal Assets. April 2020.

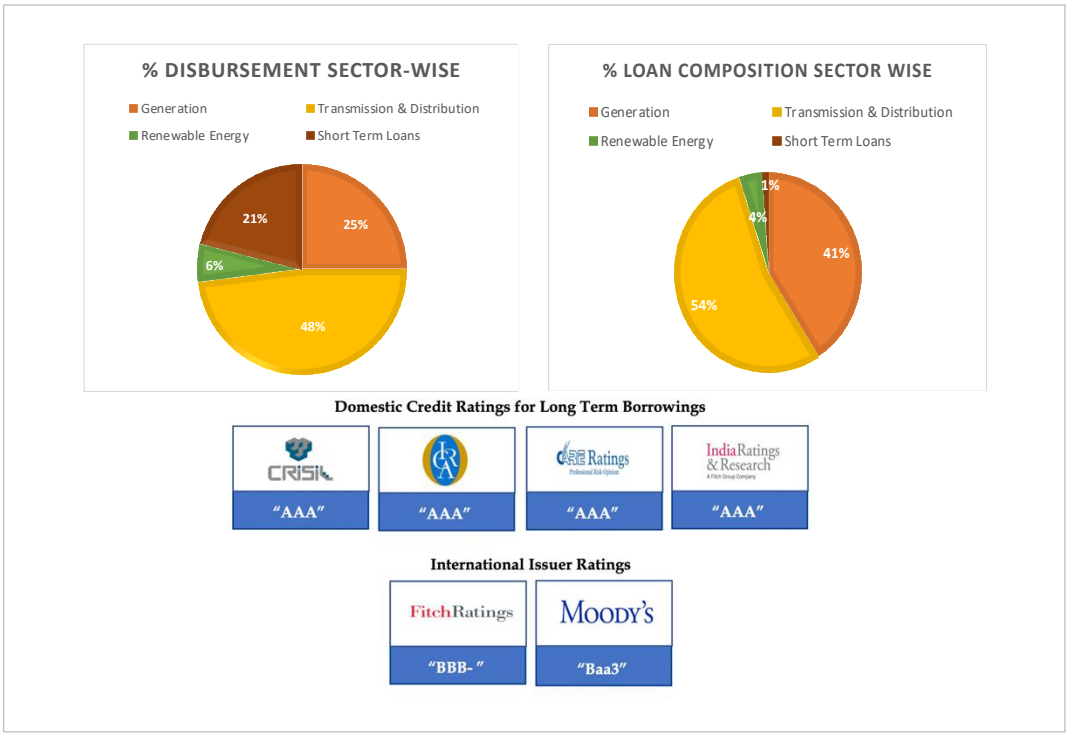
towards other loans including short- and medium-term loans.[12]

REC raised a Rs3,350 crore (US$450m) green bond in July 2017 for a tenor of 10 years, listed on the International Securities Market (ISM) segment of the London Stock Exchange and also on the Singapore Stock Exchange.

The proceeds have financed solar, wind and renewable purchase obligations, including refinancing of eligible projects as defined in REC's green bond framework but there is no visible linkage with the credit rating of the discoms in those projects.

To date, REC still disburses only 6% of its overall funding towards RE projects.

Figure 4: REC Performance in %



Source: IEEFA, REC Investor Presentation Performance Highlights Q1 FY 22.

Multilateral development banks (MDBs) such as the World Bank, the Asian Development Bank (ADB) and others have a huge focus on developing economies, combining the provision of low-cost capital with high risk-taking ability. But the funding comes with a lot of caveats and proceeds are monitored very carefully. Climate finance committed by MDBs rose to a total of Rs491,195 crore (US$66bn) in

[12]REC. REC Investor Presentation Performance Highlights Q1 FY 22. June 2021.

2020 from Rs458,448 crore (US$61.6bn) in 2019,[13] according to the 2020 Joint Report on Multilateral Development Banks' Climate Finance.[14]

The impact of green financing on the PFC and REC balance sheets has been small considering its relative size, but it is steadily growing. The green push will grow exponentially in coming years, obliging PFC and REC to increase their percentage of RE disbursement. Thus, if institutions such as PFC and REC need to tap into the green capital source, they need to create internal mechanisms to track their funding for climate change mitigation initiatives.

PFC has recently raised a green bond.[15] Green bond proceeds are usually at lower interest rates compared to conventional bonds as they are in greater demand from the investor community, which pushes down the yield on these instruments. The proceeds must be invested in projects with demonstrable decarbonisation results. So, if discoms do not have credible decarbonisation goals, they cannot receive this low-cost financing.

Similarly, sustainability-linked bonds are also gaining traction, helping to raise low-cost capital with associated key performance indices (KPIs) to be met relating to ESG. This requirement, in turn, needs a structured re-examination of the rating parameters as they do not reflect the readiness of the discom to meet decarbonisation goals. This further echoes the necessity of a hybrid scoring mechanism pairing green parameters with financial performance.

Existing Credit Rating Methodology and Parameters

The objective of the integrated set-up is to rate all utilities in the power distribution sector on the basis of their performance and their ability to sustain that level of performance. The methodology aims for objective judgement against various parameters, broadly classified under:

- Operational & Reform parameters, with 43% weighting comprising AT&C Losses, efficiency of power purchase cost, RPO compliance etc.
- External parameters, 15%, relating to regulatory environment, state government subsidy support etc.
- Financial parameters, 42%, comprising cost coverage ratio, payables, receivables, timely submission of audited accounts etc.

[13] AIIB. MDBs' Climate Finance Rose to US$66 Billion in 2020, Joint Report Shows. June 2021.
[14] Joint Report on Multilateral Development Banks' Climate Finance. June 2021.
[15] Business Line. PFC Issues India's First Ever Euro-Denominated Green Bonds. September 2021.

Figure 5: Summary of Integrated Rating Methodology Parameters and Grading Scale

S.No.	Parameters	Marks
1	OPERATIONAL & REFORM Parameters	43
I)	Operational related	
i)	AT&C Losses	28,-4
ii)	Power purchase	3
iii)	Cost Efficiency	6
II)	Reform related	
iv)	RPO Compliance	2
v)	Corporate Governance	4
2	EXTERNAL Parameters	15
I)	Regulatory	11,-19
II)	Govt. Support	4
3	FINANCIAL Parameters	42
I)	Ratios	
a	Cost Coverage Ratio	15
b	Interest Coverage Ratio	4
c	Total Debt to Net Worth	3,-2
II)	Sustainability	6
III)	Receivables	5
IV)	Payables	4
V)	Audited Accounts	5,-12
VI)	Audit Qualifications	0,-1
VII)	Default to Banks / FIs	0,-2
	Total	100

Score Distribution	Grade	No. of Utilities	Grading Definition
Between 80 and 100	A+	5	Very High Operational and Financial Performance Capability
Between 65 and 80	A	3	High Operational and Financial Performance Capability
Between 50 and 65	B+	10	Moderate Operational and Financial Performance Capability
Between 35 and 50	B	6	Below Average Operational and Financial Performance Capability
Between 20 and 35	C+	9	Low Operational and Financial Performance Capability
Between 0 and 20	C	8	Very Low Operational and Financial Performance Capability

Source: PFC. Ninth Annual Integrated Rating for State Power Distribution Utilities. July 2021.

The methodology assigns negative marks for non-compliance on parameters such as unavailability of audited accounts, non-formation of state transmission utility, non-filing of tariff petition etc. The negative marks give necessary depth to rating methodology.

The financial decision on how much money goes to which discom is based on the integrated credit rating exercise undertaken by ICRA and CARE, under guidance from PFC and REC. Distribution companies use this financial support to improve operational and financial efficiency and meet decarbonisation goals as mentioned above. However, a deep dive into the parameter list highlights the need to diversify and hybridise the parameters.

Key Learnings from the Existing Credit Rating

1. Only one green parameter, the Renewable Purchase Obligation (RPO), is part of the existing rating.

2. The RPO has the least weight amongst all parameters.

Figure 6: RPO Scoring

II.	Reform related	6
iv)	RPO Compliance	2
	If target achieved for RPO (sourced from SERC/MNRE/Utilities)	2
	If target partially achieved	Proportionate

Source: PFC. Ninth Annual Integrated Rating for State Power Distribution Utilities. July 2021.

3. Decarbonisation goals including RE, EV, DRE, EE, solar pumps etc are not reflected as part of credit rating.

These key findings necessitate a closer look into the rating inferences, to understand the significance of the high and low ratings given to the discoms.

- **Does high rating of a discom represent higher capacity to achieve decarbonisation targets?** If yes, then why have discoms in Gujarat consistently gained higher ratings despite not meeting their RPO targets? States have innovative technologies such as RE, RE + storage, electric vehicles, energy efficiency, green hydrogen to be utilised to the fullest, but the progress is slow.

- **Are discoms doing enough on environmental and social grounds**? The sector has brought in active ESG factors to attract global climate investment. Investors are incorporating ESG data into the investment process to gain a fuller understanding of the companies of interest. Ratings agencies should look at including some of these parameters as the first step to enhance discoms' ability to attract ESG investors. This will also have ripple effects on the ESG ratings of PFC and REC as their lending to discoms would also be based on environmental and social factors.

- **Is the present credit rating methodology incentivising states to decarbonise their portfolio?** Discom debt is often bailed out by a state government by issuing green bonds to attract investors. The state bail-out packages often are delinked from the credit rating and do not consider the credit worthiness of discoms when dividing the funds.

The above three learnings and the three questions further bolster the need for new hybrid parameters (green + credit) to improve discom performance and motivate their efforts to decarbonise the power portfolio and to meet the clean energy transition targets.

Linking Discom Responsibilities and Performance

The Government of India is giving priority to three important goals: ensuring the financial sustainability of the distribution sector; providing 24/7 affordable power supply; and increasing the share of cleaner energy sources. Under the Electricity Act 2003, good progress has been made in the areas of generation and transmission but not much has changed on the distribution side. A majority of the state-owned discoms face a continued cash crunch. This compromises their abilities to make investments in network and systems or to buy enough power from the generators.

To sum it up, the prime reasons for the discoms' financial distress are the high cost of power purchase, non-payment of subsidies, high distribution losses and non-revision of tariffs. To compound the problem, reliable and granular data are not available – at least not in the public domain – which makes it difficult to establish the root cause of this distress.

IEEFA notes key missing pieces. The current credit rating mechanism is highly linked to the operational and financial performance of discoms, which is necessary but needs revision. With the changing responsibility and working structure of the

Indian discoms, one cannot miss incorporating the environmental, technical, and social aspects.

Figure 7 illustrates the discom sector's diverse roles and responsibilities, while also highlighting the factors that affect current performance and those with the potential (beyond financial and operation) to adversely affect long-term performance and sustainability.

Figure 7: Factors Impacting Discom Economics

Source: Author's analysis.

Discoms are best suited for advancing end-use efficiency and renewable energy because of their direct interface with consumers. For successful decarbonisation of the power sector, discoms will have to play varied roles such as demand-supply planner; demand aggregator; RE and EE enabler; performance watchdog; and technology and model innovator.

All these roles require effective planning, implementation followed by structured monitoring and evaluation parameters and protocols. To become a clean energy technology leader, a discom's performance on clean technology update and dissemination needs to be tracked. To work in tandem with the environment, tracking GHG emission by discoms is crucial.

Similarly, customised parameters to map green performance of discoms is necessary. A hybrid rating mechanism will strengthen discoms' ability to fulfil these different roles while adding the capacity to be financially sustainable and environmentally responsible.

Hybrid Rating for Hybrid Sources of Energy

The success of the Indian distribution sector depends on carbon neutrality. Deep decarbonisation of the sector will require climate finance and support. To attract such green capital and strengthen the sector, it is necessary to re-examine the rating methodology and add green parameters.

This becomes even more crucial since a huge portion of the financial support provided to the discoms (based on the ratings) is to meet the decarbonisation targets like solar rooftop, for example, Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan Yojana (KUSUM), Atmanirbhar Bharat etc. However, the rating parameters focus on operational and financial tracking without looking at the green interventions undertaken by the various state discoms.

With global focus moving beyond economic growth to more circular and sustainable development, green financing is expected to grow in the global financial institutions' portfolio with the aim of reducing environmental pollution, protecting the balance of economic and social developmental and serving as effective mechanisms for sustainable development of communities.

Need for Hybrid Rating of Discoms

Investments in FY2020/21 were heavily geared towards decarbonisation, a trend that will accelerate. Two key factors explain this investment strategy in the power sector: First, Indian energy policies continue to favour the clean energy transition, allocating large budgets to green the power capacity mix and accelerate domestic manufacturing. Second, the costs of wind and solar power have continued to fall dramatically to the point of cost parity, reducing the need for subsidy.

The current exercise of discom ratings covers just the assets and liabilities. It is high time that the ratings are revised to reflect green mandates, decarbonisation plans and tariff implications to resolve the challenges of payables (and receivables). The hybridisation of energy resources (coal+ solar+ wind+ storage+ electric vehicles + energy efficiency + green hydrogen etc.) and reduced dependency on conventional sources of energy calls for an accompanying diversification of the financing portfolio and rating methodology.

Another interesting financial policy development is the growing importance of ESG in the capital structure. Historically, the energy sector has been ahead of many other sectors in tapping the green bond market, given the nature of its business and its investments in renewable energy projects. However, till date discoms have not considered adopting ESG framework for tracking their performance.

Steps to Hybridise Discom Rating

The Indian power sector holds tremendous potential to contribute to domestic and global decarbonisation given the use of the right tools, among them hybrid rating. This could serve the dual purpose of addressing climate targets and mitigating some of the expected near-term economic pressures on the Indian economy.

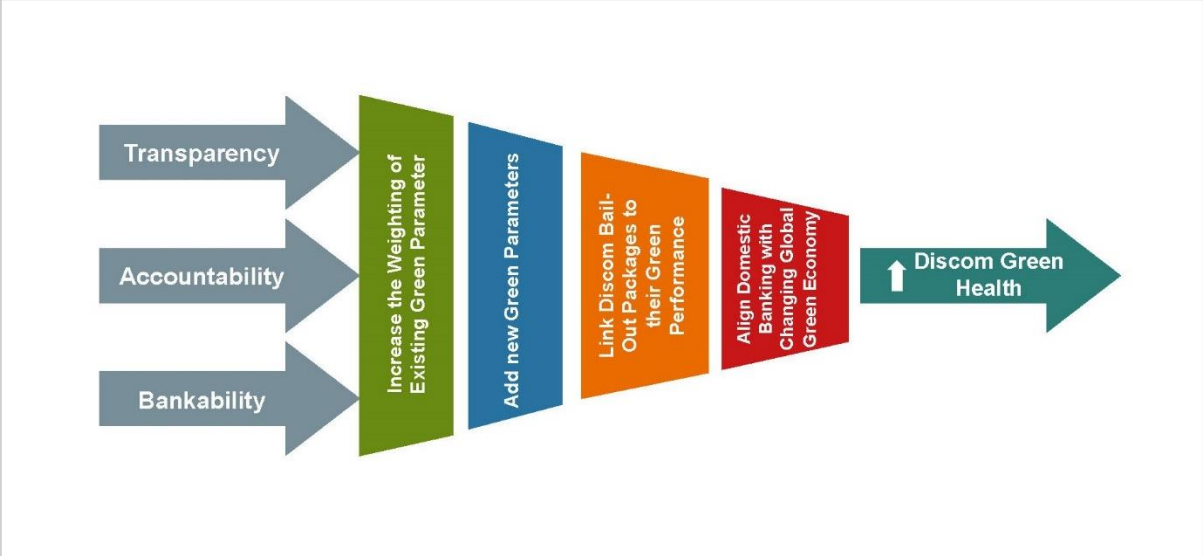
Indian states have been making announcements to shift away from coal and undertake a clean energy transition. The same now needs to be reflected in the rating methodology by tightening the existing parameters, adding new ones, and linking lending with performance.

This is a further opportunity for discoms to improve not just their credit worthiness but also their ability to attract green finance and green bonds. Additionally, it is time to refresh the outlook towards discoms and view them as public owned corporates. Here lies a fortuitous opportunity to introduce a customised ESG framework for discoms. Increasing investor focus on ESG factors will continue to spur the issuance of sustainable financing and to influence investment strategies.

The Indian power sector has huge potential to contribute to domestic and global decarbonisation given the right tools.

The four recommendations below capture the steps to be undertaken for sustainable decarbonisation of the discoms:

Figure 8: Discom Green Finance Funnel



Source: Author's analysis.

1. Increase the Weight of the Existing Green Parameter:

The RPO is the only green factor included as part of the current rating mechanism, but it carries the least weight. As the first step, there is merit in increasing the value of the RPO and bring in specificity by tracking performance as per the RPO solar and non-solar split.

2. Add New Green Parameters:

Considering the time and effort required to re-engineer a separate green rating, the more logical next step is to strengthen the existing integrated rating methodology, drawing from the ESG framework used for corporate ratings. One can start by considering ESG criteria of borrowers when lending. This will require development of an internal mechanism by PFC and REC to track the green performance of borrowers, making new parameters necessary.

For ease of implementation, new parameters can be added in a phased manner:

Phase 1: Add parameters to track RE + EV + EE performance:

- % Increase in share of RE in the total installed capacity contributing to SDG7 (Affordable and Clean Energy)
- Capacity of solar pump installations
- Energy efficient interventions (in-house and consumer-centric) supported to reduce carbon emission
- EV policy and infrastructure readiness

Phase 2: Add parameters to track decarbonisation pathway and plans:

- Strategic carbon neutrality plan, whether or not formulated by discom
- Efficient land usage policy
- Sustainability officer at each discom unit to plan and track clean energy transition initiatives
- Digitisation of discoms

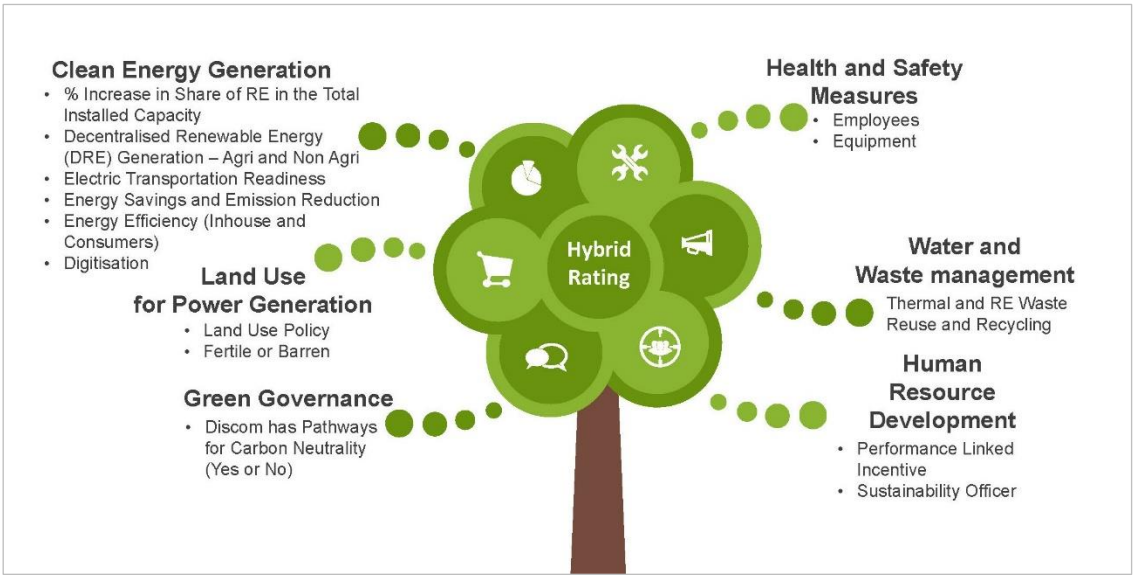
Phase 3: Add parameters to enhance circular utilisation of resources:

- Clean tech waste collection and segregation policy and implementation plan
- Recycling units supported by discoms
- Health and safety measures undertaken for protection of employees and equipment

The suggested phased approach is to ensure that discoms and credit rating agencies have the time and understanding to implement the required hybrid rating. These parameters are drawn from ESG rating mechanisms and green bond frameworks used globally.

The aim to move away from coal and decarbonise the power generation, transmission and distribution sector will require state discoms to lay down a structured decarbonisation plan including KPIs.

Figure 9: Hybrid Rating Tree



Source: Author's analysis.

3. Link Discom Bail-Out Packages to their Green Performance based on Hybrid Rating:

The financial health of discoms has been deteriorating over years, obliging state and centre governments to issue bail-out packages. This support is often not tracked and monitored.

- Centre and State government financial support to be distributed among discoms depending on their hybrid credit rating. This will manage risks and maintain financial stability
- Discoms to track the use of the financial support and its impacts on their performance
- Discoms to learn from Science Based Targets initiative (SBTi), Task Force on Climate-related Financial Disclosures (TCFD) framework and GRI (Global Reporting Initiative) standards. Adoption of any of these frameworks could help discoms get higher rating

4. Align Domestic Banking with Changing Global Green Economy:

The Reserve Bank of India joined the Central Banks and Supervisors Network for Greening the Financial System (NGFS) as a member on 23 April 2021.[16] NGFS is a group of central banks and supervisors willing to share best practices and contribute to the development of environmental and climate risk management in the financial sector, while mobilising mainstream finance to support the transition towards a sustainable economy. RBI's late entry to the NGFS club demonstrates the

[16] ETBFSI.com. RBI joins network for greening financial system. 30 April 2021.

bank has been slow to recognise climate risk and to adapt its operations to the transition away from carbon.

- MoP to mandate a fixed percentage of PFC and REC funding to discoms towards cleaner energy generation and distribution.
- RBI to create framework to contribute to global efforts on green finance, learning from the NGFS.

India is committed to decarbonise production, transmission and distribution of power, in an effort to tackle climate change as well as providing access to affordable and clean energy, in line with SDG7.

In the Indian distribution sector, GHG emissions tracking is important for discoms to increase disclosure, transparency, and accountability. Discoms need to identify any climate change-related opportunities (current or future) with the potential to generate a substantive positive change in their business operations, revenue or expenditure. This will require a structured climate-oriented rating methodology.

Decarbonisation of the power sector will depend upon the clean energy interventions undertaken by the discoms. Tracking of discom performance based on a hybrid rating mechanism is necessary now. The existing integrated rating methodology needs to be updated along with inclusion of such parameters in a phased manner.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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