



# India's Power Finance Corporation Continues to Fund Non-Performing Coal Assets

## *PFC Also Expands Lending to Renewables*

### Executive Summary

In March 2019, India's government-owned Power Finance Corporation (PFC) acquired 52.3% the Rural Electrification Corporation Ltd. (REC) to form the country's largest non-banking finance company (NBFC), and a critically important lender for India's power sector with a total asset book approaching US\$100bn as of December 2019.

In this report we appraise the impact of PFC and REC's continued lending to coal-fired projects on the India's power sector, given the ongoing stress in India's NBFC sector post the Infrastructure Leasing & Financial Services Ltd. default.

Over the years PFC and REC have lent extensively to coal-fired power projects, with Rs343,746 crore (US\$49bn), or 54% of their total loan book exposed to the thermal power sector.

This lending has in turn accumulated an extensive list of non-performing assets (NPAs) on their balance sheets, amounting to roughly Rs47,454 crore (US\$6.8bn) as of December 2019. However, IEEFA views the extent of PFC's stranded asset risk significantly higher than that as India's thermal power generation sector continues to generate ongoing oversized trouble for the country's banks, accounting for US\$40-60bn in stranded assets.

**PFC and REC have 54% of  
their total loan book  
exposed to the thermal  
power sector.**

PFC (including its subsidiary REC) account for impairment losses of Rs15,751 crore (US\$2 billion) between FY2014/15 and FY2019/20 (April – December). In IEEFA's view, PFC is extremely underprovided by accounting insufficiently for impairment risks and associated costs, given its almost zero provision for its Distribution Company (discom) sector exposure.

In calendar year 2019, 8.8GW of new coal-fired power projects started construction. As PFC is the lender of last resort for new coal power, all these projects received lending support from PFC and REC, underlining a key development in India — lending from the private sector for coal-fired project proposals has diminished to negligible levels. In this report, we detail PFC and REC's lending to new projects and

refinancing of loans to other unbankable projects and the stranded asset risk associated with these projects.

On the positive side, PFC and REC have lent a combined Rs33,759 crore (US\$4.8bn) to renewable energy projects as of December 2019, with some 5% of loans outstanding.

Given India's massive renewables target of 450GW by 2029/30, and the associated funding requirements for the expansion and modernisation of the national grid system, IEEFA estimates US\$500-700bn of new investment is needed. This will also require work from smaller regional developers that provides a significant opportunity for a rapid step-up in funding from PFC and REC.

Going forward PFC and REC must pivot to prioritise lending to India's renewable energy generation and grid sectors, to act as a catalyst for further private debt and equity investments in this critical low-cost, low-emissions domestic opportunity.

In the report, we use PFC to address the consolidated entity, as REC is partly owned by PFC.

## **Introduction**

### *Power Finance Corporation (PFC)*

The National Stock Exchange-listed Power Finance Corporation Ltd. (PFC) is 56% owned by the Government of India and the country's largest non-banking financial company (NBFC) with a primary focus on lending to the power generation and grid transmission sectors.

PFC was established in 1986 to support financing India's power infrastructure. PFC provides financial assistance to power projects across India including generation, transmission, distribution and renovation, modernisation and updating (RM&U) projects.

In the last three years, it has financed renewable energy projects and other infrastructure projects that have backward linkages to the power sector such as coal mine development, fuel transportation, and oil and gas pipelines. The borrower profile includes state electricity boards, state sector power utilities, central sector power utilities, and private sector companies.

The company also provides consultancy and capital advisory services. Its subsidiaries include PFC Consulting Limited, PFC Green Energy Limited, and PFC Capital Advisory Services Limited.

PFC was fully government-owned until January 2007, when the company undertook an initial public offering (IPO). PFC had a market capitalisation of US\$2.98bn as of April 2020.

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## Acquisition of REC

In March 2019, PFC acquired a 52.3% stake in state-owned REC (formerly Rural Electrification Corporation Limited) for Rs14,500 crore (US\$2bn). Apart from helping the government to achieve its budget divestment target of Rs80,000 crore (US\$11.5bn), the PFC's acquisition was said to drive an improvement of lending policies and processes to support the power sector. REC has continued to be run as an independent entity to date, undermining this forecast synergy.

REC was responsible for lending to India's landmark 100% household electrification *Saubhagya* drive.<sup>1</sup>

REC was formed in 1969 to provide financial support to electrify rural areas to support India's agricultural economy, with a focus on distributing pump-sets and building transmission and distribution infrastructure.

Since 2000, REC's mandate has expanded to also support generation infrastructure across a range of scales and locations.

REC also has been offering loan products for financing renewable energy projects. REC has tied up a line of credit for €100m (approximately Rs600 crore) with the German government's KfW under the Indo-German Development Cooperation agreement for financing renewable energy power projects at concessional rates of interest.

As of December 31, 2019, REC's total loan book reached Rs307,425 crore (US\$44bn) of which 41% is loaned to the thermal power sector and 5% to the renewable energy sector. REC has loaned Rs162,148 crore (US\$23bn) to transmission and distribution sector, amounting to 53% of its total loan book.<sup>2</sup>

**As of 31 December 2019,  
REC's total loan book  
reached Rs307,425 crore  
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<sup>1</sup> Live Mint, [26.02 million households get electricity connections under Saubhagya scheme](#), 31 March 2019

<sup>2</sup> REC, [Analyst Presentation](#), Q3 9M FY2019/20, page 12

## India's Largest Coal Power Financer

PFC is India's largest lender to the power sector with its consolidated loan asset book reaching Rs640,387crore (US\$91.4bn) at the end of December 2019. Of the total loan assets, 54% of exposure is into thermal power projects, which amounts to Rs343,746 crore (US\$49.1bn).

Apart from being India's largest coal-fired power funder, PFC has started to expand its lending operation to renewable energy projects.

PFC's lending exposure to renewables has increased in the last three years with its gross loan assets in renewables reaching Rs33,759crore (US\$4.8bn) at the end of December 2019. As of December 2019, PFC's loan asset exposure to transmission and distribution sector is of Rs259,113 crore (US\$37bn), forming 40% of its gross loan assets.

**PFC has started to expand its lending operation to renewable energy projects.**

In December 2017, PFC raised its first green bond of US\$400m at a coupon of 3.75%. The bonds are listed on the London Stock Exchange's new international securities market and Singapore Stock Exchange. The proceeds were slated for use in funding renewable energy projects.<sup>3</sup>

**Figure 2.1: PFC & REC Combined Loan Asset Book (FY2016/17 – FY2019/20 Apr-Dec)**

(Rs Crore)	FY2016/17	FY2017/18	FY2018/19	FY2019/20 (Apr-Dec)
<b>Consolidated Gross Loan Book</b>	<b>452,821</b>	<b>523,217</b>	<b>601,340</b>	<b>640,387</b>
<b>(US\$bn)</b>	<b>63.8</b>	<b>73.7</b>	<b>84.7</b>	<b>90.2</b>
PFC	240,169	279,329	314,667	332,962
REC	201,929	239,449	281,210	307,424
Conventional Power (combined)	287,319	306,914	329,487	343,746
	63%	59%	55%	54%
Renewable Power (combined)	2,447	19,799	28,285	33,759
	1%	4%	5%	5%
Transmission & Distribution (combined)	132,452	167,496	232,790	259,113
	29%	32%	39%	40%

Source: PFC Annual reports, Investor presentations

Note: Conventional power includes Large hydro power; PFC have not provided standalone disclosure for loans to renewable energy power for FY2016/17

<sup>3</sup> PFC, Annual Report 2018/19, page 34

## *PFC's Borrowings*

Some 17% of the total Rs289,264 crore (US\$41bn) of borrowing for PFC's standalone accounts as of December 2019 came from foreign banks. During the first nine months of FY2019/20, PFC raised Rs63,790 crore (US\$9bn), of which 25% was raised in foreign currencies.<sup>4</sup> Similarly, REC's standalone borrowings stood at Rs262,740 (US\$37.5bn) as of December 2019.<sup>5</sup>

The other 83% of PFC's standalone borrowings come from Indian commercial banks. International banks such as Barclays, Citi, HSBC, JPMorgan Chase and Standard Chartered, as well as Japanese banks Mizuho and MUFG provided foreign currency loans to PFC. Given the moves by all of these banks to exclude lending to new thermal coal mining and coal fired power plants,<sup>6</sup> at some stage PFC's ability to access global capital markets will be impeded if it does not start to align with the Task Force on Climate-Related Financial Disclosures (TCFD)<sup>7</sup> and Network for Greening of the Financial System<sup>8</sup> (NGFS) principles.

## *PFC Lending to Stranded Assets*

PFC identified Rs27,765 crore (US\$3.9bn) of its loan assets as non-performing assets (NPAs) as of December 2019 for its standalone accounts, 8% of its gross loan assets.

PFC reports that these NPAs are 29 projects, most of which are in the coal-fired power sector. PFC is seeking resolution of these assets through India's National Company Law Tribunal (NCLT) and other channels.

PFC consolidated accounts (including REC and other subsidiaries) identify Rs47,454crore (US\$6.8bn) of its consolidated loan assets as non-performing, making up 7.4% of gross loan assets.

With India's thermal power generation sector under severe stress from carrying US\$40-60bn of non-performing assets, financing from private banking institutions to the sector has dried up.

**Financing from private banking institutions to the thermal power generation sector has dried up.**

In comparison, transcripts from PFC investor meetings from FY2017/18 reveal PFC has provided refinancing loans to NTPC's Meja plant (1,320 MW) of Rs3,700 crore (US\$500m) and Raichur Yermarus Power project (1600MW) of Rs1,700 crore (US\$260m) (a project of Karnataka Power Corporation Ltd KPCL and BHEL).<sup>9</sup>

<sup>4</sup> PFC, [Performance Highlights](#), Quarter ended 31<sup>st</sup> December 2019, Page 29

<sup>5</sup> REC, [Investor Presentation](#), Quarter ended 31<sup>st</sup> December 2019, Page 18

<sup>6</sup> IEEFA, [Over 100 Globally Significant Financial Institutions Are Exiting Coal](#).

<sup>7</sup> [Task Force on Climate-Related Financial Disclosure](#)

<sup>8</sup> [NGFS](#)

<sup>9</sup> PFC India, [Investors Interaction Meet](#) (page 2), 31 May 2018

IEEFA views PFC's lending to new existing or new thermal power developments 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. IEEFA questions how PFC can expect to get a viable total project return over the 40-year life of thermal power plants (TPP) given the uncompetitive tariffs these projects require, particularly in light of rising financial distress at distribution companies (discoms) demanding an ever-lower cost of procuring new power generation.

**IEEFA questions how PFC can expect to get a viable total project return over the 40-year life of thermal power plants.**

### **Meja Thermal Power Project, 1,320MW, Uttar Pradesh**

The project is a joint venture by NTPC and Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) located in Meja village, Uttar Pradesh.

In 2012, the project was originally backed by consortium of 16 banks led by the State Bank of India (SBI) and syndicated by SBI Capital Markets Ltd. PFC replaced the consortium by refinancing the project with Rs3,700 crore (US\$500m).

The first unit of 660MW, based on outdated super-critical technology, was commissioned in 2018. Within 18 months of its start, the unit stopped operation due to turbine problems.<sup>10</sup> A second unit was planned for commissioning in 2018 but was delayed, and now has been further delayed due to the closure of the first unit.

PFC's refinancing of an already troubled project appears to be extremely risky.

### **Yeramus Power Station, 1,600MW, Karnataka**

The power plant is located in Yeramus village of Raichur district in Karnataka and jointly owned by KPCL and BHEL. The power plant was fully commissioned in 2017. PFC has provided refinancing of Rs1,700 crore (US\$260m) for the project.

In 2018, IEEFA identified stranded asset risk in Karnataka's thermal power sector because of insufficient in-state coal mining.<sup>11</sup> Karnataka's coal-fired tariffs have coal transportation costs of Rs1.06-1.66/kWh over a distance of 700-1,200km. The plants also bear additional risk of coal unavailability during the monsoon seasons when mining and railway transportation become difficult.

## ***PFC and REC Lending to New Coal-Fired Power Plants in 2019***

The Global Energy Monitor (GEM) in its latest report from March 2020 'Boom and Bust 2020' highlights that four new Indian power plants with total capacity of

<sup>10</sup> India Today, [SP voices concern over shut down of Meja thermal plant](#), 9 December 2019

<sup>11</sup> IEEFA, [Karnataka's electricity sector transformation](#), July 2018

8.8GW started construction during CY2019.<sup>12</sup> All of these power plants received funding from PFC and REC.

Following are the projects which received funding from PFC and REC in 2019:

### **Adani Godda Power Plant, 1,600MW, Jharkhand**

PFC and REC have combined agreed to lend the power project Rs10,075 crore (US\$1.4bn).<sup>13</sup>

Adani's ultra-supercritical Godda power plant located in Godda, Jharkhand, has a power purchase agreement (PPA) with the Bangladesh power development board to export the plant's entire power output to Bangladesh.

IEEFA analysed the costs Bangladesh would end up paying for this power, because Adani plans to import coal from its Carmichael coal mining project in Australia, via the port of Dhamra, Odisha (owned by Adani Ports), some 700 kilometres away from the power plant by rail.<sup>14</sup>

IEEFA estimates the tariffs for the power from the Godda plant would be about Taka8.71/kWh — the highest tariff among all Bangladesh's recent power procurement deals. It would also increase water stress and air pollution in Jharkhand while locking in energy poverty for the poor of Bangladesh at nearly double the cost of importing clean renewable energy from India.

Adani's Godda power plant is exposed to multiple risks, primarily the availability of cheaper renewable power. Adani's other imported coal-based power plants in India, such as Mundra and Udupi, have been operating at unsustainably low utilisation rates below 60% during the last three years. Moreover, the Carmichael coal mining project has not been able to start operations for more than a decade now because of financial constraints, as well as land acquisition and water disputes.

In IEEFA's view, the Godda power plant's stranded asset risks make PFC's and REC's loan asset extremely precarious, particularly if there is a change of government in Bangladesh, given the significantly cheaper options available. Potential options include the idea voiced in 2018 by Prime Minister Narendra Modi for Bangladesh to procure low-cost solar power from Gujarat and Rajasthan,<sup>15</sup> available at half the delivered cost of Godda, even allowing for the significant additional transmission costs.

### **Patratu Power Plant, 4,000MW, Jharkhand**

REC has sanctioned a loan of Rs14,000 crore (US\$2bn) for construction of Phase I of the Patratu power project (consisting of three 800MW plants). The power plant has a long-term PPA with Jharkhand discom JBVUNL to take 85% of its power from the

<sup>12</sup> Global Energy Monitor, [Boom and Bust 2020](#), March 2020

<sup>13</sup> Brickwork Ratings, [Adani Power \(Jharkhand\)](#), 9 September 2019

<sup>14</sup> IEEFA, [Adani Godda Power Project](#), April 2018

<sup>15</sup> LiveMint, [Bangladesh wants to buy solar power from India](#), 16 April 2018



start of commercial operations with tariff based on prevailing Central Electricity Regulation Commission regulations.

The project is exposed to counterparty credit risk owing to the weak profile of its off-taker JBVUNL. It also faces project execution risks, as well as the likely suboptimal 55% capacity utilisation rate evident in nearly every thermal power plant across India over 2018/19 and 2019/20 (refer Figure 3.1).

According to rating agency ICRA, the weak financial profile of JBVUNL is reflected in its negative net worth, low-cost coverage, high aggregate technical and commercial losses and stretched payable days exposes the project to counter-party credit and payment risks.<sup>16</sup>

### **Udangudi Thermal Power Project, 1,600MW, Tamil Nadu**

In January 2018, REC agreed to lend Rs10,453 crore (US\$1.5bn) to the Udangudi power project which has not progressed since it was initially proposed in 2012.<sup>17</sup>

In June 2018, Tamil Nadu discom TANGEDCO bid to sponsor the project. The proposed project is intended to be a blend of 70% domestic coal sourced from Talcher coalfield of Mahanadi coalfields in Odisha and 30% imported from Indonesia, South Africa, or Australia. The Talcher coalfield in Odisha is roughly 2,000km away, which means the coal would be hauled either by rail or sea, incurring massive costs.

Construction was stalled in December 2019 by heavy rains flooding the site.<sup>18</sup>

TANGEDCO's weak financial profile makes the project exposed to counter-party credit risks.

### **Yadadri Power Station, 4,000MW, Telangana**

In September 2015, Telangana State Power Generation Corp (TSGENCO) applied for a term of reference (ToR) for a 5 x 800MW supercritical coal plant in Veerlapalem Village, Damercherla Tehsil. The plant was proposed to use 50% domestic and 50% imported coal.

In May 2017 the first four units of the thermal power plant won financing support of Rs1,695 crore (US\$2.65bn) from REC. In September 2017, PFC committed a term loan of Rs4,000 crore (US\$600m) to TSGENCO for setting up the fifth unit of the coal plant.

While the Indian government is committed to reducing dependence on imported coal and increasing renewable energy generation on its grid, PFC and REC's funding

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<sup>16</sup> ICRA, [Patratu Vidyut Utpadan Nigam Limited](#), 3 October 2018

<sup>17</sup> Business Line, [REC to lend Rs10,453 crore for TN power project](#), 12 January 2018

<sup>18</sup> Indian Express, [Check dam found broken near upcoming Udangudi Power Plant in Thoothukudi](#), 15 December 2019



for new thermal power plants based on imported coal appear to counter the government's efforts and objectives.

In IEEFA's view, the state-owned PFC and REC are risking capital borrowed primarily from publicly-owned banks for projects that are far from least-cost and inconsistent with Prime Minister Narendra Modi's drive for 450 gigawatts (GW) of renewable capacity by 2030.

## Financial Stress in India's Thermal Power Sector

India's thermal power generation sector continues to foreshadow potential trouble for Indian banks, accounting as they do for US\$40-60bn in potentially stranded assets.

A variety of factors can lead to a thermal power generating asset becoming stranded—economically unviable—and unable to deliver a worthwhile return on investment over its useful life. These factors include reductions in demand growth projections, new government regulations to reduce air and particulate pollution, fuel supply, lack of commercial viability against lower cost renewable energy alternatives, availability of financing, capital cost and timeline blowouts in construction, and even legal action.

Most state government and private thermal power generation participants are seriously underperforming, despite dominating India's electricity generation sector. India obtained 61% of total installed capacity and 75% of generation from thermal sources in 2019/20 (refer to Figure 3.1). Unsustainable capacity utilisation rates below 60% over the past three years, combined with excessive financial leverage, make debt servicing extremely difficult.

**Most state government and private thermal power generation participants are seriously underperforming.**

**Figure 3.1: India's Electricity Capacity and Generation (2019/20)**

	---- Capacity ----		-- Generation --		Capacity	Increase
	GW	%	TWh	%	Utilisation	GW yoy
Coal-fired	205.2	55.4%	986.9	71.3%	55.5%	4.4
Gas-fired	24.9	6.7%	49.0	3.5%	22.4%	0.0
Diesel-fired	0.5	0.1%	0.1	0.0%	2.0%	-0.1
Large Hydro	45.7	12.3%	157.9	11.4%	39.6%	0.3
Nuclear	6.8	1.8%	42.8	3.1%	72.1%	0.0
Renewables	87.0	23.5%	141.7	10.2%	19.7%	9.4
Bhutan (Import)	n.a	n.a	4.9	0.4%	n.a.	
<b>Total</b>	<b>370.1</b>	<b>100%</b>	<b>1,383.3</b>	<b>100.0%</b>		<b>14.0</b>
Captive power	51.4					
<b>Total</b>	<b>421.5</b>					

Source: CEA, IEEFA estimates

Note: Renewables include small hydro

The industry's financial distress is exacerbated by loss-making electricity discoms that have often failed to make timely payments, or have sought to renegotiate tariffs on existing PPAs between the generator and buyer. Out of some 40 GW of stressed coal-fired projects in India, 15GW has yet to be commissioned, according to a March 2018 report from the government's Standing Committee on Energy.

Moreover, some 16.2GW of coastal power plants built to operate entirely on imported coal have been severely affected by the doubling of imported coal prices since 2016. While delays in project implementation related to land acquisition and permit approvals have resulted in cost overruns, the unavailability of coal supply contracts has also been an issue.

Insufficient coal railway capacity has kept Coal India Limited—the primary supplier—from consistently keeping up with demand, at least until the dramatic slowdown in electricity demand over 2019/20. Higher prices for domestic and foreign coal in recent years, a declining exchange rate, and rising railway freight charges for coal transport over distances of more than 500 kilometres (km), have also increased variable generation costs for many coal-fired power plants at a time of ongoing renewable energy deflation. Coal is increasingly challenged from both the cost-competitiveness and sustainability perspective.

New 25-year, zero indexation, renewable energy PPAs are regularly being signed at Rs2.60-2.80/kWh, some 60-70% below the first-year cost of existing coal-fired power plants in India, and half the cost of power plants burning imported coal.

## PFC's Asset Impairments

PFC consolidated accounts disclose total asset write-downs of Rs15,751 crore (US\$2,072m) between FY2014/15 and FY2019/20 (April – December). Please note that from FY2017/18 onwards, PFC and REC have changed their method for provisioning allowance on stressed loans to adopt the expected credit loss (ECL) method in accordance with the new Indian Accounting Standards.<sup>19</sup>

**Figure 4.1: PFC's Consolidated Annual Asset Impairments FY2014/15-FY2018/19 (Apr-Dec)**

(Rs crore)	FY2014/15	FY2015/16	FY2016/17	FY2017/18	FY2018/19	FY2019/20 (Apr-Dec)
<b>PFC consolidated</b>						
Impairment on financial instruments				4,693	-626	921
Provisions	843	1,610	5,112			
Provisions for decline in value of investments	1	96	87			
<b>REC</b>						
Impairment on financial instruments				2,301	243	363
Provisions	806	1,096	1,110			
Total asset impairments	1,650	2,803	6,309	4,693	-626	921
Total Asset impairments (US\$m)	217	369	830	618	-82	121
<b>Total between 2014/15 - 2019/20 Apr-Dec (Rs crore)</b>				<b>15,751</b>		
<b>Total between 2014/15 - 2019/20 Apr-Dec (US\$m)</b>				<b>2,072</b>		

Source: PFC & REC annual reports

Note: IEEFA estimates PFC's asset write-downs from impairment and provision costs reported by PFC; From F2017/18 onwards PFC's consolidated accounts capture REC's impairment losses;

**Figure 4.2: PFC's Consolidated Cumulative Asset Impairments**

(Rs crore)	FY2016/17	FY2017/18	FY2018/19	FY2019/20 (Apr-Dec)
Gross Loan assets	447,693	518,479	595,877	640,387
State Sector	371,849	434,124	508,774	548,818
Growth (%)		17%	17%	8%
Private Sector	75,844	84,355	87,102	91,568
Growth (%)		11%	3%	5%
Cumulative impairment on financial instruments (Rs crore)	23,822	28,327	27,679	28,600
Annual impairment on financial instruments (Rs crore)		4,506	-648	921

Source: PFC Annual report

In its December 2019 performance highlights presentation, PFC reported that 83% of loan assets on its standalone account were with government-backed projects. PFC rates these projects as standard assets and free of any non-performing asset risk.<sup>20</sup>

As illustrated in Figure 4.2, PFC's loan exposure to government sector grew 17% in FY2018/19 against only 3% for the private sector. For FY2018/19, PFC has written-

<sup>19</sup> PFC Performance highlight, Q1FY2018/19, June 2018, Page 8

<sup>20</sup> PFC Performance highlight, Q3 9M December 2019, Page 20

back Rs648 crore (US\$92m) implying improvement of asset quality on its balance sheet. PFC's significant exposure to the thermal power generation sector—which has seen utilisation rates consistently fall to unsustainably low levels—makes such an improvement in PFC's asset quality appear rather odd.

PFC's loan assets are protected by the contracted two-part tariffs of thermal power plants wherein the power distribution companies pay for fixed capital costs even if they do not draw power from a thermal power plant. This potentially enables the power plant to service its debts.

However, IEEFA views the risk on PFC's loan assets in the thermal power sector in conjunction with its implicit exposure to state-owned discoms. The Ministry of Power's portal PRAAPTI, which captures payments due from discoms to power generators, suggests that discoms have accumulated overdue payments of roughly Rs80,000 crore (US\$11.5bn) to the state sector in the 12 months to January 2020.<sup>21</sup>

REC has 34% of its loan assets with state-owned power distribution companies. REC's latest investor presentation for Q3FY2019/20 reveals Maharashtra, Rajasthan, Tamil Nadu, Telangana, and Uttar Pradesh as the top five states in terms of loan exposure.<sup>22</sup> As per PRAAPTI, four of the five states (excluding Maharashtra) are the worst performing in the "ease of making payments" parameter.

ET Energy World reported on April 13, 2020, that PFC and REC will be providing short-term concessional loans to state discoms to service their overdue payments to generation companies. The state governments will provide budgetary support against these loans. These loans will be given for a period of seven to 10 years and will come with a moratorium of two years.<sup>23</sup>

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<sup>21</sup> PRAAPTI, January 2020

<sup>22</sup> REC, [Investor Presentation](#), Q3 FY2019/20, Page 13

<sup>23</sup> ET Energy World, [PFC, REC plan to offer concessional loans for distribution companies](#), 13 April 2020

In theory, PFC's loans to state-owned thermal power projects are protected as they are perceived to have extremely low sovereign risk. However, state-sponsored bailouts of their lossmaking discoms have so far involved nothing more than moving bad loans from one pocket to the other, as PFC and discoms are government-owned entities. Additionally, the discom sector has consistently sold electricity on average below the cost of procurement, meaning the discoms lose money with every additional unit of electricity sold. This creates a perverse disincentive for discoms to actually supply power sufficient to drive sustainable economic growth in India. The unfunded and cross-sector subsidies are very material and very politically sensitive, making any sustained resolution problematic.

**State-sponsored bailouts of loss-making discoms has been nothing more than moving bad loans from one pocket to the other.**

As discussed earlier, much of the financial stress in India's power sector comes from inefficiencies in the power distribution sector. PFC states the loan assets associated with public sector power projects are better protected from sovereign risk than private projects, but they are equally exposed to payment delays, counterparty credit risks from state-owned discoms, execution and cost overrun risks.

Generally, when the economy is doing well, the government-owned entities (in this case, the power infrastructure assets) will perform equally well. However, during economic downturns, government-owned undertakings will perform less well because the government must take on a larger burden to stabilise the economy.

In IEEFA's view, PFC is extremely underprovided by not accounting sufficiently for impairment risks and associated costs.

As of December 2019, REC's loan book accounted for Rs19,689 crore (US\$2.8bn) of non-performing assets. REC has allowed for 51% provisioning against its non-performing assets.

**Figure 4.3: REC Standalone NPA Provisioning**

(Rs crore)	FY2014/15	FY2015/16	FY2016/17	FY2017/18	FY2018/19	FY2019/20 (Apr-Dec)
Gross Loan Assets	179,647	201,278	201,929	239,449	281,210	307,424
Gross NPAs	1,335	4,243	4,873	17,128	20,350	19,689
Gross NPAs (US\$m)	191	606	696	2,447	2,907	2,813
Provisions for NPAs	365	1,013	1,639	3,516	9,699	9,979
Provisions for NPAs (US\$m)	52	145	234	502	1,386	1,426
	27%	24%	34%	21%	48%	51%

Source: REC performance highlights presentations (standalone accounts)

REC has not provided sector-wide disclosure of its non-performing assets. However, given the fact that 34% of REC's lending exposure is to the distribution sector, it is likely that majority of its NPAs would be loans to state-owned discoms.

IEEFA's latest paper highlights the power distribution sector as the weakest link of India's power sector.<sup>24</sup> With an already significant exposure to a financially troubled sector, REC has now extended lending to greenfield development of coal-fired power plants.

Because PFC and REC are public sector undertakings, IEEFA views devaluation of their assets as loss of public capital. The ongoing crisis in the Indian banking system stifles credit flow into the renewable sector as well.

To be sure, there has been a continued flow of international capital into India's renewable sector, but it is limited to handful of large players such as Renew Power, Adani Green, Tata Power and Azure Power.

Given India's massive target of 275GW of renewables by 2026/27 and 450GW by 2029/30, and the associated expansion and modernisation of the national grid system, IEEFA estimates US\$500-700bn of new investment is required. This will also require participation from smaller regional developers that will in turn require domestic funding.

It is extremely important, therefore, to free up liquidity in the domestic banking system as soon as possible to keep India's renewable energy ambitions on track. This will require financial institutions such as PFC and REC to weather the short-term pain of writing off and resolving stranded thermal power plant loans, and moving to hold promoters accountable for their investment decisions. Promoters receive all of the benefits on good investments; it is also critical that they take the losses on failed investments. Otherwise, such socialisation of losses will mean past mistakes will inevitably reoccur to the cost of the Indian electricity consumer and taxpayers.

<sup>24</sup> IEEFA, [India's power distribution sector needs further reform](#), March 2020

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## India's NBFC Crisis

Non-banking financial companies, also referred to as shadow banks, enjoy relatively more flexible regulation than conventional banks. This enables NBFCs to lend more flexibly than conventional banks. NBFCs such as PFC and REC raise funds from commercial banks to lend on capital to other businesses.

The collapse and defaults by one of India's largest NBFCs, Infrastructure Leasing & Financial Services group (IL&FS), in September 2018 has clearly undermined investor confidence in lending to NBFCs.

Over the last 20 years, investment in infrastructure became an important focus for India, and IL&FS snapped up many infrastructure projects. In the process, it built up a debt-to-equity ratio of 18.7 before collapsing in September 2018 with a group debt of about Rs 91,000 crore (US\$13bn). Of this, nearly Rs 60,000 crore (US\$8.6bn) of debt included road, power, and water projects.

In addition to dramatic corporate governance failings, complications in land acquisition were a major reason behind IL&FS's troubles, and the 2013 land acquisition law highlighted the unviability of many of its projects. Cost escalations led to many incomplete projects, which were worsened by a lack of timely action to rescue them.<sup>25</sup>

In the wake of the IL&FS default, there has been a significant slowdown in lending to NBFCs as commercial banks, mutual funds and other investors fear that more such entities would default.

With the recent default of Yes Bank, another large commercial bank, NBFCs are likely to face renewed pressure on their funding and liquidity. The Reserve Bank of India (RBI) in March 2020 provided a credit line of Rs60,000 crore (US\$8.6bn) to Yes Bank as its non-performing assets rose to 18% of its total loan book at the end of December 2019.<sup>26</sup>

NBFCs play an increasingly important part in the Indian economy, and their share of the credit market has increased because they have been lending in sectors where commercial banks have demurred.

NBFCs cost of capital has risen, curbing the flow of credit to the economy. This constriction could have negative implications for crucial sectors such as renewable energy and power transmission in the coming decade.

NBFCs are finding it difficult to raise money or are having to pay a heavy premium cost for doing so, and this has choked the flow of credit to the economy. It has hit the micro, small and medium enterprises (MSME) sector, which is already suffering a

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<sup>25</sup> The Economic Times, [IL&FS: The crisis that has India in panic mode](#), 3 October 2018

<sup>26</sup> Business Standard, [YES Bank gets Rs 60k-cr line of credit from RBI to resume operations](#), 19 March 2020



slowdown triggered by attempted demonetisation in 2016 and the goods and services tax (GST) in 2018.

## **Conclusion**

PFC and REC combined are India's largest NBFC outfit, with total loan book approaching US\$100bn. The combined entities account for US\$6.7bn of non-performing assets as of December 2019. In IEEFA's view, the extent of their stranded assets owing to underperformance of its thermal power generation interests is significantly higher than they have disclosed.

In IEEFA's view, PFC is extremely under-provided by not accounting sufficiently for impairment risks and associated costs.

Both entities have significantly increased their lending to the renewable energy sector, in line with the government's long-term power sector objectives. But they have continued to lend extensively to the greenfield development of coal-fired power plants based on imported coal, as well as re-financing underperforming assets.

**PFC is extremely under-provided by not accounting sufficiently for impairment risks and associated costs.**

Some 16.2GW of coastal power plants built to operate 100% on imported coal have been severely affected by the doubling of imported coal prices since 2016. While delays in project implementation related to land acquisition and permit approvals have resulted in cost overruns, the unavailability of coal supply contracts has also been an issue for new construction.

The merger of PFC and REC was envisaged to improve lending efficiency in the Indian power sector. Their continued support to unviable thermal power projects further increases stranded asset risk in the sector, choking off liquidity in other important energy elements such as renewables, transmission, and distribution.

PFC and REC must change course to align with the development of new solutions such as pumped hydro storage and batteries that will transform India's power sector.

## 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](http://www.ieefa.org)

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