

INDIA  
2018

# COAL VS RENEWABLES FINANCE ANALYSIS

**CFA**  
Centre for Financial Accountability

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## METHODOLOGY

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This analysis examined 52 project finance deals comprising a loan component, across 54 coal-fired power and renewable energy projects (defined as hydroelectric, geothermal, wave, wind and solar power projects), with a financial close date from 1st January 2018 to 31st December 2018.

Deals were identified via investigation of subscription-based financial databases provided by Bloomberg Professional, IJGlobal, Thomson Reuters and market disclosures.

Where financial information was identified, it was cross-referenced with the sources listed above, media reports and other financial journals. Where material information between sources was inconsistent or unavailable, a determination was made to attempt to accurately reflect the deal status.

Only project finance lending was included. Corporate lending was excluded from the study. Where the source of funds or projects these funds were allocated to were unknown, lending was excluded. All dollar amounts are reported in US Dollars (USD) unless stated otherwise. All lending was either in Indian Rupees (INR) or USD and where aggregation of lending across these currencies occurred, the US Federal Reserve exchange rate was used. Lending amounts are as at the date of financial close and aggregated figures were reached by adding these amounts.





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## 1. INTRODUCTION

According to the International Energy Agency, India has become the fastest growing energy market in the world, with the highest growth rate in investment in the energy sector globally in 2018.<sup>1</sup> For the last three years in a row, the country has invested more in renewables than in fossil fuels,<sup>2</sup> and in 2018, for the first time spending on solar energy exceeded spending on coal-fired power generation.<sup>3</sup>

This analysis identified and reviewed project finance lending to **54** energy projects, comprising coal-fired power stations and renewable energy generation facilities in India that reached financial close in 2018. These projects attracted total lending of **₹30,524 crore (US\$4.4 billion)**, 80% of which is attributed to renewable projects, while the rest went towards funding coal-fired power projects.

This analysis builds upon and references CFA's India 2017 Coal vs Renewables Finance Analysis.<sup>4</sup>

While it is not intended to be exhaustive, this analysis provides a snapshot of which financial institutions are lending to these projects.

- <sup>1</sup> According to International Energy Agency (IEA), India's investment in the energy sector grew at a rate of 12% in 2018 – the highest growth rate as compared to any other country.  
<https://energy.economictimes.indiatimes.com/news/renewable/india-becomes-fastest-growing-energy-market-in-the-world/69317593>  
<https://www.independent.co.uk/environment/india-coal-solar-power-investment-money-climate-change-iea-a8921961.html>

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> <https://www.cenfa.org/coal/government-owned-banks-in-india-financed-more-coal-than-re-in-2017>



## 2 . SUMMARY



- Of all finance profiled in this study, **80% went to renewables while coal received 20%.**
- There was a 90% decline in lending to coal-fired power from 2017 to 2018.**  
 In 2018, only five coal-fired power projects with a combined capacity of 3.8 GW received finance totalling **₹6,081 crore (US\$850 million)**. By contrast, in 2017 12 coal-fired projects with a combined capacity of 17 GW received **₹60,767 crore (US\$9.35 billion)**.
- 'Primary finance' (a form of lending most often used to fund new projects, as opposed to refinancing) to coal power shrank 93% to **₹1,207 crore (US\$190 million)** in 2018 from **₹17,224 crore (US\$2,675)** in 2017.
- 2018 saw a **₹1,529 crore (US\$47 million)** increase in funding for renewables compared to 2017. A total of 49 renewable projects with a combined capacity of 4.7 GW obtained loans of **₹24,442 crore (US\$3.55 billion) in 2018**. Solar PV attracted 60% of this finance while the remaining 40% went to wind projects.
- Primary finance for renewable projects increased by 10% from 2017 to 2018.
- In 2018, most coal-fired project loans came from majority government and majority government-owned financial institutions **₹3,938 crore (US\$559 million)** whereas majority privately-owned commercial banks<sup>5</sup> contributed three-quarters of all finance towards renewable projects (**₹18,263 crore / US\$2.64 billion**). This trend is consistent with findings from 2017.
- In 2018, some Indian states clearly paved the pathway for renewable projects. Projects in Karnataka, Madhya Pradesh and Gujarat attracted half of the entire country's project finance for renewables across 23 solar PV and wind projects. Meanwhile Chhattisgarh and West Bengal together attracted finance for three coal-fired power projects but no renewables.

<sup>5</sup> Herein referred to simply as 'commercial banks'





### 3 ■ INDIA 2018: CHANGES IN PROJECT FINANCE LENDING TO ENERGY PROJECTS (COAL-FIRED, SOLAR AND WIND)

Year	Coal-fired	Renewables	Grand Total
2017	60,767	22,913	83,680
2018	6,081	24,442	30,524 <sup>6</sup>

<sup>6</sup> May not add due to rounding

Values are in ₹

Year	Solar	Wind	Renewables Total
2017	15,536	7,377	22,913
2018	14,578	9,864	24,442

Values are in ₹

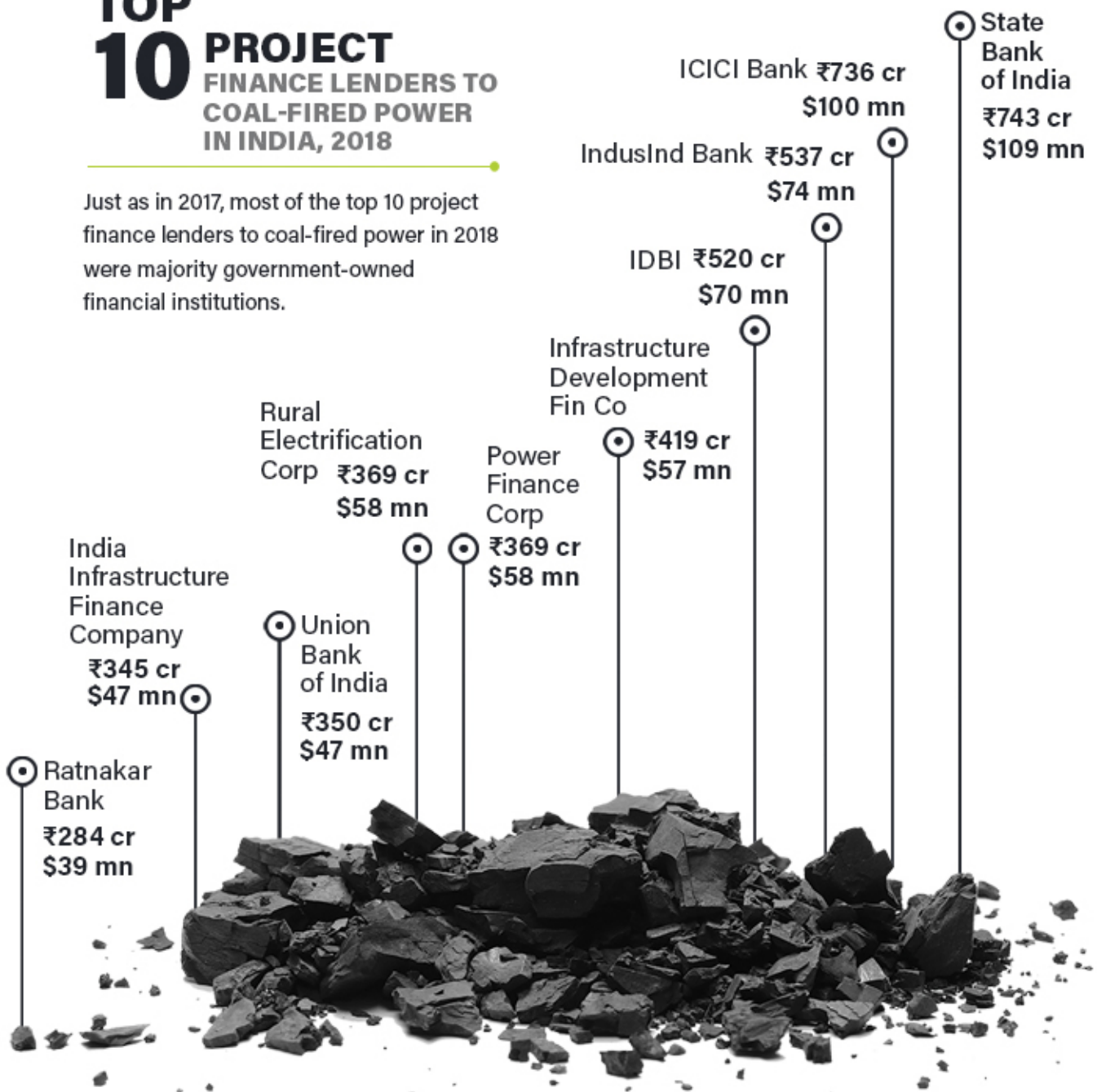


## 4. WHO IS LENDING TO COAL-FIRED POWER?

In 2018, five coal-fired power projects with a combined capacity of 3.8 GW were financed by 25 commercial and state-owned lenders. This entailed **₹6,081 crore (US\$850 million)** of project finance lending, one-tenth of the coal power finance in 2017.

### 4.1 TOP 10 PROJECT FINANCE LENDERS TO COAL-FIRED POWER IN INDIA, 2018

Just as in 2017, most of the top 10 project finance lenders to coal-fired power in 2018 were majority government-owned financial institutions.





It has been widely reported that as much as US\$38 billion of loans to the power sector in India have the potential to be written off, as 71 GW of India's private sector coal-fired projects face bankruptcy filings.<sup>7</sup> Despite power sector debt emerging as the greatest risk for Indian banks,<sup>8</sup> 14 government and majority government-owned financial institutions have loaned **₹3,938 crore (US\$559 million)** whilst 11 commercial banks have provided **₹2,143 crore (US\$291 million)** to coal-fired power projects in 2018.

<sup>7</sup> <https://energy.economictimes.indiatimes.com/news/power/banks-stare-at-38-billion-new-dud-loans-from-power-sector-report/63615069>

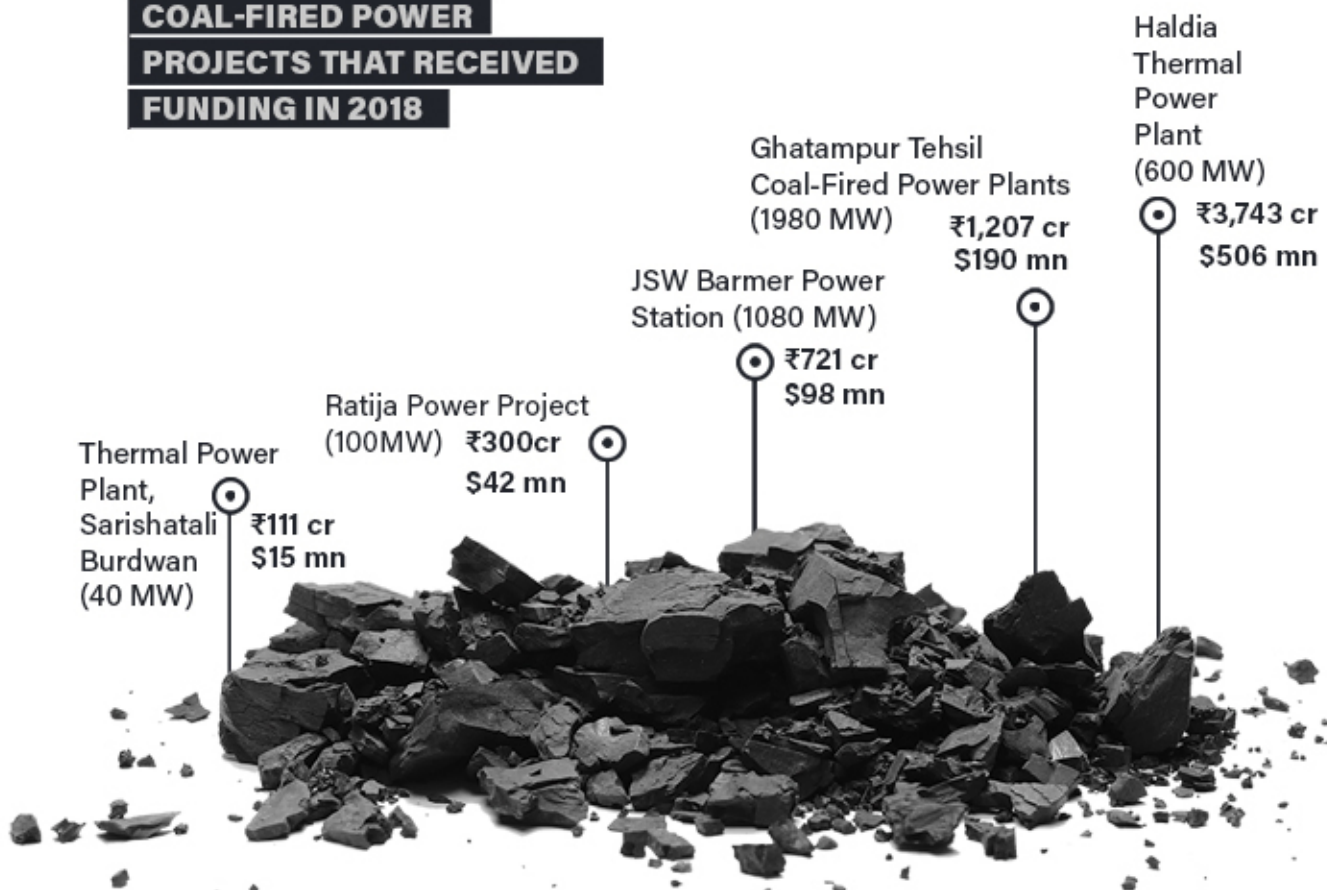
<sup>8</sup> <https://www.bloomberg.com/news/articles/2018-06-24/abandoned-power-plant-a-38-billion-warning-sign-for-india-banks>

## 4.2 MOST OF THESE DEALS REFINANCED EXISTING PROJECTS

80% of coal-fired power lending in 2018 totaling **₹4,875 crore (US\$661 million)** was used for 'refinancing,' where proceeds are intended to renew existing debt. Refinancing almost always occurs once projects have already been established or are under construction.

The remaining 20%, **₹1,207 crore (US\$190 million)**, took the form of primary finance for the construction of one project; the 1,980 MW Ghatampur coal-fired power plant in Uttar Pradesh.

### COAL-FIRED POWER PROJECTS THAT RECEIVED FUNDING IN 2018



## 4.3

### SPONSORS OF

### COAL-FIRED POWER PLANTS THAT RECEIVED PROJECT FINANCE

### IN INDIA, 2018 (BY PROJECT FINANCE AMOUNT)

Sponsors of coal-fired power	INR (crore)	USD (mn)
Calcutta Electric Supply Corporation (CESC)	3,854	521
JSW Energy	721	98
NLC (Neyveli Lignite Corp) India Ltd*	616	97
UP Rajya Vidyut Utpadan Nigam Ltd (UPRVUNL)*	591	93
ACB (India) Limited	300	42

\* NLC (Neyveli Lignite Corp) India Ltd and Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) received a ₹1,207 crore (US\$190 million) finance through their joint venture Neyveli Uttar Pradesh Power Limited (shareholding ratio of 51:49).



## 5. WHO IS LENDING TO RENEWABLES?

This analysis identified lending of **₹24,442 crore (US\$3.55 billion)** to renewable energy generation projects from 29 lenders in 2018, of which 35 were solar PV projects with a total capacity of 3.11 GW and 14 wind projects with a total capacity of 1.55 GW.

There was a 7% increase in lending to renewable projects between 2017 and 2018, despite the slow growth of “on-grid” capacity additions in renewable energy in FY19.<sup>9</sup>

Consistent with the previous year, solar PV dominated project finance lending in 2018, attracting **₹14,578 crore (US\$2.13 billion)** from 28 lenders. Among other factors, the attractiveness of solar PV may be attributable to its low installation costs in India.<sup>10</sup>

Lending to wind energy projects stood at **₹ 9,864 crore (US\$1.41 billion)** in 2018, a 34% increase on 2017.

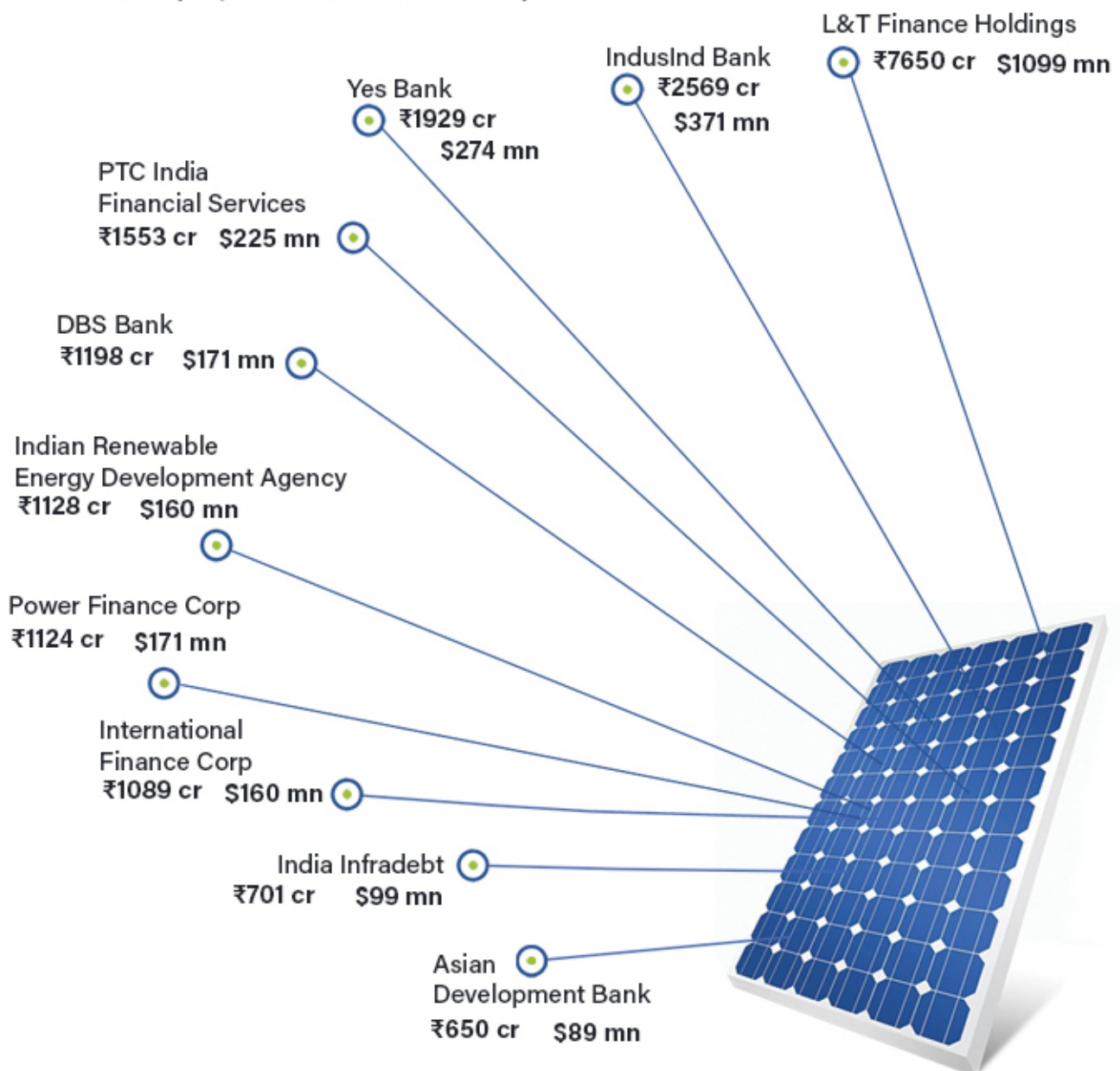
<sup>9</sup> <http://ieefa.org/wp-content/uploads/2019/04/Indias-Electricity-Sector-Transition-Still-on-Track-April-2019.pdf>

<sup>10</sup> <https://cleantechnica.com/2019/06/05/low-margins-cheaper-modules-make-india-lowest-cost-producer-of-solar-pv/>



## 5.1 TOP 10 PROJECT FINANCE LENDERS TO RENEWABLE ENERGY IN INDIA, 2018

The top five lenders to renewable projects in 2018 were commercial banks. Overall, renewables received finance from a mix of commercial banks, majority government-owned financial institutions, alongside finance from multilateral and bilateral development banks, among others. However, 17 commercial banks contributed three-quarters of all project finance for renewables (**₹18,263 crore/US\$2.64 billion**).



The leading wholly state-owned lender was Indian Renewable Energy Development Agency (IREDA), a 'Non-Banking Financial Institution'<sup>11</sup> that financed seven solar and wind energy projects in 2018.

<sup>11</sup> <https://mnre.gov.in/ireda>

## 5.2 MOST OF THESE DEALS ARE TO FINANCE NEW RENEWABLE PROJECTS

Renewables are now a cheaper source of energy than coal in India.<sup>12</sup> The country is seeing a rapid growth of renewables, with the government aiming for 175 GW of renewable energy capacity by 2022.<sup>13</sup> About 80% of all lending to renewables took the form of primary finance, which is most commonly used to develop new projects

<sup>12</sup> <https://www.carbontracker.org/reports/coal-portal/>

<sup>13</sup> <https://www.independent.co.uk/environment/india-coal-solar-power-investment-money-climate-change-iea-a8921961.html>

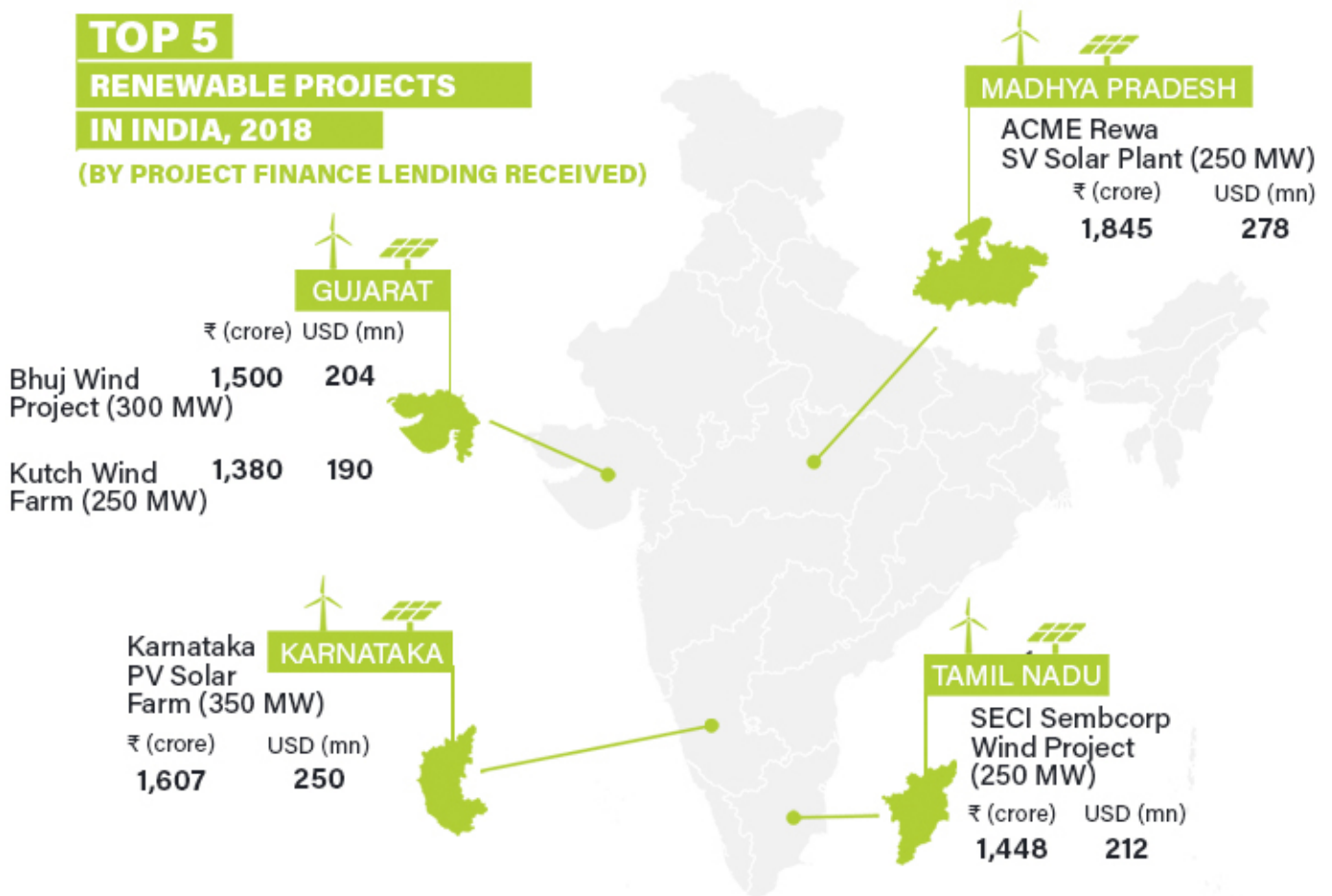
### 5.3

#### TOP 5

#### RENEWABLE PROJECTS

#### IN INDIA, 2018

(BY PROJECT FINANCE LENDING RECEIVED)



## 5.4

### TOP 5

#### SPONSORS OF RENEWABLES

#### PROJECTS THAT RECEIVED PROJECT FINANCE IN INDIA, 2018

(BY PROJECT FINANCE AMOUNT)

Sponsors	INR (crore)	USD (mn)
Renew Power Ventures	2,301	325
ACME Group	2,167	328
Azure Power	1,910	272
Adani Green Energy	1,752	271
Alfanar Energy Pvt Ltd (AEPL)	1,500	204



## 6 ■ RENEWABLE PROJECTS ARE CONCENTRATED IN A FEW STATES

In 2018, renewable energy projects located in only ten out of India's 29 states received project finance lending, compared to 12 states in 2017.

Renewable projects in five states received three quarters of all lending in 2018 (listed in order of largest to smallest amount received): (1) Karnataka, (2) Madhya Pradesh, (3) Gujarat, (4) Rajasthan and (5) Andhra Pradesh.

Compared to the previous year, 2018 saw Gujarat and Madhya Pradesh displace Telangana and Tamil Nadu to claim a 'top five' position for states attracting the most project finance for energy.

No finance was identified for renewables in Punjab in 2018, representing a significant decline from the previous year.

### STATES THAT ATTRACTED PROJECT FINANCE FOR RENEWABLES IN INDIA, 2018

States	Solar INR (crore)	Wind INR (crore)	Renewables INR (crore)	Renewables USD (mn)
Karnataka	3,556	1,088	4,644	685
Madhya Pradesh	3,944	199	4,143	608
Rajasthan	2,831	705	3,536	508
Gujarat	341	3,278	3,618	504
Andhra Pradesh	895	2,061	2,956	413
Tamilnadu	160	1,448	1,608	234
Maharashtra	400	1,086	1,486	232
Telangana	1,361		1,361	205
Uttar Pradesh	180		180	24
Project location/ state not specified <sup>14</sup>	910		910	135

<sup>14</sup> One deal worth ₹ 910 crore (US\$135 million) was identified as finance of rooftop solar projects across the country

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