



ICRA

A MOODY'S INVESTORS
SERVICE COMPANY

SOLAR ENERGY SECTOR

MARCH 2019

7-7.5 GW solar capacity addition expected in FY 2019-20; timely implementation of the orders by SERC/CERC allowing change in law (for GST & Safeguard duty) remains important

Sabyasachi Majumdar

+91 124 4545 304

sabyasachi@icraindia.com

Girishkumar Kadam

+91 22 6114 3441

girishkumar@icraindia.com

Shaurya Maini

+91 124 4545 388

shaurya.maini@icraindia.com

Aditya Jhaver

+91 22 6169 3379

aditya.jhaver@icraindia.com

CONTENTS

1. Executive Summary	04
2. Trends in Solar Capacity Addition	09
3. Cumulative solar energy capacity target under JNNSM	11
4. Cumulative solar energy capacity target under JNNSM	13
5. Progress under JNNSM for ground-mounted solar projects	16
6. Progress under JNNSM for setting up solar parks	22
7. Trends in solar energy tariffs and its cost competitiveness	31
8. Estimates of capacity addition in FY2020	39
9. Regulatory updates amid the cost pressures due to SGD and GST	42
10. Tender cancellations and tariff capping	45
11. Viability of competitively bid tariff	47
12. Solar cell/module manufacturing and sourcing in the Indian market	51
13. Updates on key state solar policies	54
14. Analysis, trends in long-term solar RPO trajectory	58
15. RPO Compliance by state distribution utilities	62
16. Renewable Energy Certificate Framework	64
17. Assessment of Principles of Determination of APPC in key states	67
18. Trend in REC Price and Volume	69
19. Assessment of forecasting, scheduling and deviation settlement mechanism for wind and solar power generators	71
20. Tariff petition filings by DISCOMs, UDAY Scheme	76
21. Operational profile of ICRA-rated commissioned solar PV plants	82
22. ICRA-rated portfolio in solar power sector	85



ABOUT ICRA

ICRA Limited (formerly Investment Information and Credit Rating Agency of India Limited) was set up in 1991 by leading financial/investment institutions, commercial banks and financial services companies as an independent and professional investment Information and Credit Rating Agency.

Today, ICRA and its subsidiaries together form the ICRA Group of Companies (Group ICRA). ICRA is a Public Limited Company, with its shares listed on the Bombay Stock Exchange and the National Stock Exchange.

Alliance with Moody's Investors Service

The international Credit Rating Agency Moody's Investors Service is ICRA's largest shareholder. The participation of Moody's is supported by a Technical Services Agreement, which entails Moody's providing certain high-value technical services to ICRA. Specifically, the agreement is aimed at benefiting ICRA's in-house research capabilities, and providing it with access to Moody's global research base. The agreement also envisages Moody's conducting regular training and business seminars for ICRA analysts on various subjects to help them better understand and manage concepts and issues relating to the development of the capital markets in India. Besides this formal training programme, the agreement provides for Moody's advising ICRA on Rating-products strategy, and the Ratings business in general.

The ICRA Factor

Our services are designed to

- Provide information and guidance to institutional and individual investors/creditors;
- Enhance the ability of borrowers/issuers to access the money market and the capital market for tapping a larger volume of resources from a wider range of the investing public;
- Assist the regulators in promoting transparency in the financial markets;
- Provide intermediaries with a tool to improve efficiency in the funds raising process.



Business Contacts

Mr. L. Shivakumar
E-mail: shivakumar@icraindia.com
Tel: +91 22 6114 3406 / +91 98210 86490

Mr. Jayanta Chatterjee
E-mail: jayantac@icraindia.com
Tel: +91 80 4332 6401/ +91 98450 22459

Media and Public Relations

Ms. Naznin Prodhani
E-mail: communications@icraindia.com
Tel: +91 124 4545 860

Registered Office:

1105, Kailash Building, 11th Floor,
26, Kasturba Gandhi Marg,
New Delhi - 110 001
Tel: + 91 11 2335 7940-45

Corporate Office:

Building No.8, 2nd Floor,
Tower A, DLF Cyber City Phase II,
Gurgaon- 122 002
Tel: +91 124 4545300

Ahmedabad

907 & 908, Sakar – II,
Ellisbridge, Opp. Town Hall,
Ahmedabad - 380 006
Tel: +91 79 4027 1500/01

Bengaluru 1

'The Millenia', Tower- B, Unit No. 1004,
10th Floor, 1 & 2 Murphy Road,
Bengaluru - 560 008
Tel: +91 80 4332 6400

Bengaluru 2

2nd Floor, Vayudooth Chamber,
15-16, Trinity Circle, M.G. Road,
Bengaluru - 560 001
Tel: +91 80 4922 5500

Chennai

5th Floor, Karumuttu Centre,
634, Anna Salai, Nandanam
Chennai - 600 035
Tel: +91 44 4596 4300

Hyderabad 1

No. 7-1-58, 301, 3rd Floor, 'CONCOURSE',
Above SBI-HPS Branch, Ameerpet,
Hyderabad - 500 016
Tel: +91 40 4920 0200

Hyderabad 2

4A, 4th Floor, SHOBHAN,
6-3-927, A&B Somajiguda,
Raj Bhavan Road,
Hyderabad – 500082
Tel: +91 40 40676500

Kolkata

A-10 & 11, 3rd Floor,
FMC Fortuna 234/3A,
A.J.C. Bose Road,
Kolkata -700 020
Tel: +91 33 7150 1100/01

Mumbai

3rd Floor, Electric Mansion
Appasaheb Marathe Marg,
Prabhadevi,
Mumbai - 400 025
Tel: +91 22 6169 3300

Pune

5A, 5th Floor, Symphony,
S. No. 210 CTS 3202 Range Hills Road,
Shivajinagar, Pune - 411 020
Tel: +91 20 2556 1194

Email: info@icraindia.com

Helpdesk: 124 3341580

Website: www.icra.in/ www.icraresearch.in