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SPEAKERS:

AWEA WEBINAR SERIES 2020 - MARKET SESSION

How Regulations Shape Credit Risks of Wind Developers in China and India



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TUESDAY, 24 NOVEMBER 2020 - 3 PM SGT

Asia Wind Energy Association

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Introduction



The Asia Wind Energy Association was established in December 2016 to become the leading trade association for the wind energy sector in Asia Pacific.

The association acts as the regional platform for all wind power industry stakeholders to collectively promote the best interests of the wind power sector.

The Asia Wind Energy Association is supported by a wide variety of stakeholders from the offshore and onshore wind industry.

Information

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Today Speakers





Rachna Jain Director, South & SE Asia, Energy & Utilities Fitch Ratings

Rachna joined Fitch Ratings, Singapore, in 2015. She covers Energy and Utilities credits across ASEAN and India. Rachna is primary analyst for credits like Greenko Energy Holdings, NTPC Limited, Vietnam Electricity, Pt Perusahaan Listrik Negara, et al. Prior to joining Fitch Ratings, she worked as an equity research analyst with Nomura, where she focused on the power and utilities stocks across ASEAN. She has over eleven years of experience across financial analysis and research, corporate finance, and private equity. Rachna is a CFA Charter holder. She has done the MBA from Indian Institute of Technology, Delhi, with major in Finance.





Diana Xia

Associate Director, North Asia, Energy & Utilities Fitch Ratings

Diana Xia is a Hong Kong based Associate Director in Fitch Ratings' APAC corporate ratings group. Her primary coverage is energy and utilities sector in Greater China, including power generation, power grid, gas utilities etc. Before joining Fitch, Diana worked at China Development Bank and China Huarong Asset Management as a project manager, for more than six years. Her expertise covered project financing, export credit and equity investment in utilities and infrastructure sectors across "Belt & Road" countries. She also had one-year secondment experience in China's NDRC. Diana earned her MPhil in Development Studies from University of Oxford in 2011. She graduated from Utrecht University in 2009.





Muralidharan Ramakrishnan

Senior Director, Head of South & South-East Asia Energy and Utilities Fitch Ratings

Muralidharan Ramakrishnan is Head of South & South-East Asia Energy and Utilities (E&U) team at Fitch Ratings based in Singapore. The E&U team is responsible for credit ratings for oil and gas, power and water utilities, major integrated energy companies as well as thermal coal producers/contractors in the region. Murali joined Fitch's Asia-Pacific corporates group in June 2010 and was based in Mumbai until 2015 covering diversified industrials including metals & mining, natural resources, capital goods, automobile and chemicals. Prior to joining Fitch, Murali was a senior consultant in a risk consulting firm. He was also with Crisil Ltd for three years, where he was part of the company's Rating Centre of Excellence (Criteria and Product Development) initially and Corporate Ratings subsequently . Murali graduated with Bachelors degree in Mathematics from Loyola College, University of Madras and is a Chartered Accountant.





Penny Chen Senior Director, Corporates Ratings Fitch Ratings

Penny Chen is a Senior Director in Fitch Ratings' APAC corporate ratings group and is based in Shanghai, China. Her current primary coverage is energy and utilities sector in Greater China, including oil & gas, power, gas, coal. Before joining Fitch in 2015, Penny worked at BNP Paribas Equities Asia China Research Team for nearly 10 years. Her coverage included Greater China companies in the alternative energy, environmental services, power generation, and gas distribution sectors. Penny earned her Bachelor of Arts degree from Fudan University, and she is also a CFA charter holder. **Fitch**Ratings

Regulations & Industry Shaping Credit Risks of Asian Wind Developers

Rachna Jain, Diana Xia

24 November 2020

Introduction to Fitch Ratings and Credit Ratings					
Which Factors Affect Credit Ratings?					
Factors Affecting Credit Profiles of Wind Power Developers					
China					
	Snapshot on China's Wind Power Generation				
	Key Regulations				
	How power generators' credit profile is affected?				
India					
	Key Regulations				
	Industry-wide Credit Trends				
	How power generators' credit profile is affected?				
Questic	ons & Answers				

Introduction to Fitch Ratings and Credit Ratings

Fitch Ratings – The Global Rating Agency with Local Market Experience

Credit Ratings Reflect Relative Vulnerability to Default on Financial Obligations

Based on In-depth Assessment of

- Covers Intention and Capability of Debt Servicing
- > Macro Environment, Group Structure, and Business and Financial Profiles
- Evolve as New Information Emerges

Affects Availability, Cost, other Terms and Secondary Sale of Debt Securities

Rating	Definition					
AAA	Highest Credit Quality					
AA	Very High Credit Quality					
А	High Credit Quality					
BBB	Good Credit Quality					
BB	Speculative					
В	Highly Speculative					
CCC	Substantial Credit Risk					
CC	Very High Levels of Credit Risk					
С	Near Default					
RD	Restricted Default					
D	Default					

Fitch's Rating Scale





China

Snapshot of China's Wind Power Generation



China's Energy Mix By Consumption (2019)



70%

60%

50% 40%

30%

20%

China's Fuel Mix Breakdown

By Power Capacity

21%

16%

Wind Power's Contribution to Total Outpuut Rises



Source: Fitch Ratings; Wind; CEC

Wind Power Generation Grew Robustly

^{66%} 62%



End-2015 End-9M20

9% 11%

Wind

8%

3%

Solar & Others

Grid-Connection Deadlines Drive Installations

Subsidized Wind Development

- > Feed-in-tariff tied to the year of approval, with grid-connection deadlines
- Feed-in-tariff=coal-fired benchmark tariff +subsidies

Grid-Connection Deadlines

- > Onshore Wind:
 - > Approved before 2019: by end-2020
 - Approved in 2019-2020: by end-2021
 - > Projects approved post-2020 will not longer be subsidized
- Offshore Wind
 - ➢ Before end-2021
 - > Relocating subsidy disbursement from central to provincial

Subsidized Wind Power Tariff Range



Notes: 1. The year refers to the year of appoval; 2. Prices before 2019 refer to feed-in-tariffs and those post-2019 are references prices; 3. government will no longer approve subsidies for onshore wind from 2021

New Subsidy Regulations To Benefit Developers

□From catalogue-basis to pro-rata basis

- Pre-2020, only projects registered in 1st-7th catalogue received regular subsidy payments
 - Large recurring working capital outflow
- Coverage is now expanded to all qualified subsidized projects under operations
 - > Should improve cashflow and debt servicing
 - > However, China's Renewable Surcharge Fund remains in deficit

Active acquisitions

- Major sellers: private developers
 - > To meet debt servicing needs, or to rebalance portfolio with less-subsidy-heavy projects
- > Major buyers: state-owned generation companies, with large coal-fired power capacity
 - > To improve fuel mix and maintain organic growth; supported by strong funding access

Regulations Favor Subsidy-Free Projects

Revenue Visibility

> The price and volume risks are reduced for subsidy-free projects

Cost Cuts

> Should mitigate the lower tariff of subsidy-free projects than the subsidized ones

	Subsidized Projects	Unsubsidized Projects
Tariff	Tariff is fixed for 20 years, but a portion of output will be sold via market trading, usually with discounts.	Lower tariff, but more stable. As government guarantees a full-output purchase, there is no price exposure to trading.
Volume	Curtailment remains an issue	The dispatch is the most prioritized
Non- equipment costs	High	Waived
Subsidy payment	Material collection delays	No cashflow pressure in this regard
Source: Fitch F	Ratings	

Regulations Improve Volume Visibility

Curtailment Alert Mechanism

- Installations will be suspended if curtailment rates are very high
- > Wind projects in Xinjiang and Gansu are now permitted to commence construction

Renewable Consumption Target Policy





How state-owned gencos' credit profile will be affected by wind power development?

Industry-Wide Credit Trends

- Higher volume visibility
- Higher price stability
- Declining reliance on subsidy collection
- Leverage profile framed by investment plans

Share of Wind Capacity in Fuel Mix of China's Major IPPs Will Grow





India

Snapshot of Indian Renewable Capacity

25 400 350 20 300 250 15 200 10 150 100 5 50 0 0 Apr 15 Jul 15 Oct 15 Jan 16 Apr 16 Jul 16 Oct 16 Jan 17 Apr 17 Jul 17 Oct 17 Jan 18 Apr 18 Jan 19 Apr 19 Jan 19 Jan 19 Oct 19 Uul 19 Jan 15 Jan 20 Apr 20 4 4 4 Jul Oct Apr

All India (GW, RHS)

Renewables (%, LHS)

Source: Central Electricity Authority

Renewable Capacity Mix

All India Power Generation Capacity



RE (GW, LHS) — Wind (%, RHS) — Solar (%, RHS)

Source: Central Electricity Authorrity

All India Electricity Generation Mix



Renewables (%, LHS)

All India (TWh, RHS)

Source: Central Electricity Authority

Renewable Generation Mix



Source: Central Electricity Authorrity

India's Capacity Addition Plan

□ Total Capacity to Increase to 817GW by 2030

- Electricity demand expected to increase by 6% per annum
- Addition of 446GW (June-2020: 371GW)
- > Non-Fossil Fuel to Account for 40 % of India's 2030's Installed Capacity
- Cost-Effectiveness, Environmental Consciousness, Intermittent Generation

□ Wind Capacity to Increase to 140GW by 2030 (June-2020: 38GW)

> Potential of more than 300 GW at 100m hub height (695 GW at 120m)



Regulatory/Policy Backdrop



□Federal Structure results in Framework Varying across States

Industry-wide Credit Trends

Good Capacity Addition till 1H17

- Feed-in Tariffs Competitive Bidding Introduced in Feb 2017
- Accelerated Depreciation Ended in 2017
- Generation Based Incentives For Commissioning before Mar 2017

Lukewarm Recent Performance

- Unsubscribed/Undersubscribed Auctions Lately
- Mismatch in Tariff Expectations Tariff Caps Lifted Now
- Lack of Suitable Land/Transmission Network Large RE Parks
- COVID 19-Induced Logistic Challenges

High Counterparty Risk

- Weak State-owned Distribution Companies are Key Counterparties
- Developers Face High Receivables, Curtailments
- Tariff renegotiations Event Risk
- Counterparty Risk Mitigants
 - Exposure to Sovereign-owned entities, commercial & industrial customers
 - Diversification across state-owned distribution companies





Wind (GW, LHS)

Source: Central Electricity Authorrity

Structural Reforms in the Making

□ Financial Reforms are Ineffective in the Absence of Operational Overhaul

> Ujwal DISCOM Assurance Yojana introduced in 2015 after 'Reforms' in 2001 and 2012





Meaningful Measures Expected in the Medium Term

- To Improve Distribution Segment, the Weakest Link in Supply Chain
 - Monitored Appointment of Regulators
 - Private Player Participation
 - Direct Benefit Transfer
- Establishment of Electricity Contract Enforcement Authority

<u>Andhra Pradesh (INR bn)</u>	
Total Receivables	138.9
Subsidies	59.5
Government Offices	79.4
Total Payables	67.0
Central Gencos	50.4
Central Transcos	2.2
RE Players	5.7
IPPs	8.6

How power generators' credit profile is affected?

Positives

- Medium term policy certainty
- Must-run status
- Fixed Tariffs, Long Term Contracts
- Counterparty Diversification
- Discoms Structural Reforms
- Financing Access, Strong Parents

Negatives

- Resource Risk
- Counterparty risks
- Declining Tariffs and Profits
- Stretched Financial Profile
- Tight Interest Coverage
- Fx Exposure

Issuer	Greenko Energy	ReNew RG II	ReNew Power	Azure Power Energy	Neerg Energy
Credit Ratings	BB/Stable	BB	BB-/Stable	BB-	BB-(b+)
Fitch Corporates Rated USD bonds	USD2,450 million	USD435 million	USD300 million	USD500 million	USD475 million

Q&A

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Q&A Session

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Question 1

Why Indian developers have raised US dollar bonds? Is it mainly for cheaper loans?

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Question 2

What is your view on the proposal recently made by industry participants in Beijing that pledged to have China's wind power capacity exceed 800GW by 2030?

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Question 3

Do you think wind power tariffs in India have bottomed out?

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Question 4

Are China's wind and solar power developers equally impacted by subsidy policies?

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Question 5

What is your view on wind capacity addition in India given land issues and availability of cheaper solar power?

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Question 6

Is operational expenditure (OPEX) considered as a critical factor while developing credit ratings? If not, will it become a critical factor in the near future?

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Question 7

Is there a fitch rating chart for Indian IPPs too?

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Question 8

What factors will shape China's future wind power capacity additions, other than regulations?

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Question 9

You mentioned about weak distribution companies in India. What is your take on situation in Andhra Pradesh?

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Question 10

Have COVID-19 materially impaired China's wind power development in 2020?

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Thank You