

# The Role of Climate Finance in Clean Energy Deployment

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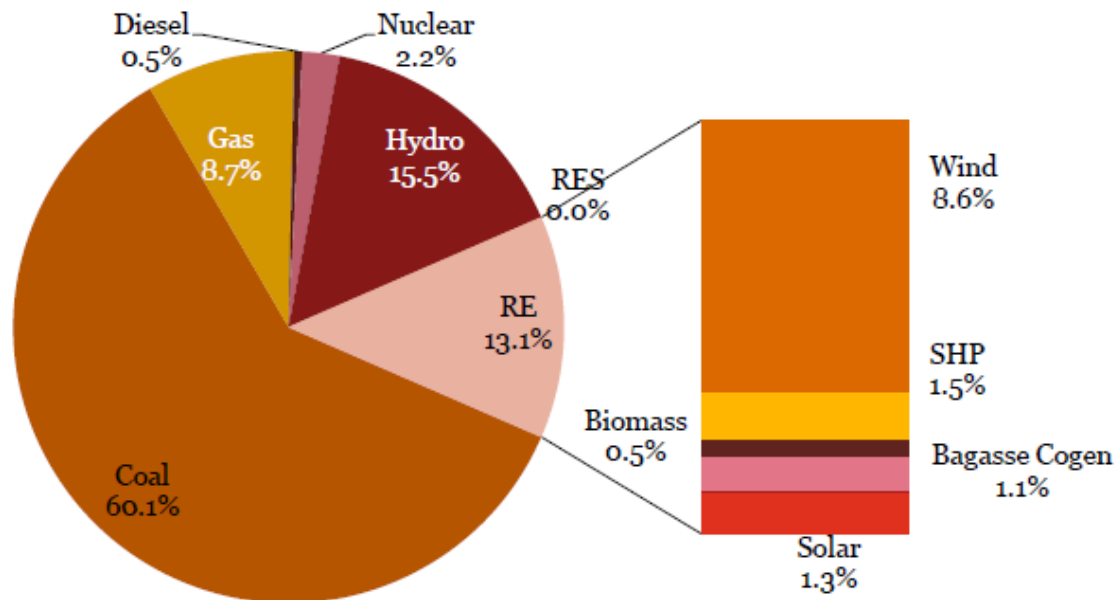
 @kvsrinath

# Clean Energy Statistics and Potential in India

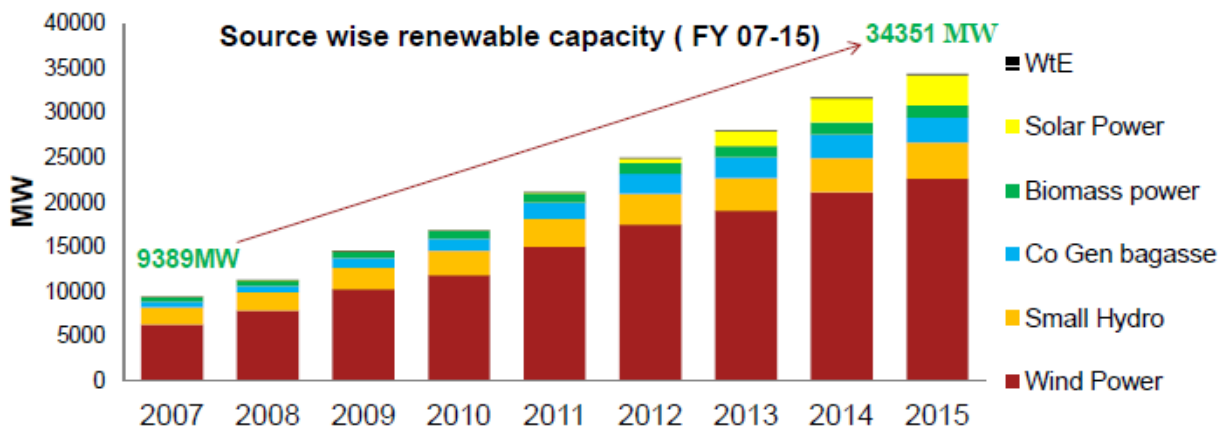


## Power Scenario in India as on March 2015

**Current Installed Capacity 263.66 GW**



**RE Capacity 34.35 GW**



# Clean Energy Statistics and Potential in India



Capacities in MW			
Source	Estimated Potential	Targets (till 2022)	Installed Capacity (Jan 2016)
Solar Power	7,49,000	1,00,000	5,248.21
Wind Power	1,02,788	60,000	25,188.39
Biomass Power	23,000	10,000	4,760.55
Small Hydro	20,000	5,000	4,187.65
<b>Total</b>	<b>8,94,788</b>	<b>1,75,000</b>	<b>39,385</b>

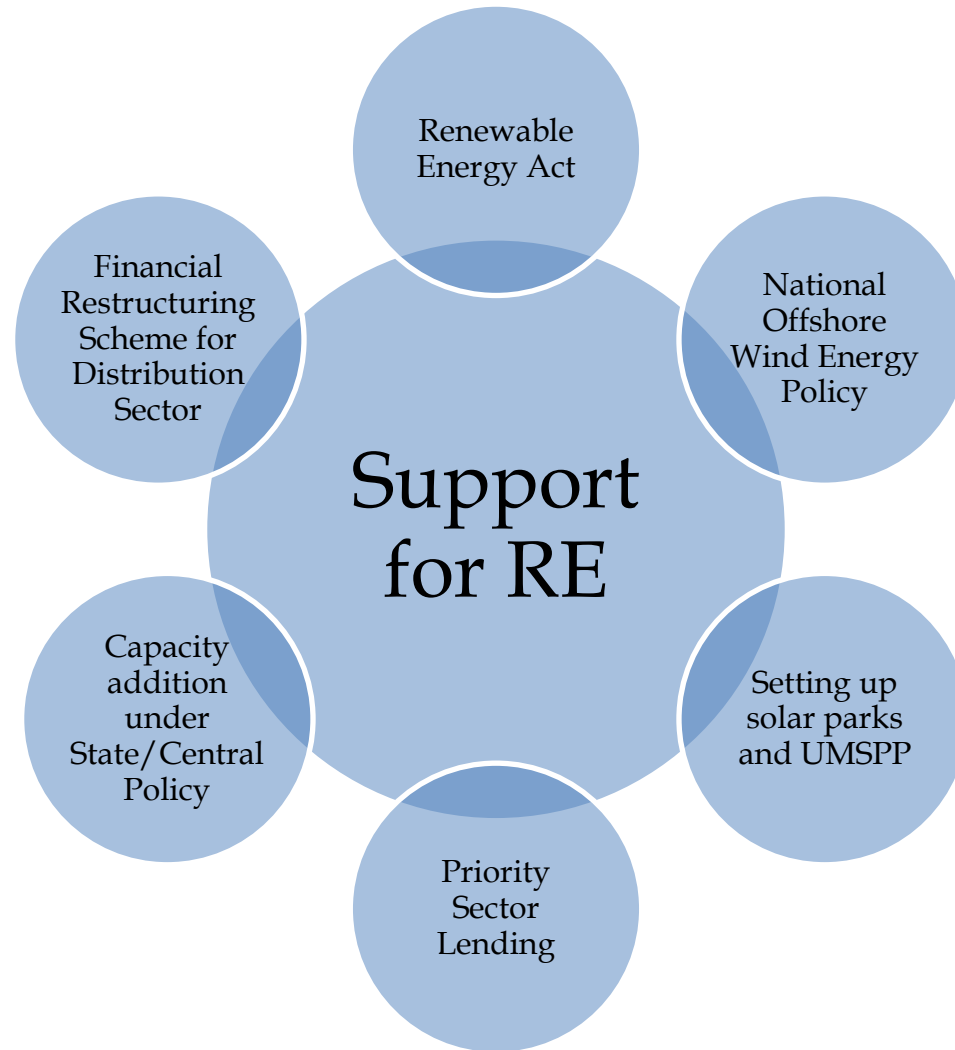
**With this ambitious target, India will become one of the largest Green Energy producers in the World requiring investment of USD 200 Billion**

# Increasing thrust for Renewable Power in India



- **India's NDCs**
  - To reduce emissions intensity of its GDP by 33 to 35 % by 2030
  - To achieve about 40 % cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030
- **Union Budget**
  - Clean Energy Cess renamed as Clean Environment Cess
  - Rate increased from INR 200 per tonne to 400 per tonne of coal, lignite and peat
- **Railway Budget**
  - Tender documents for 50 MW solar plants on rooftop issued and facility for another 100 MW being set up
  - To commission 132.5 MW of windmill power plants in 2016-17

# Recent Developments Promoting Renewable Energy Sector



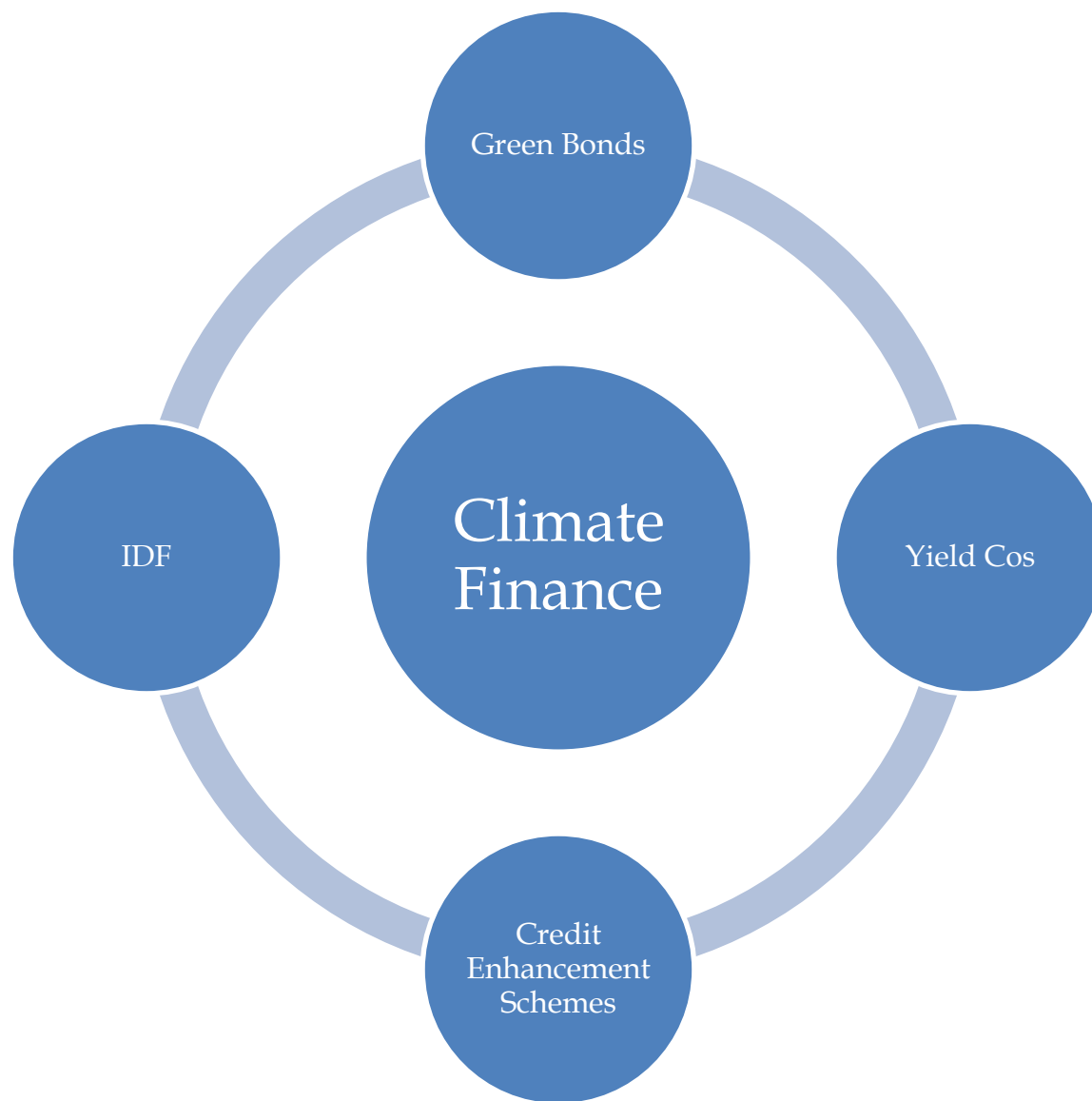
# *Challenges faced in Funding Clean Energy Deployment*



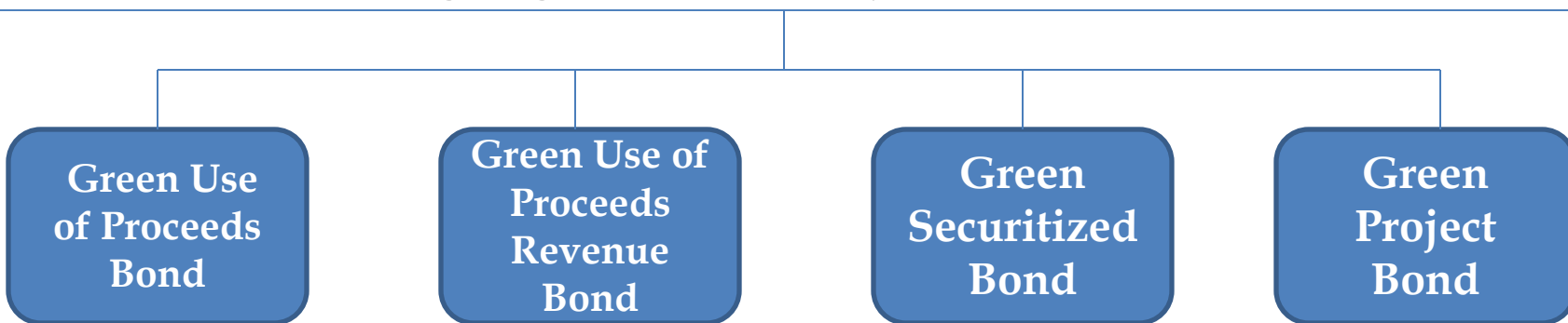
## Key challenges for RE Funding

- Shortage of available financing
- Short tenure loans
- Currency Devaluation
- High cost of debt

# Role of Climate Finance in Clean Energy Deployment



**Green Bonds** are innovative financial instruments whose proceeds will be exclusively applied to financing or re-financing in part or in full, to new and/or existing eligible Green Projects



## Global Scenario

- World bank and IFC are pioneers in issuing green bonds
- Cumulative Global issuance has surpassed USD 100 Billion

## Indian Scenario

- YES BANK issued India's first ever Green infrastructure Bonds
- EXIM Bank , IDBI Bank and CLP India also followed suit and issued



- A **Yield Co** is a dividend growth-oriented public company that bundles renewable and/or conventional long-term contracted operating assets in order to generate long term and low risk predictable cash flows
- The emergence of the structure has provided the renewable sector with access to a new investor class offering: low – cost equity in return for certainty of cash flows

## Global Scenario

- Most of the Yield Cos launched in 2013 are focused on wind assets
- The structure has opened to utility scale solar projects in 2014
- There are 8 Yield Cos in the US, 6 in the UK, 4 in Canada and 1 in Spain

The **Credit Enhancement Schemes** provide unconditional and irrevocable partial credit guarantee to commercially viable infrastructure projects

## Case Study 1

- **Hindustan Power and Renew Wind Energy** raised INR 380 Cr and INR 451 Cr respectively through infrastructure bonds which were partially guaranteed by IIFCL and counter guaranteed by Asian Development Bank
- YES BANK and IDFC Ltd were the sole underwriter and arranger to the bonds issued by Hindustan Power and Renew Wind Energy respectively

## Case Study 2

- **Asian Development Bank (ADB)** backed the issuance of the first Climate Bond in Asia and the Pacific
- ADB's credit enhancement to AP Renewables was in the form of a guarantee of 75% of principal and interest on the bond

- **Infrastructure Debt Funds (IDFs)** provide low cost long term refinance to projects in renewable energy sector
- IDFs raise majority of its funds through insurance and pension funds thus attracting funds through this category of investors in renewable energy sector

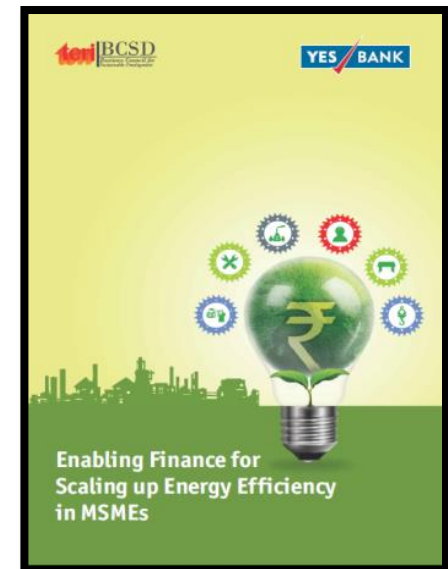
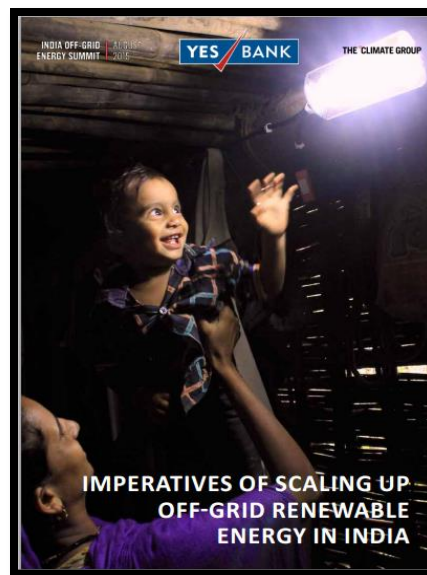
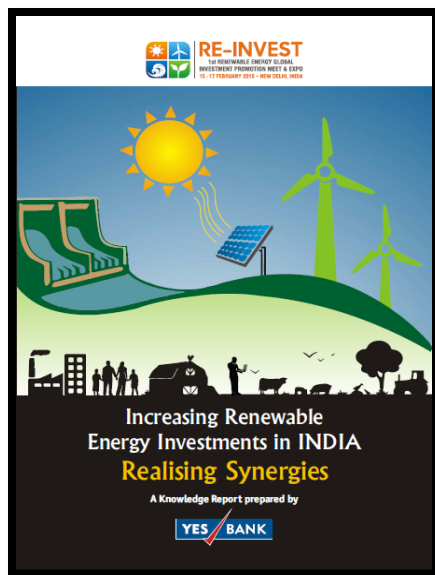
## Case Study

- **India Infrastructure Finance Company Limited** Infra Debt Fund announced in May 2015 to float a “green sector” scheme to raise Rs 1,000 crore for funding environmentally sustainable infrastructure projects like renewable energy, water and waste treatment

# *The cogs in the sustainability wheel*



- Increasing Renewable Energy Investments in India- Realising Synergies
- Imperatives of Scaling up off-grid Renewable energy in India
- Enabling Finance for scaling up Energy Efficiency in MSMEs



# *Proactive investments for environmental outcomes*



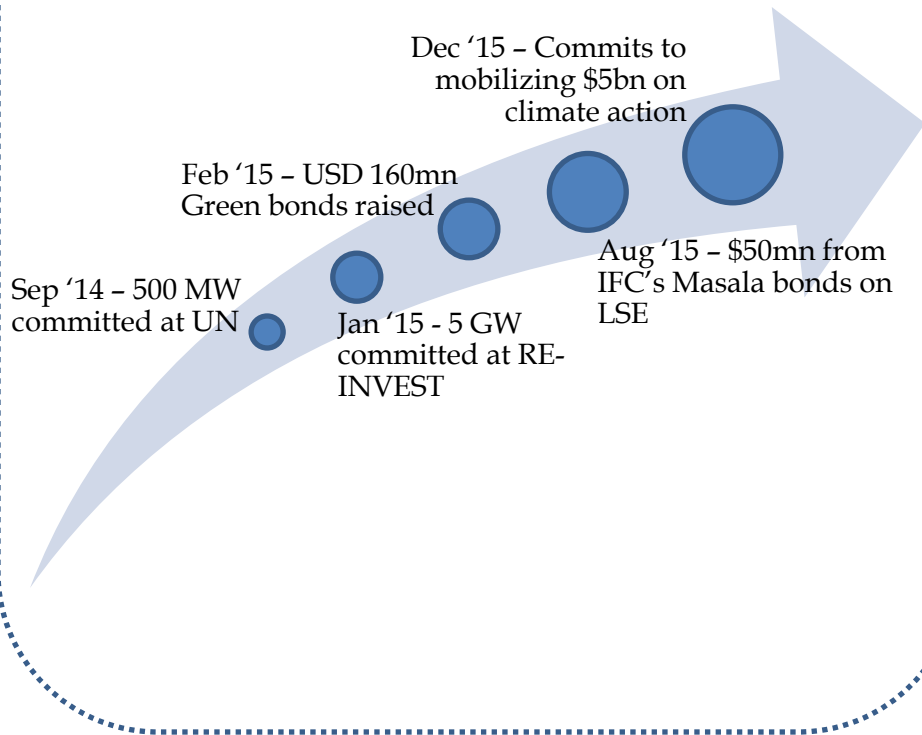
## **Welspun Neemuch - Largest solar PV Project - 151 MW capacity**

- Electricity for 624,000 households
- Avoid 216,372 tonnes of CO<sub>2</sub> emissions annually

## **Debt Funding of 218.4 MW Wind Power Project in Gujarat, Madhya Pradesh, Rajasthan and Maharashtra**

- The project would generate 449 Million Units of power annually
- Avoid 4.5 million tonnes of CO<sub>2</sub> emissions annually

## Revolutionizing Renewable Energy Financing in India



Developing voluntary **responsible financing guidelines** for Banking sector with IBA & GIZ

Raised \$50 mn from **first ever green masala bonds listed by IFC** at London Stock Exchange

1<sup>st</sup> Indian Bank to launch **Green Infrastructure Bonds**, raising \$160 mn

MoU with London Stock Exchange on **bond and equity issuance** towards developing **green infrastructure**

1<sup>st</sup> Bank to adopt an **Environment and Social Risk Policy**

## **YES BANK Commits to target mobilizing USD 5 billion towards climate action by 2020 during COP21**

**Target funding of 5,000 MW of clean energy**

**Gradually increase percentage of Renewable Energy in its power portfolio**

**Contribute towards creating a carbon sink by planting 2 million trees**

**Touch 100 million lives through its safe and clean drinking water program**

**Offset Carbon Emissions of the bank's operations**







*"Yes, the planet got destroyed. But for a beautiful moment in time we created a lot of value for shareholders."*