
Potential of Renewables in India for Climate
Change Mitigation – Role of **IREDA**

CLIMATE CHANGE INDIA
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Importance of RE in India

- Huge gap in Demand-Supply
- Proportional relationship between GDP growth & Energy consumption
- Depleting reserves of conventional fossil fuels
- Energy security issues due to limited domestic resources & dependence on imports
- Equitable distribution of RE sources, thus, promoting the concept of distributed generation & consumption
- Environmentally benign nature of RE
- Huge untapped potential of RE sources



RE Potential of India (MW)

- | | |
|--------------------|--------------|
| ▪ Wind Power | 45195 |
| ▪ Bio Power (Agro) | 16881 |
| ▪ Small Hydro | 15000 |
| ▪ Cogeneration | 5000 |
| ▪ Waste to Energy | 2700 |
| ▪ TOTAL: | 84776 |



Source: 11th plan proposal for new and renewable energy, MNRE



IREDA: An Introduction

Inception: Incorporated on March 11, 1987 as a Public Limited Government Company under MNRE

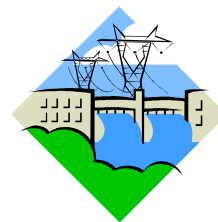
Mission: Be a pioneering, participant friendly and competitive institution for financing and promoting self-sustaining **investment in energy generation from renewable sources**, energy efficiency and environment technologies for **sustainable development**

As an NBFC, IREDA is a specialized institution for financing projects related to energy generation from renewable sources



Sectors Financed

- Small Hydro Energy
- Wind Energy
- Biomass Cogeneration
- Biomass Power Generation
- Waste to Energy
- EE & Conservation
- Solar Energy
- Bio-fuels / Alternate Fuel



Financing Schemes

- Project Financing
- Equipment Financing
- Loans for Manufacturing
- Energy Centers
- Financial Intermediaries



Special Features

- Term loans up to
 - 70% of project cost
 - 80% of equipment cost
- Attractive interest rates
- Repayment period up to 12 years
- Payment moratorium up to 3 years

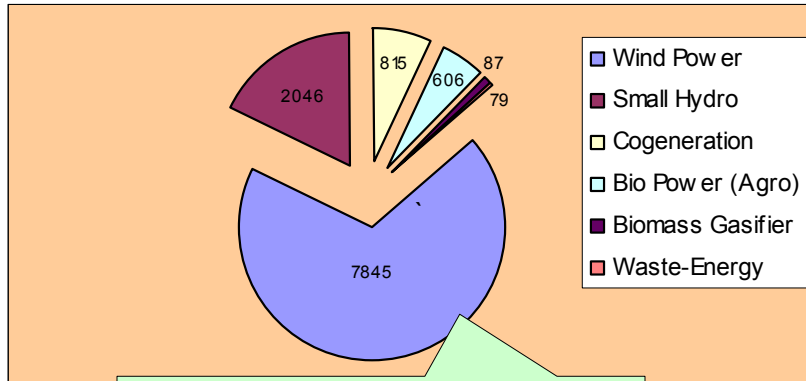


IREDA as FI

- Firm & Competitive lending norms
- Only specialized FI for RE
- Long experience in funding all types of RE Projects
- Exposures with Multi-lateral & Bi-lateral Agencies
- Experience sharing & expert advice
- Experience in processing & documentation for MNRE Subsidy



India's RE Portfolio (MW)

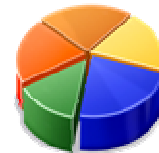


Over 14% of the total Indian RE potential has been harnessed (11480 MW out of the potential of 84776 MW)

Source: MNRE, cumulative achievements as on 31 December 2007



IREDA's share in RE Installed Capacity (MW)



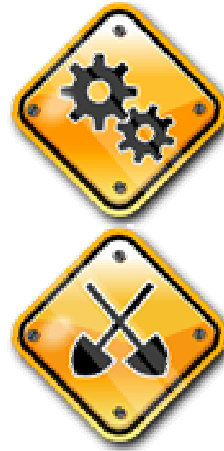
SECTOR	TOTAL	IREDA	Share
■			9.6%
■ IREDA has financed over 14% of the total RE installed capacity in India			12.9%
■			49%
■ Its share has decreased in sectors of Wind and Small Hydro as they have become more viable and commercial banks have started offering loans in these sectors			25.6%
■			30.5%
■			10.2%
■			22.9%
■ TOTAL*	11478	1630	14.2%

* Excluding Decentralized Energy Systems



Barriers in RE Projects

- Small size
- Remotely located
- Lack of infrastructure like evacuation facilities, roads
- High cost per MW
- Absence of assured customer/market
- Absence of National Renewable Energy Policy



Contribution of IREDA to RE

- Established itself as model institution to promote & finance entrepreneurial investments in RE sector
- Catalyzed market development by reducing business risk, thus encourage other lenders to support the sector
- Strengthened the institutional framework for encouraging entry of private sector investments in RE sector

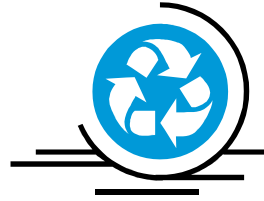


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Contribution of IREDA to RE

- Created awareness in the country and built up the necessary capacity
- Encouraged government to declare conducive policies for investments in RE sector
- Helped in creating direct and indirect employment generation, economic development and improving living conditions in rural areas



Due to uncertainties involved in RE sector, presence of a dedicated financing institution like **IREDA** has been very useful and has led to a multiplier effect



RE Targets for the 11th Plan

- | | |
|---------------------|-----------------|
| ▪ Wind Power: | 10500 MW |
| ▪ SHP: | 1400 MW |
| ▪ Cogeneration: | 1200 MW |
| ▪ Distributed Gen: | 950 MW |
| ▪ Bio Power (Agro): | 500 MW |
| ▪ Waste to Energy: | 400 MW |
| ▪ Solar: | 50 MW |
| ▪ TOTAL: | 15000 MW |



Source: 11th plan proposal for new and renewable energy, MNRE



Opportunities in Indian RE sector

- High projected economic growth requires corresponding growth in energy requirements
- Increasing world-wide concern over Climate Change
- Government mandate of 10% of new power generation capacity addition through Renewable Energy by 2012
- Electrification of 25000 remote/difficult villages from RE based sources by 2012



Contact Details



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“There is enough in this world for everyone's need, but not enough for everyone's greed.”

– Mahatma Gandhi