

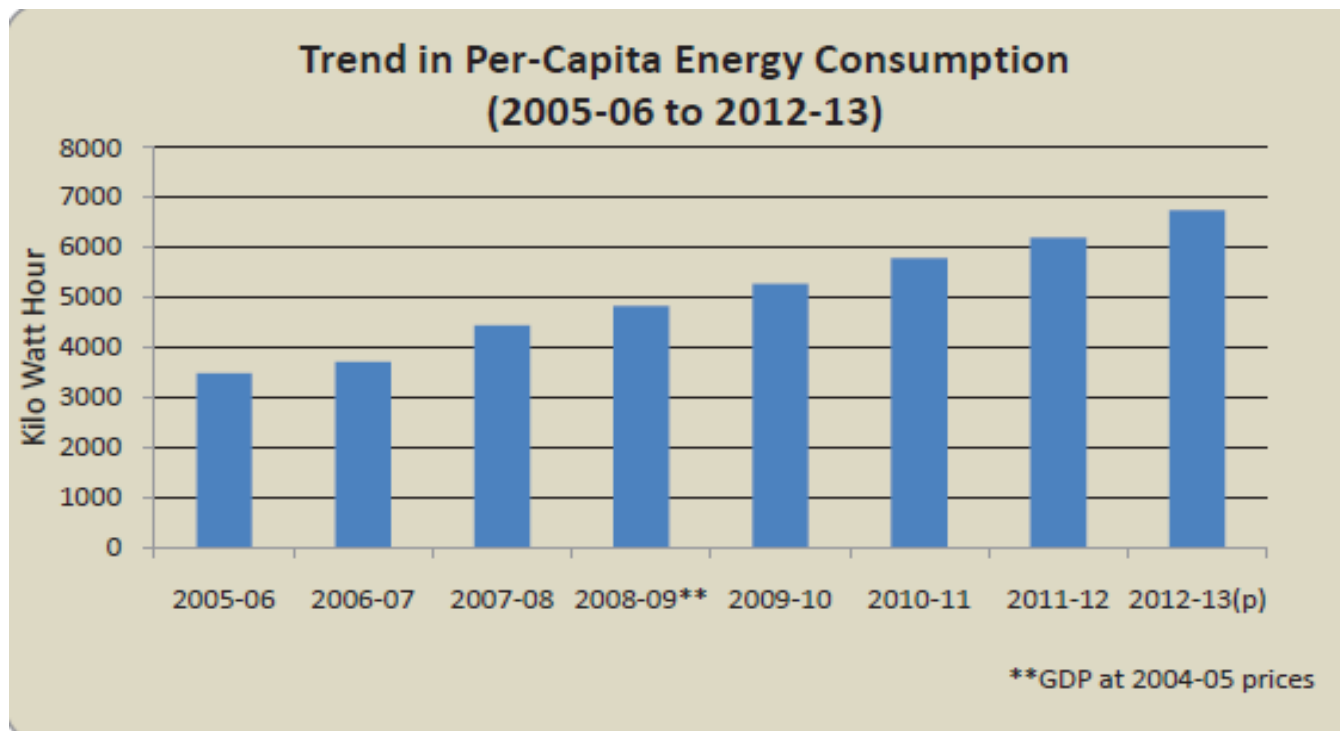
# Renewable Energy Financing in India

Key initiatives by Climate Parliament

# India – Renewable Energy Landscape

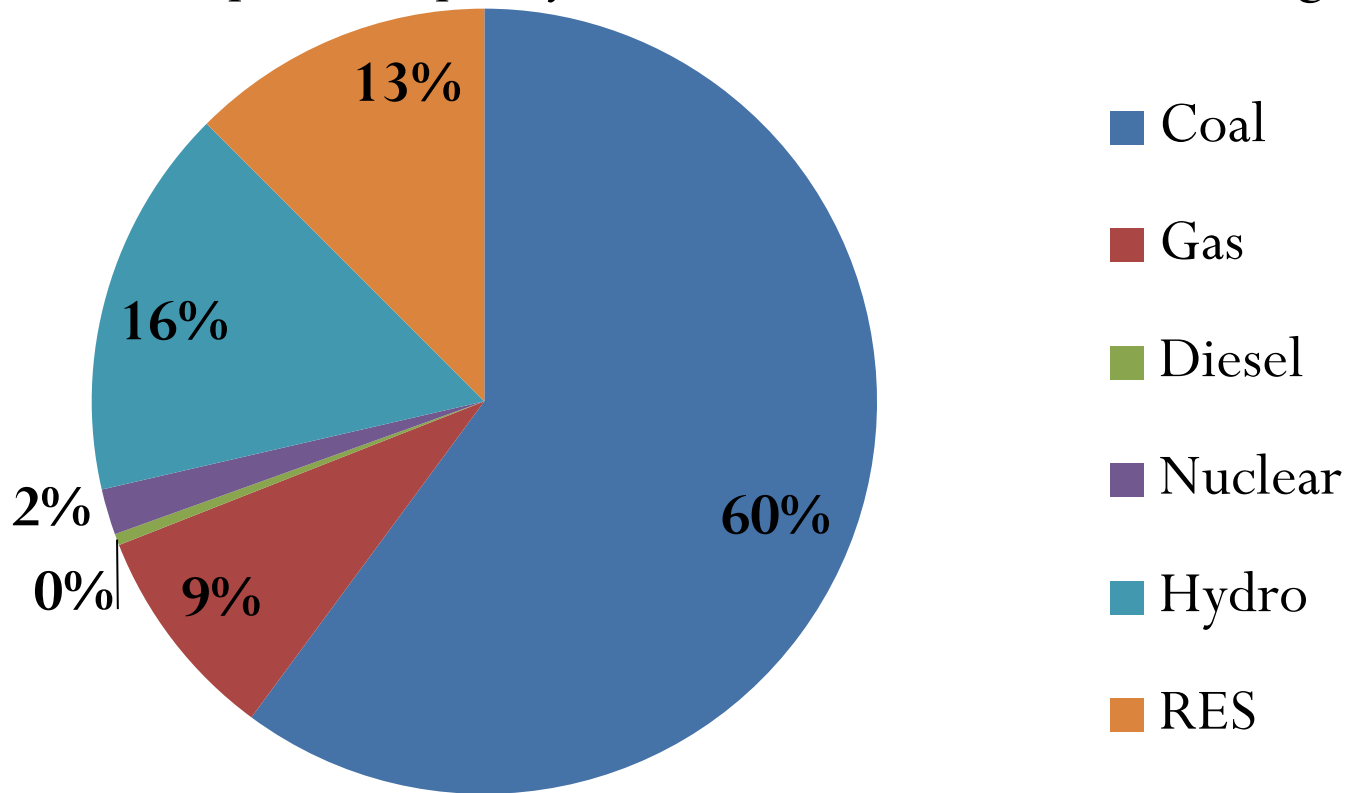
# Growing energy demand in India

- Per-capita Energy Consumption (PEC) increased from 3,497.59 KWh in 2005-06 to 6748.61 KWh in 2012-13, a CAGR of 8.56%.
- The annual average growth rate of the total energy requirement is expected to be 5.7 per cent per year in the Twelfth Plan.



# Power Sector in India

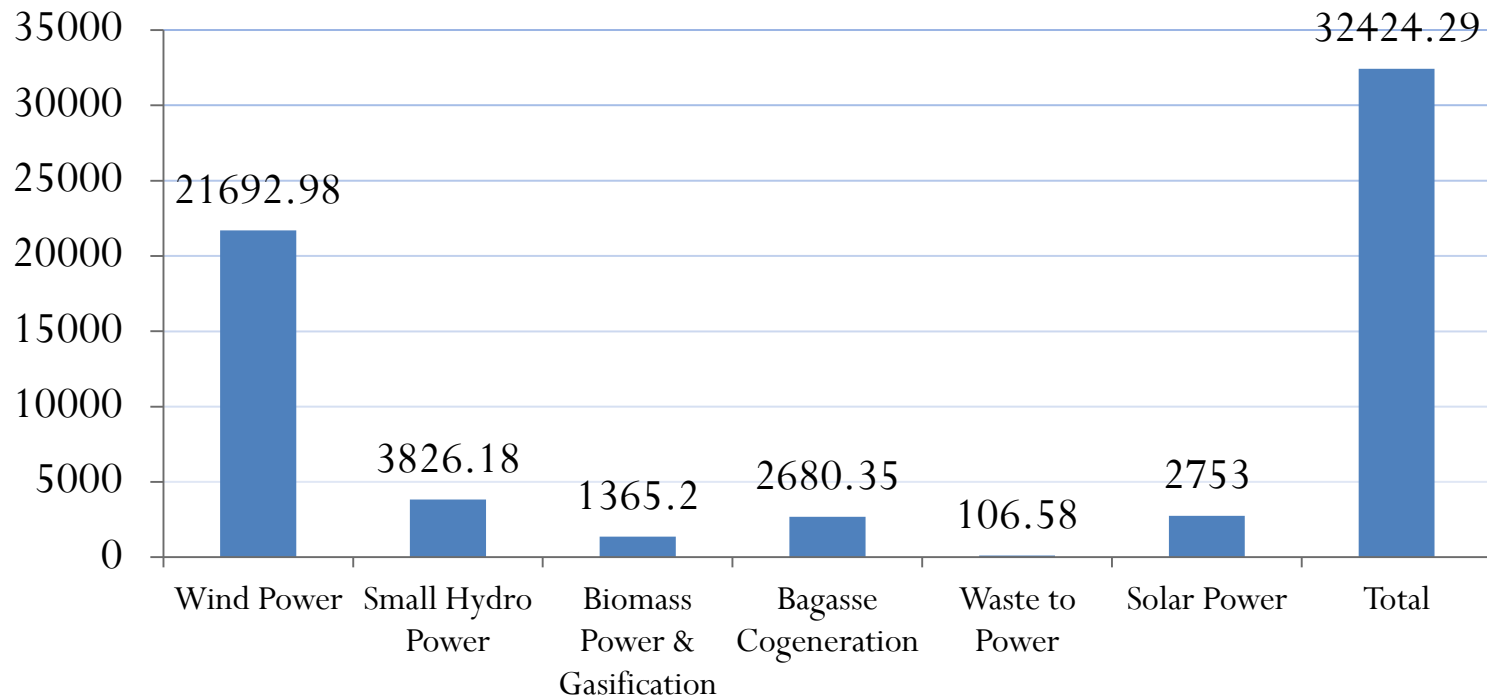
- Total installed power capacity in India is 253389.48 MW (August 2014)



Power capacity distribution in India (MW)

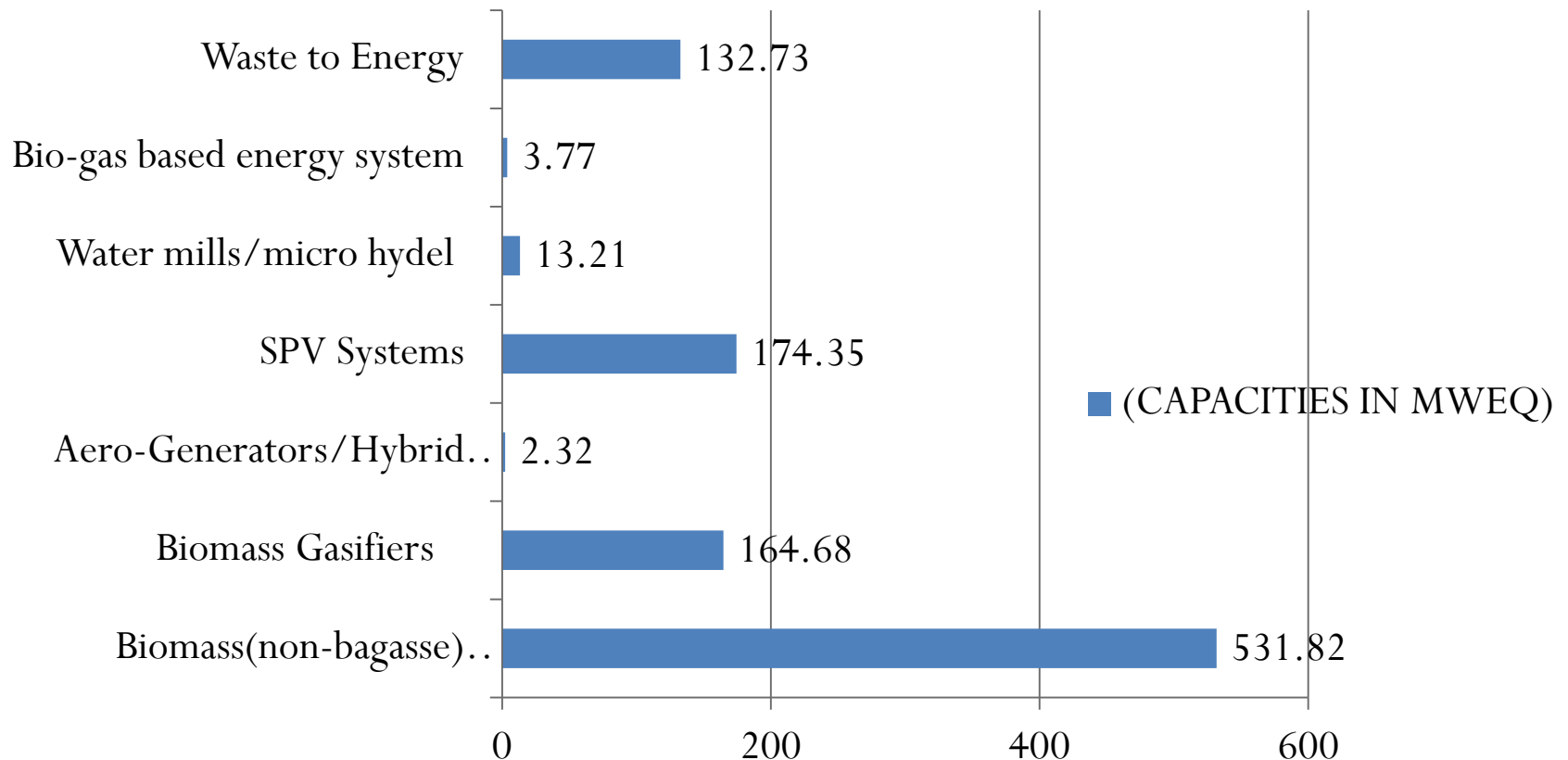
# RE installed capacity in India

## Grid Interactive renewable energy capacity\* (MW)



*\* Large hydro not included*

# OFF-GRID/ CAPTIVE POWER



Total installed capacity: 1022.88 MW

# RE Policy Regime in India

## Legislations & Policies

### National Level

The Electricity Act 2003

National Electricity Policy

National Tariff Policy

The Integrated Energy Policy

National Action Plan on Climate Change

JNNSM

Other Missions

RPO and RECs

## Organisations

- MoP
- MNRE
- CERC
- CEA
- NLDC

### State Level

Preferential Tariff

Other Incentives

RPO/REC

- SEDA
- SERCs
- SLDC

# Initiatives by the Government

- **Solar energy:**

- National Solar Mission targets increased 5 times to 100,000 MW-
- Government of India has plans to develop ultra mega solar power plants in the country. Costs of the first one will come down to Rs. 5.40
- MNRE plans setting up 25 solar parks, each with a capacity of 500 to 1000 MW.
- Ministry of Railways and Defence is promoting installation of solar projects out of their own budgets.



**Charanka Solar Park, Gujarat**

Source: <http://urvishdave.wordpress.com>



# Initiatives by the Government

- **Wind energy :**
  - Fifth largest wind power installed capacity in the world.
  - Recently reintroduced
  - National Wind Energy Mission to be launched soon.
  - First Ever Offshore Wind Power Project in India-100 MW Project to come up in Gujarat Coast.



## **Wind turbines in agricultural fields of India**

Source:[http://en.wikipedia.org/wiki/Electricity\\_sector\\_in\\_India#mediaviewer/File:India\\_fields\\_and\\_wind\\_turbines.jpg](http://en.wikipedia.org/wiki/Electricity_sector_in_India#mediaviewer/File:India_fields_and_wind_turbines.jpg)

# Policy Initiatives by the Government

- The Government is planning to introduce a National Energy Policy which would provide balanced emphasis on conventional and non conventional resources.
- Clean Energy Cess – National clean Energy Fund (NCEF) increased from Rs. 50 per tonne to Rs. 100 per tonne. Project scope increased to environmental projects.
- Bundling of conventional and solar energy: A nodal agency(NVVN) in India purchases power from solar as well as coal power producers and supplies bundled power to the distribution utilities. This brings down the costs of electricity significantly.

# Initiatives and achievements of Climate Parliament India for RE financing

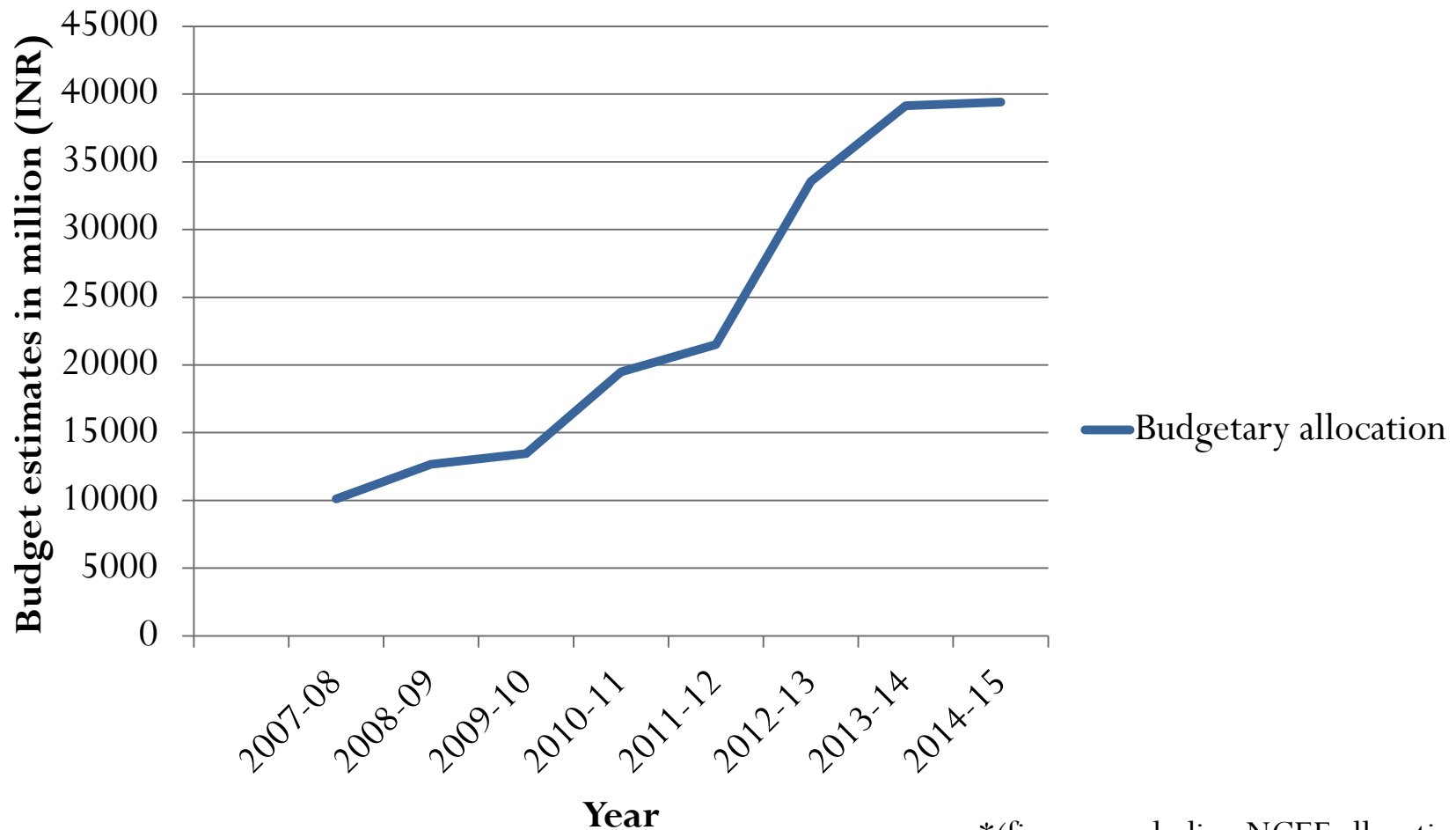
**Financing will be a major factor determining the implementation of initiatives and targets planned by the Government. Thus CP in India has focused several activities on this issue.**

# Renewable Energy Financing

- Climate Parliament has been actively pursuing the Government on the following issues related to RE financing:
  - Increase in budgetary allocation for MNRE
  - Effective utilization of National Clean Energy Fund
  - Re-introduction of Accelerated Depreciation(AD) and Generation Based Incentive(GBI) for wind energy
  - Priority sector lending for renewable energy
  - Investment by PSUs and major companies(through CSR) in renewable energy
  - Tax free bonds for renewable energy

# MNRE Budget 2008-14

## Budgetary allocation for MNRE (GBS + IEBR)



\*(figures excluding NCEF allocation)

# Increase in MNRE budget

## Baseline:

Low budgetary allocation for MNRE (less than 0.6% till 2012-13)

2010

CP members  
briefed  
Committee on  
Estimates

2011

Committee of  
Estimates gave  
the 1% budget  
recommendation

2012

-Energy  
Committee  
intervention  
-Delegation to  
PM

2013

Pre budget  
memorandum,  
media briefings,  
energy  
committee  
interventions

2014

Union budget  
2014-15, plan  
outlay for the  
MNRE was  
nearly 1% of the  
Central Plan  
Outlay

# Delegation to the Ex-Prime Minister



## **Climate Parliament members meeting the PM, December, 2012**

(Delegation to the Prime Minister focussed on budget allocation for MNRE and other renewable energy issues)



# Climate Parliament MPs interaction with media on renewable energy in Union Budget 2013-14



**Dr. Sanjay Jaiswal and Mr. Jayant Chaudhary meeting members from the media,  
Feb, 2013**



# Allocation of funds from National Clean Energy Fund (NCEF) to MNRE

## Baseline:

Large portion of NCEF remained  
unutilized till the year 2012

2012

Climate Parliament MPs  
write to Finance Minister  
on NCEF Utilization  
  
Mr. K.N Singh Deo raises  
the issue of NCEF  
utilization under Rule 377  
in Lok Sabha

2013

CP members write  
to Finance Minister  
for allocating NCEF  
funds for RE  
  
Parliamentary  
questions, VIP  
mentions , etc.

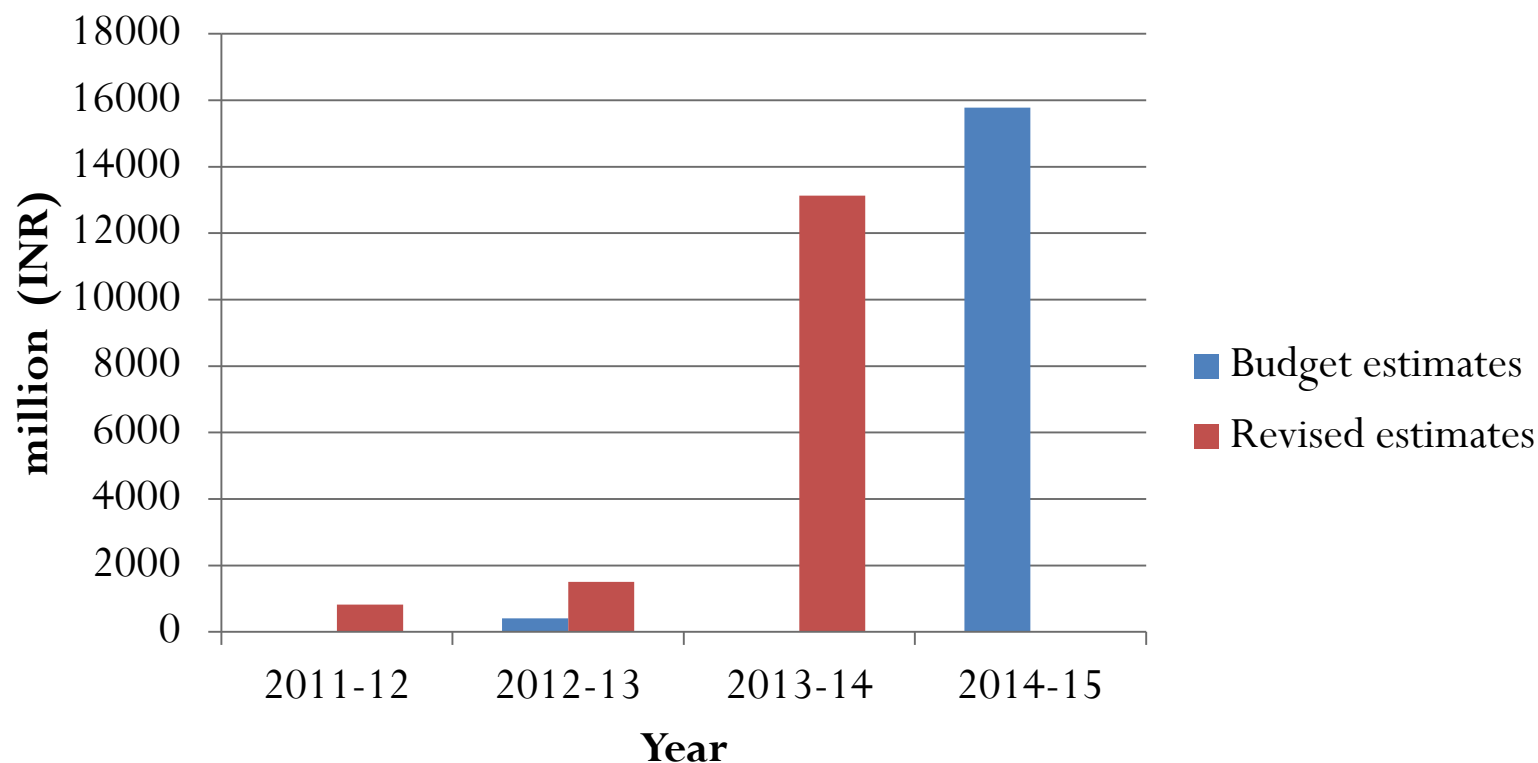
2013

NCEF allocation for  
RE projects  
increased  
  
Allocation of NCEF  
fund to IREDA in  
budget 2013-14

2014

Government  
amended the NCEF  
guidelines for  
providing resources  
to implement regular  
MNRE programs

# Allocation of funds from National Clean Energy Fund (NCEF) to MNRE



**NCEF utilisation patterns by MNRE from 2011-12 to 2014-15**

RE for 2014-15 is not available

# BusinessLine

Young Parliamentarians to ask PM to review clean energy fund policy

Our Bureau

MPhil / PhD (Save Years) - Management, Science & Arts courses call us now for more details  
www.inseduhub.com



Kalikesh Narayan Singh Deo  
New Delhi, Nov. 14:

The Climate Parliament India, a group of young Parliamentarians, will write to the Prime Minister, asking for a review of the policy on usage of the National Clean Energy Fund (NCEF). The NCEF has an estimated corpus of ₹1,000 crore, but only ₹100 crore has been utilised. The group wants a large part of it remains unutilised.

Since "at least 80 per cent of the corpus currently remains unutilised" the Group wants NCEF focused on providing risk guarantees for all renewable energy projects, irrespective of the policy on usage of the National Clean Energy Fund (NCEF). The NCEF has an estimated corpus of ₹1,000 crore, but only ₹100 crore has been utilised. The group wants a large part of it remains unutilised.

"We had written to the Finance Minister, but after getting an opaque reply from him, we supported by the Centre and States. The Prime Minister may also be asked to consider vi-

Climate Parliament. Deo plans to raise the matter in the winter session of Parliament, slated for December 2014.

## Climate MPs upset at non-utilisation of funds

RASHMISINGAL  
NEW DELHI, AUG. 12

Climate parliamentarians are upset at the non-utilisation of the National Clean Energy Fund (NCEF), which presently has ₹1,000 crore in its

fund had been utilised in 2010-11 to ₹100 crore. The group wants a large part of it remains unutilised.

Since "at least 80 per cent of the corpus currently remains unutilised" the Group wants NCEF focused on providing risk guarantees for all renewable energy projects, irrespective of the policy on usage of the National Clean Energy Fund (NCEF). The NCEF has an estimated corpus of ₹1,000 crore, but only ₹100 crore has been utilised. The group wants a large part of it remains unutilised.

"We had written to the Finance Minister, but after getting an opaque reply from him, we supported by the Centre and States. The Prime Minister may also be asked to consider vi-

Climate Parliament. Deo plans to raise the matter in the winter session of Parliament, slated for December 2014.

Climate parliamentarians are upset at the non-utilisation of the National Clean Energy Fund (NCEF), which presently has ₹1,000 crore in its

fund had been utilised in 2010-11 to ₹100 crore. The group wants a large part of it remains unutilised.

Steering committee chaired by BJP MP Rajeev Pratap Rudy highlighted that this fund was being used to meet budgetary

Parliamentarians including Milind Deora, Raj, K.N. Singh Deo and Vandana Chavan complained that some of the budgetary shortfalls being met included ₹100 crore that had been approved for the environment min-

Isirya's Green India mission while another ₹1,000 crore was approved for funding solar projects under the second phase of the Jawaharlar Nehru National Solar Mission.

Jayant Chaudhary MP, a member of the steering committee, maintains that the NCEF should be housed with the ministry of new and renewable energy (MNRE) rather than with the ministry of finance and had moved a private member's bill last Thursday to this effect.

"Ministries seldom talk to each other and continue to work in a pigeonhole fashion. And there is no firm commitment about the achievement of 15 per cent renewable energy in the total electricity mix under the National Action Plan for Climate Change," he said.

The MNRE had first set an ambitious target of 90,000 MW by 2020. This was whittled down to 30,000 MW to be met by 2017. The corresponding ₹19,119 crore but so far the ministry has received

₹1,150 crore in 2012-13 and ₹1,500 in 2013-14 which is budgetary allocation. Mr Chaudhary further called for the creation of a Non-Risk Guarantee Fund, which will take care of the payment risk to private utilities under the solar mission who often do not receive payments because several state utilities are running at a loss. Mr's further pointed out that presently renewable energy was contributing 6.4 per cent to the total grid electricity in 2012-13.

also whether there can be any innovative way to dis-

from the government," Mr Chhibber said.

port the if the am ing govt farmers definition the power posed by "We his suggestiv should i guarante crop. We nition of line to b more p included should b should is poorest," leader told re Parliame The ma said it w provided are accep the Ch Security Isolation

2, B

Prithvi-II tested successfully

Boy mauled to death by leopard

Tension in MP over tribals' stir

# Re-introduction of incentives for Wind Energy

## Baseline:

In April 2012, both GBI and AD benefit were removed which led to a major fall in wind installations from 2012 onwards

2012

Questions raised in Parliament on removal of AD and GBI

2013

- Dr. Jhanshi Lakshmi Botcha wrote to the MNRE minister
- Wind energy meet for experts and MPs in July
- Recommendations for the wind energy sector submitted to the Government

2013

GBI was re-introduced in the union budget 2013-14

2014

AD was re-introduced in union budget 2014-15

# Parliamentarians Meet on “Wind Power Sector in India: Enabling Future Growth”, July 2013.



**Climate Parliament MPs attending the meet on Wind Power in Bengaluru, July 2013**



# Priority sector lending

- **Baseline:** Renewable energy was not included in priority sector lending category of RBI.
- **Initiatives:**
  - Climate Parliament in India had suggested priority sector lending for renewables in the following:
    - ‘Key Issues for Promotion of Renewable Energy in India’ (January 2011)
    - ‘Key Suggestions to Achieve the Targets of Renewables, under the National Action Plan on Climate Change and the Draft Approach to the Twelfth Five Year Plan’ (December 2011).
  - During the budget session of the Indian Parliament in March 2012, Climate Parliament Group of Indian MPs submitted detailed letters, demanding the recognition of priority sector lending for renewables to:

- Mr. Farooq Abdullah, then Minister for New and Renewable Energy
- Mr. Montek Singh Ahluwalia, then Deputy Chairman, Planning Commission

- **Results:**

- In July 2012, Reserve Bank of India (RBI) released revised guidelines through which off-grid solar and other off-grid renewable energy solutions for households were included in the category of priority sector lending.

# Renewable energy in PSEs and CSR

- **Baseline:** In August 2013 the new Companies Act was launched along with CSR rules. There was no specific mention of renewable energy in Schedule VII.
- **Initiatives:**
  - Mr K.P Ramalingam submitted a letter on promoting clean energy sources under Corporate Social Responsibility (CSR) to Shri Sachin Pilot, then Minister of State for Corporate Affairs, during January 2014.
  - Mr Mansukh Mandaviya submitted a letter to Mr Praful Patel, then Minister Heavy Industry and Public Enterprises, regarding promotion of clean energy through Central Public Sector Enterprises' in general and particularly through their Corporate Social Responsibility obligations .
  - Several questions have been raised on this issue in the Indian Parliament, by the members of the network.



- **Results:**

- In June 2014, the Ministry of Corporate affairs released a statement in public that renewable energy projects will also be considered as CSR initiatives under the broad category of ‘Environmental sustainability, ecological balance and conservation of natural resources’.
- This is a significant development as it can generate 15 - 20000 Crore INR (3 billion USD) per year and a portion of this now can be routed to the renewable energy projects in India.
- Central public sector undertakings (CPSUs) have started working on setting up ultra mega solar power plants in India.
- In August 2014, MNRE secretary through a letter asked all the union ministries and public sector units to adopt solar energy and install rooftop solar units.

# Tax free bonds for renewable energy

- **Baseline:** Limited resources were raised by IREDA through tax free bonds prior to 2012-13.
- **Initiatives:**
  - Members of the network have actively raised questions on the functioning of IREDA and issuance of tax free bonds in the country since 2010.
  - In a memorandum submitted to P. Chidambaram (then Finance Minister of India) in January 2013, the members stressed on use of tax free bonds to raise low cost financing for renewable energy projects.
  - Expert report commissioned by Climate Parliament India also provided suggestions on this issue.
- **Results:**
  - IREDA has started issuing tax free bonds in last few years.
  - In the year 2013-14 Government of India permitted IREDA to raise INR 1000 crore (USD 162.39 million) through tax free bonds. There was a timely release of these bonds as compared to previous years.

# Policy support crucial to further growth

In the wake of the problems India's wind power sector has been facing of late, advocates of renewable energy have come up with recommendations that they believe would revitalise the sector



With installation of around 20,000 MW of renewable energy (RE) capacity, India is on track to replace its coal-based energy generation by 2030. However, the sector is still facing several challenges. The government needs to provide more incentives and subsidies to attract private investment. Additionally, the regulatory framework needs to be streamlined to reduce the time and cost of setting up projects. The industry also needs to focus on improving the efficiency of the power transmission system to reduce losses.

# Parliamentarians push for revamping power sector

Bangalore: A group of parliamentarians from different parts of the country met in Bangalore on Saturday to discuss ways to enable future growth of wind power sector in India. Participants agreed on the need to revamp the wind energy sector in the country to tap the full potential. The discussion was organized by CII.

parts of the country "I am surprised to know 95% of wind power potential exists in five states, namely Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra and Gujarat. We need wind mills with higher efficiency and those that occupy less physical space," said Botcha.

Dhruvanarayana Rangaswamy representing Chamarajanagar Lok Sabha constituency from Karnataka said, "I wanted to know the possibilities of tapping wind power in this district. In Karnataka, wind power is being tapped in Chitradurga and Chikballapur. However, Koppal and Blyapur have great potential," he suggested.

Mukul Sharma (South Asia), CII, providing inputs to private south India with his experience in the sector.

## ON THE SAME PAGE

Climate Parliament, a forum to help world's members of parliament combat climate change. Presentations pointed out the fact that wind energy in India was not being tapped to its full potential, unlike in countries like the US and China who have multiplied their strength in this front.

Parliamentarians Jhansi Lakshmi Botcha and Govindan Reddy from AP said there was a need to revamp the old wind mills with traditional techniques.

# Why nuclear when wind energy is better?

Members of Parliament interact with renewable energy experts at the Climate Parliament meet in the city

Bangalore: What happens when a bunch of intelligent and well-informed Members of Parliament get together to discuss the future of renewable energy in India? A lot of solutions are discussed and plans of action to tap green energy get drafted.

This was one of the hard questions that came up during the meet.

It was Y. Suresh Kumar, former secretary general, now leading Indian Wind Energy Association, who first brought up the fact about nuclear energy production vis-a-vis wind energy in India to the legislators.

"Nuclear energy is important, but it is very expensive and takes a long time to set up. Wind energy, on the other hand, is much cheaper and can be set up much faster. It also has no carbon footprint. We need to focus more on wind energy and other renewable sources." - Y. Suresh Kumar

Dr. Hema Subrahmanya, senior research analyst, CII, said quoting from their own study, "Even modest calculations suggest that 45,000 MW of wind energy can be harnessed in India. And we can tap it at a cost of 1.8 paise per kWh, just by installing 1.8 GW of wind capacity. This is much cheaper than the cost of generating power from coal-based plants. The government needs to provide more incentives and subsidies to attract private investment in the wind energy sector. Additionally, the regulatory framework needs to be streamlined to reduce the time and cost of setting up projects. The industry also needs to focus on improving the efficiency of the power transmission system to reduce losses."



# Business Standard

## MPs seek exclusive panel on wind energy

A group of MPs working on climate issues have asked the ministries of New and Renewable Energy and Finance to constitute an exclusive committee to fast track their recommendations on wind energy.

Press Trust of India | New Delhi September 10, 2013 Last Updated at 19:31 IST

# IREDA tax-free bonds are just the first step forward, says Jayant Chaudhary



The Government of India has recently allowed 13 public sector institutions to raise nearly Rs 48,000 crore in 2013-14 through tax-free bonds, to meet their infrastructure investment needs. Indian Renewable Energy Development Agency (IREDA) has also been permitted to raise bonds. Climate Parliament positively reviewed the move for raising funds.

## Business Line

Coordinated effort vital to meet renewable energy target: Climate Parliament

Richa Mishra  
New Delhi, Jan 28:

The Climate Parliament in its report on 'Review of India's progress in achieving NAPCC target of 15 per cent renewable energy by 2020' said there is an urgent need for co-ordination amongst the key Government implementation of the renewable energy targets.

The report says that "It is essential that all ministries and organisations related to power sector own the National Action Plan for Climate Change (NAPCC)."

Climate Parliament is a network of cross-party parliamentarians to promote renewable energy.

The report shows that the final draft of 12th Five Year Plan which was tabled to the National Development December 27, 2012, provides two different estimates of renewable energy shares in the country's electricity mix by 2017.

While in one section the Plan refers that the share of renewable energy in India's electricity mix is 11 per cent by end-2017 and 16 per cent by end-2030. In another section it states that the ambitious 16 MW by 2017 has been set in accordance with the NAPCC goal of achieving 12 per cent renewable energy by 2017.

The 12th Five Year Plan (2012-17) is crucial for assessing renewable energy achievements, setting suggesting measures for achieving the NAPCC targets.

According to the 12th Plan, the NAPCC norms envisage that the share of renewable energy in the which was to reach seven per cent in 2011-12 should reach 12 per cent by 2016-17. For this the cc renewable requirement would be 52,000 megawatt considering the conservative average capacity of 30 per cent.

The present installed capacity of renewable power is around 25,000 megawatt and consequent capacity addition required for the 12th plan would be about 30,000 megawatt.

According to the recent report released by the Central Electricity Authority till August 2012 renewable energy close to 10 per cent of the total installed capacity while it formed six per cent of the country's total power generation.

# OneWorld South Asia

- Agriculture
- Education
- Health
- Responsible Business



## Renewable Energy and Climate Change

Sep 18, 2013

This episode of Ek Duniya Ek Awaaz is based on the issues related to renewable energy and climate change. The programme features an interview with Dr Sanjay Jaiswal, Member of Parliament, Rajya Sabha, who has been working on the issues related to energy and climate change. He also shared about generating electricity which is operational in his own constituency.

