

# RECs Market in India

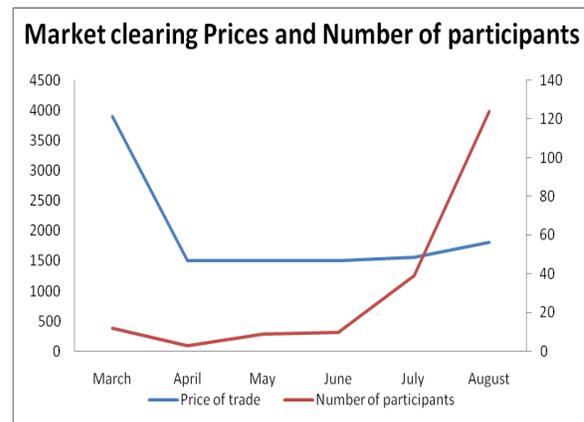
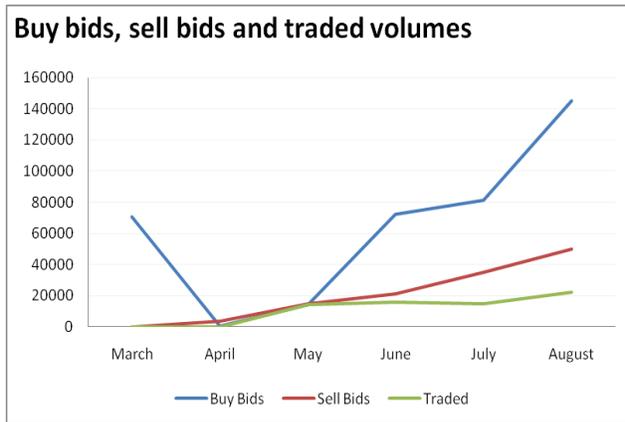
## Good start, set to get deeper and wider

RECs trades have started off since March 2011 and have become a regular monthly event to watch out for the participants in the Renewable Energy market. Partly because RECs trade is an important indicator of the seriousness with which the Renewable Purchase Obligation gets enforced in India and also since a number of investors are looking to REC market for gaining confidence.

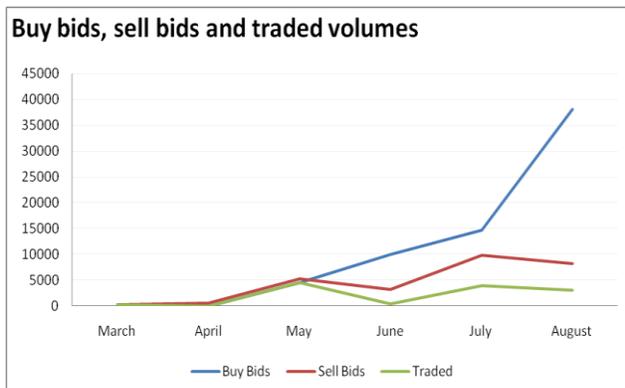
### REC Market so far

The movement of key indicators in the REC trading sessions so far is shown below

#### IEX



#### PXIL



### Making sense of the numbers

1. There is a sustained growth in the number of market participants, market clearing price and buy bids. This is one of the most important of market strength to be watched out for.
  - a. On the IEX, the sell bids have tripled over the last 3 trading sessions, the buy bids have grown ten times.
  - b. On the PXIL, while the sell bids have increased by 60% over the last 3 trading sessions, the buy bids have increased more than eight times.

All these could potentially point to a possible shortage of RECs as the financial year approaches and a premium prices for the RECs.

2. With the floor price left un-affected by the CERC amendment, the investors have gained much higher confidence on the returns they can expect. The move by CERC to not change the floor price was a welcome move for the renewable energy investments market.
3. The renewable energy output required to meet the NAPCC (National Action Plan on Climate Change) target is as under

Year	RE Target	National Energy requirement in billion units	RE generation required in Million Units
2011	6%	906.31	54378.96
2012	7%	968.65	67806.13
2013	8%	1017.09	81367.35
2014	9%	1067.94	96115.18
2015	10%	1121.34	112134.38

It can be seen that the RE generation is required to grow by 67% between the years 2012-13 and 2014-15, just to meet the NAPCC target at the projected rate of growth of energy consumption in the country. In the above projections the national energy requirement has been projected to grow at a conservative 5% between 2012-13 and 2014-15 as compared to the actual growth in the demand and supply of electric energy in India. The rate of growth as per Ministry of Power is more than 6.2%. This implies that even at a 67% growth in requirement of renewable energy to meet the NAPCC target, these targets are under-stated given the projection methodology and the actual observed demand and supply.

4. RPO performance is mixed across states. RE rich states such as TN and Karnataka fare well on procuring RE, while states such as Kerala, MP, Orissa, Rajasthan have a much longer way to go in meeting their RPO target targets. The table in the next page, sourced from IDFC indicates the status of achievement across some of the key states.

State	RPO Target in 2009-10	RPO Performance in 2009-10
Andhra Pradesh	5%	4.06%
Chattisgarh	10%	3.62%
Gujarat	2%	2.55%
Karnataka	7-10%	11.04%
Madhya Pradesh	10%	0.06%
Maharashtra	6%	4.25%
Orissa	4%	1.59%
Punjab	2%	1.49%
Uttar Pradesh	7.5%	2.97%
West Bengal	4-6.8%	0.34%

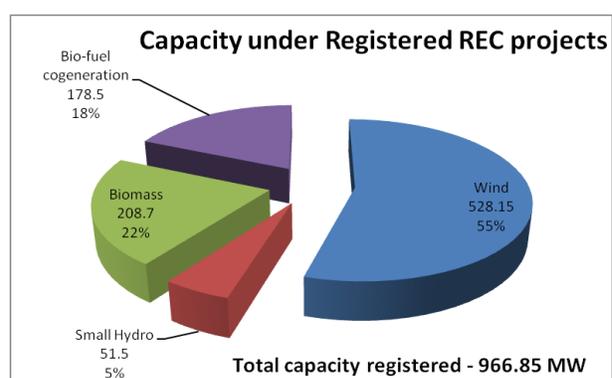
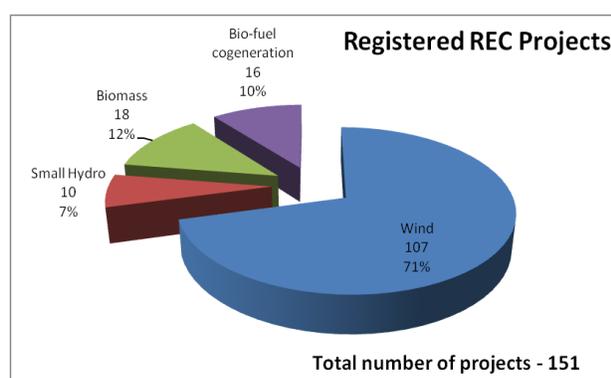
Source: IDFC - GoI (2009b), Singh (2009), FoR (2008), Bloomberg New Energy Finance (2010), and relevant regulations of SERCs.

### Few important pointers

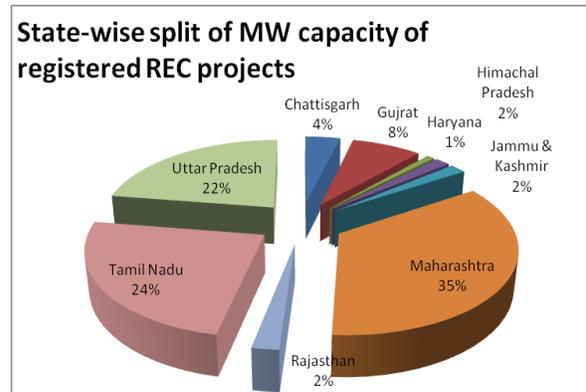
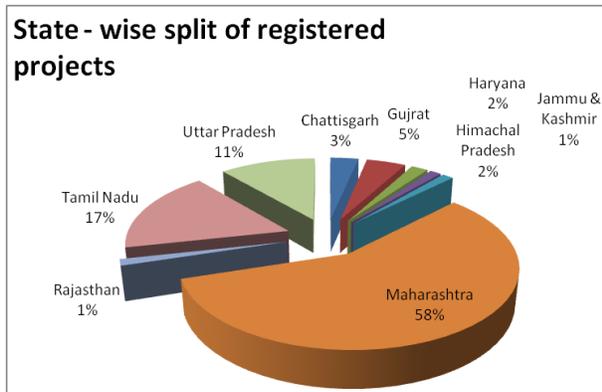
- While some states such as Tamil Nadu have reduced their RPO targets, heavy consumer state of Gujarat has aggressively increased its RPO target from 2% in its earlier regulations to 5%, 6% and 7% for the years 2010-11, 2011-12 and 2012-13.
- All the key states – Maharashtra, Tamil Nadu and Karnataka are facing severe power shortage and will see significant upgradation in electricity infrastructure and therefore consumption.
- Some states such as UP have lower installed energy base and are significantly RE deficit as against their targets.
- These RPO targets are also applicable to open access and captive consumers. This is expected to create a significant demand as the enforcement starts to happen.

## Projects Analysis

As of September 5, 2011, there are 151 registered projects, amounting to 966.85 MW of installed capacity. The composition of registered projects by technology is as under



The composition of the registered projects by states in which these projects are located is as under



Important aspect to note is the widespread acceptance of the REC mechanism across a number of states – including Jammu & Kashmir. With a key state such as Karnataka having put in place the REC procedures recently, we expect a significant growth in number of REC projects.

There are 206 projects in the accreditation process – which will progress to the registration stage soon. With the commissioning of a number of wind energy projects in Tamil Nadu and Gujarat, wind is expected to contribute significantly to the number of REC projects, though the MW contribution is likely to diminish as a number of larger biomass and other projects get commissioned and adopt REC framework.

Solar projects are not likely to emerge on the REC market for some more time given the nascent stage, cost of funding and the fact that much of the revenue of solar projects will depend on RECs, if adopted.

## About Agneya

Agneya is a focused consulting organization working in the fields of carbon, energy, water, waste and sustainability. Agneya was founded by alumni of IIM Ahmedabad and IIM Bangalore. Agneya has worked on projects across renewable energy, carbon management, energy management, energy regulations and sustainability management for investors across real estate, infrastructure, manufacturing and mining sectors. Agneya team members have relevant experience in areas of climate change, renewable energy, resource management and business sustainability. Agneya also has experience in executing REC projects and is equipped with essential knowledge of the REC market.

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