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Dear Reader,

NITI Ayog released the draft National Energy Policy (NEP). This document provides a comprehensive roadmap for energy policy and reforms over a long period of time (recommendations are based on India's energy ambitions by the year 2040).

Some of the important policy suggestions made by the NITI Aayog are: renewable energy is close to achieving grid parity and therefore will not require "must run" status. Also, the report suggested an increase in the installed capacity of large hydro projects. One of the most significant suggestion is that Cross Subsidy shall be paid through Direct Benefit Transfer (DBT). This newsletter has a detailed analysis of the NEP.

REC trading remained suspended in the month of June as well. This was the second month that trading has not happened.

However, in an order dated 17 July 2017, the Supreme Court conditional trading of non-solar RECs stating that the differential price between the earlier and the present floor price shall be deposited with the regulator.

The regulatory section of this newsletter covers solar policies of UP and Goa, Open Access regulations of Delhi, and other developments.

We hope that you find this newsletter an informative read and, as always, we look forward to feedback and comments.

- Team REConnect





Analysis of Draft National Energy Policy

Niti Aayog has released the draft National Electricity Policy

The NITI Aayog recently published the Draft National Energy Policy (NEP). The document aims to lay down a comprehensive roadmap for energy policy and reforms over a long period of time (recommendations are based on India’s energy ambitions by the year 2040).

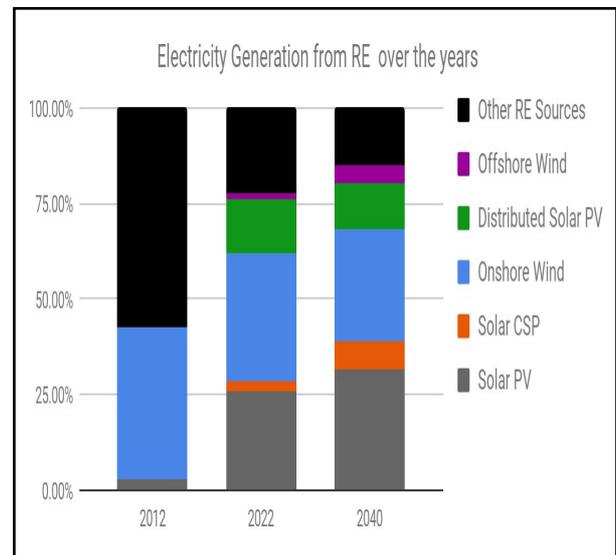
The draft policy document is long and extensive, and covers a wide spectrum including coal, oil and gas, electricity and even air quality. This analysis, however, focuses on the electricity sector, and on the major recommendations made for the sector.

The key points in the NEP with respect to important topics are:

Renewable Energy:

- The policy takes into account the rapid changes in the RE sector - the ambitious capacity growth planned (175 GW by 2022) and the steep decline in prices resulting in achieving grid parity.
- The NEP recognises that RE power is close to achieving grid parity. The policy document envisages ‘autonomous growth’ in RE capacity after 2022, reaching up to 597 - 710 GW by 2040. The recommendations made by the NITI Aayog with regards to RE power are:
 - Exposing RE technologies to “market discipline”
 - Address lagging RE sources such as hydro and biomass
 - **Gradual withdrawal of “Must Run” status and other supports such as exemption from inter-state transmission charges**

- Significant investment in large scale RE integration in the grid is also recommended
- Following is the graph representing the expected change in the mix of energy obtained from renewable sources:



As per the graph, Solar PV is expected to increase the most in terms of generation till 2040. New categories of renewable energy generation such as offshore wind and distributed solar PV (non-existent in 2012) will see growth.

Generation from other RE sources (biomass, hydro) will decrease as a proportion to overall to a large extent by 2040. Therefore, as per the report, generation from solar and wind capacities will take precedence in the coming years.

Large Hydro:

The NEP suggests significant development of large hydro project to provide balancing power, and other related benefits like water



for irrigation and flood control. The most important recommendation is to provide accelerated depreciation benefits to such projects to accelerate their development.

Regulatory and other reforms:

The NEP is very critical of the existing regulatory regime. The document says:

“Had we stayed course originally chartered by the Electricity Act 2003, significantly greater transformation of Indian electricity sector would have been accomplished. Fuel supply issues, bureaucratic attitude in state electricity companies and sub-optimal decision making of Regulators have robbed the sector of its potential gains.”

The NEP proposes far reaching reforms in Discoms. It highlights

“the paradoxical situation such that we have voluminous unsatisfied demand for electricity and yet our generation capacity is grossly underutilized. The phenomenon has arisen because of poor financial health of discoms.”

Policy recommendations made in the NEP with respect to Discoms are:

- Separating the distribution of electricity from ownership of the distribution grid. This is generally known as separation of Carriage and Content, and is one of the key provisions in the draft Electricity Bill currently in the Parliament. The NITI Aayog argues that this will subject the Discoms to commercial pressure, rather than political pressure. An important point to note here is that the NITI Aayog assumes: *“Discoms would continue to own the grid while actual distribution or sale of electricity would pass on to private agents”*.
- In making this recommendations, the telecom sector has been used as a template. The NEP says - *“As in telecom sector, customers will have the freedom to choose their electricity distributor from*

among various private agents and go for the one who offers the best deal. Electricity distributors will thus compete for customers.”

- Some of the most far-reaching recommendations are made with regards to cross-subsidy. The NEP suggests that cross subsidy should be collected as a form of tax and paid as subsidy by the government (rather than subsidization by the Discom). The proposed payment will come from the Direct Benefit Transfer (DBT, or Aadhar linked) mechanism.

The NEP says the following:

“The same cross subsidy can be provided under the proposed system by taxing the purchases of electricity by industrial customers and using the tax proceeds to subsidize vulnerable customers.”

And,

“The government concerned would pay electricity subsidies to chosen segments of the society (for example, farmers) through DBT, which is an efficient subsidy delivery mechanism. Our eventual goal should be to bring down the cross subsidy from industry, placing the burden directly on the budget.”

Further, in the long run the NEP hopes to achieve reduction in the subsidy element itself through reduction in AT&C losses and lower cost of power, and *“contribution from large domestic consumers”*.

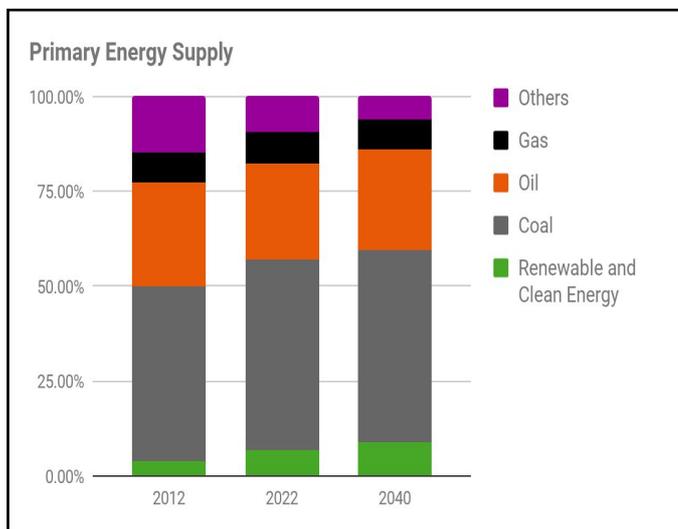
The NEP is also critical of the existing regulatory mechanisms. It says *“The experience so far with many State Electricity Regulators has not been good as exhibited by poor decision making. The long intervals in raising electricity tariffs, poor enforcement of RPOs and weak regulatory oversight has often been blamed on political meddling.”*

The NEP recommends several changes like setting up of new, specialised regulators for coal and oil & gas, and strengthening the Government-Regulator interface.

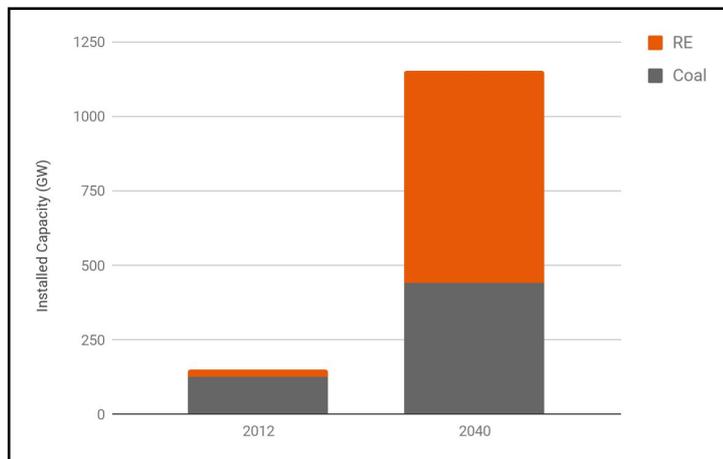
Conclusion

The NEP lays down an ambitious agenda of radical reforms. Suggested changes like removing cross subsidy and moving to the direct benefit subsidy mechanism, separation of carriage and content, RE power to be no different from conventional power are likely to take significant effort and a bold political will.

Following graph represent how the primary energy supply will change as per the predictions in the report:



As per the graph, there will still be dependence on energy supply based on coal as a source. Not to say that the energy derived from renewable sources will not increase in the coming years. Gas as a source will primarily remain constant till 2040. The only decrease which can be seen is going to be in the energy derived from other sources. The difference in the installed capacity of coal and renewable energy will look something like the graph below.



The installed capacity of coal is going to increase in 2040 as compared to that in 2012 but in comparison to installed capacity of renewable energy, it will not have a significant increase. As compared to coal, installed capacity of renewables will increase 10 times by the year 2040.

In NITI Aayog's vision, by 2040, the electricity sector in India will look very different:

- Every Indian must have access to all forms of energy as per choice, in desired volumes.
- The energy mix of India will have a high share of renewable
- The country will have transitioned to direct benefit transfer (DBT) to support the economically weaker section
- The Indian energy market will have fully evolved with supply rising to meet demand on the basis of competitive markets
- The Government will have gradually moved into the role of a facilitator rather than an active player in the energy markets



DERC DETERMINES TERMS AND CONDITIONS FOR DETERMINATION OF OPEN ACCESS POLICY:

DERC has released an order determining the terms and conditions for open access charges for FY 2017-18. Following are the salient features of the order:

- Eligibility: Short Term Open Access (STOA) is applicable to consumers having a contract demand of 1 MW and above connected at 11 kV or above.
- Metering Arrangements: The distribution licensee shall provide check meters of the same specifications as the check meters. The distribution licensee shall provide ABT compliant special energy meters at the point of drawal. The formats for availing open access approvals have also been notified
- The 60 day timeline has also been defined for the procurement, testing and installation of ABT meters.

Activity	Timeframe
Procurement of metering equipment by the authorised agency	Within 30 days
Testing by authorised agency	Within 10 days
Installation at site by applicant/ distribution licensee	Within 10 days
Testing by distribution licensee/ STU and issue of point wise compliance report	Within 10 days

The previous open access policy was announced in 2005. As of now, there are close to 60 clients in Delhi in Open Access which are trading power. As per the last policy, the quantum of energy traded had to be constant

which is not the case anymore.

Earlier, an undertaking used to be taken in case of a mixed feeder which is still the case. Also, the SNAs asked for Bank Guarentee which included open accessed charges which is also still the case.

The order can be accessed [here](#).

TSERC DETERMINES TRANSMISSION TARIFF FOR FY 2017-18:

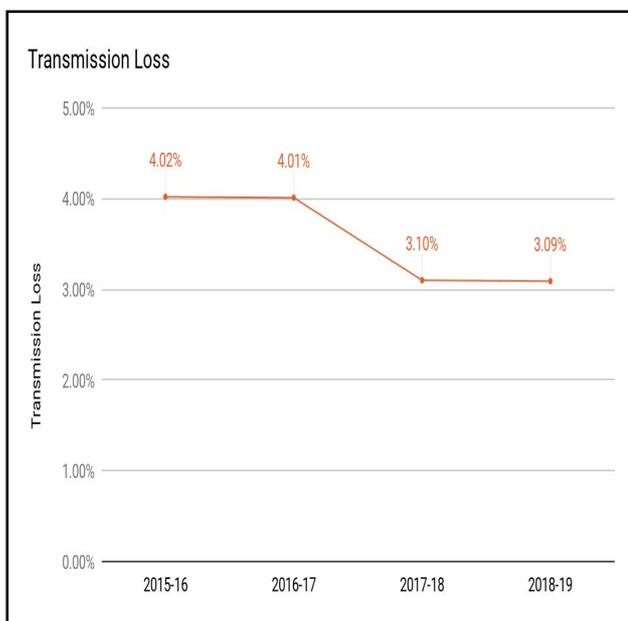
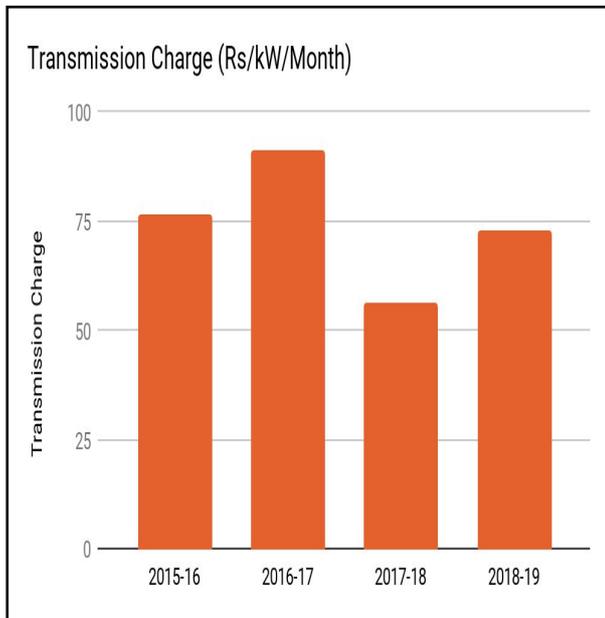
The Telangana State Electricity Regulatory Commission (TSERC) has determined the transmission tariff for the FY 2017-18 and FY 2018-19 in its order dated 1/05/2017. The order states the transmission charge and loss as follow:

	Transmission Loss
2017-18	3.10%
2018-19	3.09%

	Transmission Charge (Rs/kW/Month)
2017-18	56.3
2018-19	73.12



As per previous years, the transmission charge has followed a trajectory as depicted in the following graph:



UTTAR PRADESH RELEASES SOLAR POLICY, 2017

Uttar Pradesh has recently released its solar policy effective from the date of notification. It will remain effective until 5 years from the date of issuance.

The policy promotes solar rooftop and grid connected solar projects. It also aims to achieve 8% solar RPO by 2022 which is in keeping with the target of 4300 MW by then.

- The state government is promoting the development of solar parks by providing land for its development. It also provides connectivity of solar parks to the nearest substation.
- To promote third party sale, exemption on wheeling/ transmission charges for third party sale.
- They will also be exempted from cross subsidy surcharge, transmission and wheeling charges.
- Banking: Banking of 100% energy in every financial year shall be permitted.
- Electricity duty for 10 years shall be exempted for sale to distribution licensee and solar PV projects will not have to take environmental clearance.
- Building permission from local bodies will not be required for residential, industrial or commercial units.
- Single window clearance will be taken for all solar power projects by UPNEDA.

Though this policy promotes third party sales, and the state determined open access charges in 2002 which are revised every year, the state does not permit open access. Therefore, though there is exemption on wheeling/ transmission charges on third-party sales, it is going to be of no benefit till the time the UP government approves of open access.

The order can be accessed [here](#).

GOA RELEASES DRAFT SOLAR POLICY, 2017:

Goa has recently released its solar policy effective for a period of 7 years from the date of notification.

The policy promotes use of solar energy for generation of power in industries and for industrial use. It also aims to install 150 MW of solar power by 2022.

The major features of the policy are:

- Exemption from cross subsidy surcharge, transmission and wheeling charges and electricity duty for captive and third party.
- Banking: As per the JERC's power

- banking regulations.
- Single window clearance will be taken through the state government for all solar power projects by GEDA.

The order can be accessed [here](#).

IMPACT OF GST ON RENEWABLE ENERGY SECTOR

Piyush Goyal had an interactive session with Trade and Industry Associations and Central Public Sector Undertakings about the smooth roll-out of GST.

He also said that GST would increase India's business many fold and that more than 2 Cr from present 80 lakh assesseees. IEEMA, one of the trade and industry associations raised a number of doubts in the session relation to GST. The following impacts were seen on different items due to GST:

- **Electrical items:** High rate of GST has been implemented on electrical items such as wires, cables, switchboard, panels, etc. But since the rate would be same across the board, the industry would not be impacted.
- **Project Import:** The GST rates on project imports in at 18% which makes domestic products at 28% to be costlier which does not do justice to the domestic suppliers.
- **Solar power system:** There is lack of clarity in what is covered in solar power systems since solar power systems will attract GST of 5% whereas solar power generating systems attracts a GST of 18%
- **Transmission Towers:** Transmission towers are supplied as a works contract and 18% GST is applicable on it. A supplier does not supply the transmission tower as a stand alone product.
- **Power (electricity):** Since some of the states did not agree, electricity was not included in GST.
- **Existing exemptions:** Exemptions will not be given on MNRE projects, power projects and area based exemptions. Refund of area based exemptions would be given, the details of the same will given by the ministry in some time.

The article can be accessed [here](#)

MOP WAIVES TRANSMISSION CHARGES AND LOSSES ON ELECTRICITY PROCURED FROM SOLAR SOURCES:

The Ministry of Power (MoP) had waived off the inter-state transmission charges and losses on the electricity generated by wind and solar sources of energy in September last year. That order has now been amended by the MoP and as per the new order, transmission charges and losses are waived off only on solar projects. The MoP, after consultation with MNRE, CEA, CERC and POSOCO, has notified the following:

For generation projects based on solar resources, the waiver will be on projects commissioned till 31/12/2019. The waiver will be available till 25 years of date of commissioning of such projects and on solar projects entering PPAs for sale of electricity to DISCOMs for compliance of RPO. The remaining of the terms and conditions remain the same as the 2016 order.

There seem to be a number of restrictions in the applicability of this order. Firstly, this order is only applicable to solar projects entering PPAs to sell electricity to DISCOMs. Secondly, this is only for the solar projects installed for RPO compliance.

The order can be accessed [here](#).



Supreme Court allows conditional trading for Non Solar RECs

In the matter of CERC's order on new RECs pricing and the stay granted by the SC on trading, another hearing was held in Supreme Court on 14th July 2017.

Main highlights of the Order:

- An Intervention appeal was filed requesting obligated entities to purchase RECs at previous prices i.e. Rs 1500/ REC (MWH) with the additional amount deposited with the CERC
- The Supreme Court allowed this, and directed that the differential price (Rs 500/REC) i.e. between the earlier floor price (Rs 1500/REC) and the present Floor Price (Rs 1000/REC) to be held by CERC during the pendency of the matter with Appellate Tribunal
- Therefore, stay on the REC Trading (only for Non Solar RECs) have been withdrawn by Supreme Court and trade is likely to start. However, we believe that it will be some time before trading can start as CERC will have to develop modalities to accept such a deposit.
- The stay on Solar RECs trading remains in place, and the hearing on that matter will be held in due course

Today (17/July/17) the Appellate Tribunal was due to hear the above matter, but it has been postponed to a later date.

Implications of the SC order:

- Trading will resume in the case of Non-solar RECs, but will remain suspended in the case of Solar RECs. However, we believe that it will be some time before trading can start as CERC will have to develop modalities to accept such a deposit.
- Despite the start of trading, it is very unlikely that any meaningful demand for Non-solar RECs will materialise. Given the lack of any pressure to comply with RPOs, it is unlikely that any obligated entity will spend a higher amount while the matter is still sub-judice in the ApTel.

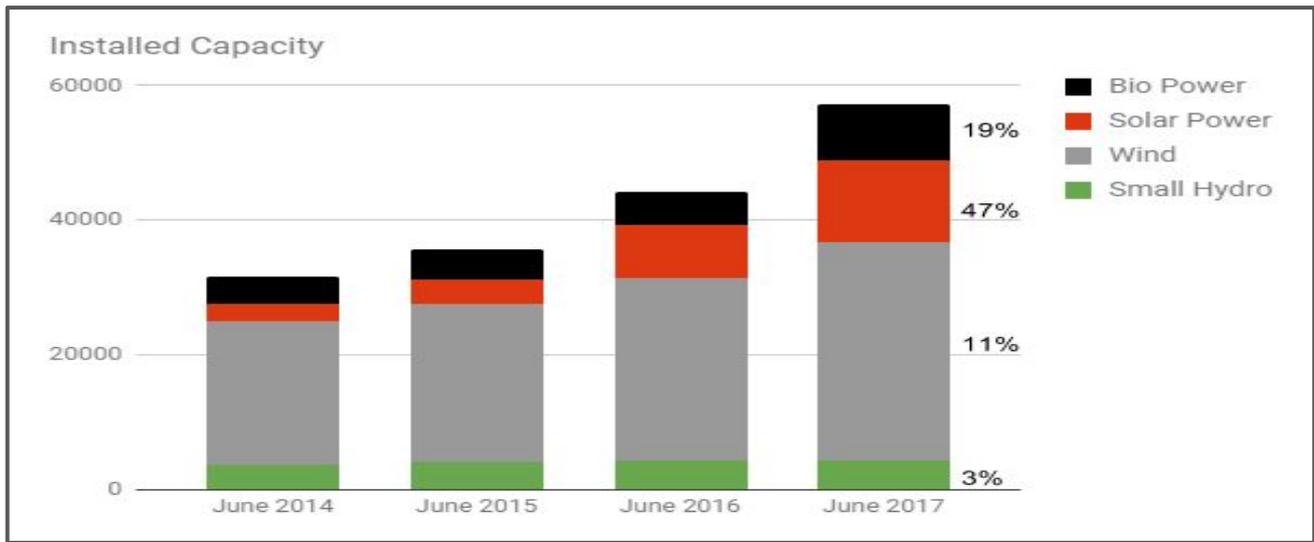
IX has released a notice on the approved rules and by-laws of trading of ESCerts (Energy Saving Certificates). The trading is expected to start some time in August and will be done on every Tuesday of every week from 1PM to 3PM. The price quotation will be in INR/ESCerts. Price tick which has been determined is 1 INR and minimum volume order volume limit is one ESCert. Registration of ESCerts has begun from mid-July

The notice can be accessed [here](#).

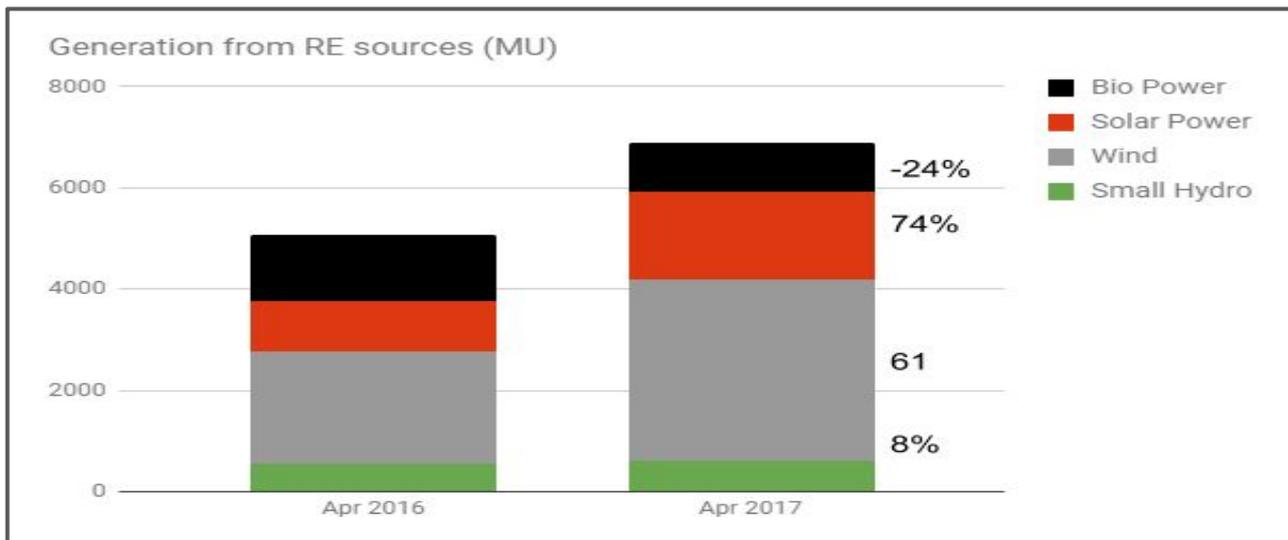


RE Generation

RE power capacity and generation statistics for the month



The installed capacity of wind and solar have risen drastically since the past four years. The Compounded Annual Growth Rate (CAGR) is maximum for solar (47%) followed by biopower (19%) and then wind (11%). The lowest CAGR was for small hydro projects (3%).



The above graph shows the generation from RE sources. As compared to April 2016, there has been a 61% increase in the generation from wind till April 2017. Similarly for solar, there has been a 74% increase in generation. But the real surprise has been the decrease in generation from Bio-power (this category includes biomass and bagasse based power projects) - this category reduced by a significant 24%.





About REConnect

REConnect Energy is India's leading service provider to the renewable energy sector. We provide advanced data analytics for grid management, REC and ESCerts trading services. We also work with power consumers to manage Renewable Purchase Obligation (RPO) liabilities, and develop and execute their energy sourcing strategy. We are India's largest provider of forecasting and scheduling services, serving government and power generators. We are a knowledge focused company that prides itself in providing premium services to our clients backed by proprietary technology, an in-house data science capability and in-depth research & analysis.

REConnect is run by an experienced and professional team. The team consists of members with relevant experience of working at IEX, L&T, JP Morgan, Arthur Andersen and Gensol. Key members of the team are alumnus of IIT Bombay and Columbia University (an Ivy League university).



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For more details of services provided and profile of the management team, please visit our [website](#).

