

# PICTORIAL REPORT



**Supported by:**  
Ministry of New &  
Renewable Energy  
Government of India

**Partner State:** Gujarat

6<sup>th</sup> International Expo & Summit



# renewtech

India 2013

**16 - 18 May 2013**

Auto Cluster Exhibition Centre,  
Chinchwad, Pune, India

*Theme: "Renewables for Energy Security"*



**Corporate Support**



A Maharatna Company



**Partner Exchange**



**Banking Partner**



State Bank of India

**Hospitality Partner**



**Supporting Associations**



INDIAN WIND ENERGY ASSOCIATION



SOLAR ENERGY SOCIETY OF INDIA



WORLD BIOENERGY ASSOCIATION

**Official Magazine**



**Exhibition Managers**



Services Pvt. Ltd.

**Organisers**



INDIA-TECH FOUNDATION

# Conference Programme

## Day - I: Thursday, 16th May 2013

### 10.00 am – 11.00 am Session I : Inaugural Session

Lighting of the Lamp and Presentation of Flowers

Welcome Address

& About the Event

**Shri. Indra Mohan**

President, India Tech Foundation

Special Address

**Shri. Richard Bale**

Consul General of Canada in Mumbai

Keynote Address

**Dr. Ashvini Kumar**

Director – Solar Energy Corporation of India

### STATE AWARDS PRESENTATION

Vote of Thanks:

**Shri. Ashish Gupta**

Secretary General, India-Tech Foundation

11.00 am – 11.15 am

Ribbon Cutting & Inauguration of the Exhibition

### 11.15 am – 1.00 pm Session II : Some Major Opportunities & Initiatives

Session Chairman :

**Dr. Ashvini Kumar**

Director Solar Energy Corporation of India, MNRE

Narmada Canal-Top Solar power Project :

**Shri. Gurdeep Singh**

Managing Director, Gujarat State Electricity Co. Ltd.

Some New Developments in Rooftops Solar

**Shri. J.P. Gupta**

Vice President (Engineering), Waaree Energies

MNRE & UNDP Initiative for market development of Solar-Thermal:

**Shri. Sudhir Kumar,**

Jt. Director & Head Centre For Solar Energy, WISE

Solar Energy For Bringing Down Energy Cost:

**Shri. Sachin Rele**

CEO & Mg Director, Autonic Energy Systems

### 1.45 pm – 3.15pm

#### Session II : Some Major Opportunities & Initiatives (Continued....)

Session Chairman:

**Dr. Ashvini Kumar,** Director

Solar Energy Corporation of India, MNRE

NTPC's Initiatives in Renewable Energy Sector

**Shri. Ajit Kumar,** Executive Director – BD, NTPC Ltd.

Trends and Issues in REC Market

**Shri. Bikram Singh,** Vice President, Indian Energy Exchange Ltd.

Importance of O & M Activities of SPV Projects:

**Shri. Rajeev Gyani,** Executive Engineer,

Chattisgarh Renewable Energy Dev. Agency

Opportunities from Europe to India:

**Shri. Shrikar Dole,** Western Region Manager

European Business & Technology Centre

### 3.30pm – 5.30pm

#### Session III : Some Best Case Studies (State Nodal Agencies)

(In alphabetical order)

Session Chairman:

**CHATTISGARH :**

**Shri. Deepak Gupta,** Former Secretary- MNRE

Role of CREDA in Off Grid Renewable Energy

**Shri. Shailendra Kumar Shukla,** Director,

CREDA

**GUJARAT :**

Achievements & Future in Solar Energy Sector

**Shri. Sanjay Amrani,** Director, GEDA

**KARGIL & (J&K State) :** Role of KREDA in Renewable Energy Sector

- A Special Discussion

**Shri. Kacho Ahmed Khan,** Project Coordinator,

KREDA

**LEH (Ladakh) :**

Role of LREDA in Renewable Energy Sector

- A Special Discussion

**Shri. Reuben Gergan,** Sr. Project Engineer,

LREDA

**MAHARASHTRA :**

Role of MEDA in Wind Energy Sector

**Shri. S.R. Chaudhari,** General Manager, MEDA



Speakers at the Inaugural Session

## Day - II : Friday, 17th May 2013

### 10.00 am – 1.00 pm Session IV :

Round Table Meet : "Financing 30000 MW Capacity Addition Of Renewable Energy by 2017"

Session Chairman: **Dr. Pramod Deo,**

Chairman, Central Electricity Regulatory Commission

#### **Panel Discussion:**

- Regulators Should Revisit The Tariff Aspect.
- Open Access: Why High tariff for Grid connectivity for Renewable Energy?
- Classify Renewable Energy on 'Priority Sector' (only Off Grid?).
- Identify best locations for Solar, Wind & Biomass and set up large projects – Wind Farms, Solar Parks, and Cluster Based Approach (Similar to China & KIZAD, Abu Dhabi, Models) etc.
- Land Banks' (Barren Land) under SPVs for 'Energy Plantation'
- Interest subvention or 'Generation Based Incentives' should be considered for speedier development of Renewable Energy.

#### **Distinguished Panelists:**

(in alphabetical order Organization/ Companywise)

**Shri. M. R. Sreenivasa Murthy,** Chairman, Karnataka ERC

**Shri. Vidyesh Raje,** Ernst & Young

**Shri. Satish Kashyap,** Director, General Carbon Advisory Ser. Pvt. Ltd.

**Shri. Amit Khurana,** Managing Director, Madhav Group, Vadodara

**Shri. Chintan Shah,** President - Strategic Business, Suzlon Energy Ltd.

**Shri. J. P. Gupta,** Vice President - Engineering, Waaree Energies Pvt. Ltd.

### 1.00pm – 2.00pm Lunch

### 2.00pm – 4.00pm Session V :

Some Challenges & New Developments in Renewable Energy Sector

Session Chairman :

**Shri Satish Kashyap,**

Director, General Carbon Advisory Services Pvt. Ltd.

Hydrogen Energy:

**Dr. Ulhas Kharul,** Head - Hydrogen Energy & Fuel Cell Program,

National Chemical Laboratory,

Challenges & Opportunities in Bio Mass Energy Sector:

**Shri. Monish Ahuja,** Director, PTC Bermaco Green Energy Sys. Pvt. Ltd.

Green Corridor Project :

**Dr. Rajesh Kumar,** Chief Manager – Smart Grid, Power Grid

Corporation. Ltd.





**Shri Richard Bale**, Consul General of Canada, lighting the traditional lamp at the Inaugural Function of RENEWTECH India 2013 International Conference, while **H. E. Dato Paduka Haji Sidek Ali**, High Commissioner of Brunei Darussalam, **Dr. Ashvini Kumar**, Director Solar Energy Corporation of India, MNRE, **Shri Deepak Gupta**, Former Secretary- MNRE & **Shri Indra Mohan**, President, India Tech Foundation look-on

# 6<sup>th</sup> International Expo & Summit renewtech India 2013



## A Report

RENEWTECH India 2013: 6<sup>th</sup> International Summit & Trade Expo 2013 marked its grand opening at *Auto Cluster Convention & Exhibition Centre, Chinchwad, Pune* on 16<sup>th</sup> May 2013. The three day Exhibition & Conference held from 16 to 18<sup>th</sup> May 2013 witnessed large number of visitors, leading technocrats in Renewable Energy sector and policy planners both from the Govt. as well as the industry. While the leading stakeholders in renewable energy and related sectors showcased their tech-innovation strategies, products and services, the speakers focused on the progress made so far, future projections as well as the enabling policy and regulatory framework for the renewable energy sector of India.

RENEWTECH India 2013 was supported by Govt. of India Ministry of New & Renewable Energy (MNRE) and three Leading Renewable Industry Associations: Solar Society of India, Indian Wind Energy Association & World Bio-Technology Association. The event was slated as the premium annual event in the world of Renewables for offering clean and green emerging technologies.

As per the scientific reports Carbon Dioxide levels have reached an alarming average daily level of 400 parts per million. According to the best evidence available the Co2 levels in the air were never so high during the past three million years. In view of the aforementioned threat of high levels of CO2 in the air, 300,000 MW of this capacity addition is expected to come from Renewable Energy Sector, quite an ambitious target. RENEWTECH India 2013, therefore, aimed to draw-up a road map for "How to achieve 30000 MW in Renewable Energy by 2017", with the help of a "Round Table Meet". Gujarat was partner state which highlighted their all round progress in renewable sectors and thus being 'Right destinations for investments'.

RENEWTECH India 2013 conference flagged off with a traditional light lamp ceremony followed by presentation of bouquets of flowers to the respected dignitaries at the dias. Shri Indra Mohan, President, India -Tech Foundation further invited the delegates, speakers, technocrats & entrepreneurs and press

media during the event. In his welcome address he said, "We all are aware, Energy and infrastructure sectors are twin engines of growth & progress for a fast developing economy of our country. Presently, India is generating over 2,11,766 MW of power, which is indeed an important mile-stone. However electricity demand is constantly rising due to, on one hand the growing aspiration of the people and on the other hand, millions of households are still awaiting for electricity."



**Richard Bale**

**Shri Richard Bale**, Consul General of Canada gave a special address stating that the government of Canada will be investing 13.8 million dollars over five years for the establishment of Canada-India Research Centre of Excellence, in Mumbai. The administrative worked need to set-up the centre is in progress and is expected to open by the year end. The selection of the projects will be competitive and based on their quality.



**Dr. Ashvini Kumar**

**Dr. Ashvini Kumar**, Director – Solar Energy Corporation of India gave the inaugural address who said, "Renewable energy is an evolving sector which has grown from 2% to 12% from the last decade in the power generation. The renewable energy industry has seen a turnover of 40,000 crore in 2012 with average growth rate of 12%. The target in the 12<sup>th</sup> Five year plan is 30GW of which solar power will contribute 10GW." One of the distinguished members of the 'Experts Committee', Mr. Deepak Gupta, (Former Secretary – MNRE chaired the session on Some Best Case Studies (State Nodal Agencies) during this two day highly informative conference. At the end, **Shri Ashish Gupta**, Secretary General, India-Tech Foundation addressed the Vote-of-Thanks to the respected dignitaries at the dias.



**Gurdeep Singh**

**Session – II: 'Some Major Opportunities & Initiatives'** was chaired by **Dr. Ashvini Kumar**, Director Solar Energy Corporation of India, MNRE. The first presentation was on **Narmada Canal-Top Solar power Project** by **Shri Gurdeep Singh**, Mg Director, Gujarat State Electricity Co. Ltd who informed that Narmada Canal-Top project is a new direction to clean & green energy. The canal with solar arrays is developed to generate clean and green power, strengthening energy security and mitigating huge amounts of carbon emissions. The projects helps create awareness & promote use of canals for future solar plants and generate power with even higher efficiency compared to terrestrial solar power plants.



**J. P. Gupta**



**Shri Indra Mohan**, President, ITF  
Presenting bouquet of flowers to  
**Shri. Ashvini Kumar**,  
Director Solar Energy Corporation of India

## EXPERT TALK



**Dr. Ashvini Kumar**

Indian economy has been growing on an average at 8% annually and to sustain it, growth in energy is very crucial. With policy framework in place and state governments backing the sector, a target of 20% renewable energy in the total electricity generation is set for 2020. The main emphasis of the mission is on setting up policy and regulatory mechanism to support achievement of its objectives.

**Dr. Ashvini Kumar**,  
Director – Solar Energy Corporation of India



**Gurdeep Singh**

Solar Canal Projects help in saving of 5 acre land per MW & reduction of water evaporation (9 million Liter per year) from the canal. Energy generation being close to consumption point helps in reduction of T&D losses and due to cooling effect of water flowing in the canal, the temperature of panels is relatively lower resulting into higher generation compared to similar plant on the ground.

**Shri Gurdeep Singh**,  
Mg Director, Gujarat State Electricity Co. Ltd.



**Ajit Kumar**

The total capacity commissioned so far by NTPC in Phase-I of JNNISM is 580MW. For new power plants the installation of Roof Top Solar PV modules is being included as a part of main plant bidder's scope. Sustainability principles are translated into strategy and action in NTPC so that corporate excellence is blended with inclusive growth and environment friendly power development. Environmental initiatives taken by NTPC have led to avoidance of 1.96 million tonnes of CO2 during the last financial year.

**Shri Ajit Kumar**,  
Executive Director – BD, NTPC Ltd.



Some Prominent Speakers at the 6th

The next presentation was given by **Shri J.P. Gupta**, Vice President (Engineering), Waaree Energies on 'Some New Developments in Rooftops Solar' who said, "With falling prices of solar photovoltaic modules and increasing prices of diesel, the electricity from a solar plant is almost at par with utility power and much economical as compared to DGSET power. In India companies with DGSET power plant, have huge rooftop area which receives unobstructed sunlight throughout the day, thus providing a good opportunity to set-up a rooftop PV system. Waaree Energies is expert on rooftop system Installations and committed to manufacture and sale of Solar Photovoltaic Modules and Systems that can produce clean & green energy leading to sustainable environmental development."

'MNRE & UNDP Initiative for market development of Solar-Thermal' was presented



**Sudhir Kumar**

by **Shri Sudhir Kumar**, Jt. Director & Head Centre for Solar Energy, WISE who said, "Concentrated Solar Technologies is a device that can concentrate solar radiation using mirrors/lenses to produce high temperatures in the range of 100 to 450 C or more even. India is full of sun energy & good DNI (Direct Normal Irradiance) is available in most parts of country. CSTs can help reducing the fuel oil/electricity in industries & commercial establishments during daytime by way of integrating them with their existing units. Use of CSTs at places of direct utility can make them economically viable subject to availability of good DNI."



**Sachin Rele**

The last presentation of the session was given by **Shri Sachin Rele**, CEO & Mg Director Autonic Energy Systems on 'Solar Energy for Bringing down Energy Cost'. He stated that operation and Maintenance (O & M) are very crucial elements for Solar PV Plants. The types of O & M in solar PV plants are a) Predictive Maintenance

- Prediction and prevent possible malfunction in daily usage. It is more suitable for moving parts, typically Sun tracking b) Preventive Maintenance - To set up periodic task for enhancing lifetime performance c) Corrective maintenance - Incidence has already happened, i.e. Manufacture defects and external damages. In O & M of Solar PV Plants, elements that need to take care off are maintenance of PV Module, Grid Inverters, Sun Tracker Maintenance, Control Cabinets, Protection device and cables, Meters, Fastners & structures."

As the session continued post lunch, session chairman **Dr. Ashvini Kumar**, Director Solar Energy Corporation of India, MNRE spoke on 'National Solar Mission: Current Status of Implementation and Beyond'. During his opening remarks he said, "Renewable Energy helps support a low-carbon growth trajectory, and solar is one of the options to be explored. Govt. Of India has set up the ambitious JNNISM to create enabling policy framework for deployment of 20,000 MW of solar power by 2022. JNNISM will also ramp up capacity of grid connected solar power to 1,000 MW by 2013 and additional capacity of 3,000 – 9,000 MW by 2017."

The first presentation was on 'NTPC's Initiatives in



**Ajit Kumar**

Renewable Energy Sector' by **Shri Ajit Kumar**, Executive Director – BD, NTPC Ltd. who informed NTPC has appointed NTPC Vidyut Vyapar Nigam Ltd. (NVVN) as the Nodal Agency for purchase of power from developers of Solar Power Plants

under JNNISM and further sale to distribution utilities after bundling with unallocated quota of power from coal based stations of NTPC. Under various schemes NTPC is planning to install Roof Top Solar PV Modules on roofs of TG halls of existing power stations. As part of innovation concept NTPC is exploring the possibility of installation of floating solar PV modules in its water storage reservoirs located in thermal power stations. 'Trends and Issues in REC Market' was presented by



A view of the audience in rapt attention

Panel discussion in progress chaired



RENEWTECH India 2013: International Conference



Shri Indra Mohan, President, India-Tech Foundation Presenting bouquet of flowers to Shri Richard Bale, Consul General of CANADA



**Bikram Singh**

**Shri Bikram Singh**, Vice President, Indian Energy Exchange Ltd. who said, "RECs are better way to transfer green premium than green energy. The major reason Why REC is a better option than 'buying renewable power' is a follows: a) REC market offers greater schedulability for less predictable and less controllable market. Secondly, it controls High Overheads such as More System imbalances, discoms spending on more reserves to avoid UI and more reserves required to balance. REC offers flexibility in open access that is costly in terms of payment of transmission, wheeling charges, losses and scheduling charges to LDCs."



**Rajeev Gyani**

**Shri Rajeev Gyani**, Executive Engineer, Chattisgarh Renewable Energy Devept. Agency presented on 'Importance of O & M Activities of SPV Projects' who said, "SPV should not be installed until O & M provisions have been made may it be off-grid or grid connected. For

O & M some of the aspects need to be ensure are manual cleaning of modules are easy, provision of water points near arrays is required, markings should be must & customer friendly, monitoring of current & voltage, replacement of fuses/isolators and lastly minimum bends/joints on DC side."

'Opportunities from Europe to India' was presented



**Shrikar Dole**

by **Shri Shrikar Dole**, Western Region Manager European Business & Technology Centre who said, "Energy policy has been a cornerstone of European integration. In its daily activities, the EU contributes to deliver competitive, secure and sustainable energy for Europe. While considering the Indian Renewable Energy scenario it is figured that over 400 million people amounting upto 47.5 % are still under no access to electricity thereby making

electrification as a priority for inclusive growth. Distributed Energy Technologies can prove to be the key for solving this issue. Due to the remoteness of rural/BoP population, RE can offer a viable alternative."



**Deepak Gupta**

**Session III:** Some Best Case Studies (State Nodal Agencies) was chaired by one of the distinguished members of the 'Experts Committee', **Mr. Deepak Gupta**, Former Secretary - MNRE. The first case study 'Role of CREDA in Off Grid Renewable Energy' was presented by **Shri Shailendra Kumar Shukla**, Director, CREDA who



**Shailendra Shukla**

introduced the Solar LED Lamp & Study LED Lamp concept under the scheme "One student One Solar lamp" and "Solar for each family". He said, "Chhattisgarh will soon become the first state of the country which is going to daunt usage of kerosene for lighting homes (lanterns) by substituting the same by Solar LED task light and Solar LED Study lamp. Taking initiative in this direction, the state government has decided to distribute free Solar task lights to about 13.5 lacs families and free Solar LED study lamps to school children residing in tribal and left wing extremist dominated 95 blocks of the state. The implementation of the scheme will cost the exchequer approximately Rs.230 Crore."

'Achievements & Future in Solar Energy Sector' was presented by **Shri Sanjay Amrani**, Director, GEDA who said,



**Sanjay Amrani**

"Gujarat is a pioneer in Renewables & Conservation of energy. The state is first State to have an exclusive "Climate Change Department" in the Country." He informed about the Solar Park Concept which will have concentrated zone of development for solar power related activities

## EXPERT TALK



**Dr. Pramod Deo**

Policies like generation based incentive schemes and interest rate subsidies are in the implementation process for rapid development of renewable sector. Unless we have

intra-state power evacuation we cannot have interstate or interregional transfer of renewable energy. While installing huge renewable capacity of around 42,000MW, new states should proactively take the benefits of REC certificate to fulfill their power requirements.

**Dr. Pramod Deo**, Chairman, Central Electricity Regulatory Commission



**M. R. S. Murthy**

Greater the RPO compliance of the state more difficult for regulator to increase the tariff or set differential tariff pertaining to renewable sources.

Financial incentives must have to come from policy measures initiative by government rather than regulators making changes to tariff structures. For regulators there is a certain limit for playing their role in renewable energy generation.

**Shri M.R.Sreenivasa Murthy**, Chairman, Karnataka ERC



**Amit Khurana**

Overall Finance is available for any project which has merit and completely viable. There has to be innovative methods for increasing the tariff to reduce burden on discoms. While migrating to

Residential-cum-Commercial Roof top net metering is the best way which can help in getting the big projects in solar PV industry. Thus, it's very important that net metering should take place and the grid is able to provide sufficient power.

**Shri Amit Khurana**, Managing Director, Madhav Group



by Dr. Pramod Deo, Chairman, CERC

A view of the audience in rapt attention

through Solar Thermal/ PV Generation based projects, Solar Components' Manufacturing/ Assembling, R & D and Capacity Building. Gandhinagar Photovoltaic Rooftop Programme marks the first distributed power generation programme in India in its true sense which brings together a PPP. Besides, GEDA has funded Rs. 24 Crores to Pandit Deendayal Petroleum University for setting up of Solar Research and Development centre."



**Kacho Ahmed Khan**

'Role of KREDA in Renewable Energy Sector - A Special Discussion' was presented by **Shri Kacho Ahmed Khan**, project coordinator, KREDA who said, "SPV power plants have reduced a large portion of the diesel fuel used. Solar Energy is economical and eco friendly to provide power to larger facilities like schools, community centres etc. Solar Green House can be utilized for producing vegetables for home consumption and market. Economic/living standard of local people can be improved by the usage of Solar Green House. It also improves health condition and locally produced vegetables can be available at lower prices."

**Shri Reuben Gergan**, Sr. Project Engineer, LREDA presented on 'Role of LAREDA in Renewable Energy Sector - A Special Discussion' who said, "Renewable energy plays a vital role in securing the demands of rural India. While Ladakh lacks natural resources, the region is rich in renewable energy sources and amongst the best regions for development of solar projects. Ladakh has the largest geothermal reservoirs in the country at Puga Valley and Chumathang, with a potential for generation up to 150 MW. Ladakh Vision Statement 2025 is to transform Ladakh from an energy deficient to energy surplus region and supply the local population with reliable affordable and quality power by trapping the renewable energy sources available in the region to the maximum possible advantage."



**Reuben Gergan**

'Role of MEDA in Wind Energy Sector' was presented by **Shri S.R. Chaudhari**, General Manager, MEDA who informed that Solar Photovoltaic Power Plants of various capacities have been installed in the State under JNNSM in Off-grid. MEDA has installed total 1849 kW capacity wind solar hybrid systems at 221 sites. The proposals of total 763 kW capacity has been submitted to MNRE to be sanctioned soon. MEDA has the largest Wind Monitoring Programme in the country with 359 sites. Under MNRE Scheme World's largest Solar Cooking System has been set up at Sai Sansthan Shirdi which comprises of 73 dishes each of 16 sq. m. area cooking food for 20,000 people twice a day and has been saving 3000-5000 LPG cylinders per year.



**S. R. Chaudhari**

**Day-II of 6th RENEWTECH India 2013** Conference started with a Round Table Meet on "Financing 30000 MW Capacity Addition Of Renewable Energy by 2017" which was chaired by **Dr. Pramod Deo**, Chairman, Central Electricity Regulatory Commission. This highly informative meet provided an overall strategy and policy planning to strengthen the financial aspect of renewable energy sector.



**Dr. Pramod Deo**

Some Recommendation during the Round Table Meet by **Dr. Pramod Deo**, Chairman, Central Electricity Regulatory Commission

- State regulator needs to give clear vision of the various problems & issues at the state level. For rising RPO compliance we have implemented the scheme of Renewable Energy Certificate (REC) where states can fulfill their RE energy deficit through REC certificates.
- Connectivity standards in Solar PV industry are not upto the mark. A regulatory model has been prepared to get net metering into reality which has helped to reduce the solar cost.
- In context of renewable energy it is really the state regulators who are very important. For regulators the tariff target should be set differential and should be depend upon project basis.
- Entire renewable development is driven by private sector due to huge fund investments. Accelerated depreciation and Tax Benefits are the driving factors for them.
- Instead of buying REC certificates we can have electricity flowing evenly distributed to mitigate the problem.
- If state level commission will adopt the accelerated depreciation there will be no need for GBI.
- In Biomass a committee has been appointed to stabilize the fluctuating feedstock price issue. Biomass is important for energy generation at a small scale level.
- Municipal solid waste is byproduct and it should be taken care off at the urban level quite comfortably that has enough political measures.



**M. R. S. Murthy**

To begin with **Shri M.R.Sreenivasa Murthy**, Chairman, Karnataka ERC said, "Wind energy sector has a massive opportunity of increasing almost five folds in coming years. Once energy policies for financing of renewable energy projects like generation based incentive and interest rate subsidies are implemented the economy of wind energy is bound to improve. While meeting the RPO compliance, the difference between the conventional and renewable power tend to increase the proportion of the overall tariff rates."



**Vidyeshh Rajee**

**Shri Vidyeshh Rajee**, Ernst & Young

It is important we have thorough knowledge of eco systems around the renewable energy development that will help put things in better perspective. In renewable play predominantly private developers are coming with higher capacity addition. There are enough sub-segments within the investment committee who are looking for financing for renewable projects. It is very crucial before financing any projects that the projects is viable and gives payment security for investment and is well equipped technological front.

**Satish Kashyap**, Director, General Carbon Advisory Services Pvt. Ltd.



**Satish Kashyap**

Competitive bidding in solar has to be replicated in other renewables to make projects financially viable. It is something which is creeping into wind sector as well. Accelerated Depreciation has once again set a boon for tariff structure in renewable sector. The policy and cost structure are project specific, therefore the entire model to incentivize the scheme stays open. We should have proactive heart to step into the power based model and work towards achieving our goal.



**Amit Khurana**

**Shri Amit Khurana**, Managing Director, Madhav Group, Vadodara

While preparing financing project for Solar sector the major issues which can be highlighted are as follows: a) Conditions of Discoms i.e To fund the power which they claim to buy b) Clear understanding of open access i.e REC cum- APPC (Average Pooled Purchase Cost) method in which the states should proactively approach to buy REC's through the Average Pooled Purchase Cost. c) Control period of tariff plan – In the lengthy execution process, projects cost gets fallen down due to which RP obligators try to develop their own project which is a negative aspect for the government.

**Shri Chintan Shah**, President - Strategic Business, Suzlon Energy Ltd.



**Chintan Shah**

The important aspects while financing a renewable project is the longevity of the policy. Secondly, many states are still not complying with the RPO (Renewable Purchase Obligation). Huge amount of RECs are still left unsold which is not a bankable instruments. *When we have fair amount of restructuring of loans across India, the minister of power can put a condition to the discoms to understand the CDR agreement one has to buy the pre-compliance. We can also promote bilateral trade for REC's by offering exchange for a long term. The exchange price can be used as a benchmark in this method.*

**Shri J. P. Gupta**, Vice President - Engineering, Waaree Energies Pvt. Ltd.



**J. P. Gupta**

Open access tariff should be followed in India so that our country which has been facing problem for electricity shortage from past so many years can be mitigated. *Wind is present but Solar has future.* The role of CERC is very important along with the political support to enhancement the development of renewable energy sector. There should be implementation of RPO in such a way that it benefits and the country and its people.

**Session V:** Some Challenges & New Developments in Renewable Energy Sector was chaired by **Shri Satish Kashyap**, Director, General Carbon Advisory Services Pvt. Ltd. The first presentation was given by **Dr. Ulhas Kharul**, Head - Hydrogen Energy Program, National Chemical Laboratory on 'Some New Developments in Hydrogen Energy: Fuel Cell Technology' who said, "Hydrogen Energy is developed through hydrogen molecule which has highest energy-to-



**Satish Kashyap**

# RENEWTECH India 2013 Excellence Awards



*Role of Chattisgarh Renewable Energy Development Authority  
In Off Grid Renewable Energy*



*Gujarat Energy Development Authority's  
Achievements & Future in  
Solar Energy Sector*



*Role of Kargil Renewable Energy Development Authority  
in Renewable Energy Sector*



*Role of Ladakh Renewable Energy Development Authority  
in Renewable Energy Sector*



*Role of Maharashtra Energy Development Authority  
in Wind Energy Sector*



**Dr. Ulhas Kharul**

mass ratio. It is carbon-free, non toxic source of energy in which its thermal / electrochemical combustion with O<sub>2</sub> yields huge energy & water simultaneously. It gives reduced dependence on petroleum imports. Polymer Electrolyte Membrane Fuel Cell (PEMFC) is a concept in which oxidation tendency of H<sub>2</sub> is utilized to convert chemical energy into electrical energy which gives higher efficiency, higher lifetime lesser emission with environmental benefits. For PEMFCs to succeed in our country there has to be robust manufacturing base for components and systems, need Indian standards & certification for PEMFC systems and comprehensive testing facilities for demonstration and validation of applications, benchmarking.”

'Challenges & Opportunities in Bio Mass Energy Sector' was presented by **Shri Monish Ahuja**, Director, PTC Bermaco Green Energy Systems Pvt. Ltd. who said,



**Monish Ahuja**

“As an innovative approach, Bermaco has implemented a 100% Paddy Straw fired 12 MW Biomass Power Project at Ghanour, Patiala for its SPV Punjab Biomass Power Ltd. Some benefits of biomass power are socio-economic development and social integration, agricultural development, foreign exchange savings, poverty alleviation, energy security and climate change mitigation. The principal challenges developers face for investing in a biomass project is - ensuring a secure and cost-effective supply of biomass fuel while larger fraction of cost originates from the logistics and storage operations. For this we need to optimize fuel purchasing through analysis, processes, technology and integrated networking.”

The last presentation for 6<sup>th</sup> RENEWTECH India 2013 conference was on 'Green Corridor Project' presented by **Mr. Rajesh Kumar**, Chief Manager – Smart Grid, Power Grid Corporation of India Ltd. who said, “Conducive policy environment, regulatory framework and fiscal & financial incentives can offer accelerated penetration of renewable energy (RE) generation. Some major issues in Large Scale Renewable Integration are Intermittency, Variability / Uncertainty, plants connected at remote / concentrated locations with weak transmission network and Renewable plants providing lesser grid support during system disturbances/exigencies. To overcome the issues, Govt. of India has initiated Green Energy Corridors – a Transmission Plan for Envisaged Renewable Capacity. Green Energy Corridor will have proper planning of intra-State/inter-State Transmission requirements and will provide mechanism to address Wind/Solar generation uncertainty through forecasting of generation, provision of flexible generations, Demand side Management & Energy Storage.”



**Dr. Rajesh Kumar**

## Thank you for your participation Conference Partners

- NTPC
- ONGC
- Power Grid Corporation of India Limited
- Suzlon

## Some Prominent Participants

- 2M Industries
- Advantage Ecosys
- Auto Cluster Development & Research Limited
- Autonic Energy Systems Pvt. Ltd.
- Chattisgarh State Renewable Energy Development Agency (Creda)
- Chemtrols Solar Pvt. Ltd.
- Consulate General Of Canada
- Enertech Ups Pvt. Ltd.
- European Business and Technology Centre
- General Carbon
- Green Brilliance Energy Pvt. Ltd.
- Gujarat Energy Development Agency
- Gujarat Power Corporation Limited.
- Gujarat State Electricity Corporation Ltd.
- Indian Energy Exchange
- Ladakh Renewable Energy Development Agency (Lreda)
- Madhav Infra Projects Pvt. Ltd.
- Maharashtra Energy Development Agency
- S B Aditya Power Projects P Limited (S B Wind Energy Private Limited)
- State Bank of India
- Surana Ventures Ltd.
- Unique Ups
- Waaree Energies Private Limited.

# Some Glimpses of the RENEWTECH Expo 2013

2M Industries



Advantage Ecosys



Chattisgarh State Renewable Energy Development Agency



Chemtrols Solar Pvt. Ltd.



Consulate General Of Canada



Autonic Energy Systems Pvt. Ltd.



Enertech Ups Pvt. Ltd.



Madhav Infra Projects Pvt. Ltd.



Gujarat State Electricity Corporation Ltd.



Gujarat Energy Development Agency



Surana Ventures Ltd.



Maharashtra Energy Development Agency



Unique Ups



Waaree Energies Private Limited



S B Aditya Power Projects P Limited  
S B Wind Energy Private Limited

