Webinar

On

Net zero energy buildings and net zero tourist locations

21 July 2022

Proceedings

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EU – India Clean Energy and Climate Partnership (CECP) – Net zero buildings and net zero energy tourist locations in India

On 21 July 2022, EU-India Clean Energy & Climate Partnership (CECP) project hosted a webinar on "net zero buildings and net zero tourist locations". The key objective of this webinar was to provide a platform for EU and Indian experts to share experiences of their net zero journey and to define a framework to achieve NZE targets. It would also provide a platform to seek feedback on the findings of the feasibility study conducted at five different locations in India and facilitate capacity building and sensitization of relevant stakeholders (including representatives from State Designated Agencies in India) to meet India's energy needs.

The event was attended by nearly 100 participants from European Commission, representatives from various State Designation Agencies (SDAs), Tirumala Tirupati Devasthanams (TTD), architects, engineers, and private stakeholders. List of attendees is attached in **Annexure-1.**

1.1. Welcome address

Mr. Aayush Nautiyal, Consultant, PwC India extended a warm welcome to all the participants and invited the panellists to deliver the opening remarks.

1.2. Opening remarks & context setting

Mr. Edwin Koekkoek, First Counsellor – Energy & Climate Action, EU Delegation to India welcomed all the participants. He stated that Europe and India had entered into agreement in 2016 in the form of EU India Clean Energy Climate Partnership.

- He mentioned that with the Russia -Ukraine war which has impacted oil & gas sector globally, EU has come up with a package of **Repower EU** which aims to reduce the energy demand and increase the implementation of clean energy measures.
- In December 2021, the EU commission proposed to move from net zero emission buildings to zero emissions buildings, thereby aligning with the energy efficiency first principle. This policy will be applicable to all new buildings from 1st January 2030.
- The concept of zero emission building definition also looks into the building materials and sustainability of the building in determining global warming potential.
- In EU, very large part of the buildings are quite old and there is a need to focus on renovation with the idea of transforming the existing building to nearly zero energy buildings.

Ms. Meenal Anand, from Bureau of Energy Efficiency, Ministry of Power, presented her views on the net zero energy transition in India.

- She highlighted that BEE has been working for the last 10 years in the area of building energy efficiency such as star rating for residential and commercial buildings, energy star labelling for residential buildings, Energy Conservation Building Code (ECBC) of India, and Eco-Niwas Samhita for residential buildings.
- She mentioned that transition to net zero is the future and requested all the stakeholders to provide their feedback on the feasibility study conducted as a part of EU India CECP project.

1.3. Policy framework and initiatives towards NZE

Ms. Sanne de wit, Net Zero Energy Analyst from Energiesprong, Netherlands discussed about the net zero energy landscape in Europe by presenting a case study on net zero energy for residential establishment in Netherlands. She explained how an old existing building was transformed into a net zero house by incorporating new roof with solar panels, new external facade in front, energy parks in the back of the house equipped with heat pumps and relative system, PVM and monitoring.

Ms. Suhasini Iyer from Auroville Design Consultant - CSR, presented her views on approach in achieving carbon neutral settlements. She mentioned that most of the buildings are yet to be built in India and the focus should be on planning and design, building materials, water, waste management, solid waste segregation, solar passive design and mobility.

1.4. Net zero energy tourist locations

CECP Project

Mr. Rajeev Ralhan, Partner, PwC India, thanked all the stakeholders for their participation and support in this project. He briefed about the feasibility study which was conducted on 'Net Zero Energy tourist locations' at five different locations to propose the ways for improving energy efficiency and offsetting the remaining demand through renewable sources. The 5 locations were at Leh, Tirupati, Fort Kochi, Shirdi and Gokarna. The objective of this webinar was to seek inputs from the stakeholder on the findings of the study.

Mr. Gopal Nurani Parasu, Manager, PwC India presented the findings of the feasibility study which covered the framework used for the identification of tourist locations, approach & methodology, interventions proposed and strategies proposed for achieving net zero across building sector, public amenities and transport sector.

Presentation of best practices and initiatives undertaken in Tirumala for renewable energy

Mr. Ravisankar Reddy, Divisional Engineer, Tirumala Tirupati Devasthanams (TTD) and **Mr. Ramanujan Reddy,** officer on special duty – New and Renewable Energy Development Corporation of Andhra Pradesh Limited presented on the best practices adopted in Tirupati for renewable energy.

Discussants from SDA

1. **Mr. Manjunath** from Karnataka Renewable Energy Development Limited (KREDL) presented his views on the initiatives taken on energy conservation and renewable energy in Karnataka.
    - Government of Karnataka has recently launched renewable energy policy to meet the target of 500 GW by 2027 by Government of India.
    - Karnataka has 15.5 GW installed capacity of renewable energy and it is 4th ranked state in India in terms of installed renewable energy capacity in the country.
    - Karnataka government also recently published the Energy Conservation and Energy Efficiency (EC&EE) policy from 2022 to 2027 to promote the energy efficiency initiative and ensure energy security in the state.
    - The state is developing a policy to provide affordable, decentralized energy supply to agriculture, commercial and household sectors. This policy is expected to save 144 MWh and will reduce carbon emissions by 6 lakhs tonnes.

Mr. Vijay Kumar, District Manager of Ahmednagar District, from Maharashtra Energy Development Agency (MEDA) shared his views on the renewable energy used in the Shirdi.

- The total potential of the renewable energy capacity in Maharashtra from different sources like Wind, Solar, Hydro etc is nearly 13,750 MW. Out of this, Maharashtra has already achieved 10,000 MW through renewable energy.
- Shirdi Sai Baba Sansthan has around 11-12 buildings and MEDA has proposed 3.6 MW capacity of solar for Sri Sai baba Sansthan building.
- The Bhakt Niwas has already installed the 5 lakh litres capacity of solar hot water system.

Question Answer Session

- Mr. Harish Babu asked the TTD officials enquired why the scroll compressors are used in the TTD instead of screw compressors and what is the heat load?

1.5. Consolidation of thoughts & vote of thanks

Mr. Aayush Nautiyal thanked all the stakeholders who joined virtually for their participation in the webinar.

Ms. Meenal Anand thanked EU, SDAs, administrative bodies and all the participants who joined the webinar.

Annexure 1: Names of attendees

S No.	Name of Attendee	Organization Name
	Europe	
1	Edwin Koekkoek	Delegation of the EU in India
	India	
2	Rajeev Ralhan	Partner, PwC India
3	Rajeev Kumar	
4	Shruti Gupta	
5	Mr. Ravi Sankar Reddy	Divisional Engineer, TTD
6	Anubha Ashtikar	Senior Associate, PwC India
7	Sandeep Manocha	Associate, PwC India
8	Hitanshu	
9	Debasish Chowdhury	
10	Harish Babu	
11	Jagadeeswara Reddy	
12	Paresh Sawaiker	
13	Anwar Ahmad	
14	Manjunath	KREDL
15	Ramanjaneya Reddy	Special officer NREDCAPL
16	Rohit	
17	RRECL	
18	Divya	
19	Mutalib	
20	Aindrila Ghosh	ECBC and ENS Cell, Ranchi
21	Suhasini Iyer	Auroville Design Consultant
22	Meenal Anand	BEE
23	Girish	
24	Jyoti Mishra	
25	Chief Engineer	Directorate of Energy
26	Soumyajit Basu	
27	Tsering Angchuk	
28	Winamra Negi	CSB Cell, Rajkot
29	Aayush Nautiyal	Associate, PwC India
30	Sambit Mahapatra	Associate, PwC India
31	Kashyap Tidke	
32	Er. Deepak Jasrotia	SDA Himachal Pradesh
33	Dr. R Harikumar	
34	Cyprus High Commission	New Delhi
35	Ar. Salochana Dhiman	
36	Sudhanshu Shekhar	
37	APSECM	
38	Abhilash KP	
39	T Krishna Teja	SDA Jharkhand
40	Ziad Ballouli	
41	Muhammed Rijas P	
42	Shivangi Sinha	

43	Gopal Nurani	Manager, PwC India
44	Gaurav Singh	
45	Ravi Kumar Gaurav	
46	SDA Sikkim	
47	Divya Srinivasan	
48	Shyny Sam	
49	Sanne de wit	Energy Analyst, Energie Sprong
50	Ashiqua Sulthana	
51	D Vyas	
52	Anuja Chakraborty	
53	Amrit Sharma	
54	Mukund Verma	ECBC and ENS Cell, Ranchi
55	Sourav	
56	Sreekanth PK	
57	Dr. Sunil Edward	
58	Priyanka Kalanta	
59	Shivangi Sinha	
60	Tomson Sebastian	
61	Shivam Sinha	
62	Ar. Disa	
63	Atilesh Gautam	
64	Yogesh Karnapooshanam	
65	Glory Srivastava	Associate, PwC India
66	Danish Khan	ECBC and ENS Cell, Shimla
67	Brijesh Mehra	
68	Monak Modi	Senior Associate, PwC India
69	Abhijit Anand	
70	Madhan	
71	Rakesh Sinha	
72	Ex Engineer	ZDA
73	Sharadd Naggre	
74	Nidhi Ranjan	
75	Anita Kheuta	
76	Meenakshi Sharma	
77	Kritika Dayal	
78	Manish Kumar	
79	Karan	
80	Rajeev	
81	Abhishek Kumar	
82	Kanishk Bhatt	CSB Cell, Rajkot
83	Donna	
84	Rita Sisodia	
85	Manisha Bajaj	
86	Raushan Kumar	
87	EEB Cell, Goa	
88	Sharadd Naggre	

89	Anshu	
90	Aditya Dogra	
91	Rekha Kaundal	
92	RRECL	
93	Samiksha Bhardwaj	
94	Johnson Danial	SDA Kerala
95	Mukul Kumar	
96	Labeeba Latheef	
97	MEDA	
98	Anant Verma	
99	Mutalib Kargil	
100	Kamran Ahmad	
101	Madan Mohan Roy	
102	Amit Sharma	
103	SDA Assam	
104	Varun Aggarwal	
105	Arijit Paul	
106	Manoranjan Kumar	
107	Ranjeet Singh	
108	Ar. Girija	
109	Rajat Nainwal	
110	SDA Tripura	
111	Md Sarwar Alam	
112	Saju Joseph	
113	Atul Saxena	
114	Prashant Juneja	
115	Arun	