



Report
by “India One” Solar Thermal Power Plant Team
from
the 4th Clean Energy Ministerial (CEM 4)
and
Innovation Showcase Pavilion
New Delhi, April 16th – 18th 2013

<http://www.cleanenergyministerial.org/Events/CEM4.aspx>

At the United Nations Framework Convention on Climate Change conference of parties in Copenhagen in December 2009, U.S. Secretary of Energy Steven Chu announced that USA would host the first Clean Energy Ministerial to bring together ministers with responsibility for clean energy technologies from the world’s major economies and ministers from a select number of smaller countries that are leading in various areas of clean energy. By working together, these governments can accomplish more than by working alone.

The CEM’s initiatives build on Technology Action Plans that were released by the Major Economies Forum Global Partnership in December 2009, which laid out best practice blueprints for action in key technology areas.

In this light, the first CEM was organized in USA in 2010, followed by Abu Dhabi and UK. The fourth CEM was hosted by India from April’16th-18th 2013 at New Delhi. The theme of the

convention was Energy Innovation. Indian Government in consultation with other member countries decided to host also an Innovation Pavilion in the convention.

Inaugurating **the fourth Clean Energy Ministerial** in New Delhi, India's Prime Minister Dr. Manmohan Singh said that "there is need for inter-country consultation and discussion in these areas to promote information exchange and to identify possible areas of collaboration, and also to learn from each other's experience in addressing common problems. The Clean Energy Ministerial has made a major contribution to such discussions."

The energy ministers and other high-level delegates from the 23 participating governments outlined progress made to date under the 13 Clean Energy Ministerial (CEM) initiatives and committed to furthering their efforts to accelerate clean energy supply, improve energy efficiency, and expand clean energy access around the world. They also welcomed further work on the topic of clean energy finance to be delivered to ministers at the fifth Clean Energy Ministerial (CEM5), to be held in Korea in 2014.

A unique feature of this Ministerial was **the Innovation Showcase Pavilion**, hosted by the Government of India. The Pavilion featured 45 companies from around the world that are at the forefront of the clean energy revolution in technology sectors such as solar, smart and mini-grid, energy storage, lighting, electric vehicles, and energy efficiency and finance.

Exhibitors were able to showcase their technologies to Ministers, private-sector executives, investors, and other key clean energy stakeholders, gaining global exposure and the potential to attract new investment and establish new business relationships. Inauguration of the Innovation Showcase Pavilion was done by Dr. Farooq Abdullah, Indian Minister of New and Renewable Energy, and Dr. Steven Chu, U.S. Secretary of Energy, in the presence of Dr. Montek Singh Ahluwalia, Deputy Chairman of the Planning Commission of India.

Some of the companies presenting their innovative achievement in clean energy were following: Tata Power Solar, Lanco Solar, Quanta Services, Suzlon, Infosys, India Smart Grid Forum, Customized Energy Solutions, TERI, Schneider Electric, United Technologies, Fortum, New Energy and Industrial Technology Organization (NEDO), Megnatar Venture, UK Research Council, Carbon Clean Solutions, Self Employed Women's Association (SEW), Skytran, International Finance Corporation (IFC)

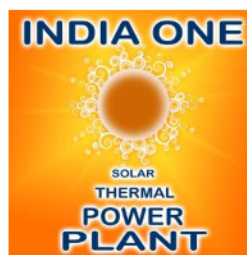
One of the exhibitors invited to participate in the Innovation Showcase Pavilion was Brahma Kumaris and World Renewal Spiritual Trust featuring "India One" Solar Thermal Power Plant Project.



BRAHMA KUMARIS

Brahma Kumaris and World Renewal Spiritual Trust

“India One” Solar Thermal Power Plant



The Brahma Kumaris World Spiritual University is an international non-governmental organization of the United Nations, based in Mt Abu, India. For over 75 years the Brahma Kumaris has been working to introduce reflection and calm into everyday life. With over 8,500 centres in the heart of local communities, the Brahma Kumaris delivers programs on a wide range of personal growth topics, in more than 110 countries. The Brahma Kumaris is in general consultative status with the Economic and Social Council (ECOSOC) of United Nations. It is also affiliated to the UN Department of Public Information (DPI) and is an accredited observer to United Nations Framework Convention on Climate Change (UNFCCC).

The World Renewal Spiritual Trust (WRST) is a sister organization of the Brahma Kumaris and a registered charity, with headquarters in Mumbai. The Brahma Kumaris and the WRST have been actively involved in the research and demonstration of alternative renewable energy concepts for more than 15 years. This approach is an expression of respect for the natural resources and it provides sustainable energy for the Brahma Kumaris community.

In 1992, the WRST established the Department of Renewable Energy and since then became one of the key developers and promoters of solar applications in India. The WRST introduced 6 large solar steam cooking systems across India, incl. the first one and one of the largest in India. The

WRST installed and operates around 100 photo voltaic battery systems (off grid), with total capacity of more than 900 KW peak. In 2011, the WRST received an official recognition through the Ministry of Science and Technology, as a Scientific and Industrial Research Organization (SIRO).

In the beginning of 2011, the WRST initiated the design, development and installation of “India One”, a 1 MW solar thermal power plant. It will be a captive power plant, supplying power and heat to the Brahma Kumaris headquarters in Abu Road, Rajasthan with total capacity of 25 000 people.

“India One” Solar Thermal Power Plant is a research project, with a very innovative nature and indigenous solutions in CSP technology. The Key Features of “India One” Solar Thermal Power Plant include:

- 770 nos. of 60 m² fixed focus parabolic reflectors, 1 MW peak electrical output;
- Network enabled & fully automatic, dual axis tracking system with image recognition control system;
- Thermal storage for continuous 24 hr operation; uninterrupted, round the clock, power and heat supply from the renewable source;
- Direct generation of super-heated steam, with no need of thermic fluids;
- Modular discharging for on-demand power supply, due to decentralized storage;
- Co-generation for efficient usage of thermal energy.

For “India One” Solar Thermal Power Plant, the WRST has secured part of funds from the Ministry of New and Renewable Energy (MNRE), Government of India. In addition, the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) is partly funding the project via the bilateral “ComSolar” program, through the GIZ, to demonstrate and promote this technology.

WRST has created a local team of engineers and experts to execute the project smoothly. The team is in close cooperation with various Indian R&D institutes and manufacturers. “India One” team partnered also with Germany based Fraunhofer Institute (ISE), IndiaCare and a group of international scientists and engineers who are consulting towards the design of this new CSP technology.

For more information, please visit our website: www.india-one.net or [www.facebook.com / India One Solar Thermal Power Plant](https://www.facebook.com/IndiaOneSolarThermalPowerPlant). Thank you and OM SHANTI

PHOTO GALLERY

the 4th CLEAN ENERGY MINISTERIAL

and

INNOVATION SHOWCASE PAVILION

NEW DELHI, 16th – 18th April, 2013







Confederation of Indian Industry



**IITC Centre of Excellence
for Sustainable Development**

INNOVATION SHOWCASE PAVILION

16 - 18 April 2013 : New Delhi, India

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Exhibitors List

Organization	Staff No.	Organization	Staff No.
Astori T&D India Limited	5	New Energy and Industrial Technology Development Organisation (NEIDO)	1, 2
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