



Newsletter:

Issue 10: May, 2014

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Message from Chairperson

It is my pleasure to lead the FICCI Water Mission for the year 2014. As Chairperson of this prestigious Mission, I look forward to furthering the work initiated during the last three years in close collaboration with the government, industry and the communities.



We will build upon the initiatives already underway, as well as take up new ones in line with the emerging concerns relating to the sector.

The first meeting of the Water Mission Steering Committee for the year 2014, was organised on April 02. We had a detailed discussion on the work plan for the year 2014 and identified three thematic areas – Water Efficiency, Private Sector Participation in Water and Water Stewardship around which FICCI Water Mission would work for this year. I look forward to your engagement and support to take the mission's agenda forward.

The newsletter contains an update of major news items relating to water sector, update on new technology, major news items pertaining to sector, important sectoral reports and information on upcoming programme on water. We hope that you would find the newsletter useful. The secretariat looks forward to your comments and suggestions.

Anita Marangoly George

**Chairperson, FICCI Water Mission and
Director-Infrastructure and Natural Resources
IFC, World Bank Group**

Message from Co-Chairperson



It gives me an immense pleasure to co-lead FICCI Water Mission for the year 2014. I am happy to share with you the tenth issue of FICCI Water Mission e-Newsletter. This newsletter will give you an update on the Mission's work and developments in the water sector at large.

The last month saw the first committee meeting of the year. In order to streamline the work of the mission, three thematic areas – Water Efficiency, Private Sector Participation in Water and Water Stewardship, were identified and a task force has been formed for each area. The task force would meet at regular intervals to discuss the work and monitor the progress of their respective area.

The mission will continue its work on Water Awards and Knowledge Initiative reports to recognise excellence in water conservation and management and to document best practices in water management adopted by corporate sector, with a focus on water intensive industrial sectors.

I look forward to your support so that we are able to take a lead on water issues, forge new partnerships and engage various stakeholders to deliver on our commitments.

Sanjiv Lal
Co-Chairperson, FICCI Water Mission and
Vice President-Corporate Projects
Tata Chemicals Limited

Water Mission Activities

Water Mission Committee Meeting

The first meeting of the Water Mission Steering Committee was organised on April 02, 2014. Ms. Anita Marangoly George, Chairperson welcomed the members and shared the priority areas for the Mission - Water Efficiency, Private Sector Participation in Water and Water Stewardship. The Secretariat shared the work plan and schedule of the activities for this year.

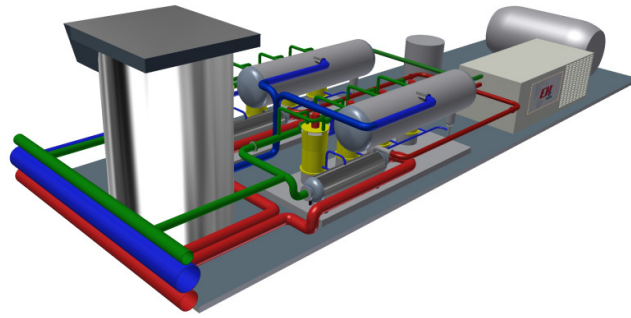


In the meeting, the work under the three thematic areas - Water Efficiency, Private Sector Participation in Water and Water Stewardship was discussed in details and it was decided to have a task force for each of the thematic areas. Nominations were asked from the members of the steering committee for the task force. Mr. Romit Sen, Deputy Director, Centre for International Project Trust (CIPT) would lead the water efficiency task force; Mr. Susnato Sen, Practice Head – Infrastructure, TATA Strategic Management Group would lead the ‘Public Sector Participation in Water’ and Mr. Bastiaan Mohrmann - Head, Water South Asia, IFC and Country Representative India, The 2030 WRG would lead the ‘Water Stewardship’ task force.

Update on Technology

Seawater freezing desalination and ice slurry air conditioning system

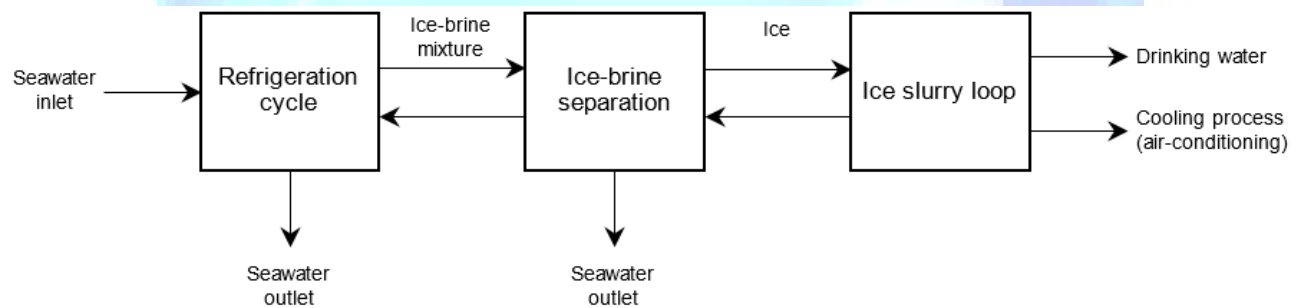
The technology developed by EH2 Solar is based on seawater freezing desalination procedure. The proposed equipment permits ice with salinity lower than 400 ppm to be obtained from seawater by combining refrigeration and ice-brine separation processes in a single integrated unit. Thus, this innovative EH2 Solar concept is able to supply not only clean tap water but also cooled air that can be eventually used for building air-conditioning purposes.



Seawater freezing desalination and ice slurry air conditioning system

A preliminary evaluation of the overall thermodynamics performance of the EH2 system has been performed at École Polytechnique de Montréal. This work was carried out by Etienne Saloux, Ph.D candidate and specialist in energy-exergy analysis under the supervision of Professor Alberto Teyssedou (expert in thermodynamics, heat transfer and thermo-hydraulics).

A simplified schematic of the EH2 Solar system is shown below. Air-conditioning and drinking water are obtained from the desalination of a fraction of the seawater inlet via partial water solidification. Hence, ice is formed by cooling seawater at the evaporator of a refrigeration cycle where seawater serves as the thermal source for both the evaporator and the condensers. The ice-brine separation process takes place by combining the seawater cooling loop with a desalination ice slurry loop. Then, a heat exchanger placed in one of the loops, allows air-conditioning to be achieved by transferring heat to the ice mixture which in turn is transformed into pure clean water. A portion of this water can eventually be used for drinking purposes while the remaining is cooled down to repeat the process.



Schematic diagram of seawater freezing desalination system and ice slurry air conditioning


Thermodynamic validation of the EH2 Solar system has been performed at operating flow conditions provided by EH2 Solar. Mass and energy balances have been applied to each sub-structure (refrigeration cycle, ice-brine separation, ice slurry loop, etc.) and then assembled together

to determine the overall energy performance. Assuming the same efficiency for all heat exchanger, the coefficient of performance (COP) of the refrigeration cycle was found to be around 7.2. The overall COP of the system, by assuming that air-conditioning is the only useful effect, is about 8.2. It is obvious that this value can be slightly higher if the production of drinking water is included in the balance equations. However, a more careful investigation of such complex process will necessitate exergy analyses to be performed.


About Company: EH2 Solar Inc. is an innovation company working in the field of research and development of green technologies. It is specialized in desalination and water treatment by freezing and as a by-product produces cooling and air conditioning.

For more information please visit - <http://eh2solar.com/energy/>


Bulletin Board

 **940 Marathwada Villages reeling under drought** - The water scarcity in Marathwada is turning from bad to worse by each passing day and 940 villages in the region are craving for water. The four major dams are left with literally no water while others are depleting fast. According to the Ground Water Survey Department, the underground water level in these villages has gone down by one metre. These villages include 366 in Aurangabad, 285 in Beed, 205 in Osmanabad, 69 in Latur, 11 in Jalna, 2 in Parbhani and 1 each in Nanded and Hingoli districts

<http://freepressjournal.in/940-marathwada-villages-reeling-under-drought/>


 **Know The Drill Well Before Drilling A Well** - In a bid to check depleting groundwater in the national Capital, Delhi Government's Revenue Department issued a notification making mandatory the registration of all drilling machinery operators and tubewell operators in the national Capital with the Delhi Jal Board (DJB). The Government has also issued a notification, for voluntary disclosure of tubewells/ borewells within three months by the owners/users.

<http://www.dailypioneer.com/city/know-the-drill-well-before-drilling-a-well.html>

 **Wastewater treatment plant at Banganga to ease water woes** – The Brihanmumbai Municipal Corporation (BMC) has built wastewater treatment plant in Banganga wastewater pumping station at Walkeshwar. 15 lakh liter Per day of water is filtered which will be

distributed by May end in Raj Bhavan garden, Kamala Nehru Park, Priyadran garden with State Ministers' garden and other areas in Walkeshwar. First, 5 lakh liter filtered wastewater will be supplied from May 15 to Walkeshwar area by the BMC.

<http://freepressjournal.in/wastewater-treatment-plant-at-banganga-to-ease-water-woes/>

 **Not many takers for water kiosks** - A 20 litre bottle of drinking water for Rs. 3 shouldn't be a hard sell in Delhi, a city that comes to the brink of a water crisis nearly every summer. But a high-tech initiative that provides cheap drinking water through ATM-like kiosks in a resettlement colony is still struggling to win over residents six months into the project.

[http://www.thehindu.com/news/cities/Delhi/not-many-takers-for-water-](http://www.thehindu.com/news/cities/Delhi/not-many-takers-for-water-kiosks/article5950438.ece?utm_source=RSS_Feed&utm_medium=RSS&utm_campaign=RSS)

[kiosks/article5950438.ece?utm_source=RSS_Feed&utm_medium=RSS&utm_campaign=RSS](http://www.thehindu.com/news/cities/Delhi/not-many-takers-for-water-kiosks/article5950438.ece?utm_source=RSS_Feed&utm_medium=RSS&utm_campaign=RSS)
[_Syndication](#)

Upcoming Events

Singapore International Water Week 2014 – Singapore, 1-5 June, 2014

The Singapore International Water Week (SIWW) is the global platform to share and co-create innovative water solutions. Stakeholders from the global water industry gather at SIWW to share business opportunities and showcase the latest water technologies. SIWW is part of the strategic programme of the Singapore Government to grow the water industry and develop water technologies. In line with global water industry trends and opportunities, SIWW 2014 will feature discussions on four themes, namely: Municipal Water, Industrial Water, Integrated City-Environment-Water, and Future of Water.

For more information please visit - <http://www.siww.com.sg/>

2nd Annual International Conference on Water - Athens, Greece, 14-17 July 2014

The Athens Institute for Education and Research (ATINER) hold its 2nd Annual International Conference on Water on 14-17 July 2014, Athens, Greece. The aim of the conference is to bring together academicians and researchers from all scientific subject areas who have done work on water such as Biology, Life Sciences, and Environmental Science; Business, Management, Administration, Finance, and Economics; Chemistry, Physics and Materials Science; Engineering and Medicine; Social Sciences, Arts, and Humanities.

Call for paper – The conference has made a call for paper. The last date for submission of abstract is May 26, 2014.

For more information please visit: <http://www.atiner.gr/water.htm>

FICCI-OECD-ADB-WRG 2013 Joint seminar on Water Risk and Stewardship - New Delhi, India, August 20-21, 2014.

To contribute to positive action on India's agenda of water policy reform, the Organisation for Economic Co-operation and Development (OECD), the Federation of Indian Chambers of Commerce and Industry (FICCI), the Asian Development Bank (ADB), and the 2030 Water Resources Group (WRG) are collaborating to organise a joint seminar on Water Risks and Stewardship in India. The objectives of the seminar are 3-fold:

- Build a common understanding of water risks and risk sharing to promote practical efforts to manage water risks and improve stewardship;
- Provide a platform for policy dialogue by convening various stakeholders (industry, development co-operation agencies, government officials from state and national levels, and NGOs); and
- Draw out lessons learned from water stewardship approaches and recent experience with policy reforms to support the exchange of good practice.

The seminar could potentially serve as a platform for further collaborative engagement.

Sector Report - Safeguarding India's Water Resources: The business case for corporate water disclosure in India

This report, prepared by CDP and KPMG and supported by Grundfos India, demonstrated the business case for corporate water disclosure in India and its role in safeguarding water resources. It is a call for action to policy makers, investors and the business community to take positive action to address the Indian water crisis and create a more resilient future for all.

The report aimed at government, business and investor communities, built the case for corporate water disclosure, and identified the reasons for it being the most effective way to stimulate a rational and coherent business response to the issues of water availability.

The report identified that:

- India faces an impending water crisis as it moves on into the 21st century with the potential to stifle economic growth;
- Water is a critical business issue that deserves serious attention;
- An increasing number of stakeholders are calling for transparent and comparable disclosure of water related information from Indian companies for consideration in decision making;
- Indian businesses are currently underestimating water-related risks due to a lack of effective measurement and monitoring;

Download the report – <https://www.cdp.net/CDPResults/CDP-india-business-case-for-water-disclosure.pdf>

Comments/ queries can be address to –

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