



# INTERNATIONAL CONFERENCE ON EMERGING WATER DESALINATION TECHNOLOGIES IN MUNICIPAL AND INDUSTRIAL APPLICATIONS

*Held in Conjunction with the IDA World Congress 2015*

**August 28-29, 2015**

**San Diego Convention Center**  
111 West Harbor Drive  
San Diego, California 92101 USA

## **Co-Organizers**

- National Water Research Institute (NWRI)
- National Centre of Excellence in Desalination Australia (NCEDA)
- KAUST Water Desalination and Reuse Center (WDRC)

## **Conference Focus**

DesalTech 2015 will focus on research in emerging water desalination technologies for municipal and industrial applications.

Reverse osmosis (RO) has become the conventional seawater and brackish water desalination technology in both municipal and industrial water applications. However, RO is an energy-intensive process with a large carbon footprint. In response, global research and development is focusing on several emerging technologies that are less energy-intensive and offer further opportunities for integration with renewable energy.

These processes include, among others, forward osmosis (FO), membrane distillation (MD), adsorption desalination (AD), and capacitive deionization (CDI). Although these technologies may not replace RO, they provide important niche applications, as well as potential hybrids in combination with other processes. In addition to water production, there is a growing interest in exploiting desalination brines for (salinity gradient) energy production through processes like pressure retarded osmosis (PRO) and reverse electrodialysis (RED). While the municipal market



The DesalTech 2015 conference will be a co-located event held in conjunction with the IDA World Congress 2015, to take place Aug. 30-Sept. 4, 2015 at the San Diego Convention Center. Visit the IDA World Congress 2015 website to learn more: <http://wc.idadesal.org/>.

for desalination is better understood, market forces are at work for desalination applications in industry, most notably oil and gas extraction/production and mining.

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## Conference Program

The two-day conference will feature more than 50 oral presentations and 20 posters focusing on a range of desalination technologies. Please visit <http://www.desaltech2015.com/program.html> to download a PDF of the preliminary program.



*Solar-powered adsorption desalination and cooling (ADC) pilot. Photo courtesy of Prof Ng Kim Choon, KAUST.*

Confirmed speakers include:

### Day One: Plenary Sessions

- Overview and Roadmap for Membrane Process Development in Desalination. Anthony Fane, Singapore Membrane Technology Center.
- Energetics of Desalination. Menachem Elimelech, Yale University.

### Day One: Keynote Presentations

- Forward Osmosis Principles, Trends, and Applications. Tzahi Cath, Colorado School of Mines (CSM).
- Opportunities for Membrane Distillation. Stephen Gray, Victoria University.
- PRO: Should It Stay or Should It Go? Amy Childress, University of Southern California.
- Comparative Assessment of MD Configurations and Modules. Noredine Ghaffour, King Abdullah University of Science and Technology (KAUST).
- RED Principles and the EU (INES) Salinity Gradient Power Network. Frank Neumann, Institute for Infrastructure, Environment and Innovation (IMIEU).
- Biomimetic FO and PRO Membranes. Rong Wang, Singapore Membrane Technology Centre (SMTC).

### Day Two: Plenary Sessions

- Desalination Needs and Opportunities in the Oil and Gas Industry. Samer Adham, ConocoPhillips.
- Polymeric Membranes for Clean Water and Osmotic Power Generation. Neal Chung, National University of Singapore.

### Day Two: Keynote Presentations

- Extraction of Water and Minerals from Coal Seam Gas Produced Water for Beneficial Uses. Neil Palmer, National Centre for Excellence in Desalination Australia.
- Adsorption Desalination (AD). Kim Choon Ng, National University of Singapore and WDRC (KSA).
- The Singapore Commercialization Ecosystem. Harry Seah, Public Utilities Board (PUB), Singapore.
- Challenges in Future Desalination: Brine Management. Seung-Hyun Kim, Kyungnam University.

- Brine Management and Zero Liquid Discharge Options. Tom Pankratz, Water Desalination Report.
- Role of Pressure Retarded Osmosis in the Mega-ton Project. Masaru Kurihara, Toray.

### Co-Located with the IDA World Congress 2015

The DesalTech2015 Conference is scheduled for the **Friday and Saturday (Aug. 28-29)** before the IDA World Congress 2015, to be held by the International Desalination Association (IDA) on August 30-September 4, 2015, at the San Diego Convention Center in San Diego, California.



IDA is the world’s leading resource for information and professional development for the global desalination industry. Since its first Congress in 1987, the IDA World Congress has been recognized as the premier global event in the desalination and water reuse industry.

DesalTech2015 Conference attendees are encouraged to consider attending the IDA World Congress 2015 as it is a unique opportunity combining research and development in desalination and water reuse technology. Discounted prices will be offered for attending both events. More information about the IDA World Congress 2015 can be found at <http://wc.idadesal.org/>.

### Conference Registration Rates

Registrant	Early Registration (USD)	Registration After July 8 (USD)
Full Registration	\$475	\$550
Public Agency/Student/Speaker	\$350	\$425
One-Day Registration (Fri. Aug. 28)	\$325	\$400
One-Day Public Agency/Student/Speaker (Fri. Aug. 28)	\$275	\$325
One-Day Registration (Sat. Aug. 29)	\$275	\$350
One-Day Public Agency/Student/Speaker (Sat. Aug 29)	\$225	\$275

Please visit <http://www.desaltech2015.com/registration.html> to register.

Those attending both DesalTech 2015 and the IDA World Congress are eligible for a discounted registration rate. If you are attending both events, then do NOT register on the web site. Instead, visit <http://www.desaltech2015.com/registration.html> to download the dual registration form, and send your completed form to Ms. Brandi Caskey at [bcaskey@nwri-usa.org](mailto:bcaskey@nwri-usa.org).

## Conference Lodging

DesalTech2015 and the IDA World Congress 2015 will share the same hotels for lodging, which include:

- San Diego Marriott Marquis & Marina (headquarters hotel)
- Marriott Residence Inn San Diego
- Manchester Grand Hyatt San Diego

Please visit <http://www.desaltech2015.com/venue.html> and click on your hotel of choice to book your room. Conference rates are valid only while available and are not guaranteed; please contact the hotel for current pricing. If you have questions regarding lodging please contact Ms. Jaime Lumia at [jlumia@nwri-usa.org](mailto:jlumia@nwri-usa.org).



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## Conference Sponsorship Opportunities

Please consider becoming a sponsor of DesalTech 2015. Register as a sponsor online at <http://www.desaltech2015.com/sponsors.html> or email Jaime Lumia at [jlumia@nwri-usa.org](mailto:jlumia@nwri-usa.org).

Participants from across the globe, representing researchers, academics, manufacturers, consultants, and utilities, will attend this event. Sponsorship opportunities include:

### **"Gold" Conference Sponsor - \$5,000**

#### **Only 2 sponsorships are available.**

Up to four (4) complimentary conference registrations (August 28 & 29)

Promotion as conference sponsor:

- Company logo on conference program as Gold Sponsor
- Prominent logo placement and company description on website
- Company description and contact information in conference program

One (1) skirted 6-foot tabletop exhibit (\$800 value) (optional)

### **"Silver" Conference Sponsor - \$2,500**

#### **Only four sponsorships are available.**

Up to two (2) complimentary conference registrations (August 28 & 29)

Promotion as conference sponsor:

- Company logo on conference program as Silver Sponsor
- Prominent logo placement and company description on website
- Company description and contact information in conference program

One (1) skirted 6-foot tabletop exhibit (\$800 value) (optional)

### **"Bronze" Conference Sponsor - \$1,000**

One (1) complimentary conference registration

Promotion as conference sponsor:

- Company logo on conference program

- Company logo on website
- Company description and contact information in conference program

### **Exhibit Space - \$800**

One (1) skirted 6-foot tabletop exhibit

Logo in program, on exhibitor poster, and on website

1 Full Conference Registration (August 28 & 29)

2 Reception Tickets

If you would like more information on how your organization can sponsor DesalTech 2015, contact Ms. Jaime Lumia at +1-714-378-3278 or [jlumia@nwri-usa.org](mailto:jlumia@nwri-usa.org)

### **About the Co-Organizers**

Since 1991, the **National Water Research Institute (NWRI)** — a science-oriented 501c3 nonprofit — has sponsored projects and programs to improve water quality, protect public health and the environment, and create safe, new sources of water. NWRI specializes in working with researchers across the country with the best available facilities, such as laboratories at universities and water agencies, and are guided by a Board of Directors made up of representatives of water and wastewater agencies in California. NWRI hosts the annual Athalie Richardson Irvine Clarke Prize, one of only a dozen prizes that awards scholarly and practical achievements in water research. To learn more about NWRI, please visit [www.nwri-usa.org](http://www.nwri-usa.org).



The **Water Desalination and Reuse Center (WDRC)** at King Abdullah University of Science and Technology (KAUST) is a globally-active research center focusing on (i) emerging technologies for low-energy and renewable energy-driven desalination processes and hybrids and (ii) sustainable (energy-neutral) wastewater treatment processes for safe reuse. WDRC research is performed along the entire industrial value chain, including process scale-up, with technology commercialization as a driver. Process-related research is underpinned by material science research in developing improved membranes as well as nano-adsorbents and -catalysts. To learn more about WDRC, please visit <http://wdrc.kaust.edu.sa>.



The **National Centre of Excellence in Desalination Australia (NCEDA)** was established in 2010 with funding from the Australian Government's *Water for the Future* initiative to lead research and build national capacity and capabilities in desalination. NCEDA is highly regarded as a global leader in desalination research, with particular strength and relevance in inland water desalination and salt management, as well as small-scale plants. Specifically, NCEDA strives to reduce desalination costs, decrease energy consumption, increase the feasibility of using renewable energy sources, and develop innovative technologies to more efficiently separate salt from water. To learn more about NCEDA, please visit <http://desalination.edu.au/>.



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## Conference Program Planning Committee

- Jeff Mosher, Executive Director, NWRI (USA)
  - David Furukawa, Scientific Director, NCEDA (Australia)
  - Gary Amy, Emeritus Professor, WDRC (Saudi Arabia)
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## For More Information

### Website:

[www.desaltech2015.com](http://www.desaltech2015.com)

### Contact:

#### Registration

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#### Sponsorship/Hotel Accommodations/Travel

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#### Technical Program/Oral and Poster Presentations

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