

# GCC Power and Water Desalination Summit 2011

2<sup>nd</sup> - 3<sup>rd</sup> October 2011, The Doha Marriott Hotel, Doha, Qatar

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## THE PRESTIGIOUS SPEAKER PANEL

**H.E. Dr. Abdullah Al Shehri**  
Electricity and Co-Generation Regulatory, Saudi Arabia  
Governor

**Capt. Abdullah Bastaki**  
Rivoli General Trading and Contracting Co.  
President & CEO

**Ahmed Al-Mazrouy**  
Majan Electricity Company, Oman  
General Manager

**Andy Biffen**  
Hidd Power Company, Bahrain  
Executive Managing Director

**Dr. Corrado Sommariva**  
International Desalination Association (IDA) President  
ILF Consulting Engineers Middle East Managing Director

**Craig Hesser**  
GEOCOGEN AG  
Vice President & Chief Executive Officer

**Dave Pearson**  
Star Refrigeration Ltd  
Director of Innovation

**Dr Fareed M Al-Yagout**  
National Power Company, Saudi Arabia, President

**Dr. Hassan Fath**  
Masdar Institute of Science and Technology  
Professor of Practice - Water and Environmental Engineering

**Joost W. Vermey**  
TEBODIN, Middle East  
Senior Consultant - Water Projects

**Marco Rognoni**  
Saline Water Specialists (SWS)  
Chairman & President

**Dr. Alessandro Trezzi**  
Saline Water Specialists (SWS)  
Division Manager

**Med Seghair**  
Wärtsilä  
Business Development Manager; Power Plants, Middle East

**Mian Ehsanullah Al Khalij Commercial Bank, Qatar**  
Head of Public Sector & Liability Management,  
Corporate Banking Division

**Nizar Kammourie**  
SAWACO Water Desalination  
General Manager

**Peter Nicoll**  
Modern Water plc  
Technical Director

**Richard Menezes**  
UTICO Utilities Group, Ras Al Khaimah,  
United Arab Emirates  
Vice Chairman and Managing Director

**Dr. Simon Nisan**  
NDS International, France  
Chief Executive Officer

**Eng. Suhaila Marafi**  
Ministry of Electricity & Water, Kuwait  
Director, Dept. of Studies & Research

**Sven Christensson**  
Sweden Water Export Company, Sweden  
Chairman & CEO

**Zahir Khalid Suleiman Al-Suleimani**  
Public Authority for Electricity and Water, Oman  
Director General of Projects

Principle Power Partner



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### THE DISTINGUISHED ADVISORY PANEL

**Dr. Abdel El-Zaemey, ILF Consulting**  
Deputy Managing Director - Water and Energy

**Bill Hanbury, ACWA Power**  
Chair of Water & Power Research

**Javier Carrillo, ITT Water Wastewater, Spain**  
Deputy Commercial Director, Water Treatment

**Joost Vermeij, Tebodin Middle East Ltd**  
Senior Consultant Water Projects

**Mohammed Essam, Technology Experts Global**  
Desalination Systems Design Manager

**Mohammed Saud, Bushnak Group**  
Vice President, Projects & Business Development

**Eng. Suhaila Marafi, Ministry of Electricity & Water, Kuwait**  
Director, Dept. Of Studies & Research

### EVENT OVERVIEW

The Gulf Co-operation Council (GCC) States comprise some of the most arid areas on Earth. With minimal internal resources (both surface and groundwater) and minimal precipitation, the region relies mostly on costly desalination processes to generate its drinking water. Evidencing the need of GCC nations to increase their Power and Desalination, recent forecasts suggests that more than \$135bn will be required by 2019 if rising demand is to be met and old infrastructure is to be replaced. Water use in the GCC is the product of both remarkable scarcity and remarkable development. The GCC has about a fifth as much renewable water on average than the rest of the Middle East, but desalination and non-renewable aquifers have largely closed this gap. Overall, GCC countries are facing enormous investments to keep pace with growing water demand. The heart of the challenge is that desalination demand is set to increase on several levels, and with it, the energy required to maintain water supplies. Desalination relies primarily on natural gas, which is an efficient resource but an increasingly hard one to obtain. Other alternatives like nuclear and solar power are efficient but expensive, and no GCC country yet has the proper infrastructure to exploit them effectively. Even for governments that can afford advanced technologies or provide seemingly infinite fossil fuels for desalination, other costs exist. Desalination carries significant capital requirements in addition to operating costs, and its brining effects on source water present environmental challenges that will only grow as desalination itself intensifies.

Fleming Gulf's "GCC Power and Water Desalination Summit 2011" brings together senior officials from the Power and Water sector sharing their expertise and solutions on the current trends and future opportunities in the Power and Water Desalination Industry. We look forward to welcoming you at the GCC Power and Water Desalination Summit on the 2<sup>nd</sup> & 3<sup>rd</sup> Of October in Doha, Qatar.

### KEY TOPICS

- ▶ **Opportunities in the Water Desalination Sector – Saudi Arabia**
- ▶ **"Future Projects in Kuwait"**
- ▶ **Nuclear Powered desalination – Focusing on the necessity of nuclear powered desalination and also the current challenges and the future prospects with regards to the same.**
- ▶ **Future water and power projects in the sultanate of Oman**
- ▶ **Desalination powered by Renewable Energy**

### FIND YOUR REASONS TO ATTEND

- ▶ **How to meet the increase in demand for Power and Water in GCC**
- ▶ **Power and cost optimization in Desalination Plants**
- ▶ **Forward Osmosis technology**
- ▶ **Nuclear Powered Desalination**
- ▶ **Privatization in GCC countries**

### WHO SHOULD ATTEND

Job Titles:

Chief Executive Officers • Chief Operating Officers • Vice President • Director Water Resources • General Managers • Project Managers • Head of Desalination • Plant Manager/Directors • Director Water Projects • Senior Manager • Head of Environment & Research • Chief Engineers • Technical Directors • Quality Managers • Chief Hydrologists • Presidents • Engineering Managers

Institutions:

Water and Power Investors and Advocates • Power and Desalination Utilities • Power Plant Operators and Owners • Desalination Plant Operators and Owners • IWPP Master Developers • IWPP Major Contractors • Government Ministries • Municipal Sector – Water and Power • Industrial Sector – Water and Power • Energy and Nuclear Sector – Water and Power • Original equipment manufacturers

Media Partners:



Day 1, 2<sup>nd</sup> October 2011

**8:20 Registration and Coffee**

**8:50 Welcome Note from Fleming Gulf**

**8:55 Opening Remarks from the Chairperson**  
**Dr. Simon Nisan, NDS International ,France**  
Chief Executive Officer

**9:00 ▶ Keynote Presentation Sustainable solutions to keep supplies ahead of demand**  
• Selection of desalination technology and long term planning  
• Future demand scenarios and related consequences  
**Dr. Corrado Sommariva**  
**International Desalination Association (IDA), President**  
**ILF Consulting Engineers Middle East, Managing Director**

**9:30 ▶ Oman Keynote Future water and power projects in the Sultanate of Oman**  
• Water institutions in Oman.  
• Future water project.  
• New desalination plants.  
• Renewable energy  
**Zahir Khalid Suleiman Al-Suleimani, Public Authority for Electricity and Water, Oman**  
Director General of Projects

**10:00 Self-Contained Sustainable Power Generation and Desalination Projects**  
• Important items in regional planning for power generation and desalination  
• Extra deep geothermal principles  
• The coordination of power generation and sea water desalination  
• The best part is yet to come – the price!  
**Craig Hesser, GEOCOGEN AG**  
Vice President & Chief Executive Officer

**10:30 Morning Coffee & Networking**

**11:00 ▶ Saudi Arabia Keynote Opportunities in the Water Desalination Sector – Saudi Arabia**  
• Economic & Social Indicators  
• Key drivers for water sector demand  
• Challenges, Opportunities & Investment  
• Water Sector Structure & Key Players  
• Market Forecast CAPEX & OPEX  
• Forthcoming Projects in Water  
• Anticipated Investment for The Next 6 Years  
**Nizar Kammourie, SAWACO-Water Desalination, Saudi Arabia**  
General Manager

**11:40 ▶ Kuwait Keynote Future Projects in Kuwait**  
• Additional Power Required Peak Load, Available & Future Capacity 2020  
• Projects to be Tendered by MEW ( Power & Water )  
• BOT Projects (Power & Water)  
• MEW Budget 2011/2012  
• Alternative Energy Projects  
**Eng. Suhaila Marafi, Ministry of Electricity & Water, Kuwait**  
Director, Dept. of Studies & Research

**12:10 Wartsilä Decentralized Thermal Desalination Solution**  
**Med Seghair, Wartsilä**  
Business Development Manager; Power Plants, Middle East

**12:40 Fresh water export**  
**Sven Christensson, Sweden Water Export Company, Sweden**  
Chairman & CEO

**13:00 Prayer Break & Luncheon**

**14:00 Interactive Panel Discussion Exchanging best practices and solutions to optimize power and desalination**  
• What are the key challenges in ensuring efficient development and operation of power and desalination?  
• How operational efficiency of power and desalination plants can be improved in hot and arid regions  
**Moderator:**  
**Nizar Kammourie, SAWACO-Water Desalination, Saudi Arabia**  
General Manager

**Panelists:**

**Dr Fareed M Al-Yagout, National Power Company, Saudi Arabia**  
President

**Eng. Suhaila Marafi, Ministry of Electricity & Water, Kuwait**  
Director, Dept. of Studies & Research

**Med Seghair, Wartsilä**  
Business Development Manager; Power Plants, Middle East

**14:30 Project Finance – A Bank's Perspective**

- Market Snapshot: Opportunities in Qatar & GCC
- Planned Infrastructure Projects in Qatar
- Risk Allocation for a Power / Water Desalination Project
- Success Factors and Risk Considerations: Identify, Manage & Control
- Risk Minimization Process
- Achieving a Successful Financial Close

**Mian Ehsanullah, Al Khalij Commercial Bank (al khaliji) Q.S.C.**  
Head of Public Sector & Liability Management,  
Corporate Banking Division

**15:00 Renewable Energy – Desalination System for Sustainable Development of Small Communities in Remote Area: A Joint R&D Project Proposals**

- Renewable Energy desalination as a future promising alternative for water production in the region
- Proposed joint R&D projects' concepts for the sustainable development of small communities in remote areas

**The R&D projects include -**

- Development of a stand alone agriculture greenhouse-desalination system; self sufficient of energy & irrigating water
- Design & manufacturing of a novel multiple effect, high yield solar still system with salts recovery and zero brine discharge
- Stand alone integrated complex, driven by renewable energy, for the production of water, food, energy & salts
- Newly developed versus conventional membrane and pre treatment systems.
- Renewable energy driven high performance msf and integrated msf/msd

**Dr. Hassan El-Banna S. Fath**

**Masdar Institute of Science & Technology, Abu Dhabi**  
Professor of Practice

**15:30 Afternoon Tea & Networking**

**16:00 Energy Cost for Desalination Evaporation versus reverse osmosis**

**Marco Rognoni, Saline Water Specialists (SWS)**  
Chairman & President

**16:20 Scientific approach beside business in Thermal Desalination (with presentation of SWS)**

**Alessandro Trezzi, Saline Water Specialists (SWS)**  
Division Manager

**16:40 Interactive Panel Discussion**

**Desalination powered by Renewable Energy – Focus on the Future**

- Concentrated solar power for water desalination as well as production of power.
- State of art of renewable energy technologies suitable for application in desalination.
- Environmental implications of desalination technologies and their association with renewable energies.
- Economic and sustainability issues of desalination powered by renewable energy
- Advanced energy recovery systems in desalination plants.

**Moderator:**

**Dr Fareed M Al-Yagout, National Power Company, Saudi Arabia**  
President

**Panelists:**  
**Zahir Khalid Suleiman Al-Suleimani, Public Authority for Electricity and Water, Oman**  
Director General of Projects

**Dr. Hassan El-Banna S. Fath, Masdar Institute of Science & Technology, Abu Dhabi**  
Professor of Practice

**Marco Rognoni, Saline Water Specialists (SWS)**  
Chairman & President

**17:15 Closing Remarks from the Chairperson**

**17:30 Networking & Cocktail Reception**



Day 2, 3<sup>rd</sup> October 2011

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**8:20 Registration and Coffee**

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**8:55 Opening Remarks from the Chairperson**

**Dr. Simon Nisan, NDS International, France**  
Chief Executive Officer

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**9:00** ▶ **Keynote Presentation** **Privatization in GCC countries and Business models**

*Center stage in the overhauling process of Power and Water sector.*

- Funding and financing requirements for major projects in GCC.
- Legal issues concerning development, Law of PPP (Public private partnership).
- Bringing in a strategic alliance partnership to manage water utility services.
- Developments in implementing IWPP / IPP projects
- GCC interconnection agreement – Flexibility to buy power anywhere in GCC.

**H.E. Dr. Abdullah Al Shehri, Electricity and Co-Generation Regulatory Authority, Saudi Arabia**  
Governor

**9:30 Dilemma for Govt. Private partnership in Utilities development - A New Way Forward**

- Present Govt. Private Utilities development
- Change in policy reflecting lowest possible consumer price with highest quality consumer service without subsidy.
- Pro-active development for all partners in the value chain
- Need of the hour in balancing efficiency building as much as capacity building – which supports both the environment as well as economy

**Richard Menezes, UTICO Utilities Group, Ras Al Khaimah, United Arab Emirates**  
Vice Chairman and Managing Director

**10:00 Nuclear Powered Desalination - How desalination can contribute to Nuclear Power programs**

- Requirements for nuclear power and desalination.
- The essentials of nuclear desalination.
- Cost reduction methods in nuclear desalination
- Comparative economics: with and without nuclear desalination
- Perspectives for new nuclear desalination systems.
- Future prospects and challenges of nuclear power and nuclear desalination.

**Simon Nisan, NDS International France**  
Chief Executive Officer

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**10:45 Morning Coffee and Networking**

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**11:15 Issues Relating to Operating an IWPP**

- Staffing
- Plant Performance
- Maintenance Management
- Chemical Supplies

**Andy Biffen, Hidd Power Company, Bahrain**  
Executive Managing Director

**11:50 Solar and Wind in Water treatment & Desalination**

- Solar Energy Applications
- Solar Energy with environment
- Cost Implications
- Speed – Extremely fast installations within minutes

**Capt. Abdullah Bastaki, Rivoli General Trading and Contracting Co.**  
President & Chief Executive Officer

**12:25 Status and Future Prospects of Thermal Desalination Technologies:**

- Current applications of MSF, MED and MVC technologies
- Technology Innovations
- Technology Selection in IWPP's
- Future Prospects for Thermal Technologies

**Joost W. Vermeij, TEBODIN, Middle East**  
Senior Consultant - Water Projects

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**13:00 Prayer Break & Luncheon**

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**14:00 1000 MW Hybrid Solar Thermal Power Station**

- A multi fuel power station with a prime source of Solar thermal energy
- Enhancement of fossil fuel use efficiency
- Environment Friendly Source of Electrical Energy.
- Enhancement on Future technology
- Capping carbon emission
- Land Mark and tourist Attraction

**Ahmed Al-Mazrouy, Majan Electricity Company, Oman**  
General Manager

**14:40 Forward osmosis in the power and desalination sectors**

- How can it be applied and what are its advantages
- Forward osmosis based desalination – a commercial reality in Oman
- Evaporative cooling tower make-up water via forward osmosis
- Key results from these applications

**Peter Nicoll, Modern Water plc**  
Technical Director

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**15:20 Afternoon Tea and Networking**

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**15:50 District Cooling & Desalination – Using Heat Pumps & M.E.D**

- Heat Pumps driving the desalination process
- Proven Technologies
- District Cooling - A viable heat source for desalination delivering 40% savings in water cost

**Dave Pearson, Star Refrigeration Ltd**  
Director of Innovation

**16:20 Interactive Panel Discussion: Future prospects for water & power in GCC countries**

- Future market trends.
- Financing from government/private companies.
- Targeted future plans.
- Projects to expand existing plans to establish new plants.
- Specialized companies in this field that are investing heavily

**Moderator:**  
**Andy Biffen, Hidd Power Company, Bahrain**  
Executive Managing Director

**Panelists:**  
**Ahmed Al-Mazrouy, Majan Electricity Company, Oman**  
General Manager

**Dave Pearson, Star Refrigeration Ltd**  
Director of Innovation

**Peter Nicoll, Modern Water plc**  
Technical Director

**16:50 Closing Remarks from the Chairperson**

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I would like to thank everyone who has helped with the research and organization of this event, especially the speakers for their support and commitment.

**Jason Mendonca, Conference Producer**  
jason.mendonca@fleminggulf.com

Event Info: + 971 4 609 1570, fax: + 971 4 609 1589

email: jason.mendonca@fleminggulf.com, www.fleminggulf.com

## Meet Our Comprehensive Speaker Panel

### **H.E. Dr Abdullah M Al-Shehri, Electricity & Co-Generation Regulatory Authority (ECRA) Governor**

H.E. Dr Abdullah M Al-Shehri is the Governor, and ex-Vice Governor for Regulatory Affairs of the Electricity & Cogeneration Regulatory Authority (ECRA), as well as an ex-Member of the Shura Council. He is a professor of Electrical Engineering and ex-Dean of Graduate Studies and Scientific Research at King Fahd University of Petroleum & Minerals (KFUPM). Dr Al-Shehri received his PhD Degree from Oregon State University in the USA, in 1985, in the area of power systems. He obtained his MSc and BSc degrees in Electrical Engineering from King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, in 1980 and 1978 respectively.

### **Capt. Abdullah Bastaki, Rivoli General Trading and Contracting Co. President & CEO**

Captain Abdullah Bastaki is a leading aviation industry expert in Kuwait. He started his career in 1969 with Kuwait Airways Corporation as one of the first Kuwaiti pilots in the Company. After a number of years became the Operation Director of KAC while being the Chief Pilot to the Amiri Fleet. Abdullah Bastaki retired from KAC in 1997 and started the Abdullah Bastaki Aviation Consulting Office, providing consultation services and general aviation services in Kuwait. He then formed many aviation entities in Kuwait, Middle East, Asia and Africa regions. Abdullah Bastaki inherited Rivoli General Trading and Contracting in 1998. Rivoli has been in existence for over 60 years, and was founded by Ali Akbar Abdullah Bastaki the late father of Mr. Bastaki. Mr. Bastaki has long held a belief that solar energy will be the future of the earth's energy needs, and solar technology will be the fore runner in providing all the earth's needs for future energy. As such he has turned Rivoli into a green company whose purpose is to work in the field of alternative energy. Mr. Bastaki has also foreseen the future shortage of water in the region and as such has teamed up with Trunz, to provide the area with a way to overcome future shortages of water while utilizing alternative energy to provide these needs.

### **Ahmed Saif Al Mazrouy, Majan Electricity Company, Oman General Manager**

Ahmed Bin Saif Al-Mazrouy graduated from Cardiff University (Wales) as an Electrical and Electronic Engineer. He joined Petroleum Development Oman as a Petroleum Engineer then moved into PDO's electrical field as a Coordinator of Electrical Generation, Transmission, Distribution and Remote Control. In 2007 he left PDO and joined the newly created electrical distribution company Mazoon Electricity. In 2008 he was promoted to General Manager of Majan Electricity which is the sister company of Mazoon Electricity. Mr. Mazrouy is very much interested on renewable energy especially solar technology & has presented a number of papers on the same subject.

### **Andy Biffen, Hidd Power Company, Bahrain Executive Managing Director**

Andy has 28 years experience with the development, acquisition and operation of power generating facilities. During his career, he has focussed mainly on International IPPs and IWPPs in regions including; Asia, Australia, USA, Europe and UAE. Andy studied Energy Technology at Aston University, UK and started his career with the Central Electricity Generating Board (UK Power Utility). Since then, he has worked for National Power plc, International Power plc, Innogy plc and ReEnergy Group plc. Andy joined Sumitomo Corporation in 2008 and is currently the Executive Managing Director (EMD) of Hidd Power Company, located in the Kingdom of Bahrain. (Sumitomo Corporation has held a 30% investment in Hidd Power Company since acquisition in 2006).

As EMD of Hidd Power Company, Andy's responsibilities include:

- Ensuring that the Hidd facility it is operated safely and in line with best international practice and procedures
- Representation of the HPC shareholders
- Day to day management of HPC as per the "Project Agreements", "Business Plan" and other board directives
- Provide timely reporting to the HPC lenders and ensure compliance with the debt agreements
- To maximise the commercial performance of the business, taking into account all operational considerations and long term objectives
- Provide executive interface with all HPC counterparties and regulatory bodies

### **Dr. Corrado Sommariva, International Desalination Association (IDA) President**

### **ILF Consulting Engineers Middle East Managing Director**

Dr. Sommariva is a consultant of international reputation. He is presently the Managing Director of ILF Consulting Engineers Middle East and the head of the worldwide desalination activities of ILF. He is presently the President of the International Desalination Association (IDA, 2011-2013). Dr. Sommariva has experience in both thermal, reverse osmosis and waste water system and served in all the major desalination developments in the Middle East in various roles. Dr. Sommariva has a PHD in Chemical engineering from Genoa University and a diploma in management from Leicester University. Dr. Sommariva has been President of the European Desalination Society (EDS), an honorary Professor at Genoa and L'Aquila Universities and has published over 50 papers on desalination leading edge research and economics and published a book on Desalination management and economics. Dr. Sommariva joined ILF in 2009 after working 9 years with Mott MacDonald where he has been leading the desalination and water treatment group as Managing Director of Generation Middle East. In his early career Dr. Sommariva worked in Ansaldo Energia and Italimpianti in various roles in the Middle East.

### **Craig Hesser, GEOCOGEN AG Vice President & Chief Executive Officer**

Craig Hesser was born and raised in the USA, and completed his education and started his career there. He started at Phillips Academy, Andover, Mass. and continued with a B.S. in Chemical Engineering from the University of Kansas, and an MBA at Pepperdine University in California. In addition to the university diplomas, Craig is a certified consultant in SAP and client relationship management. Craig's oil business activities took him from Japan to India and from Finland and northern Canada to South Africa. He gained experience on five continents as an operator, engineer, external consultant, internal consultant, trainer, client/owner major project manager, contractor project manager, engineering manager, operations manager, maintenance manager, facility manager, and corporate manager, and executive. He has worked for or with major oil companies, independent oil companies, start-up petroleum operations, small to world-scale engineering and construction companies, and small to large computer software consulting companies. He has also dealt with governments and governmental agencies and has been responsible for permitting activities for various facilities. Craig also has experience with management of power generation facilities as utilities within refineries, as cogeneration facilities, and as stand-alone operations using conventional and alternative fuels. Craig is Vice President and CEO of GEOCOGEN AG (Cham, Switzerland) and a member of the board. His responsibilities are for technical sales, technical product development, project development, on-site project management, ground-level installations and operations, client training, and Internet operations.

### **Dave Pearson, Star Refrigeration Ltd Director of Innovation**

Dave Pearson joined Howden Compressors in 1996 Later moving to Star Refrigeration in 1989 he worked in the design team and then for 4 years as General Manager of Starfrost, a spiral freezer subsidiary of Star Refrigeration. Returning to Star in 2008, his work has largely been in heat recovery applications, including the World's Largest Natural Fluid District Heat pump. "Neatpump" It was this work that led to the novel consideration of harnessing the waste heat from district cooling in desalination processes. "NeatDesal". Dave is a dual graduate from the University of Strathclyde in Glasgow, Scotland. His Mechanical Engineering thesis was on the phase-out of R22. His masters thesis for the M.B.A. course is titled "Innovation and New Product Development". As part of this work in Innovation, Dave has been closely involved in the expansion of Star's international business. Deploying several models for different products and markets, Dave based this approach on "empathy". "Strategising and finding a win-win situation is what it is all about".

### **Fareed Al-Yagout, National Power Company President**

Dr. Fareed graduated at King Fahd University of Petroleum & Minerals (KFUPM) with a BSc degree in Applied Mechanical Engineering and master Degree in Business Administration, also enrolled for PhD Program in University of Science in Malaysia. In a career spanning more than 25 years in the Power and Desalination Sector, he has worked in the Saudi Electricity Company (SEC) and Saline Water Conversion Corporation (SWCC) before assuming his present position as the President of National Power Company (NPC) since 2003. Dr. Fareed is a Board Member in National Power Company (NPC), Jubail Energy Company (JEC) and Industrial Gases Company (IGC), also as a technical advisor for Al-Zamil Group Holding Company. Dr. Fareed is an active of various social activities, both national and international, Executive Director for Al Basar International Foundation (the World Health Organization programs for Blindness prevention in Asia and Africa), Board member for Isra University in Pakistan and Al-Ihsan University in Bangladesh, and Board member for Makkah Ophthalmology College in Sudan.

### **Prof. Dr. Hassan Fath, Masdar Institute of Science and Technology Professor of Practice - Water and Environmental Engineering**

Prof. Dr. Hassan Fath has wide academic and industrial experience in desalination & energy technologies. Currently he is the Professor of Practice at Masdar Institute of Science and Technology. Prior to that Dr. Fath was a Professor in Alexandria University (Egypt) and Visiting Professor at the following institutes: King Abdul Aziz University, (KSA), Qatar University, University of Beirut and University of Technology (Iraq). Dr. Fath is the author of two filed patents in MSF-MED desalination technologies. He has published a book entitled „Desalination Technology“, and is the co-author of the Encyclopedia of Desalination & Water Reuse (DESWARE) and author of „Selections of Desalination Scientific Encyclopedia“ (in press). In addition he has published over 100 papers in desalination and energy technologies. Dr. Fath also has a significant industrial and engineering experience, having worked for Atomic Energy of Canada Limited (AECL) and Ontario Hydro (Canada); Saudi Arabian Marketing and Refining Co. (SAMAREC/ARAMCO), Consolidated Electricity Company (SCECO-W), and Saline Water Conversion Corporation (SWCC), Saudi Arabia; and the leader of new thermal desalination processes, Doosan's Water Research and Development Center, UAE. Courses/Teaching interests: Desalination, Thermo-fluids

### **Joost W. Vermey, TEBODIN, Middle East Senior Consultant - Water Projects**

Over the past 25 years, he gained extensive experience in consultancy, design and engineering, and commissioning of water and wastewater treatment plants, and industrial water supply systems. In the field of desalination plants, he has carried out consultancy and engineering assignments related to MSF, MED, MVC and RO plants for more than 20 years in The Caribbean, The Netherlands and The Middle East. He has been a resident of Abu Dhabi, U.A.E. since 2002. On thermal desalination plant projects he has acted as Owner's Engineer on the Taweelah-A1 IWPP MED desalination plant in Abu Dhabi, the Sohar IWPP MSF plant in Oman, and the Mukhaizna vertical tube falling film MVC plant in Oman. Other implemented desalination plant projects on his list include the MED plants at Botlek, Netherlands, Alba, Bahrain, and RO plants in Botlek, Netherlands, Sharjah, UAE, Mukhaizna, Oman.

Event Info: + 971 4 609 1570, fax: + 971 4 609 1589  
email: jason.mendonca@fleminggulf.com, www.fleminggulf.com

## Meet Our Comprehensive Speaker Panel

### **Marco Rognoni, Saline Water Specialists (SWS)** Chairman & President

Italian National with international experience, mainly in the MENA countries. Doctorship in Chemical Engineering awarded in Italy in 1969. MBA awarded in Italy in 1974. In the sea water desalination field since over 25 years, as Managing Director of Sowit (Italy) till 1997, with over 25 desalination plants designed and delivered. Founder of SWS in Italy in 1997 and chairman of it, with executive control of over 12 desalination units fabricated and supplied since then. Founder of SWS&GB in India in 2005 and chairman of it. Well known by the international scientific community, is considered among the top experts of thermal processes for desalination. Author of several scientific papers about evaporative desalination, and of patents applicable to it. Author of a comprehensive book about sea water desalination. Deep knowledge of the application of renewable energy to the desalination processes and of the recovery of the waste thermal energy in Power Plants, Refineries and from the ocean, with innovative technologies and plants successfully delivered and tested. Member of the European Desalination Society, of the Indian Desalination Association and of the International Desalination Association.

### **Dr. Alessandro Trezzi, Saline Water Specialists (SWS)** Division Manager

Italian National with international experience, mainly in the MENA countries. Doctorship in Chemical Engineering awarded in Italy in 1998. In the sea water desalination field from over 12 years since the career start up as process engineer in SWS. Process and project engineer for over 12 desalination units fabricated and supplied since then, among over 40 water treatment plants of other technologies like Ion Exchange Units and Vacuum Deaeration. Up to date General Manager of SWS, after having been Proposals and Sales Manager in the same company. Co-author of several scientific papers about sea water desalination, and of patents applicable to it. Deep knowledge of the desalination processes as well as different water treatment and condensate treatment processes.

### **Med Seghair, Wärtsilä** Business Development Manager; Power Plants, Middle East

Med is holding a Bachelor's degree and Master of Sciences in Electro-Mechanical Engineering from the Polytechnical Institute of Saint Petersburg. Having more than 20 years in the company, he has a wide experience from reciprocation, and combustion engines design, power plant design & project delivery management and operation & maintenance of power plants operating on gas or liquid fuel, cogeneration, reliable energy supply. Med has been involved in the development of the District Heating and cooling and Power supply concepts and has spent more than 18 years in Europe East and West, Russia, CIS, and many years in Turkey selling Power Plants for private industries, IPPs and Utilities with installed plant capacities up to 300 MW.

### **Mian Ehsanullah, Al Khalij Commercial Bank, Qatar** Head of Public Sector & Liability Management, Corporate Banking Division

A seasoned MBA with over 22 years of diverse banking experience spanning commercial, investment & development banking, of which 15 years is in Qatar. Expertise includes Syndicate & Club Financing, Corporate Finance Advisory, Financial Restructuring, Islamic Finance, Marine Finance, Contracting Finance, Remedial Management and Liability Management.

### **Nizar Kammourie, SAWACO Water Desalination** General Manager

Mr. Kammourie has developed SAWACO-Water desalination, Saudi Arabia's first private water utility, for Saudi Brothers Commercial Group in 2000. Under his management, SAWACO has quadrupled its desalination output capacity to 40,000 m<sup>3</sup>/day extended its operating model to include BOT concessions. Mr. Kammourie heads several companies: CEO of Suido Kiko Middle East, an EPC contractor in the water treatment sector, Managing Director of Chemsbro, the chemical service company that supports the water treatment industry across the GCC. Mr. Kammourie is Business Development Director of Saudi Brothers Commercial Group and is involved in developing several industrial initiatives for Saudi Brothers Commercial Group.

### **Peter Nicoll, Modern Water plc** Technical Director

Peter Nicoll leads the multi-disciplined technical team at Modern Water where he has been instrumental in the planning, development, deployment and implementation of the Company's patented forward osmosis process. He has extensive experience in the design and operation of large desalination plants, business development, sales of capital equipment and professional services throughout the world. Peter is a Chartered Engineer and a Fellow of the Institution of Mechanical Engineers. His previous experience includes Director of Business Development for Fichtner Consulting Engineers and he has held a number of senior roles both technically and commercially at Weir Westgarth.

### **Richard Menezes, UTICO Utilities Group, Ras Al Khaimah, United Arab Emirates** Vice Chairman and Managing Director

Vice Chairman and Managing Director of Utico Group, with over 20 years of Utilities experience. He has a B.Sc in Chemistry among various Diplomas. He has been actively involved in design, engineering, installations, operations and maintenance and Utilities Projects Development for many years. Arguably the First DBOO project in the Middle East was developed and led by him in 1996 for the Sohar Port. The largest privately owned Full Service IWPP consisting of 110,000m<sup>3</sup>/day SWRO, 70MW power plant, 120KM Transmission and distribution network, chilled water system in the ME is being done by Utico led by him.

### **Dr. Simon Nisan, NDS International, France** Chief Executive Officer

Dr. Simon NISAN is the Chief Executive Officer of his company, NDS international. He has been up till recently the Chargé d'Affaire, Nuclear Desalination and Chief Engineer at the French Atomic Energy Commission (CEA). He is a well known IAEA expert for nuclear desalination, small and medium sized reactors and economic evaluations. He was also Member and Chairman of IAEA's elite group INDAG (International Nuclear Desalination Advisory Group). He has prepared two IAEA TECDOCS on Nuclear Desalination: TECDOCS 1524 and 1561. He is the author of more than 50 papers on various subjects on nuclear desalination. He has been the technical advisor and expert to several international projects on nuclear desalination: the Franco-Tunisian project TUNDESAL whose results convinced the Tunisian government to opt for the nuclear systems in 2020; the Franco-Moroccan project AMANE for the feasibility of nuclear desalination for Agadir and Laayoun sites; the Franco-Libyan project LIBNDS for the feasibility of nuclear desalination systems for a site near Tripoli, The Franco-Indian collaboration in the field of nuclear desalination. He was also the coordinator of the EU commission's 5th FP project, EURODESAL, with the participation of 7 EU and Canadian partners. He has also been very active in the field of transfer of technology to the developing countries. He thus led a group on technology transfer for the Federation for the Respect of Man and Mankind, working under UNESCO. He speaks fluently French, English, German and Italian. He is now learning Arabic and Hindi. More bio-data about him can be obtained from Marquis's WHO is WHO in the World (22nd edition, 2005) or through his blog:  
www.simon-nisan.com

### **Eng. Suhaila Marafi, Ministry of Electricity & Water, Kuwait** Director, Department of Studies & Research

As the Director of Studies and Research Dept. at the Ministry of Electricity & Water in Kuwait, Eng. Marafi is responsible for long & short term planning by reflecting annual increase in population & the projects planned by housing & Industrial Authorities on the future energy and water demand in order to avoid any shortage in either Power or Water. Eng. Marafi's previous experience includes Electrical Network Dept. - Design Engineer at the Ministry of Electricity and Water in Kuwait; US Army Corps of Engineers for the Kuwait Emergency Recovery Organization „KERO“; Council of Ministers at Divided Zone Agreement Team, New Khairan City“  
She is currently active as:

- Ministry Coordinator With KNPC for the New Refineries
- Committee Member With Public Authority for Housing Welfare - for pre-qualification of local & international consultant for new cities
- Committee Member for investigating the causes of power shortage during summer 2006
- Committee Member of Tarsheed campaign ( Saving Energy )
- Committee Member - Abdaleya Project for Solar Energy Combined Station
- Committee Member KISR Workshop - Energy Sector
- Committee Member - Kuwait National Nuclear Energy Committee
- Committee Member - Kuwait National Nuclear Energy Committee
- Committee Member - Kuwait Team for Renewable Energy Committee

### **Sven Christensson, Sweden Water Export Company, Sweden** Chairman & CEO

Sven Christensson born 1969, is the founder and President of a number of companies and projects in Sweden. Often the topics is about developing projects and Mr. Christensson has the commission from the governing of Sweden. Mr Christensson also works in many other countries and the the Global Water Shortage made him take action in this subject.

### **Zahir Khalid Suleiman Al-Suleimani, Public Authority for Electricity and Water, Oman** Director General of Projects

Mr. Zaher Khaled Al Sulaimani (Omani) Director General of projects in the public authority of electricity and water he assumed this position in April 2008 before that he was Director General of Water Resources Assessments in the Ministry of Regional Municipalities and Water Resources Sultanate of Oman since June 2006 after serving 3 ½ years as Director-General of Water Resources Affairs in the Ministry of Regional Municipalities, Environment and Water Resources since March 2003. Before that he was Deputy Director-General of Water Resources for 6 years that was after serving 3 years as Director of Research Department, in the Ministry of Water Resources since October 1994. Prior to his positions in the water sector he was a Geologist in the former Ministry of Petroleum & Minerals for almost 12 years, He is founder member and president of the Oman water society, member of the Historical Association of Oman, founder member of the Geological Society of Oman, Country Technical Representative in the Middle East Desalination Research Center, Secretary of the Water science technology Association, member of the Environment Society of Oman, international water association and international Desalination association. His degrees in geology are from Qatar University ( Bsc. ), Bern University (M.Sc.). His current interests focus on enhancing the principle of the integrated water resources managements and its applications, monitoring the climate change and its impact on the water resources and environmental systems.



Event Info: + 971 4 609 1570, fax: + 971 4 609 1589  
email: jason.mendonca@fleminggulf.com, www.fleminggulf.com

## Meet the Solution Providers

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GEOCOGEN AG is a technology transfer and service company that has been established to assume the marketing, sales, design, procurement, project management, and service responsibilities for the GEOCOGEN product line from ICEC Holding AG, the parent company. GEOCOGEN AG is continuing with the initiation and development of additional products, and with further development of the original GEOCOGEN Power Plant project concept. Presently, concentrated sales efforts are taking place in the Arabian Peninsula and other Middle Eastern Countries, Switzerland, other parts of Europe including the Balkans, the Indian Sub-Continent, and Asia. GEOCOGEN AG's home office is in Cham (Canton Zug), Switzerland.

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### Gold Sponsor

Utico is a Utilities Company specializing in Water, Power, Waste Water, Steam and related Utility services for clientele requiring reliable and low cost supply of Utilities. Utico is a subsidiary of the prestigious Ghantoot Group of companies a privately owned 2 Billion US Dollars business conglomerate. Utico is the Largest Private Utilities Company in the UAE serving a population of 80,000 in RAK and Abu Dhabi for the Govt. and Private Sectors. Utico serves an industrial area of nearly 400 industries, one sea port, one 18 hole Golf Course, 3 Hotels, nearly 4000 residential units and an area of approx. 500sq.Km with Transmission Lines of 60Kms and nearly 100kms of Distribution network, storage tanks and pumping stations. SCADA and central monitoring centre is also under implementation. We have a 24 hours customer service centre with linesmen, Billing and collection centre, A dedicated Quality control centre and third party laboratory services, tank cleaning and sterilization services to provide the best Utility service experience to our consumers. We operate within the Govt. Tariff rates and operate on a 24x7x365 basis with a team of dedicated staff of over 60 engineers and 100 technicians and administrative staff.

**Utico**  
THE UTILITY EXPERTS

### Gold Sponsor

Star Refrigeration. UK's largest independent refrigeration contractor. Founded in 1970 they have evolved at the forefront of technological changes. As early pioneers of low charge, leak tight ammonia systems they were able to expand and became the contractor for the first CO2 refrigeration system in modern day Britain. Star has delivered the world's largest natural working fluid district heating system (Neatpump) which cools 8C seawater to heat a city with water at 90C. The NeatDesal system can deliver district cooling whilst capturing the solar energy recovered from the city to deliver desalinated water at 40% less cost than reverse osmosis.

**STAR**  
REFRIGERATION

### Gold Sponsor

Sofinter is an integrated group of highly specialized companies operating in the sector of steam and power generation using various fuels, biomass and municipal and industrial waste. The companies operate in accordance with the most stringent environmental regulations in force. The group includes:  
Ansaldo Caldaie: a world leader in the production of power boilers that use traditional fuels, biomass and municipal solid waste.  
Macchi: a world leader in the production of co-generation boilers for industrial and process plants.

**Sofinter** s.p.a.

### Gold Sponsor

SWS: worldwide supplier of sea-water desalination plants and water treatment units as utilities to the Power and Oil & Gas Industry. Europower: an Italian leader in the implementation of medium size, 10 – 50 MW, cogeneration plants. Itea: owner of a very innovative technology for the safe destruction of toxic waste with the simultaneous generation of steam and/or energy with high efficiency. Ecoengineering Impianti: implements plants for the treatment of municipal solid waste and sludge treatment with gasification technologies. Commissioning Italia: Technical assistance, supervision and commissioning of power generation, water treatment and waste to energy plants; Global Service. SWS is the engineering division operating in the field of industrial plants and equipment for the production of boiler feed water and the treatment of the process water and condensates. Based on its proprietary know-how, SWS designs and supplies the following plants and equipments:

**SWS**  
DESALINATION  
TECHNOLOGIES

- Sea Water Thermal Desalination Units
- MSF, MED, MVC process
- Deaerators
- Thermal HEI deaerators
- Vacuum deaerator packages
- Water Treatments
- Demineralization (by Ion Exchange)
- Filtration, Deoiling, Chemical conditioning
- Condensate Treatments
- Polishing (by Ion Exchange)
- Deoiling
- Fine Filtration

SWS proposes its products worldwide to the EPC contractors and to the end users in the markets of the power generation, oil & gas and petrochemical industry. Up to date, SWS had developed jobs all over the world. Reference List and details relevant to each of the references are available upon request. SWS plants can be arranged as package units delivered on ExWorks, FOT, FOB, CIF, DDU, DDP basis according to any customer preference. Turn-key supplies are also available whenever the customer is the end user, in partnership with a job to job selected local erection contractor. SWS operates in strict compliance with a quality system which is certified ISO 9001. Moreover, SWS is committed to pursue an effective policy for the environment protection, the same quality procedures are taking care of the ambient impacts during both the design and the production phases of the equipment, controlled by severe internal audits and intensive surveillance on the

activities of the subvendors. SWS enjoys a complete scientific know-how in the field of the water and its applications. The full range know-how on water treatments makes of SWS an ideal contractor or partner for those projects involving water treatments of any technology and starting from any water source. Integrated Solutions involving both water treatment and steam generation are also available from Sofinter by combination of its divisions and companies, covering an extended but homogeneous scope of supply to be approached as a single project with single job management and single interface to the Clients.

### Silver Sponsor

Dow Water & Process Solutions is a leading purification and separation technology supplier, offering customers advanced ion exchange and membrane technologies that make water safer, cleaner and more available; food better; and pharmaceuticals more effective. In doing so, we enable the success and well-being of both customers and the millions of people they serve.

**DOW**

### Principle Power Partner

Wärtsilä power plants, for power generation only or for combined heat and power generation, range in size from one MW up to hundreds of MW:s and are based on single or multiple engines from Wärtsilä's range of reciprocating engines. These engines offer the large advantage of fuel flexibility since they have the ability to run on a wide range of gases and oils, even liquid biofuel. The engines can also be converted from one fuel to another if the need arises. Wärtsilä is a leading supplier of flexible power plants for the decentralized power generation market. Wärtsilä offers solutions and engines for flexible baseload operation, grid stability and peaking services and for industrial self generation, including specific solutions for the oil & gas industry. In addition, Wärtsilä's decentralized power plants offer high simple cycle efficiency, also at partial loads, operational flexibility, rapid start-up and high availability and reliability. In short, Wärtsilä reciprocating engines provide an interesting and competitive alternative to the conventional model of centralized power plants. Wärtsilä has a long history and extensive experience in the design, building and turn-key supply of power plants, executing over 100 power plant projects each year. At the end of 2009, Wärtsilä had more than 43 GW of power installed in power plants in 166 countries around the world.

**WÄRTSILÄ**

### Official Water Export Partner

Sweden Water Export. It was 1903 when the Christensson family began trading and shipping flammable oils. For more than a century now, the family has run a variety of businesses at sea. The managing director of Sweden Water Export has also been involved in aid work in several developing countries. Shortages of clean water around the world have become so acute that the company's managing director decides to start Sweden Water Export, with a vision of 'Water for all nations'. We believe we have what it takes to deliver on that vision. Everything from the water resource in almost unlimited quantities, to skilled engineers and contractors who can provide assistance from start to finish.

**SWEDEN WATER EXPORT**

### Associate Sponsor

Toray Industries, Inc. (TORAY) is a leading manufacturer of membrane products for the water industry with a global presence. The product line includes Reverse Osmosis and Nanofiltration spiral wound membrane elements for seawater- and brackish water desalination and for waste water post-treatment, in all industry standard sizes 16", 8", 4" and 2,5" diameter, Membrane- Bioreactor (MBR) membrane modules with PVDF MF flat sheet membrane for municipal and industrial wastewater treatment and/or reclamation, Micro- and Ultrafiltration hollow fiber PVDF membrane modules (pressurized and submerged types) for surface water- and waste water filtration and for seawater RO pretreatment. With a strong focus on research and product development TORAY continuously extends its technology and quality leadership in both product design and quality as well as manufacturing capacity and quality standards. Plants in Japan, USA and Asia provide modern manufacturing capacity for fast and reliable global delivery. TORAY regional offices in Dubai and Riyadh are offering design-projection support and technical services for start-up assistance, performance monitoring through online normalization software, staff training, trouble shooting and maintenance for RO, MF/UF and RO systems. Products are readily available from stock in Jebel Ali Free zone. www.toraywater.com

**TORAY**  
MEMBRANE EUROPE

### Associate Sponsor

Rivoli General Trading and Contracting a company that was established in 1955 by its original founder Ali Akbar Bastaki. The company's name back then was Ali Akbar Abdullah Bastaki Trading and Contracting. It was one of the first general trading and contracting companies located in Kuwait. Under its management Ali Akbar Abdullah Bastaki General Trading and Contracting held different international agencies, namely BMW, NSU Prince and other German cars, Persil, and others. They had started one of the first beverage bottling plants in Kuwait for KamaCola and Kamafruit beverages. As well as Bastaki Garage, this is one of the largest garages in Kuwait for repairing cars. The company also had other brands under its management and opened a retail store named Rivoli located in the heart of Kuwait's textile market. Other branches were later opened around the gulf and are still in operation to this day. Its name was later changed to Rivoli General Trading and Contracting, in order to associate better with the history it founded. The company was taken over three years ago by Captain Abdullah Bastaki (the eldest Son of Ali Akbar Bastaki) and his son Fadi Bastaki to lead the company in a new direction and seize on the abundant opportunities in which Rivoli General Trading and Contracting is in a position to secure. It has shifted its business focus to expand in the green technology segment and is actively pursuing new and exciting technologies to help sustain a greener planet. Rivoli is being managed by Capt. Abdullah Bastaki and two of his sons Mr. Fadi Abdullah Bastaki and Mr. Tareq Abdullah Bastaki.

**الدولة العامة للخدمات والتجارة**  
Rivoli General Trading and Contracting