

Exploring innovative cooling technologies for a sustainable future

# 6th Annual Middle East & District Cooling &

10 -11 November 2014 | The Ritz-Carlton, Doha, State of Qatar



### THE ESTEEMED SPEAKER & PANEL MEMBERS



H.E. Ahmad M. Bin Shafar, Chief Executive Officer, EMPOWER UAE



Dominic McPolin Chief Planning Officer, Central Planning Office Ministry of Works, Bahrain



Ghazi El Sherif Environmental Affairs Expert Public Works Authority (Ashqhal), State of Qatar



George Berbari
Chief Executive Officer
DC Pro Engineering, UAE



**Guillaume Bourtourault**Chief Executive Officer **FAFCO SA, Switzerland** 



Ammar S Hammad
Director
Vista Automation, UAE



**Heikki Lahdenperä**Chief Executive Officer, **Chiller Oy Finland** 



Herbert Pohl
Chief Executive Officer
RG Thermal Energy Solutions,
UAE



Jim Phene, Director Business Development, Europe, Middle East & Africa, LAKOS Separators and Filtration Systems, USA



Kamal Taj, Head of Mechanical Engineering Department, KEO International Consultants, Qatar



Mohamad Jaroudi General Manager - Sales and Marketing Future Pipe Industries Qatar



Moawia Dafaalla Senior Project Manager – Engineering Lusail Real Estate Development Company



Senior representative **Regulation and Supervision Bureau, Dubai** 



Salah Nezar Sustainability Director Qatar Project Management, State of Qatar



Dr. Saud Abdul Ghani
Head of the Mechanical and
Industrial Engineering
Department, Qatar University,
State of Qatar



**Mohamed Elweshahy, PMP**Senior MEP Manager **Hill International, Qatar** 



Monis Mosfi Chief Executive Officer City Cool



Eng. Abdallah O Bdeir, Chairman, Head of Technical Development Committee & Member of the Founding Board, Jordan Green Building Council



**Tristan Robert**Deputy President, Sales & Marketing Director **Cryogel, France** 





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INDUSTRY HIGHLIGHTS 2014 TO BE ADDRESSED AT THE

### 6<sup>TH</sup> ANNUAL MIDDLE EAST DISTRICT COOLING SUMMIT

- ♦ EFFICIENCY OF DISTRICT COOLING VS TRADITIONAL ACADVANCES in Pumping and Piping Technologies for Adaptive District Cooling Networks - Cost benefits & long term
- **ENERGY SAVINGS through District Cooling methodologies** and approaches in the GCC countries
- District Cooling AUTOMATION TECHNOLOGIES
- SUSTAINABILITY AND GREEN BUILDINGS
- THE IMPLEMENTATION OF RENEWABLE ENERGY IN DISTRICT **Cooling Networks - Road map and future prospects**
- Cost & PRICING POLICIES in the region -Impact on Customer/ end user
- IMPLEMENTATION AND EFFECTIVE USAGE of treated sewage effluent (TSE) in District Cooling and impact on the environment
- Stadium Air conditioning & Outdoor cooling
- BENEFITS & VIABILITY of DC to the end user
- **TRIGENERATION** The next evolution to District Cooling?

### **KEY TECHNOLOGY** HIGHLIGHTS 2014

- THE POTENTIAL OF USING SOLAR A/C for district cooling
- THERMAL ENERGY STORAGE for Efficient District Cooling - Economic benefits and advancements in different technologies
- VALVE SELECTION for District Cooling plants
- THERMAL ICE STORAGE for DC plants
- **C**OOLING TOWERS AND CHILLERS
- Advances in Pumping and Piping Technologies for Adaptive District Cooling Networks - Cost benefits & long term

### ATTENDEE PROFILE

- **Director Generals**
- Founders, Presidents, Chief Executive Officers and **Managing Directors**
- **Chief Planning officers**
- **General Managers**

LINF:

- **Power Plant Managers**
- Project & Technical Directors
- Head of contracts and procurement
- **Operation and Maintenance Directors/ Managers**
- **Environment experts and scientists**

### THE ADVISORY COMMITTEE

### **Dominic McPolin**

Chief Planning Officer

**Central Planning Office** Ministry of Works, Bahrain

### **Ghazi El Sherif**

**Environmental Affairs Expert** 

Public Works Authority (Ashghal), State of Qatar

### **George Berbari**

Chief Executive Officer

DC Pro Engineering, UAE

### Salah Nezar

Sustainability Director

**Qatar Project Management, State of Qatar** 

### Hisham Hajaj

Program Manager- Projects, Aljazeera Network

Vice President, ASHRAE Qatar Oryx Chapter, State of Qatar

### **Dr. Saud Abdul Ghani**

Head of the Mechanical and Industrial Engineering Department **Qatar University, State of Qatar** 

### **INDUSTRY SECTORS AT THE**

### **6TH ANNUAL MIDDLE EAST** DISTRICT COOLING SUMMIT

- Ministries & Government authorities in the Power & Water sector
- Government bodies responsible for regulations
- **Master Planners and developers**
- Trigeneration, Cogeneration, Combined Heat & **Power Companies**
- Power and DC Plant operators & Owners
- Modular & Standalone District Cooling Projects
- Investment Banks financially investing in DC projects
- **Power Plant Projects**
- **EPC Contracting companies**
- **Build, Own, Operate and Transfer Projects**
- **Engineering & Design Consultancies**
- Legal and technical advisories
- **Research Institutes & Universities**
- **Public Power and Water Companies**
- **Private Water and Electricity Companies**
- **Regional Municipalities Power and Water**
- **Engineering and Design Consultancies**
- Financial, Legal and technical advisories **Industrial Sector - Power and Water**
- Technology and solution providers

**BOOKING** 







### 10<sup>TH</sup> NOVEMBER 2014



### **REGISTRATION AND COFFEE**



#### **WELCOME NOTE - FLEMING GULF** 9:00

#### **OPENING REMARKS - CHAIR** 9:05

► INAUGURAL ADDRESS District Cooling for sustainable 9:10 growth and focus on the environment - Focus on the

> H.E. Eng. Essa bin Hilal Al Kuwari | President Qatar General Electricity and Water Company "Kahramaa" (invited)

► OPENING KEYNOTE PRESENTATION Status of District Cooling in the region and prospects for future

> **Ibrahim Mohammed Al Sada** | Manager, District Cooling Services Department | Qatar General Electricity and Water Company "Kahramaa" (invited)

#### **▶ KEYNOTE ADDRESS** 9:30

H.E. Ahmad M. Bin Shafar | Chief Executive Officer **EMPOWER UAE** 

### **LEADERS & STAKEHOLDERS OPEN DIALOGUE PANEL:** The future of District Cooling with Tri-generation, Cogeneration & Integration of Renewable energy



- Is tri-generation and co-generation a promising alternative to conventional cooling systems
- What about thermal energy storage and absorption chiller technology?
- Cooling integrated with renewable energy Feasibilty study & future prospects
- Investement opportunities and financing of projects for efficient District Cooling projects in the region
- Sustainability, energy efficiency and reduction in CO2
- Geothermal cooling Is it an option to the region? **PANEL MEMBERS:**

H.E. Ahmad M. Bin Shafar | Chief Executive Officer, EMPOWER UAE Ibrahim Mohammed Al Sada | Manager, District Cooling Services Department - Qatar General Electricity and Water Company "Kahramaa" (invited)

Dominic McPolin | Chief Planning Officer, Central Planning Office Ministry of Works, Bahrain

George Berbari | Chief Executive Officer, DC Pro Engineering, UAE

### 10:20 MORNING COFFEE, EXHIBITION TOUR & NETWORKING RECEPTION



### 11:00 Improving power generation efficiency through employment of district cooling

- Power Security and District Cooling Efficiency in the GCC
- Case studies for demonstrating the efficiency of combined power, fresh water, and cool tri-generation in the region
- Feasibility of advanced dynamic integrated power/cool metering infrastructure in the GCC countries
- Simulation tools for optimization of energy conservation in District cooling projects.

George Berbari | Chief Executive Officer

DC Pro Engineering, UAE

### 11:25 Regulations standards & guidelines supporting District Cooling technology in the Arab world

- The role and support of Government Authorities for the implementation of District Cooling
- Code of practice & District Cooling Licences
- Updates on the regulatory framework and policies in District
- · Government benefits Vs User benefits Senior official | Regulations & Supervision Bureau (RSB), Dubai, UAE

### **Control of Thermal Energy Storage in District Cooling Plants**

- Thermal Energy Storage Basics of Implementation
- · Control of Energy Storage and Consumption
- Design Considerations for Optimal Control

Ammar S Hammad | Director, Vista Automation, UAE

### **Effective implementation of green building strategies** in buildings

- Green infrastructure implementation
- · Ethics and the green economy infrastructure
- · Smart grids in green infrastructure

Eng. Abdallah O Bdeir | Chairman, Head of Technical Development Committee & Member of the Founding Board, Jordan Green **Building Council** 

### 12:35 GCC Filtration Lessons Learned

- Advantages offered by Two Chambered Separator.
- · Applying Separator Technology to address the unique requirements of the GCC.
- Successful Applications and lessons learned in the GCC Jim Phene | Director Business Development, Europe, Middle East & Africa | LAKOS Separators and Filtration Systems, USA

#### 13:00 PRAYER BREAK AND LUNCH RECEPTION



### 14:15 **Challenges facing District Cooling Integration in**

- Energy savings through District Cooling methodologies and approaches in the GCC countries
- Benefits & viability of DC to the end user Case studies
- Cost & pricing policies in the region -Impact on Customer/ end user
- · Penetration rate of district cooling in Qatar in line with Fifa

Dr. Saud Abdul Ghani | Head of the Mechanical and Industrial Engineering Department, Qatar University, State of Qatar

### 14:40 Thermal Ice Storage in District Cooling networks -**Lessons learnt and future prospects**

- Methodologies of ice thermal storage and the know how
- Economics and applications
- Future prospects in the region and proven case studies

**Guillaume Bourtourault** | Chief Executive Officer

**FAFCO SA, Switzerland** 

### 15:00 **CASE STUDY: Advanced Metering solutions for District** Cooling networks



- · Automatic meter reading solutions for DC plants
- Successful case studies in the region and future prospects

#### 15:20 AFTERNOON COFFEE AND NETWORKING

### **WORKSHOP A: Smart Grids with District Cooling**

- The purpose of the workshop is to highlight the maximum energy efficiency and savings through the effective implementation of smart networks in district cooling plants giving you a picture on energy and cost savings. This smart application and energy storage will result in higher efficiency and maximum cost savings.
- Interconnected and smart grid including large-scale storage
- Improve the end-use energy efficiency in customer buildings
- Reduce economic and environmental strain on the regional power arid

#### **CLOSING REMARKS - CHAIR** 17:20

### **EVENING NETWORKING & COCKTAIL RECEPTION**









### DAY 2 11<sup>™</sup> NOVEMBER 2014



#### 8:15 **REGISTRATION AND COFFEE**



#### **OPENING REMARKS FROM THE CHAIRPERSON** 9:05

### 9:10 The future of Solar Cooling in the region - Feasibility and implications

- · Innovations in solar cooling technology
- · Cost estimations and future devlopments
- · Regional case studies

Mohamed Elweshahy, PMP | Senior MEP Manager Hill International, Qatar

### 9:35 Stadium Air conditioning & Outdoor cooling

- District Cooling for FIFA 2022
- Implementation of sustainability of stadiums and the maintenance of cooling systems
- · Supply of zero carbon energy and maximizing efficiency Salah Nezar | Sustainability Director

**Qatar Project Management, State of Qatar** 

### 10:00 Implementation and effective usage of treated sewage effluent (TSE) in District Cooling and impact on the environment

- · Challenges of water quality in District Cooling
- Reduction in leakages & water loss this maximizing water cycles
- Use of gray water for cooling towers Impact on the environment

Ghazi El Sherif | Environmental Affairs Expert Public Works Authority (Ashghal), State of Qatar

### 10:25 MORNING COFFEE & NETWORKING RECEPTION



### 10:55 Environment, Safety & Health standards in District **Cooling networks**

- Reduction in CO2 emmissions
- · The effective utilization of eco-friendly refrigerants
- · Implementation of rigorous health and safety standards

### 11:20 Potential of low to medium temperature geothermal cooling in the Middle East

- Overview of low-to-medium temperature geothermal energy in the Middle East
- Where is it found and how is it extracted & utilized
- · What are the economic implications/benefits of its use
- · How can these resources be developed
- · Summary & conclusions.

Herbert Pohl | Chief Executive Officer RG Thermal Energy Solutions, UAE

### 11:40 Comparison of available TSE application for cooling towers in Oatar

- Available options- polishing plant and direct TSE use
- Descriptions of both options
- · Pros and cons of both options

Kamal Taj, Head of Mechanical Engineering Department **KEO International Consultants, Qatar** 

#### **Energy Efficient cooling solution** 12:10

Moawia Dafaalla | Senior Project Manager – Engineering **Lusail Real Estate Development Company** 

### **EXECUTIVE INTERACTIVE PANEL: The implementation** 12:30 of Renewable energy in District Cooling Networks Road map and future prospects

**PANEL MEMBERS:** 

Mohamed Elweshahy, PMP | Senior MEP Manager Hill International, Qatar Salah Nezar | Sustainability Director **Qatar Project Management, State of Qatar** Herbert Pohl | Chief Executive Officer **RG Thermal Energy Solutions, UAE** 

#### 13:00 PRAYER BREAK AND LUNCH RECEPTION



### 14:00 Optimizing District Cooling design using Thermal **Energy Storage**

- The actual District Cooling design and limits
- The benefits of using Thermal Energy Storage in District Cooling
- Proposal of a new District Cooling design for reducing equipments and the main network

Tristan Robert | Deputy President, Sales & Marketing Director Cryogel, France

### 14:25 Pre insulated piping solutions for District Cooling

- Advancements in piping technologies for Adaptive District Cooling Networks
- Cost benefits & long term behaviors
- Reduction in installation & operational costs and increase service life

Mohamad Jaroudi | General Manager - Sales and Marketing **Future Pipe Industries Qatar** 

### 14:50 **WORKSHOP B: Advancements in Instrumentation and** Control in order to reduce energy consumption

- · District Cooling automation technologies
- Scada control
- Programming the District Cooling network
- · Case studies and implementation strategies

### **RECOMMENDATIONS, CONCLUSIONS & CLOSING REMARKS - CHAIR**

AFTERNOON COFFEE AND END OF SUMMIT





### MEET THE PRESTIGIOUS PANEL



### H.E. Ahmad M. Bin Shafar | Chief Executive Officer **EMPOWER UAE**

Mr. Ahmad Bin Shafar, B.Sc. in Business Administration in Management from California State University, Los Angeles, USA. Mr. Ahmad Bin Shafar is the Chief Executive Officer (CEO) and a founding member of Emirates Central Cooling Systems Corporation (Empower), a position he has held since the company's inception in February 2004. Mr. Ahmad has over 18 years of experience in senior management positions including 8 years with Standard Chartered Bank in the areas of Corporate and Retail banking, Finance, Marketing and Customer Relations. As CEO, Mr. Ahmad provides strategic direction with the goal of making Empower a blue chip company and one of the most efficient and profitable District Cooling Services (DCS) provider in the world. Under his leadership, Empower is eyeing the global leadership position in the DCS industry by 2014. Mr. Ahmad is also the Chairman of the board of directors of Empower Logstor Insulated Pipe Systems (ELIPS), a strategic joint venture between Empower and Logstor, a world leader in pre insulated pipe systems. Mr. Ahmad is the first UAE national to ever be nominated to the IDEA Board of Directors in June 2013. Mr. Ahmad has been a key speaker, lecturer and panelist at a number of events, including industry specific conferences and trade shows organized by American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) and International District Energy Association (IDEA). Mr. Ahmad's professional membership includes - Member of IMD International (since 2005), Member of Cranfield Management Association (since 2004), Member of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) (since 2004), Member of International District Energy Association (IDEA) (since 2004) He also holds various executive positions including Chief Executive Officer, Emirates Central Cooling Systems Corporation (Empower) (since 2004), Chairman, Empower Logstor Insulated Pipe Systems (ELIPS) (since 2007), Chairman, Bin Shafar Holding (since 2012), Chairman, Al Shafar National Contracting (SNC) (since 1998), Board Member, Dubai Sports Council (since 2009), Chairman of Investment & Marketing Committee, Dubai Sports Council (since 2009), Board Member, International District Energy Association (since 2013). Executive Programs include Cranfield General Management Program, Cranfield University (2004) Mastering Top Management Dilemmas, IMD (2005), Orchestrating Winning Performance, IMD (2006) Building High Performance Boards, IMD (2006) , The Breakthrough Program for Senior Executives, IMD (2009)

### **Ammar S Hammad** | Director, Vista Automation, UAE

Ammar holds Masters Degree in Industrial and Manufacturing Engineering from Cleveland State University, and a Bachelor of Electrical Engineering from Mu'tah University with over 24 years of engineering experience, 17 years of which in industrial automation. Ammar started his Industrial Automation engineering career with Rockwell Automation in Mayfield Heights Ohio in 1997 as an application engineer, and moved his way up to management level leading the Automation and Commissioning Division at Stellar Energy in Jacksonville, Florida and Dubai, UAE between 2004 and 2008; before taking the senior management role at Vista Automation in 2008.Ammar's application expertise with Rockwell Automation was focused on manufacturing processes including automotive, pharmaceutical; and food & beverage. With Stellar Energy Ammar's career became focused on cooling applications including district cooling and turbine inlet cooling where Ammar led the execution and delivery of the control system and commissioning of more than 10 chiller plants ranging in capacity between 2,500TR modular plants and 42,000TR. Since 2008 Ammar has been leading Vista Automation; an ISO9001:2008 certified company; and successfully completed for over 20 Chiller plants for district cooling and turbine inlet air cooling applications ranging in capacity between 10,000TR and 90,000TR.

### **Dominic McPolin** | Chief Planning Officer, Central Planning Office | Ministry of Works, Kingdom of Bahrain

Mr. McPolin is a Chartered Town Planner with two degrees in City Planning specialising in Infrastructure. He holds the post graduate entry exams of the Royal Institute of Chartered Surveyors and the RICS post graduate diploma in Project Management. In addition he holds an ACCA Post Graduate Certified Diploma in Accountancy and Finance and he also has an MBA in Construction. He has worked in Bahrain for 24 years having previously worked in Ireland (Belfast, Dublin), U.K. (London), Germany and Iraq. As Chief of the Central Planning Office (CPO), he is responsible for the coordination of the planning, implementation and security of all infrastructure, both public and private, in Bahrain through CPO procedures. Although the CPO is part of the Office of H.E. the Minister of Works, the responsibilities apply across all demarcation lines to include all ministry agencies and companies involved with the provision of infrastructure.He is currently managing a number of specialized teams including the Bahrain Northshore Infrastructure Programme Management Team, the Housing PPP Primary Infrastructure Programme Management Team and also a team from the U.S. Army Corps of Engineers.Mr. McPolin has been instrumental in the development of policies and procedures for the development of private sector infrastructure provision and in particular the incorporation of private infrastructure assets within the public road reservation and as such has worked closely with District Cooling Companies in developing their networks in the Kingdom of Bahrain. The Bahrain National Economic Vision for 2030 has emphasized the role of CPO in coordination of the operational planning of all infrastructure in the Kingdom and has assigned CPO the role to ensure alignment of all infrastructure developers with that Economic Vision and the National Plan and to hold the concerned infrastructure providers accountable for deliveries in fulfilling the vision.

### Ghazi El Sherif | Environmental Affairs Expert Public Works Authority (Ashghal), State of Qatar

Dr. Ghazi Abdel Kerim has a Ph. D. and M Sc. in environmental engineering from Alexandria University, Egypt and university of New Castle Upon Tyne, United Kingdom respectively. He also has M.P.H.Sc. in public health engineering and B Sc. in civil engineering from Alexandria University. Since then he worked as staff member of Alexandria University, occupying position professor of environmental engineering. In parallel, he occupied numerous consulting and advisory positions for governmental & non governmental organizations as well as industrial institutions in the field of environmental engineering particularly water, wastewater, industrial wastewater, and solid waste management for sustainable development. Since 2004, he was seconded from Alexandria University to work at Public Works Authority (PWA) Qatar. Since then, he has been working as environmental affairs expert with the responsibility of coordinating infrastructures projects with the provision of environmental management services during design, construction and operation stages for the successful compliance with the environmental standards for sustainable development. He has 28 years practical experience in the above mentioned filed as well as published nearly 35 publications in international conferences as well as scientific international journals.

### George Berbari | Chief Executive Officer DC Pro Engineering, UAE

George Berbari holds a Bachelor of mechanical engineering from American University of Beirut (AUB) 1985. Recipient of AUB distinguished alumni award for the mechanical engineering for the year 2007/2008. Founder and CEO of DC PRO Engineering who is an electro mechanical consultancy firm specialized in District Energy Services and Green Buildings MEP design. DC PRO Engineering has the three ISO Certifications (ISO 9001, 14000 & 18000) and has over 45 professionals (10 LEED, 2 Project Management & 2 Energy Management Certified Engineers and 2 certified ASHRAE High Performance Building Designer Professional - HBDP) who designed over 1,600,000 Ton of District Cooling Schemes in the GCC since its inception in March 2006 and 35,000,000 ft2 of Green Buildings MEP designs. George has 26 Years extensive HVAC experience in the Middle East (ME) where he played a major role in transferring the District Cooling (DC) to the ME in 1995. DC has grown to 2.5 million Ton in operation in 2010 and more than 2 million Ton planned in the next 10 years. George has transferred more than 20 technologies to the ME and Pioneered 6 new applications in the field of Air Conditioning and power generation .A regional sustainability leader with best design approach achieved for Masdar City (first Carbon Neutral City) that includes a centralized district energy comprising of a hybrid Concentrated Solar powered, Geothermal powered and solar electric energy powered chilling plant with centralized hybrid novice fresh air systems including centralized liquid and solid desiccant system that use geothermal energy and indirect recovered heat rejection energy for centralized regenerations. Prior to joining DC PRO, Mr. Berbari was the Engineering Manager and a Founding member of National Central Cooling Co. (Tabreed) in UAE which he served for ten years. George has held Sales management position in UTS Carrier in UAE for five years and Operation Manager in TECMO Industries Group in Lebanon where for five years as well. George has several publications in ASHRAE journal, MEP and Climate Control Magazine. GB has Chaired Eight (11) District Cooling & Sustainability Conferences and presented 30 Public Presentation in relation to District Energy & Green Building in the GCC region and few outside the region.

### **Guillaume Bourtourault** | Chief Executive Officer **FAFCO SA, Switzerland**

As a research engineer at the R&D division of EDF (Main French Power Supplier), Guillaume first worked for 4 years on Renewables and energy management, he produced several publications and obtained one patent. He was then responsible for the thermal technologies at EDF Renewables before he left to serve as CEO at FAFCO, with very ambitious goals supported by the new shareholders. Guillaume has given lectures for 10 years in French engineering schools and universities and public presentations in France and Germany on Renewables and energy management. Guillaume graduated at ESPCI Paris Tech as Chemical Engineer and completed an MSc in Environmental Engineering at Imperial College London.





### MEET THE PRESTIGIOUS PANEL



### Heikki Lahdenperä | Chief Executive Officer **Chiller Oy Finland**

Heikki Lahdenperä CEO of Chiller Company is an MSc engineer of heat transfer and refrigeration, graduated from Technical University of Tampere in Finland. He joined Chiller Oy 25 years ago as a shareholder. Prior to Chiller, he worked for Carrier and later for Trane. Following his masters, he was in USA with Carrier Corp heavy refrigeration department and training course of air conditioning. He has patents in air conditioning field and he has created free cooling system for indoor installed water chillers. Chiller Oy has manufactured thousands of these kinds of chillers, being one of the biggest manufacturers of free cooling chillers. His working place is in Finland and in Chiller Air conditioning Solutions LLC in Dubai UAE.

### Herbert Pohl | Chief Executive Officer **RG** Thermal Energy Solutions, UAE

Dr. Herbert Pohl is co-founder of Jones Pohl Group (JPG) and CEO of RG TES. Previously, he was a Director with McKinsey. Jones Pohl Group (JPG) is a value-driven firm that focuses on development and investment opportunities in infrastructure, specifically in renewable energy. Recently, JPG has set up TIMU Energy Holdings together with Harith Partners to invest in renewable energy in Africa. Herbert has published and spoken extensively about infrastructure including at WEF Africa and the New York Forum. Herbert holds an LLM from New York University and a PHD from Munich University.

### Jim Phene | Director Business Development, Europe, Middle East & Africa | LAKOS Separators and Filtration Systems, USA

Graduate of United States Air Force Academy with Bachelor of Science degree, former USAF pilot with over 32 years of experience in the global water industry including design, installation and sales of water control structures for intakes and canals, irrigation both drip and mechanized irrigation systems for agriculture and waste water disposal, automation, telemetry, chemical injection, water treatment and filtration solutions across Agriculture, HVAC, Industrial and the Power market segments. Jim is leveraging this experience and expertise gained over his career specifically tailoring the LAKOS offering over the last 6 years to meet the challenging requirements of the Middle East HVAC, Industrial and Power sectors.

### Kamal Taj | Head of Mechanical Engineering Department **KEO International Consultants, Qatar**

Kamal Taj, PE, LEED AP, GSAS is the head of Mechanical engineering department for KEO International Consultant, Doha, Qatar Branch. He is a Registered Professional Engineer in the USA with a Master's in Mechanical Engineering from Northwestern University and Master's in Business Administration degree from Olivet Nazarene University in USA. He has over 33 years of professional experience, with 25 years in the USA and over 9 years in the Middle East. His experience Include project management, design and review of major Building Services systems including, HVAC, Plumbing and Fire Protection systems. Some of the projects involving District cooling, that he has been involved in Qatar include many Residential and office Towers at the Pearl and Barwa Financial District.

### Mohamed Elweshahy | Senior MEP Manager Hill International, Qatar

Mohamed Elweshahy is the MEP Manager of Hill international with 20 years experience leading and managing electromechanical mega Construction Projects as an owner & founder, MEP Contractor, Engineering and Projects Manager in international companies. Elweshahy is an industry leader with 6 billion \$ finished diversified projects and passion for Green Energy and Sustainability.

### Monis Mosfi | Chief Executive Officer | CityCool

Embarked on his professional career in 1986 as a Maintenance Engineer, post completion of Master's Degree in Electrical Engineering, Monis has charted a phenomenal growth path, to merit the role of a CEO today, while handling diverse roles with leading organisations and successfully delivering in challenging situations with dexterity and professionalism. Monis's core skill set lies within and beyond the sphere of high-end project execution. Infact his commercial direction and expertise for projects pertaining to District Cooling, HVAC, Food Processing and Refrigeration industries is worth highlighting. His ability in optimising operations, finalising tenders and negotiations and style of leadership is par excellence and cannot be expressed in simple words. Attributes that clearly define the essence of Monis's persona are intellectual, dynamic, multilingual, results-driven, strategic thinker, collaborative and complemented by a vision for transforming not just an organisation but society as a whole towards cumulative development and growth. He has also developed a unique skill-set necessary for providing top notch business strategies for ascertaining profitable and growth oriented mergers and acquisitions, joint ventures, and strategic alliances.

### Mohamad Jaroudi | General Manager - Sales and Marketing **Future Pipe Industries Qatar**

Mr. Jaroudi is currently the General Manager - Sales and Marketing of Future Pipe Industries Qatar, a member of Future Pipe group. Mr. Jaroudi has been a member of the Future Pipe Group since 1995 with 19 year experience and involvement in the pipe system business and specification development since then and its contribution to the industry. After Mr. Jaroudi's graduation as a Mechanical Engineer from the American university of Beirut, he joined Future Pipe Group in Abu Dhabi as a Technical Engineer. He was a key element and contributor in the certification and promotion of company's product and selling to the different end-users including water and desalination industry. In 1999, Mr. Jaroudi was then re assigned as the Regional Manager in head office Dubai to handle the GCC market. In 2004 he moved to Qatar and acted as a focal member in developing the specifications for the different end-users and specifying the largest GRP pipe system project for the cooling water lines in Qatar. Mr. Jaroudi is both technical and executive; with a leading role in the different activities related to the sales, marketing, project management and customer support and had the unique experience in dealing with different end-users around the GCC, international EPIC contractors /consultants and FEED engineers. His role in providing value engineering analysis related to the efficiency, cost and energy saving in water pipe lines through the use of Fiberglass piping was vital as it proved to end users and plant designers that they can achieve lower life cycle costs. His educational background includes a B.S. degree in Mechanical Engineering from the American University of Beirut and he is an active member in Syndicate of Engineers, Lebanon, Chamber of Commerce and Industry , Qatar &American Society of Mechanical Engineers & Member of Levant Desalination Association and the previous affiliate representative.

### Salah Nezar | Sustainability Director Qatar Project Management, State of Qatar

Salah is an award winning experienced Sustainability Specialist with 23 years of international experience in delivering variety of projects across numerous sectors. He holds the position of Sustainability Director at QPM. He is LEED Accredited Professional and QSAS Certified Green Professional and has led the design and Design-management of a number of prestigious projects such as: Pearl River Tower in Guangzhou China (designated to be the first zero energy skyscraper in the world), United Nation Headquarter Upgrade in NYC (historic sustainable renovation of the HQ complex), Madagascar House- Bronx Zoo (first LEED-Gold Certification for a Landmark Building in NY State), Bank of America-1 Bryant Park, NYC (first skyscrapers achieving LEED Platinum Certification in the US) and Chhatrapati Shivaji International Airport in Mumbai, and Barwa Financial District. Salah is the author of numerous published works, technical papers related to High Performance Buildings, Carbon Neutral Solutions and Indoor Environment Quality. Salah holds two Masters of Science Degrees; MS in Mechanical Engineering specialising in High Performance Buildings and the second one in Computational Fluid Dynamics.

### Dr. Saud Abdul Ghani | Head of the Mechanical and Industrial Engineering Department, Qatar University, State of Qatar

Ph.D., Mechanical Engineering, School of Mechanical, Materials and Manufacturing Engineering, University of Nottingham (UK), 2002. Dr Ghani Research areas: Thermofluids, Thermal Comfort, HVAC, CFD, Experimental Fluid Mechanics and Flow Visualization, Biomedical Engineering, Airflow Through Human Airways, and CSF flow.

### Tristan Robert | Deputy President, Sales & Marketing Director Cryogel, France

Tristan Robert is responsible to the global Sales and Marketing of Cryogel, the inventor of Encapsulated Ice Thermal Storage solutions for shaving electrical consumptions peaks or remove on-peak hours electric cost to off-peak hours, reducing installation size and operation costs. Mechanical Engineer completed with an Energy Degree and a Business School Marketing Master. Mr. Robert works since over 20 years in international business development in construction, air conditioning, heating, renewable energies and Industries for major companies such as Carrier, Wilo and Vinci.





# SPONSORS & PARTNERS



### **OFFICIAL FILTRATION & SEPARATION PARTNER: LAKOS**



Over 40 Years of Innovative Filtration Solutions LAKOS patented design is considered "clean technology." Water and energy conservation as well as waste minimization are at the core of our family of filtration products that are manufactured and sold through distributors and partners in over 75

countries. Featuring innovative and adaptable solutions for specific filtration problems for over 40 years, LAKOS Separators and Filtration Solutions has become a world leader. Recently acquired by the Lindsay Corporation, an almost \$700 Million global company that trades on the US' New York Stock Exchange under the symbol LNN, focused on providing irrigation and infrastructure solutions to meet the needs of a growing population. The company remains the direction of founder and Chairman Claude C. Laval III. Laval shares leadership of the with his daughter, Melinda Laval, President. An advisory board from a variety of fields offers expert advice as well as internal team of design and application engineers. The company operates from a 100,000+ square foot manufacturing, sales, marketing and engineering headquarters in Fresno, California. A worldwide network of technically trained distributors extends the company's reach, with applications around the globe. Originally designed for groundwater and agricultural uses, LAKOS Separation and Filtration products are now targeted to key industrial markets as well, and our products for cleaning Cooling Tower basins and Heat Exchangers represent our fastest-growing market.

### **OFFICIAL THERMAL ENERGY STORAGE PARTNER: FAFCO**



Established in 1981, FAFCO has developed a whole range of products energy savings and energy management, among which storage systems. Manufactured in its own factory in Switzerland, its storage system is the best solution for all cooling applications, ranging from

150 kWh up to 200. MWh storage capacity. Its specificity is a very accurate and reliable load measurement system, coupled with highly flexible cooling power control. With the most compact system worldwide, FAFCO can supply systems for any location : outside or inside, for refurbishment or new plants, on-site mounted or ex-works, FAFCO will engineer the most relevant solution taking into account existing and upcoming equipments.

### **OFFICIAL GREEN BUILDING PARTNER:**

### **Qatar Green Building Council**



Foundation to promote and equip a sustainable building industry Qatar, thus responding to Qatar National Vision 2030's call for sustainable development environmental protection. Qatar Green Building Council is sustainable growth in Qatar through

education and networking programmes, demonstrating commitment to a prosperous and sustainable future through cost-efficient and environment-friendly buildingpractices. We operate along three pillars: technical expertise development, research and innovation, and sustainability education and training. QGBC, a non-profit organization, depends on the strength of its members and volunteers to promote and achieve its vision in the best way possible. Since its founding in 2009, QGBC has developed a relatively large network of members who take on various responsibilities including volunteering, supporting QGBC by steering the agendas of the various interest groups, driving sustainability initiatives, providing support at events, and conducting education outreach initiatives.

### **PROJECT MANAGEMENT PARTNER: Qatar Project** Management (QPM)



QPM provides unrivaled real estate project and infrastructure management services that perpetuate world class standards in the industry. QPM's operations ensure project efficiency and absolute precision for civil infrastructure, commercial, leisure, real estate, and residential

projects within the evolving global marketplace. QPM offers a full range of professional project management services including program development and management,

claim management and resolution, project control, health and safety management, cost management, and environmental management. The company also specializes in the field of risk management. QPM manages projects in various locations around the world and plays an integral role in the development of international communities. To maintain a world-class standard of project management, QPM invests in the latest project management technologies and employs a highly skilled team of professionals with alobal experience.

### GOLD SPONSOR: ELIPS | EMPOWER LOGSTOR L.L.C



ELIPS is a leading provider of innovative, value creating preinsulated pipes solutions. Elips is the UAE's largest manufacturer of preinsulated pipes & holding a National Industrial License, located in Dubai, Jebel Ali Industrial Area. ELIPS is a technology and engineering facility to

produce complete insulated pipe system for District Cooling and Oil & Gas projects.

### **GOLD SPONSOR: Cryogel France**



Cryogel was founded in 1986 and is specialized in designing and supplying Ice Thermal Energy Storage solutions for shaving the peak consumption by spreading the cooling needs along the day and therefore reducing installed cooling capacities and operation costs. Jean Patry has patented the first

design of encapsulated ice balls in 1981, which was a simple ball with an air pocket. In 1986 Jean Patry also patented the second generation under the name IB2 with dimples expanding while the water was turning into ice. Those two systems needed to be flooded in a mixture of water and glycol. In 2005, a totally new concept was patented and launched, the ICE SPRAY SYSTEM which is the only system allowing large capacities of storage in one tank, without hydrostatic pressure and very limited glycol. Today several hundreds of installations are in operation representing millions of Ice balls and Ice capsules in Europe, USA, Latin America, Asia and Middle East. Due to its expertise, Cryogel France is recognized as one of the best specialists in Thermal Energy Storage. Our technology can be used for: new installation, retrofitting, extension, all buildings, shopping malls, resorts, district cooling data centers, gas turbines, renewable energy production optimisation, etc.

### **GOLD SPONSOR: Vista Automation**



Vista Automation is a leading industrial automation provider offering services in the Middle . East region and covering a wide range of applications and processes including & Gas, Utilities. and Manufacturing. Headquartered in Dubai, UAE with sales and support

offices in Doha, Qatar and Riyadh, KSA; Vista offers turnkey integrated PLC/SCADA based solutions for discrete, batch, and continuous processes with significant focus on the application software development and testing. Vista is dedicated to providing its valued customers with the Industrial Automation Solutions that fit their needs and fulfill their requirements to achieve their production targets efficiently and effectively, and to fill the market's need for a system integrator who appreciates and understands the importance of developing intuitive and robust application software that shortens the system startup, minimizes production downtimes, and with high level of intelligence that facilitates the operation and maintenance of the process. Vista is an ISO9001:2008 certified company with an extensive expertise in the district cooling industry that comes from the successful completion of turnkey instrumentation and controls solutions for over 20 Chiller plants for district cooling and turbine inlet air cooling applications ranging in capacity between 10,000TR and 90,000TR in the past 5 years.

### **BRONZE SPONSOR: Goodwin International Ltd.**



Goodwin International Ltd. is globally recognised and approved for its design, manufacture and supply of Dual Plate Check Valves and Nozzle Valves to the hydrocarbon, energy, process and water industries. Located in the heart England, in Stoke-on-Trent,





# PONSORS & PARTNERS



Goodwin International is an engineering company of diverse skills, capabilities and products and is a wholly owned subsidiary of Goodwin PLC group of companies. The history and pedigree of Goodwin dates back to 1883. The initial company was its foundry, which still exists today, and is one of the foremost nickel alloy foundries in Europe. The Goodwin Nozzle Check Valve is superior to anything available on the market today. It is specifically used for those critical/severe applications where reliability and high performance are an absolute necessity. Its speed of response and dynamic behaviour is such that unwanted phenomena such as "valve slam" and "water hammer" are prevented from occurring. Extremely low pressure loss across the valve means there is potential for significant pump energy savings. With over 1.5 million valves in service from over 30 years of supply to many global industries, Goodwin International Ltd. provides a comprehensive level of customer service supported by a comprehensive representative network and its own overseas offices in Brazil, Dubai, India, Korea, China and Japan (www.checkvalves.co.uk).

### **ASSOCIATION PARTNER: Euroheat & Power**



Euroheat & Power (EHP)unites the Combined Heat and Power (CHP), District Heating and Cooling (DHC) sector throughout Europe and beyond, with members from over thirty countries: including national district heating associations; utilities operating DHC systems; industrial

associations and companies; manufacturers; research institutes; consultants and other organisations involved in the CHP/DHC business. Euroheat & Power works for energy supply in balance with ecology, promoting the advantages of CHP/DHC in general and the use of renewable energies to preserve primary energies in particular, and pursues international measures to enhance innovation and the further development of the

### **ASSOCIATION PARTNER: WADE**



WADE is a non-profit research and advocacy organization that was established in June 2002 to accelerate worldwide deployment decentralized energy (DE) systems. National cogeneration and DE organizations, DE companies and providers, as well as a range of

national governments now back WADE. In total, WADE's direct and indirect membership support includes over 200 corporations around the world. It is the worldwide representative organization for those parties seeking the economic and environmental benefits of decentralized energy (DE) generation - including high efficiency cogeneration (also known as combined heat and power, CHP) and decentralized renewable energy technologies. For more information on WADE visit www.localpower.org

### **EXHIBITION PARTNER: Chiller Oy**



Chiller Oy is one of Europe's leading system manufacturer of energyand optimized . efficient conditioning solutions. The high quality of our units is based on continuous product development and testing. The starting point of our equipment design is the optimization

of energy use. We pay attention to life cycle thinking and recyclability of the materials used in our products. Design and service are always based on the customers' specific requirements, flexibility of manufacturing and cooperation with consultants/designers are cornerstones of company concept. Our typical installations are in office buildings, hotels, hospitals, various industrial processes, data centers, telecommunication rooms and villas. The units have been tested in independent laboratories and all units are quality tested in a full scale production test run before delivery to the final customer.

### **Our products**

- Ceiling product group: Indoor microclimate solutions for all buildings, different fan
- Water product group: water chillers and heat pumps.
- Cabinet group: High efficiency cooling for computer and data rooms, Precision air-conditioners for demanding sites.
- Services and accessories: Service Next Overall Concept, offering supervision system, on-line technical service for COP-optimizing, life circle handling and trouble-shooting help desk operation.

### **EXHIBITION PARTNER: AI EMADI SOLAR**



Al Emadi Solar is one of the largest solar companies in Qatar that provide high quality technical and environmental engineering services to its clients. Al Emadi Solar begin operations on 2012 and in partnership with solar companies around the globe. Al Emadi Solar target small to

large scale of business and government organizations within Qatar to implement and support the Qatar's 2020 Vision. Al Emadi Solar main activities are: PV & BIPV systems integrator, Solar thermal applications, Energy Auditing technical and economic Studies, Renewable Energy consultancies, Regional Wholesale Stores in Qatar.





# POST SHOW SUMMARY



## **5**th Annual Middle East District Cooling Summit

26 - 28 November 2013, Grand Hyatt, Doha, State of Qatar



### UNDER THE ESTEEMED PATRONAGE OF

### HIS EXCELLENCY DR. MOHAMMED BIN SALEH AL SADA

MINISTER OF ENERGY & INDUSTRY | CHAIRMAN AND MANAGING DIRECTOR OF QATAR PETROLEUM

OFFICIALLY SUPPORTED BY: QATAR
GENERAL ELECTRICITY & WATER
CORPORATION "KAHRAMAA"

OFFICIALY ENDORSED BY: MINISTRY OF ELECTRICITY & WATER (MEW), KUWAIT MINISTRY OF WORKS, KINGDOM OF BAHRAIN









### OPENING INAUGURAL ADDRESS



H.E. Eng. Essa bin Hilal Al-Kuwari President Qatar General Electricity & Water Corporation "KAHRAMAA" Member of the Permanent Water Resources Committee

### **OPENING KEYNOTE SPEECH**



**Ahmad M. Bin Shafar** Chief Executive Officer EMPOWER, U.A.E

### **KEYNOTE PRESENTATIONS BY**



Dr. Mishan Al Otaibi Assistant Undersecretary of Planning and Training Ministry of Electricity and Water, State of Kuwait



Eng. Montazar Al Muhalhal Executive Director for Strategy and Planning National Water Company, KSA

- 35+ SPEAKERS & PANELISTS
- 350+ PARTICIPANTS
- EXCLUSIVE CEO & DISTRICT COOLING LEADERS PANEL
- INTERACTIVE WORKSHOPS
- SITE VISIT: QATAR COOL'S INTEGRATED DISTRICT COOLING PLANT (IDCP): THE WORLD'S LARGEST DISTRICT COOLING
- PLANT LOCATED ON THE PEARL-QATAR

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OFFICIAL DISTRICT

**SIEMENS** 









# **POST SHOW SUMMARY**



# 5th Annual Middle East District Cooling Summit

26 - 28 November 2013, Grand Hyatt, Doha, State of Qatar

OFFICIAL REAL ESTATE **DEVELOPMENT PARTNER**  OFFICIAL WATER UTILITY **PARTNER** 

**PARTNER** 

OFFICIAL GREEN MOTOR PROJECT MANAGEMENT **PARTNER** 









**OFFICIAL GREEN BUILDING PARTNER**  **OFFICIAL FILTRATION &** SEPARATION PARTNER

**OFFICIAL EPC** CONTRACTOR PARTNER OFFICIAL VALVE PARTNER









OFFICIAL BANKING PARTNER

















### **BRONZE SPONSORS**

























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