

Water & Energy Experts Forum

منتدى خبراء المياه والطاقة

Under the patronage & participation of

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24-26 SEPTEMBER 2025

CAIRO INTERNATIONAL CONVENTION
CENTER (CICC)

بعضنا

Innovations and Key Trends in Technologies in the Water and Energy Industry

أحدث التوجهات والإبتكارات في تقنيات صناعة المياه و الطاقة

وذلك ضمن فعاليات

المعرض والمؤتمر الدولي للمياه والطاقة
بالشرق الأوسط وأفريقيا (مصر) 2025

**The International Exhibition & Conference for Water and
Energy in the Middle East and Africa (Egypt) 2025**

Aqua Energy Expo MEA (Egypt) 2025

أكوا إنيرجي إكسبو (مصر) ٢٠٢٥

تحت شعار

عندما تلتقي كفاءة المياه مع كفاءة الطاقة تتحقق الاستدامة

**When Water Efficiency Meets Energy Efficiency
Sustainability Comes True**



The Water and Energy Experts Forum includes more than **40** workshops in the fields of Water and Energy.

منتدى خبراء المياه والطاقة يتضمن أكثر من 40 ورشة عمل في مجالي المياه والطاقة

The forum will be held as part of the activities of the International Water and Energy Exhibition and Conference for the Middle East and Africa (Egypt) 2025 Aqua Energy Expo (Egypt) from September 24 to 26, 2025, at the Cairo International Convention Center in Nasr City, Cairo.

سينعقد المنتدى ضمن فعاليات المعرض والمؤتمر الدولي للمياه والطاقة بالشرق الأوسط وأفريقيا (مصر) 2025 اكوا انيرجي اكسبو (مصر) بتاريخ من 24 إلى 26 سبتمبر 2025 م في مركز القاهرة الدولي للمؤتمرات بمدينة نصر بالقاهرة

Under the Slogan:

تحت شعار

When Water Efficiency Meets Energy Efficiency, Sustainability Comes True.

عندما تلتقي كفاءة المياه مع كفاءة الطاقة تتحقق الاستدامة

The forum includes **7** main themes and more than **40** technical sessions covering Water, Energy, and Sustainability, with the most prominent engineers and experts in Egypt and the Arab world.

يضم المنتدى 7 محاور رئيسية و أكثر من 40 جلسة فنية بين المياه، الطاقة والاستدامة مع أكبر المهندسين والخبراء في مصر والوطن العربي.



The Main Themes

Innovative approaches to water reuse, circular economy strategies, and sustainability initiatives.

- Water in Circular Economy and Resilience (WICER): Integrating Circular Economy Principles to Enhance Urban Water Resilience.
- Sustainable WASH Investments: Driving Investments in Water, Sanitation, and Hygiene.
- Recycling Water for Agricultural Use Innovative Approaches to Using Treated Wastewater for Irrigation.
- Implementation of Zero Liquid Discharge (ZLD) Systems for Industrial Wastewater to Protect Aquatic Ecosystems, Soil, and Groundwater.
- Enhancing Water Reuse in MENA Using AI-Based Technologies.

Water Quality Challenges, Exploring current challenges in water quality monitoring, pollution control, and innovative solutions

- Pollution Source Control and Management: Strategies for Mitigating Pollution in Water Bodies.
- Occurrence, Fate, and Transport of Contaminants: Understanding how Contaminants move Through Water Systems.
- Innovative Solutions for Global Water Quality Challenges: Empowering Citizen Scientists and Incorporating Indigenous knowledge.
- Advanced Water Treatment Technologies: Using Biotechnology and natural Methods for water purification.
- Water Storage for Security and Resilience to Climate Change.



Innovations and Key Trends in Desalination Technologies

- Solar-Powered Desalination: Advanced Technologies for Solar-Driven Water Purification.
- Wave-Powered Desalination: Utilizing Ocean Energy for Desalination.
- Electrochemical Desalination Processes: Advanced Methods for Desalination Using Electrochemical Techniques.
- Environmental Impacts of Desalination Plants: Addressing the Ecological Effects of Desalination.
- Brine Management Solutions: Innovative Approaches to Handling Desalination Byproducts.

Smart Water Technologies, AI, and Water Digitalization

- Drone and water digitalization.
- Digital Water Management: Using AI, IoT, and Smart Meters for Efficient Water Management.
- Geographical Information Systems (GIS): Visualizing and Modeling Water Infrastructure.
- Intelligent Asset Management: Using AI to Optimize Water Infrastructure Maintenance.
- 5G and Blockchain in Water Management: Enhancing Data Security and Speed.



The Role of Energy Efficiency and Renewable Energy in Water Industry Decarbonization.

- Integrating Renewable Energy to Decarbonize Water Operations, Water-Energy Nexus, and the Future of Water Innovation.
- Hybrid Renewable Energy Systems: Combining multiple renewable sources for efficient desalination.
- Digitalization in Energy Management: Using data and AI to optimize energy use.
- Pumped Storage Hydropower: Enhancing grid stability with energy storage solutions.
- Strategies for Integrating Renewable Energy and Improving Energy Efficiency in The Water Industry.

Domestic and Industrial Wastewater Treatment and Sludge Management.

- Biological Treatment Nitrification Balancing: Ammonias, Nitrites & Nitrates.
- Sludge Digestion and Related Solids Management.
- Advancements in Produced Water Sterilization Technologies.
- Membrane Filter Applications- Basics and Maintenance.
- Scaling and Corrosion Occurrences in Treatment Plant Operations.

The Future of Green Energy: Challenges and Opportunities.

- The Role of Technology in Advancing Hydropower Solutions.
- Overcoming Economic Barriers to Green Hydrogen.
- Challenges and Opportunities of Wind Energy.
- Opportunities for Innovation in Solar and Wind Energy.
- The Role of Artificial Intelligence in Optimizing Green Energy Systems.

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11:30 PM - 02:20 PM

FIRST TOPIC



FIRST DAY

SEP 24, Wednesday

Advanced Water Treatment Technologies

- **Eng. Ahmed Hashem**

-(MAS company profile and Scope of Works - MAS Suppliers and Partner Project
- Reference and IOT Projects)



11:30 PM - 11:50 PM

- **Dr. Zakaria Morad**

The Power of Bioaugmentation & Biomass Control



11:50 PM - 12:10 PM

- **Eng. Mohamed Maged**

Challenges in Home Water Filter Field under the Spotlight



12:10 PM - 12:30 PM

- **Dr. Mohamed EssamEldin**

Water between Purity and Health



12:30 PM - 12:50 PM

Time for Break and Prayer



12:50 PM - 01:20 PM

- **Eng. Hany Kamal**

Water Disinfection Using Chlorine Gas Injection Systems



01:20 PM - 01:40 PM

- **Prof.Dr. Mohamed Fikry**

The Up to Date Technologies in Water Treatment



01:40 PM - 02:00 PM

- **Eng. Mohamed Kastawy**

Smarter Filtration, Stronger Future: How Filtralite Saves Water & Energy



02:00 PM - 02:20 PM



Eng. Ahmed Hashem

Mas Automation



Dr. Zakaria Morad

Head of Global Scientific Offices
Sternova Solutions



Eng. Mohamed Maged

Owner & Director
RO-TECH co. (Water Purification
Systems)



Prof.Dr. Mohamed Fikry

Chairman of the Board of Directors
Falcon Egypt Water Treatment
Systems



Eng. Hany Kamal

Executive Director
TECHNO INSTALL



Eng. Mohamed Kastawy

Area Sales Manager
Filtralite



Dr. Muhammad Essam Eldin

Founder & CEO
Pinpoint, a Home Water Treatment Company

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02:20 PM - 03:40 PM

SECOND TOPIC



FIRST DAY

SEP 24, Wednesday

Domestic and Industrial Wastewater Treatment and Sludge Management

- Eng. Hany Fayed



02:20 PM - 02:40 PM

Odor Emissions and Biogenic Corrosion in Sewage Plants and Sewage Transport Systems

- Dr. Fathy Abu El-Saud Ghorab



02:40 PM - 03:00 PM

TSC Chemicals: Pioneering Innovations in Sustainability of Water Resources

- Eng. Ahmed Abbas



03:00 PM - 03:20 PM

Innovating with GRP (Durable, Lightweight, and Cost-Effective for a Sustainable Future)

- Prof. Dr. Mohamed Shabaan



03:20 PM - 03:40 PM

Enhancement of Water Demand Management in Egypt: Drainage Water Reuse Strategies for Effective and Sustainable Management



Eng. Hany Fayed
CEO
ESWTCO



Dr. Fathy Abu El-Saud Ghorab
Consultant
Tayseer International Chemicals Co.



Eng. Ahmed Abbas
Chairman
Nile Industries



Prof. Dr. Mohamed Shabaan
Director
Drainage Research Institute (DRI)



03:40 PM - 04:00 PM

THIRD TOPIC



FIRST DAY

SEP 24, Wednesday

Water Hammer Projects

- Eng. Muhammad Mamdouh



03:40 PM - 04:00 PM

Leading the Way: Egyptian Engineering Company's Excellence in Water Hammer Projects Across MENA



Eng. Muhammad Mamdouh
Business Development Manager
Egyptian Engineering Company



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🕒 04:00 PM - 04:20 PM — **FOURTH TOPIC** — 📅 **FIRST DAY** SEP 24, Wednesday

The Role of Energy Efficiency and Renewable Energy in Water Industry and The Future of Green Energy: Challenges and Opportunities

Dr. Simon Kloter

Improved Gas Turbine Efficiency through Optimized Compressor Cleaning

🕒 04:00 PM - 04:20 PM



Dr. Simon Kloter

Head of Technology and Business Development
at Turbotect Ltd.

Horizon Chemicals

Time for Break and Prayer

🕒 04:20 PM - 04:50 PM

🕒 04:50 PM - 05:30 PM — **FIFTH TOPIC** — 📅 **FIRST DAY** SEP 24, Wednesday

Filters & Membranes

• **Dr. Ibrahim El-Shibiny**

Membrane Filter Applications - Basic & Maintenance

🕒 04:50 PM - 05:10 PM

• **Hatem Hussin**

Reverse Engineering Trust: How Do We Build a Renaissance
When Scientists and Businessmen Meet?

🕒 05:10 PM - 05:30 PM



Dr. Ibrahim El-Shibiny

Environment, Water
Treatment & SD. Expert.



Eng. Hatem Hussin

Chairman of the Board
**Maskoub (International Contracting
Company)**



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05:30 PM - 06:50 PM

SIXTH TOPIC



FIRST DAY

SEP 24, Wednesday

Innovations and Key Trends in Desalination Technologies

- **Prof.Dr. Gamal Khedr**



05:30 PM - 05:50 PM

Investigation of Failure of an Electrodialysis Plant and It's Retrofitting by Reverse Osmosis

- **Eng. Dosouky El-Shiekh**



05:50 PM - 06:10 PM

Wrong Beliefs in Salty Water Desalination with the Reverse Osmosis System

- **Eng. Mohamed Ramzy**



06:10 PM - 06:30 PM

How to Improve the Desalination Industry Environment

- **Eng. Mohamed Aly**



06:30 PM - 06:50 PM

Latest Updates on RO Technology



Prof.Dr. Gamal Khedr

Consultant, Water Desalination / Treatment
National Research Center of Egypt



Eng. Dosouky El-Shiekh

Desalination Section Head
Hassan Allam Holding (HAH)



Eng. Mohamed Ramzy

Mechanical Engineer
**Holding Company for Drinking Water
and Wastewater**



Eng. Mohamed Aly

Water Desalination Expert



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11:30 AM - 02:30 PM

FIRST TOPIC



SECOND DAY

SEP 25, Thursday

The Role of Energy Efficiency & Renewable Energy in Water Industry & The Future of Green Energy: Challenges & Opportunities

- Eng. Walaa Mohamed Elsrogy



11:30 AM - 11:50 AM

- Eng. Ahmed Khairy



11:50 AM - 12:10 PM

Egyptian National Water Security, Solutions, & Environmental Impact with the Relationship between Water & Energy

- Dr. Rehan Mohamed



12:10 PM - 12:30 PM

Hybrid Renewable Energy Systems Combining Multiple Renewable Sources for Efficiency Desalination

- Eng. Ahmed Dahy



12:30 PM - 12:50 PM

Solar-Powered Desalination: Advanced Technologies for Solar-Driven Water Purification



Walaa Mohamed Elsrogy

General Manager of
**Artificial Intelligence and Control
Department**



Eng. Ahmed Khairy

Consultant Engineer for Desalination
& Wastewater Plants



Dr. Rehan Mohamed

Faculty of Environmental Research & Studies
Ain Shams University



Eng. Ahmed Dahy

Water and Energy Expert

Time for Break and Prayer

12:50 PM - 01:30 PM

- Dr.Eng. Faiza Abou Zeid



01:30 PM - 01:50 PM

Definition of Green Hydrogen and Green Projects

- Prof. Tarek Samir



01:50 PM - 02:10 PM

GHG Accounting & Green Certificates



Dr.Eng. Faiza Abu Zaid

General Manager
Faiza AbouZeid Trusted Chemicals



Prof. Tarek Samir

Prof of Water Chemistry
National Research Center



- Dr.Eng. Nagat Ibrahim Muhammad

Head of Marketing Sector

El Nasr Casting Company



02:10 PM - 02:30 PM

Topic: El Nasr Casting Company - Industrial Leadership and Global Quality



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02:30 PM - 03:10 PM — **SECOND TOPIC** — **SECOND DAY** SEP 25, Thursday **Integrity and Sustainability in Water and Soil Management under Climate Change**

- **Dr. Maha Al-Attar** 02:30 PM - 02:50 PM
Innovative Pathways for Water Sustainability in a Changing Climate: From Awareness to Action
- **Dr. Nesreen Abdelrahim** 02:50 PM - 03:10 PM
Advanced Chemical & Analytical Laboratories: A Key Pillar for Sustainability, Energy & Water Efficiency



Dr. Maha Al-Attar
Founder & CEO
Carbonera for Advanced Carbon Materials



Dr. Nesreen Abdelrahim
General Manager
Central Chemical Labs

03:10 PM - 04:10 PM — **THIRD TOPIC** — **SECOND DAY** SEP 25, Thursday **Water Quality Challenges, Exploring Current Challenges in Water Quality Monitoring, Pollution Control, and Innovative Solutions**

- **Eng. Nooh Hafez** 03:10 PM - 03:30 PM
Types of Flow Meters and How to Select Them in Water and Wastewater Field
- **Dr. Abeer Hamdy** 03:30 PM - 03:50 PM
Occurrence, Fate, & Transport of Contaminants: Understanding How Contaminants Move Through Water Systems
- **Dr. Aly Maan Elghanam** 03:50 PM - 04:10 PM
Interpretation of Water Analysis Results



Eng. Nooh Hafez
General Manager
Flotech for Instrumentations & Control Co.



Dr. Abeer Hamdy
General Manager
Daqahlia Drinking Water and Wastewater Co



Dr. Aly Maan Elghanam
General Manager
Ministry of Electricity (Former)

Time for Break and Prayer

04:10 PM - 04:50 PM



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🕒 04:50 PM - 05:30 PM — **FOURTH TOPIC** — 📅 **SECOND DAY** SEP 25, Thursday

Smart Water Technologies, AI, and Water Digitalization

• **Dr. Mohamed Nazieh Mohamed**

Dynamic Optimization of Industrial Wastewater Treatment Processes for Sustainable Design and Operation Utilizing Artificial Intelligence

🕒 04:50 PM - 05:10 PM

• **Eng. Haitham Elkott**

Smart Water Technologies, AI, and Water Digitalization

🕒 05:10 PM - 05:30 PM



Dr. Mohamed Nazieh Mohamed

Lead Process Engineer & Technical Trainer
Horizon Chemicals



Eng. Haitham Elkott

Water Treatment and Project
Management Expert

🕒 05:30 PM - 06:30 PM — **FIFTH TOPIC** — 📅 **SECOND DAY** SEP 25, Thursday

Advanced Water Treatment Technologies

• **Mr. Waleed Abu El-Saud**

Why Aren't We Leading? Challenges and Solutions in Localizing Advanced Water Treatment Technologies

🕒 05:30 PM - 05:50 PM

• **Dr.Chemist. Maisa Salah Eldin**

Arghel as Environment-Friendly Herbal Extract for the Control of Corrosion and Deposition of Scale in Water Systems

🕒 05:50 PM - 06:10 PM

• **Eng. Farida Abd El-Kader Ali**

Nanotechnology for Water Purification

🕒 06:10 PM - 06:30 PM



Mr. Waleed Abu El-Saud

Managing Director
NSCOMPANY



Dr.Chemist. Maisa Salah Eldin

General Manager of Research and
Development
Alexandria Water Company



Eng. Farida Abd El-Kader Ali

MSc Agriculture Engineer - Member of the Board
Trustees of the Pioneers of Community Impact Foundation



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06:30 PM - 07:50 PM

SIXTH TOPIC



SECOND DAY

SEP 25, Thursday

Domestic and Industrial Wastewater Treatment and Sludge Management

- **Prof. Dr. Mahmoud Fathy Mubarak**



06:30 PM - 06:50 PM

Advanced Materials for Oil & Gas Water Treatment: Produced Water Solutions and Cutting-Edge Technologies

- **Prof. Dr. Emad Hamdy El- Ghlohary**



06:50 PM - 07:10 PM

Using of Modified Paved Sludge Drying Beds (MPSDB) Compared to Sand Sludge Drying Beds (SSDB)

- **Eng. Mahmoud Lutfy**



07:10 PM - 07:30 PM

Achieving Class A Sludge in Sewage Treatment Plants

- **Dr. El-Sawy Mabrouk**



07:30 PM - 07:50 PM

Old and Modern Techniques in Industrial Wastewater Treatment



Prof. Dr. Mahmoud Fathy Mubarak

Core Lab Center Board Member

Egyptian Petroleum Research Institute



Prof. Dr. Emad Hamdy El- Ghlohary

Prof of Sanitary & Environmental Engineer

Zagzig University



Eng. Mahmoud Lutfy

Business Process Improvement Manager

IETOS



Dr. El-Sawy Mabrouk

Industrial Wastewater Treatment Consultant

- **Dr. Mohamed Swidan**



07:50 PM - 08:10 PM

New Innovation towards Energy Saving in RO Plants



Dr. Mohamed Swidan

CEO & Founder

Engineering Consultancy Research Co.



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11:30 AM - 12:10 PM — **FIRST TOPIC** — **THIRD DAY** SEP 26, Friday **Advanced Water Treatment Technologies**

• **Dr. Ghada El-Manadily**

Optimization of Coagulation Processes by Using Enhanced Coagulant as Activated Silica in Water Purification

11:30 AM - 11:50 AM

• **Chemist. Mona El-Shafey**

Comparison between Activated Carbon and Potassium Permanganate as a Methodology for Water Treatment in Water Treatment Plants

11:50 AM - 12:10 PM



Dr. Ghada El-Manadily

General Manager of Central laboratories
Alexandria Drinking Water Co.



Chemist. Mona El-Shafey

Technical Manager of Biology Lab
(Central Laboratories)
Alexandria Water Co.

Time for Break and Prayer

12:10 AM - 02:00 PM

02:00 PM - 03:00 PM — **SECOND TOPIC** — **THIRD DAY** SEP 26, Friday **The Role of Energy Efficiency & Renewable Energy in Water Industry & The Future of Green Energy: Challenges & Opportunities.**

• **Dr. Omar Abdel Meguieed**

Energy Security and Risk Management in Energy Projects

02:00 PM - 02:20 PM

• **Dr.Chemist. Mohamed El-Sofy**

Sustainability and Carbon Footprint: Towards a More Sustainable Future

02:20 PM - 02:40 PM

• **Dr. Omar Elhosseiny Elnady**

Towards a WEF Nexus Sector Resilient to Climate Change

02:40 PM - 03:00 PM



Dr. Omar Abdel Meguieed

Executive General Manager for
Project Execution Follow-Up
Gasco



Dr.Chemist. Mohamed El-Sofy

Director of Administration
Holding Company for Drinking Water & Wastewater



Dr. Omar Elhosseiny Elnady

Course Director & Ass.Prof. of environmental engineering
Coventry University



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🕒 03:00 PM - 03:40 PM — **THIRD TOPIC** — 📅 **THIRD DAY** SEP 26, Friday

Integrity and Sustainability in Water and Soil Management under Climate Change

• **Dr. Abd-Fattah Mahmoud**

🕒 03:00 PM - 03:20 PM

ESG Sustainability Framework & Its Application within Institutions Operating in the Water & Water Management Sector

• **Dr. Ahmed Mohamed Saad Elshenawy**

🕒 03:20 PM - 03:40 PM

Sustainable Approaches to Water and Soil Management in the Drylands of the Mediterranean



Dr. Abd-Fattah Mahmoud

Lecturer and Consultant in Management Systems and Sustainability



Dr. Ahmed Mohamed Saad Elshenawy

Researcher
Desert Research Center

🕒 03:40 PM - 04:00 PM — **FORTH TOPIC** — 📅 **THIRD DAY** SEP 26, Friday

Innovations and Key Trends in Desalination Technologies

• **Dr. Manal Gaber El-Ofy**

🕒 03:40 PM - 04:00 PM

-Environmental Impacts of Desalination Plants: Addressing the Ecological Effects of Desalination

-Brine Management Solutions: Innovative Approaches to Handling Desalination Byproducts



Dr. Manal Gaber El-Ofy

Rapporteur of the General Water Committee
General Syndicate of Engineers

Time for Break and Prayer

🕒 04:00 PM - 04:50 PM



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🕒 04:50 PM - 05:50 PM — **FIFTH TOPIC** — 📅 **THIRD DAY** SEP 26, Friday

Water Quality Challenges, Exploring Current Challenges in water Quality Monitoring, Pollution Control, and Innovative Solutions

- **Dr. Ahmed Hashaam** 🕒 04:50 PM - 05:10 PM
Validation and Risk Management: Key Compliance Strategies for Pharmaceutical Water Systems
- **Microbiologist. El-Hassan El-Sadek** 🕒 05:10 PM - 05:30 PM
Microbiological Standards in the New Drinking Water Ministerial Decree: Integration and Implementation
- **Dr. Mohammad A. Hasan** 🕒 05:30 PM - 05:50 PM
Criteria for Selecting Ion Exchange Resins and Activated Carbon Used in Water Treatment



Dr. Ahmed Hasham
Msc., Ph.D in Inorganic & Analytical Chemistry
Quality Assurance Manager



Microbiologist. El-Hassan El-Sadek
Deputy Manager of Microbiology Department
Reference Laboratory for Drinking Water, Egypt



Dr. Mohammad A. Hasan
Consultant Chemist

