

Press Release

## HE Saeed Mohammed Al Tayer reviews key projects at DEWA's R&D Centre at the Mohammed bin Rashid Al Maktoum Solar Park

**Dubai, UAE, 22 January 2023:** HE Saeed Mohammed Al Tayer, MD&CEO of Dubai Electricity and Water Authority (DEWA), visited DEWA's Research and Development (R&D) Centre at the Mohammed bin Rashid Al Maktoum Solar Park. He was briefed on the latest projects the Centre is working on and the areas of work of the IoT laboratory, which helps manage energy and assets using smart sensors, Artificial Intelligence analytics and cloud storage capabilities.

**Al Tayer** was welcomed by Waleed Bin Salman, Executive Vice President of Business Development and Excellence at DEWA; Dr. Ali Rashid Al Alili, Vice President - Research and Development; Dr. Hesham Ismail, Senior Manager of Technology Advancement and staff members.

**Al Tayer** commended the efforts of the R&D Centre, which includes talented Emirati professionals, in developing advanced solutions in the Centre's areas of work.

"Through the R&D Centre, DEWA aims to develop disruptive technologies for the Fourth Industrial Revolution to provide world-class services that enhance the quality of life in Dubai, in addition to developing the research and development sector in the UAE and providing it with qualified Emiratis, as well as supporting the scientific community in the UAE and the world. This is achieved through disseminating knowledge, developing the capabilities of Emirati researchers, and strengthening DEWA's distinguished position at the forefront of global utilities. Through its pioneering projects, quality partnerships, and the innovations it develops, the R&D Centre supports DEWA's vision to become a globally leading sustainable innovative corporation," said **Al Tayer**.

### Innovative Projects

Al Tayer reviewed a number of innovative research projects at the R&D Centre. These include the Carbon Capture Storage and Utilisation (CCSU), Wireless Power Transfer (WPT), and the Flow Battery, for which DEWA has registered a patent. The 4IR Advanced Materials team is working on an advanced version featuring a no-leak geometry as well as another invention that improves the safety of the system.

The 4IR Robotics team explained the latest updates on the granted patent of System and Method for Measuring Atmospheric Attenuation to determine the best locations for Concentrated Solar Power (CSP) towers. The team briefed Al Tayer on a new invention, which is a high-precision solar tracker.

### IoT lab

Al Tayer was briefed by the IoT staff on use cases on the first fully automated and energy-optimised building monitoring and control IoT installation in the UAE. The platform includes temperature sensors and people

counting systems, to adjust the temperature and lighting conditions based on the number of people inside the building as well as the external temperature. He also reviewed a data-driven decision support system and an underground pipeline inspection (UPI) test rig for the identification of water transmission leakages.

Al Tayar was briefed about LoRA IoT for the 3U nanosatellite (DEWA-SAT 1) launched by DEWA as part of its Space-D programme. The R&D Centre developed the satellite IoT terminals to connect DEWA's assets to the satellite directly and be suitable for grid applications, where it links IoT sensors to DEWA's nanosatellites.

### Seawater Reverse Osmosis (SWRO)

Al Tayar checked the solar-powered water pumping and desalination station at the Mohammed bin Rashid Al Maktoum Solar Park to desalinate water using Reverse Osmosis (RO) technology, with a production capacity of 50 cubic metres (around 11,000 gallons) a day. This project is part of DEWA's efforts to provide R&D facilities at the Solar Park with high-quality drinking water.

### The Centre's work areas

The R&D Centre's research areas include solar power, smart grid integration, energy efficiency, and water. It also focuses on space technologies and Fourth Industrial Revolution applications. Its internal labs study and test system reliability, and it carries out external field testing of new technologies and equipment, including the performance and reliability of solar photovoltaic panels and removing dust.

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