

10 Recent Milestones of the UAE Peaceful Nuclear Energy Program

مؤسسة الإمارات للطاقة النووية
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March 2022: Barakah Unit 2 Achieves Commercial Operation, Doubling UAE's Clean Electricity Generation from Nuclear Energy

The commercial operation of Barakah Unit 2 adds a further 1,400 MW of zero-carbon emissions electricity to the UAE's electricity grid. The Barakah Plant is now halfway to providing up to 25% of the UAE's energy needs through clean electricity whilst rapidly decarbonizing the Nation's power sector.

As Unit 2 commences commercial operation, it provides another significant contribution to rapidly decarbonizing the UAE's power sector, enabling net zero growth and tackling climate change.

December 2021: IAEA Director General Rafael Mariano Grossi Witnessed Progress of the Barakah Nuclear Energy Plant

The Director General of the International Atomic Energy Agency (IAEA), Rafael Mariano Grossi, has visited the Barakah Nuclear Energy Plant in the Al Dhafra region of Abu Dhabi Emirate. Mr. Grossi witnessed the major progress that has been made at the Barakah Plant, which is generating clean electricity and rapidly decarbonizing the Nation's power sector.

DG Grossi met with Emirati engineers, reactor operators and other young talent working at the Barakah Plant. With more than 1,100 employees under the age of 35 and more than 500 Emiratis having graduated through the Energy Pioneers training program, ENEC is committed to the development of nuclear energy professionals and clean energy leaders for the UAE. ENEC's Emirati-led nuclear operations teams are fully-equipped with the skills and expertise to support one of the newest nuclear energy programs in the world and achieve international and local sustainability goals.



November 2021: Barakah Unit 3 Construction Completed.

Unit 3 of the Barakah Plant completed construction activities and its systems were declared ready to complete operational readiness activities prior to national and international operational assessments. With Unit 3's significant milestone, ENEC demonstrates the significant progress made in delivering climate solutions today and fulfilling the UAE's promise of clean energy using nuclear technology to provide the baseload clean electricity needed to support intermittent renewable energy sources.

September 2021: Barakah Unit 2 Successfully Connects to UAE's Transmission Grid for the First Time

Unit 2 of the Barakah Nuclear Energy Plant has safely and successfully connected to the UAE grid, delivering the first megawatts of carbon-free electricity from the second of four units at the Barakah plant. The Barakah Plant continues to set new benchmarks for new build nuclear programs. Grid connection of Unit 2 was achieved just 16 days after start up of the Unit at the end of August, utilizing the lessons learned from the start up and connection process from Unit 1, to reduce connection time while ensuring the highest standards of nuclear safety and operational excellence.



August 2021: Barakah Unit 2 Successfully Started-up

The Barakah Plant continues to make tremendous progress as part of the region's largest decarbonization effort with the successful start-up of Unit 2. With a second unit started-up, the Barakah plant has moved to multi-unit operations, supporting the UAE in swiftly decarbonizing its electricity sector.

Unit 2 will now conduct testing while increasing power in stages in preparation for commercial operations.

June 2021: ENEC Achieves 100 Million Safe Work Hours at the Barakah Plant

ENEC and all contractors involved in the Barakah Nuclear Energy Plant project achieved four years and more than 100 million safe man-hours without a Lost Time Injury (LTI), highlighting ENEC's success in implementing the highest standards of safety, security, and quality.

ENEC and its Prime Contractor and Joint Venture partner the Korea Electric Power Corporation (KEPCO) have worked closely together for more than a decade on implementing the highest safety and quality standards and ensuring an exceptional safety culture. Dedication to continuous improvement of everyday work behaviors, accountability, and employee empowerment to ensure their own safety and that of their colleagues has been delivered through a range of safety-related practices and tools including continuous training programs. This has resulted in their shared achievement of what is a significant industrial safety accomplishment.

April 2021: Barakah Unit 1 Declared Commercially Operational, Delivers Clean Electricity to UAE

The UAE entered a historic new era of clean electricity production as Unit 1 of the Barakah Nuclear Energy Plant in Abu Dhabi officially began commercial operations. The game changing moment means that Unit 1 of the Barakah Plant will now commercially deliver emissions free electricity 24 hours a day, seven days a week, for more than 60 years.

The start of commercial operations signifies a major advancement in the UAE's commitment to decarbonization and its efforts to combat global climate change. The UAE Peaceful Nuclear Energy Program today plays a significant role in the diversification of the Nation's energy portfolio and serves as a bridge to other clean energy technologies.

March 2021: FANR Issues Barakah Unit 2 Operating License, Nawah begins Fuel Load

Nawah Energy Company (Nawah), the operator of the Barakah Nuclear Energy Plant, received the Operating License for Barakah Unit 2 from the Federal Authority for Nuclear Regulation (FANR). The Operating License gave permission for Nawah's highly skilled and qualified team of UAE Nationals and international experts to commence loading the first nuclear fuel assemblies into the reactor of Unit 2, the first step towards gradually beginning operations and the generation of clean electricity.

January 2021: Barakah Unit 2 Confirmed Ready for Start-up Following WANO Independent Assessment

An international team of nuclear energy experts from the World Association of Nuclear Operators (WANO) has concluded that Unit 2 of the Barakah Nuclear Energy Plant in Abu Dhabi is ready to start-up, following an extensive operational readiness assessment.

The WANO team reviewed and examined numerous functional and cross-functional areas that are essential for the safe start-up and operation of Unit 2 during the Pre-start Up Review (PSUR) process.

December 2020: Unit 1 Achieves 100% Power

Barakah Unit 1 successfully achieved 100% of the rated reactor power capacity. This made the Barakah Plant the largest source of clean baseload electricity in the country, capable of providing constant and reliable power in a sustainable manner around the clock. This significant achievement accelerates the decarbonization of the UAE power sector, while also supporting the diversification of the Nation's energy portfolio as it transitions to cleaner electricity sources.

