

مؤسسة الإمارات للطاقة النووية
Emirates Nuclear Energy Corporation



شركة براكة الأولى ش.م.خ
Barakah One Company PJSC



شركة نواة للطاقة
Nawah Energy Company



SUSTAINABILITY REPORT 2022

www.enec.gov.ae



SUSTAINABILITY

REPORT 2022



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ABOUT THIS REPORT



This report provides stakeholders with a comprehensive and transparent update on the Emirates Nuclear Energy Corporation's (ENEC) sustainability pillars (Economic, Environmental, and Social) performance summary for 2022 as well as its governance structure. The report covers the activities of the Barakah Nuclear Energy Plant which is managed by ENEC and operated by its subsidiary Nawah Energy Company (Nawah). Additionally, Barakah One Company (BOC), a subsidiary of ENEC, is responsible for handling the commercial aspects of the program. ENEC signed a Joint Venture agreement with its Prime Contractor the Korea Electric Power Corporation - KEPCO to establish these subsidiaries. Complete details on the scope of this report can be found in Appendix A, as well as the data presented throughout the report.

Reporting Standards

This report has been prepared in accordance with GRI Sustainability Reporting Standards, referencing Abu Dhabi Securities Exchange's (ADX) 31 Key Performance Indicators. Additionally, the report describes our commitment to the 17 United Nation (UN) Sustainable Development Goals (UN SDGs). Please refer to Appendix C to view the GRI content index and Appendix E for UN SDG, GRI, and ADX Mapping.

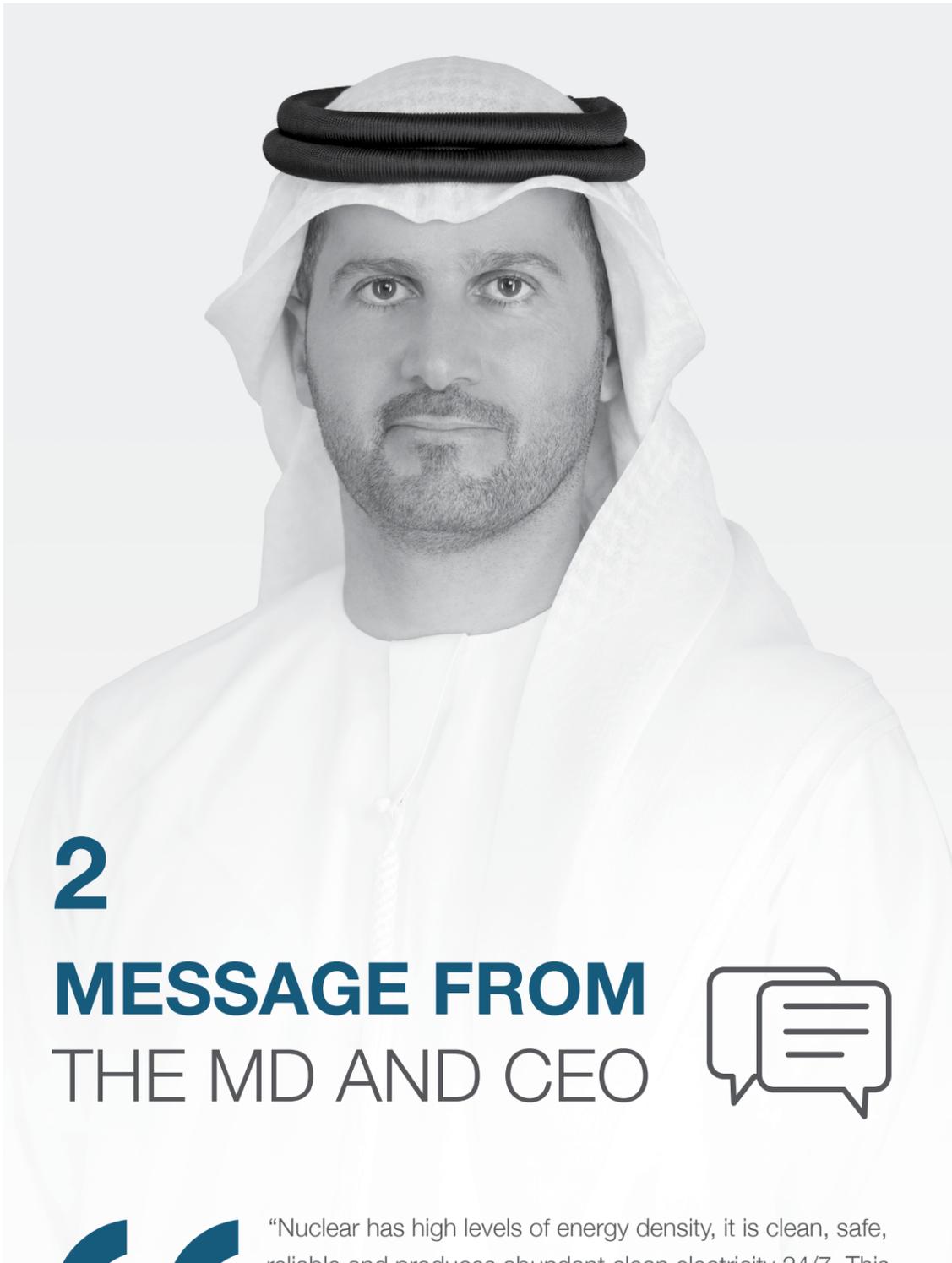
Reporting Period

This report describes our economic, environmental, social, and governance activities between 01 January 2022 and 31 December 2022.

For questions or comments regarding this report and the Enterprise's sustainability program, please visit www.enec.gov.ae or contact hse@enec.gov.ae.

Disclaimer

This report contains commitment statements and reflects management's reasonable and current expectations. No assurance can be given that such expectations will prove correct. Such statements are subject to risks and uncertainties and should not be relied upon due to ever-changing future events that could materially change the outcome. This document has not been subject to review by an independent third-party assurance provider.



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MESSAGE FROM THE MD AND CEO



“Nuclear has high levels of energy density, it is clean, safe, reliable and produces abundant clean electricity 24/7. This is incredibly important for guaranteeing energy security.”

H.E. Eng. Mohamed Al Hammadi

Managing Director and Chief Executive Officer (ENEC)

Access to energy has underpinned global development, lifting billions of people out of poverty and raising living standards globally. However, it is now clear that if we are to continue on this growth trajectory, we must transition to cleaner energy sources to ensure sustainable economic growth and human development if we are to remain within global temperature rises set out in the Paris Commitments of 2016.

The Intergovernmental Panel on Climate Change (IPCC) has warned ‘There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all.’ Their warning is the latest in an increasingly stern series of calls to humanity to tackle the existential threat of climate change.

In the early 21st century, long before the IPCC’s urgent calls began, the UAE’s leadership set a vision for our nation’s transition towards development powered by clean energy with the establishment of ENEC in 2009. ENEC is a role model and leader in the region for decarbonizing the nation’s power grid at this critical point in human history where the world must act together to mitigate climate change. It is my honor to lead the UAE’s program, driving the largest decarbonization efforts in the region and making a positive difference both locally and globally, offering a new model for other nations to follow.

In 2022, Unit 2 at the Barakah Plant was successfully connected with the national grid to power our nation. Its continuous delivery of safe, reliable, and efficient electricity is powering the sustainable development of our Emirate and the UAE. Therefore, this year’s Sustainability Report focuses on our contributions to Net Zero 2050, and how we deliver them safely and sustainably.

The UAE was the first country in the region to sign the Paris Agreement in 2016, and more recently, it released its national Net Zero by 2050 strategic initiative. The Organization is a carbon-negative organization which mitigated 7.12 million tons of carbon dioxide equivalent greenhouse gas (GHG) emissions from the national grid in 2022. Thus, it plays a key role in the UAE Net Zero by 2050 strategy. Together, we can drive the transition to a global Net Zero economy and bring about long-lasting changes required for the future of our planet.

I am proud of what we have delivered, and we will of course continue our focus to deliver sustainable, safe and efficient electricity to the grid.

I am hereby delighted to present to you the 2022 edition of our Sustainability Report. I thank everyone at the Organization and our stakeholders, whose perseverance, commitment, and diligent work has contributed to our achievements in 2022.

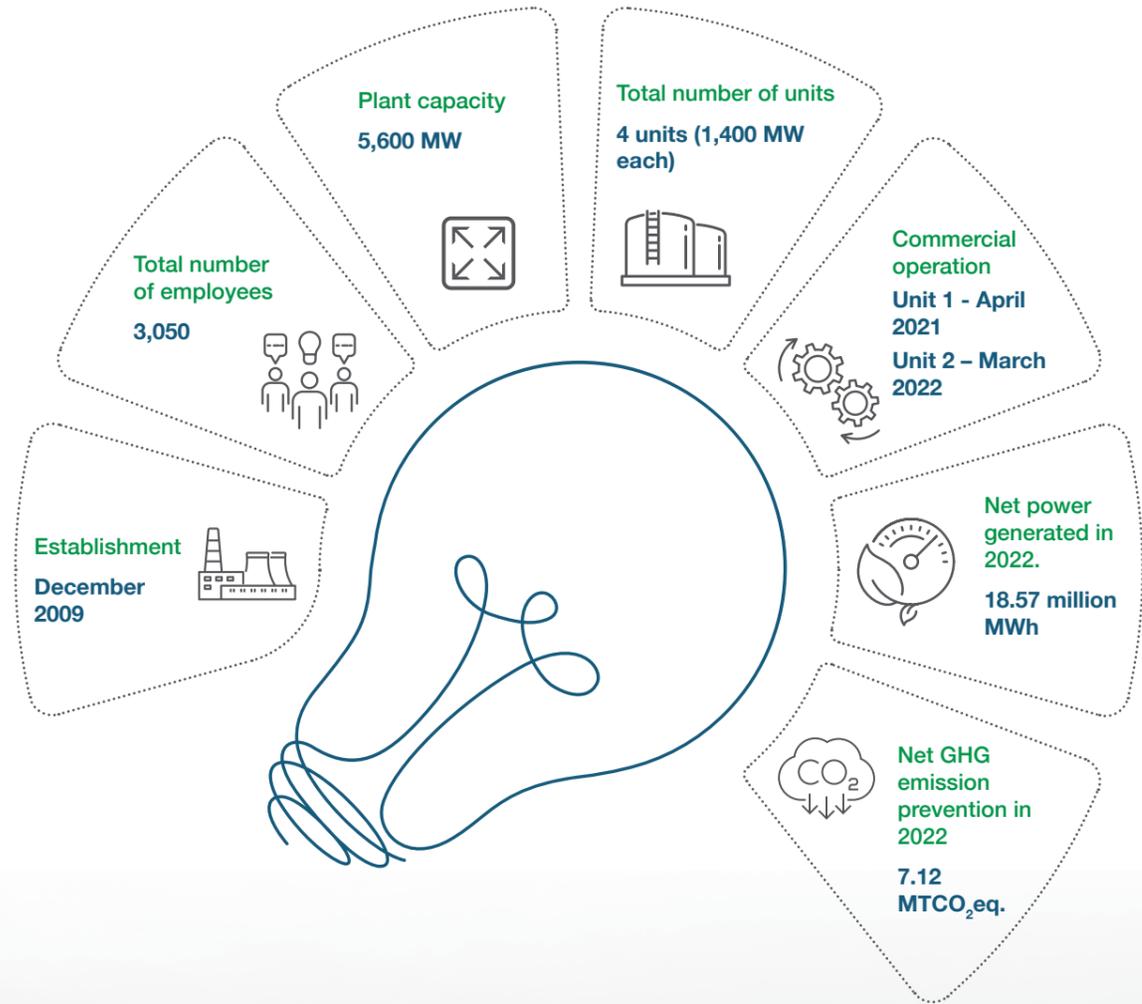


3 OVERVIEW

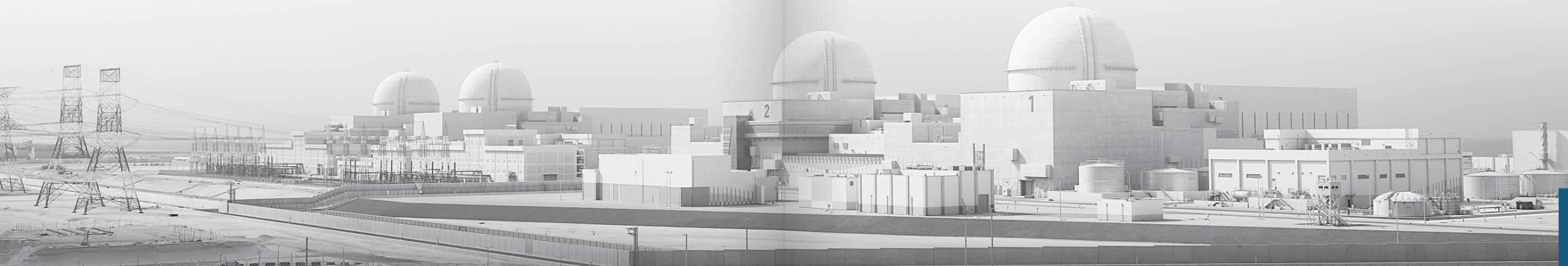
ENEC was established by federal law under Decree No 6 of December 2009 by His Highness, the late President of the United Arab Emirates (UAE), Sheikh Khalifa bin Zayed Al Nahyan. Since its inception, ENEC has been working to deliver safe, clean, reliable, and efficient nuclear energy to the Nation. ENEC is a Public Joint Stock Company (PJSC) owned by Abu Dhabi Development Holding Company (ADQ), one of the region's largest holding companies and one of the investment arms of the Government of Abu Dhabi.

ENEC owns the Arab World's first nuclear energy plant to support the national vision of economic and social growth reducing the carbon footprint with clean nuclear energy. The organization contributes to the development of human resource capacity for the nuclear energy program in coordination with the Education sector of UAE. It also effectively engages with the UAE community to ensure a high level of awareness and understanding about the program and the role of nuclear energy in the nation's energy portfolio.

The Barakah Plant is located in the Al Dhafra Region of Abu Dhabi, It consists of four third-generation Advanced Power Reactor (APR-1400) nuclear energy generating units and their associated facilities, with a combined capacity of approximately 5,600 Megawatts (MW). The Barakah Plant is expected to meet up to 25 percent of the UAE's electricity demand, once fully operational.



 **About ENEC**
<https://www.enec.gov.ae/about-us/overview/>





OUR VISION

Powering the growth of the UAE.



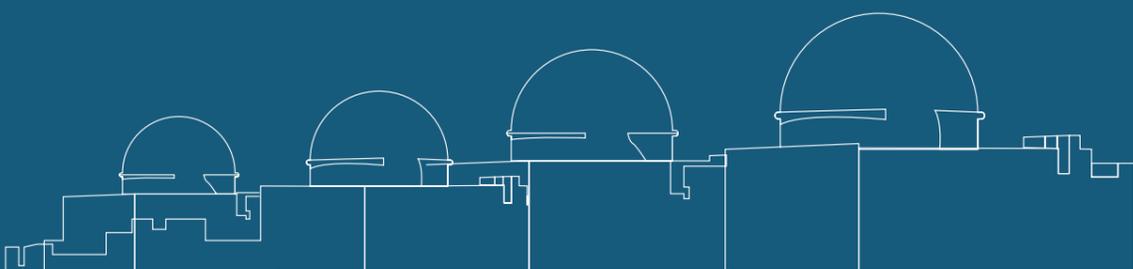
OUR MISSION

Ensure a safe and sustainable peaceful nuclear energy program.



OUR VALUES

Our vision and mission are guided by our commitment to the six corporate values of Accountability, Teamwork, Safety, Integrity, Trust, and Excellence (AT SITE). The values are embraced across the Enterprise and complemented with continually enhanced programs such as Lead, Enable, Align, Direction Setting (LEAD - AT SITE).



Accountability

Responsibility and authority are well-defined and clearly understood, and people take ownership for their work, delivering high quality results in a timely manner as efficiently as possible.

Teamwork

Individuals and teams communicate and coordinate their activities within and across organizational boundaries, demonstrating a strong sense of collaboration and cooperation in connection with projects and operational activities.

Safety

Safety is the overriding priority at ENEC. We design and execute world-class safety and security processes and systems that ensure the safety of the public, ENEC employees, and the environment.

Integrity

We listen to and respect the opinions, expertise, and traditions of others. We are accountable for our work, our business, and our actions. We do not tolerate discrimination or harassment.

Trust

We build trust through adhering to nuclear standards, living our values, fulfilling our commitments, and promoting open and fact-based communications with our colleagues, our stakeholders, and the general public.

Excellence

We actively pursue excellence through the continuous performance improvement of our projects, programs, and processes, which drives greater effectiveness and efficiency, in pursuit of outstanding and sustainable results.



3.1 GROUP STRUCTURE

Emirates Nuclear Energy Corporation

In December 2009, ENEC was established to deliver the UAE Peaceful Nuclear Energy Program and develop the cornerstone of the UAE's nuclear program, through the Barakah Plant – the first nuclear energy plant in the Arab World.

In 2009, KEPCO, South Korea's single largest public power electric utility, was awarded the prime contract for the design, construction, and operation of the four reactors at the Barakah Plant. The contract also covers extensive training, human resource development, and education programs as the UAE builds the capacity to staff a thriving nuclear energy industry. KEPCO was chosen following a comprehensive year-long evaluation conducted by 75 international experts who evaluated various factors, including safety, deliverability, and commitment to human resource development.

The Barakah Plant is integral to the UAE's vision of sustainable growth and a step toward a future, where our nation's energy demand is not entirely dependent on oil and gas. By developing the Barakah Plant, we support the diversification of the UAE's energy portfolio by providing 24/7 clean electricity to meet the country's domestic energy demand while creating high-value careers for UAE Nationals. This serves as an incubator for the development of a high-tech local nuclear industry. The Barakah Plant supports the UAE's sustainable economic growth and environmental protection efforts. It is essential to deliver the UAE's Net Zero targets by 2050. The Barakah Plant is just the beginning of the UAE Peaceful Nuclear Energy Program and ENEC is leading on getting new investments and technologies to maximize the role of nuclear energy in the country.

 **ENEC Prime Contractor**
<https://www.enec.gov.ae/barakah-plant/prime-contractor/>



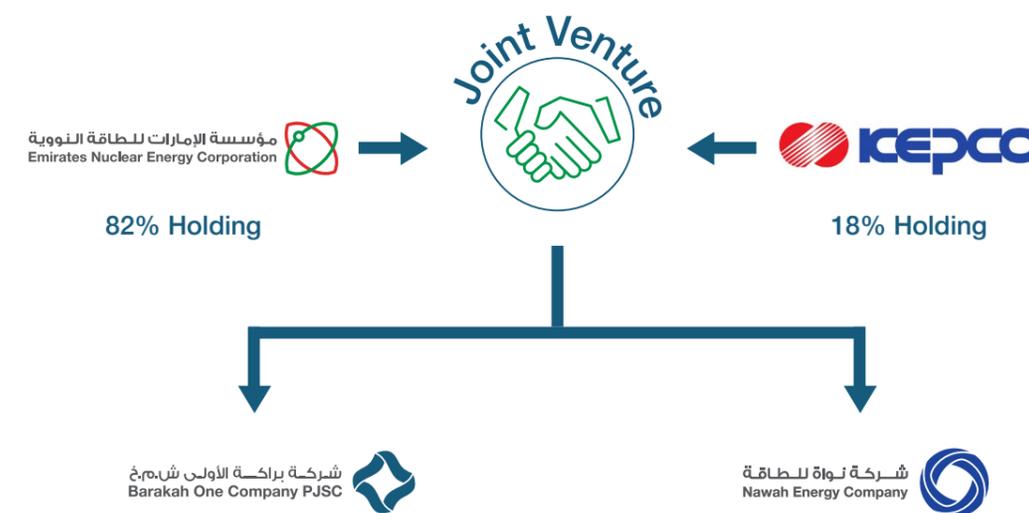
Headquarters

Abu Dhabi, UAE



3.2 OUR BUSINESS SUBSIDIARIES

In October 2016, ENEC signed a Joint Venture agreement with KEPCO, launching the Nawah Energy Company and Barakah One Company. Through the JV, KEPCO became a minority shareholder of Nawah and Barakah One Company, holding 18 percent in each subsidiary, while ENEC maintains the majority share of 82 percent in each subsidiaries.



Nawah Energy Company

Nawah is a Joint Venture subsidiary of ENEC and partially owned by the Korea Electric Power Corporation (KEPCO). Nawah has been mandated to safely operate and maintain Units 1 to 4 of the Barakah Plant.

Nawah is an Emirati-led, multinational, and multicultural organization committed to operating excellence through its skilled nuclear energy workforce in the United Arab Emirates, with a focus on the development of fostering the next generation of nuclear energy leaders and ensuring the highest levels of efficiency and standards in operating the Barakah Plant.

Nawah commenced commercial operations of Unit 1 of the Barakah Plant in 2021, and Unit 2 in 2022.

 **Nawah Energy Company**
<https://www.nawah.ae/about-nawah/overview>



Barakah One Company

A Joint Venture subsidiary of the Emirates Nuclear Energy Corporation (ENEC) and partially owned by the Korea Electric Power Corporation (KEPCO), Barakah One Company (BOC) is in-charge of representing the financial and commercial interests of the Barakah Plant. BOC is accountable for ensuring that ENEC and KEPCO build the plant following the highest quality, safety, and sustainability standards under all existing contracts, including the Prime Contract.

Moreover, in October 2016, BOC and Abu Dhabi Water and Electricity Company (ADWEC), which has since become the Emirates Water and Electricity Company (EWEC), announced a Power Purchase Agreement (PPA), which mandates the price-per-kilowatt structure of the electricity produced by the Barakah Plant Units 1 to 4. Setting a price at which electricity is produced and sold to the grid by the Barakah Plant is a significant commercial milestone for the project. With BOC managing the commercial interests of the Barakah Plant, ENEC, Nawah and KEPCO continue to deliver the program in a safe, efficient, and commercially viable manner.



3.3 BARAKAH PLANT PROGRESS

In 2022, Barakah Plant Unit 1 underwent its first scheduled refueling outage. The outage provided the Enterprise with invaluable hands-on experience and lessons learned to apply for other outages.

On 23 March 2022, Unit 2 was safely and successfully connected to the UAE electricity grid, doubling the Barakah Plant's generation capacity. The Enterprise has implemented lessons learned from the start-up and operations of Unit 1 which was a key driver for the significant improvement in Unit 2 performance.

After completion of the operational readiness preparations, testing, regulatory inspections, and international assessments, the Federal Authority for Nuclear Regulation (FANR) issued an operating license for Unit 3 in June 2022. Unit 3 is expected to commence commercial operation in early 2023. Meanwhile, Unit 4 is progressing with its construction and commissioning activities.

Unit	Percent Completion 2022	2022 Project Progress Update
Unit 1	Commercially Operational	<ul style="list-style-type: none"> Commenced commercial operations (01 April 2021)
Unit 2	Commercially Operational	<ul style="list-style-type: none"> Commenced commercial operations (23 March 2022)
Unit 3	Construction Completed	<ul style="list-style-type: none"> Construction completed (October 2021) Obtained Operating License (June 2022) Fuel Load and Start-up Activities (September 2022) Scheduled to start up and commence commercial operations in early 2023.
Unit 4	94%	<ul style="list-style-type: none"> Construction and commissioning in progress

Operating and Regulatory Licenses

We are working to ensure the highest standards of quality and transparency are implemented throughout the construction and operation of the Barakah Plant. All our activities are conducted under the strict regulation of FANR with oversight from the Nuclear Safety Review Board (NSRB). In addition, senior nuclear experts from the International Atomic Energy Agency (IAEA) and the World Association of Nuclear Operators (WANO) continue to conduct independent assessments of the robustness of the UAE Peaceful Nuclear Energy Program.

Following the receipt of operating licenses in February 2020 and March 2021 and successful commercial operations of Unit 1 in April 2021 and Unit 2 in March 2022 respectively; FANR issued the operating license to Nawah in June 2022 allowing to start safely loading fuel into Barakah Plant Unit 3. The Operating License was issued following a rigorous series of inspections and



an extensive study of the Operating License Application (OLA) document by FANR. Since 2009, the UAE Peaceful Nuclear Energy Program has been subject to more than 418 inspections by FANR. Additionally, WANO and IAEA have conducted more than 45 independent inspections, reviews, and assessments, ensuring that the highest international standards are met throughout the development and delivery of the UAE Peaceful Nuclear Energy Program.

Memberships



3.4 AWARDS AND RECOGNITIONS

We at the Enterprise are focused on delivering a world-class nuclear energy program to the UAE. The Enterprise’s continual commitment to excellence is reflected through the awards and recognitions in various business aspects. The below listed award in multiple categories of ‘Nuclear Digital Transformation’ during 2022 was an addition to the long list of accolades for the Enterprise. The list of awards from the past is part of the previously published Sustainability Reports.

2022

ICMG Architecture Awards for “Accelerate Nuclear Digital Transformation with Enterprise Connected View Approach”

The Enterprise was recognized in 5 different categories of the 2022 ICMG Architecture Awards for “Accelerate Nuclear Digital Transformation with Enterprise Connected View Approach.”

1. Best Digital Strategy in Digital Strategy to Execution
2. Best Digital Architecture in Oil and Energy
3. Best Digital IT in Artificial Intelligence Enabled Solution
4. Best Digital Enterprise Management in Digital Architecture Methodology
5. Best Enterprise Management in Enterprise Architecture



4 GOVERNANCE, RISK, AND MANAGEMENT

4.1 OVERVIEW

Responsible stewardship of its economic, environmental, and social aspects forms the basis of the Organization's corporate governance processes. The Board of Directors and the leadership team ensure we remain a viable, thriving entity, with continually improving Environmental, Social, and Corporate Governance (ESG) that is annually evaluated and rated by our holding company ADQ. The Enterprise's robust and streamlined governance structure helps effective business operations and the assessment and management of risks that may impact our plants and operations. It also ensures that the funds are used appropriately.

Sustainability Objectives

Our Governance related Sustainability objectives are:

- To establish and maintain a world-class governance framework that ensures transparency, accountability, and ethical conduct in all aspects of nuclear energy operations, contributing to the long-term sustainability of ENEC and its subsidiaries and fostering public trust.

Sustainability Value Pillar	Sustainability Aspect	UN SDG Addressed
Our Economic Footprint	• Governance	 



UN SDG Addressed	
	<p>Industry, Innovation, and Infrastructure</p> <p>Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.</p>
	<p>Equal opportunity and reduce inequalities</p> <p>Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.</p>
	<p>Substantially reduce corruption and bribery</p> <p>Monitor and disclose the proportion of business/ person who had at least one contact with a public official and who paid a bribe to a public official or were asked for a bribe by those public officials, during the previous 12 months.</p>
	<p>Develop effective, accountable and transparent institutions at all levels</p> <p>Primary expenditures as a proportion of the original approved budget, by sector (or by budget codes or similar).</p>
	<p>Promote and enforce non-discriminatory laws and policies for sustainable development</p> <p>Monitor and disclose the proportion of the population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law.</p>



ADX ESG Metrics Addressed

	G2. Board Independence
Governance G2	Prohibit CEO from serving as board chair and increase independent board members.
Governance G3	G3. Incentivized Pay Incentivize the executives to drive their performance on sustainability.
	G4. Supplier Code of Conduct
Governance G4	Develop and implement a Code of Conduct for vendors/ suppliers and disclose the percentage of vendors/ suppliers who have been formally certified for their compliance.
Governance G5	G5. Ethics & Prevention of Corruption Develop and implement an Ethics and/or Prevention of Corruption policy and disclose the percentage of the workforce who have been formally certified for their compliance.
	G6. Data Privacy
Governance G6	Develop and implement a Data Privacy policy and disclose steps taken towards complying with General Data Protection Rules.
Governance G7	G7. Sustainability Reporting Publish sustainability report.
	G8. Disclosure Practices
Governance G8	Gather sustainability performance data and present it in the sustainability report. Focus on relevant UN SDGs and set targets to report the progress.
Social S6	S6. Non-Discrimination Develop and implement a non-discrimination policy.
	S10. Human Rights
Social S10	Develop and implement human rights policy and extend its coverage to vendors/ suppliers.

4.2 GOVERNANCE

Under the oversight and directions of the Board of Directors, ENEC and its subsidiaries consistently review existing arrangements to enhance the excellence in governance by aligning our processes, procedures, and performance with the requirements of the Abu Dhabi Accountability Authority (ADAA), Federal Authority for Nuclear Regulation (FANR), World Association of Nuclear Operators (WANO) and the Institute of Nuclear Power Operations (INPO).

Responsible stewardship of its economic, environmental, and social aspects forms the basis of our corporate governance processes. The Board of Directors and the leadership team ensure that we remain a viable, thriving entity, with continually improving Environmental, Social and Corporate Governance (ESG) that is annually evaluated and rated by our holding company ADQ. Our robust and streamlined governance structure helps effective business operations and the assessment and management of risks that may impact our plants and operations. It also ensures that the funds are used appropriately.

ENEC and its subsidiaries understand that strong leadership and commitment is vital to developing the UAE's Peaceful Nuclear Energy Program. This Program is guided by a Board of Directors with members representing excellence in the nuclear, corporate, and government fields and an executive management team. We have established a solid governance philosophy and Code of General Business Principles and Ethics that drives our business excellence and enables us to meet and exceed international standards.

Board of Directors

The Board of Directors are the supreme authority entrusted by Abu Dhabi Law No. 8 of 2021, with full authority to govern and oversee the Organization's activities. It has the power, objectives and responsibilities set forth in Law No. 8 and the ADQ decision dated 03 June 2021.

Board members are appointed based on their expertise, including their understanding of the unique safety and security responsibilities of ENEC and its subsidiaries. The Board is a collegial body, but members can act critically and independently of one another, especially when such independence enhances nuclear safety, security, and reliability.

It is an essential requirement for the Board Members to participate in an induction program and receive the necessary training in nuclear power, safety, and decision-making. The Board Members are subjected to performance evaluation measures at the end of their respective terms by the Chairman of the Board. The performance results are considered for renewal of appointment for a further period and shared with the Abu Dhabi Executive Council, if requested.





His Excellency
Khaldoon Khalifa Al Mubarak
Chairman, Board of Directors



His Excellency
Eng. Suhail Mohamed Faraj Al Mazrouei
UAE Minister of Energy and Industry
Vice-Chairman, Board of Directors



Eng. Awaidha Murshed Ali Al Marar
Member, Board of Directors



H.E. Mohamed Hassan Al Suwaidi
Member, Board of Directors



H.E. Mohamed Al Hammadi
Managing Director and ENEC CEO



H.E. Ebrahim Al Zaabi
Member, Board of Directors



Masood M. Sharif Mahmood
Member, Board of Directors



David V. Scott
Member, Board of Directors



Michael J. Wallace
Member, Board of Directors



Charles G. Pardee
Member, Board of Directors

Board Committees

The Board has three committees to oversee the Enterprise's activities and to provide clear direction. Each committee has a written charter outlining its responsibilities, which is approved by the Board.

Board Committee	Description	Sustainability Issues Addressed
Committee on Nuclear Power (CNP)	CNP oversees and advises the Board of Directors on nuclear safety, security, reliability, regulation, and environmental matters related to the construction and operation of the nuclear units. The CNP consists of three board members and external members with extensive prior nuclear industry experience.	<ul style="list-style-type: none"> • Health and Safety • Security • Quality and Reliability • Environmental Management
Audit, Risk, and Compliance Committee (ARCC)	ARCC assists the Board in discharging its responsibilities overseeing Audit, Governance, Risk Management, and Compliance functions. The ARCC is composed of three members and is chaired by a Board Member. One member of the committee at least is independent of the ENEC Board of Directors.	<ul style="list-style-type: none"> • Health and Safety • Governance and Accountability • Risk Management • Ethics • Regulatory Compliance
Human Capital Committee (HCC)	HCC, comprised of at least two Board members, reviews, and advises the Board of Directors on issues regarding human resources and staffing, compensation, and senior executive succession planning.	<ul style="list-style-type: none"> • Resourcing and Succession • Emiratization • Training and Development

We have established and implemented a robust set of standards, principles, and model behaviors for its employees to follow as part of their duties. We require all employees, contractors, business partners, and representatives to achieve the highest personal and professional integrity standards in all aspects of their activities. We require all our stakeholders to comply with all applicable laws, rules, regulations, standards, policies, and procedures.



Auditing and Accountability

We regularly report our financial performance and the performance of our subsidiaries to the Department of Finance (DoF), Abu Dhabi Development Holding Company (ADDH; now known as ADQ), and the Department of Energy (DoE). To ensure timely, meaningful, and reliable disclosures of our financial performance, the following mechanisms are in place:

Statutory Audit: Conducted by an external audit firm, which provides an opinion on the financial statements prepared by the management. The external audit firm conducts a review of the quarterly financial statements and audits the annual financial statements and reports the results to the Audit, Risk and Compliance Committee.

Internal Audit: Regular reviews and audits of our financial and non-financial systems, processes, conducted by the internal audit team.

ADAA: ENEC is subject to Abu Dhabi Accountability Authority (ADAA) oversight. ADAA is the supreme entity responsible for promoting the principles of accountability, transparency, and integrity across Abu Dhabi entities. It seeks to ensure public resources and funds are managed, collected, and expended efficiently, effectively, and economically, safeguarding them for future generations.

External Audit: Conducted quarterly, bi-annual, and annual audits by an independent third-party auditor, reporting the findings directly to the ENEC Board of Directors.

Management Systems (MS) Internal and External Audits: Conducted annually according to management system requirements internally by the MS team and externally by appointed third parties.

Internal Audit

Our internal audit function provides independent objective assurance and advisory support to Senior Management and the Board of Directors by evaluating and recommending improvements related to risk management, internal control, governance processes, and supporting anti-fraud and misconduct investigations. Our internal audit function is well established and acts as an assurance provider to the Board of Directors, reporting directly to the Board via the ARCC. The function conducts annual risk assessments covering all activities, including projects, schedule, performance, finance, Information, and Communications Technology (ICT), human resources, and any audit-related issues that arise annually. The internal audit function adheres to the Institute of Internal Auditors (IIA) standards and the requirements set by ADAA and is subject to periodic assessments by ADAA.

We launched the Combined Assurance Framework (CAF) to provide a means for the internal audit function and other assurance providers to work together and align their assurance processes. As a result, the audit committee and senior management are given insights on governance, risk management, and control arrangement from a comprehensive, holistic perspective. As part of the 2022 audit plan, all risks identified, including mitigation plans, were assessed to ensure the appropriate implementation of measures to eliminate and minimize any potential negative impacts.

Business Principles, Ethics and Compliance

In order to uphold the highest standards of ethical conduct and integrity, complying with all applicable legal and regulatory obligations, we have established and continue to maintain a robust set of standards, principles, and model behaviors to create and sustain a corporate environment in which the affairs are conducted in accordance with the applicable legal and regulatory obligations, free from any acts of fraud or misconduct.

Compliance

The Business Ethics and Compliance Department is part of the Legal Division of Nawah and provides compliance services across ENEC and its subsidiaries. The Business Ethics and Compliance Department, reporting to the General Counsel of Nawah, is responsible for establishing, operating, and maintaining the compliance program and building a robust culture of ethics and compliance at ENEC and its subsidiaries.

Business Ethics and Compliance Framework

We strictly follow legal and regulatory obligations and respect and comply with all commitments, including agreements, standards, and codes of practice. We have built our Business Ethics and Compliance Program, which covers ethical, legal, and regulatory compliance aspects on an international standard, the ISO 37301 framework (Compliance Management System – Requirements with guidance for use) and the Internal Control Framework from the Committee of Sponsoring Organizations (COSO).



Governance, Risk, and Compliance (GRC) Policy

This policy implements an integrated, systematic, and proactive corporate governance structure to achieve the organizational goals. Furthermore, it establishes and maintains governance over our subsidiaries with a high level of performance while managing diverse risks and promoting compliance with the highest standards of business ethics and applicable agreements, laws, and regulations.

Business Ethics and Compliance Policy:

Across ENEC and its subsidiaries we adopt a zero-tolerance approach to all forms of fraud and misconduct. This is reflected across the organization through the Business Ethics and Compliance Policy. This Policy Statement confirms our commitment to ethical conduct and compliance with applicable laws and regulations.

Compliance and Ethics Program Governance

Board Oversight of the Compliance Program

The Audit, Risk and Compliance Committee (ARCC), which is a Board Committee, oversees the ethical compliance and legal and regulatory compliance programs. A report is presented to the ARCC every quarter on the implementation and performance of the Compliance Program.

Management Oversight of the Compliance Program

The Enterprise Compliance Review Board (ECRB), a management oversight body comprising of the CEOs and the Senior Officers of ENEC and its subsidiaries, maintain the management oversight and conducts management reviews on the compliance program implementation, performance, and effectiveness.

Advisory Body for the Compliance Program

The Compliance Council (ECC) continues to provide advice on implementing the compliance program. The Vice Presidents and Directors, who are the compliance area owners of the business form the Council, offer the necessary support for the implementation of the compliance program.

Business Ethics Committee

This committee oversees the investigations of fraud and misconduct cases and endorses the investigation reports for necessary disciplinary actions.

Employee Relations Committee

This committee reviews the cases referred for final warning and termination for consistency in the application of sanctions to violations pertaining to our Code of General Business Principles and Ethics.

Legal and Regulatory Compliance Program

Compliance Program

We continue to maintain and regularly update a compliance universe, which is a live repository of all applicable international, federal, and local laws, regulations, licenses, permits, and commitments, in coordination with the relevant subject matter experts from legal and other functions. This includes various compliance areas based on the subject managed, and owners and ambassadors are assigned to demonstrate compliance on their applicable obligations. The Business Ethics and Compliance Department facilitates the establishment of compliance registers for each area and regularly monitors them.

Some of the significant laws enacted in 2022 that are applicable to include:

- Decision of the Chairman of the Board of Directors of FANR No. 6 of 2022, to implement Cabinet Resolution No. 104 of 2021, regarding the Fees for Calibration Services Provided by the Secondary Standard Dosimetry Laboratory of the Federal Authority for Nuclear Regulation.
- FANR Board Decision No. 2 of 2022, granting Nawah Energy Company PJSC. licensing to exercise certain controlled activities at Unit 3 at the Barakah Plant.



- Federal Decree-Law No. 47 of 2022 on the Taxation of Corporations and Businesses.
- Cabinet Resolution No. 97 of 2022 Concerning the Procedures and Controls for Implementing Unemployment Insurance Scheme.
- Resolution No. 14 of 2022 of the Board of Management of the FANR - Approving the Issuance of the revised Regulation for Leadership and Management for Safety in Nuclear Facilities - FANR-REG-01, v1.
- Resolution No. 15 of 2022 of the Board of Management of the FANR - approving the Issuing of the regulation on technical services related to radiation safety- FANR-REG-30, version 0.
- Federal Decree-Law No. 28 of 2022 regarding tax procedures.
- Federal Decree-Law No. 14 of 2022 amending some provisions of the decree Federal Law No. 33 of 2021 regulating labor relations.
- Federal Decree-Law No. 18 of 2022 amending some provisions of the Federal Decree-Law No. 8 of 2017 regarding Value Added Tax.
- Decision of the Head of the Department of Energy No. 20 of 2022 regarding the adoption of the strategic objectives of clean energy for the year 2035 for the production of electricity in the Emirate of Abu Dhabi.
- Crisis Management Policy for the Abu Dhabi Energy Sector

We are implementing a Governance, Risk and Compliance platform to automate our compliance management processes.

Ethical Compliance Program

Code of General Business Principles and Ethics (the Code)

ENEC's and its subsidiaries Code of General Business Principles and Ethics stipulates the expected professional behaviors (compliance with legal obligations regarding ethical conduct) from all employees irrespective of their category of employment. It covers a wide range of topics including anti-fraud, anti-corruption, and misconduct, Health, Safety and Environment, treating each other with respect, preventing harassment, intimidation, retaliation, and discrimination, assuring non-retaliation against employees who raise concerns, protecting assets of the Enterprise and other related topics.

It is mandatory for each employee to complete training on the Code annually. The training completion is tracked using Learning Management System Taqa (LMS Taqa) and adherence to ethics and prevention of fraud and corruption principles is ensured through annual disclosures through the Disclosure Management System.



Code of Conduct for Suppliers

The Supplier Code of Conduct sets forth the principles and standards of conduct that we expect from suppliers, their employees, subcontractors, and sub-suppliers to abide by during the provision of goods and services. To support compliance with this Code, suppliers shall ensure that the Code is shared with all individuals assigned to perform work for or on behalf of ENEC and its subsidiaries, and that the related tasks are executed by individuals with the skills, expertise, and certifications necessary to uphold the principles and meet the standards of the Code.

The information contained in the Supplier Code includes topics such as compliance with legal and regulatory requirements, compliance with policies and procedures, health and safety management, business continuity management, environmental and sustainability leadership, labor issues and human rights, ethical business conduct, the Anti-Fraud and Misconduct Program (AFMP), conflicts of interest, engagement with external parties, general management and administration supplier concerns, monitoring and compliance with the supplier code, and breach of the Supplier Code of Conduct.

Promoting an Ethical Culture

Onboarding Sessions

The onboarding sessions include topics on the Code of Ethics and the responsibilities of its employees towards complying with the Code and their obligations to report any matter of fraud and misconduct when they become aware of such issues. During the Onboarding sessions, the principles of our Anti-Fraud and Misconduct Program (AFMP) and methods of reporting their concerns are explained.

Awareness and Training Sessions

Periodic Anti-Fraud Fundamentals training sessions, reporting channels awareness sessions, and other ethics awareness sessions for all employees are conducted jointly by the Business Ethics and Compliance and the Audit and Investigation Departments. Around thirteen sessions have been conducted in 2022.

Compliance and Ethics Campaigns

The Business Ethics and Compliance Department regularly conducts campaigns to promote a culture of ethics and compliance. This covers a wide range of topics dealing with doing the right thing including preventing and detecting fraud, bribery and corruption, conflict of interest, business courtesies, reporting channels, dealing with harassment, intimidation, retaliation, discrimination, and respecting others. The campaigns utilize various modes of communication such as posters, quizzes, dedicated interactive sessions, and newsletters on related topics.



Anti-Fraud and Misconduct Program (AFMP)

We have established an AFMP procedure that supports prevention, detection, investigation and response towards fraud or misconduct incidents, and to instill honesty and ethical behavior in the Enterprise's culture and environment.

The AFMP procedure provides a framework to promote responsible and secure whistleblowing. It serves to receive and address any concern or complaint regarding fraud and/ or misconduct. As outlined in the AFMP procedure, the whistleblowing system comprises four anonymous reporting channels that are available for reporting suspected incidents of fraud, fraudulent activity, or misconduct.

The four reporting channels are:

- i. Toll-free hotline available in multiple languages 24/7 across several countries
- ii. Dedicated email address for reporting concerns
- iii. Dedicated Web Portal – internal and external; and
- iv. Provision to submit verbal/ written complaints using AFMP reporting forms

The AFMP procedure highlights the significance associated with the protection of whistleblowers. It condemns and addresses any acts of retaliation against whistleblowers for reporting concerns in good faith.

 **ENE Reporting**
<https://www.enec.gov.ae/about-us/leadership-and-governance/reporting/>

Managing the Risks of Fraud, Bribery and Corruption

A Fraud Risk Management Framework has been developed to explain the principles and methodology to prevent, detect, and deter fraud, bribery, and corruption at the workplace. Under this framework and in accordance with the laws enacted by the ADAA, a fraud risk management exercise was conducted on areas such as prime contract, procurement, human resources, nuclear Training, Industrial development, information security, and information and communication technology. The main aim of the exercise is to identify various fraud scenarios that might occur, assess their risk, review the controls that are in place, and determine actions to reduce the level of risk to As Low as Reasonably Practicable (ALARP).

We also conducted a fraud risk assessment exercise with over 50 risk workshops, in coordination with subject matter experts from the business on certain focus 15 areas and finalized related Fraud Risk Registers.



Managing the Risks due to Sanctions

ENEC and its subsidiaries have started to implement a Sanctions Compliance Program in order to comply with the requirements of UAE Federal Law, and the terms and conditions set by our lenders and other partners. The program aims to minimize/eliminate exposure of the Organization to entities or individuals designated under various sanction lists including the UAE's terrorist list. A sanctions screening tool has been deployed through which we continually screen and monitor our suppliers for any sanctions update and adverse media information against our critical suppliers and apply the necessary controls.

Furthermore, we have also instituted a questionnaire to conduct integrity due diligence on our suppliers through the supplier lifecycle module under SAP Ariba, as managed by the Supplier Relationship Management Team.



4.3 RISK MANAGEMENT

We take a proactive approach to risk management. The Board of Directors are responsible for overseeing the processes established to identify and to proactively, assess, manage, report, and monitor material risks that threaten to achieve the goals and objectives. The Enterprise's Executive Risk Management Committee (ERMC) functions as Risk Counsel for ENEC and its subsidiaries and their Boards.

In addition, the Risk Management program combined assurance framework, business continuity management and crisis response management, are in place to enable the response to potential events in a swift and effective manner, thereby minimizing impacts and ensuring the business continuity of activities. The key Environmental, Social, and Governance (ESG) risks are considered by the Risk Management team.

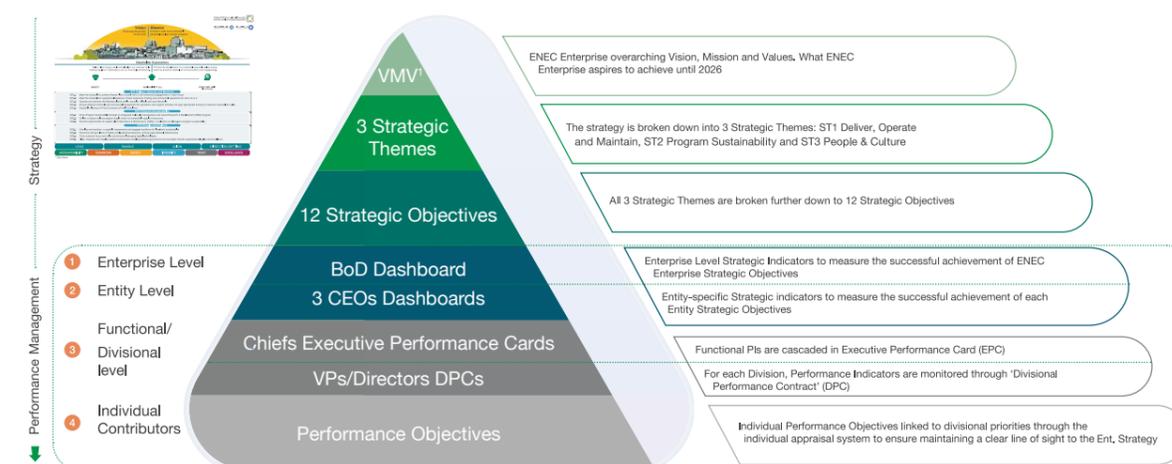
The Risk Management team has conducted multiple benchmarks over previous years and have been part of many diagnostic reviews including ADQ. The implementation has always been considered as the most advanced among the group companies. The maturity that we bring by implementing a Board approved tolerance and appetite criteria, combined assurance framework, and escalation methods for the ERMC make us a very mature organization from a risk management perspective. Having the committee at the highest level with all C-suite members makes the risk management process most advanced and visible.

 **Risk Management**
<https://www.enec.gov.ae/about-us/leadership-and-governance/risk-management/>

4.4 OPERATIONAL EFFICIENCY

Performance Management Framework

The Performance Management Framework provides direction towards the delivery of key milestones and objectives of the organization in the most efficient and effective way. It enables focus and attention of the organization by grouping the objectives under certain key themes to enable the successful execution of the strategy. The strategy is defined in terms of a set of strategic themes, underlying objectives and supporting Initiatives required to achieve people and culture.



1 VMV: Vision, Mission, Values

The strategic performance dashboard presents the critical Strategic Indicators (SIs) results that measure the Organization's performance annually. The dashboard consists of three main pillars – Safety and Quality, Schedule, and Cost.

Despite the unique challenges presented by the evolving geopolitical and global economic landscape, the strategic performance results in 2022 met and/or exceeded targets on several indicators by a substantial margin.



4.5 BUSINESS CONTINUITY MANAGEMENT

Business Continuity Management Program Organization and Scope

The Business Continuity Management (BCM) Department, under the Corporate Strategy and Governance (CSG) function, is responsible for the wide development, implementation, and management of Business Continuity (BC) capabilities to ensure resilience is built into day-to-day activities. The BCM processes are in line with the requirements of the National Emergency Crisis and Disasters Management Authority (NCEMA) regulation and other applicable laws and regulations.

The objective of the BCM program is to maintain the performance of activities needed to achieve business objectives, and to meet stakeholder expectations following business disruptions. In compliance with the requirements of NCEMA 7000:2021 and ISO 22301:2019 BCM standards, we set out key objectives to enhance program implementation and ability to respond to business disruptions, particularly to recover prioritized business processes, contributing to the delivery of clean energy, utilizing predefined resources, and dependencies.

Business Continuity Management Program Compliance and Reporting

According to Federal Decree-Law No. 2 of 2011, Article 19, ENEC and its subsidiaries are obligated to create plans that ensure business continuity based on the UAE National Standard for BCM - NCEMA 7000. To ensure consistency in implementation and internal reporting of BCM compliance across, the BCM Department, working in collaboration with Business Ethics and Compliance, developed a Business Continuity Compliance Register documenting the specific requirements of NCEMA 7000. In addition to internal reporting of BCM compliance against NCEMA 7000, reporting against the provisions in the International Standard for Business Continuity Management: ISO 22301 is regularly conducted. Compliance with ISO 22301 is assessed using the Business Continuity Management Matrix developed by the Corporate Management Systems Group, with technical support from the BCM Department.

External reporting of BCM compliance is also provided to the Abu Dhabi Emergency, Crisis, and Disasters Management Centre (ADCMC). The BCM Program implementation reports to ADCMC are based on compliance with NCEMA 7000. Other external entities which request and receive reports and assessments on BCM from ENEC and its subsidiaries including ADQ, and DoE.

Moreover, the BCM Department has been audited in 2022 by various stakeholders including the Quality Assurance (QA) and Internal Audit Departments, ADCMC, DoE, and an independent third party to measure compliance level with the NCEMA 7000:2021 and ISO 22301:2019 Standards.

Business Continuity Management Program Accomplishments, 2022

In 2022, the BCM Department achieved the following significant accomplishments:

- A BCM program compliance score of 95.7 percent against the requirements of NCEMA 7000:2021.
- The BCM team participated in meetings, training, and awareness sessions conducted by ADCMC and the DoE to engage stakeholders and stay updated with the latest changes in BCM regulations and standards.
- An audit conducted by an independent third party led to the upgradation and certification of ISO 22301:2019, superseding the previous ISO 22301:2012 Standard.
- Conducted a joint ERM BCM Awareness Week which received positive feedback from participants.
- The BCM Department has issued BC Plans, which are compliant with the requirements of NCEMA 7000 and ISO 22301, enabling the development of the annual BC Exercise and Test Plans.



4.6 QUALITY, EFFICIENCY, AND RELIABILITY – INTEGRATED MANAGEMENT SYSTEMS

As part of our commitment to safety, ENEC designed a rigorous Quality Assurance (QA) program to ensure that the UAE’s first nuclear energy plant is designed, constructed, commissioned, and operated in line with the best industry practices, governing codes standards, regulations, and license requirements. Our QA program is an integral part of ENEC’s Integrated Management System (IMS).

Our QA program applies to every contractor and sub-contractor involved in the program, and hence, our entire supply chain.

By extending our QA program to all our activities, we aim to achieve the highest safety, quality, availability, and reliability standards. To date, we have dedicated more than 41,000 man-hours to quality audits for all aspects of the program.

We conduct regular audits of the IMS framework and QA program to ensure high standards are being met and continuously improved upon. In 2022, we conducted 50 internal, external QA/MS audits and assessments on all aspects of the IMS framework and QA program. These included 21 internal and 12 external (supplier and third-party) QA/MS audits, as well as 17 assessments of the IMS framework. We also supported an external audit related to maintaining ISO certifications, which include:

- ISO 45001:2018 Occupational Health and Safety Management Systems
- ISO 9001:2015 Quality Management Systems
- ISO 14001:2015 Environmental Management Systems
- ISO 22301:2019 Business Continuity Management Systems
- ISO 27001:2013 Information Security Management Systems
- ISO 20000-1 Information Technology Service Management System

 **Quality Assurance**
<https://www.enec.gov.ae/about-us/leadership-and-governance/quality-assurance/>



5 EMBEDDING SUSTAINABILITY INTO THE ORGANIZATION

ENEC and its subsidiaries are deeply committed to sustainability, which is evident in the mission statement and development of the UAE Peaceful Nuclear Energy Program. This program is the largest decarbonization project in the Arab World and provides the cleanest source of energy for the UAE. However, our focus on sustainability extends beyond nuclear energy generation to encompass all aspects of our plants’ design, construction, and operation. As we commenced Unit 1 and 2 operations, it is critical to embed sustainability practices where we have clear foresight. To achieve this, we adopt the following sustainability approach:



The commitment to sustainability is reinforced in the operation of the Barakah Plant, through integration into the overall strategy through stakeholder management, materiality assessment, maturity analysis, and supply chain management.



5.1 STRATEGY DEVELOPMENT FRAMEWORK

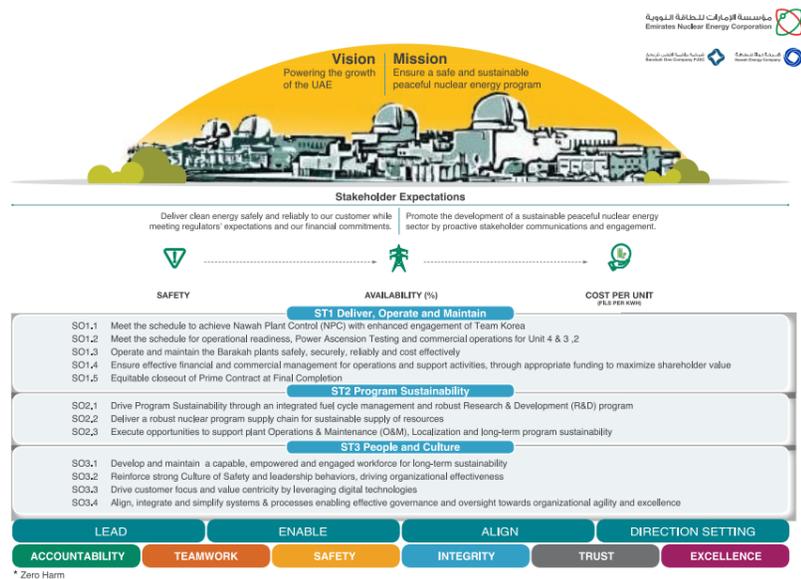
The Strategy Department is responsible for providing guidance and direction to the business, focusing on key milestones and activities to achieve its objectives in the most efficient and effective manner. It outlines the goals and ambitions of the organization and determines the best approach to accomplishing them.

As the transitions from construction to operations, shifting priorities are guiding its direction and strategy development process. To position the Program among the most advanced peaceful nuclear energy programs worldwide, we is focused on establishing and managing the adoption of safe practices, state-of-the-art technologies, and integrating guidelines from IAEA, INPO, and WANO.

During the development of the Strategy for 2022-2026, key drivers were considered, including internal and external forces that shape the organization’s strategy and outlook during distinct phases of its evolution. We are committed to continuously developing into a nuclear excellence and human performance-based entity.

Strategy 2022-2026

Led by the strategy drivers and following the strategy management framework, the strategy was updated as below.



Sustainability Management

Our fundamental principles are based on sustainability which is reflected in our vision, mission, and values. We have established a Sustainability, ESG Strategy, and management program that aligns with international guidelines and standards, such as the UN SDGs, the GRI Sustainability Reporting Standards, ADX ESG Disclosure Guidance, as well as national visions, including the Abu Dhabi Economic Vision 2030, and the UAE Energy Strategy 2050.

Our sustainability framework focuses on three core pillars: delivering safe, clean, efficient, and reliable energy to the uae; supporting economic growth by maximizing our economic impact; and creating value for citizens by empowering our people. All material sustainability aspects are addressed throughout the entire lifecycle of the nuclear energy plant, from construction to decommissioning, to ensure that we maintain our commitment to sustainability.

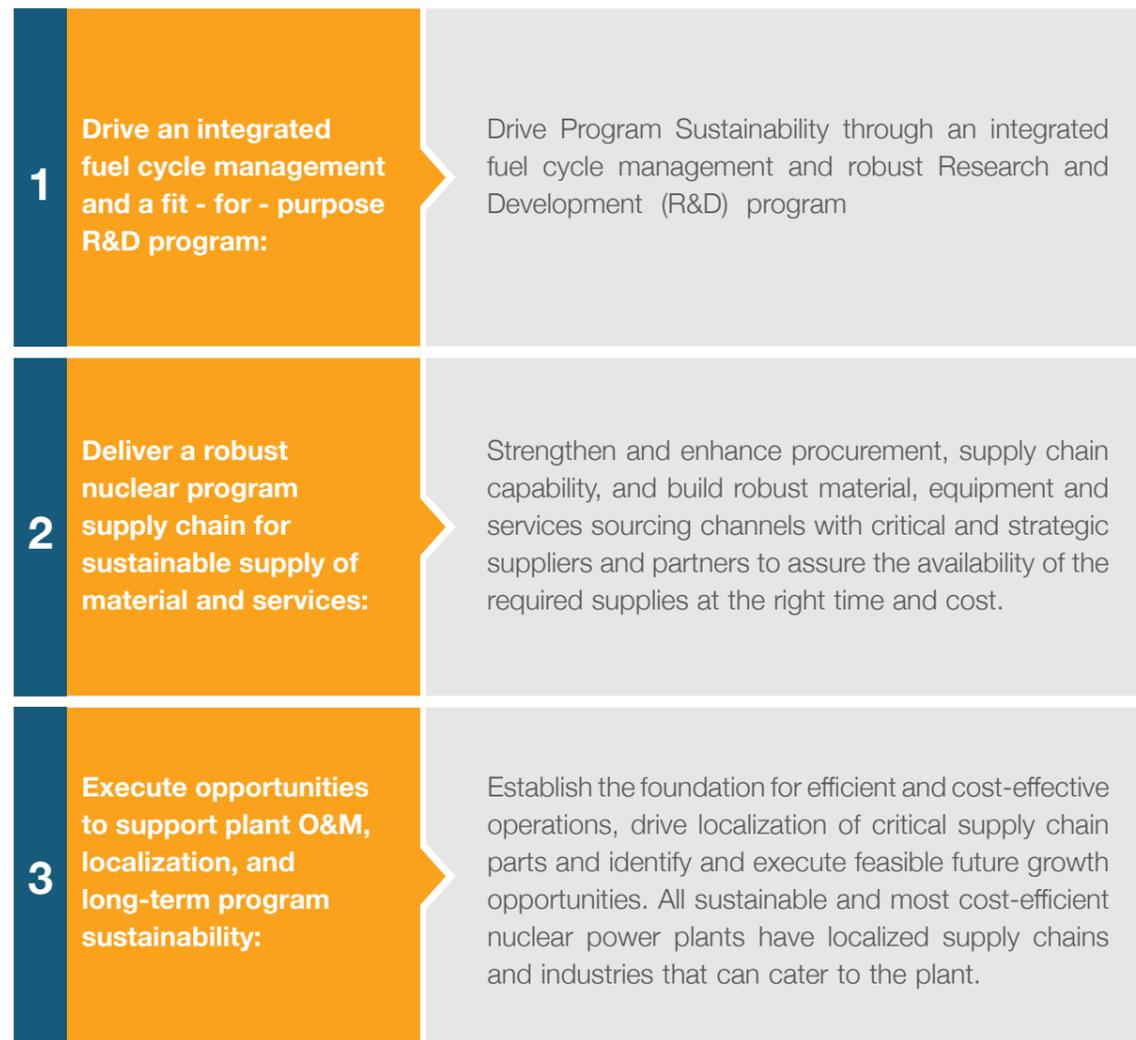
Sustainability Value Pillars



One of the themes of the Strategy 2022-2026 is 'Program Sustainability'. As the organization transitions from construction to producing 50 percent of the planned clean energy with two operational units, it becomes paramount to sustain our ability to provide operations with the required materials and services, as well as developing an uninterrupted supply chain of suitably qualified and experienced personnel, operational spare parts, and consumables.

In addition to meeting our current operational needs, we must also plan for the future beyond the commercial operations of the four units. This includes exploring research and development opportunities to find technical solutions and enhancements that can help us maintain and extend the plant's lifespan. Achieving program sustainability will require a forward-looking approach that considers both present and future needs.

There are three objectives under the Program Sustainability theme:



We follow a Sustainability Performance Management Procedure to guide the implementation of our sustainability program. This procedure outlines the roles and responsibilities needed to achieve the following objectives:

- Establishing sustainability objectives, targets, and programs that align with our vision, mission, and strategic objectives.
- Monitoring and measuring the potential impacts of our activities, products, and services on sustainability and our stakeholders.
- Monitoring the performance of our sustainability initiatives.
- Ensuring compliance with our membership commitments to the Abu Dhabi Sustainability Group (ADSG).

To continually improve our sustainability performance, we have established clear and measurable objectives and targets, monitor our progress, review our performance, and regularly report at all levels of our business.



5.2 STAKEHOLDER ENGAGEMENT

We understand the importance of stakeholders and their role in helping us evolve as a business in an ever-changing world especially with respect to increased demand for climate actions and clean energy. To keep the stakeholders informed of our economic, environmental, social, and governance issues, we engage with stakeholders and listen to their feedback on what is important for our business. In 2022, we conducted several events, surveys, meetings, and focus groups to engage with our stakeholders directly. This allowed us to update them on our progress, strategic decisions, and priorities while gathering feedback and suggestions to improve as a responsible and sustainable business.

To develop our materiality list of disclosures, we shared an online survey with our stakeholders to gain insight into what they consider essential for us to disclose in our Sustainability Report. The survey focused on engaging with both internal and external stakeholders. Participants were asked to rate sustainability topics on a scale of 1 to 10, which was later converted into a materiality matrix for better data visualization and to prioritize sustainability topics. By conducting these surveys, we show our stakeholders that we value their involvement and feedback in defining the content of our Sustainability Report, and their opinion is crucial in realizing the goal of a completely sustainable ecosystem.

The External Stakeholders Working Group (ESWG)

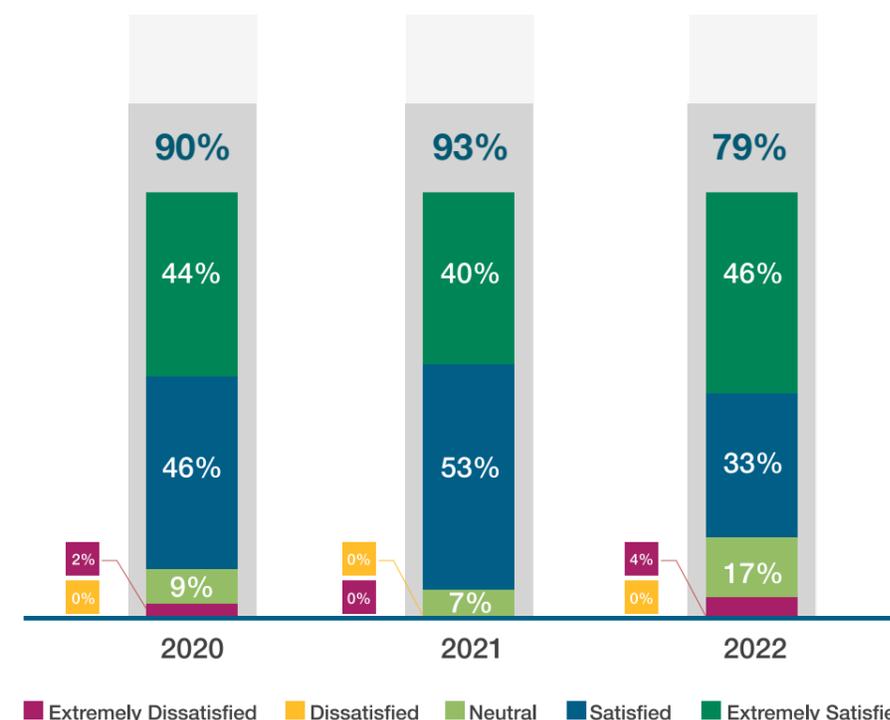
Our Communications Division created and managed the External Stakeholders Working Group (ESWG). The ESWG has developed a stakeholder map that categorizes important external stakeholders based on their impact on the Enterprise's operations and business. Additionally, we have identified a group of stakeholders who are crucial to the success of the UAE's Peaceful Nuclear Energy Program.

The purpose of the ESWG is to improve and strengthen relationships with stakeholders by designating specific organizational responsibilities and contact points to facilitate better communication with External Stakeholders. This is intended to streamline communication channels and ensure more effective engagement between the organizational contact points and stakeholders.

Stakeholder Satisfaction

As part of our Strategy to improve our relationship with external stakeholders, we conduct an annual survey through our Stakeholder Relations Function to assess their experience with us. The purpose of this survey is to gauge the satisfaction level of our external stakeholders and gather feedback on specific areas that need improvement. The aim is to enhance their experience with us in the future.

In 2022, 79 percent of respondents expressed their satisfaction for interactions with ENEC and its subsidiaries. Although the number of extremely satisfied stakeholders increased by six (06) percent, the overall satisfaction level decreased by 14 percent compared to 2021 results. The change is attributed to a ten percent increase in stakeholders opting to remain 'neutral' and a four (04) percent increase expressing their dissatisfaction reflecting the timely response to stakeholder requests.



Outreach Program

The Outreach Program is designed to introduce and raise awareness about the UAE Peaceful Nuclear Energy Program across the UAE. This program is tailored to the needs of different societal groups and is designed to achieve the following goals:

- Understand the critical role nuclear plays in achieving Net Zero goals.
- Highlight the value of clean electricity to delivering Net Zero 2050.
- Highlight the role of nuclear energy for mitigating climate change.
- Increase awareness of the UAE Peaceful Nuclear Energy Program.
- Increase support of specific groups as influencers among their communities.
- Showcase the benefits of the project to the UAE.

The sessions are designed to target different sectors in the UAE, varying from schools and university students to government entities and the public. Overall, 73 sessions attended by over 5579 participants were conducted virtually in 2022.

Outreach Satisfaction Survey

The Stakeholder Relations department conducts outreach satisfaction surveys to measure and evaluate the overall satisfaction of the attendees and their feedback on specific elements, to enhance their experience in the future. The overall satisfaction survey result in 2022 was 91 percent.



Public Opinion Poll

The Enterprise conducts an annual public opinion poll to gauge awareness, support, and perception about Nuclear energy and the UAE Peaceful Nuclear Energy program. The following are the results of a public opinion poll conducted in 2022:

Nuclear Energy as a Source of Electricity

- 51 percent of respondents knew about Nuclear Energy as a source of generating electricity in the UAE.
- 81 percent of respondents reacted favorably towards using Nuclear Energy for Generating Electricity.
- 83 percent of respondents understood the importance Nuclear Energy for our future needs.
- 79 percent of respondents believe the benefits of Nuclear Energy outweigh the risks.

UAE Peaceful Nuclear Energy Program

67 percent of respondents demonstrated awareness of the UAE Peaceful Nuclear Energy Program, and of those:

- 67 percent were aware that the Barakah Plant was operational.
- 43 percent were aware of the Barakah Plant's location in the Al Dhafra region.

Public Perception of ENEC

- 73 percent of respondents demonstrated awareness of ENEC.
- 93 percent of respondents were proud of ENEC's success.
- 95 percent of respondents trust in ENEC.
- 52 percent of respondents demonstrated awareness of the ENEC MD and CEO



5.3 MATERIALITY

A Sustainability Report provides information about a company's impact on the economy, environment, and society both within and outside the organization. The report allows stakeholders to gain a better understanding of the company's operations and provides an opportunity to provide feedback that can positively influence decision-making for the organization and the broader community. In creating such a report, various methods are used to determine what information should be disclosed. We have conducted a materiality survey for internal and external stakeholders.

Material sustainability topics were finalized through a systematic approach:

Questionnaire Development



Several brainstorming sessions took place to create a format for a survey questionnaire. The questions in the survey were designed using GRI Sustainability Reporting Standards and covered various topics related to economic, environment, social issues, and governance matters.

Questionnaire Distribution - Online Survey

A comprehensive survey format was created and shared online to collect responses from internal and external stakeholders.

Prioritizing Sustainability Issues

The questionnaire results from surveys were collated together based on the priorities set by our stakeholders.

Sustainability Brainstorming Sessions

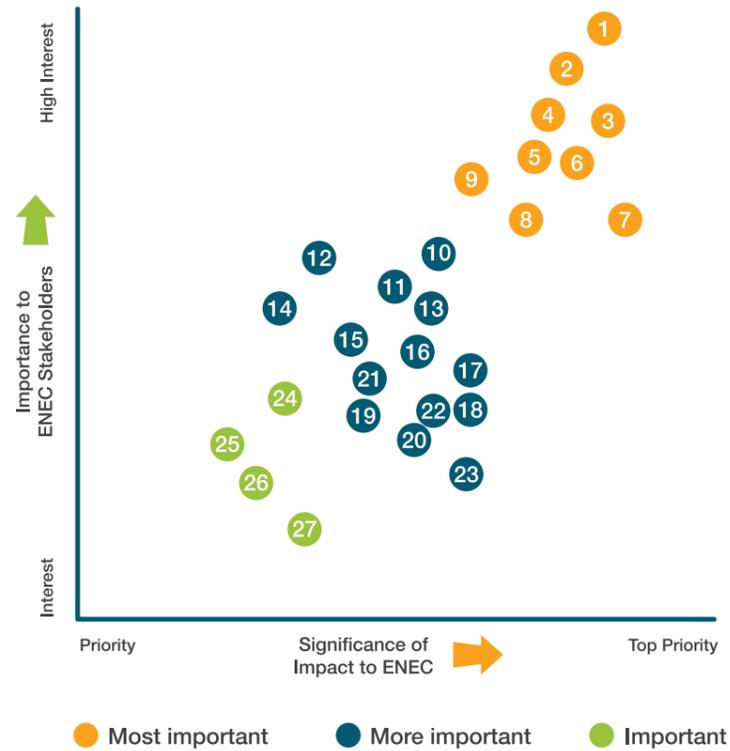
Several sessions were held to determine the sustainability priorities of various departments and divisions within the organization. These sessions established the framework and main theme for this Sustainability Report.

Alignment with National and International Plans and Commitments

The chosen topics were evaluated against various national and international commitments and priorities such as the UAE Energy Strategy 2050, Abu Dhabi Economic Vision 2030, ADX ESG Guideline, Paris Climate Agreement, and the UN's SDGs.



Material Matrix



We plotted the topics as represented in the matrix above through a rigorous stakeholder consultation process that may influence the Enterprise's sustainability performance, stakeholders' perceptions, and decisions.

#	Material Topic UN SDG	GRI Topic Standards	Description	Material Topic ADX	Sustainability Value Pillar	Boundaries	Priority
1	-	-	Infrastructure Security	-	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise	Most important
2		403, 414	Healthy and Safe Work Environment - contractor and sub-contractors	ADX S7	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise and Contractors	Most important
3		403	Workforce health and safety	ADX S7	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise and Contractors	Most important
4	-	2-27, 308	Regulatory and Framework Compliance - Environment and Sustainability	-	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise and Contractors	Most important
5	-	306	Radioactive waste best practices	ADX E7	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise	Most important
6		403	Prevention from nuclear radiation -workers and public	ADX S8	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise and Community	Most important
7	-	301, 302	Plant operations	-	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise	Most important
8	-	301, 302	Fuel supply	-	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise	Most important
9	-	-	Infrastructural emergency preparedness, due to natural or man-made reasons	-	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise and Community	Most important
10	-	418	Data protection library and strong firewall	ADX G6	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise	Most important
11	-	404	State-of-the-art training and education for employees	-	Empowering our People	ENEC Enterprise	More important
12	-	401	Employee turnover rate	ADX S3	Empowering our People	ENEC Enterprise	More important
13	-	406	Non-discrimination and Equal opportunity	-	Empowering our People	ENEC Enterprise	More important
14		405	Diversity and Equal Opportunity	ADX S4	Empowering our People	ENEC Enterprise	More important
15		413	Local communities	ADX S12	Empowering our People	ENEC Enterprise	More important



#	Material Topic UN SDG	GRI Topic Standards	Description	Material Topic ADX	Sustainability Value Pillar	Boundaries	Priority
16	13 CLIMATE ACTION	-	Climate risk mitigation	ADX E10	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise	More important
17	-	304	Environmental oversight	ADX E8	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise and contractors	More important
18	-	2-27	Environmental compliance	ADX G8	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise and contractors	More important
19	13 CLIMATE ACTION	305	Emissions	ADX E10	Safe, Clean, Efficient and Reliable Energy	ENEC Enterprise and contractors	More important
20	-	2-6	Supply Chain Assessment on ESG	-	Our Economic Footprint	ENEC Enterprise and contractors	More important
21	-	204	Procurement practices	-	Our Economic Footprint	ENEC Enterprise	More important
22	-	418	Customer privacy	-	Empowering our People	ENEC Enterprise	More important
23	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	202, 205, 206	Market Presence, Anti-Corruption and Anti-Competitive Behavior	ADX G5	Our Economic Footprint	ENEC Enterprise	More important
24	-	201	Economic performance	-	Our Economic Footprint	ENEC Enterprise	More important
25	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	302	Energy	ADX E04	Our Economic Footprint	ENEC Enterprise	Important
26	-	-	Addressing the grievances for workforce and contractors	-	Empowering our People	ENEC Enterprise and contractors	Important
27	-	-	Socio-economic Compliance	-	Empowering our People	ENEC Enterprise	Important
28	-	203	Indirect economic impact	-	Empowering our People	ENEC Enterprise	Important

We are committed to implementing sustainability management according to ADSG Guidelines and aligning our activities with local initiatives, such as ADX's ESG Disclosure Guidelines, in addition to international best practices and global initiatives such as the UN SDGs.



Sustainability Maturity

We utilize the Sustainability Maturity Assessment Tool (SMAT), that is deployed by the ADSG, and under the leadership of the Environment Agency of Abu Dhabi (EAD), to assess our sustainability management. The tool has over 150 criteria that assess relevant sustainability policies, approaches, and performance across seven areas, including management, owners, employees, suppliers, customers, community, and environment. The results of the 2022 SMAT show that our sustainability program has continued to mature year-on-year, with the maturity index increasing by 3.6 percent from 2021.





Today our investments in nuclear are paying dividends as we have three commercially operating Units at Barakah, with a fourth soon to be complete.

H.E. Eng. Mohamed Al Hammadi, MD and CEO of ENEC

Contribution to UN SDGs

Our sustainability strategy and program help us monitor our progress towards the United Nations Sustainable Development Goals (SDGs). The Enterprise's efforts are crucial to the UAE's contribution to the UN SDGs, particularly in achieving SDG 7, which aims to promote affordable and clean energy. Once fully operational, the Barakah Plant will provide up to 25 percent of the UAE's total electricity needs.

Our sustainability pillars are aligned with the UN SDGs. More information on our contribution to the specific targets of each UN SDG is provided within the relevant chapters of this report.

Sustainability Value Pillar	Sustainability Aspect	UN SDG Addressed
Our Economic Footprint	<ul style="list-style-type: none"> Governance Financial Responsibility Supply Chain Management Economic Development Combat Climate Change 	
Safe, Clean, Efficient and Reliable Energy	<ul style="list-style-type: none"> Environment Management System (EMS) Quality, Efficiency, and Reliability 	
Empowering our People	<ul style="list-style-type: none"> Occupational Health and Safety, Management System (OHSMS) Security Our Workforce National Talent Development Knowledge Creation 	

5.4 CLEAN ENERGY CERTIFICATES

The growth of a new market for green certification is being driven by various factors, including the requirement for organizations to meet ESG indicators to secure sustainable financing. This has led to an increase in demand for Energy Attribute Certificates (EAC) worldwide. EAC are official documents that provide evidence of clean or renewable energy consumption and promote transparency by verifying electricity purchased and consumed. Corporations and consumers can purchase EACs to reduce their carbon footprint and improve their sustainability rating. EACs offer the option to ensure that the electricity consumed is clean, which encourages clean energy producers to generate more electricity, thus incentivizing green investment.

The DoE and the International Renewable Energy Certificate (I-REC) Standard Foundation signed a local issuer agreement, formalizing DoE's position as the sole issuer of Clean Energy Certificates in the Emirate of Abu Dhabi. Clean Energy Certificates is the name used in Abu Dhabi for EACs.

Energy providers and power end-users in Abu Dhabi were able to purchase I-REC Standard adherent EACs to certify their ownership of a certain amount of electricity generated from a specified clean energy source (e.g., solar, nuclear, etc.). This is part of Abu Dhabi's Regulatory Policy for Clean Energy Certificates, demonstrating the commitment to drive the transition to a sustainable decarbonized energy sector and marking a foundational step to establish an EAC market and facilitate trading clean energy attributes.

The Emirates Water and Electricity Company (EWEC) is responsible for registering renewable and nuclear energy generation facilities with I-RECs and determining the origin of electricity supplied to the grid by DoE licensed power generation entities. The certificates are then sold to customers who want to obtain proof of clean energy use. This is an important development because it marks the first time that the I-REC Standard has permitted the issuance of EACs/I-RECs for electricity generated from various technologies, including nuclear energy.

In Abu Dhabi, the Clean Energy Certificate system allows energy providers and users to buy EACs that comply with the I-REC Standard. These certificates verify their ownership of a specific amount of electricity generated from a particular clean energy source (such as nuclear or solar) within a certain timeframe and enable them to account for their CO2 emissions related to electricity usage. Moreover, the system enables them to highlight their commitment to environmentally friendly practices transparently.

Once the Barakah Plant's four Units and the Al Dhafra Solar Photo Voltaic (PV) plant are completed, EWEC expects to generate approximately 46 Terawatts (TW) of clean net power annually. By 2025, the Barakah Plant is projected to generate 88 percent of the total clean electricity produced in Abu Dhabi.

The UAE's nuclear and renewable energy assets provide significant amounts of clean electricity, which can be certified through these standards. This enhances the availability of green finance for businesses and promotes additional investment in renewable energy sources. Furthermore, nuclear energy has the potential to generate baseload green electricity and can also be utilized to produce green hydrogen, a promising fuel for industries like aviation and shipping that rely heavily on electricity.



5.5 RESEARCH AND DEVELOPMENT

The Research and Development (R&D) Department is tasked with leading and managing a portfolio of projects that support the UAE's Peaceful Nuclear Power Program, by:

- Enhancing Overall Safety (nuclear, public, and environmental)
- Operational Reliability and Efficiency
- Long-term Sustainable Operation and Maintenance
- Fulfillment of Regulatory Requirements
- Build Human and National Knowledge Capability

The vision of the R&D program is to actively contribute to the UAE's aspiration of becoming a prominent regional and global leader in nuclear research for peaceful purposes. The mission of the Enterprise R&D program is to spearhead research initiatives that foster the sustainability and human capacity development of the Enterprise nuclear program. Through these efforts, we aim to make significant contributions to the UAE's knowledge economy and clean energy objectives.

Key Focus Areas

The R&D Program aims to develop a comprehensive research portfolio encompassing the following sectors:



To support sustainability efforts at the Barakah Plant, the Enterprise R&D Program provides solutions and opportunities for the following 12 Research Focus Areas (RFA) below:

1. Chemistry: Researching chemical processes and interactions within the nuclear power plant to improve efficiency, safety, and sustainability.
2. Concrete: Developing innovative concrete formulations and testing methodologies to enhance the durability, strength, and resistance of structures within the plant.
3. Fuel: Advancing fuel technologies and designs to optimize performance, increase energy output, and reduce waste generation.
4. Human Factors: Investigating human-machine interaction, cognitive processes, and ergonomic design to improve safety, efficiency, and decision-making within the plant.
5. Long-Term Operations: Conducting studies on plant operations, maintenance strategies, and aging management to ensure the safe and reliable long-term operation of the Barakah Plant.
6. Maintenance: Developing advanced maintenance techniques, predictive maintenance models, and condition monitoring systems to optimize plant performance and minimize downtime.
7. Materials: Researching nuclear-grade materials, including alloys, ceramics, and composites, to enhance their properties, performance, and resistance to extreme conditions.
8. Power Optimization: Exploring methods to maximize power output, increase efficiency, and optimize plant performance while maintaining safety and reliability.
9. Radiation Protection: Developing innovative radiation shielding materials, monitoring techniques, and safety protocols to protect workers and the environment from radiation exposure.
10. Safety Analysis: Conducting in-depth safety assessments, risk analyses, and accident scenario modeling to ensure the plant's safety systems and procedures are robust and effective.
11. Sustainability: Investigating sustainable practices, resource conservation, waste reduction, and environmental impact mitigation to enhance the overall sustainability of the Barakah Plant.
12. Spent Fuel and Radioactive Waste: Developing advanced techniques for the safe handling, storage, and disposal of spent fuel and radioactive waste, ensuring long-term safety, and minimizing environmental impact.

By focusing on these Research Focus Areas, the R&D Program aims to drive innovation, enhance safety, optimize performance, and ensure the long-term sustainability of the Barakah Plant as a safe, reliable, and environmentally responsible source of nuclear power.



The R&D Program is actively exploring opportunities in the research and development of three key areas: Green Hydrogen production, Small Modular Reactors (SMRs), and Advanced Reactors. Below are the Enterprise R&D Program's short, medium, and long-term milestones:

Technical Focus Area	R&D Short Term (5 year)	R&D Medium Term (10 years)	R&D Long Term (15+ years)
TFA1 (Fuel, Chemistry, Safety Analysis)	Barakah Plant fuel cycle migrated to a 24-month period	Fully automated chemistry ATF fuel options	Barakah Plant safety analyses transitioned to risk-based methods
TFA2 (Maintenance, Long Term Operations, Human Factors)	Transition to digital control systems in MCR to enhance HFE Wireless sensors for non-safety applications	Engineering programs and knowledge in place to transition to value-based maintenance Barakah Plant has robots and drones for radiation surveys / maintenance work	Engineering programs and knowledge in place to transition to condition-based maintenance Fully functional Barakah Plant digital twin Widespread use of both augmented and virtual reality
TFA3 (Concrete, Materials, Power Optimization)	Significant reduction in Barakah Plant house load Structural health monitoring using advanced NDE techniques	Advanced construction techniques (slip-forming) for non-safety applications Pilot for 3D printing of replacement parts	Use advanced manufacturing (e.g., additive manufacturing) to procure replacement parts R&D Products submitted for the Materials code case Load following capabilities
TFA4 (Spent Fuel and Radioactive Waste, Radiation Protection, Sustainability)	R&D product submitted for safety case and design of first near surface storage facility	Studies completed for possibly siting spent fuel using on-site methods (e.g., deep borehole disposal)	Risk-informed methods in place for equipment aging, concrete, reactor vessel and piping integrity In-house capabilities for environmental monitoring
Regulatory and BNEP Input	Build capabilities to support emergent technical / licensing issues	Development of a proactive licensing program	Infrastructure in place to allow risk-informed regulatory decisions
Non-Electric Applications	Hydrogen market studies for UAE required infrastructure Energy grid/market (including non-electricity commodities)	Co-generation capabilities Engage advanced reactor (AR) developers for hydrogen and high-grade heat production	Advanced reactors (AR) for use of high-grade industrial heat, hydrogen and medical isotopes
ENEC R&D Program Goals	Establishing an ENEC/ Barakah Plant Nuclear Excellence Center	Financial sustainability, exploring AR deployment	Advanced non-light water reactors, fusion and space exploration

Enterprise R&D Collaborations



مركز الإمارات للتكنولوجيا النووية
Emirates Nuclear Technology Center

The Emirates Nuclear Technology Center (ENTC) at Khalifa University was established through a collaboration between the Enterprise, FANR, and Khalifa University (KU). ENTC serves as a central hub to address current and future research requirements in support of the UAE's Peaceful Nuclear Energy Program. Its primary objective is to deliver safe, clean, and efficient nuclear energy, aligned with the Abu Dhabi Vision 2030 and the UAE National Energy Strategy 2050, while ensuring the protection of the public, workers, and the environment.

The mission of ENTC is to conduct research in key thematic areas of nuclear technology that are essential for providing a risk-informed basis for the safe operation of nuclear power plants. This includes estimating the consequences and developing strategies in the event of accidents. The main research areas covered by ENTC include Nuclear Safety and Systems, Nuclear Materials and Chemistry, and Radiation Safety in the Environment.

The R&D Program collaborates with governmental entities, institutions, academia, and the industrial sectors to work on various technical focus areas aligned with the R&D roadmap milestones for the Barakah Plant and the UAE Peaceful Nuclear Energy Program. The program covers projects and activities in areas such as materials research, fuel cycle optimization, environmental considerations, Small Modular Reactors (SMRs), and hydrogen generation. These projects contribute to building the National Nuclear R&D capabilities and promote the growth of the knowledge economy.

As part of its efforts, the R&D Program has developed a white paper that envisions large-scale, low-cost nuclear-generated hydrogen and synthetic fuels production in the UAE. This paper outlines the potential for leveraging nuclear energy to produce hydrogen, highlighting its benefits and the technical requirements for implementation.

Furthermore, the R&D Program places significant emphasis on human capacity and ecosystem capability development. It aims to foster a nuclear R&D culture across ENEC and its subsidiaries and the UAE. The program supports collaborative R&D projects between UAE national academia and the nuclear industry, facilitating site visits where students and Principal Investigators (PIs) interact with sponsors and subject matter experts. These visits provide an opportunity to gain insight into the research specifications and expected solutions for implementation at the Barakah Plant.

Through these initiatives, the R&D Program is committed to advancing nuclear research, nurturing talent, and fostering collaborations to contribute to the development of a sustainable and knowledge-based economy.



5.6 COP27– ENEC AND UAE DELEGATION

We have participated at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP) events, including at COP26 in Glasgow in 2021, and more recently at COP27 in Sharm-El-Sheikh in 2022. The main aim was to position nuclear energy as a clean energy source and to have nuclear energy recognized as a low carbon energy source that is rapidly reducing the carbon intensity of the UAE's power sector and demonstrate to all participants that nuclear is an essential contributor to achieving Net Zero 2050.

At COP27, we worked together with the UAE delegation at the event to include the Barakah Plant and other collaterals at the UAE pavilion in the exhibition of the event. This was significant as several media and social media influencers pointed out that the UAE was very progressive and technology agnostic as the only country to highlight the role of nuclear energy in decarbonizing its energy mix.

We were also able to participate in several events and talks hosted in the UAE pavilion, as well as on other international pavilions such as Atoms4Climate alongside the IAEA Director General Rafael Mariano Grossi and International Energy Agency (IEA) Director General Fatih Birol. H.E. Mohamed Al Hammadi, ENEC's Managing Director and CEO, took part in these events, highlighting the importance of nuclear energy and the Barakah Plant to the UAE's climate policy and ambitions.

As a result, our program is a key contributor in the fight against climate change and for promoting other pillars of sustainability such as creating sustainable jobs and establishing a low carbon economy in the UAE.

COP28, to be held in Dubai in 2023, will be another opportunity for the Enterprise to highlight to the world that a peaceful nuclear energy program can be successfully implemented. The UAE is a prime example in using nuclear energy for achieving rapid decarbonization and emissions reductions. The UAE Peaceful Nuclear Energy Program stands as a global benchmark for the successful development of a nuclear energy plant and for its contribution to the nation's efforts towards Net Zero.



6 SUSTAINABLE ECONOMIC GROWTH

6.1 OVERVIEW

In 2022, the UAE achieved a Gross Domestic Product (GDP) growth of 7.6 percent, as the Nation recovered swiftly from the COVID-19 pandemic. The UAE's Peaceful Nuclear Energy Program has proven to be a responsible and strategic multibillion dollars investment, which promotes economic and industrial growth, while diversifying the country's energy generation portfolio.

As the Nation's economy grows, the UAE requires electricity to power and meet the rising energy demand. This Program will continue to power the future growth of the UAE, as it has delivered the demand for skilled jobs and new business opportunities for the local market. As the first nuclear energy plant in the Arab World, and with other countries now looking to follow the UAE's lead, the nuclear industry will give UAE companies a competitive edge and the opportunity to conduct business in the regional and international nuclear energy sector.

Sustainability Objectives

Our goals for sustainable economic development encompass the following objectives:

1. Financial responsibility – deliver cost-effective power through a combination of fiscal responsibility and effective operational execution.
2. Supply chain management – develop a supply chain that is increasingly locally-based and meets the environmental, social, and sustainability standards of the nuclear industry.
3. Economic development – become a driving force behind the UAE's investment plan, providing business development opportunities and contributing to the UAE's GDP.
4. Action to combat climate change – deliver zero carbon electricity to the energy grid, thereby reducing the UAE's GHG emissions.



UN SDG Targets and ADX Metrics Addressed

We are contributing to the following UN SDGs and ADX Metrics by delivering the following sustainability objectives:

Sustainability Value Pillar	Sustainability Aspect	UN SDG Addressed
Our Economic Footprint	<ul style="list-style-type: none"> Governance Financial Responsibility Supply Chain Management Economic Development Combat Climate Change 	

UN SDG Addressed



By 2030, increase substantially the share of renewable energy in the global energy mix

Disclose renewable energy share in the total final energy consumption.



Diversify, innovate, and upgrade for economic productivity.

Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation, including through a focus on high value added and labor-intensive sectors.



Promote policies to support job creation and growing enterprises.

Promote development-oriented policies that support productive activities, creation of decent work, entrepreneurship, creativity, and innovation, and encourage the formalization and growth of micro, small- and medium-sized enterprises, including through access to financial services.



Promote inclusive and sustainable industrialization.

Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.



Promote sustainable public procurement practices.

Promote public procurement practices that are sustainable, in accordance with national policies and priorities.



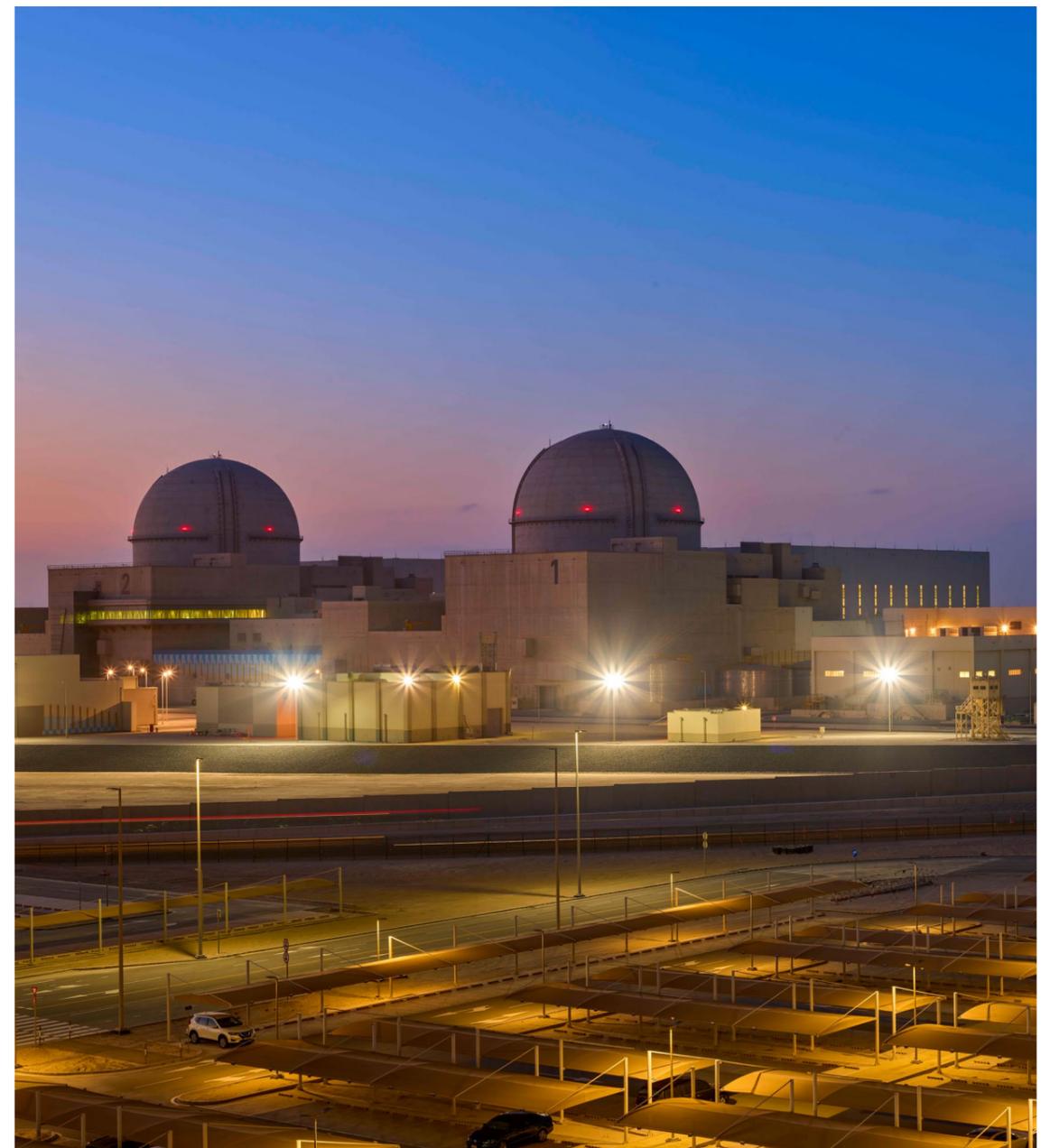
Integrate climate change measures.

Integrate climate change measures into national policies, strategies and planning and lower the Greenhouse Gas (GHG) emissions by the country.



ADX ESG Metrics Addressed

Social S9	S9. Child and Forced Labor Develop and implement human rights policy. Extend the coverage to include all suppliers and vendors.
Social S12	S12. Community Investment Invest part of the revenue to community development.



6.2 FINANCIAL RESPONSIBILITY

ENEC and its subsidiaries have created the appropriate guidelines and protocols to carry out its business operations in a responsible and productive way, with the aim of optimizing the utilization of government resources for the UAE Peaceful Nuclear Energy Program.

Project Financing

We successfully implemented a robust and well-structured financial framework that has facilitated the construction and progression of the UAE's first nuclear energy plant and the infrastructure to progress towards the delivery of Units 1 to 4. The overall project financing requirements are estimated at United States Dollar (USD) 27.2 billion:

- USD 17.9 billion comes from a direct loan by the Government of Abu Dhabi
- USD 2.5 billion has been provided as a direct loan from the Export-Import Bank of Korea (KEXIM)
- USD 0.3 billion were generated through loan agreements with five local and international commercial banks.
- A total of USD 6.5 billion in equity commitments were made for the establishment of Nawah Energy Company and the BOC, in exchange for equity interest in the two companies, shared between ENEC (82 percent) and KEPCO (18 percent)

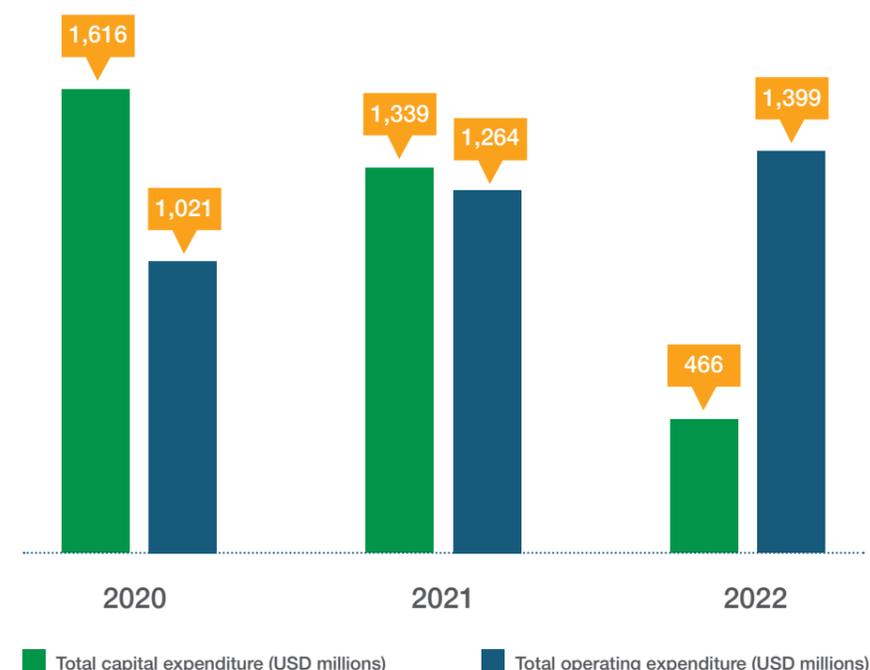
Furthermore, the Enterprise has secured a financing agreement with HSBC for the construction of a 1,600-Staff Accommodation Units project at a total amount of USD 175 million.

Budgeting and Spending

The organization has implemented measures to guarantee that funds are utilized efficiently and within the assigned budget. Expenses are closely monitored, and only authorized personnel in accordance with the proper Delegation of Authority (DOA) have the power to approve them before they are committed. Payments are authorized based on the limit set in the relevant DOA approved by the Board, which undergoes periodic review and update. Additionally, the financial performance of different departments in the organization is closely monitored to identify areas where cost optimization is possible.

The majority of the Enterprise's capital expenditure corresponds to payments made under the USD 20 billion contractual agreement with the Prime Contractor. In 2022, the capital expenditure amounted to USD 466 million, reflecting a downward trend due to the gradual conclusion of construction activities. On the other hand, the Enterprise's operating expenditure is on the rise, indicating the organization's transition from a construction phase to operation phase.

Project Capital and Operating Expenditure



The increase in operating expenditure in 2022, compared to 2021, is primarily attributable to the first refueling outage of Unit 1, operations of Unit 2, including expenses related to nuclear fuel consumption and depreciation costs. Other components of operating expenditure encompass employee wages and benefits, service contractors, communication administration, and capacity building efforts, such as the Enterprise Energy Pioneers scholarship program.

Demonstrating its commitment to the local community, the Enterprise has made significant contributions by sponsoring activities amounting to over AED 1.6 million in 2022.





Community Investment
Donations and sponsorships (AED; Millions)

6.3 SUSTAINABLE SUPPLY CHAIN MANAGEMENT

Our supply chain functions encompass various critical areas, including Governance, Oversight, Support, and Performance (GOSP), strategic procurement, strategic contract management, operational procurement, inventory management, warehouse and logistics. These functions are managed and evaluated based on four key elements: qualified staff, process (e.g., SAP systems), procedures, and warehouse (plant). They collectively ensure the effective planning, sourcing, procurement, receipt, storage, transportation, and issuance of necessary materials and services for the safe and secure operation of the Barakah Plant.

The scope of our supply chain extends both extensively and globally, covering the requirements for constructing and operating the Barakah Plant and associated facilities like office buildings and accommodation units. We have 3,101 registered suppliers who regularly compete for contracts. This supplier network encompasses a wide range of entities, including locally owned Small and Medium-sized Enterprises (SMEs) as well as large-scale Multinational Companies (MNCs). The diverse composition of our supplier base reflects our commitment to engaging businesses of various sizes and backgrounds to support our operations.

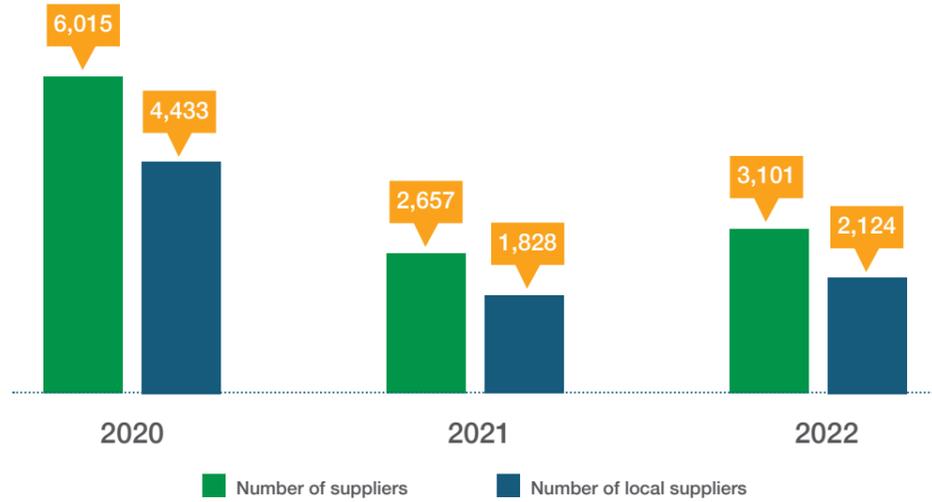
ENEC and its subsidiaries bear the responsibility for meeting its corporate procurement needs, which encompass a range of requirements such as expert services, ICT equipment, and on-site support services. To fulfill these needs, ENEC's Procurement and Supply Chain (PSC) team operates as a centralized service, facilitating procurement and contracting processes. The team ensures that goods and services are acquired under favorable contractual terms and conditions, all while adhering to legal and regulatory obligations. Additionally, the procurement function aligns with the sustainability goals, emphasizing environmentally and socially responsible sourcing practices.

Nawah PSC is accountable for procuring materials and services specific to the plant's operations. This includes acquiring expert support, engineering services, and manpower resources. Operating as a centralized service, Nawah PSC oversees procurement and contracting activities to secure the best terms and conditions for goods and services. Furthermore, this function ensures compliance with nuclear safety and quality requirements, prioritizing the organization's commitment to safety.

As the Prime Contractor, KEPCO maintains its own network of suppliers and subcontractors. The Enterprise assumes the responsibility of overseeing these arrangements, providing guidance, and monitoring performance to ensure adherence to the organization's standards as well as UAE-specific requirements. This oversight helps to maintain the highest quality standards and regulatory compliance throughout the KEPCO procurement process.

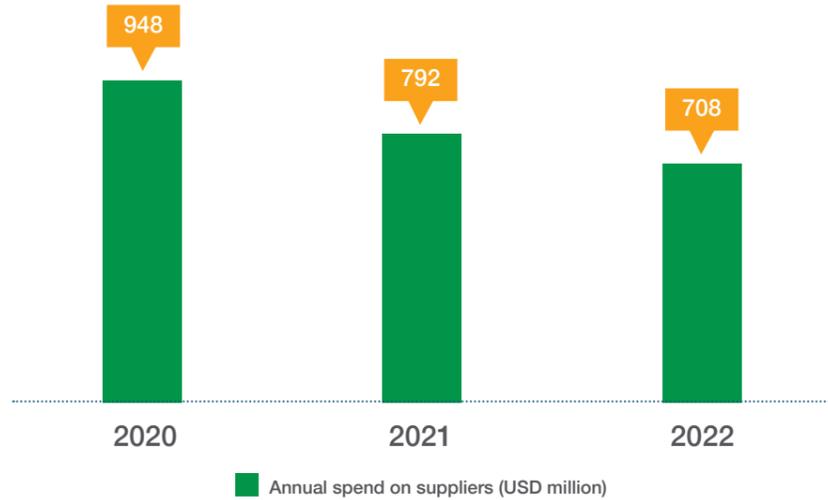


Supply Chain Overview



Scope: ENEC, Nawah, and BOC

Supply Chain Expenditure



Scope: ENEC, Nawah, and BOC

[Supplier Code of Conduct](https://www.enec.gov.ae/doc/supplier-code-of-conduct-pri-version-211120191-5e04bff053da3.pdf)
[Contractor HSES Management Procedure](https://www.enec.gov.ae/doc/enec-standard-hse-requirements-for-contractors-60c5f19aac042.pdf)

[Contractor HSES Management Procedure](https://www.enec.gov.ae/doc/enec-standard-hse-requirements-for-contractors-60c5f19aac042.pdf)



Supply Chain Localization

To maximize the economic benefits for the UAE from the nuclear energy project and enhance supply security, the Enterprise strives to prioritize the procurement of goods and services from local suppliers whenever feasible. In 2022, approximately 68.5 percent of the suppliers registered with the Enterprise were based locally. Furthermore, a significant portion of the procurement spend in 2022, totaling USD 517 million, equivalent to 73 percent of the total, was allocated to local suppliers. The reduction in local procurement spend in 2022 is attributed to construction progress towards completion, leading to a reduction in Prime Contract activities performed by KEPCO.

In line with these efforts, ENEC continued to implement the In-Country Value (ICV) Program in 2022. This program is of national strategic importance as it aims to increase the overall expenditure retained within the country. By doing so, it stimulates business development investments, fosters the development of local human capabilities, and enhances productivity in the local economy. The ICV Program, aligned with the UAE’s vision, supports the future growth of market capabilities within the country and enhances business relationships between the Enterprise and both local and international companies. In 2022, the awarded suppliers had a weighted average ICV score of 15.7 percent.

Furthermore, ENEC actively supports the Khalifa Fund for Enterprise Development (KFED), an organization dedicated to promoting and assisting entrepreneurial ventures in Abu Dhabi. Presently, there are 28 registered KFED companies serving as suppliers to ENEC, and we actively encourage their participation in bidding for future contracts. By collaborating with KFED, ENEC fosters a supportive environment for local businesses and contributes to the growth and development of the entrepreneurial ecosystem in the region.

Local Procurement			
Year	2020	2021	2022
Total procurement spending on suppliers based in the UAE (USD millions)	396	792	517
Percentage of registered suppliers that are locally based (%)	74	68.8	68.5
Percentage of procurement spending on locally based suppliers (%)	42	84	73
Number of KFED suppliers registered (Locally owned SME companies funded by KFED) (Cumulative)	30	28	28

Scope: ENEC, Nawah, and BOC



Labor Practices

The Enterprise has established a Supplier Code of Conduct that sets forth mandatory labor practices. Compliance with labor laws and the implementation of proper worker welfare practices are considered essential prerequisites for suppliers to be eligible for registration or contract awards. In the past, suppliers were required to sign a statement confirming their adherence to worker welfare standards, which served as a means of verification. In response to a decision made by the relevant government department, the collection of this explicit statement of compliance has been discontinued. This decision was made based on the understanding that the provisions outlined in the statement are adequately addressed and covered by existing laws and regulations.

Supplier Risks and Screening

To mitigate potential risks and fulfill our internal Health, Safety, Environment, and Sustainability requirements, we actively engage in ensuring that our supply chain adheres to stringent ethical standards. We also strive to ensure that our suppliers implement the necessary environmental, social, and labor-related policies and procedures to operate responsibly.

All suppliers registered through our dedicated supplier portal are required to accept and adhere to our 'Supplier Code of Conduct.' This comprehensive document outlines the principles and standards of conduct expected from every supplier. It covers various topics such as fraud prevention, ethical behavior, conflicts of interest, whistleblowing, compliance with the law, and our commitment to environmental stewardship and sustainability leadership.

We have developed Sustainable Procurement Guidelines in accordance with We have sustainability policies, objectives, and procedures. These guidelines serve as a resource to assist in incorporating sustainability considerations into the procurement process. By integrating elements of sustainability into our procurement practices, we actively support the Enterprise's sustainability goals and contribute to fostering a more sustainable future.

6.4 ECONOMIC DEVELOPMENT

The development of the Barakah Plant has been a major driver of short-term and long-term economic development for the Al Dhafra Region and the UAE. The project has generated numerous employment opportunities and triggered substantial investments in local infrastructure that will have a lasting impact over the plant lifecycle. Additionally, the project has provided an opportunity for local businesses to meet the necessary quality standards required to join the global nuclear supply chain.

Business and Industrial Development

The Business and Industrial Development (BID) team has been tasked with forging strong collaborations with local UAE firms, aligning them with the stringent quality and technical criteria required to secure contracts within the UAE Peaceful Nuclear Energy Program. Guided by the robust framework of the Roadmap for plant sustainability, localization, and future business growth, the BID team is empowered to drive the establishment of a sustainable and localized nuclear supply chain while also fostering an environment that encourages international suppliers to establish their presence within the UAE.

In 2022, the BID team demonstrated unwavering dedication to localizing the supply chain for the Barakah Plant and advancing plant support initiatives. We successfully achieved significant milestones outlined in the BID Localization Plan, highlighting our commitment to the UAE nuclear program.

Throughout the year, we made notable progress in localizing non-safety related materials and services, integrating local suppliers into the Barakah Plant supply chain. Additionally, we qualified a radiological protection testing laboratory, enhancing our ability to meet stringent safety standards. Collaboration with renowned nuclear industries from France and Korea was strengthened, fostering valuable partnerships and knowledge exchange. In 2022, several conferences events took place, notably two France-UAE Supplier association (E-Fusion) events in the UAE, and one Korean Nuclear Association (KNA) event in Korea. These gatherings attracted a considerable number of participants and facilitated constructive discussions among various stakeholders, including international companies, local suppliers, and our representatives.





Figure 1: French Delegation at the Barakah Plant during the E-Fusion 5 Suppliers Event

We also played a crucial role in facilitating alliances between international suppliers and local companies, nurturing mutually beneficial business relationships. Close collaboration with governmental entities like Ministry of Industry and Advanced Technology (MOIAT) and Abu Dhabi Department of Economic Development (DED) ensured alignment of industrial strategies, reinforcing our cohesive approach.



Figure 2: BID presenting Localization Strategy during the MOIAT “Make it in the Emirates” event in June 2022

To this end, the BID team has prioritized the qualification of local suppliers with ASME Nuclear Quality Assurance (NQA-1) accreditation and the development of nuclear-specific capabilities in local organizations, including testing laboratories.

In 2022, the QA and BID jointly conducted two NQA-1 Awareness Sessions attended by 12 local companies. The purpose of these sessions was to provide detailed information about the implementation of the NQA-1 Management System. These sessions aimed to foster a shared understanding and commitment to the NQA-1 standards within the nuclear industry, promoting collaboration and knowledge exchange among participants.

In addition to supply chain localization, the team has been actively engaged in plant support and business growth initiatives. These efforts encompass areas such as Materials and Engineering Excellence and Knowledge Management, which are vital for maintaining operational efficiency and fostering continuous improvement within the plant. Moreover, the team has also focused on supporting the establishment of new nuclear start-ups, nurturing a culture of innovation and collaboration in the nuclear sector.

Knowledge Transfer and Partnerships

We are proud to support for local businesses in the UAE and its dedication to fostering the development of a domestic nuclear energy supply chain. As part of the Barakah Plant, we work closely with UAE companies to ensure their compliance with rigorous quality and technical standards required to secure contracts within the national nuclear energy program. This commitment aligns with the UAE’s strategy for economic and industrial development, which seeks to enhance the manufacturing sector’s output, value, and environmental sustainability.

The economic progress of the UAE and the operational commencement of the Barakah Plant create avenues for local companies to establish partnerships with experienced international counterparts to meet the demands of the four nuclear reactor units at the Barakah Plant and other potential entrants in the Middle East nuclear sector. Acting as a bridge between local and international entities, the BID team plays a crucial role in facilitating their participation in the program, promoting collaborations, joint ventures, and knowledge transfer.

We are committed to:

- Identifying and building alliances between local companies and international entities.
- Working with government entities to attract and incentivize international investment in the UAE’s nuclear energy sector.
- Assisting investors to establish a local stand-alone presence or to identify and work with local partners.



A Memorandum of Understanding (MOU) with the Comité Stratégique de la Filière Nucléaire (CSFN) was signed in 2022, with the aim of facilitating collaboration between the French nuclear supply chain and UAE industries, to foster the growth of the UAE-based nuclear industry and provide comprehensive support for the operations and maintenance of the UAE Peaceful Nuclear Energy Program.

 **Investments in UAE**
<https://www.enec.gov.ae/suppliers/supplier-education/investor-guide-and-investments-in-the-uae/>



7 PROTECTING OUR ENVIRONMENT AND ECOSYSTEMS

7.1 OVERVIEW

We place a strong emphasis on sustainability, considering it as one of its highest priorities across all assets. We align our sustainability goals with the UN SDGs and meets the ESG disclosure requirements set by ADX. As a source of electricity generation, nuclear energy plants have the unique advantage of producing power with net negative greenhouse gas emissions. This makes the Barakah Plant a valuable contributor to the UAE’s path towards Net Zero efforts in reducing its carbon footprint, both on a national and international scale.

Sustainability Objectives

Our Environmental and Sustainability objectives include:

1. Environmental Management – adhere to the highest available standards and regulations while working to prevent pollution, preserve biodiversity, conserve water and energy resources, and handle waste effectively.

Sustainability Value Pillar	Sustainability Aspect	UN SDG Addressed
Safe, Clean, Efficient and Reliable Energy	• Environment Management System (EMS)	   



UN SDG Addressed



Reduce Illness and Death from Hazardous Chemicals and Pollution
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.



Improve water quality, wastewater treatment and safe reuse
By 2030, improve water quality by reducing pollution, eliminating dumping, and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally.



Universal access to modern energy
By 2030, ensure universal access to affordable, reliable, and modern energy services.



Global Energy Mix
By 2030, increase substantially the share of renewable energy in the global energy mix.



By 2030, increase substantially the share of renewable energy in the global energy mix
Disclose renewable energy share in the total final energy consumption.



Substantially reduce waste generation
By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.

ADX ESG Metrics Addressed

Environment E1	E1. GHG Emissions Disclose the Scope 1 GHG emission in terms of CO ₂ eq as a minimum and include Scope 2 & 3, if applicable.
Environment E2	E2. GHG Emissions Intensity Disclose GHG emission intensity in terms of MTCO ₂ eq per MWh of electricity generated.
Environment E3	E3. Energy Usage Disclose the total direct and indirect energy consumed by the Enterprise.
Environment E4	E4. Energy Intensity Disclose energy intensity as GJ per person.
Environment E5	E5. Energy Mix Disclose percentage energy usage by generation type.
Environment E6	E6. Water Usage Disclose the total amount of water consumed and recycled in cubic meters.
Environment E7	E7. Environmental Operations Develop and implement Environmental Policy. Set specific targets for specific waste, water, energy, and/ or recycling policies. Adopt and implement an Energy Management System.
Environment E8	E8. Environmental Oversight Develop and implement procedures to oversee sustainability issues.
Environment E9	E9. Environmental Oversight Involve your Board to oversee and/or manage sustainability issues.
Environment E10	E10. Climate Risk Mitigation Plan and invest in climate-related infrastructure, resilience, and product development.



7.2 ENVIRONMENT MANAGEMENT APPROACH

We have meticulously followed the environmental assessment process established by the Environment Agency - Abu Dhabi (EAD). Through comprehensive environmental studies, we have obtained the necessary Environmental Permits from EAD to undertake the construction and operation of the nuclear energy plant. These studies have allowed for the identification of suitable sites, assessment of environmental impacts, routine environmental monitoring requirements, and implementation of appropriate prevention and mitigation measures.

To ensure effective environmental management, we developed the Construction Environment Management Plan (CEMP) for the construction phase and the Operational Environment Management Plan (OEMP) for the operation phase. These plans have been duly approved by EAD and have been implemented to address environmental considerations. The annual OEMP Third Party Audit was carried during February 2022 for the second year of operation. The audit results showed that the Barakah Plant is principally meeting the requirements of the EAD operational environmental permit and the OEMP, with no major non-compliance, non-conformity, or deviations recorded during the reporting period.

The Environment and Sustainability Charter, jointly signed with the Prime Contractor, serves as a commitment to strictly adhere to the prevention and mitigation measures and monitoring program outlined in the approved CEMP. We diligently conduct environmental performance monitoring and reporting activities as prescribed in the approved environmental studies and in compliance with the environmental permit conditions set by EAD and national regulations.

In line with our commitment to environmental stewardship, we have established an Environmental Management System (EMS) certified against ISO 14001:2015. Notably, in 2022, We recorded zero significant or reportable environmental incidents and no breaches of environmental regulations or permit conditions, reaffirming its dedication to maintaining a responsible environmental track record.

7.3 ENVIRONMENT MANAGEMENT SYSTEM (EMS)

We place an utmost importance on the implementation of a robust Environment Management program. This commitment is achieved through the establishment, execution, and oversight of the EMS, which adheres to both local and international regulations and standards.

The EMS encompasses various essential elements related to environmental stewardship, including:

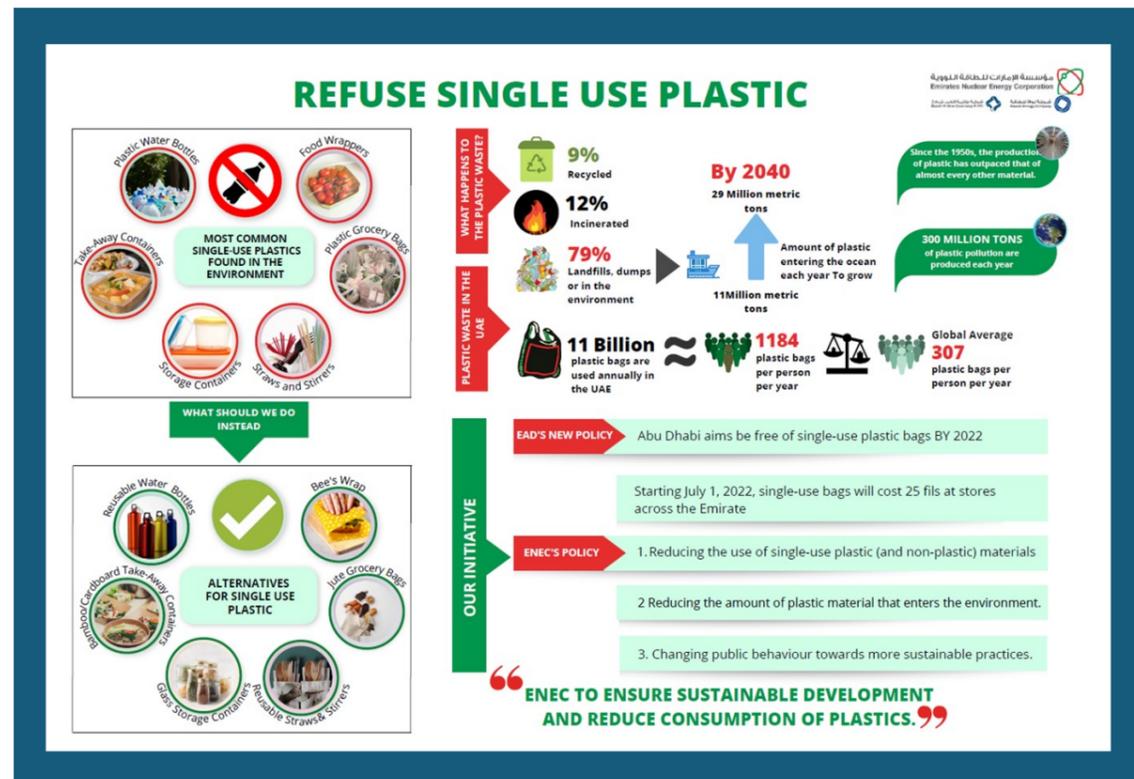
- Sustainability and Environment Policies
- Environment Legal Compliance and Risk Management Program
- Environment Induction, Training and Awareness Programs
- Incident and Emergency Response Programs



7.4 SUSTAINABILITY INITIATIVES

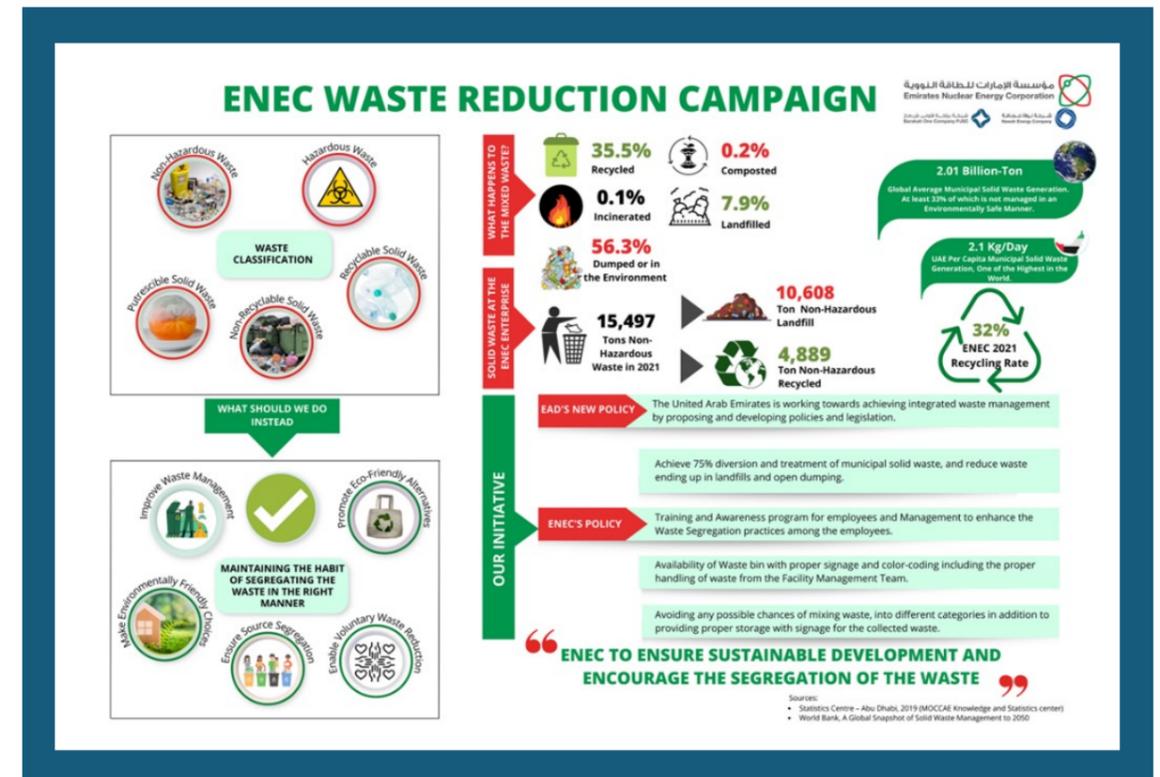
Q1 2022: Single-Use Plastic

We encouraged our employees to eliminate or reduce the usage of single-use plastic by bringing awareness to its harmful environmental impact and impending ban in Abu Dhabi.



Q2 2022: ENEC Solid Waste Management

The UAE is working towards achieving an integrated waste management by proposing and developing policies and legislation. We conducted an awareness campaign for employees and management to enhance waste segregation practices.



Q3 2022: Greenhouse Gas (GHG) Emissions

The UAE Net Zero 2050 visionary strategic initiative is a national drive to achieve net-zero emissions by 2050, making the UAE the first Middle East and North Africa (MENA) nation to do so. The clean energy generated by the Barakah Plant has already mitigated 10.1 million tons of GHG emissions from the national grid since in 2021; and is contributing to the UAE Net Zero 2050 strategic initiative We have.

ENEC GHG AWARENESS CAMPAIGN

Paris Agreement Goal is to limit global warming to well below 2 degrees, preferably to 1.5 degrees Celsius, compared to pre-industrial levels

As of 2021, we have already reached 1.1°C of global warming compared to pre-industrial levels

WAYS TO REDUCE GHG EMISSIONS

- Reduce Energy Consumption
- Clean Fuel Alternatives
- Energy Efficiency to Net Zero
- Carbon Offsets

ENEC GHG AWARENESS CAMPAIGN

ABU DHABI GHG EMISSIONS SECTOR

75.9% Energy	16.7% Industrial Process	5.3% Waste	2.1% Agriculture
98% Fuel Combustion Emission	25% Oil and Gas	13% Transport	16% Manufacturing and Industries
02% Fugitive Emission	45% Water and Electricity	1% Other Energy	

2021 ENEC AVOIDED THE RELEASE OF 2.8 MILLION MTCO₂eq

STRATEGIC ALIGNMENT
The UAE Net Zero 2050 strategic initiative is a national drive to achieve net-zero emissions by 2050, making the Emirates the first Middle East and North Africa (MENA) nation to do so. The initiative aligns with the Principles of the 2050 - the UAE's roadmap for accelerating national economic development

ENEC'S POLICY

1. Enhance the GHG emissions Accounting
2. Get aligned with the ADQ, GHG reporting requirements
3. Embracing the culture of sustainability and raising awareness

ENTERPRISE STRATEGY 2022-26 STRATEGIC THEME
“ENSURE PROGRAM AND ENTERPRISE SUSTAINABILITY FOR BNEP OPERATIONS AND FUTURE GROWTH”

ENEC Net GHG Emissions 2021 (MTCO₂eq)

59,147 GHG Emissions	-2,886,000 GHG offset	-2,826,853 Net GHG Emissions
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GHG Emission Intensity (MTCO₂eq/Person)

6 (2019)	13 (2020)	6.79 (2021)
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Q4 2022: Water Conservation

Due to the lack of freshwater sources, it is important for the UAE to identify a low carbon desalination solution to meet its long-term water needs. In 2017, the UAE launched 'The UAE Water Security Strategy 2036' which aims to ensure sustainability and continuous access to water during normal and extreme emergency conditions. Since desalination is an energy intensive process, our efforts to produce safe, clean, and reliable energy will help to reduce the environmental impact generated by our long-term need for water.

We conducted an awareness session to enhance knowledge on the global water crisis, regional and local strategies, as well as the our water management efforts.

ENEC WATER CONSERVATION CAMPAIGN

As populations grow and natural environments become degraded, ensuring everyone has safe and sufficient water supplies is becoming increasingly challenging. A major part of the solution is to reduce pollution and improve the way we manage wastewater. A more circular, sustainable economy means reducing contamination of ecosystems, and increasing the treatment, recycling and safe reuse of wastewater as a source of water, energy and nutrients.

Water Crisis in the MENA Region

The Middle East and North Africa is home to 6% of the world's population and less than 2% of the world's renewable water supply.

Over 75% of worldwide desalinated water is in the Middle East and North Africa, 70% of which is in the GCC countries

MENA Region Water is supplied from three main sources

- 1- Groundwater supplies about 51% of the irrigation uses but some limited quantities are used for potable uses.
- 2- Desalinated Water Supplies about 40% mainly for potable water uses
- 3- Treated Wastewater supplies about 9% and mainly used for the irrigation and the industrial uses

There are two sources of water in UAE

Groundwater

While groundwater is used for agriculture in Al Ain and Liwa, drinking water is provided entirely from desalinated seawater across the Emirates.

Desalination

There were eight seawater desalination plants in Abu Dhabi owned and operated by eight joint ventures: Taseel A, Taseel B, the Five, Um al Nar plant, and the Al Mirfa plant.

Nuclear power plant water usage intensity:

Water Consumption of Power Plants with Cooling Towers

Water drawn for the purpose of cooling is safely returned back to the source of extraction. The temperature of the cooling water is always kept maximum of 5°C above the source water to avoid any thermal pollution. The loss of water during cooling is through Evaporation, which accounts to maximum of 1%.

UAE Water Security

ENEC has reduced its water consumption by approx. 44% in the year 2021

ENEC has observed lowest water intensity in the year 2021

ENEC Total Water Consumption (M³)

Year	Consumption (M ³)
2019	1,305,190
2020	2,005,189
2021	1,305,708

ENEC Water Intensity (M³/Person)

Year	Intensity (M ³ /Person)
2019	218
2020	220
2021	89

Why to Conserve water?

- 1- 97% of all the water on the earth is salt water which is not suitable for drinking. Only 3% of all the water is fresh water, and only one percent is available for drinking water. The other two percent is locked in ice caps and glaciers.
- 2- Consuming the water we have, minimizes the effects of water shortages and helps build a better defense against future drought years.

Global Average
Daily water consumption per capita per day

170-300 Liters of water

One of the United Nations' Sustainable Development Goals aims to provide universal access to clean water and sanitation by 2030.

Annual Beach Clean Up

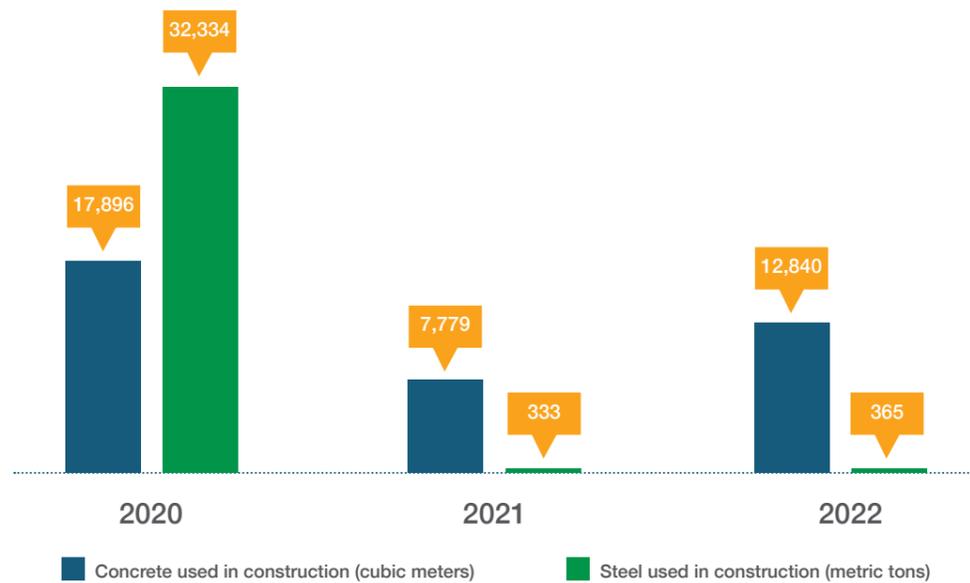
An annual beach clean-up was held in November 2022 with over 78 volunteers from the Organization, KEPCO, and other subcontractors. More than 790 kilograms of general waste and 439 kilograms of wood and recyclables was collected from the beach in the vicinity of the Barakah Plant.



7.5 MATERIAL USE

The development of a nuclear energy plant entails the substantial utilization of essential materials such as nuclear-grade concrete and steel, vital for upholding the plant's safety and reliability. Our material consumption has seen an increase in 2022, driven by the construction of new plant support facilities and the refurbishment of existing ones. In addition to closely monitoring the large quantities of materials required for construction, we also carefully track the usage of office supplies, including paper, plastic water bottles, and printer cartridges.

Material Use

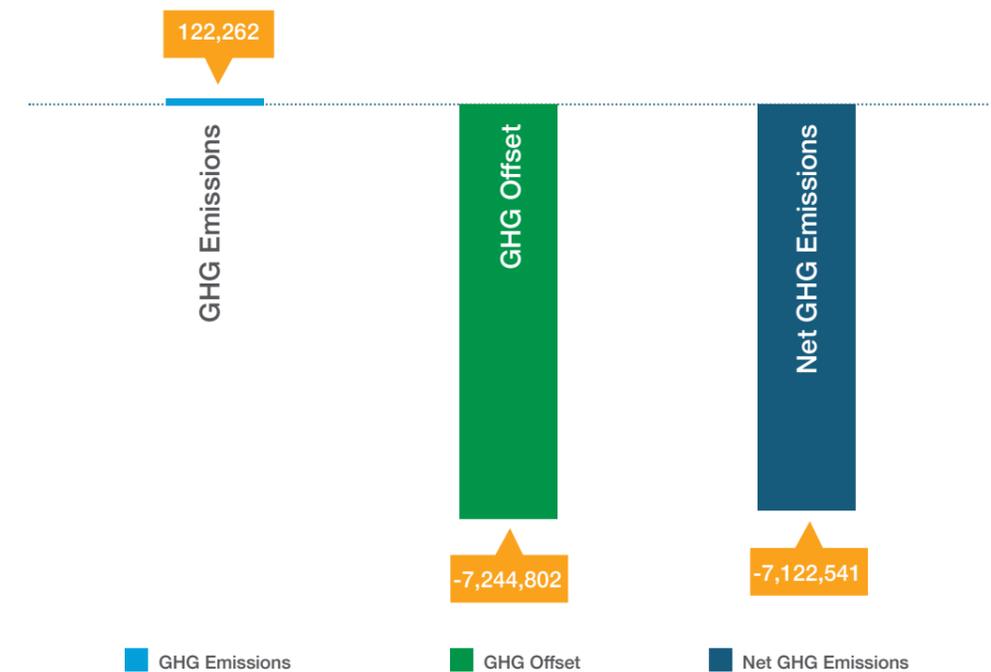


7.6 GHG EMISSIONS

The UAE is meeting climate change challenge head on and is ushering in a new era of clean electricity. By investing in both clean baseload energy sources such as nuclear, alongside renewables, our nation is delivering an energy portfolio that will continue to meet electricity demand to power our modern lives while cutting carbon emissions. This takes us one step closer to meeting our international commitments for emissions reductions under the Paris Agreement on climate change.

With two units providing clean energy to the UAE grid, Barakah plant's GHG offset and Net GHG emissions for year 2022 are presented below.

Net GHG Emission (MTCO₂eq) - 2022



We tracked direct and indirect emissions from the construction and operation processes of the plant as follows.

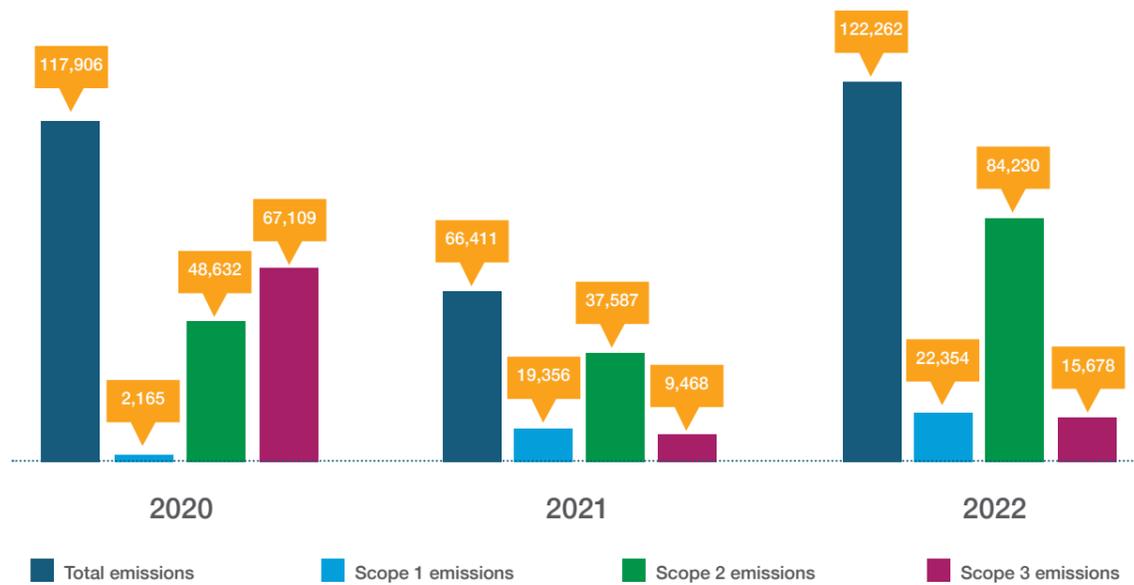
GRI 2016: 305-5

GRI 2016: 305-5



- Scope 1 emissions are direct emissions generated from the burning of fossil fuels, e.g., petrol and diesel used for heavy machinery, generators, and light vehicles.
- Scope 2 emissions are generated from the use of electricity and are known as ‘indirect’ since energy plants elsewhere generate the actual emissions.
- Scope 3 emissions are known as ‘other indirect emissions’ since they occur outside the boundaries of the organization, such as the supply chain, and come from the provision of products and services.

GHG Emission Intensity (MTCO₂eq)



Scope: ENEC, Nawah, BOC, and Contractors

The increase in the total GHG emission is attributed to Scope 1 due to auxiliary boiler being used to generate steam for Unit 1 following the completion of unit refuelling outage. and Scope 2 due to elevated electricity usage as a result of additional plant buildings and facilities becoming operational following construction completion, increased activities during first refuelling outage of Unit 1 including on-site outage support facilities e.g., accommodation, offices etc.



GHG Emissions
Emissions intensity (MTCO₂eq./person)

Scope: ENEC, Nawah, BOC, and Contractors

2021 numbers reinstated

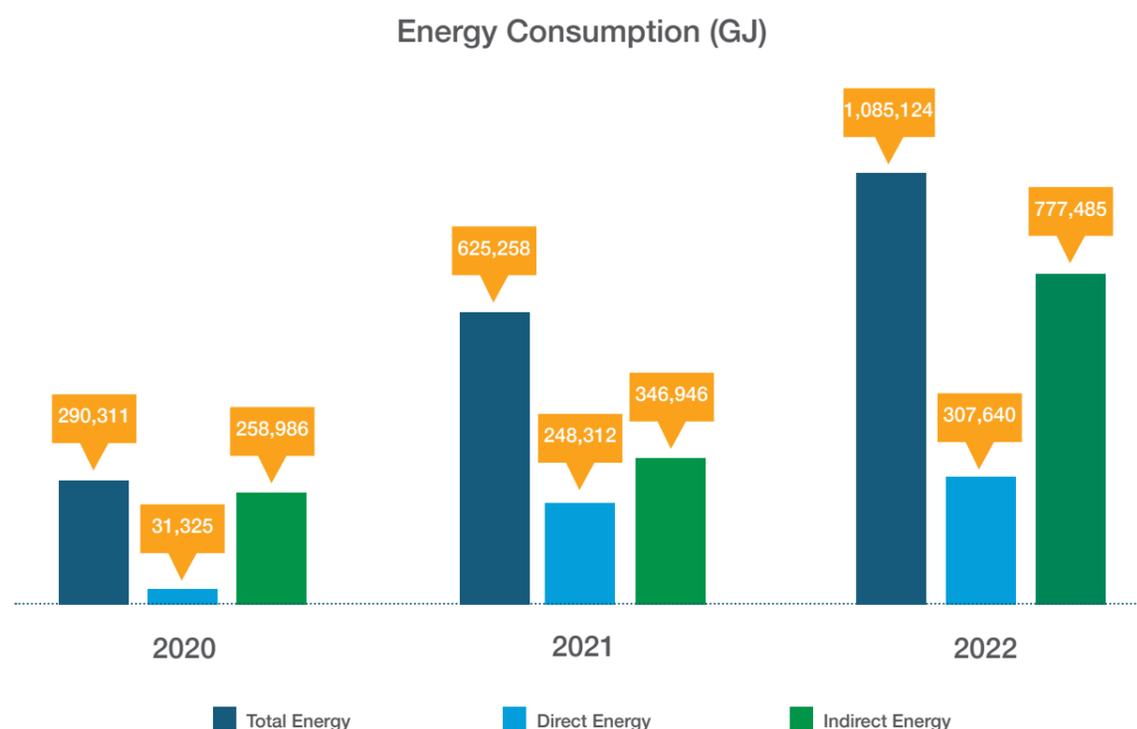


7.7 ENERGY

Along with our contractors, we have set internal targets to reduce their energy consumption. We plan and implement the monthly monitoring program.

The HQ building, located in Masdar City, has achieved a 4 Pearl design and construction rating under the Estidama Pearl Building Rating system. The guesthouse accommodation at the Barakah Plant has also achieved 2 Pearl Estidama Rating for Design and Construction. The building has implemented a high level of energy and water conservation measures in its design and construction as required by the Estidama Pearl Building Rating System. The design measures improved energy saving during the entire operational life of the building.

We utilized gasoline and diesel as direct energy sources during the construction phase. Electricity imported from the national grid, indirect energy use, is used for lighting, equipment, and ancillary buildings at the Barakah Plant. In 2022, the operational activities of the Barakah Plant led to a substantial rise in diesel consumption compared to previous years. This increase can be attributed to the plant's expanded operations and the completion of additional units entering the operational phase. Additionally, there was a significant surge in indirect energy consumption, primarily electricity usage, due to additional accommodation facilities and the heightened outage activities at the Barakah Plant.



Energy			
Year	2020	2021*	2022
Total energy consumption (Gigajoules – GJ)	290,311	625,258	1,085,124
Energy intensity (GJ/person)	31.89	71.83	88.51
Direct Energy (GJ)	31,325	278,312	307,640
Indirect energy (GJ)	258,986	346,946	777,485

Scope: ENEC, Nawah, BOC, and Contractors

*Nawah values have been restated



7.8 WATER AND WASTEWATER

Water

Our buildings, and the contractor staff accommodation at the Barakah Plant are the major consumers of potable water. Landscaping associated with the buildings and the Barakah Plant utilize Treated Sewage Effluent (TSE) from the onsite wastewater treatment plant. In addition, the contractors use the TSE for dust control and suppression measures during construction activities. TSE meets the standards set by DoE. The Enterprise verifies the water quality by testing the water samples in the laboratory once a month.

Water			
Year	2020	2021	2022
Total water consumed (cubic meters)	2,005,169	1,595,736*	1,768,781
Water Intensity (cubic meters/person)	220.28	183.31*	144.27

Scope: ENEC, Nawah, BOC, and Contractors

* ENEC CPO Numbers Restated

Wastewater

Greywater and sewage from office buildings in Barakah, and contractor and staff accommodations, constitute our non-hazardous liquid waste. Construction and maintenance activities generate hazardous liquid waste such as oils, paints, etc. All non-hazardous liquid waste is treated in the onsite wastewater treatment plant.

In 2022, the treated 100 percent of the non-hazardous wastewater to the standards set by DoE's Recycled Water and Biosolids Regulations 2021 and used 80 percent of the TSE for irrigation and 20 percent for dust suppression activities. Hazardous liquid wastes are being recycled offsite by a third-party contractor.

Wastewater			
Year	2020	2021	2022
Wastewater recycled offsite (million liters)	1	0	0
Wastewater recycled onsite (million liters)	927	1,544	1,399
Percentage of wastewater recycled onsite	100%	100%	100%
Hazardous liquid waste disposed (liters)	0	136,040	NA
Hazardous liquid waste recycled (liters)	75,014	134,430*	107,400

Scope: ENEC, Nawah, BOC, and Contractors

* Nawah Numbers restated



7.9 WASTE

Our offices at the Barakah Plant, along with our contractor, and staff accommodations, are the principal source of municipal solid waste generation. Construction activities at site results in the generation of construction waste.

Non-hazardous Waste

The combined efforts of ENEC and its subsidiaries and the subcontractors have led to the diversion of 47.7 percent of waste from the landfill. As the construction phase is ending, less recyclable waste has been generated. However, effective waste segregation practices have resulted in a higher recycling percentage compared to 2021.

Non-hazardous waste			
Year	2020	2021	2022
Non-hazardous waste disposed (metric tons)	6,082	10,608	6,600
Non-hazardous waste recycled (metric tons)	7,952	4,888	6,010
Percentage of total non-hazardous waste recycled	57%	31.5%	47.7%

Scope: ENEC, Nawah, BOC, and Contractors

Hazardous Waste

Construction activities and use of construction materials have resulted in the generation of hazardous waste. The hazardous waste is either recycled or disposed of through Tadweer approved environmental service providers. In 2022, the hazardous waste generated from waste oil from the heavy equipment workshop, pre-commissioning work, and repair work were recycled.



Hazardous Waste			
Year	2020	2021	2022
Hazardous waste disposed (metric tons)	0	202.62	486.94
Hazardous waste recycled (metric tons)	10	30.22	107,918.38
Percentage of total hazardous waste recycled	100%	13%	99.55%

Scope: Nawah and Teslam



7.10 RADIOACTIVE WASTE MANAGEMENT

The Radioactive Waste Management Program is designed to ensure that all radioactive waste meets the requirements for handling, transporting, storing, and disposing, as stated in the applicable national and international regulations. The primary goal is to minimize the impact of radioactive waste generated, such that it can be safely stored.

At the Barakah Plant, the annual targets for radioactive waste (m³) are determined on a per-unit basis, considering several factors including:

- Past performance
- The scope of work that is known in advance (such as refueling outages)
- Lessons learned implemented to drive waste minimization efforts at the Barakah Plant.

The overall goal of this approach is to ensure that there is sufficient capacity within the facility's interim radioactive waste storage building for the next decade.

In 2022, 12.5 Metric tons of Low-level waste (LLW) radioactive waste was generated. The primary make-up of radioactive waste was from Dry Active Waste (DAW) generated during the refueling outage from the following sources:

- Pressurizer Heater Replacement in addition to the secondary waste generated in support.
- Steam Generator Primary inspection
- Reactor head disassembly/assembly
- Cavity decontamination

We implemented an active waste minimization communication plan for Unit 3 Initial start-up and operation. As a result, it was recommended to improve the liquid, gas, and solid waste system operations which will reduce waste generation.

We have an active Radioactive Waste Management Advisory Committee which provides Nawah recommendations for continuous improvement. The Radioactive Waste Working Group meets periodically to drive continuous improvement to meet operational and business plan goals by addressing functional area, technical, regulatory, and specific process issues relevant to radioactive waste.

Managing Spent Nuclear Fuel

A nuclear reactor can require more than 200 fuel assemblies. The fuel assemblies are replaced when they no longer produce enough heat. At the Barakah Plant, about one-third of a reactor's fuel is replaced every 12 to 18 months during refueling outages. Once it has been removed from a reactor, the fuel is known as spent nuclear fuel. When used or 'spent' fuel is removed from the reactor, it is moved to a spent fuel pool to cool. The spent fuel pool is contained in the auxiliary building of the plant and remains there to cool. While the fuel only needs three to five years to cool, the spent fuel pool at the Barakah Plant will be able to store 20 years' worth of spent fuel before it is moved to a longer-term storage facility.

When the fuel is removed from the spent fuel pool, it is stored in concrete and steel containers called dry casks. These casks can be securely stored onsite at a nuclear energy plant or at an interim or long-term storage facility.

All methods for storing spent nuclear fuel are undertaken in strict accordance with best practices and guidelines developed by regulatory agencies around the world and the IAEA.



7.11 BIODIVERSITY

The Barakah Plant uses seawater for cooling of its nuclear reactors and discharges slightly warmer water back to the marine environment. This could result in marine habitat loss, species displacement, and marine sediment quality impacts. We have implemented a monitoring and mitigation program identified in the environmental studies to minimize its impact on the marine environment.

Marine Wildlife Management

In 2022, we continued our turtle rescue program. This program provides details of the available resources in terms of facilities, equipment, and rescue teams that have been dedicated for the purpose of retrieving stranded and distressed turtles at the Barakah Plant. Sea turtle rescues at Barakah Plant commonly occur during the winter months when the water temperature drops, and turtles become sick. All rescued sea turtles were handled in a turtle holding facility, at the Barakah Plant, before being transported to The National Aquarium (TNA) in Abu Dhabi for treatment and rehabilitation. A total of 71 sea turtles were retrieved during 2022. Out of the 71 turtles, a total of 34 were retrieved alive, where the majority were endangered green turtles (n=24) followed by Critically Endangered hawksbill turtles (n=10).

Coral Translocation and Fragmentation

In 2019, coral conservation efforts at the Barakah Plant were conducted through translocation of 7,305 coral colonies from donor and fragmentation of coral colonies to a total of 22,321 coral fragments.

The monitoring of translocated coral fragments and colonies in June and July 2020 was scheduled to occur biannually for three years. The coral translocation monitoring was completed in October 2022. Monitoring results showed that the conditions at recipient site are more conducive to coral survivorship, recruitment, and growth compared to donor site.

7.12 RADIOLOGICAL MONITORING LABORATORY

In August 2014, the Environmental Radiochemistry Laboratory started to establish background radiation baseline for the Barakah Plant, in accordance with the Radiological Environmental Monitoring Program (REMP) section of the Offsite Dose Calculation Manual (ODCM). This program monitors the plant's operational activities to ensure the health and safety of the public. The Lab sends semi-annual reports to FANR, containing the results of radiological tests performed on samples including soil, sediment, fish, invertebrates, air, particulate and gaseous drinking water, seawater, surface water, and ground water. Test results have been reported for 2022 and all results indicate that radiation levels are within acceptable limits.



8 PROTECTING AND EMPOWERING OUR PEOPLE

8.1 OVERVIEW

The core principles of ‘creating value for citizens by empowering our people’ have been rigorously applied to both the construction and operation of the Barakah Plant.

Hundreds of professionals from around the globe, with a wide range of expertise, knowledge, and experience, have gathered as a team for the construction and operation of the Barakah Plant. As the first project of its kind within the Arab World, we have drawn from the best national and international talent, while simultaneously investing heavily in human capital through highly specialized nuclear energy education and training programs for UAE Nationals.

Our knowledge and employment sustainability objectives include:

Occupational Health Safety Management System (OHSMS) – safeguard the occupational health and safety of all employees, contractors, and the local community.

Security – to ensure the security of the public, our employees, and contractors, through the design and execution of world-class security processes and systems, and the development of a robust culture of security.

Our workforce – to generate jobs, recruit, and retain high-quality people and the nuclear energy sector.

National talent development – to develop National talent for employment in the nuclear energy sector.

Knowledge creation – to contribute to the development of a knowledge-based economy benefiting from international experience and the provision of world-class training and education programs.

By delivering on these sustainability objectives, we are contributing to the achievement of the following UN SDG targets and ADX ESG Metrics:



UN SDGs Targets and ADX ESG Metrics Addressed

Sustainability Value Pillar	Sustainability Aspect	UN SDG Addressed
Empowering our People	<ul style="list-style-type: none"> Occupational Health and Safety Management System (OHSMS) Security Our Workforce National Talent Development Knowledge Creation 	

UN SDGs Addressed



Reduce mortality from non-communicable diseases and promote mental health.
By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.



Reduce Road Injuries and Death
By 2030, halve the number of global deaths and injuries from road traffic accidents.



Reduce Illness and Death from Hazardous Chemicals and Pollution
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination by hazardous chemicals.



Increase the number of people with relevant skills for financial success.
By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship.



Ensure full participation in leadership and decision-making.
Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life.



UN SDGs Addressed



Full employment and decent work with equal pay

By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.



Promote youth employment, education, and training.

By 2030, substantially reduce the proportion of youth not in employment, education, or training.



Protect labor rights and promote safe working environments.

Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.



Develop sustainable, resilient, and inclusive infrastructures.

Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

ADX ESG Metrics Addressed

Social S3	S3. Employee Turnover Disclose percentage Year-over-year change for full-time employees.
Social S4	S4. Gender Diversity Disclose percentage total enterprise headcount held by men and women (Overall, entry and mid-level, and senior- and executive level).
Social S7	S7. Injury Rate Disclose percentage frequency of injury events relative to total workforce time.
Social S8	S8. Global Health & Safety Develop and implement occupational health and safety policy.
Social S9	S9. Child and Forced Labor Develop and implement child labor/ forced labor policy. Extend the coverage to include all suppliers and vendors.
Social S11	S11. Nationalization Prioritize to increase Emiratization rate.
Social S12	S12. Community Investment Invest a part of the revenue to community development.

8.2 OCCUPATIONAL HEALTH & SAFETY, MANAGEMENT SYSTEMS (OHSMS)

Safety is the overriding priority for UAE's Peaceful Nuclear Energy Program. We are committed to delivering the highest standards of safety and quality as we work to generate clean and sustainable nuclear energy for the Nation.

Our Sustainability Policy and our Occupational Safety and Health (OSH) Policy outline our commitment to conducting work in a sustainable manner and effectively controlling environmental, health, safety, and security risks through all phases of the nuclear energy plant lifecycle.

We have a social responsibility to ensure a safe community and safeguard our employees' health and safety. Extensive effort is made to ensure the occupational health, safety, and security of our people at the HQ and Barakah Plant site facilities. The existing measures cover the prevention of workplace incidents, emergency preparedness should an emergency arise, and business continuity management in the event of a crisis. The H&S Department's priority is to facilitate proactive H&S initiatives, ensure regulatory compliance and enable a safe working environment for all.



Safety to ENEC

<https://www.enec.gov.ae/regulation/safety-at-enec/culture-of-safety/>

To integrate the management of all aspects of health, safety, and our environmental impacts, we developed a comprehensive Occupational Health and Safety Management System (OHSMS). Our OHSMS defines the principles by which we conduct business, including HSE policies, procedures, and codes of practice that ensure a systematic approach to OHS. The key elements include:

1. OHS Legal Compliance
2. OHS Communication and Consultation
3. OHS Risk Management
4. Contractor HSE Management
5. OHS Performance Management
6. OHS Incident Management
7. OHS Training and Competency Programs
8. Emergency Management Programs
9. OHS Review and Inspection



The OHSMS has been in place since 2010 and is continually improved to ensure alignment with regulatory requirements, international standards and the identification of new and emerging risks and opportunities. The OHSMS is certified against ISO 45001:2018. The OHSMS has obtained the Abu Dhabi Centre for Occupational Safety and Health System (OSHAD) Certificate of Approval.

To manage and monitor the OHSMS, we have several teams, including a Corporate Health & Safety (H&S), Project H&S, Plant H&S, and Teslam H&S teams.

Heat Stress

Heat stress has been identified as one of the region’s highest occupational health risks, primarily for personnel working outdoors in the summer months. The focus is to avoid heat stress incidents by implementing control measures that ensure employees, contractors, and subcontractors are never over-exposed to the sun and remain hydrated. In 2022, we achieved zero heat stress incidents, for both employees and contractors due to its rigorous prevention program. This program is in compliance with UAE Ministerial Resolution No. (44) of 2022 on Occupational Health and Safety and Labor Accommodation which requires a mandatory midday break for outdoor workers from 12:30PM to 15:00PM during the summer months of June to September.

Heat Stress			
Year	2020	2021	2022
Heat stress incidents (employees)	4	0	0
Heat stress incidents (contractors and subcontractors)	2	4	0

Scope: ENEC, Nawah, BOC, and contractors

Food Safety

The Corporate H&S Team, along with the Teslam H&S Team, regularly evaluate compliance with food safety and catering standards at the Barakah Plant.

In addition to compliance assessments, the teams conduct awareness campaigns to address specific issues, such as employee health and well-being programs that evaluate eating habits. These campaigns include initiatives aimed at promoting healthy eating habits during Ramadan and increasing awareness of the importance of staying hydrated and using cool shelters during hot summer weather.



Industrial Hygiene

Several industrial hygiene procedures and programs are implemented, including the identification and monitoring of areas with insufficient oxygen, confined space control, calibration of industrial hygiene equipment, monitoring of stress factors that affect industrial hygiene, assessments related to hygiene such as air quality surveys, noise control areas, and management of hazardous substances.

To ensure the safety of employees, Respirator and Self-Contained Breathing Apparatus (SCBA) training and fit testing equipment are provided, and all breathing apparatuses are regularly tested and inspected.

Health Screening

All employees are required to undergo health screening and medical surveillance as per statutory requirements set by OSHAD and FANR. The results and recommendations from the screening are kept confidential to manage the individual’s occupational health. The frequency of these assessments varies based on the risks associated with an employee’s job category.

Health and Safety Grievances

The Action Request (AR) program enables employees to proactively report safety concerns and near-miss incidents, assigning responsibility for implementing corrective actions to the appropriate party. The Employee Grievance Committee is also in place to address and resolve employee grievances. All employees are obligated to stop work activities if they observe an existing or potential safety threat, and health-related concerns can be raised through the AR program.

Contractors and subcontractors can use the Safety Observation Program to report grievances related to well-being, where workers can drop a card into boxes placed around the Barakah Plant. In 2022, no grievances related to well-being were reported using this program.

Employee Occupational Safety

Employees working in HQ in Abu Dhabi and/or onsite at the Barakah Plant, regularly travelling between the two locations. This means that safety risks ranging from transportation, construction, operation, and nuclear safety onsite are all material issues that are incorporated into the management of safety. In 2022, we achieved a zero Lost Time Injury Frequency Rate (LTIFR) and 1.52 in the Total Recordable Case Frequency Rate (TRCFR) among our employees.



Employee Occupational Safety			
Year	2020	2021	2022
Number of employee hours worked	7,243,242	8,985,700	6,597,590
Fatalities (employees)	0	0	0
Lost Time Injury Frequency Rate (LTIFR; employees)	0.51	0	0
Total Reported Case Frequency Rate (TRCFR; employees)	0.74	0.67	1.52

Scope: ENEC, Nawah, and BOC

LTIFR and TRCFR are calculated per million man-hours.

Contractor Occupational Safety

We regularly undertake audits to ensure that our contractors and subcontractors follow all relevant UAE laws and regulations. As a Prime Contract holder, the contractor HSE performance oversight starts with the review of KEPCO's HSEMS and its procedures and stretches to onsite inspections for all areas and disciplines. Observed deficiencies, if not corrected on the spot, are reported through a deficiency notification program, which is the formal communication channel with the Prime Contractor, and then addressed through corrective action plans. Performance indicators and deficiency notifications are followed-up and tracked monthly until complete implementation and effective closure is reached.

In 2022, the contractor LTIFR and TRCFR increased as a result of contractors performing high risk non-routine activities such as outage, demolition etc.

Contractor Occupational Safety			
Year	2020	2021	2022
Contractor and subcontractor hours worked (millions)	16.32	17.26	23.71
Fatalities (contractors and subcontractors)	0	0	0
Lost Time Injury Frequency Rate (LTIFR; contractors and subcontractors)	0	0.06	0.89
Total Reported Case Frequency Rate (TRCFR; contractors and subcontractors)	0.31	0.64	0.92

Scope: Contractors

LTIFR and TRCFR are calculated per million man-hours.

Nuclear Safety

We have developed the necessary procedures and management systems to achieve the highest standards of nuclear safety and quality during operation of the Barakah Plant. All procedures and systems are built on the expertise and operational experience of the global nuclear energy industry, adopting best practices from operators around the world and from industry organizations, including IAEA, WANO, and INPO.

The design, siting, construction, operation, and decommissioning of nuclear energy plants as well as the use of all radioactive material and radiation sources is regulated by FANR. All activities across the Enterprise comply with FANR's core values of safety awareness and responsibility, competency, independence, and transparency. All procedures and programs in place are aligned with FANR requirements.



8.3 SECURITY

We work closely with the Critical Infrastructure and Coastal Protection Authority (CICPA), the Abu Dhabi Government agency tasked with handling the protection and security of vital assets and infrastructure, including the Barakah Plant. Under the regulation of FANR and with guidance from the IAEA, CICPA has developed and implemented the highest international security standards for the Barakah Plant.

The security teams across the Enterprise are responsible for implementing the FANR-approved Physical Protection Plan (PPP) for construction. The PPP for construction addresses the protection of nuclear materials and the nuclear facility against malicious acts, such as the unauthorized removal of nuclear material. An additional FANR-approved Physical Protection Plan for Operation (PPP-O) addresses the organizational structure and staffing of security, the plant's physical protection (including the designation of protected and vital areas), guard training and qualification, information security, cybersecurity, and responses to security contingencies including preparedness for concurrent nuclear safety-related emergencies and security threats. The PPP-O provides assurances that physical protection strategies will neutralize any threats and seeks to ensure that the nuclear facility is protected from malicious acts and radiological sabotage.

Emergency Preparedness

Working with internal and external stakeholders, we developed a comprehensive Emergency Preparedness and Response program. This covers all aspects of nuclear emergency activities, emergency response organization, emergency equipment, training, and awareness.

There were 47 updates to the emergency preparedness and response procedures throughout the year. The purpose of changes was editorial and enhancements to address feedback from drills, exercises, audit, and inspections.

Twenty-seven (27) various emergency response training sessions were conducted in 2022 in HQ with a total of 306 people attending the training. At the Barakah Plant, six (6) Fire Warden training sessions were conducted with a total of 63 attendees.

Emergency Preparedness and Response

In 2022 two (2) evacuation drills were conducted as per the Annual Evacuation Drill Plan. At the Barakah Plant, twenty-nine (29) drills were conducted successfully both in the offices and accommodation facilities. Debrief meetings are conducted with all responsible stakeholders after each evacuation drill to discuss lessons learned and areas for further improvement. All lessons learned and corrective actions are documented in the drill reports which are circulated to relevant stakeholders through Enterprise Document Control System. Drill reports include assessment criteria, and the drill performance is evaluated against those criteria.

Barakah Emergency Preparedness Program

We ensure that commissioning and operations of all programs, processes, and activities are developed, implemented, and completed in a safe and effective manner.

The comprehensive program focuses on a commitment to protect the health and safety of employees, the public, and environment from a potential radiological event. The program covers the following functional roles and capabilities:

- Onsite Emergency Preparedness
- Offsite Emergency Preparedness
- Emergency Response Equipment and Facilities
- Emergency Response Training
- Drill and Exercise Program
- Barakah Emergency Plan and associated Implementing Procedures

The ability to respond to a radiological emergency at the Barakah Plant in a timely and effective manner must be periodically demonstrated to obtain, and maintain, an operating license from FANR. Emergency drills and exercises are scheduled periodically to test the effectiveness of the Emergency Response Plan, and its implementing procedures, which include emergency communications, timely response of Emergency Response Facilities, adequacy of emergency response resources, and coordination between the various agencies involved. In line with the Strategy and priorities for the safe, secure operations of commercially operating units, we continue to work closely with FANR, local stakeholders, the IAEA, and international nuclear experts to ensure that their Emergency Preparedness and Response Program adheres to the highest international standards. Key Performance Indicators as described in the Business Plan are implemented and closely monitored to ensure all aspects of the Emergency Preparedness and Response Program are fully maintained to the highest levels. Additionally, the onsite emergency



plan includes assessment criteria and protective actions to return the plant to a stable condition in case of radiological emergencies.

In 2022, Emergency Management implementation scope for occupied buildings outside the protected zones with all related responsibilities was transferred from H&S to Teslam leaving only a governance role under H&S.



8.4 OUR WORKFORCE

We foster a highly engaging and nurturing work environment for its employees. Moreover, We strive to recruit and retain the best of the talent from UAE and the world. In 2022, female employees represented 17% of our total workforce. As a key priority, we are encouraging women to join the nuclear sector through initiatives such as Women in Nuclear (WiN) that support current and future female employees. We recognize the importance of investing in our people. We offer excellent professional development opportunities and have made a flexible time policy through operating experience gained during the pandemic. We value the traditions and heritage of the UAE while acknowledging and celebrating the diversity of our workforce represented by multiple nationalities.

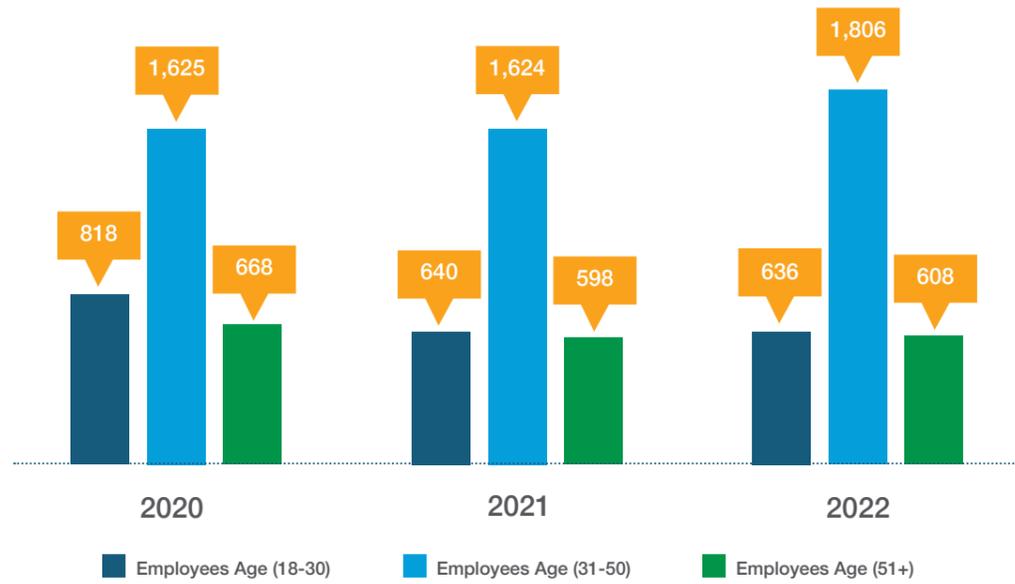
Workforce Profile

Our workforce is comprised of the highest caliber of professionals and specialists, who are helping to operate one of the largest nuclear energy projects globally, and one of the most strategically significant projects in UAE history. In total, we have a proud workforce of 3,050 employees in 2022.

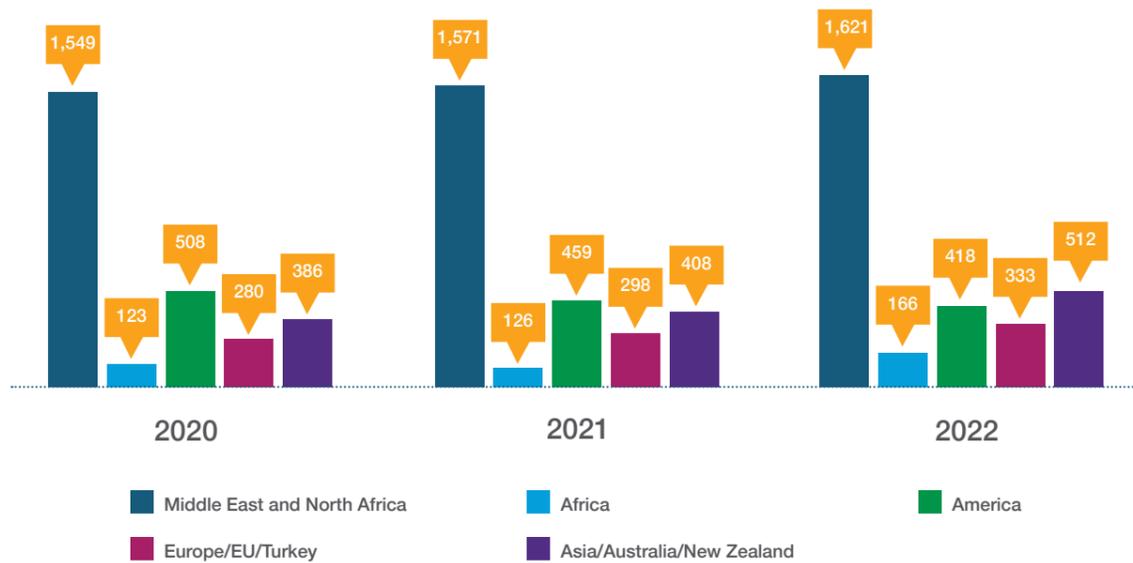
Our workforce has representation from over 1,561 UAE nationals, which consists of a youth population of 636 (ages 18-30 years), contributing to national goals and targets for youth employment as the Enterprise believes in providing a platform for the nation's young and enthusiastic talent.



Workforce Age Distribution



Employee Numbers by Nationality



Scope: ENEC, Nawah, and BOC

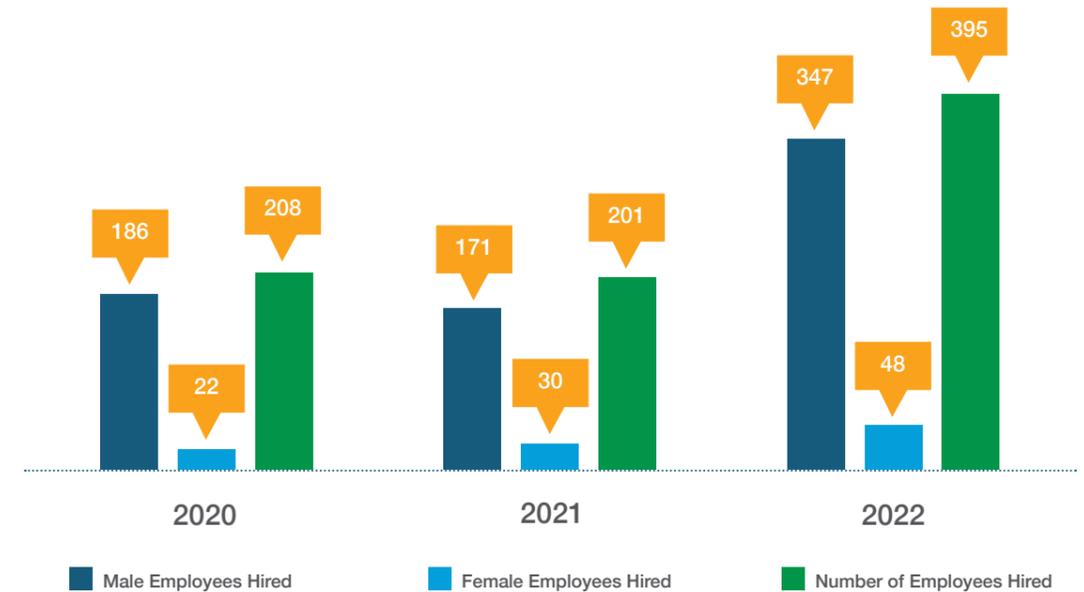


Recruitment and Onboarding

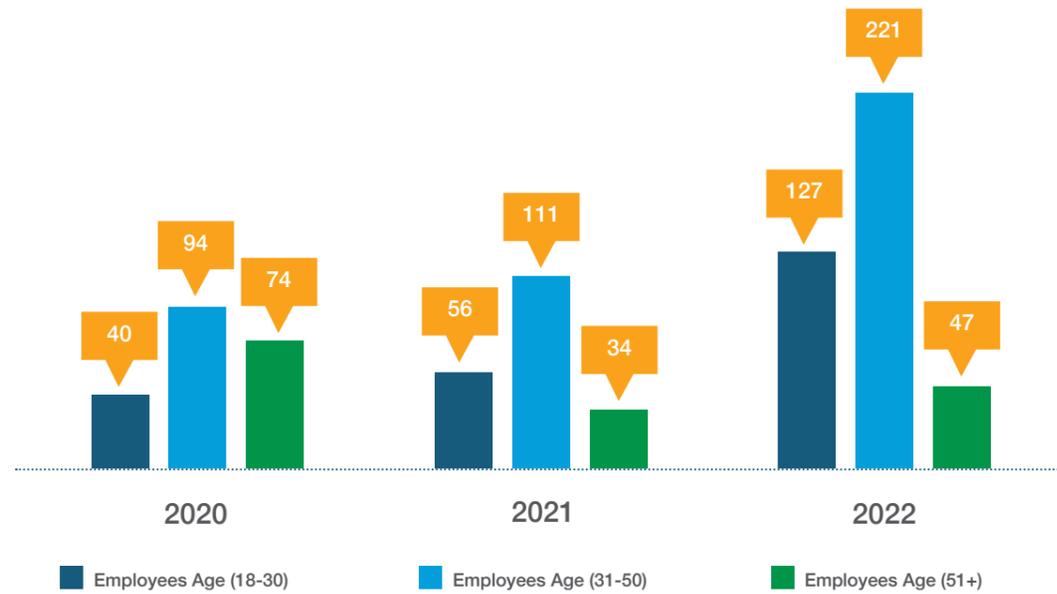
Our rapidly growing workforce directly impacts the national economy through the spending of wages and benefits, which in turn indirectly supports job creation in other sectors. There is also an additional indirect impact as many expat employees relocate with their families, spurring further economic activity within the UAE.

In 2022, 395 employees were recruited, including 117 UAE Nationals, 48 women, and 127 youth (ages 18-30 years). All new employees undergo a rigorous induction program entitled 'Becoming a Nuclear Professional.' This training covers our regulatory requirements, safety culture, radiological restrictions, and risks, as per the Enterprise's policies, procedures, and internal systems.

Number of Employees Hired



New Employees - By Age Distribution



Hired Employees - By Nationality



Scope: ENEC, Nawah, and BOC



Engagement and Satisfaction

Engagement among employees supports achieving the mission, vision, and corporate strategy by improving employee satisfaction, retention, and productivity.

In 2022, we conducted an Employee Engagement Survey that secured an 80 percent sustainable engagement score. Based on the score, 76 actions have been developed.

Programs and Initiatives taken during the year towards employee management and development program:

- Market aligned and transparent grading structure.
 - Implementation of new transparent grading system and launch of fair and equal annual salary review process.
- Recruitment efforts focused on redeployment of internal talent with Barakah Plant experience.
 - Launch of new internal careers site to increase internal mobility.
- Implement transformational leadership development programs including:
 - Program targeting Directors, Managers, and Superintendents.
 - Continuing training sessions for leaders on a quarterly basis.
- Launch a new Emirati Admin Assistant program intended for Emirati candidates for clerical positions.
- Implementation of a Graduate Development Engineers program (GDEs) to supply fresh graduates to technical roles in the Enterprise.



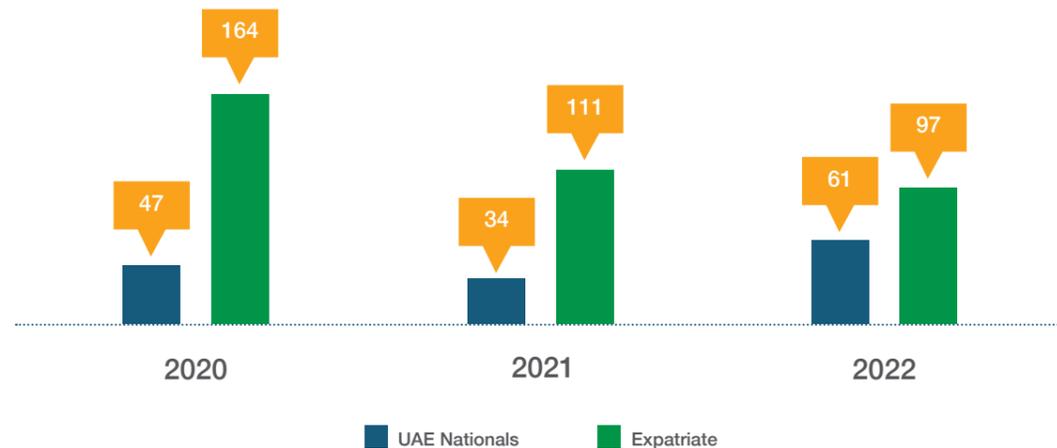
Employees Attrition Rate - Total



Employee Attrition - Gender



Employee Attrition - Nationality



Employee Concerns Program

To enhance a work environment that supports and encourages all employees, contractors, and subcontractors, the Enterprise established an industry best practice Employee Concerns Program (ECP), where they can identify and disclose nuclear safety and quality concerns without fear of retaliation.

The ECP is an independent system for reporting nuclear safety and quality concerns. It is designed to encourage open communication and to ensure employees can raise nuclear safety or quality issues without fearing harassment, intimidation, retaliation, or discrimination (HIRD). The ECP addresses nuclear safety and quality concerns in a timely and objective manner and acts as an alternative and anonymous system for reporting nuclear safety concerns.

The ECP is a first of a kind program in the UAE and supports a Safety Conscious Work Environment (SCWE), which is a fundamental principle in maintaining a strong nuclear safety culture. The program relies on employees and contractors to identify and report nuclear safety issues as well as issues impacting our plant's programs, processes, and performance. A strong SCWE supports the goal of adopting a strong Nuclear Safety Culture.

It encourages personnel to raise any nuclear safety concern such as:

- Problems with the safety, design, operation, maintenance, management, or construction of the Barakah Plant
- Treatment of individuals by their supervisor, manager, or peers

Talent Management Framework

Employees are the most valuable asset and are the competitive advantage. In 2022, our Talent Management team followed the Talent Management and Transfer Framework to support the Strategy of 2022-2026 in developing and maintaining a capable and engaged workforce.

- Talent management reviews and succession planning cycle were formally initiated across the Enterprise to identify key critical and leadership Emirati succession roles.
- Employees identified for all potential successors are measured by Individual Development Plans (IDPs), a tool to address development goals including but not limited to, on the job training, mentoring, coaching, and formal training. Key metrics were developed and assigned across the executive score cards to ensure progress is captured in this area. Such matrix is captured in the Emirati Health Index (EHI); this index is measured at the Entity, Chief, and VP level.
- Talent Management supports the safe and sustainable operation of Barakah Plant through the proactive planning, development, and growth of the Enterprise Talent. It does so through



implementation of youth development programs intended for Emirati fresh graduate engineers, who join the organization to gain industry exposure and employability.

- Talent Pipeline programs provide a technical pipeline for Emirati field operators and technicians at the Barakah Plant as well as for undergraduate and graduate students, who are sponsored in various local and international universities. Internal Talent in the organization is equally given opportunity to further their technical, corporate and leadership development on an ongoing basis through both in-house and external training.

Knowledge Management and Transfer Framework

We rely heavily on specialist knowledge to deliver a safe and sustainable peaceful nuclear energy program. Knowledge is therefore a very important asset that needs to be effectively managed. Knowledge is required to flow seamlessly through all stages in the Plant Lifecycle. The knowledge transfer mission is to maintain a knowledgeable and skilled workforce with a focus on the sustainable and continuous development of UAE nuclear professionals and leaders.

Therefore, for implementing knowledge transfer, the knowledge management approach is applied through:

- Identifying business, operational, and safety risks due to knowledge gaps (such as knowledge loss risk assessment to identify where the organization is most at risk of losing mission-critical knowledge).
- Effective transfer of knowledge from an ageing workforce to younger workers; and improved strategic planning and decision-making, resulting from access to more reliable knowledge/information.

Leadership Development Program

In continuation of our efforts in developing the leadership competencies and to establish a strong leadership level that enables differing tiers of the organization achieving strategic objective, following leadership training sessions are conducted on a quarterly basis:

- Constant alignment with the First Line and Supervisors through the Foundational Alignment Sessions (FAS).
- Constant alignment sessions with Managers and Directors through the Continuous Leadership Development (CLD).
- Developmental program for foundational leadership level through Foundational Leadership Essentials (FLE).
- Developmental program for Managers and Directors through the Onwards to Nuclear Excellence (ONE).

- Leadership coaching through Nuclear Leader as a Coach Program (NLAC).
- Training of ROs and SROs through Leading Effective Teams (LET) program.
- ASPIRE – Four levels that comprehensively cover and consolidate all core competencies, and all aspects of SELF and TEAM, as well as introduce initial concepts and competencies in SELF and TEAM leadership.



Employee Recognition and Reward Framework

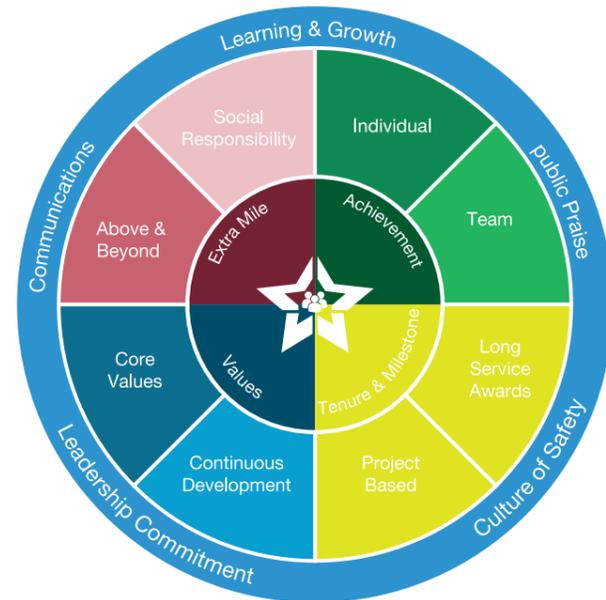
We adopt reward practices that enable engaging, motivating, and retaining the right people at all levels. The Enterprise's Employee Recognition and Awards Framework has been developed to build a positive recognition work environment.

- **Spot awards** is an automated process, whereas a nominator would nominate an employee who has done exceptional work outside of their day-to-day activities and responsibilities.
- **Corporate awards** are for employees who have done exceptional cost-saving activities for the Enterprise. They are nominated and then a panel would review their accomplishment and approve/reject the nomination accordingly.
- **Annual Merit Increase** is a new annual activity introduced in which employees are awarded with a basic salary increase based on their performance, basic salary positioning and market increase. This has been in effect since 2022.



Employee Recognition Framework

- 1 **ACHIEVEMENT RECOGNITION** Involves recognizing tangible outcomes or product of an employee's work.
- 2 **VALUES RECOGNITION** Focuses on how employee does their job as opposed to results of their work. Important to recognize their trainino, skills, and expertise.
- 3 **EXTRA MILE RECOGNITION** Focuses on outstanding achievement, exemplary performance and wide impact achievements that go above and beyond.
- 4 **TENURE & MILESTONES RECOGNITION** Focuses on recognizing tenure and celebrating key milestones.



Anti-discrimination

As per the Code of General Business Principles and Ethics and Disciplinary Action Code, employees must make all employment decisions without regard to an individual's race, color, national origin, religion, gender, age, disability, or other characteristics (personal traits). Such employment decisions include selection, hiring, placement, compensation, benefits, transfer, promotion, training, termination, and disciplinary action.

Female Participation

We believe in fair and equal gender opportunity that supports and encourages the professional development of female employees, to realize their full potential in the nuclear industry. We developed an integrated approach to promoting the inclusion of women in our workforce by supporting the new generation of women employed in the nuclear industry, developing their skills, and creating an inclusive workplace that supports work-life balance and well-being.

In 2022, the workforce was comprised of 519 female employees. Women made up 17.02 percent of the total workforce and 7.59 percent of senior management, slightly lower in total workforce but significantly lower in top management than in previous years. Many of the women at the Barakah Plant are employed in highly technical roles, making it one of the most gender-diverse nuclear energy plants in the world.

Workforce Female Ratio



Women in Nuclear (WiN)

WiN is a global working group represented in the UAE that supports the overall role of women in the nuclear industry. It focuses on women working professionally in various fields of nuclear energy applications. The working group addresses the general concerns about nuclear energy and supports the overall understanding of women's needs in the organization, taking into consideration the UAE's culture and the considerable number of women employed at the Barakah Plant.

WiN plays an integral role in ensuring that Barakah is the employer of choice for all women and drives the Enterprise's female employees to join international networks and to expand their horizons.

 **Women in Nuclear**
[https://www.nawah.ae/about-nawah/women-in-nuclear-\(win\)](https://www.nawah.ae/about-nawah/women-in-nuclear-(win))



8.5 NATIONAL TALENT DEVELOPMENT

We provide a positive work-life balance for its employees and promotes Emiratization in a cohesive cross-cultural workforce. We are committed to investing in the Western Region community and economy, to support its sustainable growth by creating long-term partnerships and job opportunities.

Emiratization

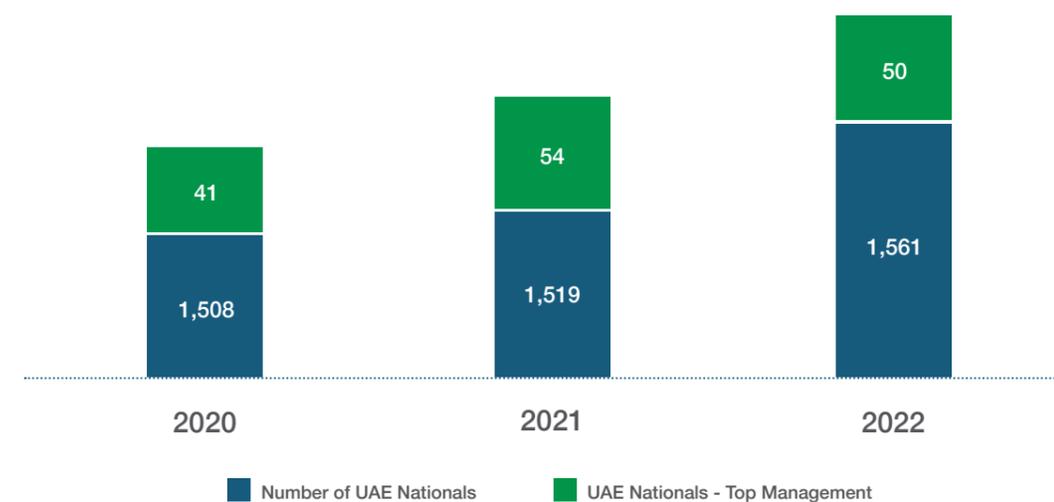
Emiratization remains a foundational strategy for Human Capital. From 2021, a 5-year forward-looking Emiratization Strategy was developed and is in the implementation stages, with a focus on:

- Emirati leader development and advancement for core positions through our talent identification and succession planning program
- Emirati effective participation in sustainable positions supporting Barakah Plant operations beyond 2024.
- Effective engagement of international experts in knowledge transfer and advancement of Emiratis
- Implementing robust programs for the development of technical and non-technical entry-level Emiratis

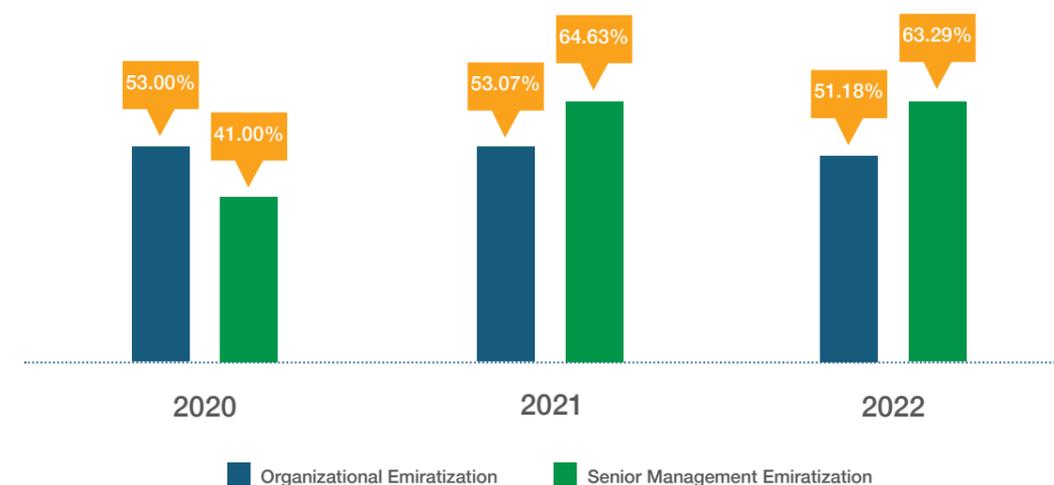
A dedicated Emiratization Department is responsible for attracting and retaining national talent to reduce reliance on international expertise. In 2022, we employed 1,561 UAE Nationals, 42 more as compared to 2021. The Emiratization rate was 51.18 percent across the workforce in 2022, and 63.29 percent among senior management.



Emiratization



Emiratization Rate



Scope: ENEC, Nawah, and BOC



Our talent reviews and succession planning cycles were formally initiated to identify key succession roles as well as potential Emirati successors for Directors and above. All potential successors now have Individual development plans tracking the key milestones in their development before potential assessment and appointment as warranted. Key metrics were developed and assigned across executive scorecards to ensure progress is made in this area.



8.6 KNOWLEDGE CREATION

Our ongoing efforts to support the UAE's transition to a knowledge-based economy include knowledge sharing and engaging with local and international stakeholders, thereby driving growth, and setting new standards of excellence. The nuclear energy industry has some of the most stringent quality, technical and risk management standards in the world, and we are committed to sharing its experiences in implementing and maintaining these standards with other national stakeholders and entities. Hence, we seek to reach out to our stakeholders to provide formal education and an overview of the program and technology.

Learning and Development

To deepen the understanding about ENEC and its subsidiaries,, a foundational training program for all new joiners is conducted. ENEC also provides 35 core competency courses to foster many opportunities for the continuous development of the technical and soft skills that are crucial for a successful workplace. All trainings are aligned with the international nuclear industry. Guidance is provided by the WANO and complies with the requirements of FANR.

Systematic Approach to Training

We deliver a Systematic Approach to Training (SAT) that applies to ENEC, the Barakah Plant and corporate training programs, as applicable, and oversees contractor-provided training to ensure compliance with applicable requirements. All training programs comply with the Systematic Approach to Training (SAT) in determining the training needs, as required by FANR. The training programs' conduct, compliance, and effectiveness are periodically reviewed and evaluated internally as well as externally, by WANO and FANR, to ensure continuous improvement. The Nuclear Training function designs, develops, implements, evaluates, and oversees training and qualification programs for the staff of the Barakah Plant. This is conducted primarily through the development and implementation of general employee training programs, Nawah administered initial and continuous training programs for Barakah Plant Operations and Technical staff, and simulator training facilities.

Data Management Training

The Data Management Program (DMP) was developed based on the mandate from Abu Dhabi Digital Authority. DMP aims to transform our processes to a data driven organization, capitalizing on the strategic role of data management and analytics in informing effective leadership decision making.



Nuclear Knowledge Management Training

Significant mission-critical knowledge is held with specialists in the form of tacit knowledge such as skills, expertise, technical competencies, know-how, and historical knowledge of plants and operations. Explicit-type knowledge is held in documents and ICT systems as information and data.

A key function of Knowledge Management therefore is to unlock the potential value of knowledge through initiatives that support diverse types of knowledge flows across tacit and explicit boundaries. Employees were trained in nuclear knowledge management theories, models, and best practices.

Capacity Building – Managing Radioactive Waste

We are committed to investing in talent development, and in 2022 radioactive waste personnel successfully completed the following training/certification/initiatives:

- Eight (8) personnel successfully completed Altrad Nuclear Waste Management Radwaste Training in France.
- Eight (8) personnel successfully completed energy solutions radioactive material international shipping training in the United States.
- Radioactive Waste Management team continuous capability building witnessed significant accomplishments with one of the function's members achieving doctorate in 'Radioactive Waste Management options in the UAE' by Kings College London, and another in Master of Science degree in Nuclear Engineering from the Republic of Korea.
- Implementation of lessons learned during operation and outages that result in further reduction of radioactive waste generation (for example, Unit 1 check outage generated forty-four (44) 200L drums of dry active waste, Unit 2 check outage resulted in four (4) 200L drums, and Unit 3 resulted in two (2) 200L drums).
- Unit 1 Refueling Outage – Reactor Containment Building was managed where contamination was controlled at the source (i.e., tents, bullpens) and as a result the majority of containment was kept as a clean area (non-contaminated).
- Catch containers were installed to effectively prevent leaks from spreading contamination to floors and surrounding equipment.
- Use of radiation safety protective clothing that is dissolvable, which minimizes the amount of radioactive waste generated (i.e., zipper material).
- Radwaste Self-Assessment identifying eleven (11) recommendations for continuous improvement.

- Participate in re-occurring Enterprise Radioactive Waste Management Advisory Committee, which provides Nawah recommendations for continuous improvement.
- Barakah Plant Radioactive Waste Working Group meets periodically to drive continuous improvement to meet operational and business plan goals by addressing functional area, technical, regulatory, and specific process issues relevant to radioactive waste.

ENARA Leadership Program

The ENARA Leadership Program provides developmental opportunities to leaders and has four tiers of leadership development programs dedicated to Executives (VP/Chief), Directors, Managers, and Heads/ Supervisors. Programs are developed for each leadership tier, focusing on the competencies and effective behaviors needed at each tier.

Global Sanctions Course

In a world of increasingly complex laws, regulations, and policies, providing our employees with an understanding of global sanctions is key. CCL Academy has provided training to employees in customized groups with the aims of explaining what sanctions are, understanding various sanctions regimes, and understanding how to identify red flags and monitor sanctions.

Workforce Investigator Course

We provided employees with practical training focusing on compliance, employee concerns programs, cross-culture communication, and employee relations. The course aimed to enhance employees' knowledge of workplace investigations in line with best-practice investigative skills and techniques, by training them on how to analyze evidence and write an investigation report.

Innovation Management Certification – Level 1

To maintain an innovation and excellence culture, employees from the Youth Category undergo Innovation Management Certification-Level 1. The certificate is provided by the Global Innovation Management Institute (GIMI), a leader in the field of Innovation. The training is customized to the Enterprise Innovation Requirement that aims to build innovation management capabilities at all levels of the organization, provides an in-depth understanding of how to define innovation strategy, how to build innovation capacity, and how to instill innovation discipline.



Nuclear Energy Training

We collaborate with the IAEA, Khalifa University of Science and Technology (KU), and FANR to offer the UAE-IAEA Nuclear Energy Management School. This school provides participants with a unique international educational experience aimed at preparing future nuclear energy leaders, while encouraging research and discussion on topics relating to the peaceful use of nuclear technology and creating a network of nuclear energy peers around the world.

Competency Progression Plan

We focus on setting competency models and monitoring realistic and measurable standards of employee performance that support the timely and professional achievement of its strategic and operational objectives.

Train for Work

We support the 'Train for Work' initiative by TAMM, the Human Resources Authority of Abu Dhabi, which enables job seekers who are actively looking for work to acquire work experience and gain better opportunities to secure a job in the marketplace.

Partnering with Academic Institutions

We work with the government and local universities to ensure that the UAE workforce is qualified for jobs in the nuclear energy sector, including senior technical and management careers. We offer a variety of scholarships and training opportunities to the most talented science students and experienced professionals. There is also an outreach program to schools to encourage students to study science and advise them of career possibilities.

Higher Diploma of Nuclear Technology (HDNT) program

We have successfully partnered with numerous schools and universities through career counsellors to advertise the HDNT program, as well as creating an application portal that enables us to keep track of interested and eligible candidates.

UAE Nationals who want to become a part of the emerging nuclear energy sector can apply for scholarships in the HDNT program at Abu Dhabi Polytechnic (ADPoly), or for a variety of degrees at KU. The Enterprise provides scholarships to students in both bachelor's and master's degree programs in chemical, nuclear, mechanical, and electrical engineering.

The HDNT program is the long-term workforce program for foundational technical positions at the Barakah Plant. The program is a joint initiative between Abu Dhabi Polytechnic and ENEC. During the three-year program, students learn various subjects including mathematics, physics, chemistry, mechanical science, electrical science, heat transfer, fluid flow, nuclear physics, plant systems, nuclear safety, radiation measurement, radiation protection, and nuclear materials. Courses are taught by Abu Dhabi Polytechnic faculty as well as by our capacity-building nuclear instructors. The program also includes 'on-the-job' training (OJT), a 23-week program designed to expose students to the various disciplines offered and introduce them to the plant and their specialized fields.

Nuclear Infrastructure Development School

We have partnered with KU, FANR, NCEMA, CICPA, ADPoly, and the IAEA to launch the UAE Collaborating Centre, which helps the UAE and the IAEA. The Centre enables enhanced sharing of the experience of the UAE in building its nuclear power infrastructure development with other embarking IAEA Member States.

This collaboration delivers the Nuclear Infrastructure Development School, which provides participants with a unique international educational experience aimed at preparing future nuclear energy leaders while encouraging research and discussion on topics relating to the peaceful use of nuclear technology and creating a network of nuclear energy peers around the world. This program is run every two years.

National Qualification Authority (NQA)

Since 2015, we have partnered with the National Qualification Authority (NQA), developing, and achieving the NQA Vocational Education and Training Awards Council (VETAC) endorsement for 368 National Occupational Skill Standards (NOSS), 23 National Awards, and eight National Principal Qualifications (Q+NOSS).

Since 2017, we have been a recognized National Registered Training Provider (RTP), authorized to issue nationally endorsed qualifications. These qualifications are obtainable by the employees who can demonstrate competence in line with the national standards. Pending approval from the NQA, once implemented, these nationally endorsed qualifications will be recognized by other UAE institutions for credit transfer and career advancement. Furthermore, the qualifications will be internationally recognized.



Enterprise Internship and Summer Program

We host students as part of sharing knowledge and providing educational support through its internship and summer training programs.

The internship is designed for external students who are referred by their college/university for summer training or internship. We coordinate with the higher education body and accepts requests to host students for a duration ranging from four months to one year.

Summer training is for external students who are interested in becoming summer trainees. These trainees voluntarily initiated a summer training request. We host summer trainees during their school summer break for a period of between two and four months.

Student Sponsorships			
Year	2020	2021	2022
Higher Diploma	63	100	68
Bachelor	31	12	1
Masters	1	1	1
PhD	0	2	0
Total Number of Students	95	115	70

Barakah Youth Council (BYC)

The Barakah Youth Council (BYC) inspires, supports, and empowers the future UAE National leaders of the UAE Peaceful Nuclear Energy Industry. The BYC serves as a direct channel of communication between the senior leadership of and the young UAE National employees. The council provides these young employees with a voice to champion change and drive continuous improvement, while also being involved in the decision-making for the evolution of the UAE Peaceful Nuclear Energy Program.



Energy Pioneer Program

In 2009, we established the Energy Pioneers program with the aim of developing a pipeline of Emirati talent as the nuclear energy program grows. Our Energy Pioneers program is designed to attract our nation's most promising science students, engineering graduates, and experienced professionals, and train them to become leaders in the UAE's growing nuclear energy sector.

Our Energy Pioneers have a key role in the success of the nuclear energy program in the UAE, where they receive training of the highest international standards by the industry's leading global experts.

The Energy Pioneers Program was fostered to continue building a pipeline of future nuclear-qualified talent. As of year-end, the Talent Pipeline consisted of 640 Energy Pioneers, of which 469 achieved qualifications, and 171 are continuing the Training and Job Qualification program.

Qualification	SRO	RO	Local Operator	Chemistry	Radiation Protection	Maintenance	Engineering	Other
Certified	49	11	98	42	35	63	170	1
Ongoing	17	46	55	12	19	5	7	10
Total	66	57	153	54	54	68	177	11

University Students Internship Program

We run an internship program for UAE and Korean students in undergraduate engineering programs. We launched this program in collaboration with KEPCO and the Korea Nuclear Association (KNA). The program is designed to involve the students in activities such as plant design, plant construction, commissioning, operation, maintenance, and decommissioning.

Technical Working Group

The Technical Working Group (TWG) was established to research, track, and share information on the status of and progress being made by our international peer companies in the nuclear sector. TWG aims to identify and understand gaps and constraints in the sector and identify unique solutions and innovations that contribute to the success and the achievement of the UAE Peaceful Nuclear Energy Program.



Training and Development			
Year	2020	2021	2022
Total number of internal and external training hours delivered	341,163	156,389	805,962
Average hours of internal and external training per employee	120	54.64	264.25
Internal training hours delivered	328,715	118,029	764,114
UAE National employees	101,278	39,198	346,613
International employees	227,437	78,831	417,501
External training hours delivered	12,448	38,360	41,848
UAE National employees	6,672	29,648	29,024
International employees	5,776	8,712	12,824
Number of e-Learning and e-Reads available	1,169	789	1,162
Number of e-Learning and e-Reads completed	58,216	50,195	108,902

Scope: ENEC, Nawah, and BOC

Contributing factors for the significant increase in the number of training hours delivered are due to an increase in the workforce, refueling outage mandatory trainings, other mandatory, and business application trainings.



9 APPENDICES

9.1 APPENDIX A - REPORT SCOPE AND BOUNDARIES

The scope and boundaries of this report includes operations and activities that fall under ENEC and subsidiaries, Barakah One Company (BOC), and Nawah Energy Company, including contractors. The scope covers ENEC HQ activities at leased buildings in Abu Dhabi, and construction, operations, and maintenance related activities conducted at the Barakah Plant.

This report was prepared using data and information collected in cooperation with all ENEC, BOC, and Nawah divisions and contractors including the Prime Contractor.

Section of the report	Boundaries of performance reporting
Our Economic Footprint	
Governance	ENEC, Nawah, and BOC
Financial Responsibility	ENEC, Nawah, and BOC
Supply Chain Management	ENEC, Nawah, and BOC
Economic Development	ENEC, Nawah, and BOC
Safe, Clean, Efficient and Reliable Energy	
Environment Management System (EMS)	ENEC, Nawah, BOC, and contractors
Quality, Efficiency and Reliability	ENEC, Nawah, and BOC
Empowering our People	
Our Workforce	ENEC, Nawah, and BOC
Occupational Health, Safety Management System (OHSMS)	ENEC, Nawah, BOC, and contractors
Security	ENEC, Nawah, and BOC
National Talent Development	ENEC, Nawah, and BOC
Knowledge Creation	ENEC, Nawah, and BOC



The information presented in this report describes the Enterprise's performance and status as of 31 December 2022. The reporting period is 01 January 2022 to 31 December 2022. Compiling this report has enabled the Enterprise to better understand the impact of their operations. Moreover, the data highlights data streams that the Enterprise will continue to monitor for future reporting, and to promote continuous improvement. No limitations for reporting on scope or boundary were identified during the preparation of this report.

9.2 APPENDIX B – STAKEHOLDER MAPPING

ENEC Stakeholder Groups			
Stakeholder	Description	Interest/Role/Expectations	Channels of Engagement
Government Entities	Federal, regional, and local government ministries and authorities	Safety, security, environment, emergency preparedness, shared infrastructure, and other resources	<ul style="list-style-type: none"> • Site delegations, facility tours and inspections • Regular meetings and written correspondence • Program Executive Updates • Participation in governmental initiatives and campaigns
Nuclear-specific Organizations	Nuclear-specific industry bodies including multilateral organizations, associations, and advisory bodies	Information sharing and knowledge transfer, industry best practices, safety and security, and technology, etc.	<ul style="list-style-type: none"> • Regular meetings and workshops • Regular reports and program updates • Delegations to site • Shared initiatives • Knowledge-sharing workshops • Interactive dialogue • Reporting • International Advisory Board • Associated events, seminars, and conferences and regional events
Media	Local, regional, and international media	On-going access to timely, comprehensive information about the project	<ul style="list-style-type: none"> • Arranging interviews • Site visits • Media training
International Organizations, Government and Financial Institutions	Multilateral organizations, governments of GCC Nations, governments of civilian nuclear energy programs	On-going access to timely, comprehensive information about the project	<ul style="list-style-type: none"> • Delegations and events • Responding to on-going requests for information



ENEC Stakeholder Groups			
Stakeholder	Description	Interest/Role/Expectations	Channels of Engagement
Academic Bodies	Federal, regional, and international academic institutions	Involvement in human capacity development, vocational and technical training, bachelors, and master's programs	<ul style="list-style-type: none"> • Energy Pioneers Programs • Regular events and career fairs at schools and universities
Non-Government Organizations (NGOs)	Environmental and social interest groups	Potential environmental and social impacts/ issues during all phases of the project	-
Prime Contractor Program Related Companies	KEPCO or its Subcontractors	Initiating and developing all construction and operation works, knowledge transfer, industry best practices, health & safety and security, technology	<ul style="list-style-type: none"> • Regular meetings and workshops • Regular reports and program updates • Knowledge-sharing • Interactive dialogue • Reporting • Associated events, seminars, and conferences and events
Social Actors	Including but not limited to Al Dhafra Region residents ENEC, Nawah and Barakah One staff and Abu Dhabi residents	Increase awareness and knowledge, health & safety, security, environment, emergency preparedness, and shared infrastructure and other resources	<ul style="list-style-type: none"> • Awareness sessions • Internal engagement programs • Corporate Social Responsibilities (CSRs)
Administration, Infrastructure and Utility Organizations	Energy, electricity, and transmission companies	Obtaining Non-Objection Certificate Infrastructure works, essential urban planning activities, power supply	<ul style="list-style-type: none"> • Meetings • Benchmarking • Non-Objection Certificate • Regular meetings and workshops • Regular reports and program updates

9.3 APPENDIX C – GRI CONTENT INDEX



CONTENT INDEX ESSENTIALS SERVICE

2023

For the Content Index - Essentials Service, GRI Services reviewed that the GRI content index is clearly presented, in a manner consistent with the Standards, and that the references for disclosures 2-1 to 2-5, 3-1 and 3-2 are aligned with the appropriate sections in the body of the report.

Statement of use	ENEC has reported in accordance with the GRI Sustainability Reporting Standard for the period January to December 2022
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	Not Applicable

GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
General Disclosure					
GRI 2: General Disclosures 2021	2-1 Organizational details	7 , 11 , 15			A grey cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available
	2-2 Entities included in the organization's sustainability reporting	7			
	2-3 Reporting period, frequency and contact point	7			
	2-4 Restatements of information	38 , 87 , 89 , 90 , 91			
	2-5 External assurance	38			
	2-6 Activities, value chain and other business relationships	67 , 68 , 69 , 70			



GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
	2-7 Employees	109, 110, 112, 114			
	2-8 Workers who are not employees			Information unavailable/incomplete	
	2-9 Governance structure and composition	14, 16, 17, 23, 24, 25			
	2-10 Nomination and selection of the highest governance body	24,25			
	2-11 Chair of the highest governance body	24			
	2-12 Role of the highest governance body in overseeing the management of impacts	23			
	2-13 Delegation of responsibility for managing impacts	25			
	2-14 Role of the highest governance body in sustainability reporting	25			
	2-15 Conflicts of interest				
	2-16 Communication of critical concerns	48			
	2-17 Collective knowledge of the highest governance body				
	2-18 Evaluation of the performance of the highest governance body	28, 35			
	2-19 Remuneration policies			Confidentiality constraints	
	2-20 Process to determine remuneration			Confidentiality constraints	
	2-21 Annual total compensation ratio			Confidentiality constraints	

GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
	2-22 Statement on sustainable development strategy	9, 12			
	2-23 Policy commitments	17, 26			
	2-24 Embedding policy commitments	34			
	2-25 Processes to remediate negative impacts	103			
	2-26 Mechanisms for seeking advice and raising concerns	26, 27			
	2-27 Compliance with laws and regulations	78, 79			
	2-28 Membership associations	18		Information unavailable/incomplete	
	2-29 Approach to stakeholder engagement	44, 45, 47, 48, 49			
	2-30 Collective bargaining agreements			Not applicable	

Material Topics

GRI 3: Material Topics 2021	3-1 Process to determine material topics	7, 48, 49, 50	A grey cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available.
	3-2 List of material topics	50, 51, 52	

Infrastructure security

GRI 3: Material Topics 2021	3-3 Management of material topics	106
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Healthy and Safe Work Environment - contractor and sub-contractors

GRI 3: Material Topics 2021	3-3 Management of material topics	103
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GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	98, 101			
	403-2 Hazard identification, risk assessment, and incident investigation	101, 103			
	403-3 Occupational health services	103			
	403-4 Worker participation, consultation, and communication on occupational health and safety	101			
	403-5 Worker training on occupational health and safety	104			
	403-6 Promotion of worker health	104			
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	103			
	403-8 Workers covered by an occupational health and safety management system	101, 102			
	403-9 Work-related injuries	102, 104			
	403-10 Work-related ill health	102, 104			
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	70			
	414-2 Negative social impacts in the supply chain and actions taken	70			

GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
Workforce health and safety					
GRI 3: Material Topics 2021	3-3 Management of material topics	98			
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	98, 101			
	403-2 Hazard identification, risk assessment, and incident investigation	101, 103			
	403-3 Occupational health services	103			
	403-4 Worker participation, consultation, and communication on occupational health and safety	101			
	403-5 Worker training on occupational health and safety	104			
	403-6 Promotion of worker health	104			
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	103			
	403-8 Workers covered by an occupational health and safety management system	101, 102			
	403-9 Work-related injuries	102, 104			
	403-10 Work-related ill health	102, 104			
Regulatory and Framework Compliance - Environment and Sustainability					
GRI 3: Material Topics 2021	3-3 Management of material topics	67, 70			



GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	67, 70			
	308-2 Negative environmental impacts in the supply chain and actions taken	70			

Radioactive waste best practices

GRI 3: Material Topics 2021	3-3 Management of material topics	98			
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	98, 101			
	403-2 Hazard identification, risk assessment, and incident investigation	101, 103			
	403-3 Occupational health services	103			
	403-4 Worker participation, consultation, and communication on occupational health and safety	101			
	403-5 Worker training on occupational health and safety	104			
	403-6 Promotion of worker health	104			
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	103			
	403-8 Workers covered by an occupational health and safety management system	101, 102			
	403-9 Work-related injuries	102, 104			
	403-10 Work-related ill health	102, 104			

GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
GRI 306: Waste 2020	306-1 Waste generation and significant waste related impacts	92, 94			
	306-2 Management of significant waste related impacts	94			
	306-3 Waste generated	92			
	306-4 Waste diverted from disposal	92, 93, 95			
	306-5 Waste directed to disposal	92, 93			

Prevention from nuclear radiation -workers and public

GRI 3: Material Topics 2021	3-3 Management of material topics	98, 124			
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	98, 101			
	403-3 Occupational health services	103			
	403-4 Worker participation, consultation, and communication on occupational health and safety	101			
	403-5 Worker training on occupational health and safety	104			
	403-6 Promotion of worker health	104			
	403-8 Workers covered by an occupational health and safety management system	101, 102			

Plant operations

GRI 3: Material Topics 2021	3-3 Management of material topics	78, 79			
GRI 301: Materials 2016	301-1 Materials used by weight or volume	84			



GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
GRI 302: Energy 2016	302-1 Energy consumption within the Organisation	88, 89			
	302-3 Energy intensity	89			
	302-4 Reduction of energy consumption	88			
Fuel supply					
GRI 3: Material Topics 2021	3-3 Management of material topics	78, 79			
GRI 301: Materials 2016	301-1 Materials used by weight or volume	84			
GRI 302: Energy 2016	302-1 Energy consumption within the Organisation	88, 89			
	302-3 Energy intensity	89			
	302-4 Reduction of energy consumption	88			
Infrastructural emergency preparedness, due to natural or man-made reasons					
GRI 3: Material Topics 2021	3-3 Management of material topics	106, 107, 108			
Data protection library and strong firewall					
GRI 3: Material Topics 2021	3-3 Management of material topics	26			
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data			Information unavailable/incomplete	
State-of-the-art training and education for employees					
GRI 3: Material Topics 2021	3-3 Management of material topics	123, 124			

GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	129, 130			
	404-2 Programs for upgrading employee skills and transition assistance programs	116, 129, 130		Confidentiality constraints	
	404-3 Percentage of employees receiving regular performance and career development reviews	129, 130			
Employee turnover rate					
GRI 3: Material Topics 2021	3-3 Management of material topics	109			
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	111, 112, 114			
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees			Information unavailable/incomplete	
	401-3 Parental leave			Information unavailable/incomplete	
Non-discrimination and Equal opportunity					
GRI 3: Material Topics 2021	3-3 Management of material topics	118			
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	118			
Diversity and Equal Opportunity					
GRI 3: Material Topics 2021	3-3 Management of material topics	109, 115			
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	109, 110, 112, 114, 115, 118, 119			
	405-2 Ratio of basic salary and remuneration of women to men			Confidentiality constraints	



GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
Local communities					
GRI 3: Material Topics 2021	3-3 Management of material topics	120			
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	65, 66, 120, 121			
	413-2 Operations with significant actual and potential negative impacts on local communities	121			
Climate risk mitigation					
GRI 3: Material Topics 2021	3-3 Management of material topics	61			
Environmental oversight					
GRI 3: Material Topics 2021	3-3 Management of material topics	96			
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	96			
	304-2 Significant impacts of activities, products and services on biodiversity	96			
	304-3 Habitats protected or restored	96			
Environmental compliance					
GRI 3: Material Topics 2021	3-3 Management of material topics	109			
GRI 2: General Disclosures 2021	2-27 Compliance with laws and regulations	78, 79			

GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
Emissions					
GRI 3: Material Topics 2021	3-3 Management of material topics	85			
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	86			
	305-2 Energy indirect (Scope 2) GHG emissions	86			
	305-3 Other indirect (Scope 3) GHG emissions	86			
	305-4 GHG emissions intensity	87			
	305-5 Reduction of GHG emissions	85			
	305-6 Emissions of ozone-depleting substances (ODS)	85			
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions				Information unavailable/incomplete
Supply Chain Assessment on ESG					
GRI 3: Material Topics 2021	3-3 Management of material topics	67, 68, 69, 70			
GRI 2: General Disclosures 2021	2-6 Activities, value chain and other business relationships	67, 68, 69, 70			
Procurement practices					
GRI 3: Material Topics 2021	3-3 Management of material topics	69			
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	68, 69			



GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
Customer privacy					
GRI 3: Material Topics 2021	3-3 Management of material topics	26			
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data			Information unavailable/incomplete	
Market Presence, Anti-Corruption and Anti-Competitive Behavior					
GRI 3: Material Topics 2021	3-3 Management of material topics	10, 14, 15, 16, 17, 30, 31, 32,			
GRI 202: Market Presence 2016	202-2 Proportion of senior management hired from the local community	121			
GRI 205: Anti-Corruption 2016	205-1 Operations assessed for risks related to corruption	30, 31, 32, 33			
	205-2 Communication and training about anti-corruption policies and procedures	31, 32			
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	30, 31, 32			
Economic performance					
GRI 3: Material Topics 2021	3-3 Management of material topics	30, 31, 32, 64			
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	64, 65,			
	201-2 Financial implications and other risks and opportunities due to climate change	64			



GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
	201-3 Defined benefit plan obligations and other retirement plans			Information unavailable/incomplete	
	201-4 Financial assistance received from government	64			
Energy					
GRI 3: Material Topics 2021	3-3 Management of material topics	78, 79			
GRI 302: Energy 2016	302-1 Energy consumption within the Organisation	88, 89			
	302-2 Energy consumption outside of the Organisation	88, 89		Information unavailable/incomplete	
	302-3 Energy intensity	89			
	302-4 Reduction of energy consumption	88			
	302-5 Reductions in energy requirements of products and services			Information unavailable/incomplete	
Addressing the grievances for workforce and contractors					
GRI 3: Material Topics 2021	3-3 Management of material topics	103			
Socio-economic Compliance					
GRI 3: Material Topics 2021	3-3 Management of material topics	66			
Indirect economic impact					
GRI 3: Material Topics 2021	3-3 Management of material topics	71, 72, 73			
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	72, 73			
	203-2 Significant indirect economic impacts	72			



GRI Standard/ Other Source	Disclosure	Omission			
		Location	Requirements(s) Omitted	Reason	Explanation
Water and Effluents (Additional Disclosures)					
GRI 3: Material Topics 2021	3-3 Management of material topics	90, 91			
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	90			
	303-2 Management of water discharge related impacts	90			
	303-3 Water Withdrawal	90			
	303-4 Water Discharge	91			
	303-5 Water Consumption	91			

9.4 APPENDIX D – ACRONYMS AND GLOSSARY

Acronyms		Acronyms	
ADAA	Abu Dhabi Accountability Authority	BID	Business and Industrial Development
ADCMC	Abu Dhabi Emergency, Crisis, and Disasters Management Centre	BNEP/ Barakah Plant	Barakah Nuclear Energy Plant
ADPoly	Abu Dhabi Polytechnic	BOC	Barakah One Company
ADQ	Abu Dhabi Development Holding Company	BYC	Barakah Youth Council
ADSG	Abu Dhabi Sustainability Group	CAF	Combined Assurance Framework
ADWEC	Abu Dhabi Water and Electricity Company	CAPEX	Capital Expenditure
ADX	Abu Dhabi Securities Exchange	CEMP	Construction Environmental Management Plan
AFMP	Anti-Fraud and Misconduct Program	CEO	Chief Executive Officer
ALARP	As low as reasonably practicable	CICPA	Critical Infrastructure and Coastal Protection Authority
APR	Advanced Power Reactor	CNP	Committee on Nuclear Power
ARCC	Audit, Risk and Compliance Committee	CO2	Carbon Dioxide
ASME	American Society of Mechanical Engineers	COIT	Certified Operator Initial Training
ATF	Accident Tolerant Fuels	ConvEx-3	IAEA International Emergency Response Exercise
AT SITE	Accountability, Teamwork, Safety, Integrity, Trust, and Excellence	COP	Conference of the Parties
BC	Business Continuity	COSO	Committee of Sponsoring Organizations
BCM	Business Continuity Management	CPO	Chief Program Office
		CR	Condition Reporting
		CSIRT	Cyber Security Incident Response Team
		DAW	Dry Active Waste



Acronyms		Acronyms	
DED	Abu Dhabi Department of Economic Development	FANR	Federal Authority for Nuclear Regulation
DOA	Delegation of Authority	GCC	Gulf Cooperation Council
DoE	Department of Energy	GDP	Gross Domestic Product
DoF	Department of Finance	GHG	Greenhouse Gas
DoH	Department of Health	GIFEN	Groupement des Industriels Français de l'Énergie Nucléaire
EAC	Energy Attribute Certificates	GIMI	Global Innovation Management Institute
EAD	Environment Agency – Abu Dhabi	GJ	Gigajoules
ECC	Enterprise Compliance Council	GOSP	Governance, Oversight, Support and Performance
ECP	Employee Concerns Program	GRI	Global Reporting Initiative
ECRB	Enterprise Compliance Review Board	HCC	Human Capital Committee
EDMP	Enterprise Data Management Program	HDNT	Higher Diploma of Nuclear Technology
E-Fusion	Event organized in collaboration between ENEC, Business France, and GIFEN	HFE	Human Factors Engineering
EMEG	Emirates Marine Environmental Group	HIRD	Harassment, intimidation, retaliation, or discrimination
EMS	Environmental Management System	HQ	Headquarters
ENEC	Emirates Nuclear Energy Corporation	HSE	Health, Safety and Environment
ENTC	Emirates Nuclear Technology Center	HSEMS	Health, Safety, Environment Management System
ERM	Enterprise Risk Management	HSES	Health, Safety, Environment and Sustainability
ESG	Environmental, Social and Corporate Governance	IAEA	International Atomic Energy Agency
ESWG	External Stakeholders Working Group	ICT	Information and Communications Technology
EWEC	Emirates Water and Electricity Company	ICV	In-Country Value
		IDPs	Individual Development Plans
		IEA	International Energy Agency

Acronyms		Acronyms	
IIA	Institute of Internal Auditors	NCEMA	National Emergency Crisis and Disasters Management Authority
IMS	Integrated Management System	NDE	Non-Destructive Examination
INPO	Institute of Nuclear Power Operations	NOSS	National Occupational Skill Standards
ISO	International Organization for Standardization	NQA	National Qualification Authority
JV	Joint Venture	NQA-1	ASME Nuclear Quality Assurance
KEPCO	Korea Electric Power Corporation	NSRB	Nuclear Safety Review Board
KEXIM	Export-Import Bank of Korea	ODCM	Offsite Dose Calculation Manual
KFED	Khalifa Fund for Enterprise Development	OEMP	Operational Environmental Management Plan
KNA	Korea Nuclear Association	OLA	Operating License Approval
KU	Khalifa University of Science and Technology	OSH	Occupational Safety and Health
kWh	Kilowatt hour	OSHAD	Abu Dhabi Centre for Occupational Safety and Health
LLW	Low-level waste	OHSMS	Occupational Health and Safety Management System
LMS Taqa	Learning Management System Taqa	PI	Principal Investigator
LTIFR	Lost Time Injury Frequency Rate	PJSC	Public Joint Stock Company
MCR	Main Control Room	PPA	Power Purchase Agreement
MD & CEO	Managing Director & Chief Executive Officer	PPP	Physical Protection Plan
MEPRA	The Middle East Public Relations Association	PPP-O	Physical Protection Plan for Operation
MNCs	Multinational Companies	PSC	Procurement and Supply Chain
MOIAT	Ministry of Industry and Advanced Technology	Q	Quarter
MS	Management Systems	Q+NOSS	National Principal Qualifications
MTCO2eq	Million Tons Carbon Dioxide Equivalent	QA	Quality Assurance



Acronyms		Acronyms	
RA	Risk Assessment	VETAC	Vocational Education and Training Awards Council
REMP	Radiological Environmental Monitoring Program	WANO	World Association of Nuclear Operations
RO	Reactor Operator	WiN	Women in Nuclear
RTP	Registered Training Provider		
SAT	Systematic Approach to Training		
SCBA	Self-Contained Breathing Apparatus		
SCWE	Safety Conscious Work Environment		
SIs	Strategic Indicators		
SMAT	Sustainability Maturity Assessment Tool		
SMEs	Small and Medium-sized Enterprises		
SRO	Senior Reactor Operator		
Tadweer	The Abu Dhabi Waste Management Centre		
TAMM	Abu Dhabi Government Service		
TNA	The National Aquarium		
TRCFR	Total Recordable Case Frequency Rate		
TW	Terawatt		
UAE	United Arab Emirates		
UN	United Nations		
UNFCCC	United Nations Framework Convention on Climate Change		
UN SDGs	United Nations Sustainable Development Goals		
US	United States		
USD	United States Dollar		

Glossary	
Climate Change	Describes changes in the variability or average state of the earth's atmosphere over time scales ranging from decades to millions of years.
Emiratization	A national program initiated by the government of the United Arab Emirates to proactively increase the number of UAE Nationals in the public and private sectors, to empower UAE Nationals and reduce dependency on foreign workers.
Environmental Management System	The management of environmental programs in a comprehensive, systematic, planned, and documented manner. It includes the organizational structure, planning, and resources for developing, implementing, and maintaining policy for environmental protection.
GRI Sustainability Reporting Standards	A framework, managed by the GRI, for reporting on an organization's economic, environmental, and social performance.
GRI	The Global Reporting Initiative (GRI) is the independent, international organization that helps businesses and other organizations take responsibility for their impacts, by providing them with the global common language to communicate those impacts.
Greenhouse Gas Emissions	Anthropogenic gas emissions which increase the natural trapping of incoming solar radiation (the Greenhouse Effect) inside the earth's atmosphere. This increases the earth's global mean surface temperature and is the primary driver of climate change. These gases include carbon dioxide, methane, and hydrofluorocarbon emissions.
Gulf Cooperation Council	A political and economic union involving the six Arab states of the Arabian Gulf with many economic and social objectives.
Nuclear Energy	The energy released during nuclear fission or fusion, especially when used to generate electricity.
Nuclear Fission	When the nucleus of an atom splits and releases energy, primarily in the form of heat. Nuclear energy plants use steam, turbines, and generators to turn the heat released by nuclear fission into electricity.
Nuclear Fuel Cycle	The series of industrial processes, which involve the production of electricity from uranium in nuclear energy reactors. This can include uranium discovery, conversion, enrichment, de-conversion, and fuel fabrication, use of fuel in reactors, storage, reprocessing, and disposal.
Occupational Health and Safety	A cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment.
Radioactive	Emitting or relating to the emission of ionizing radiation or particles.
Renewable Energy	Energy from a source that is not depleted when used.



Glossary

Stakeholder Engagement The process by which a firm's stakeholders engage in dialogue to improve a firm's decision-making and accountability toward sustainable development.

Stakeholders A party that affects or can be affected by the actions of a business.

Sustainability Sustainable development has been commonly defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Brundtland Report for the World Commission on Environment and Development (1992)

Sustainability Reporting The voluntary public presentation of information about an organization's environmental, social, and economic performance over a time, usually released annually.

International standards around reporting, such as GRI, make sustainability reporting a platform for sharing and benchmarking individual company as well as sector-wide performance. Sustainability reporting may be published as a stand-alone document, on a company website or incorporated into an annual report.

9.5 APPENDIX E – UN SDGS, GRI SUSTAINABILITY REPORTING STANDARDS AND ADX MAPPING

Category	Corresponding UN SDG	GRI Topic Standards	ADX Metric	Page and/or Notes
Environment		GRI 305: Emissions 2016	E1. GHG Emissions	80
	-	GRI 305: Emissions 2016	E2. Emissions Intensity	82
		GRI 302: Energy 2016	E3. Energy Usage	81
	-	GRI 302: Energy 2016	E4. Energy Intensity	89
		GRI 302: Energy 2016	E5. Energy Mix	89
		GRI 303: Water and Effluents 2018	E6. Water Usage	90
	-	GRI 3: Material Topics 2021	E7. Environmental Operations	72
	-	GRI 2: General Disclosures 202	E8. Management Environmental Oversight	72
	-	GRI 2: General Disclosures 2021	E9. Board Environmental Oversight	25
		-	-	E10. Climate Risk Mitigation



Category	Corresponding UN SDG	GRI Topic Standards	ADX Metric	Page and/or Notes
Social		GRI 2: General Disclosures 2021	S1. CEO Pay Ratio	-
		GRI 405: Diversity and Equal Opportunity 2016	S2. Gender Pay Ratio	-
		GRI 401: Employment 2016	S3. Employee Turnover	112
		GRI 2: General Disclosures 2021 GRI 405: Diversity and Equal Opportunity 2016	S4. Gender Diversity	109
		GRI 3: Material Topics 2021	S6. Non-Discrimination	No incident recorded.
		GRI 403: Occupational Health and Safety 2018	S7. Injury Rate	102 , 104
	-	GRI 3: Material Topics 2021	S8. Global Health and Safety	98 , 99
		GRI 3: Material Topics 2021	S9. Child and Forced Labor	-
		GRI 3: Material Topics 2021	S10. Human Rights	-
		-	S11. Nationalization	121
	-	GRI 413: Local Communities 2016	S12. Community Investment	66

Category	Corresponding UN SDG	GRI Topic Standards	ADX Metric	Page and/or Notes
Governance		GRI 405: Diversity and Equal Opportunity 2016	G1. Board Diversity	24
	-	-	G2. Board Independence	23
	-	-	G3. Incentivized Pay	-
	-	-	G4. Supplier Code of Conduct	31 , 68
		-	G5. Ethics and Prevention of Corruption	31 , 32
	-	-	G6. Data Privacy	-
	-	-	G7. Sustainability Reporting	Yes, Annual
	-	-	G8. Disclosure practices	GRI 2021 Standard
	-	-	G9. External Assurance	No





SUSTAINABILITY
REPORT 2022