



SUSTAINABILITY REPORT 2019





VISION

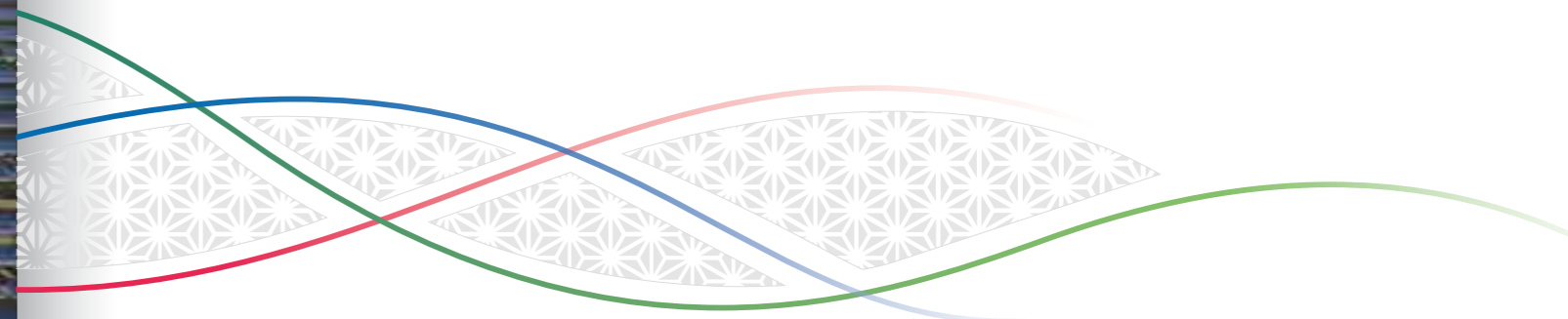
A globally leading sustainable innovative corporation.

MISSION

We are committed and aligned to Dubai's 8 Principles and 50-Year Charter supporting the UAE's directions through the delivery of global leading services and innovative energy solutions enriching lives and ensuring the happiness of our stakeholders in a sustainable manner.

MOTTO

For generations to come.





Sheikh Zayed bin Sultan Al Nahyan
Founder of UAE, 1918-2004

“ We cherish our environment because it is an integral part of our country, our history and our heritage. On land and in the sea, our forefathers lived and survived in this environment. They were able to do so only because they recognised the need to conserve it, to take from it only what they needed to live, and to preserve it for succeeding generations. ”



His Highness
Sheikh Khalifa bin Zayed Al Nahyan
President of the United Arab Emirates

“ Environmental effort is a collective responsibility which requires the participation of everyone who lives in a civilised society. Each individual is an ambassador for the environment and should be keen on ensuring its cleanliness, its sustainability, and work on reducing emissions of polluting gases. ”



His Highness
Sheikh Mohammed bin Rashid Al Maktoum
Vice President and Prime Minister of the UAE
and Ruler of Dubai

“ Our vision is clear in term of establishing sustainability’s pillars as a key component of our development journey, which is part of the national agenda. We are committed to sustainability, which is a top priority that we strive to implement taking into consideration environment conservation, and balance between economic and social development, to provide people the best quality of life and ensure happiness of community. ”



His Excellency
Saeed Mohammed Al Tayer
Managing Director and Chief Executive Officer
Dubai Electricity and Water Authority

MESSAGE FROM MD & CEO OF DUBAI ELECTRICITY AND WATER AUTHORITY GRI 102-14

Dear Stakeholders,

DEWA's global success is based on sustainability as an essential part of our vision and strategy. We are proud to share DEWA's 7th Sustainability Report with our stakeholders. This was prepared in accordance with the Global Reporting Initiative (GRI) standards to ensure transparency in our administrative practices in sustainable development, energy, water, and climate change as well as in our dealings with key stakeholders that include customers, employees, and society.

The steps taken by DEWA coincide with our commitment to protecting the environment and preserving natural resources and sustainable development and are in line with the aspirations of our wise leadership. All our strategies and business plans are guided by the vision and directives of HH Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, and HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. We also seek to implement ambitious national strategies and plans, including the UAE Centennial 2071, which is a long-term government plan to prepare the UAE and young Emiratis for the future, and Dubai Plan 2021 to position Dubai as a global destination across various fields. We are committed and aligned to Dubai's eight principles of governance and the 50-Year Charter, supporting the UAE's direction through the delivery of globally leading services and innovative energy solutions, enriching lives and ensuring the happiness of our stakeholders in a sustainable manner.

Our vision to become a globally leading, sustainable, innovative corporation is aligned with the objectives of the UN's 17 Sustainable Development Goals (SDGs) 2030. As members of the United Nations Global Compact (UNGC), we support the substantial role played by the UN in encouraging sustainable progress and SDGs by aligning our work plans, initiatives, programmes, and projects with them.

To achieve our vision and SDG goals, we implemented an integrated strategy to raise awareness about conservation and the reduction of electricity and water

use. This supports our efforts to protect the environment, preserve its natural resources, and reduce our carbon footprint. This will achieve the goals of the Dubai Clean Energy Strategy 2050 to provide 75% of Dubai's total power output from clean energy sources by 2050, and make Dubai the city with the lowest carbon footprint in the world. We are on track with the Mohammed bin Rashid Al Maktoum Solar Park; which will reach 5,000 megawatt capacity by 2030, with investments totalling AED 50 billion.

We prioritised innovation in our strategy to support sustainable development and are committed to using the disruptive technologies of the Fourth Industrial Revolution. These technologies include Artificial Intelligence (AI), Unmanned Aerial Vehicles (UAVs), Energy Storage, Blockchain, and the Internet of Things (IoT), among others.

DEWA achieved record results in the Sustainability Culture Indicator, achieving 89.17% in 2019, exceeding the global average achieved by multinational organisations. The indicator is based on several pillars, including leadership in achieving sustainability, strategic commitment to sustainability, innovation in sustainability, effectiveness of training, and raising awareness of sustainability.

Our conservation programmes and initiatives over the past 10 years have achieved significant savings in electricity and water use within all stakeholder groups. Cumulative savings between 2009 and 2019 reached 2.2 terawatt-hours of electricity and 7.8 billion gallons of water, equivalent to a total saving of AED 1.3 billion reducing 1.136 million tonnes of carbon emissions.

This report is not only an account of our major sustainable and innovative achievements. It is also a tribute to the role accomplished by all stakeholders who strive to make DEWA a global role model in energy efficiency and reliability, providing state-of-the-art infrastructure for our transition into a green economy.

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ABOUT THIS REPORT GRI 102-45,46,48,50,51,52,53

This is DEWA's seventh annual sustainability report. It presents our economic, environmental and social performance and focuses on our commitments, results and future goals, enabling us to communicate our sustainable performance to our stakeholders.

SCOPE

The data and statements contained in this report relate to and include all of DEWA's core operations and processes under DEWA's management control unless otherwise stated. Data from subsidiaries, joint ventures and suppliers have not been included in this report, unless otherwise stated.

The performance data provided in the report covers the reporting period from January 1st to December 31st, 2019. Ongoing initiatives commenced in earlier years as well as information deemed significant from our previous reports have also been included in this report. Note that there have not been any restatements or major changes to data measurement used compared to those employed in the previous report.

DEFINING THE CONTENT

DEWA's 2019 Sustainability Report provides information on our sustainability performance in a reasonable and balanced manner and it is addressed to all our stakeholders. DEWA is committed to reporting on its sustainability performance annually, and this report follows the 2018 Sustainability Report. This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. GRI provides the world's most widely used standards on sustainability reporting and disclosure, enabling organisations around the world to communicate their sustainability performance and impacts.

This report also aligns with the GRI G4 Electric Utilities Sector Disclosures and the Sustainable Development Goals. In addition, it meets the requirements of the United Nations Global Compact Communication on Progress and follows Task Force on Climate Related Financial Disclosures (TCFD) recommendations. The principles of inclusiveness, materiality, sustainability and completeness were implemented as well as those of the Accountability AA1000 Standard on inclusiveness, materiality and responsiveness.

EXTERNAL ASSURANCE

Believing that transparency is the result of providing comprehensive, credible and comparable information, we have again submitted the 2019 Sustainability Report for external assurance (at a limited level of assurance) to an independent assurance provider in accordance with the International Assurance Standard 3000 (ISAE 3000).

COMMENTS

At DEWA, we constantly seek to evolve and improve our sustainability performance. Therefore, we greatly value our stakeholders' feedback. We welcome your comments, questions, or suggestions for improvement with regards to our sixth sustainability report at: sustainability@dewa.gov.ae

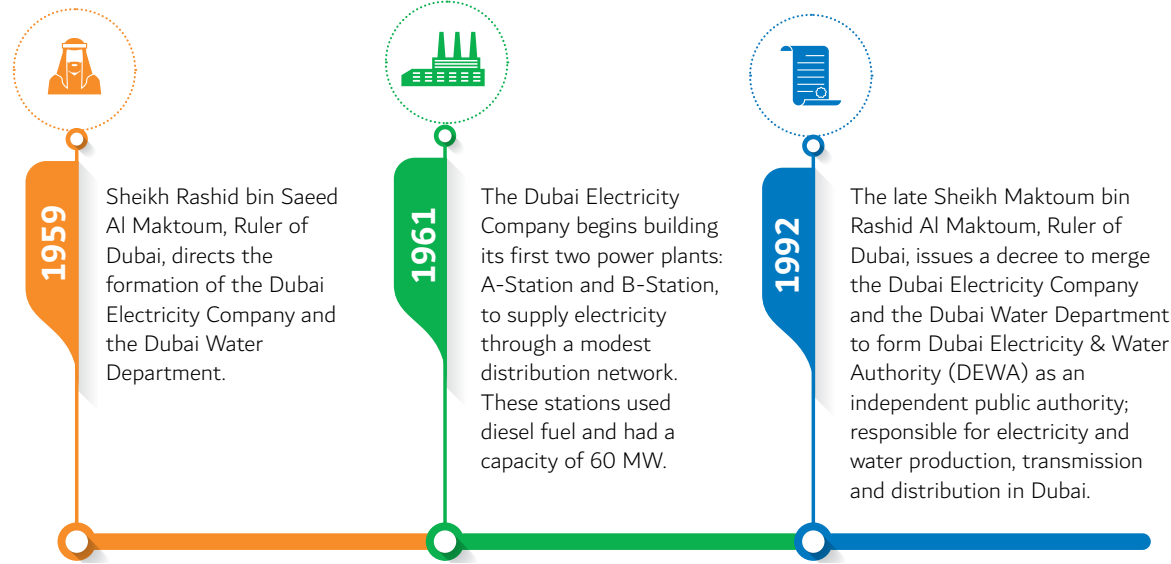
Please note that an electronic version of this report can be found on our website:
<http://www.dewa.gov.ae>

Chapter 1

About DEWA



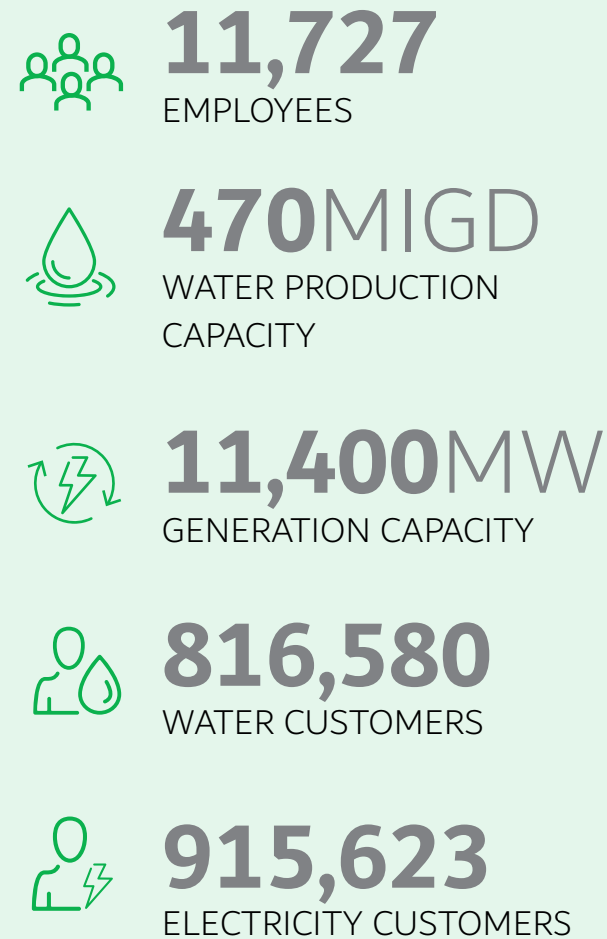
HISTORY OF DEWA GRI 102-5



DEWA AT A GLANCE GRI 102-1,102-2,102-3,102-4

Dubai Electricity and Water Authority (DEWA) is a Dubai government owned utility and is a sole provider of electricity and water in the Emirate of Dubai. DEWA's core business is to operate and maintain its power stations, and desalination plants, aquifers, power and water transmission lines and power and water distribution networks in Dubai. Its power generation and water desalination stations are mainly fuelled by natural gas. DEWA buys gas exclusively from the Dubai Supply Authority (DUSUP), which is responsible for procuring, transmitting, storing and delivering to end customers all natural gas in the Emirate of Dubai. DEWA operates as an independent authority regulated by the Dubai Supreme Council of Energy. The Supreme Council of Energy is responsible for energy policy development, planning and coordination in Dubai and has broad regulatory powers including the power to set the water and electricity tariffs charged by DEWA.

Although its main business activities are the production and supply of electricity and water, DEWA has a portfolio of related business interests.



Primary Portfolio

GRI 102-6, 102-7



DEWA owns 70% of **EMPOWER**, the largest provider of district cooling services (DCS) in the region. Its activities include the management, operation and maintenance of central cooling plants and related distribution networks.



Mai Dubai is a water-bottling factory, fully-owned by DEWA. The company distributes bottled water within the UAE and export markets.



Moro (Data Hub Integrated Solutions) is a wholly-owned subsidiary of DEWA that was formed to provide Data Centre services, cloud solutions, managed business solutions and managed IT services for DEWA and other external public and private organisations.



DUCAB-HV manufactures and supplies high-voltage cables and was established as a joint venture of DUCAB (50%), DEWA (25%) and ADWEA (25%).



ETIHAD ESCO provides buildings with energy-efficiency services and is fully-owned by DEWA. In 2019, Etihad ESCO established Etihad Energy International in partnership with Vision International Investment Company to do business in Saudi Arabia.



Dubai Carbon Centre of Excellence is an energy projects consultancy with a focus on renewable energy and carbon credits trading. The company is fully-owned by DEWA through Etihad ESCO.



Digital DEWA was created to deliver digital business solutions in B2B communications infrastructure, renewable energy services, distributed energy storage, artificial intelligence and digital services. It has three companies: Digital X, Infra X and Smart Energy X.

IPP Portfolio

Jumeirah Energy International, Shuaa Energy 2 Holdings, Hassyan Energy Holdings and Noor Energy 1 Holdings are special purpose vehicles owned 100% by Jumeirah Energy International Holdings LLC, which is DEWA's arm for investments in Independent Power Producers (IPPs).



Shuaa Energy 1 was established in 2015 to complete the 200MW 2nd phase of the Mohammed bin Rashid Al Maktoum Solar Park. DEWA owns 51% through Jumeirah Energy International and ACWA Power Solar Limited owns 49%.



Hassyan Energy Phase 1 will be the region's first clean coal power station. It will provide 2,400MW of power to DEWA's grid. DEWA, through Hassyan Energy Holdings, owns 51% and ACWA Power Harbin Holdings Limited owns 49%.



Shuaa Energy 2 is the 800MW solar power plant established in 2016 to complete the 3rd phase of the Mohammed bin Rashid Al Maktoum Solar Park with 60% belonging to DEWA through Shuaa Energy 2 Holdings and 40% to Emirates Solar Power Company.



Noor Energy 1 is the largest single-site Concentrated Solar Power (CSP) plant in the world. Established in 2018, it will have a capacity of 950MW. It is owned by Noor Energy 1 Holdings, of which DEWA owns 51% and ACWA Power Solar CSP Holding Limited owns 49%.

Financial Investment Portfolio

Dubai Green Fund Investments is owned 100% by DEWA through Jumeirah Energy International Capital Holdings and was established in 2018 to invest in green projects in Dubai to make the Emirate a global hub for green economy.

Forward Ventures is the corporate venture capital arm of DEWA. It focuses on investments in emerging technologies and new business models that can benefit DEWA and Dubai in the long run.

Jumeirah Energy International Silicon Valley Company is DEWA's outpost office in Silicon Valley owned 100% by Jumeirah Energy International Capital Holdings, DEWA's wholly-owned investment arm. Its primary goal is to look for investment opportunities related to research and development and innovation.

The above related business interests are excluded from the reported data found within this report.

DEWA'S VALUES GRI 102-16

DEWA's management believes in the importance of setting a cohesive work environment that would enable its workforce to supply electricity and water services with excellence. It has a clearly-defined set of corporate values. They represent what DEWA is as a corporation, what its employees believe in, and what its priorities are. Each value has a detailed definition, key behaviours and actions, to enable DEWA's employees to incorporate them into their daily work. These corporate values are reflected in its Code of Conduct, which is shared with all its employees in their employee handbook upon joining and is accessible through its internal portal.

DEWA's management embody and apply these values within the corporation through various means of communication and feedback. Employees are also encouraged to make use of the available communication channels to share their opinions and feedback on matters relating, but not limited to, breaches of the Code of Conduct, the work environment, and stakeholders' happiness.



GOOD GOVERNANCE GRI 102-18

Governance and Compliance are considered essentials for any organisation. As a fully government owned, utility organisation engaged in the production and supply of two life forces, namely electricity and water in Dubai, DEWA has a dual role both as producer and regulator of public utilities. Good Governance therefore is a key component for DEWA being a key driver of Dubai's success story. Governance is the way in which DEWA is directed and controlled in line with its establishment decree No.1 of 1992. It defines the distribution of roles and responsibilities among the different stakeholders (ensuring no conflict of interests or any misuse of authority). DEWA has implemented in letter and spirit the best principles of good Corporate Governance by choice and voluntary action for adoption of best practice. Benchmarks include the OECD, the World Bank, UN organisations and global peer groups. DEWA has adopted the four classic pillars of good governance, those being Trust, Transparency, Accountability, and Fair Practices. Thereafter, building



upon the four pillars DEWA's governance drivers have evolved with changing technology and expectations over the last three decades.

Considering the principle of corporate governance excellence followed by DEWA over the years, there have been numerous awards conferred on DEWA for its governance excellence.

In December 2019, DEWA organised a joint workshop with Siemens on governance and compliance in Munich, Germany. The workshop was part of DEWA's efforts to enhance partnerships and exchange best practices and experiences with major global companies. DEWA presented its approach in good and effective governance and compliance with the highest global standards as

well as the impact of data privacy on the workflow.

In July 2019, DEWA was awarded the British Governance Standard (BSi 13500) Certification, becoming the first organisation in the GCC to receive it in 2019, for the third year in a row. When DEWA fulfilled the requirements for the British Standard (BS 13500:2013) Code for Practice for Delivering Effective Governance in 2018, it was the first utility in the world to do so.

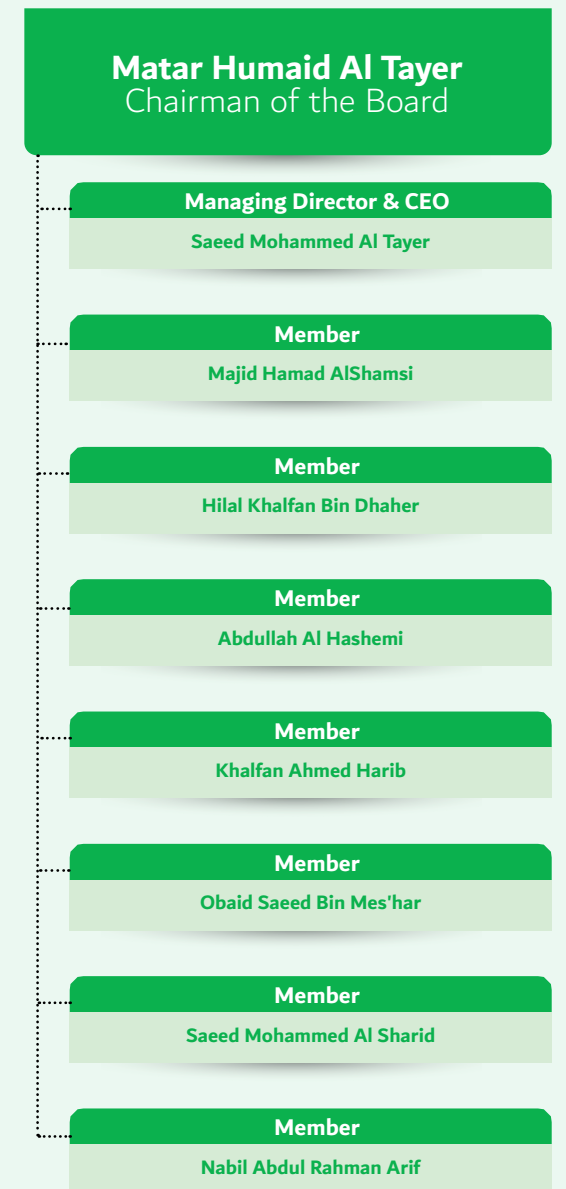
In 2019, DEWA won the Global Good Governance Excellence in Corporate Governance Award 2019, and Global Good Governance Best Corporate Governance Reporting Award 2019 from Cambridge IFA in the UK.

BOARD OF DIRECTORS

The Board of Directors of DEWA is appointed by the 100% shareholder, the Government of Dubai. The Board and the Managing Director and CEO are appointed through a decree issued by the Ruler of Dubai. The Board along with the Managing Director and CEO sets the tone at the top for a premier successful organisation, with ethics as a key driver. The Board and Management lead governance best practice by example.

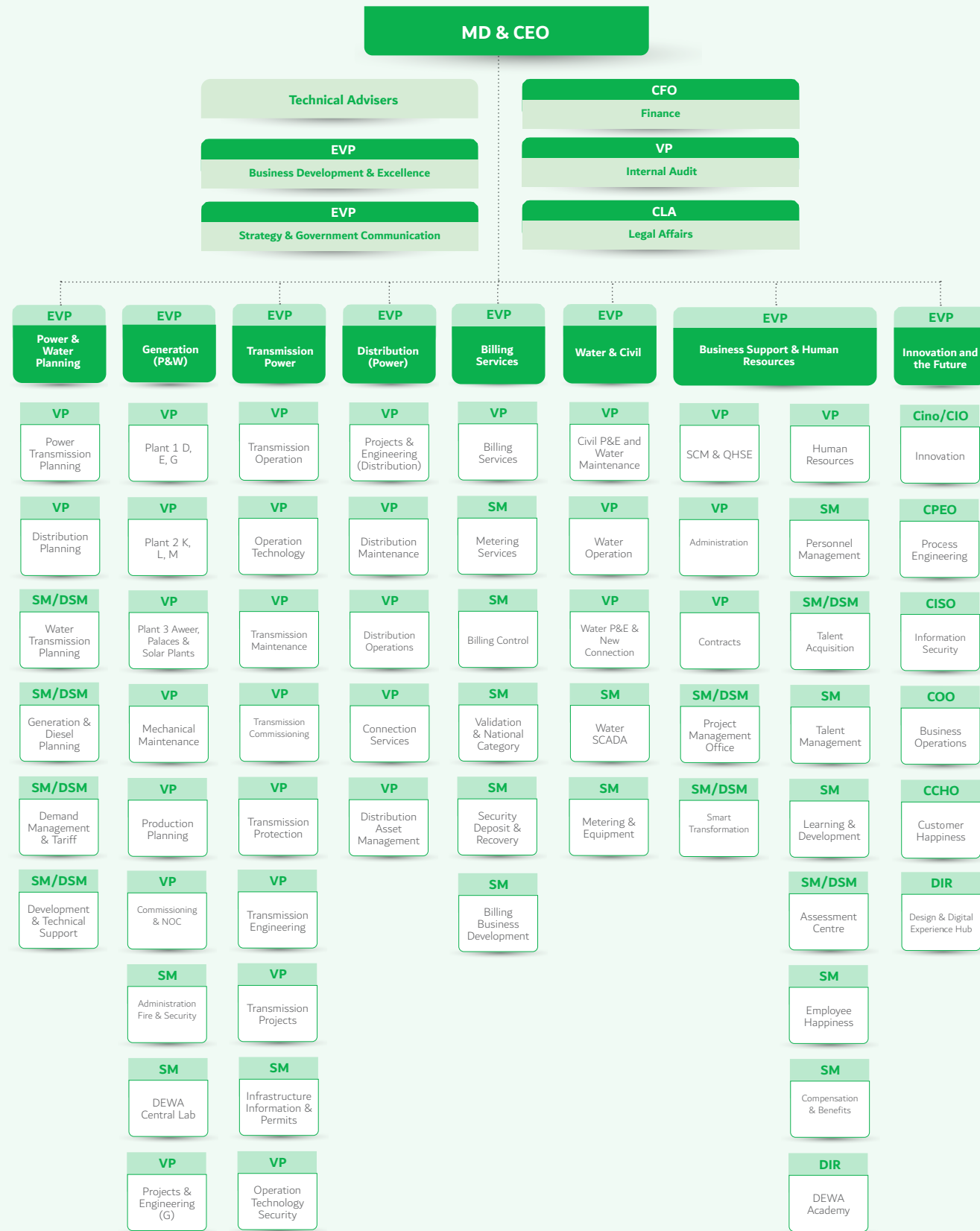
The nine members are chosen after a thorough fit and proper evaluation process. The members are qualified and experienced in engineering, technology, accounting and finance; administration, management and business. They all have extensive experience as members of the boards of organisations and companies. They provide responsible oversight of the organisation and its workings. DEWA is also able to operate based on the proclamation and resolution of conflicts of interests, clear related party disclosures and its established Code of Conduct. The Board adopts the best in board governance principles.

HE Matar Humaid Al Tayer currently serves as Chairman of the Board, while HE Saeed Mohammed Al Tayer is DEWA's Managing Director (MD) & Chief Executive Officer (CEO).



ORGANISATION CHART

DEWA operates through both primary and supportive specialised divisions, and each sector includes its own specialised departments, sections and units that manage the sector's operations in accordance with key performance indicators, objectives and plans. Collectively these support DEWA in delivering its services competently and efficiently.

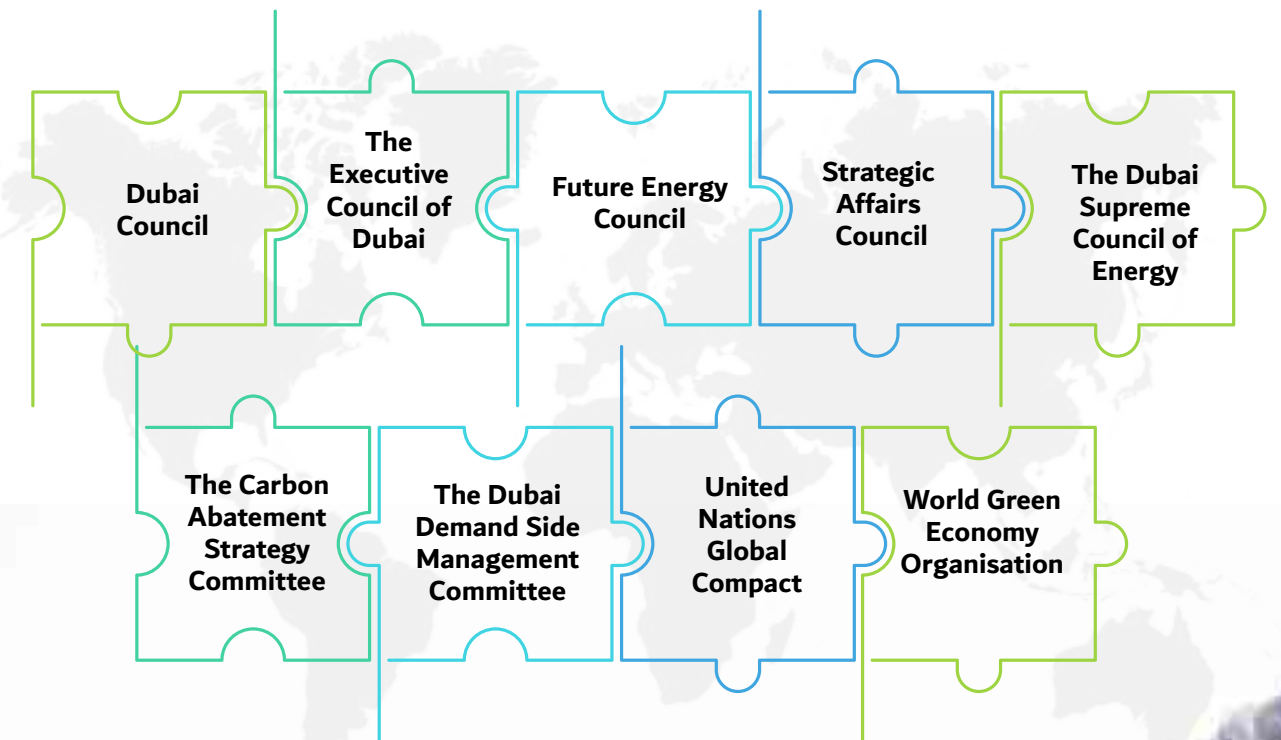


COMMITTEES

The Management team is supported in its activities by a range of other committees, which consist of either Management team members or other individuals from DEWA's divisions. These committees include but are not limited to: the Grievance Committee; the Women's Committee; the DEWA Youth Council; the Investment Committee; the Takaful and Theqa Committee; the Administration Violation Committee; the Scrap Verification Committee; the DEWA Excellence Award Committee; the Crisis Management Committee; the Group Risk and Resilience Committee; the Health, Safety & Environment Committee; the Corporate Governance Committee; the IT Security Response Team; the Cyber Emergency Response Committee; the ISO 50001 Energy Management System-Top Management Committee, and the Drones Robotics Committee.

ASSOCIATIONS & ORGANISATIONS GRI 102-13

DEWA plays a pivotal role in multiple national and international organisations, councils and committees. These organisations include but are not limited to:



STRATEGICALLY DRIVEN

The UAE and Dubai Government continue to set strategies and goals to ensure sustainable development across the UAE. It has applied the same approach towards its business.

DEWA continuously aligns its strategy with major global developments and trends and national strategies, to ensure its effective contribution to the long-term prosperity of Dubai and ultimately the UAE. Its strategy map is the road map to realising its vision, mission, motto and values, and consists of themes and strategic objectives. DEWA 2021 Strategy aims to achieve stakeholders' happiness and enhanced competitiveness, by providing the smart and innovative energy solutions at the highest levels of efficiency, while adopting the best international practices. DEWA's long-term strategy, DEWA 2021, focuses more on agility and governance, excellence and innovation, to enable it to look shape a more sustainable future.



DEWA STRATEGY FRAMEWORK

DEWA has pioneered the use of strategic planning and performance management processes into its operations since the early 1990s and has always been at its forefront. It is now setting a new global standard in corporate strategy development and performance management. The Strategy framework consists of three consecutive phases leveraging the right input from strategic intelligence and powered by innovation.

DEWA's strategy formulation involves defining the strategic direction and then designing the corporate strategy by leveraging strategic insights. The organisational alignment focuses on aligning its divisions with its overall strategy and planning strategic initiatives for its achievement. Its execution and assessment focuses on implementing the strategy and evaluating progress to track the business results against set targets.

DEWA STRATEGY MAP

Achieving DEWA's strategic objectives requires an agile strategic management for optimal decision making that focuses on top priorities. The strategy map is annually updated to keep pace with Dubai's ever growing and expanding plans and objectives, as well as, in keeping with the latest global trends.

In 2019, DEWA updated its vision to become 'a globally leading sustainable innovative corporation.' At the same time, it updated its mission to 'We are committed and aligned to Dubai's 8 Principles and 50-Year Charter supporting the UAE's directions through the delivery of global leading services and innovative energy solutions enriching lives and ensuring the happiness of our stakeholders in a sustainable manner.'

STRATEGIC AMBITIONS INTO 2021

There are five themes in the DEWA 2021 strategy for its long-term sustainability goals:



<p>Sustainable Growth Sustainable growth is DEWA's top priority goal to achieve its vision. DEWA will do this by taking the economy, the environment and society into account on its growth strategy. It also has a stakeholders' happiness strategy; it aims to be a pioneer in the global utility industry and deliver the best possible key results; and it has effectively aligned its strategy to local, federal and global development goals, with a particular focus on the United Nations Sustainable Development Goals.</p>	<p>Operational and Smart Service Excellence DEWA's routes to excellence are pioneering service levels through effective enterprise asset management, preserving the health and safety of our stakeholders, being environmentally responsible, and envisioning a futuristic customer experience.</p>	<p>Agility and Governance This focuses on safeguarding DEWA's future by maintaining leading practices in corporate governance, integrated corporate security, corporate resilience, Enterprise Risk Management, Business Continuity Management and crisis management.</p>	<p>10X the Future This theme involves disrupting and creating a sustainable future by implementing the 3Ds of Digitisation, Diversification of the energy mix and Demand Side Management.</p>	<p>Enablers of Success This is building and developing capacities for the future, planning and acquiring future talents, developing and enabling future leaders, futuristic technology-enabled workplace and promoting National Identity and Emiratisation.</p>

DEWA STRATEGY ALIGNMENT GRI 102-12

DEWA has aligned its strategy to global, the UAE's, and Dubai's strategies.



UNITED NATIONS' SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs) came into effect in January 2016 and are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity. Each of the 17 Goals has specific targets to be achieved over the next 15 years.

10 PRINCIPLES OF THE UNITED NATIONS GLOBAL COMPACT

The United Nations Global Compact is the world's largest corporate sustainability initiative with more than 13,000 corporate participants in over 170 countries. The Global Compact is based on ten fundamental principles relating to human rights, labour, environment and anti-corruption

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty that came into force in 1994. The main objective of the UNFCCC is to set guidelines and non-binding limits on greenhouse gas emissions by individual countries to avoid any drastic changes to the atmosphere and the climate.

UAE VISION 2021 & NATIONAL AGENDA

The UAE is on a journey to position itself as one of the leading countries in the world, culminating in its golden jubilee in 2021, when the UAE celebrates 50 years and begins the journey for the next 50 years. To achieve its Vision 2021, a set of national KPIs grouped in six themes was developed to track progress.

UAE AND DUBAI INNOVATION STRATEGY

The Dubai Innovation Strategy focuses on ten sectors that are aligned to the National Innovation Strategy and aims to improve living standards in Dubai. For DEWA, innovation is a priority for improving its services and initiatives, and a key element in developing its strategies and work plans.

UAE CENTENNIAL 2071

The plan focuses on human development through educational programmes with a concentration on Information Technology and Engineering, promoting the UAE's image and soft power globally, enhancing community cohesion and respect while strengthening Emirati values and ethics and lastly, building a diversified and competitive economy.

UAE WATER SECURITY STRATEGY 2036

The aim of the UAE Water Security Strategy 2036 is to sustain access to water under both regular and emergency conditions in keeping with national regulations and international standards set by the World Health Organisation. Some of the main targets for the strategy include: reducing the demand for water by 21%, increasing the reuse of treated water to 95% and increasing the national water storage capacity up to two days.

UAE STRATEGY FOR THE FUTURE

Launched under the directives of HH Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, the long-term strategy will steer the nation's growth by identifying the needs and challenges of the future, addressing them through impactful long-term plans, and successfully leveraging new opportunities for all-round development. The strategy is centred on three main pillars: new operational model for the government, building national capacity and setting strategic priorities for the future.

UAE STRATEGY FOR ARTIFICIAL INTELLIGENCE

Launched in October 2017, this strategy is the first of its kind in the world. It aims to achieve the objectives of the UAE Centennial 2071; boost government performance at all levels; use an integrated smart digital system that can overcome challenges and provide quick efficient solutions; make the UAE the first in the field of AI investments in various sectors; and create a new vital market with high economic value.

THE UAE STRATEGY FOR THE FOURTH INDUSTRIAL REVOLUTION

This strategy aims to achieve customer happiness and to position the UAE as a model for interactive cities using AI, innovative education, intelligent genomic medicine and robotic healthcare to achieve sustainability.

UAE GREEN GROWTH STRATEGY

Launched in January 2012, by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, this strategy is a long-term national initiative to build the green economy of the UAE under the slogan 'A Green Economy for Sustainable Development'. It aims to maintain a sustainable environment to support long-term economic growth.

YEAR OF TOLERANCE

His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, declared 2019 as the 'Year of Tolerance' and presented the UAE as a global hub for tolerance and acceptance. The vision behind the Year of Tolerance was 'devoting efforts to building a tolerant society that believes in the importance of human communication.' In that year, various initiatives and policies were put in place to promote the value of peace, humanity, coexistence and respect.

SMART DUBAI

Smart Dubai is a strategy for transforming Dubai into the smartest city in the world by 2021 marking the nation's golden jubilee. It includes 100 initiatives transforming 1,000 government services into smart services. DEWA as a key stakeholder is actively participating in the development of Dubai's Smart City vision.

DUBAI CLEAN ENERGY STRATEGY & DEMAND SIDE MANAGEMENT STRATEGY

The Dubai Clean Energy Strategy 2050 sets targets for 7% of clean energy in the generation mix by 2020, 25% by 2030 and 75% by 2050, while the Demand Side Management Strategy (DSM) 2030 aims to reduce energy and water demand by 30% by 2030. DEWA plays an essential role in achieving these goals by reinforcing the renewable energy sector and fuel diversification to meet the objectives of the Dubai Clean Energy Strategy 2050, which maps out Dubai's energy sector over the next three decades.

CARBON ABATEMENT STRATEGY 2021

This strategy sets the course of actions to be adopted by Dubai Government to manage Dubai's GHG emissions until 2021. It aims to reduce carbon emissions by 16% by 2021. DEWA's contribution covers majority of the targeted reduction for the power & water sector equivalent to approximately 50% of the overall reduction of Dubai's emissions. By 2019, DEWA had contributed to the achievement of the Dubai's Carbon Abatement Strategy (CAS) 2021 target two years ahead of the targeted date achieving 19% reduction in tonnes CO₂.

DUBAI GOVERNMENT EXCELLENCE PROGRAMME

The Dubai Government Excellence Programme (DGEP) creates an environment that encourages government organizations to adopt excellence and innovation, respond to the challenges and enhance performance. Towards that, DEWA provides world-class government services and adopts international best practices.

UAE AND DUBAI HAPPINESS

The UAE leadership launched the visionary ambition of becoming happiest country in the world. It appointed a Minister of State for Happiness and launched the National Programme for Happiness and Positivity. Happiness ambition is reflected both in the UAE Vision 2021 as well as the Dubai 2021 Plan.

DUBAI PLAN 2021

Dubai Plan 2021 describes the future of Dubai through holistic and complementary perspectives that were divided into six themes. Each highlights a group of KPIs for Dubai that are aligned with DEWA's 2021 Strategy.

DUBAI PAPERLESS STRATEGY

The Dubai Paperless Strategy aims to build a perfectly integrated paperless government framework, and an administration that sets solid plans and strategies to secure people's happiness and develop their communities to meet the requirements of the cities of the future. The strategy will eliminate over one billion papers annually used in Dubai government transactions.

DUBAI 10X

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai called on all Dubai Government entities to embrace disruptive innovation, which is exploiting available technologies to deliver new or existing services in radically different ways that are design thinking based and customer-focused. The disruptive innovation should be adopted by all government entities as the basis of their operations and to seek ways to incorporate its methodologies in all aspects of their work.

8 PRINCIPLES OF DUBAI

The 8 defining Principles of Governance for Dubai, endorsed by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, show the well-being of the UAE's people, the sustained progress of the nation, and the welfare of future generations. The Principles lay a strong foundation for the UAE's future growth, economic conditions, business, law and more.

50-YEAR CHARTER

The charter marks HH Sheikh Mohammed bin Rashid Al Maktoum's 50 years of service to the country and outlines plans to improve the quality of life in Dubai for its citizens and residents over the next 50 years. The charter represents the pledge and promise to enhance the lives of people in Dubai in 2019. It includes what will be undertaken to improve the quality of life, develop the community of Dubai and ensure a brighter future for generations to come.

FINANCIAL PERFORMANCE GRI 103-1,103-2,103-3,102-7,201-1

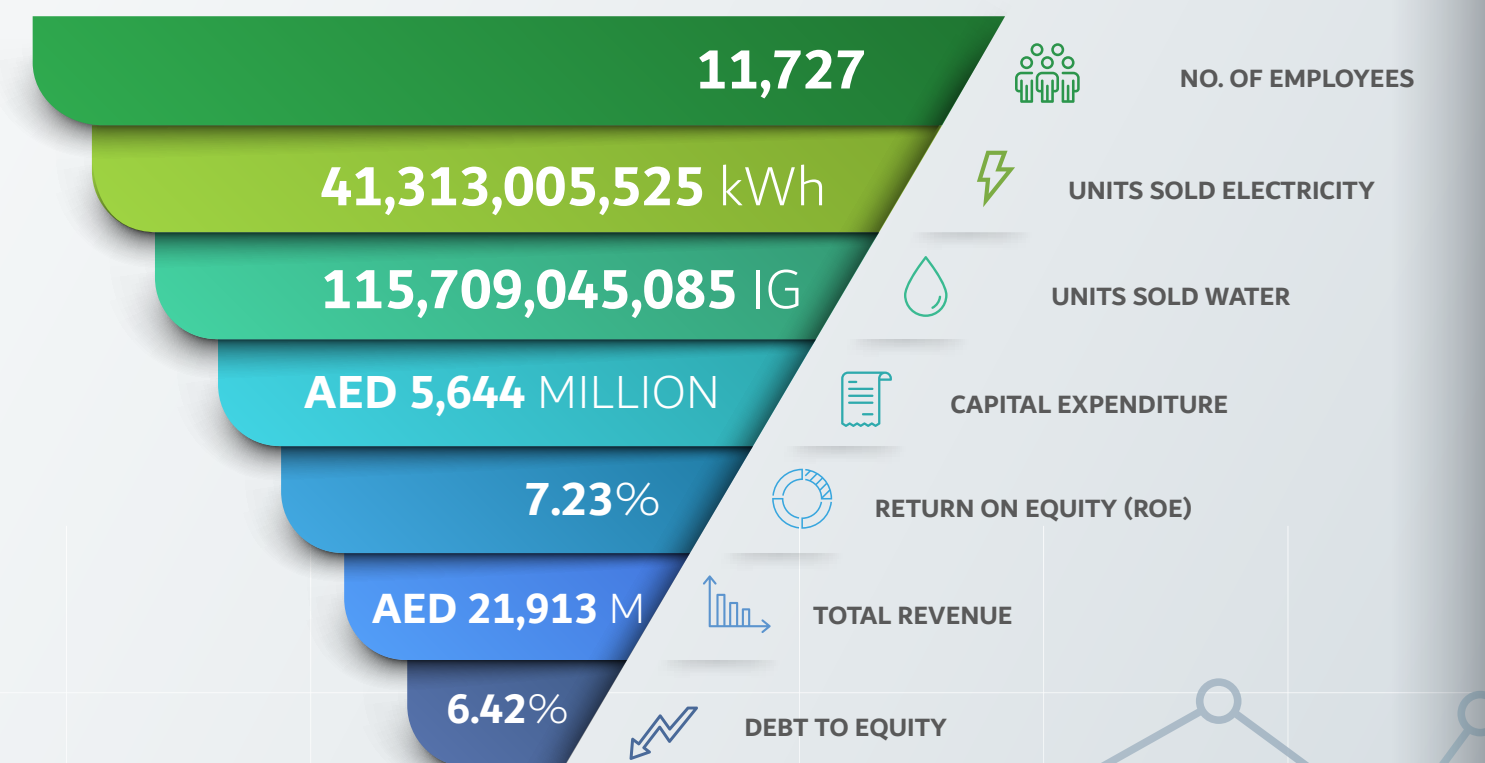
DEWA is committed to attaining long-term financial sustainability, which is demonstrated by its successful efforts to optimise costs, diversify investments, enhance the range of services provided to its customers and generate a steady return to its stakeholders.

In 2019, DEWA's efforts to enhance the quality and range of services to its customers resulted in it getting the highest score for customer satisfaction out of all the branches of the Government of Dubai.

Internationally, the UAE, represented by DEWA, maintained its first place for the third year in succession for getting electricity in the World Bank's Doing

Business report. Aligned with the green economy vision of the leadership, DEWA comprehensively invests and innovates to increase the share of renewable energy in its Generation portfolio.

Additionally, it consistently maintained a strong financial profile; sustaining a strong cash position mainly due to its attractive investment models, such as its public-private partnerships, which has proven to have consistent growth and efficiency. Moreover, it will continue to invest in Revenue Development programmes and projects that are in-line with its vision, mission and strategic objectives and maintain its healthy financial position.



CORPORATE RISK & RESILIENCE GRI 103-1,103-2,103-3,201-2

DEWA plays a critical role in Dubai's electricity and water infrastructure. This requires an enhanced capability to build and sustain resilience in response to incidents, threats and crisis situations.

The Corporate Risk & Resilience Policy and Framework is part of its commitment to embedding long-term resilience across the organisation so it remains a resilient utility for generations to come. DEWA's commitment to Corporate Risk & Resilience is part of its strategic objective IPO5 for an 'Integrated, Resilient and Agile Governance Framework'.

Its overall risk and resilience approach aligns with the UAE's applicable standard NCEMA 7000 and the international ISO 22301, ISO 31000, and BS 11200 standards, as well as all the applicable laws and regulations of the UAE. DEWA has also developed PAS 60518:2020 - Enterprise Risk & Resilience in Utilities in partnership with the British Standards Institution (BSI) as the first risk and resilience related standard specifically for the utilities sector. DEWA and the British Standards Institution (BSI) also launched the Business Agility Concept and Framework (PAS 1000:2019), the first-of-its-kind global standard to measure business agility. DEWA and BSI also signed an agreement to develop the PAS 60518:2020 standard for risk management in the energy and utilities sector. This is the first of its kind in the world and will be a global reference for the energy and utilities sector.

ENTERPRISE RISK MANAGEMENT (ERM)

During day-to-day operations DEWA encounters a wide variety of risks. It identifies and plans for the mitigation for unacceptable or intolerable risks under its established Enterprise Risk Management (ERM) Framework. This which includes:

- An enterprise-wide approach to risk management
- Oversight and control of risk through a well-established governance
- A risk assessment and management process aligned to ISO 31000:2018
- Bilingual training and awareness programmes, accessible policies and guidance procedures to help employees identify and manage risk consistently across divisions

BUSINESS CONTINUITY AND CRISIS MANAGEMENT

DEWA's divisions are responsible for the development of Business Continuity Plans (BCP) which are reviewed, tested and updated annually. During the testing phase, areas for improvement (AFI) are identified and prioritised by divisions with support from the Risk & Resilience department.

For externally facing risks and scenarios it has developed joint response plans with its strategic partners (including other government entities) to develop a collaborative response and interchange during emergency situations. Information sharing between local and national authorities is two-way and regular, ensuring that DEWA's preparedness for emergencies meets the required local and national requirements and standards. Mock drills are carried out on a regular basis to test possible scenarios.

CRISIS PREPAREDNESS AND COMMUNICATIONS

DEWA has a dedicated media response plan and a crisis communications plan, with pre-defined holding statements to ensure swift and effective communications to employees and the public during emergencies.

DEWA has a Crisis Command Centre which acts as a hub for directing, supporting and provisioning all the necessary steps during crisis. The Crisis Command Centre has direct links to Dubai level Crisis Management team and the Dubai Media Office.

INNOVATION & THE FUTURE

Innovation is one of DEWA's five core values and is a recurring theme in its strategy map. Its efforts in innovation have resulted in pioneering initiatives that have enabled it to shorten time and effort, keep pace with the Fourth Industrial Revolution (4IR), and cope with the new global transformation. As such it has achieved a number of milestones that set it apart as a pioneer in adopting 4IR and disruptive technologies in comparison to other government bodies.



هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority



المؤتمر السنوي الثامن للابتكار والمستقبل DEWA's 8th Innovation & The Future Conference

28 فبراير
February

2019



FUTURE INNOVATION AGENDA

Building on the directives of the wise leadership to anticipate and keep pace with the latest developments in strategic sectors, DEWA has adopted various initiatives based on sound scientific foundations and with a clear vision to foresee future challenges and turn them into promising opportunities. The agenda includes Dubai 10X 1.0, Dubai 10X 2.0 and Start-ups.

Start-ups

DEWA has collaborated with various start-ups through several programmes including Free Electrons and Dubai Future Accelerators.

Free Electrons

The Free Electrons started in 2017, consists of a global alliance of 10 Leading Energy Utilities:

1. American Electric Power	6. Innogy
2. AusNet	7. SPgroup
3. DEWA	8. ESB
4. CLP	9. TEPCO
5. Origin	10. EDP

Its objective is to drive next generation ideas in various area relating to energy including generation, energy management and internet of things. DEWA participated in 3 programmes in 2017, 2018 and 2019 with varying results including the adoption of 8 pilot projects and 9 signed MOUs.

Dubai 10X 2.0

The Dubai 10X 2.0, launched at the World Government Summit 2018 to develop joint government services, saw 37 government entities working together to realise projects in different sectors. In this phase, DEWA is working with Dubai Airports and RTA on initiatives to provide new services to inspire the world and enhance Dubai's position as the green economy capital.

Dubai 10X 1.0

As part of Dubai 10X 1.0, and as part of its efforts to redefine the concept of a utility, DEWA launched Digital DEWA as its digital arm, making it the world's first digital utility to use autonomous systems for renewable energy, storage, expansion in AI adoption, and providing digital services.

Digital DEWA Pillars

Solar Power	Energy Storage	Artificial Intelligence (AI)	Digital Services:
This pillar includes launching advanced solar power technologies in Dubai.	Digital DEWA aims to operate a renewable energy network using innovative energy storage technologies.	This pillar, called Rammas, expands AI to include all operations and improve customer happiness, efficiency, and productivity.	Digital DEWA will expand its digital services through MORO. This pillar provides global, standardised services and multiple solutions from a single location, according to the highest quality standards, to enhance the customer experience.

EXCELLENCE

DEWA works within the main three pillars of the fourth generation of Dubai Government Excellence Programme, to encourage and motivate employees and emphasise the importance of excellence as one of the most important ways of transforming the government of the future and satisfying stakeholders with an emphasis on customers. It adopted the Balanced Scorecard (BSC) and the Dubai Government Excellence Programme (DGEP) principles and guidelines, working according to the Fourth Generation of Government Excellence system.

Its achievements have become a role model for excellence, locally and regionally. These achievements contributed to DEWA receiving over 231 local, regional and international awards and certificates since 2016.

DEWA AWARDS & CERTIFICATES

DEWA has won more than 50 awards and certificates in 2019, including the following:



CASE STUDY

DEWA wins Sustainable Excellence Certificate from the European Foundation for Quality Management



In 2019, DEWA obtained the EFQM—Committed to Sustainability (C2S) certificate after submitting a report to the EFQM organisation that covers its five main pillars: Management, Customers, Employees, Environment and Community, and Owners and Partners. The five pillars consisted of various topics, each with a holistic view of how an organisation covers the three aspects of sustainability: Economy, Environment and Society. Certifying DEWA's commitment to sustainability proves how well it considers and implements sustainability within its operations and culture.

To achieve the certification, a team of experts from EFQM assessed DEWA's submission and followed up with an onsite assessment at its head office. DEWA mainly focused on the required five pillars by presenting projects, data, and indicators

of renewable energy, efficiency, smart initiatives, and cutting emissions as well as the latest developments of excellence in customer service and happiness of stakeholders. DEWA presented its policies, regulations and strategies that endorse employees' professional development.

During the assessment, DEWA highlighted its strategies and operations that are aligned with the UN Global Compact's (UNGC's) ten principles, as well as the organisation's efforts to achieve the UN Sustainable Development Goals (SDGs). DEWA also demonstrated that its plans and goals are aligned to the UAE Vision 2021, Dubai Plan 2021, Dubai Clean Energy Strategy 2050 and the UN Sustainable Development Goals.

Chapter 2

Sustainable Development



MANAGEMENT APPROACH

Sustainability remains an integral part of DEWA's identity. It is reflected from its top management through its people who are passionate about fostering a culture of sustainability within DEWA and across all its stakeholders.

It undertakes all necessary steps towards making DEWA an industry leader, by creating an equilibrium between financial results, environmental performance, and its commitment to the wellbeing of the community of Dubai and the UAE; thus creating sustainable value for all. As a leading utility in the region and the sole provider of electricity & water in Dubai, DEWA recognises its role in supporting the efforts towards achieving national and local strategies.

SUSTAINABILITY GOVERNANCE

DEWA's commitment to sustainability comes from the top of the organisation. The top management considers sustainability an integral part of its business oversight, as sustainability topics are integrated into, and not separate from DEWA's corporate strategy. DEWA established the Climate Change & Sustainability Department (CC&S), under the Business Development & Excellence Division. Its mission is to establish, develop and manage DEWA's corporate sustainability programme to address the needs of all stakeholders in a balanced manner, while highlighting the actions and practices that showcase DEWA's sustainability approach.

The department works to align DEWA's strategy and objectives with international trends and goals to reflect the organisation's journey towards achieving sustainable development. The CC&S Department also manages and implements all sustainability reporting; stakeholder engagement; awareness campaigns; emissions reduction programme; carbon offsetting, identification of climate change risks and their impacts on DEWA's operations, setting the relevant climate change resilience plans; mitigation and adaptation

DEWA strives to be a globally leading utility by attaining global and local expertise in adopting the latest industry standards and practices in sustainability. Emiratisation is one of its top priorities as it looks to recruit and utilise UAE talent and simultaneously train UAE nationals at all levels of its organisation aspiring to enrich Emirati skills and ensure their continuous development. In 2019, UAE nationals held approximately 86.89% of top management and leadership positions. This not only contributes to the economic and social security of the UAE but also forms an integral part of DEWA's commitment to the community to achieve the strategic objectives of the Government of Dubai and the UAE.

programmes within the power and water Sector; behavioural efficiency programmes for residential customers, and the ISO 50001 Energy Management System (EnMS) and certification of DEWA.

The Climate Change & Sustainability department would not be able to deliver the above without close coordination and collaboration with all divisions and departments across the organisation. That is done with the support of the Sustainability Leading Team (SLT). The team, established in 2013, consists of representatives from each division. Their role is to obtain, review and verify data and information. In addition, the team provides valuable insight and expertise for the above-mentioned projects and programmes.

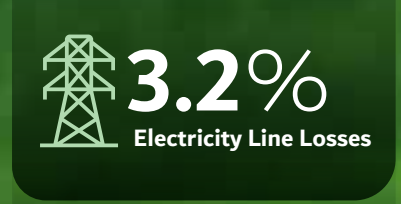
The SLT is chaired by the Chief Officer of Climate Change and Sustainability. The management team receives updates regarding sustainability issues from the Executive Vice-President of Business Development & Excellence, who is also a member of DEWA's management team.

2019 SUSTAINABILITY MANAGEMENT HIGHLIGHTS GRI 103-1, 103-2, 103-3, 102-9, 204-1

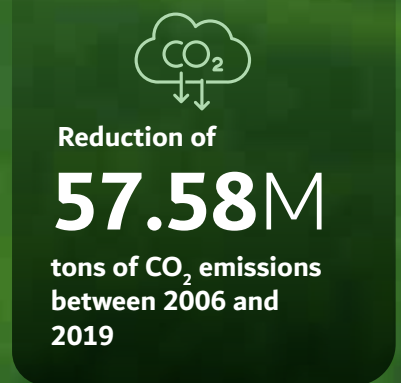


Awarded British Safety Council Globe of Honour for the environment for the 8th consecutive year

Awarded British Safety Council Sword of Honour in Health and Safety for the 12th year



Ranked 1st
The UAE, represented by DEWA was ranked 1st globally for the third year running for getting electricity in the World Bank Doing Business Report 2020.



DEWA SUPPLY CHAIN

DEWA understands that its overall environmental and social impacts extend beyond its direct operations. Therefore, it continues to implement a policy of procuring plants and systems which have minimal environmental impact, and which are of a higher efficiency. There were 7,725 suppliers listed on DEWA's suppliers' portal. During 2019, DEWA worked with 2,261 suppliers, of which 34 are strategic suppliers, 368 core suppliers and 1,859 basic suppliers. In support of the local economy, DEWA actively works with local businesses in its operations and supply chain.

During 2019, DEWA conducted 13,728 local transactions, equivalent to approximately AED408 million. This local spending includes all power plants, substations, transmission and distribution networks and DEWA offices across Dubai. DEWA considers local companies as companies who are physically located in the UAE and have a valid trade licence.

DEWA launched its Green Procurement Programme throughout its supply chain. The programme assesses the environmental consequences of products purchased at the various stages of the product's lifecycle to minimise procurement of products with adverse environmental impacts. Well defined strategies

and commercial terms and conditions are in place to eliminate, mitigate or transfer procurement related risks. To reduce vulnerability and ensure continuity of its key suppliers, DEWA developed a Supply Chain Risk Management Framework in compliance with ISO 31000, which identifies and analyses exceptional risks along the supply chain based on continuous risk assessment.

Green suppliers are screened based on their environmentally friendly products and energy saving concepts, as well as, an internal process based on the following criteria:

Suppliers having ISO 14001 standards
Applying EMS (Environmentally Management System)
Energy saving processes and systems

DEWA has set an annual KPI to monitor its procurement from green suppliers. The KPI represents the percentage of green suppliers out of the total registered suppliers. While our target in 2019 was 10%, our actual achieved was 9%.

STRATEGIC PARTNERSHIPS ALONG THE VALUE CHAIN

DEWA believes that partnerships are a key driving force that supports the achievement of its strategic objectives and its efforts to support Dubai's Sustainable development goals. They contribute to its success in many aspects such as achieving Dubai Plan 2021, achieving DEWA's strategy, services provision, digital transformation, society happiness, and empowering people of determination. It engages in strategic relationships with suppliers, customers and other business partners. In 2019, DEWA signed more than 17 MoUs seeking to obtain a reduction in the transaction costs by building trust, enabling economies of scale, fostering the exchange of knowledge, technology, and best practice and supporting risk management.

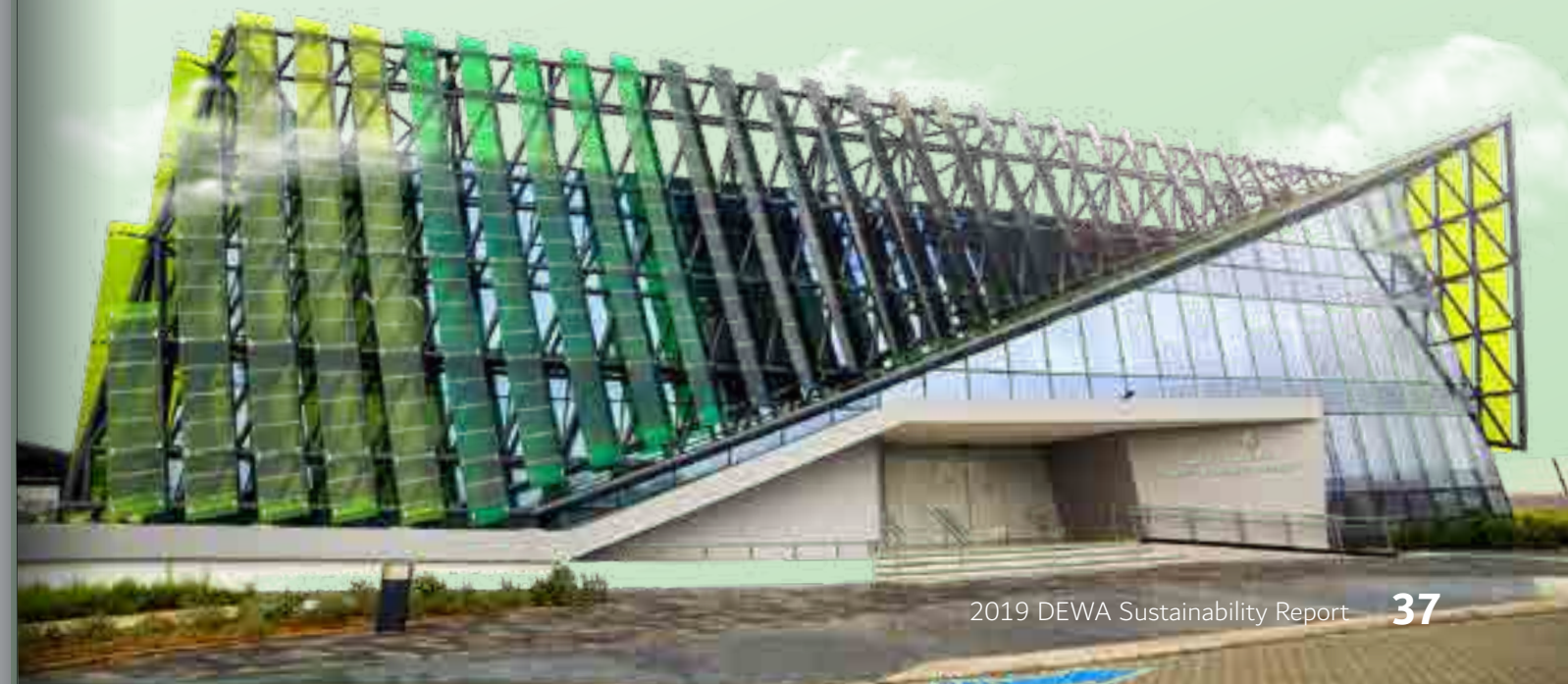
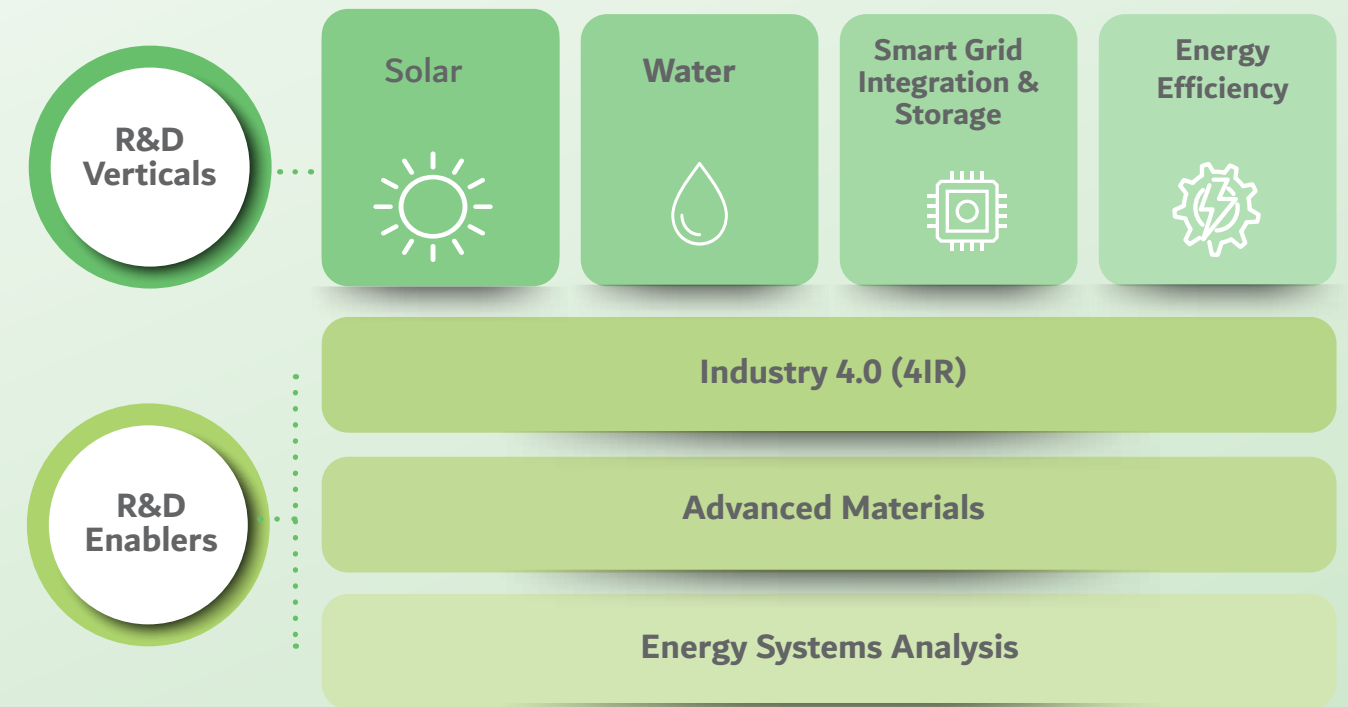
There are two main categories for DEWA's partnerships: strategic partner and main partner. Partnerships are categorised and selected based on strategic, operational, financial fit, legal and regulatory as well as learning and growth. As a result, in 2019, our partnership happiness rate reached 91.51% compared to 91.42% in 2018.

DEWA continues to seek new partnerships with businesses, academic institutions and other organisations to develop and improve its economic, social, environmental responsibilities and operations. To ensure that the partnerships are effective and beneficial to both parties, DEWA initiates and implements various initiatives which contribute to improve partnership performance and continuously raise their happiness.

RESEARCH AND DEVELOPMENT GRI 103-1, 103-2, 103-3

DEWA's Research and Development (R&D) is integrating international R&D best practices and world-class R&D facilities to develop solutions in support of DEWA's business units and Dubai's broader stakeholders. The R&D Centre focuses on four pillar areas: solar power, water, smart grids, and energy efficiency. In addition, it develops enabler technologies in robotics, advanced materials, artificial intelligence and energy systems analysis. By conducting cutting-edge research based in Dubai's climate, the R&D Centre supports the objectives of the Dubai Clean Energy Strategy 2050 to diversify energy sources and enhance energy efficiency relying on local innovation. The R&D Centre, located at the Mohammed bin Rashid Al Maktoum Solar Park in Dubai, is part of a strong push for innovation and excellence at DEWA, which is committed to investing AED500 million in R&D and innovation up to 2020. The R&D Centre staff had 31 researchers in 2019, 70% of them UAE nationals.

Research Areas



DEWA'S RESEARCH & DEVELOPMENT JOURNEY



2018

- Completion of R&D Centre
- Solar lab commissioning
- Development of 4IR R&D area
- Major expansion of projects portfolio
- Launch of Green Hydrogen Project
- 10 R&D publications



2016

- Design of R&D centre
- Kick-off solar/water R&D areas (incl. PV RO)
- Launch of Solar Decathlon Middle East



2014

- Launch of the National Innovation Strategy
- Launch of 5-year R&D strategy

2019



- Development of DEWA R&D 2.0 Strategy
- Stanford Energy 3.0 membership
- First patent awarded
- Started expansion of facilities and labs



2017

- R&D centre construction
- Start of SGI and 3DP R&D areas
- Completion of 3D lab
- Started several partnerships
- 5 R&D publications



2015

- Detailing of R&D roadmap and plans
- OTF development and opening
- Start of hiring

HIGHLIGHTS OF SUSTAINABILITY IN RESEARCH OUTPUT

Solar Research

In the Outdoor Testing Facilities, DEWA's researchers are continuously testing and benchmarking the long-term reliability and performance of different photovoltaic technologies (30 panels of different technologies at different tilt-angles, produced by different manufacturers). By identifying the photovoltaic solutions that perform better and exhibit lower degradation rates, DEWA identified what makes a truly desert-appropriate photovoltaic module. This experience is institutionalised by developing and proposing the adoption of region-specific testing and certification standards.

Studies of dust accumulation and characterisation from samples collected carefully in different areas of Dubai provided a better understanding of the cleaning needs of photovoltaic installations – both large-scale at the Mohammed bin Rashid Al Maktoum Solar Park and distributed rooftop systems under the Shams Dubai programme. Finally, in collaboration with Stanford University, DEWA is developing a 15-minutes-ahead forecasting system for photovoltaic solar power output using sky images processed by AI algorithms.

Smart Grid Integration Research

Two research projects are directly supporting the integration of renewable energy by testing and validating the performance of energy storage solutions and the aggregation of controllable loads, renewable energy and storage in the form of a Virtual Power Plant (VPP). Two utility scale battery technologies (NaS and Li-Ion) with 7.2MWh each are installed and under testing for their ability to provide utility services including ramp-rate control, frequency control, constant power from variable sources. The VPP integrates a total of 1.8MW of assets including chillers, batteries and other Distributed Energy Resources (DER). It is undergoing tests for its capability of scheduled demand response and reliable power control.



Water Research

In collaboration with Khalifa University, DEWA is developing advanced models for predicting desalination membrane fouling. Once the model is validated at the testing solar photovoltaic and Reverse Osmosis (PVRO) facility, it can be made commercially available. In collaboration with the UAE Water Aid Foundation (Suqia), DEWA is testing technologies for harvesting atmospheric water.

Fourth Industrial Revolution

DEWA is developing and using robotics, AI, 3D printing and advanced materials to support the needs of the four research areas above. Notable developments in 2019 include a system for the remote inspection of large photovoltaic plants using drones. Another development is a granted patent on the measurement of light attenuation due to atmospheric aerosols using drones and rovers that are being turned into products. Another one is a rover to measure the albedo (reflectivity) of the ground surface. Once developed, these systems can be deployed to support the design and operation of solar parks.

Additionally, DEWA R&D continues to build a strong ecosystem of local and international partnerships and collaborations with government, industry (major corporations, SMEs and startups) and academia. The quality of its work has already been recognised internationally with 13 contributions in 2019 to international conferences and publications in international journals, and involvement in world-class scientific and technical networks with 46 made in total.

Energy Efficiency Research

DEWA is working on developing and testing the next generation of energy-saving technologies across the utility value chain, with an emphasis on demand-side waste reduction and advanced cooling technologies. The EE team is instrumental in developing proposed standards for Zero Energy Buildings in Dubai and for supporting regulatory acceptance of Building Integrated Photovoltaics (BIPV)

The DEWA R&D Energy Efficiency team began organising the second Solar Decathlon Middle East (SDME) in 2020 in coordination with Expo 2020. The 2020 SDME will assess the sustainable performance of solar-houses.

CASE STUDY

The Evolution of Drones at DEWA



To support the National Innovation Strategy, DEWA launched the Sirb (Arabic for 'fleet') initiative in 2015, to use drones for internal services, support Dubai's infrastructure, and use smart technologies to serve Dubai's residents. A drone, also known as unmanned aircraft vehicle (UAV), is essentially a flying robot that can be controlled remotely or fly autonomously via software-controlled flight plans working in conjunction with GPS and onboard sensors. In 2015, DEWA launched several initiatives, policies and processes to increase the use of drones across all divisions. These initiatives included automating drone services through Khadamatech (DEWA's online employee portal)

for seamless access; a policy for the use of drones was standardised across the entire entity; and a collaboration with SANAD academy for training and flying certification of drones.

The Sirb fleet consists of high-end drones, ranging from fixed-wing to multi-rotor drones, which are capable of searching for, and identifying, oil spills and red tides. The drones can collect samples from any location within a 20 km radius. DEWA's fleet also has a Hydro Drone, which is used for water sampling from different locations and depths around the desalination plants. The drone can stay in the

air for 25 minutes and can land on water. The drones use state-of-the-art technologies such as high-definition cameras that are equipped with night-vision and laser technologies, GPS sensors, and can measure pressure, height, magnetic fields, and use ultrasound scanning.

DEWA uses drones to regularly review its projects and obtain progress reports by taking panoramic pictures, log and track flight systems. Drones are also used to inspect the water-cooling process in evaporators, enabling DEWA to operate without fully shutting them down for maintenance. Some of these drones are used to monitor photovoltaic panels and related activities, such as cleaning, by contractors to ensure the panels function properly and prevent the reduction of panel efficiency. In DEWA's Sustainable building in Al Qouz, drones scan the roof panels, which has an approximate area of 100,000 square feet, in less than 5 minutes and provide Ultra HD (4K) images with a resolution of over 20 megapixels.

ROI saving operations before and after drones

ROI/Saving					
Operations before and after drone usage					
Drone	Before	After	Difference (Time)	Cost Saving in AED	
No.	Name	Duration spends on operation	Duration spends on operation		
1	Aibotix VX6V2	verification of OPGW conductor cut-strands outage average time and processing the work = 14 hrs loss of availability = 7 hrs	processing the verification of cut-strands = 1 hrs	20 hrs	7,500 crane rent + man power cost saving = 9,500*
		crisis cases verification = 42 hrs	crisis cases verification = 20 hrs	22 hrs	2,200.00
		close visual inspection = 12 hrs	close visual inspection = 1 hrs	11 hrs	1,100.00
2	Exponent MTC 100	crisis cases verification = 42 hrs	crisis cases verification = 20 hrs	22 hrs	2,200.00
		close visual inspection = 12 hrs	close visual inspection = 1 hrs	11 hrs	1,100.00

This initiative greatly improved operational efficiency by accelerating operations, increasing safety during regular network testing and maintenance, and accurately detecting failures. It is also helping with monitoring generation, field surveys for new projects, and new connections for buildings and facilities in Dubai. With the use of drones to maintain the efficiency and sustainability of its services, DEWA raised the trust of customers in its services and improved organisational competitiveness.

DEWA SUSTAINABILITY LEADERSHIP CONFERENCE IN COLLABORATION WITH CAMBRIDGE INSTITUTE FOR SUSTAINABILITY LEADERSHIP (CISL)

DEWA's 3rd Sustainability Leadership Conference in collaboration with CISL took place in October 2019 alongside various activities and initiatives as part of DEWA's Green Week. The two-day conference included a leadership summit inviting CEOs and senior officials from across the region; and an SDGs Executive Masterclass for DEWA employees. The Masterclass for DEWA focused on developing practical skills and imparted knowledge in leadership and sustainable business by exposing participants to inspiring ideas and different perspectives, encouraging innovation, collaboration, and supporting personal development, as well as providing an informed introduction to the context of the SDGs highlighting their strategic relevance to its divisions.

Alongside the conference, DEWA organised the Sustainability Youth Forum, a volunteering day, a sustainability initiatives day for employees, WETEX and the World Green Economy Summit (WGES).

SUSTAINABILITY CULTURE INDICATOR 2019

DEWA has used the Sustainability Culture Indicator

(SCI) for the past 6 years to measure the effectiveness and the impact of its efforts in raising awareness and engagement on sustainability among its employees. The SCI is a third party employee survey which measures the extent to which sustainability has been embedded within the culture of an organisation. It includes factors that measure organisational enablers, individual enablers and behaviours inside and outside the organisation.

More specifically, the SCI is a useful tool that enables DEWA to:

- Focus its efforts to address the key barriers which prevent its employees from embracing sustainable behaviour and achieving sustainable outcomes
- Identify opportunities to build on current levels of sustainability commitment and engagement
- Benchmark its sustainability engagement against other leading global organisations

For 2019, more than 3,600 employees participated in the survey. The results showed that DEWA has maintained its progress in embedding sustainability in its culture. In 2019, DEWA achieved a score of 89.17%

with a slight decrease from its 2018 score of 90.17%. This decrease is mainly attributed to a larger number of employees taking part in the survey as this became accessible to employees from all levels within the organisation. The results achieved in 2019 allow for a better understanding of the sustainability culture across the organisation. They enable more focused awareness and engagement efforts, as well as, decision making to further instil sustainable thinking and behaviour among its employees.

The following main areas of strength have been identified:

- DEWA exceeded the average of other organisations on all factors assessed within the survey
- Employees expressed strong support for conservation efforts and volunteering initiatives
- Most sustainability-related behaviours are performed very frequently both in and outside of work

The following areas of improvement have been identified:

- Continuing to communicate DEWA's sustainability commitments and provide education and engagement opportunities
- Providing support and encouragement for recycling behaviour
- Addressing barriers to volunteering involvement

DEWA'S COMMITMENT FOR A SUSTAINABLE FUTURE

DEWA is committed to improving its sustainability performance and therefore has set the following commitments for sustainable development to:

- Ensure sustainability is fully embedded into its business strategy
- Ensure constant alignment with national and international strategies and best practices
- Increase its direct and indirect economic contribution to the Dubai economy
- Maintain world class standards of quality, reliability, efficiency, availability of electricity and water supply for Dubai
- To invest and develop renewable energy technologies
- To continue to improve its stakeholders' happiness
- To minimise its environmental footprint and ensure that its operations satisfy all environmental regulatory controls
- To increase the share of renewable and clean energy to 7% by 2020, 25% by 2030 and 75% by 2050
- To contribute to the Dubai Carbon Abatement Strategy that targets the reduction of CO₂ emissions by 16% in 2021
- To improve water efficiency within its production and distribution networks
- To reduce its employee turnover rate and increase the proportion of UAE nationals in the workforce
- To further integrate green procurement into its entire supply chain
- To further implement new CSR projects to create shared value and assess the social impact
- To contribute to Dubai's smart city initiatives with:
 - Shams Dubai (Connecting solar energy in houses and building)
 - Smart Applications via Smart Grid and Smart Meters Infrastructure



THE UN SUSTAINABLE DEVELOPMENT GOALS

SUSTAINABLE DEVELOPMENT GOALS

The United Nations Sustainable Development Goals provide a global blueprint for dignity, peace and prosperity for people and the planet, now and in the future. They address the global challenges the world faces, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice.

Four years into the implementation of the Agenda, countries are translating this shared vision into national development plans and strategies. Achieving them will be both a unique opportunity and a profound challenge. With businesses, contributing nearly 60% to global GDP, the transition will be impossible without their active participation.

A strong commitment to sustainability was also clearly articulated by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai through the UAE Centennial 2071 and the 50-Year Charter.

It is clear that a long-term vision has been set out for the UAE to ensure that the country can achieve a sustainable trajectory in all aspects of its development and expansion. This vision has been encapsulated in a number of documents and plans, such as: the UAE Vision 2021, the Dubai Plan 2021, and the Dubai Clean Energy Strategy 2050.

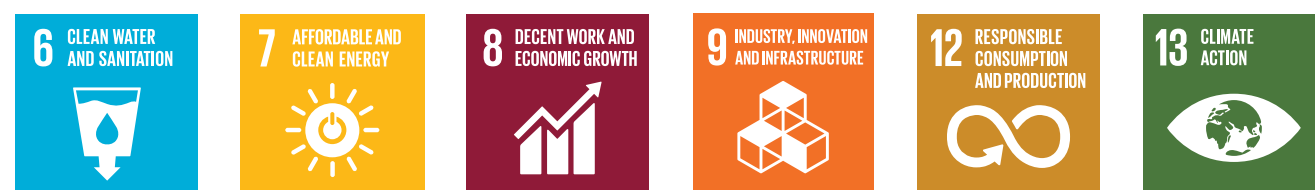
DEWA's approach towards aligning its strategies and operations with the SDGs include:

- Acknowledge and affirm the importance of the SDGs
- Identify the SDGs of greatest relevance
- Align company strategy to the SDGs
- Build capacity and embed SDGs into decision-making processes
- Report publicly on progress

Since 2016, DEWA has made a decisive effort to systematically explore how it can increase its alignment to the SDGs and be better positioned to contribute to their effective delivery.

Starting from 2017, DEWA has reviewed all 169 targets to identify those it is best placed to contribute to in the short- (1-2 years), medium- (3-5 years), and longer-term (6+ years) as well as identify the targets of 'high' or 'moderate' priority given its position as a water and energy utility in the UAE. It is important to note that this mapping was not only about correlating existing activities to the targets, but also identifying targets that reflect its vision to be a globally leading, sustainable, innovative corporation.

DEWA has identified the following six SDGs where it can have the greatest impact:



Some examples of DEWA's contribution to the priority goals are:

6 ENSURE ACCESS TO WATER AND SANITATION FOR ALL

- DEWA supports its DSM Strategy to reduce electricity and water demands by 30% of BAU by 2030. Several energy efficiency initiatives have been implemented within DEWA's premises under the Committee for Energy Management of DEWA premises. These include: conservation measures, retrofitting, light replacements and water reuse.
- DEWA implemented its 'High Water Usage Alerts' initiative to check if consumption is substantially higher than the average over a set timeframe. DEWA's SAP system analyses the data and, if it meets the criteria as per set parameters, sends Smart Water alerts to customers for any possible water leaks.
- The UAE Water Aid Foundation (Suqia), an entity under the Mohammed bin Rashid Al Maktoum Global Initiatives Foundation and annexed to DEWA, provides humanitarian aid around the world and helps communities that suffer from water scarcity by providing them with access to clean and safe drinking water.

8 PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

- DEWA has a number of subsidiaries which contribute to greater economic diversity
- DEWA has mainstreamed of disability in its internal strategies, policies, procedures, & operations.
- Providing the best work environment aligned with HSE standards

9 BUILD A RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALISATION AND FOSTER INNOVATION

- Provide reliable power and water supply to businesses and households in Dubai
- The first Green Hydrogen Project has been launched at the Mohammed Bin Rashid Solar Park
- Building-Integrated Photovoltaics technology for the R&D Centre.

12 ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

- DEWA is issuing Sustainability Reports on an annual basis
- Safe handling of chemicals to minimise release to atmosphere, ensure availability of suitable PPEs for chemical handling staff. It ensures 3R initiative to reduce waste. DEWA increases its plant efficiency and decreases its fuel consumption.

7 AFFORDABLE AND CLEAN ENERGY FOR ALL

- Shams Dubai is DEWA's first smart initiative to connect solar energy to buildings.
- Mohammed bin Rashid Al Maktoum Solar Park: The largest single-site solar power project in the world. It will produce 5,000MW by 2030 at a total investment of AED 50 billion. When completed, the solar park will reduce 6.5 million tonnes of carbon emissions annually.
- DEWA's R&D department conduct studies on renewable sources of energy (solar, water, AI, energy efficiency, smart grid integration and clean energy storage). DEWA contributes this research to the international community through:
 1. Dissemination of knowledge through conferences and journal publications (IEEE Photovoltaic Specialist Conference, European Photovoltaic conference, etc.)
 2. Engagement with R&D international organisations in joint R&D activities to solve renewable and sustainability issues (Stanford Energy 3.0, NREL, etc.)
 3. Outreach activities in the area of R&D renewables and sustainability (Solar Decathlon Middle East)

13 TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

- DEWA plays an essential role in achieving the targets set by the Dubai Clean Energy Strategy (DCES) 2050 by working to generate 75% of Dubai's total power output from clean energy by 2050
- DEWA shares the global response to climate change by reducing or avoiding greenhouse gas emissions through initiatives like: Diversification of Fuel Mix, Supply Side Energy Efficiency, Demand Side Management and CO₂ Emissions Reduction Programme.

DEWA'S SECONDARY GOALS

Goals 5, 11, 14, 16 and 17 are also considered important priorities for DEWA.



These priorities go beyond what a water or electricity utility would see as directly material and instead reflect DEWA's status as a major employer, community partner and player in the country and markets within which it operates.



DEWA & the UN Global Compact: Communication on Progress 2019

DEWA is a signatory of the UN Global Compact (UNGC) since 2017, which constitutes the world's largest corporate sustainability initiative with more than 13,000 corporate participants in over 170 countries. The Global Compact is based on ten fundamental principles relating to human rights, labour, environment and anti-corruption. In February 2019, DEWA was invited by the UNGC to take a seat and chair the UNGC UAE Local Network. This came as a result of DEWA's proactive role in contributing to the Global Agenda and a recognition for the support DEWA has shown to the UN Global Compact since joining in 2017.

DEWA is committed to the 10 principles of the UNGC, which are integrated in the policies and processes of the organisation. DEWA uses the 2019 Sustainability Report as its Communication on Progress for the UN Global Compact (UNGC). Throughout the report, there is information related to DEWA's social and environmental practices which underline its commitment to the Global Compact. The following table lists the compliance of DEWA with the ten Global Compact Principles, by making reference to the relevant chapters and GRI indicators of the Sustainability Report.

The Ten Principles of the UN Global Compact	The Sustainable Development Goals	Material Topics	Reference on the Sustainability Report or Description of the Management approach	GRI Standards Indicator
HUMAN RIGHTS				
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights		<ul style="list-style-type: none"> Occupational health and safety 	Chapter 1 Full compliance with relevant federal and local legislation and international conventions. Social accountability policy, Governance policy	102-8 102-16 102-41 403-1
Principle 2: Businesses should make sure that they are not complicit in human rights abuses			Chapter 1 Full compliance with relevant federal and local legislation and international conventions. Social accountability policy, Governance policy	102-8 102-16 102-18 403-1
LABOUR				
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining		<ul style="list-style-type: none"> Socio-economic Compliance Occupational health and safety Training and education Diversity and Equal Opportunity Non discrimination 	Chapter 1,6 Full compliance with relevant federal and local legislation and international labour standards worldwide. Social accountability policy	102-41 403-1
Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labour			Chapter 1,6 Full compliance with relevant federal and local legislation and international labour standards worldwide. Social accountability policy	419-1
Principle 5: Businesses should uphold the effective abolition of child labour			Chapter 1,6 Full compliance with relevant federal and local legislation and international labour standards worldwide. Social accountability policy	419-1
Principle 6: Businesses should uphold the elimination of discrimination in respect to employment and occupation			Chapter 1,6 Full compliance with relevant federal and local legislation and international labour standards worldwide. Social accountability policy	404-1 405-2 406-1
ENVIRONMENT				
Principle 7: Businesses should support a precautionary approach to environmental challenges.		<ul style="list-style-type: none"> Energy Water Emissions Effluents and waste Environmental Compliance Supplier Environmental Assessment Procurement Practices Innovation Research and development 	Chapter 5 Full compliance with relevant federal and local legislation. Sustainability policy	102-11
Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility			Chapter 3,4,5 Full compliance with relevant federal and local legislation. Sustainability policy	201-2 302-4 303-3 303-1 303-2 305-5 306-3 306-5 307-1 308-1 308-2
Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies			Chapter 3,4,5 Full compliance with relevant federal and local legislation. Sustainability policy	R&D
ANTI-CORRUPTION				
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery		<ul style="list-style-type: none"> Values, principles, standards, and norms of behaviour 	Chapter 1 Full compliance with relevant federal and local legislation, including Whistle Blowing policy, Conflict of Interest and Non-Disclosure of Information Regulation, Code of Conduct	102-16

STAKEHOLDER ENGAGEMENT GRI 102-42

Stakeholders represent a key part of DEWA's strategy and objectives, with DEWA recognising the advantages that arise from continuous communication and cooperation with them. Engaging with stakeholders and understanding their needs and expectations enables DEWA to constantly improve its performance, services and initiatives ensuring maximum level of happiness and impact.

These interactions occur regularly and take place through numerous initiatives and channels including happiness surveys, road-shows, joint ventures and collaboration with government authorities on regulatory priorities as described throughout this report.

Through its stakeholder management framework, DEWA aims to identify the methods of delivering the best and most inclusive engagement to ensure valuable outcomes, in alignment with the principles of both the AA1000 Stakeholder Engagement Standard 2015 and

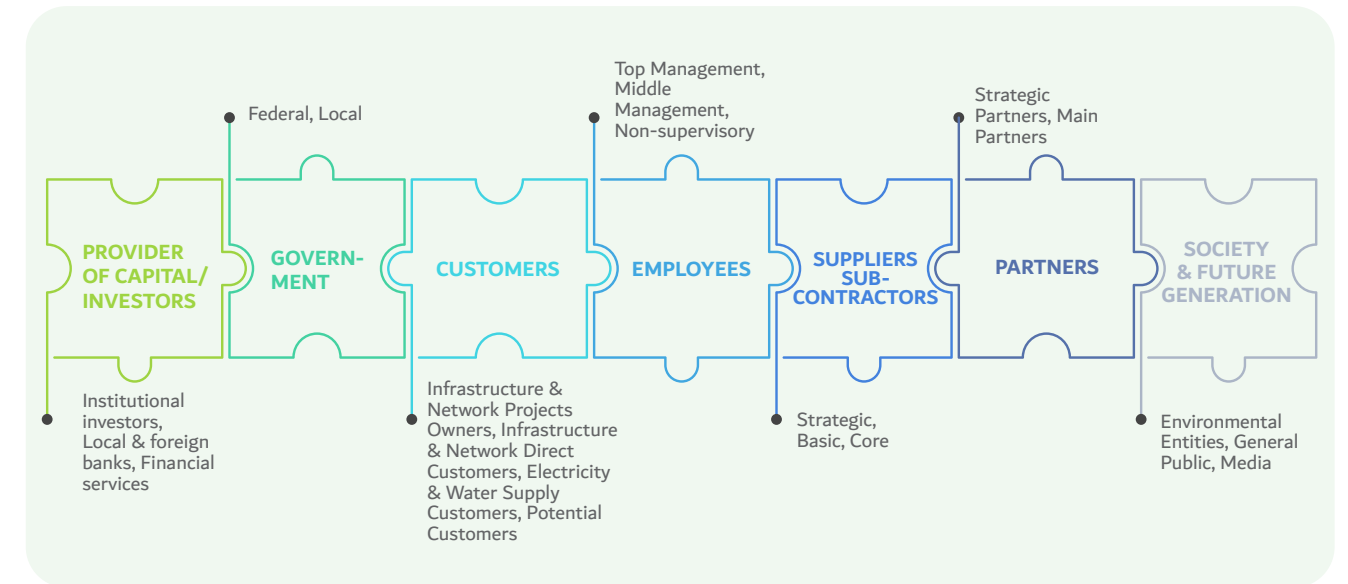
the Global Reporting Initiatives' Sustainability Reporting Standards. DEWA's key strategic objectives relating to its stakeholders include:

- Organising stakeholder engagement workshops for its key stakeholder groups
- Defining a compelling, overarching value proposition for each stakeholder group
- Managing and responding to stakeholders' needs and expectations
- Seeking new opportunities through multi-stakeholder partnerships to advance sustainable development
- Establishing community-based initiatives that benefit Dubai and the UAE

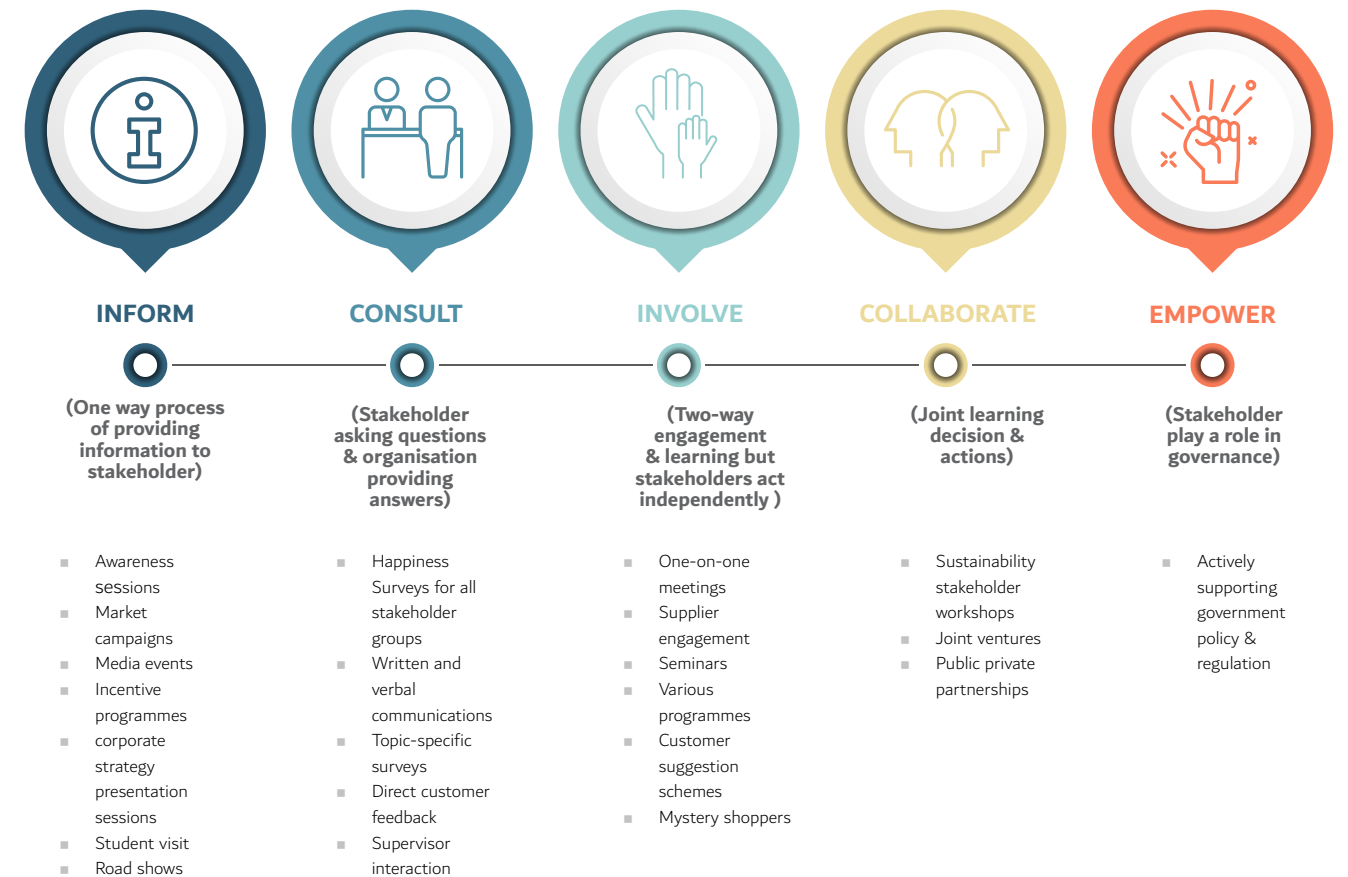


STAKEHOLDER ANALYSIS 2019 GRI 102-40

DEWA's stakeholders have been identified through a stakeholder prioritisation exercise, ranking them in terms of 'dependence' (importance of the relationship for the stakeholder), and 'influence' (importance of the relationship for DEWA). The Strategy Department is responsible for reviewing the list on an annual basis and updating it if necessary as well as ensuring that DEWA's strategic plan includes fulfilling the needs and expectations of prioritised stakeholder groups.




DEWA STAKEHOLDER ENGAGEMENT ACTIVITIES GRI 102-43,102-44



STAKEHOLDER NEEDS AND EXPECTATIONS

DEWA aims to adopt both a consistent and transparent approach when engaging with its stakeholders in a variety of ways. For every category of stakeholder, the following table shows the most important needs expressed during its engagement activities.

	<p>GOVERNMENT</p> <ul style="list-style-type: none"> Aligning with national development plans & programmes Commitment to good citizenship Regulatory compliance
	<p>CUSTOMERS</p> <ul style="list-style-type: none"> Quality safety & cost - effectiveness of service Ethical business Reducing the environment impact of organisation activities
	<p>EMPLOYEES</p> <ul style="list-style-type: none"> Secure working environment Competitive salaries Ethical behaviour Career progression & recognition Non-discrimination & equal opportunities Investment in professional development
	<p>PARTNERS</p> <ul style="list-style-type: none"> Sharing best practices Continuous & systematic dialogue & engagement MoUs to collaborate on issues
	<p>SOCIETY AND FUTURE GENERATION</p> <ul style="list-style-type: none"> Transparency & effective communication Raising awareness on sustainability issues Supporting social & cultural initiatives Management of environmental impacts of organisation activities
	<p>SUPPLIERS</p> <ul style="list-style-type: none"> Supplier qualification based on cost and quality including environmental & social assessment Transparent procurement processes Profitability
	<p>PROVIDERS OF CAPITAL/INVESTORS</p> <ul style="list-style-type: none"> Creating value in short & long term Reliability, Profitability, Transparency

STAKEHOLDER HAPPINESS

Creating a culture of happiness and positivity among stakeholders is one of DEWA's strategic objectives, and a key component of its mission and corporate values.

DEWA's annual Stakeholder Happiness Survey is one of its main tools to understand our stakeholders' expectations and help measure the effectiveness and improvement of its work. The survey addresses key issues relating to overall sustainability, including specific questions addressed to each stakeholder group. The outcomes from the survey are used to analyse gaps in DEWA's approach to Stakeholder Happiness and evaluate areas for further improvement.

The results of DEWA's 2019 Stakeholder Happiness Survey reveal that the majority of its stakeholders were happy with its sustainability performance while the majority of its suppliers are ready to promote more environmentally friendly products. Moreover, the providers of capital /investors emphasised that sustainability performance is crucial as it affects their investment decisions.

Results Of Stakeholder Sustainability Happiness Survey 2019



MATERIALITY ASSESSMENT GRI 102-47

One of the fundamental guidelines of the Global Reporting Initiative is the concept of materiality. An organisation is required to report on those matters which have the most significant economic, environmental and social impact on both its operations and the community where it works. The material topics are identified as per those found to be most significant by both its internal and external stakeholders.

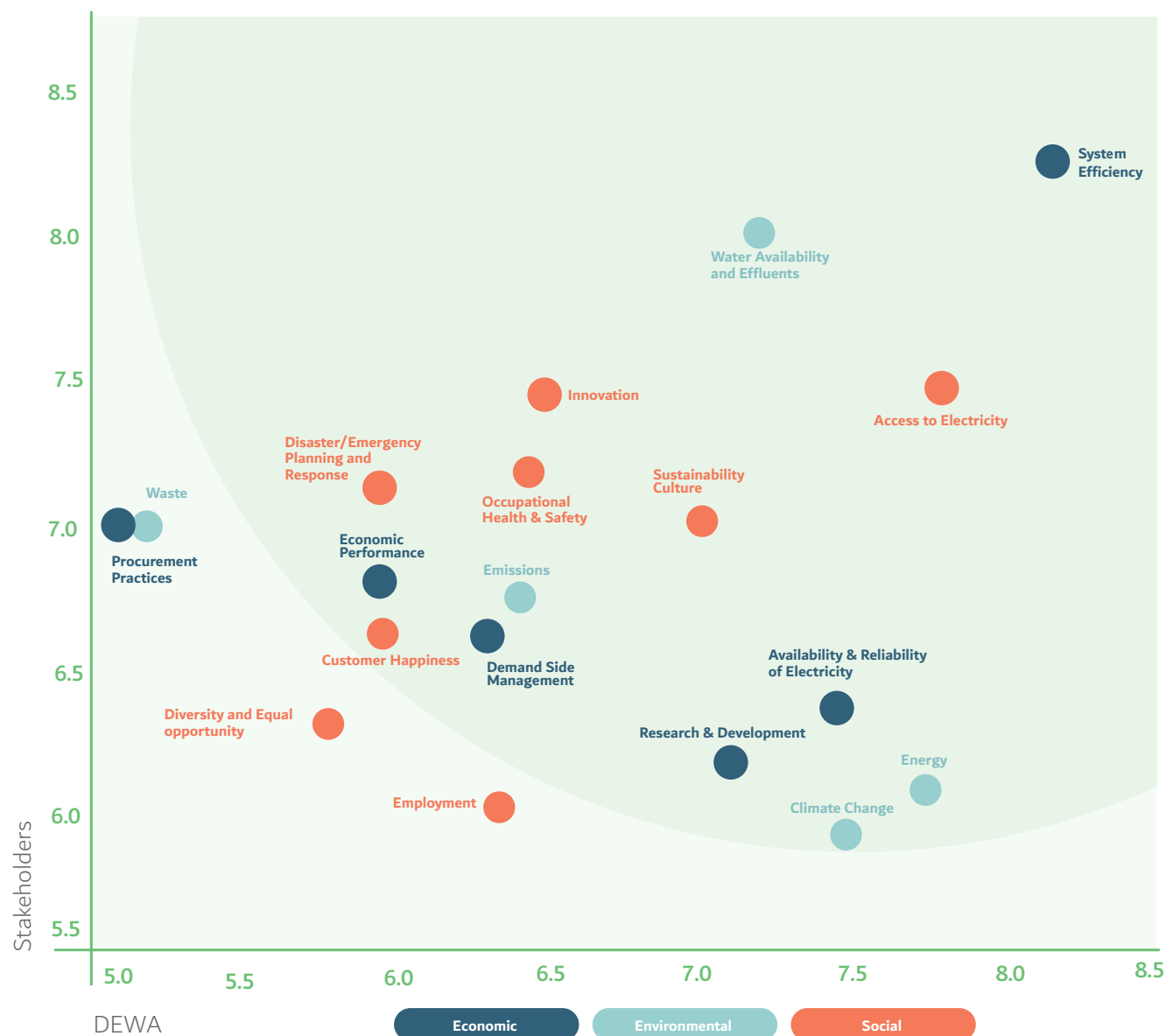
In 2019, DEWA used an online platform to run the materiality engagement workshop with its stakeholders. The platform allows for the participants to raise their concerns, vote on material topics and interact in real-time and anonymously. This approach has been found to encourage more engagement amongst the stakeholders during these workshops coming out with

better representative results and feedback. These results were taken into consideration during the corporate strategy planning process and to develop this report.

The topics classified in three categories: economic (blue), environmental (green) and social (orange), were assessed on the basis of their relevance by both stakeholders and by DEWA.

The results of the 2019 materiality assessment process are illustrated in the materiality matrix below. The horizontal axis shows DEWA Management's views while the vertical axis shows the opinions of DEWA's stakeholders. The boundaries for each material aspect can be found in Appendix 1.

DEWA's 2019 Materiality Matrix



IN SUPPORT OF EXPO: THE COUNTDOWN TO 2020

DEWA built the electricity and water infrastructure to support Expo 2020 Dubai, as the Official Sustainable Energy Partner to ensure the latest best practices in sustainability.

To achieve that, DEWA has invested AED 4.26 billion towards the development of power and water infrastructure at the Expo site; which includes various projects including:

- Building three 132/11 kilovolt (kV) substations named Sustainability, Mobility and Opportunity after the three sub-themes of Expo 2020 with 45 kilometres (km) of high-voltage (132kV) cables. As a part of its commitment towards sustainability, solar panels have been introduced in the 3 substations.
- Building a smart grid to become the first network in the world to provide the entire value chain of generation, transmission, and distribution systems to Expo 2020.
- Allocating 400MW of electricity from the Mohammed bin Rashid Al Maktoum Solar Park to ensure the provision of Solar Power for EXPO's use during event time.

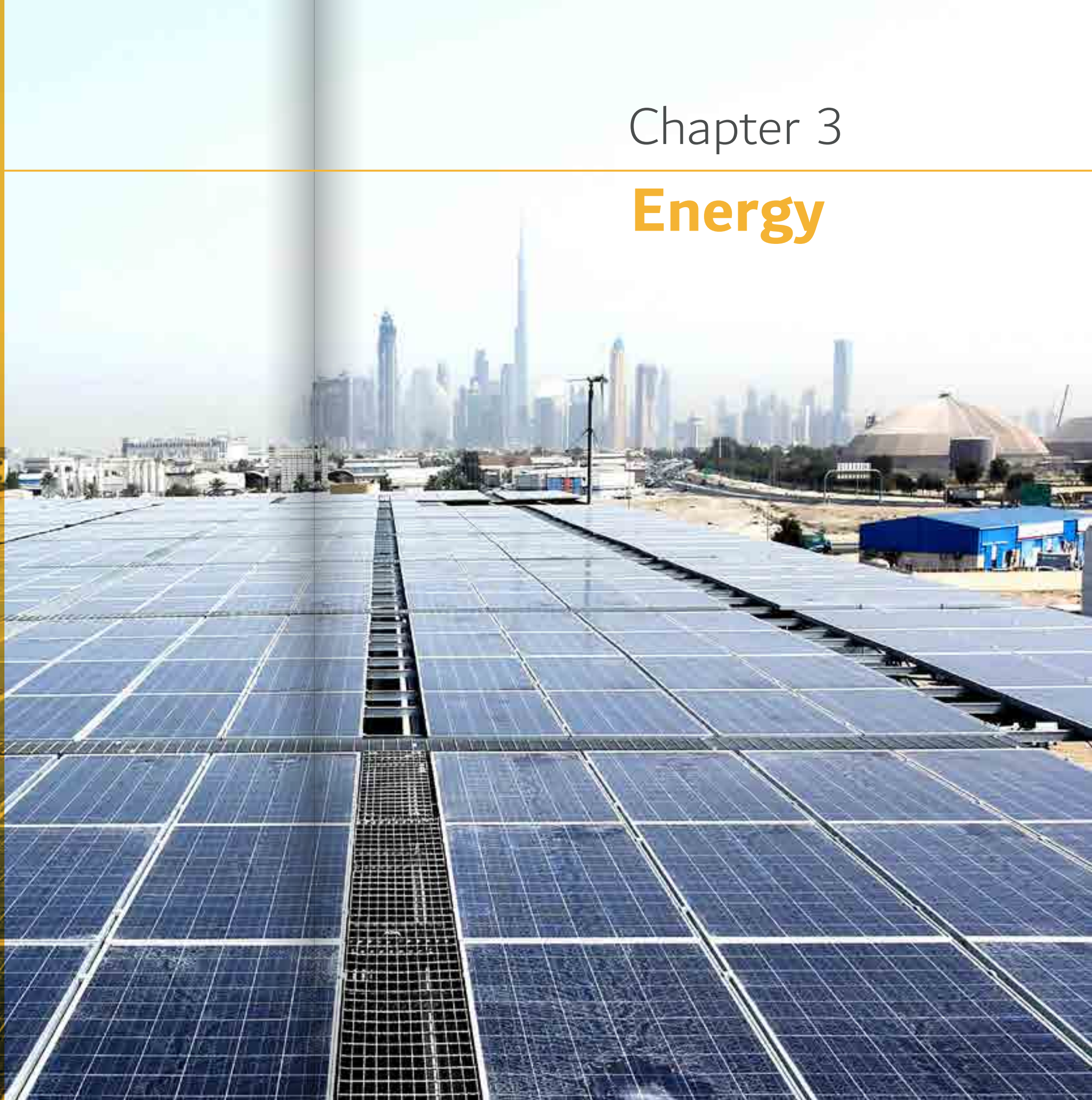
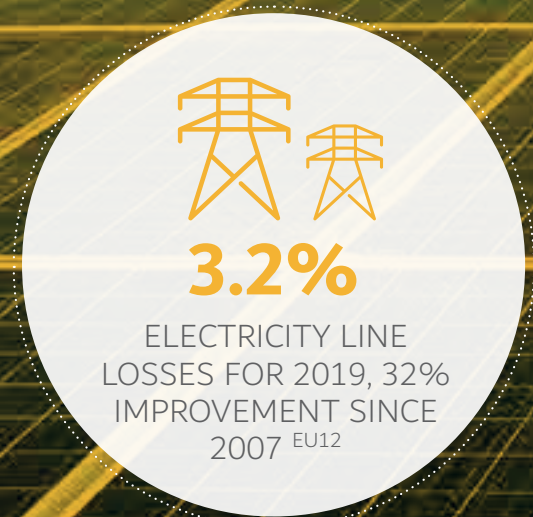
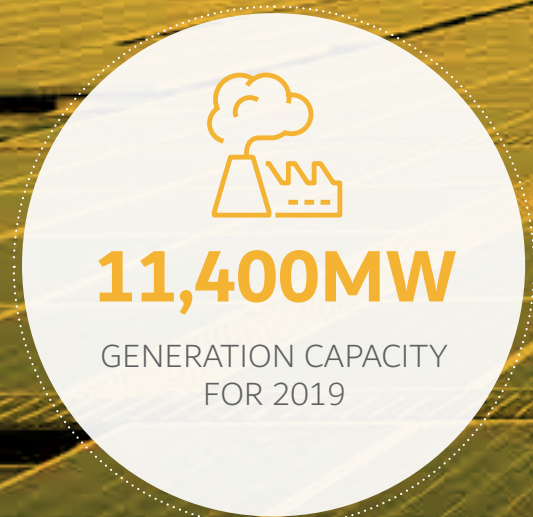
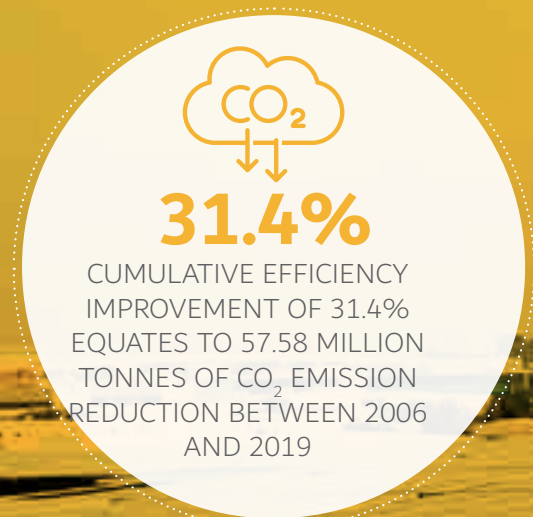
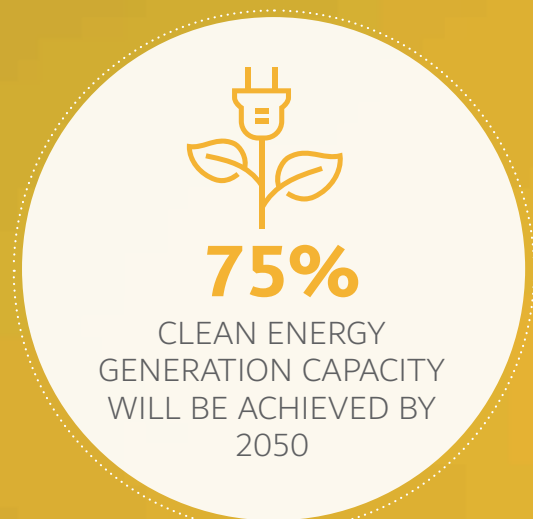
DEWA has also signed an MoU with Expo 2020 and Siemens to start a solar powered hydrogen electrolysis facility. It is built at DEWA's outdoor testing facilities in the R&D Centre at the Mohammed bin Rashid Al Maktoum Solar Park in Dubai. The facility tests and showcases an integrated megawatt-scale plant to produce hydrogen using renewable energy from solar photovoltaic, store the gas, and then deploy for either re-electrification, transportation or other industrial uses. Visitors of Expo 2020 Dubai will be able to visit the key facilities at the solar park. Overall, this partnership will showcase Dubai's efforts towards becoming the city with the lowest carbon footprint in the world.

DEWA & Expo 2020 Dubai:

- Sustainable Energy Partner
- Collaboration to kick-off a solar driven hydrogen electrolysis project
- Organising the Solar Decathlon Middle East 2020 in collaboration with Expo 2020 Dubai
- Promoting Expo 2020 Dubai at national and international platforms
- Promoting and encouraging participation in EXPO 2020 Dubai Volunteers Programme among DEWA employees

Chapter 3

Energy





Jebel Ali Power and Water Desalination Complex

MANAGEMENT APPROACH **GRI 103-1, 103-2, 103-3**

DEWA's management approach includes a commitment to ensuring the reliability of its electricity supply across Dubai. To ensure this, DEWA is investing in new technologies, applying international best practices and continuously improving its power generation, transmission and distribution facilities. The UAE, represented by DEWA, has maintained its first place globally for the third consecutive year for Getting Electricity, with scores of 100% for all the indicators in the World Bank's Doing Business 2020 report. The report measures the ease of doing business in 190 economies around the world.

DEWA implements innovative solutions to improve supply-side efficiency, reduce transmission and distribution losses and diversify energy sources to support sustainable economic growth without damaging the environment and natural resources. DEWA's Generation division has also identified 16 business risks in compliance with its ERM and the ISO 31000:2018 Risk Management Guidelines. This includes 2 Tier-1 risks and 14 Tier-3 risks. It has also identified mitigation plans for these business risks; with Risk Owners responsible for ensuring that proactive initiatives are taken by Mitigation Owners. The division manages the risk and mitigation details for all the risks with the SAP GRC (Governance, Risk & Control) System.

Risk management is also an important aspect of other implemented management systems, such as Integrated Management Systems (covering Quality, Occupational

Health & Safety and Environment Management Systems) and Asset Management Systems. DEWA's Generation division is responsible for systematically identifying, assessing and effectively controlling all its relevant risks. This includes aspects such as assets, finance, operations, quality, health & safety, environment, objectives, and reputation. These are done by all its relevant plants and departments, based on their scope and discipline.

To support this, the Generation division expanded the implementation of the ERM framework to include assets. This now includes analysing the risks to its critical assets. It has also defined and evaluated the criteria for identifying its critical assets. The division updates the list of its critical assets periodically to reflect any changes to them. These updates are based on the Generation division's Asset & Mitigation Registers, which compile all the ERM risk assessments. These assets include all the critical ones at D, E, G, H, K, L & M Stations. The relevant departments that monitor them also take time into account when reassessing asset-related risks. They then incorporate these changes into their asset management plans.

The division also includes crisis management and contingency plans in its business continuity and disaster recovery plans. These focus on minimising any impact on safety, reliability, availability and ensuring the availability of proper backup facilities, where available or required.

CRISIS MANAGEMENT PLANS

Generation Division identified the following possible crisis scenarios. These are:

1. Partial or Total Loss of Power Generation
2. Partial or Total Loss of Water Production, where demand cannot be met with wellfield assistance or modified operation
3. Fire or explosion in Liquid Fuel Storage Tanks or natural gas pipelines due to breaks or leaks or Hydrogen Cooled Generator System

The division developed separate crisis management plans for each scenario based on their impact on power & water production facilities that may lead to partial or total loss of power generation or water production. Generation division's respective plants and departments have developed specific crisis management plans for each scenario to manage their operations. They ensure that they are able to activate their crisis response plans to meet the requirements of any identified crisis scenario.

CONTINGENCY PLANS

Generation division identified and developed contingency plans for the following scenarios:

1. Blackout contingency plan
2. Water contingency plan
3. Fire contingency plan
4. Oil Spill contingency plan
5. Red Tide contingency plan

BUSINESS CONTINUITY MANAGEMENT AND DISASTER RECOVERY

When DEWA implemented its Business Continuity Management System (ISO 22301:2012), its Generation division carried out a Business Impact

Analysis on all its processes. This included identification of business impacts on finance, operations, health and safety, the environment, DEWA's objectives and reputation, IT services, and resources and process flows. This resulted in the Business Continuity Plan covering the following scenarios that could affect its ability to generate power and produce water:

1. Loss of Natural Gas Supply
2. Fire or Explosion in fuel and hydrogen systems
3. Oil spill
4. Red Tide
5. Loss of station due to power system or equipment failure, with a partial loss of power generation being greater than the Power Reserve of 500 MW
6. Loss of station due to desalination system or equipment failure, with a partial loss of water Production being greater than the Water Reserve of 50 MIGD

This is to ensure continuous delivery of power & water at minimum acceptable level during and following any kind of crises, incident or business disruption.

MOCK DRILLS

DEWA carries out periodic mock drills at periodic intervals covering crisis, contingency and business-continuity-related scenarios and conducts Inter-station audits every year. The relevant departments provide reports with an action plan and corrective actions, periodic updates, and the status of their implementation up to the implementation and closure of any identified corrective action.

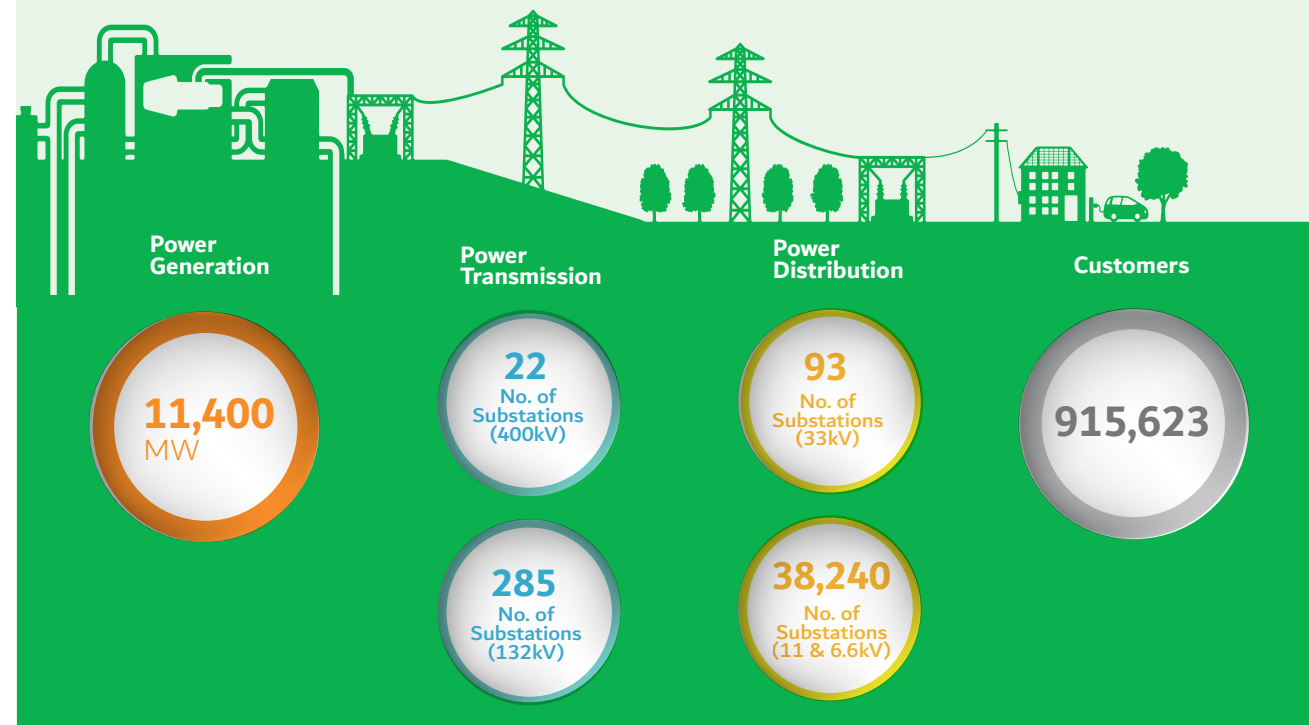
LEGAL & REGULATORY REQUIREMENTS

DEWA has a procedure (IMSP04) in place to identify its legal and regulatory requirements. It also has a procedure (IMSP10) to periodically verify its legal and regulatory requirements to ensure it complies with all of them, and communicates them to all its divisions.

POWER GENERATION GRI 102-41, 103-1, 103-2, 103-3, EU10

DEWA is the sole utility and provider of electricity and water services to the Emirate of Dubai, and ensuring the availability and reliability of these remains its key priority. DEWA's power stations and desalination plants, transmission networks and distribution networks ensure the uninterrupted supply of services to all its customers.

Natural gas is the primary fuel for power generation and water desalination operations. DEWA purchases natural gas from the DUSUP, which runs the Emirate's gas importation and distribution infrastructure. In 2019, its total gross power generation was 46,703,722 MWh, produced mainly from natural gas.



Net Energy Output Broken Down by Primary Energy Source ^{EU2}

Year	Total Gross Generation (MWh)	Natural Gas		Diesel Fuel Oil		Medium Fuel Oil		Solar	
		Generation (MWh)	% of total generation	Generation (MWh)	% of total generation	Generation (MWh)	% of total generation	Generation (MWh)	% of total generation
2017	45,162,014	44,669,687	98.91	30,225	0.07	25	0.0001	462,077	1.02
2018	45,960,803	44,995,189	97.90	27,723	0.06	69	0.0001	937,823	2.040
2019	46,703,722	45,184,886	96.75	42,779	0.09	42	0.0001	1,476,015	3.160

Note:
Diesel fuel oil and medium fuel oil are backup fuels used only during an emergency (i.e. interruption of gas supply).
The consumption during the year is due to testing and commissioning purposes.

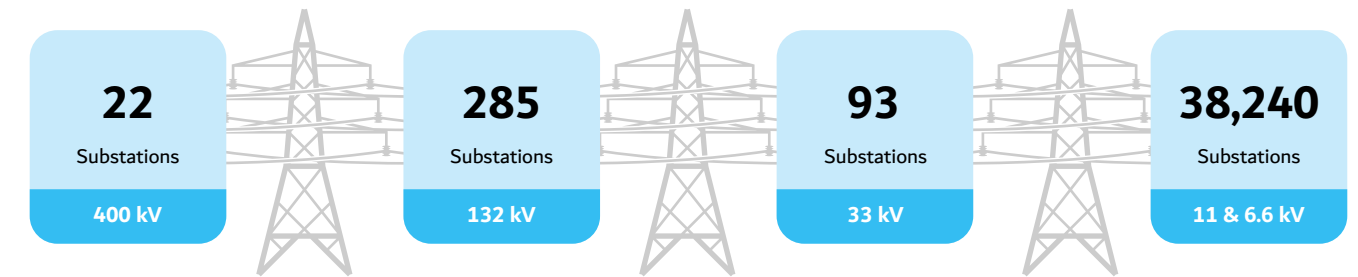
DEWA is working to transform Dubai into a global hub for clean energy and green economy, to make it the city with the lowest carbon footprint in the world. This includes meeting the clean energy objectives requires a capacity of 42,000 MW of clean and renewable energy by 2050.

Installed Capacity ^{EU1}

DEWA Installed Capacity		
Site	Station	Installed Power Capacity(MW) at 50 °C & 30% R.H
Jebel Ali, Dubai	D	1,027
	E	615.5
	G	818
	K	948
	L	2,400.6
	M	2,885
Aweer, Dubai	H	1,995.86
Seih Al Dahal, Dubai	Mohammed bin Rashid Al Maktoum Solar Park	710
Total (MW)		11,400

POWER TRANSMISSION & DISTRIBUTION GRI 103-1, 103-2, 103-3, EU12

One of the main priorities for DEWA is to ensure the reliability of the electricity connections. Therefore, DEWA invests enormously in network transmission and distribution substations to ensure achieving the safest electricity transport with a minimum interruption. As a result, for 2019, its transmission system availability achieved a score of 100%.



DEWA's commitment to meet the growing energy demand is reflected in the 2,896 new 11 & 6.6 kilovolt (kV) substations that were installed during 2019. DEWA continuously works to improve the operational efficiency of its Transmission and Distribution (T&D) network. Through DEWA's Intelligent Metering System and Smart Grid, its continued efforts have resulted in the 2019 electricity line losses lowering to 3.2%, a 32% improvement since 2007

Length of Transmission and Distribution Lines, 2019 ^{EU4}

Type	Voltage Category (kV)	Length of Transmission and Distribution lines (km)
Overhead Lines	400	1,164
	132	402
	33	112
	6.6 & 11	616
Underground Lines	400	24
	132	2,146
	33	2,142
	6.6 & 11	33,940

DEWA is currently retrofitting its Heating, Ventilation and Air Conditioning (HVAC) packaged units at its substations; replacing its packages using Refrigerant 22 (R-22) with the more eco-friendly R407C. As of the end of 2019, DEWA has retrofitted 294 packaged units, with the full phase-out of R-22 and retrofitting the remaining 540 Packaged Units by 2027.

ENERGY CHALLENGES AND INITIATIVES ^{EU10}

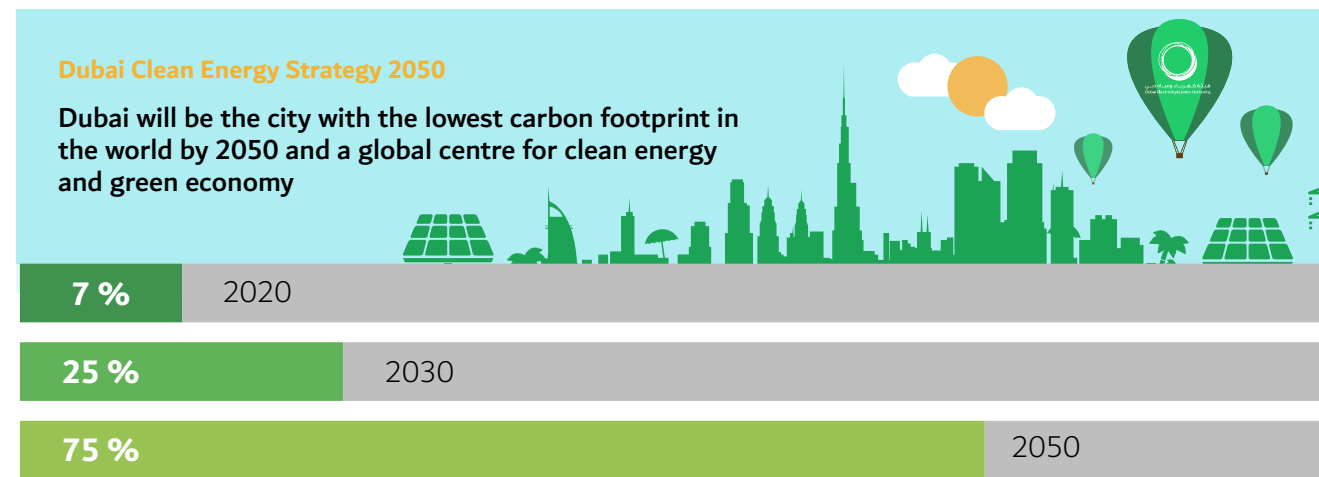
Energy challenges are among the most significant and difficult problems confronting the world today. The UN has addressed them in the 7th goal of the its SDGs as 'affordable and clean energy.' The UAE is working on developing the renewable and clean energy sector, reducing the consumption of natural resources, and finding alternative solutions to traditional energy sources to achieve the sustainable development of Dubai. This is why the Dubai Clean Energy Strategy 2050 was launched to provide 75% of Dubai's total power output from clean energy by 2050 and to make Dubai the city with the lowest carbon footprint in the world along with the UAE Centennial 2071, UAE Vision 2021, UAE Green Agenda 2050 and the 50 Year Charter launched by His Highness Sheikh Mohammed

bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, which include improving quality of life, developing Dubai's society, and ensuring a bright future for generations to come.

Dubai is a pioneer in the transition towards a green economy through two objectives. The first is to reduce energy and water demand by 30% by 2030, by promoting efficiency and conservation programmes. The other is improving the supply side by diversifying the energy mix, especially clean energy, increasing efficiency, and reducing electricity and water network losses. To achieve this, DEWA launched several green initiatives to strengthen the UAE's leading position in the use of clean and renewable energy globally.

DIVERSIFYING THE ENERGY MIX

Diversifying the energy mix reduces dependence on a single energy source, which improves energy security and increasing the total power generated from clean energy sources to be in lined with the Dubai Clean Energy Strategy 2050.



MOHAMMED BIN RASHID AL MAKTOUM SOLAR PARK

Due to the characteristics of the geographical location of the UAE, solar power is considered as the most sufficient clean energy source in the region. Therefore, In January 2012, HH Sheikh Mohammed bin Rashid Al Maktoum announced the launch of the Mohammed bin Rashid Al Maktoum Solar Park in Dubai, is the largest single site solar park in the world. This project depends on solar radiation that is available all year-round to produce electricity using the latest technology available in international markets. By 2030, it will have a capacity of 5,000 MW.

This will add significantly to the goal to generate 25% of Dubai's total power output by then. Based on studies and research, DEWA located the solar park at Seih Al Dahal in Dubai. After the project completion in 2030, the solar park will cut 6.5 million tonnes of carbon Dioxide emissions a year. In 2019, DEWA completed the second stage of third phase with a capacity of 300 MW. The third stage will be completed in 2020 and will have a capacity of 300 MW. This increased the solar park's current capacity from 410MW to 710MW.

SHAMS DUBAI

Shams Dubai was launched in 2015 to support the vision of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to make Dubai the smartest and happiest city in the world.

Shams Dubai encourages building owners to install grid connected photovoltaic systems at their premises to generate clean energy from their solar panels, with any excess exported to the power grid under a net metering

scheme. This initiative supports the Dubai Clean Energy Strategy 2050 and the Dubai Carbon Abatement Strategy.

DEWA is also installing photovoltaic panels across its facilities. It has installed solar panels on rooftops and carports at a number of DEWA buildings, sponsored a number of solar photovoltaic projects for other Dubai Government agencies, and also installed photovoltaic panels for Dubai and Hatta residents.

Shams Dubai Indicators' Progress	2016	2017	2018	2019
Connected Capacity at Year End, MW	7.3	22.8	71.4	165.2
Est. Annual Generation, GWh*	5.2	17.8	61.4	142.3
Grid Emission Factor, tCO ₂ /MWh	0.4382	0.4333	0.4258	0.4178
Est. Annual Emissions Savings, '000 t of CO ₂ **	2.3	7.7	26.2	60.6

Note:
 *Assumes 15% capacity factor on time-weighted installed capacity
 **Based on Grid Emission factor. Actual savings likely higher as solar typically displaces daytime generation only



CLEAN COAL

For decades, coal has been one of the main energy sources that many different countries are highly dependent on for electricity generation. The term 'Clean Coal' refers to several technologies that are integrated together to reduce the negative environmental impact of burning coal. These technologies mainly focus on reduction on NOx, Particular Matters, SOx and CO₂.

DEWA's Hassyan Clean Coal Power Plant will be the first plant of its kind in the Middle East and North Africa. It will generate electricity from clean coal based on the Independent Power Producer (IPP) Procurement model.

The Hassyan Clean Coal Power Plant is expected to start operations in 2020, and have a capacity of 2,664 MW by 2023. The plant will use ultra-supercritical technology in its operations, in full compliance with set international standards. The plant also meets flue gas emission limits that are more stringent than those of both the Industrial Emissions Directive of the European Union and the International Finance Corporation Guidelines.

NUCLEAR ENERGY

Nuclear energy will be 7% of Dubai's energy mix by 2030.

HYDROELECTRIC POWER STATION IN HATTA

Due to its geographical location, DEWA decided to build a hydroelectric power station in Hatta after conducting research and a feasibility study that proved the benefits and the Return On Investment (ROI) of the project. The hydroelectric power station in Hatta is the first of its kind in the GCC region.

DEWA is targeting to have an installed capacity of (250MW X 6 Hours), with an expected lifespan of 60–80 years. The dam in Hatta can store up to 1,716 million imperial gallons of water. As part of the project, an upper reservoir will be built at a higher elevation with a capacity to store over 1,000 million imperial gallons of water. During off-peak hours when power demand is relatively low, the plant will use clean and cost-effective solar power to pump water from the lower dam to the upper reservoir.

During peak-load hours when demand and production costs are higher, the energy of water flowing back down from the upper reservoir into the lower dam is used to generate power to be fed into DEWA's grid. The plant's full cycle efficiency is 78.9% and it can respond to variations in power demand within 90 seconds.

To initiate the project, DEWA awarded Électricité de France (EDF) with an AED 58 million engineering consultancy services contract, which covers field investigations, detailed design, assistance during EPC tendering as well as engineering support and supervision during construction. So far, all field investigations and design studies have been completed, and the project is in the construction stage.



SUPPLY SIDE ENERGY EFFICIENCY GRI 103-1, 103-2, 103-3, EU11

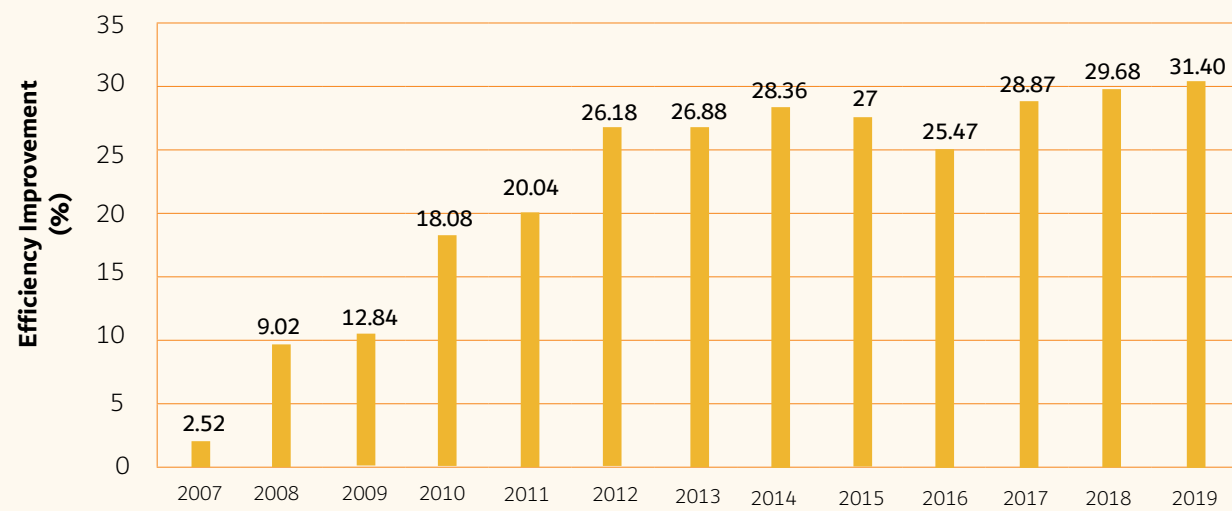
DEWA produces electricity and water mostly by cogeneration. The waste heat from gas turbine is used in HRSGs (Heat Recovery Steam Generators) to produce Steam. This steam is used to generate additional free power through backpressure steam turbine or Condensing Extraction Steam Turbine and produces water by multistage flash.

DEWA has invested in efficiency improvements including converting many simple cycle gas turbine plants into more-efficient combined and cogeneration cycle plants. In 2019, DEWA's gross efficiency (Power

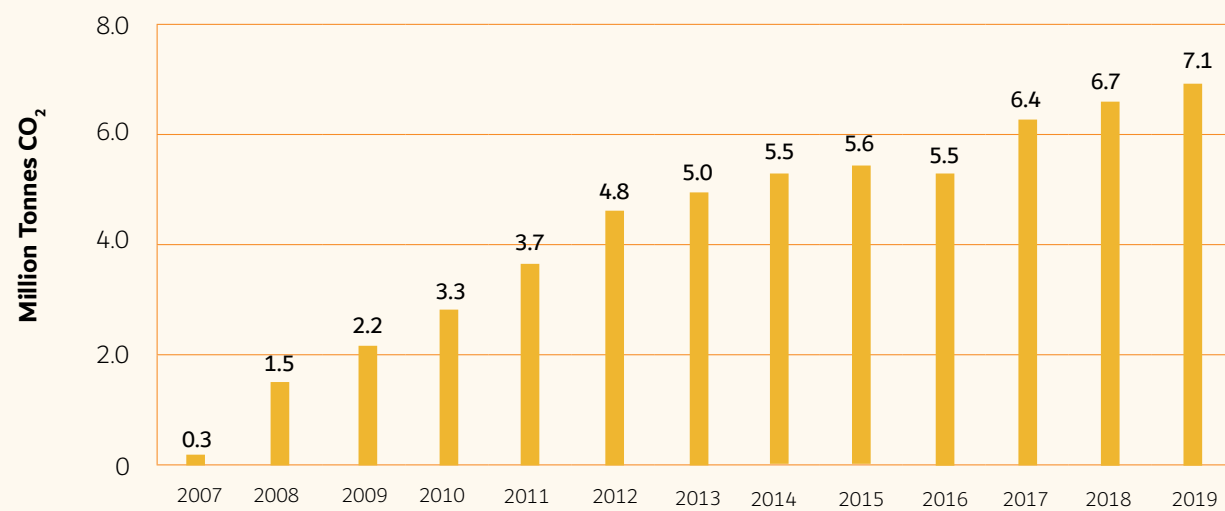
Only) and overall efficiency was 43.62 % and 96.22%, respectively. Overall, between 2006 and 2019, DEWA achieved a cumulative efficiency improvement of 31.40%, equivalent to 57.58 million tonnes of CO₂ emission reduction. This has been achieved through a combination of optimum power plant design, power augmentation, innovative upgrades for gas turbines, optimised operations and optimised outage planning. This showed a continuous year on year improvement in the amount of carbon reduction through efficiency measures.



Efficiency Gains from improvement in Gross Heat Rate 2007-2019 with respect to 2006



Carbon reduction (Million Tons CO₂) due to efficiency improvements with respect to 2006



Demand Side Management 103-1, 103-2, 103-3

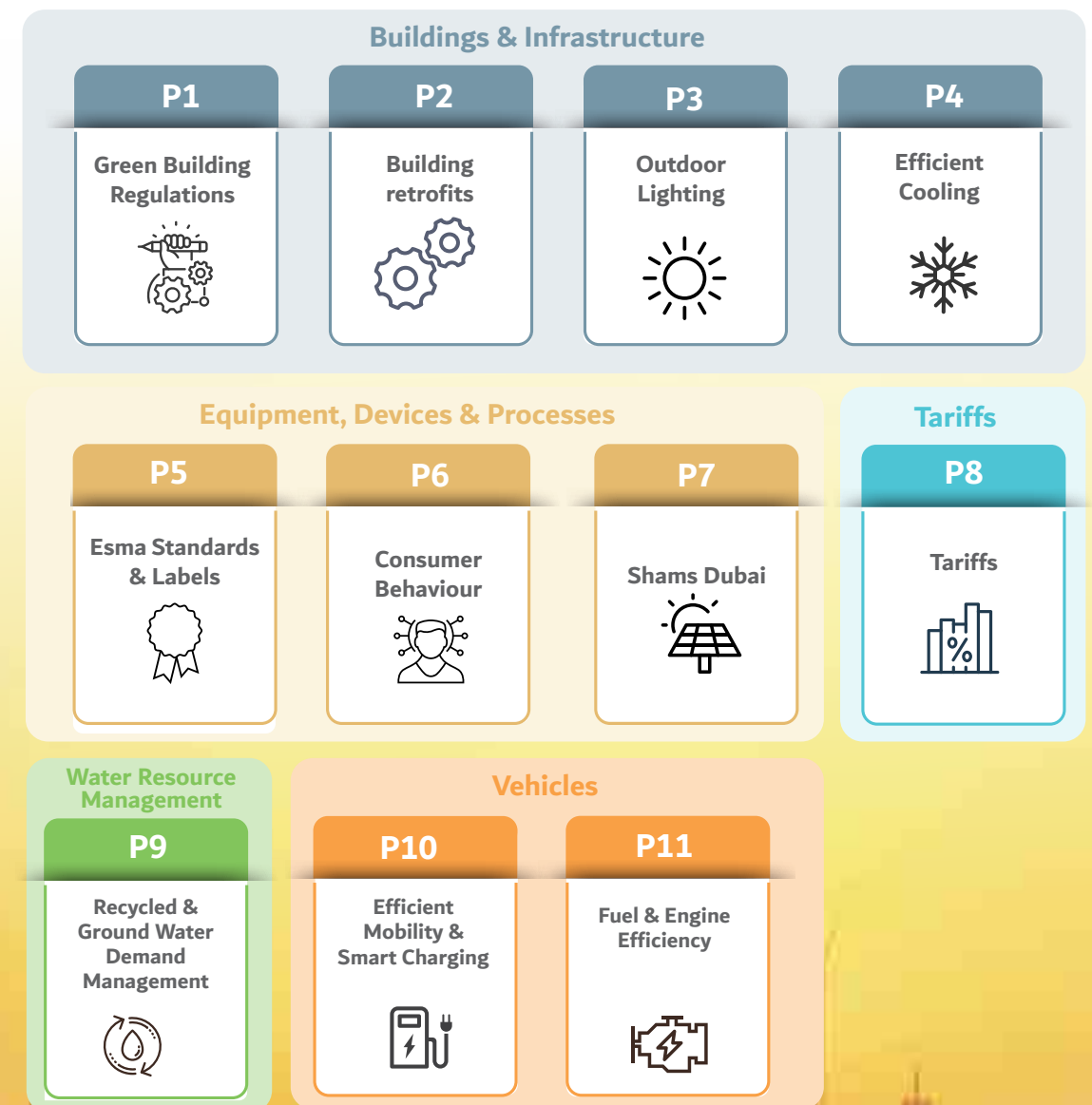
While DEWA has reduced power and water consumption through supply-side efficiency programmes, adopting best practices in generation & desalination, as well as diversifying the fuel mix. One of DEWA's energy efficiency and consumption targets is demand side management. In 2013, the Dubai Supreme Council of Energy (DSCE) launched the Dubai DSM 2030 to improve energy efficiency, reduce electricity and water consumption and help the sustainable development of Dubai.

The strategy has defined 8 main programmes in line with international best practices and similar programmes implemented globally, with a target to reduce electricity and water demand in Dubai by 30% in 2030, compared to the business as usual scenario. These include Building Regulations, Buildings Retrofits, District Cooling, Standards and Labels for Appliances & Equipment, Water Reuse & Efficient Irrigation, Outdoor Lighting, Review of Tariff Rates to promote energy conservation and economic efficiency

of consumption decisions and Shams Dubai to enable building owners to install photovoltaic panels to generate electricity and connect it to DEWA's grid. Each programme has a Programme Owner (a member company of the Supreme Council of Energy) which is responsible for the programme implementation under the management of the DSM Project Management Office (PMO) - Taqati and supervision of the Supreme Council of Energy. DEWA is the owner for the Shams Dubai Programme and Tariff Rates. In 2019, both programmes achieved electricity savings of 136GWh and 1,137 GWh respectively and 2,165 MIG of water savings from the Tariff Rates programme.

The Dubai DSM Strategy 2030 has been updated and will be issued for implementation in 2020. The updated Dubai DSM Strategy 2030 aims to accelerate the efforts to achieve or exceed the savings of 30% by 2030. The strategy includes 11 DSM programmes: P1-Green Building Regulations, P2-Building Retrofits, P3-Outdoor Lighting, P4- Efficient Cooling, P5-ESMA Standards and Labels, P6-Consumer Behaviour, P7-Shams Dubai, P8-Electricity and Water Tariffs, P9-Recycled & Ground Water Demand Management, P10-Efficient Mobility and Smart Charging and P11-Fuel and Engine Efficiency. The first 9 Programmes target electricity and water savings while the last two programmes target emission reduction in the transportation sector.

The Updated Dubai DSM Strategy 2030

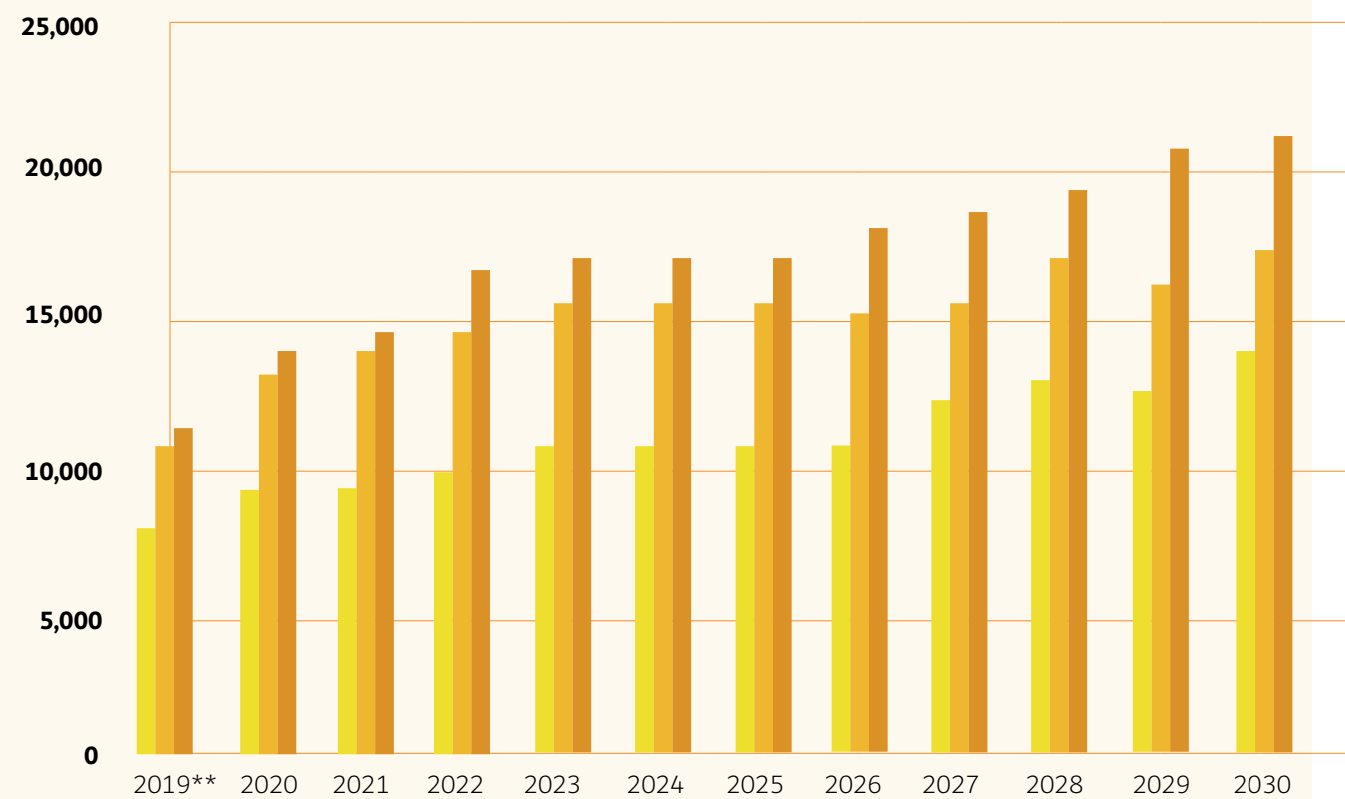


MEETING FUTURE DEMAND

As part of DEWA's efforts to meet future demand, DEWA has forecast the demand for power & water up to 2030. The Power and Water Planning (P&WP) division is responsible for the short-, medium- and long-term demand forecasts and Master Plans. P&WP updates demand forecasts every year using recognised international practices and state-of-the-art tools considering demographic and econometric growth, and captures the effect of future uncertainties through scenario planning. This ensures that DEWA maintains its world-class level of reliability, efficiency and safety and optimises its resources. Based on these demand forecasts, DEWA develops all its Master Plans, which are updated annually to meet Dubai's power and water

demands while maintaining a reserve margin of minimum 15%. Master Plans set the course for the technical planning of future infrastructure expansions of electricity and water production, transmission and distribution systems. The plan takes into consideration Dubai's future developments in commercial and industrial sectors and major future events such as Dubai Expo 2020, as well as, projected normal growth of power and water demand associated with increases in population. The plans include power generation and water desalination capacity expansion plans and power and water transmission network expansions plans up to 2030 as well as DEWA's power distribution network over the next 7 years.

Peak Power Demand and Planned Power Generation Capacity Additions (2019 - 2030)



■ Total Installed Power Generation Capacity (MW)
 ■ Total Firm Power Generation Capacity (MW)
 ■ Peak Power Demand (MW)

CASE STUDY

DEWA receives world's lowest bid for the 5th phase of the Mohammed bin Rashid Al Maktoum Solar Park



The Mohammed bin Rashid Al Maktoum Solar Park is the largest single-site solar park of its kind in the world. By 2030, it will have a capacity of 5,000 MW with an investment of AED 50 billion. Through its project phases, the park will accelerate Dubai's expansion of solar power investments. DEWA is committed to completing the Mohammed bin Rashid Al Maktoum Solar Park to the highest international standards with the latest solar power technologies. This supports the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, the Eight Principles of Governance in Dubai, and the 50-Year-Charter as well as the objectives of the Dubai Clean Energy Strategy 2050 to provide 75% of Dubai's total power output from clean energy by 2050.

The 13MW first phase became operational back in 2013 using photovoltaic solar panels. This was followed by the 200 MW second phase, which began operating in March 2017. The 800 MW third phase of the solar park is expected to be operational by 2020.

The fourth phase of the solar park is the largest single-site CSP project in the world. Using the IPP

model, it will have a capacity of 950MW with a total investment of AED 15.78 billion. The project will feature the tallest solar power tower in the world, at 260 metres, and the largest thermal storage capacity of 15 hours; generating power around the clock.

DEWA is implementing the 900 MW 5th phase of the Mohammed bin Rashid Al Maktoum Solar Park using photovoltaic solar panels based on the IPP model. DEWA has achieved a world record by receiving the lowest bid of USD 1.6953 cents per kilowatt hour (kW/h) for this phase through a partnership with the consortium led by ACWA Power and Gulf Investment Corporation as the preferred bidder to build and operate the 5th phase. This phase will become operational during the 2nd quarter of 2021.

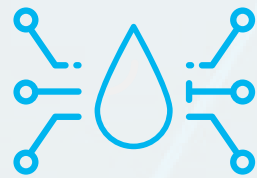
The current total production capacity of the solar projects at the solar park is 710 MW. In addition, DEWA is building three other projects with a total capacity of 1250 MW. The 900 MW 5th phase of the solar park will increase its capacity to 2,863 MW.

**6.63%**

DURING 2019, DEWA REDUCED ITS WATER LOSSES TO 6.63%, ONE OF THE LOWEST WORLDWIDE.

**815,872**

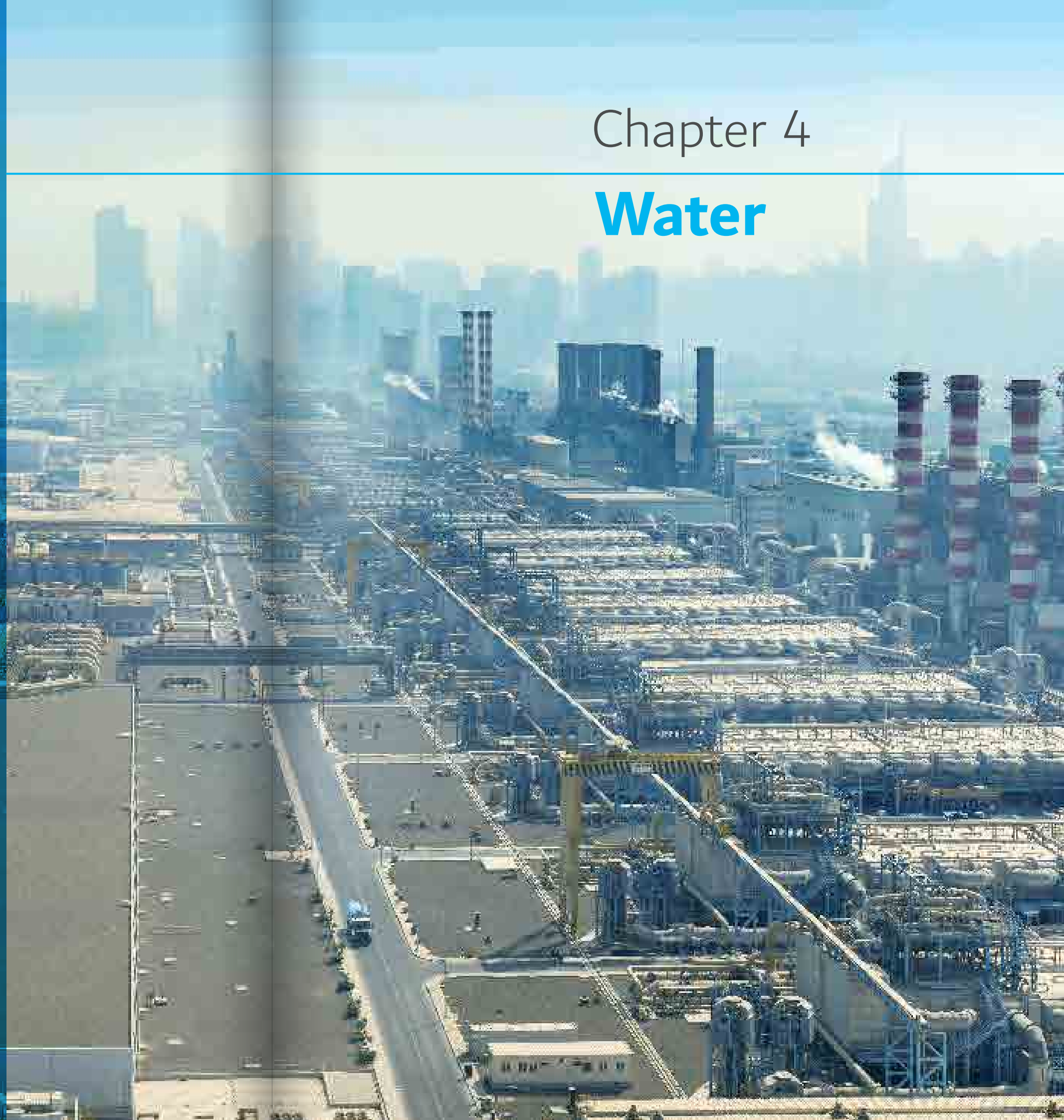
DEWA INSTALLED 815,872 SMART WATER METERS IN DUBAI BY 2019.

**100%**

DEWA HAS MET 100% OF DUBAI'S WATER DEMAND BY OPERATING AND MANAGING ITS WATER NETWORK AND RESERVOIRS.

Chapter 4

Water



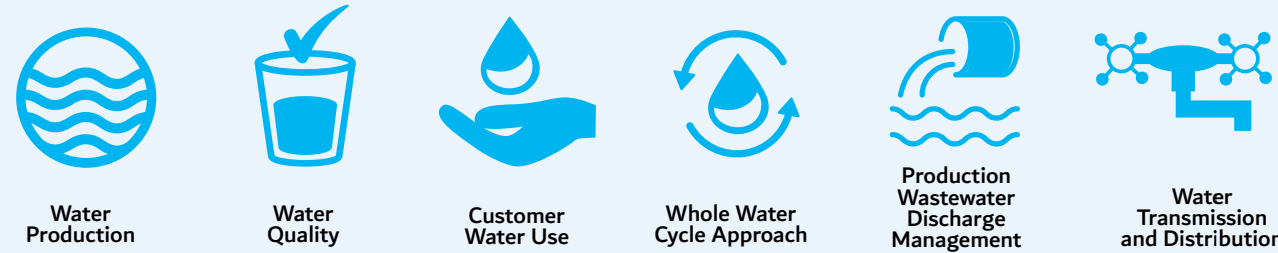
MANAGEMENT APPROACH GRI 103-1,103-2,103-3

Water is essential for all life forms and is used in day-to-day life for many purposes other than drinking. DEWA works tirelessly to enhance its total production capacity of water, to anticipate the future to meet all future requirements and needs, and ensure long-term sustainability in achieving the vision of the wise leadership. It aims to achieve the highest quality life for citizens and residents in Dubai, while working to ensure sustainable development and the happiness of the current and future generation.

To provide Dubai with a very reliable, efficient and high-quality electricity and water supply, DEWA is committed to setting long-term strategies and adopting various initiatives related to water to maintain the highest standards of reliability, efficiency, and

safety in its water resources. DEWA believes that conservation of water is important for the sustainable management of water resources and for future generations. In 2019, DEWA launched the Smart Response Service which has several features such as self-diagnosis of power and water interruptions, reducing steps to deal with complaints, through its smart app and website; enhancing customer experience and efficiency of services. DEWA also alerts smart meters customers of high-water consumption in case of water leakages.

DEWA has identified six focus areas in water management approach to maximise the efficiency of water operations, monitor its water resources accurately, and reduce its water losses:



WATER PRODUCTION GRI 303-1;303-3

To promote sustainable development, DEWA continues to build production plants based on the reverse osmosis (RO) system that demands less energy than Multi-stage flash distillation (MSF) plants, making it a more sustainable choice for water desalination. DEWA

currently desalinates water through the joint production of energy and water by using efficient MSF distillation technology, which depends on waste heat created by the production of electricity for water desalination. DEWA also uses RO to desalinate water, a proven



technology that is also used around the world, to absorb a considerable amount of generated power through clean energy.

In 2019, DEWA adopted the Independent Water Producer (IWP) system for the Hassyian desalination plant following the success of the IPP model at the Mohammed bin Rashid Al Maktoum Solar Park. The Hassyian Phase 1 plant will have 120 MIGD (Million Imperial Gallons Per Day) capacity, and is the first water desalination project undertaken using the IWP model. The project is expected to commence production in 2023, and the SWRO desalination plant will use the latest, most efficient, and reliable technologies in this field. The plant will also enhance DEWA's water transmission network, ensuring it provides a sustainable supply.

The development of the Hassyian SWRO project is part of DEWA's strategy to increase the water desalination capacity in Dubai from 470 MIGD to 750 MIGD by 2030.

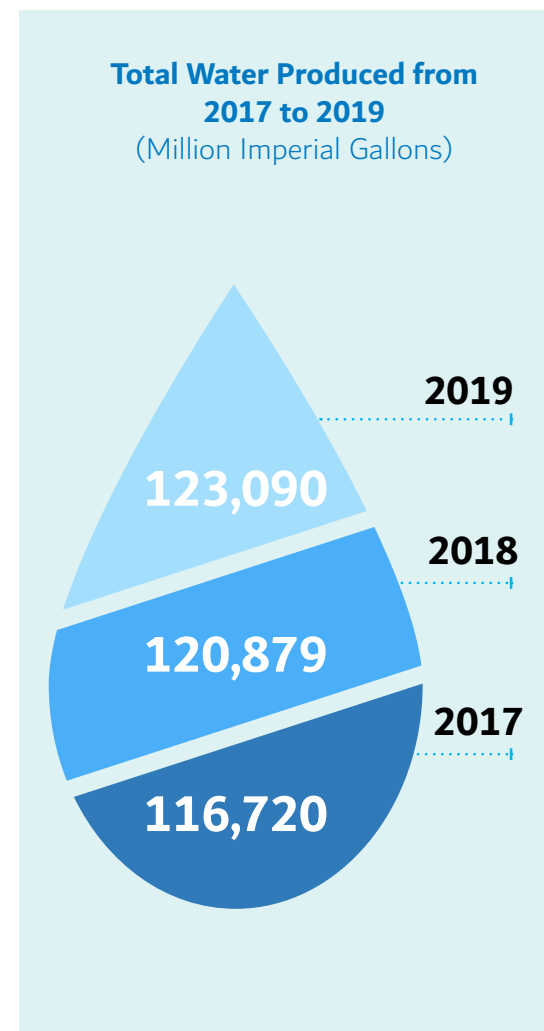
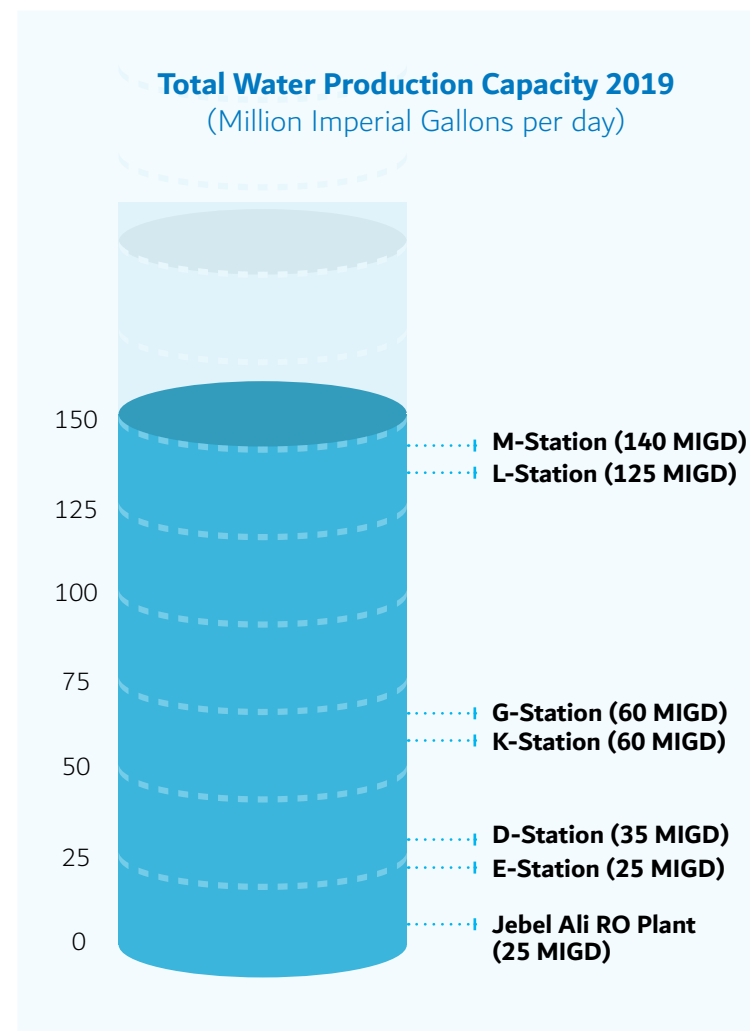
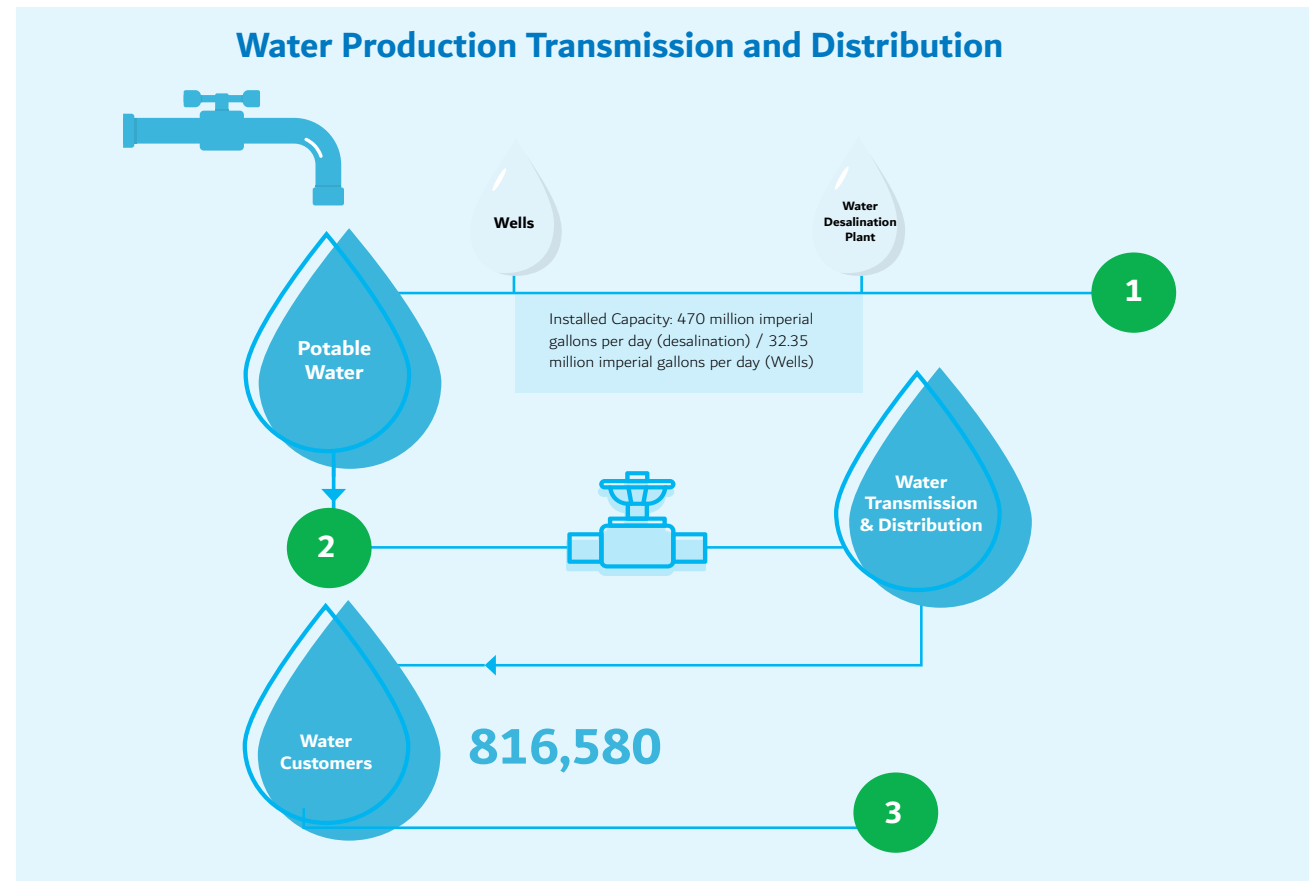
In 2019, DEWA's installed capacity from its desalination plants was 470 MIGD with a total seawater withdrawal of 5,872.5 Million cubic metres at an average flow of 3,539.6 MIGD. Seawater desalination requires an intake system that is capable of providing a reliable quantity of clean seawater with minimal ecological impact. The seawater intake volume is calculated based on pump capacity and operating hours. Furthermore, DEWA met the peak daily and monthly water demand for 2019, with substantial reserves. The peak desalinated daily water demand of 387 MIG was on 4 September 2019, an increase of 2.14% growth

compared to 2018. The average desalinated daily water demand in 2019 was 345.537 MIGD compared to 341.248 MIGD in 2018, which is an increase of 1.26%. The peak desalinated monthly average demand of 379 MIGD occurred in September 2019, an increase of 2.97% growth compared to 2018.

DEWA's installed capacity from underground wells was approximately 32.00 MIGD (total production of 455.657 MIG). However, this is reserved for contingencies. During 2019, approximately 1.25 MIGD was used from underground wells. The underground water production is measured through meter readings on the respective pumps.

For the underground wells situated in Hatta, the installed capacity is approximately 0.35 MIGD and the water from these wells is also reserved for contingencies. During 2019, total well production was 1.767 MIG. In Hatta, most of this well water is used as feed for Hatta's RO plant which is a secondary source of potable water for local communities. In 2019, the total RO production was 0.411 MIG.

In 2019, the total rejected water released from Hatta RO Plants was 1.356 MIG (the difference in total amount of well water pumped, 1.767 MIG and the permeate production from the RO plant, 0.411 MIG). RO units released the rejected water and transported it through pipelines to local farms in the Hatta area for irrigation and agricultural purposes. DEWA understands that the underground wells should be used with caution to guarantee that it will be mainly used during crisis; to serve individuals who live in regions where other water systems are unavailable.



WATER TRANSMISSION AND DISTRIBUTION GRI-303-1,303-5

DEWA has created new world records by reducing losses in its water networks to 6.63% in 2019, making it one of the lowest in the world. The new achievement shows how Dubai Government organisations are surpassing their global counterparts.

DEWA works in line with the vision and directives of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to further develop Dubai's competitiveness and strengthen its global position across all areas. Its latest achievement in reducing losses in water transmission and distribution networks confirms the success of its strategy in preparing for the future through planning, innovation, using the latest technologies in water production, transmission, and distribution, as well as management of water networks. It also highlights its strategy to increase the efficiency and reliability of Dubai's electricity and water networks. This contributes to meeting the rapid growth in Dubai, thereby contributing to the social and economic prosperity of the Emirate.

DEWA will continue its efforts to enhance Dubai's entire water network by updating old connections and meters, and developing new transmission and

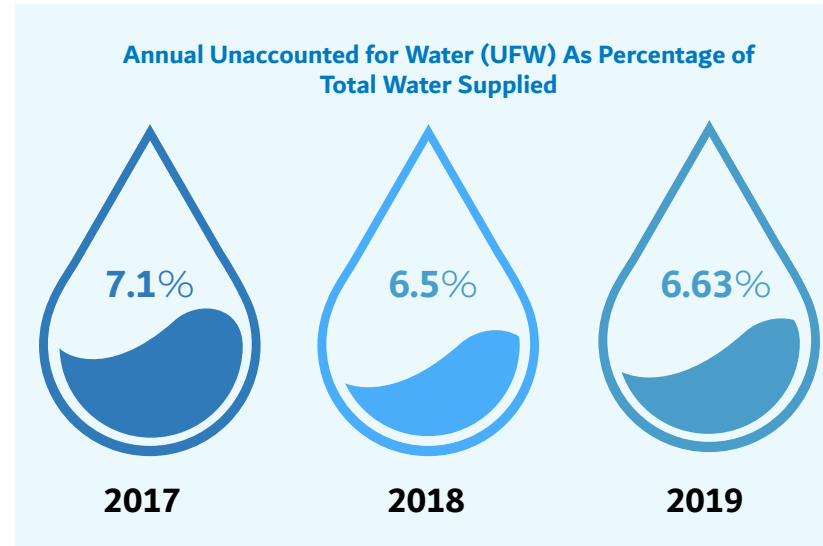
distribution networks that conform to the highest international standards. It has introduced a Supervisory Control and Data Acquisition (SCADA) system to monitor the water network, enabling an optimal and efficient network operation. It also uses the latest equipment to scan the transmission and distribution networks to prevent cracks from causing leaks in the system.

DEWA uses the latest technologies in water production, transmission, distribution, as well as control of water networks. This has contributed to several successes and achievements, making it one of the best utilities in the world.

In order to be ready for any water shortage emergencies and achieve the maximum efficiency in its water operations, DEWA stores water in its reservoirs to meet a peak demand of about two days. The water from the reservoirs is distributed through a network of pipes to its customers to minimise water losses. DEWA also monitor leakages and unbilled meters by using the Unaccounted for Water (UFW) metric.

In addition, DEWA continued using the specialised leak detection technology in scanning the operational

transmission and operational distribution networks to identify hidden network leakages and prevent water losses. DEWA continued surveying the water network, identifying and remotely managing potential leaks in the system, and scanning the transmission and distribution network through the Supervisory Control and Data Acquisition (SCADA) in order to prevent cracks from causing leaks in the system.



WATER POLICIES AND REGULATIONS

As a leading sustainable innovative global water corporation, DEWA is committed to the efficient, effective and economical management of water resources through a set of policies and regulations. The policies and regulations aim to promote sustainability principles within its business operations, covering generation, transmission and distribution of water services.

To continue monitoring and managing the optimum use of its water resources ensuring an innovative

sustainable world-class level system and services, DEWA follows a set of policies and regulations, which include but are not limited to: the W&C Asset Management Mechanism, the Electricity and Water supply policy, the Jebel Ali Power Station (JAPS) potable water specification, the GSO 149/ 2014 drinking water guidelines (Standardization Organisation for GCC), the World Health Organisation (WHO) drinking water guidelines and the National Electronic Security Authority (NESAs) standards.

WATER QUALITY AND AVAILABILITY



In line with DEWA's strategy of providing water and electricity services at the highest standards of availability, reliability, and efficiency. DEWA is continuously developing its operations, services, and initiatives as part of its ongoing efforts to develop value-added services for its clients.

In 2019, DEWA launched the smart customised vehicle that ensures the availability of water during any incident and responds to technical notifications. The vehicle contains special cabins to store electric tools including maintenance tools, first aid kits, uninterrupted power supply (UPS) and small generators, digging tools, water pumps and pipes, and other technical tools.

DEWA sets water quality standards that are stricter

than the WHO drinking water guidelines to ensure that the water it produces meets all its stringent requirements. Its Integrated Management System (IMS) is accredited by external auditors and ensures full compliance.

DEWA controls its potable water resources by tracking water quality across its network and collecting water samples from pumping stations, reservoirs and wellfields across Dubai resources. DEWA uses portable on-site equipment to test these water samples to assess turbidity, pH, residual chlorine dioxide and electrical conductivity while the remaining sophisticated testing is performed in DEWA's central laboratory to check conformance to its specifications. DEWA is also working to ensure that its drinking water is almost 100% bromate-free.

DEWA Jebel Ali Power Station Potable Water Specification / Typical Figure

SI. No.	Particulars of Analysis	WHO Guideline Value (Max)	DEWA	
			Specification	Typical Figure
1	pH value at 25°C	6.5 - 8.5	7.9 ~ 8.5	8.31
2	Total Dissolved Solids mg/L	1000	100 ~ 450	229
3	Carbonate as CaCO ₃ mg/L	-	0 ~ 10	0.4
4	Bicarbonate as HCO ₃ mg/L	-	30 ~ 75	56.4
5	Total Hardness as CaCO ₃ mg/L	500	40 ~ 120	64.6
6	Calcium as Ca mg/L	-	10 ~ 25	17.1
7	Magnesium as Mg mg/L	-	2 ~ 20	5.3
8	Chloride as Cl mg/L	250	25 ~ 250	89
9	Sulphate as SO ₄ mg/L	250	2 ~ 35	10.7
10	Fluoride as F mg/L	1.5	≤ 1.5	0.15
11	Sodium as Na mg/L	200	10 ~ 200	51.8
12	Nitrate as NO ₃ mg/L	50	≤ 50	0.16

Remarks:

- DEWA JAPS typical figure is the average of individual station averages during the year 2019
- World Health Organization's guideline values is based on W.H.O. drinking water guidelines values 4th Edition with Addendum 1 of 2017

WASTEWATER DISCHARGE MANAGEMENT GRI 103-1, 103-2, 103-3, 303-1; 303-2; 303-4; 306-1; 306-5

DEWA emphasises the importance of saving water and every year applies for wastewater discharge permits from Dubai Municipality (regulator in Dubai) with the aim to provide an efficient wastewater management system that protects the environment and public health. DEWA is responsible for the management of the wastewater generated within the scope of its Generation Division at Jebel Ali. The quality and quantity of wastewater discharged from Jebel Ali Power and Desalination Stations complex are within the permitted discharge quality and quantity.

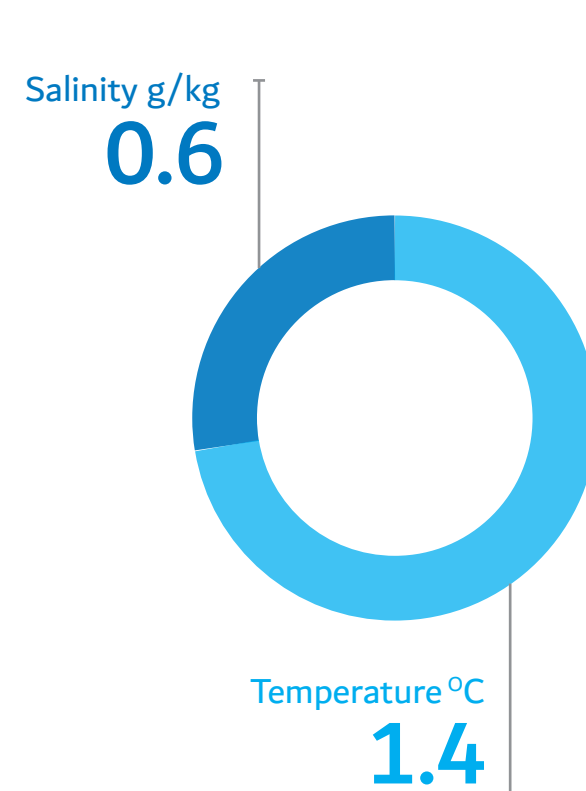
As per Dubai Municipality wastewater discharge permit issued to DEWA, the wastewater discharge is the effluent released from power generation, desalination processes, water treatment plants, and treated sewage into the marine and land environment. As per the requirements of the permit, bimonthly and quarterly ecological assessments (phytoplankton, zooplankton and macro benthos respectively) are carried out at 500m and 2.0 km away from the discharge points by a specialist environmental service provider.

In 2019, the total volume of wastewater discharged by

DEWA to the Arabian Gulf was 5,314.5 million cubic meters, comprising of processed water from power and desalination plants, water treatment plant effluent, treated sewage water, concentrated effluent and alkaline/acid wash. Smaller volumes of effluent produced from DEWA's water treatment plants (68,658 m³) and on-site treated sewage effluent (11,968.1 m³) which was discharged to the sea along with other process wastewater. A total of 98.0% of the recoverable wastewater (process wastewater and treated sewage effluent) generated was reused in the Jebel Ali Power Station Complex.

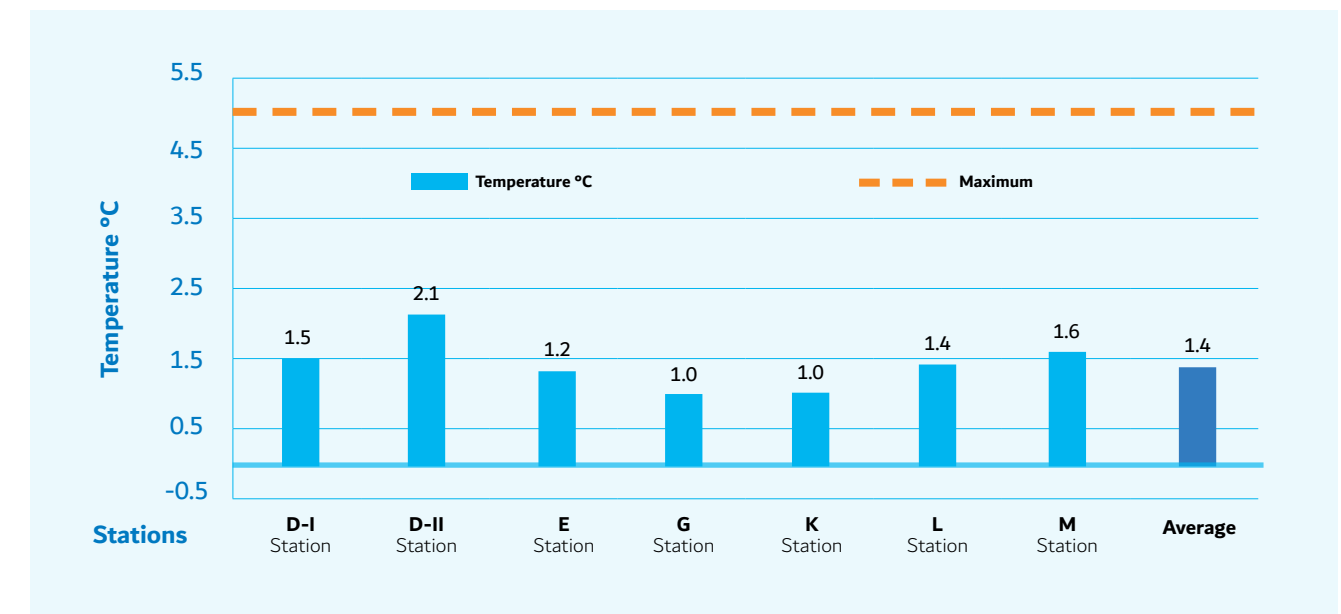
DEWA recognises the outfall of a highly concentrated salt known as brine that has the potential to affect our environment. DEWA measures the temperature and salinity difference between the mixing zone and ambient seawater on a monthly basis. In 2019, the temperature and salinity measurements were within the maximum allowed limits of 50°C and 2 ppt (parts per thousand) respectively.

The Average of Temperature and Salinity Difference Between the Seawater at Mixing Zone and Ambient Seawater 2019

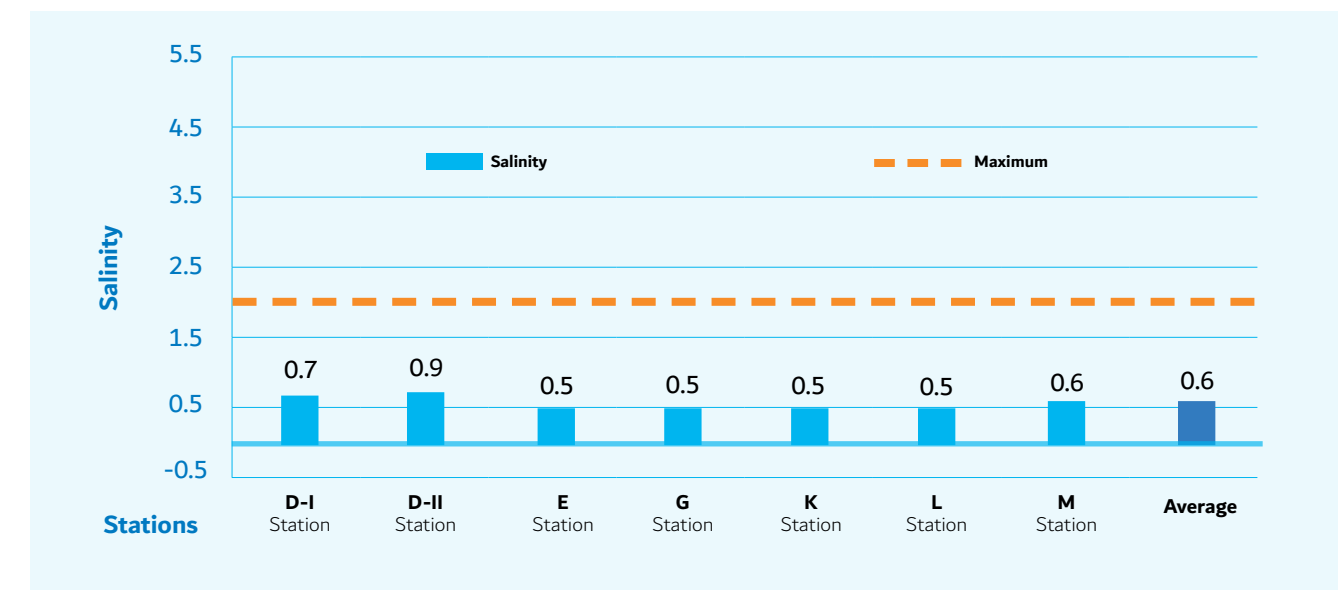


Type of Effluent	Total volume (m ³) (2019)
Process water from Powerplant	1,719,495,006
Process water from Desal plant	3,594,972,940
Water treatment plant effluent	68,658
Treated sewage water (to land)	0.0
Treated sewage water (to sea)	11,968.1
Treated Sewage Water	11,968.1
Waste Water Discharged to Marine and Land	5,314,548,572

Temperature Difference Between the Seawater at Mixing Zone and Ambient Seawater 2019



Salinity Difference Between the Seawater at Mixing Zone and Ambient Seawater 2019



WATER CHALLENGES GRI-303-1

DEWA is committed to enhancing the use of modern technology in the water sector in line with the vision of its wise leadership to overcome the challenges that are related to water. Using modern and advanced technologies in the water sector has become a necessity to enhance the availability, efficiency, and reliability of DEWA's production facilities. DEWA works with Dubai Future Accelerators, the largest accelerator programme in the world, to develop innovative and sustainable solutions to overcome these challenges.

DEWA's strategy to use the latest disruptive technologies in the water sector and keep pace with the Fourth Industrial Revolution has resulted in establishing its position as one of the best utilities in the world while taking into account the water desalination, population and economic growth, water security, the impact of climate change on water resources, and minimisation of water loss to enhance water supply and improve the efficiency and quality of water services.

WATER DESALINATION

DEWA owns and operates 43 desalination units Multi Stages Flash (MSF) evaporators with water production capacity of 445 Million Imperial Gallons per Day (MIGD) and one RO plant of 25 MIGD capacity; with a total potable water production of 470 MIGD to meet the water demand of Dubai. All Desalination units are shut down every year for mandatory preventive maintenance works to ensure efficient water production, availability and reliability during summer operation from June to September.

In line with DEWA's vision of becoming 'globally leading sustainable innovative corporation,' and its strategic objectives, a project was conceptualised for a world record Annual Outage reduction of MSF desalination from 21 days to 10. DEWA implemented a range of initiatives to reduce outages durations while enhancing quality, efficiency, environment and optimising costs. Various initiatives are broadly summarised below:

- 1) Procurement of complete sets of demister pads for each desalination units for quick replacement hence eliminating demister acid cleaning activities duration from desalination outage critical path and allowing outages reduction from 21 days to 10 days.
- 2) Outsourcing demister pads replacement and acid cleaning activities to specialist companies with costs savings outsourced versus in-house costs.
- 3) Procurement of complete Brine Recirculation Pumps and Brine Blow Down Pumps sets for each desalination stations for quick roll-in roll-out eliminating major pumps overhauling activities durations from the critical path.
- 4) Outsourcing pumps replacement and overhauling to the Original Equipment Manufacturer (OEM) allowing outages reduction from 19 days to 10 days with consequent quality enhancements and costs savings outsourced versus in-house costs.

As a result, DEWA reduced the desalination annual outage period reduction from 21 days to 10, enhancing the availability of 22 MSF desalination units by 242 days per year. This also resulted in cost reductions of 30% for pump overhauls, and a 15% cost reduction in demisters removal, acid cleaning and installation. In addition, it also reduced 24,032 tCO₂ of carbon emissions, reducing 15.62 tons of NO_x, and reducing 0.78 tons of SO₂.

Furthermore, 97% of the water produced in Dubai is desalinated water, which means that an energy-intensive process that reduces water consumption is necessary to save fuel consumption and reduce carbon emissions. In 2019, DEWA started its 'Be Water Smart' campaign, which educates customers about ways they can do in their daily lives to reduce water consumption and save water resources in Dubai and the UAE. It also promotes the use of efficient water fixtures such as water taps and shower heads equipped with flow reducers, using environmentally friendly home appliances and regular inspection for water leaks in water pipes and tubes inside the house, in addition to other simple and non-costly measures that make a big difference in conserving water. The 'Be Water Smart' initiative supports Dubai's vision and DEWA's strategy to reduce the wasteful use of natural resources and find sustainable solutions. It also underlines the importance of preserving water and highlights DEWA's efforts to raise awareness about the importance of rationalising water consumption in Dubai and the UAE.

POPULATION AND ECONOMIC GROWTH

As the world's population grows, the demand for water mounts and pressure on finite water resources intensifies. Water is a fundamental human need and a driver for sustainable growth, yet water scarcity affects over 40% of the global population and is projected to rise. Over 2 billion people lack access to safe drinking water, and the world is expected to face a 40% shortfall between forecast demand and available water supply by 2030.

To avoid facing this challenge in the future and to fulfil the increasing demand for water across all Dubai, in 2019, DEWA completed 44% of the construction of two water reservoirs in Al Nakhali and 37% of the construction of 1 water reservoir in Al Lusaily. The project includes the construction of two rectangular, reinforced concrete, 60-million imperial gallon reservoirs in Al Nakhali and one rectangular, reinforced concrete, 60-million imperial gallon reservoir in Al Lusaily, which will add to the current 818 million imperial gallons of total water storage capacity in the city of Dubai. As a result, DEWA's total storage capacity in the whole city of Dubai will increase to 998 million gallons in the upcoming years, once these two projects are due to be completed by October 2020.



DEWA seeks to achieve Dubai's DSM target to reduce demand by 30% compared to the Business As Usual (BAU) scenario by 2030. In 2019, the overall Demand Side Management initiatives at Dubai level has succeeded in achieving about 9.6 BIG (Billion Imperial Gallons) of water reduction as per initial results available.

Another solution is implementing the Advanced Metering Infrastructure (AMI) project, which is one of the three smart initiatives that enables DEWA to provide various benefits and new Smart Applications to the customers. As of 31 Dec 2019, DEWA succeeded in installing all smart meters (815,872) in record time, out of which 540,301 are monitored and read remotely every 15 minutes. This allowed DEWA to improve the availability of meter readings to 99.9%, with 535,286 water meters remotely billed in SAP. The AMI improves meter reading and billing accuracy, customer happiness, and reduces Unaccounted for Water. All smart water meters in Dubai will be communicating and billed remotely by the end of 2020.

WATER SECURITY

Water security is not only a national security issue for the UAE but also one of the seven strategic sectors of the National Innovation Strategy, as well as one of the main pillars of UAE Vision 2021. To face this challenge, DEWA has adopted a set of strategies and policies to

increase the efficiency of water use, and adopt an integrated water resource management approach to ensure sustainability. The three pillars adopted to ensure the sustainability of water production are clean solar power, reverse osmosis, and the Aquifer Storage and Recovery (ASR). This approach consists of using clean solar power for seawater desalination using the latest reverse osmosis technologies. The excess water is stored in groundwater aquifers and pumped back into the water network when needed. This integrated innovative model is a cost-effective sustainable solution that helps protect the environment, and contribute to Dubai's ability and aspirations in shaping the future.

All available water resources are considered in an integrated manner using available state-of-the-art technologies. These include surface water, groundwater, desalinated water and recycled water.

The ASR project, which is currently under execution, will provide around 6 billion gallons of water strategic storage capacity in groundwater aquifers, where water is protected from any external pollution risks and quality is maintained. The stored water can be recovered when needed to provide the Emirate with a 50 MIGD supply capacity during unforeseen prolonged emergencies tentatively up to 75 days.

IMPACT OF CLIMATE CHANGE ON OUR WATER RESOURCES

With climate change increasing globally, the management of water resources has to be highlighted. DEWA recognises the impact that climate change has on water resources and is committed to continuously raise awareness through various initiatives. In 2019, the Project Management—Transmission department (PTD) initiated an initiative that conserves water for workers by using insulated and reusable water bottles instead of the workers using their hands. PTD communicated this case with all consultants and contractors working in all DEWA Transmission projects and instructed them to provide workers with insulated and reusable bottles including training and awareness. This initiative supports the 3rd, 6th, 11th and 12th Sustainable Development Goals of the United Nations. It improves hygienic drinking water practices, reduces water wastage and plastic cups, improves the environmental and social accountability compliance at site. On average, a person wastes 500 ml of water per day at work and at DEWA, 10,000 personnel work on DEWA's transmission projects. This initiative results in water savings of 5,000 litres per day and 1.65 million litres per year at all its power transmission projects.

Every year, DEWA organises the Conservation Award in partnership with the Ministry of Education (MOE) and the Knowledge and Human Development Authority (KHDA). The Conservation Award targets all educational institutions to implement best practices in saving electricity and water. DEWA also organises awareness activities to mark World Water Day, under the theme 'leaving no one behind'. It also organises hundreds of awareness lectures in the educational sector to introduce the new generation to the concept of sustainability, including using electricity and water responsibly, and preserving precious natural resources. Till 2019, DEWA's conservation programmes and initiatives achieved significant savings in water use amounting to 7.4 billion gallons of water.



دبي انترناشيونال أكاديمي
Dubai International Academy



MINIMISATION OF WATER LOSS

With considerable activities related to expansion of the water network, due to pipeline age and extreme weather conditions, the organisation frequently faces emergencies in the form of pipeline breakages and leakages, which result in huge water losses. Delays in arriving on-site to isolate broken pipeline segments, especially due to the heavy traffic in Dubai, can make leakages worse. To overcome this problem, DEWA's Water & Civil (W&C) division built a Supervisory Control and Data Acquisition (SCADA) system, to monitor and control pipelines remotely. The system enables skilled operators to detect and isolate breakages and emergencies instantly through observing

changes in pressure and flow transmitter readings.

As a result of using SCADA, DEWA's Key Performance Indicators (KPIs) show that the organisation decreased the response and isolation time and can measure the percentage of the network that can be isolated remotely.

As a result, W&C division was able to decrease the "Response & Isolation Time" considerably as shown below.

Average Time for Response + Isolation (Transmission Breakages)



● Average time for response + Isolation (Minutes)

***Note:** The average combined time for response and isolation of transmission breakages has decreased from 60 minutes in case of manual isolation prior to 2017 to as low as 19 minutes in 2019.



By improving the Response & Isolation Time, DEWA not only reduced water loss but also indirectly protected the safety of public properties.



EXCELLENCE & INNOVATION IN WATER

DEWA continues to improve its water services and operations and has been recognised globally among the leading utility providers in the world. In 2019, DEWA won the Best Customer Service Initiative as part of the Global Business Excellence Awards 2019, organised by the UK-based Awards Intelligence for its High Water Usage Alert Initiative.

DEWA's strategy is to use the latest disruptive technologies and keep pace with the Fourth Industrial Revolution. In 2019, DEWA organised a number of workshops to discuss how quantum computing can be used in electricity and water production processes. A number of quantum computing experts from Microsoft participated in the workshops, which were attended by DEWA management and specialists. The workshops over two days support DEWA's strategy to implement the latest technologies, and take advantage of the capabilities offered by modern technologies. DEWA is the first utility in the world and the first organisation outside the US to participate in Microsoft's Quantum Computing programme. DEWA is the first government utility in the world to join the San Francisco-based Centre for the Fourth Industrial Revolution of the WEF as a partner. The Centre includes international organisations such as Microsoft, SAP, and ABB.

DEWA recognises that innovation is important at all stages of sustainable development and will continue its R&D efforts to enhance the use of modern technologies in the water sector which reflects the vision of the UAE's wise leadership to transform innovation into a government approach and a culture that is adopted by society.

CASE STUDY

Completion of M-Extension Project, Expansion of Existing M-Station, The Largest Power & Desalination Plant in UAE.



DEWA has completed the extension project of M-Station in Jebel Ali, the largest power and desalination plant in the UAE. With this expansion, the power generation capacity of M-Station increased to 2,885 MW.

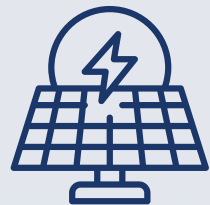
Prior to the extension, M-Station had a total power generation capacity of 2,185 MW of electricity, costing AED 5.88 billion and consisting of 6 gas turbine units and 3 steam turbine units including 16 fuel-oil storage tanks (each with a capacity of 20,000 cubic meters total fuel oil storage of 320,000 cubic meters), and 140 million imperial gallons per day (MIGD) of water production capacity by water package, costing AED 3.95 billion and consisting of 8 Multi-Stage Flash (MSF) desalination units (each with a capacity of 17.5 MIGD and totaling 140 MIGD) including two dual-fuel fired auxiliary boilers of 390 tonnes per hour.

The M-Station extension project consists of two dual-fuel Gas Turbine Generators, two Heat-Recovery Steam Boilers, and a Back-Pressure Steam Turbine at the cost of AED 1.434 billion with an overall fuel heat utilisation of 90%. By

completion of M-Extension project of 700MW, the total power generation capacity of M station has been increased to 2,885 MW and the total plant's fuel heat utilisation increased from 82.4% to 85.8%, which is one of the highest rates in the world.

The extension project supports the UAE's strategy to adopt innovation and shape the future. DEWA followed world-class standards in various stages of this project's implementation, as well as world-class operational technologies, state-of-the-art smart solutions, and information technology systems. The project focused on capacity building and the transfer of international expertise to UAE nationals, contributing to the Emiratisation of the energy sector.

The project was completed with over 21 million Safe Man Hours without Lost Time Accident. The station also operates at the highest levels of availability, reliability, and efficiency, and uses the most advanced technologies in the world.



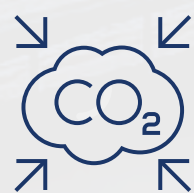
197,253

BY JANUARY 2020, DEWA CONTRACTED 197,253 I-RECS FROM THE MOHAMMED BIN RASHID AL MAKTOUM SOLAR PARK



AED11.66 M

DEWA INVESTED AED11.66 MILLION TO PHASE OUT ALL OZONE-DEPLETING SUBSTANCES (ODS) BY 2019

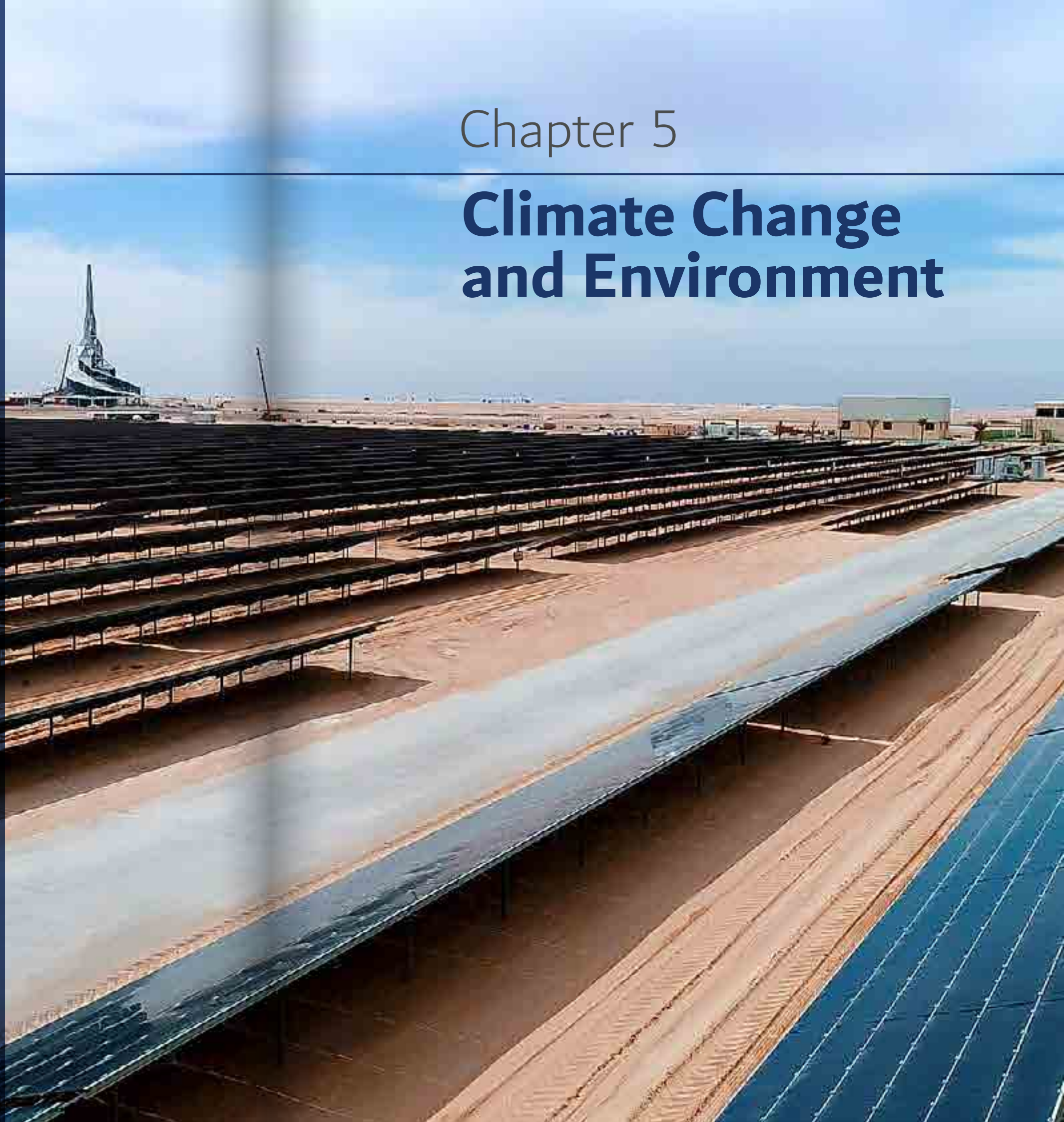


22.58 MtCO₂e

THE TOTAL CARBON EMISSIONS IN 2019 WERE 22.58 MtCO₂e COMPARED TO 27.92 MtCO₂e BAU

Chapter 5

Climate Change and Environment



MANAGEMENT APPROACH GRI 103-1,103-2,103-3

Climate change is one of the top priorities of the UAE Federal agenda. The government of the UAE decided to continuously and progressively address the negative impacts of climate change and mitigate them. In 2005, the UAE was one of the first countries to ratify the Kyoto Protocol to the UNFCCC. In 2015, the UAE endorsed the Paris agreement by participating in the Conference of the Parties (COP21), which was formally ratified after the Cabinet's approval on September 4 2016.

DEWA follows an international standard such as ISO 14064 that provides governments, businesses, regions and other organisations with a set of tools for programmes to quantify, monitor, report and verify greenhouse gas emissions. DEWA has also maintained its ISO 14001:2015 certification. This is an international

standard describing the specifications and requirements for an environmental management system (EMS).

In addition, DEWA abides by the Precautionary Principle for the Environment and has implemented corporate level policies and procedures based on international best practices and its own stringent guidelines. This is done to ensure the continuous monitoring of operations and guidance on preventative measures and corrective actions to eliminate any potential non-conformities, defects, or other undesirable situations; avoiding occurrences and other related environmental impacts. DEWA has a dedicated section to monitor and report its overall environmental performance. This includes areas such as environmental compliance, waste management, air, water emissions, environmental objectives and targets.

CLIMATE CHANGE RESILIENCE

The power and water sectors in the UAE are vulnerable to the adverse effects of climate change. Climate change is a crosscutting risk that can have both, physical impacts on DEWA's operations, and an economic impact on its business. In 2018, DEWA started developing a Climate Change Resilience Plan to assess, understand and project the real climate sensitivity of its assets and operations; thereby making climate change actions one of its top priorities. The climate change resilience team analyses climate change trends and its impacts by using DEWA's established climate change impact assessment tool and climate change resilience. The resilience plan prioritises climatic

drivers impacts, adaptive capacity, vulnerability, likelihood of climate events, and opportunities from projected climate change trends and projections. The findings are integrated with DEWA's Enterprise Risk Management system, which plays a key role in its strategic planning. Furthermore, the Climate Change Resilience Plan not only details the financial implication, and mitigation measures of the impacts of climate change, but also presents an opportunity to optimise its resource efficiency, enhance its adaptive capacity, and ensure business continuity. DEWA is the first utility in the region to initiate a low carbon transformation via climate change resilience planning.

CO₂ EMISSION REDUCTION PROGRAMME GRI-305-1; 305-4; 305-5; EU5

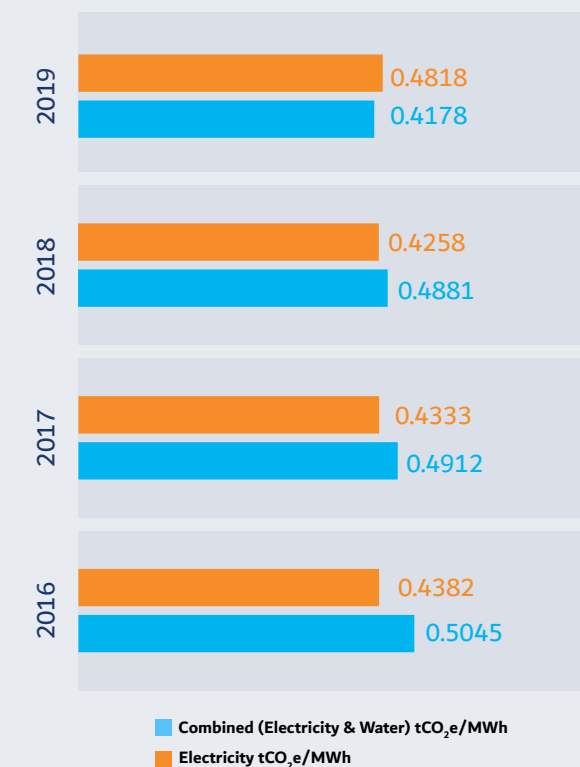
In 2012, DEWA launched its Carbon Dioxide Emissions Reduction programme. This created a roadmap for short, medium and long-term emission reductions up to 2030. It contributes to and supports the Dubai Carbon Abatement Strategy from the Dubai Supreme Council of Energy to reduce 16% of emissions across the Emirate by 2021. DEWA's Emission Reduction Programme is a comprehensive programme to reduce both demand and supply. It takes several key factors into account: Dubai's rising demand for electricity and

water, existing rationalisation initiatives, including DEWA's supply side efficiency improvements and diversifying its energy mix. DEWA was the first organisation in the Middle East to develop a comprehensive Monitoring, Reporting and Verification (MRV) framework for its Greenhouse Gas (GHG) emissions. It has monitored this since 2012, establishing that year as the baseline for reporting its emissions. The MRV framework is used to report DEWA's emissions in its Carbon Footprint Report.

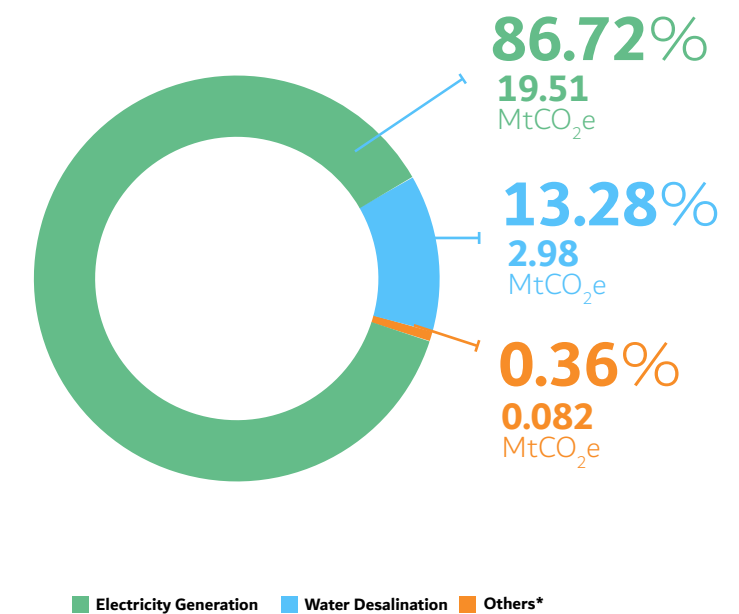
DEWA prepares this according to the Greenhouse Gas (GHG) Protocol, which is the most widely used international carbon calculation methodology. It is also compliant with ISO 14064-1, which allows for integration with national and international GHG inventory standards. DEWA's 2018 Carbon Footprint Report was finalised using production data from the monitoring, reporting and verification framework for all DEWA's divisions within the scope and boundary of the inventory.

The Carbon Footprint Report is intended to quantify and calculate DEWA's annual direct and indirect GHG emissions. These include CO₂, CH₄, N₂O, SF₆, HFCs and PFCs and electricity imports. The emissions' sources included within the report include fuel combustion during power generation and water desalination, sulphur hexafluoride (SF₆) usage in circuit breakers, fuel combustion in vehicles, and refrigerants usage for air conditioning and maintenance operations. Emissions from small emissions sources area also included: CO₂ usage in fire protection systems and labs; diesel usage during emergencies (back-up generators); acetylene usage for maintenance activities; (Liquefied Petroleum Gas) LPG usage for cable termination works; process emissions due to desalination, laboratory acetylene usage. The emissions from SF₆, fleets and refrigerants have been included due to their strategic importance or high Global Warming Potential (GWP) values. DEWA follows an operational control approach in consolidating, monitoring and reporting on its GHG emissions, quantifying them in terms of CO₂ equivalent. In 2019, DEWA's total carbon emissions were 22,581,879 (this is 22.58 million metric tons of CO₂ equivalent (MtCO₂e)), compared to 27.92 MtCO₂e business as usual estimate based on its DEWA's Emission Reduction Programme 2019 targets review. The majority of its carbon emissions emitted comes from the combustion of natural gas to generate power and desalinated water. DEWA is also meeting environmental and operational goals through cost-effective solutions to manage SF₆ in high voltage circuit breakers and phase out restricted refrigerants.

Carbon Emission Intensity, tCO₂e/MWh of Electricity Generated, 2016-2019



Mt Of CO₂e and Percentage of CO₂e Emissions by Source, 2019



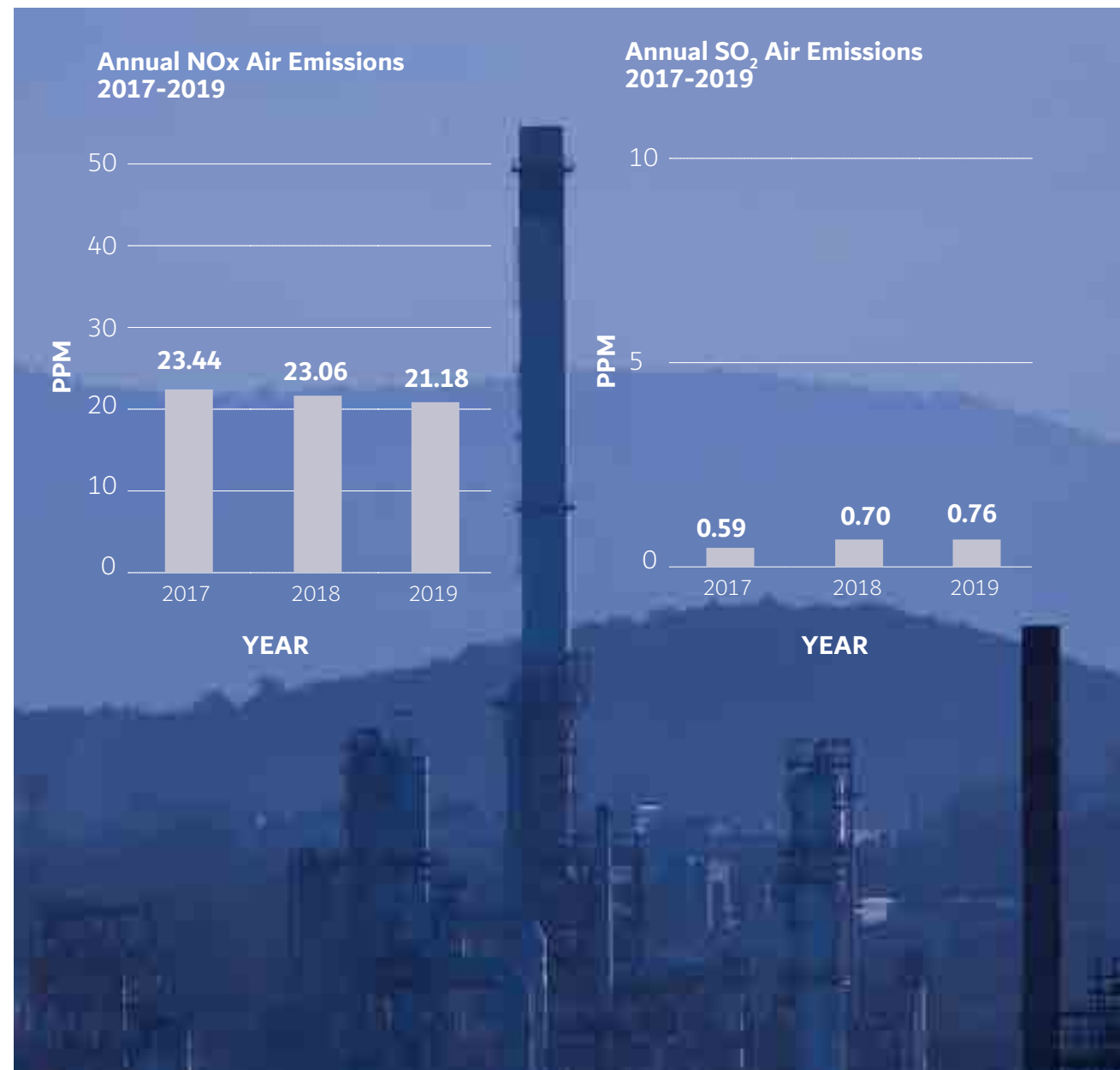
*Others include : Fleets, SF₆ usage in circuit breakers, fire protection, emissions due to desalination process, acetylene usage laboratories, diesel usage in backup and LPG usage for welding

MINIMISATION OF AIR EMISSIONS GRI 102-11, 305-4; 305-5; 305-6; 305-7

Air emissions have a damaging impact on the local climate, ecosystems, human health and air quality. This is why DEWA continuously works to avoid air emissions by minimising and limiting all types of harmful emissions, such as Nitrogen Oxide (NOx) and Sulphur Dioxide (SO₂). In 2019, the average annual NOx emissions from all units including all types of fuel, gas, turbines and boilers was 21.18 parts per million (ppm). This was a reduction of 70.76% in NOx emission levels in 2019 compared to 2006. The NOx annual average emissions remained below the UAE federal Government and European Union requirements, which are 37 ppm and 27 ppm respectively.

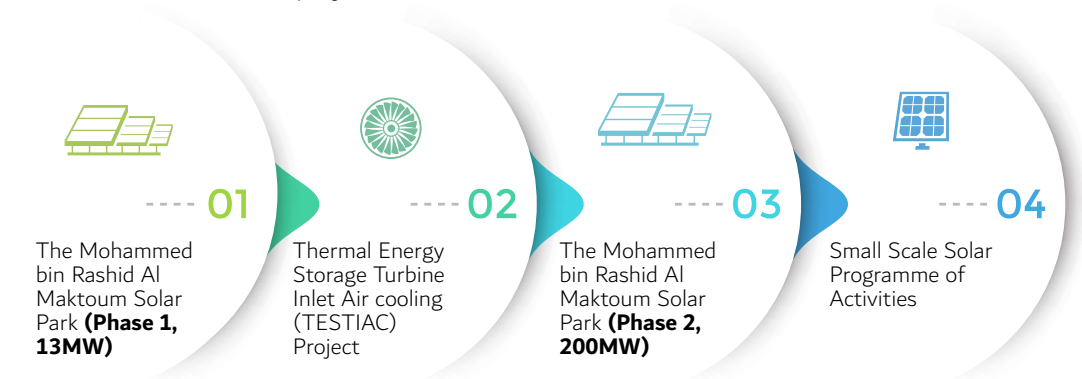
To meet the Montreal Protocol and Dubai Municipality Technical Guideline 7, to phase out ozone depleting substances completely by 2030, DEWA invested AED11.66 million to phase out all ozone depleting substances (ODS) by 2020.

In 2019, DEWA's Generation Division achieved a 90.67% phase out of the R-22 refrigerant since 2013. In addition, DEWA implemented various initiatives to reduce SF₆ leaks from switch gears used to control, protect and isolate electrical equipment.



EMISSION REDUCTION AND RENEWABLE ENERGY CERTIFICATION GRI 302-1, 302-4

DEWA is fully committed to achieving overall sustainable development; adopting initiatives that will reduce its environmental footprint and diversify its economic portfolio. Since 2012, DEWA has been building a Clean Development Mechanism (CDM) portfolio: registering different projects as CDMs projects under the United Nation's UNFCCC. Doing this has enabled DEWA to obtain Certified Emission Reduction (CER) credits, also known as carbon credits. Owning and trading carbon credits is another way of generating revenue. So far, DEWA has registered four different CDM projects:



In 2017, DEWA became the first organisation in the Middle East and North Africa to acquire International Renewable Energy Credits (i-RECs). The main concept behind the i-REC system is to encourage the world's utilities to increase the investments in renewable energies, which by default will decrease the use of fossil fuels. Therefore, i-REC underlines DEWA's Efforts and achievements in renewable energy, environmental, sustainability and green economy sectors.

By January 2020, DEWA successfully contracted 197,253 I-RECs international renewable energy certificates (I-RECs) from the Mohammed bin Rashid Solar Park's 13MW, 200 MW, and 800 MW photovoltaic plants.

SUSTAINABLE AND ENERGY EFFICIENT BUILDINGS

ENERGY MANAGEMENT OF DEWA PREMISES AND ASSETS

DEWA continuously seeks to improve energy efficiency at its premises as it is committed to managing its energy use and consumption efficiently, effectively, and economically. DEWA's premise energy management committee implemented several energy efficiency initiatives at DEWA premises within the framework such as the conservation measures, retrofitting, light replacements and reuse of Treated Sewage Effluent (TSE) water for irrigation. These initiatives support the Demand Side Management strategy and are in line with DEWA's energy management policy.

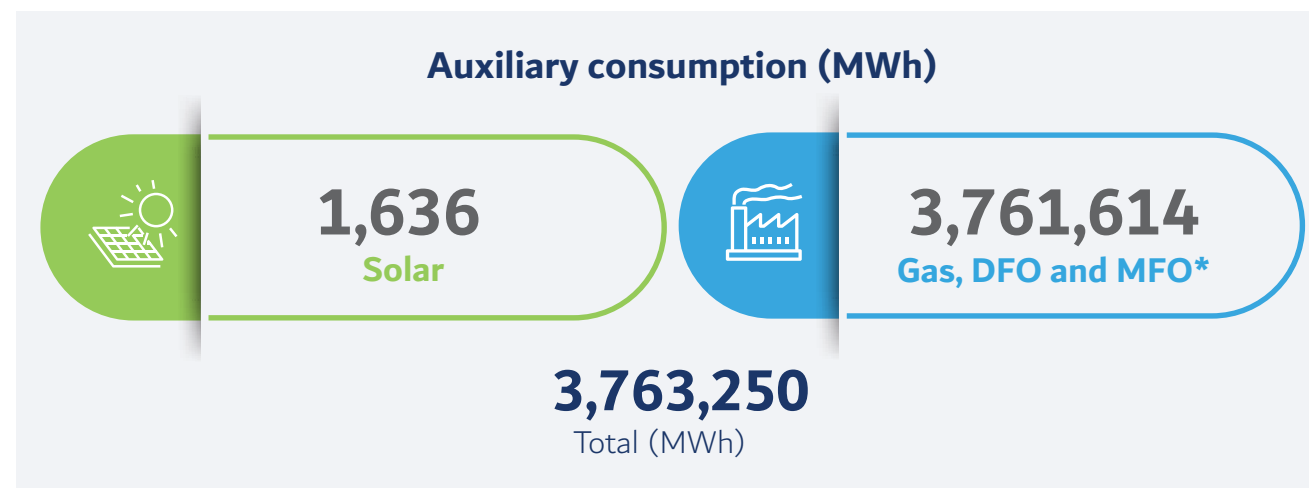
In 2018, DEWA successfully implemented and certified an Energy Management System for its Head Office building to ISO 50001:2018 standard. The Head Office Energy Management System enabled DEWA to quantify and establish realised benefits based on its energy performance, and was the ideal flagship project to show DEWA's pioneering role as an effective and economical manager of its energy use. DEWA's Head Office received the Global Energy Management Insight Award 2019 from the Clean Energy Ministerial (CEM), a high-level global forum to promote policies and programmes that advance the use of clean energy sources. This award is part of the CEM Energy Management Leadership Awards programme, which is managed by CEM's Energy Management Working Group (EMWG), which includes representatives from many countries around the world. DEWA is also currently expanding the boundary of the Energy

The overall savings achieved in 2019 from these initiatives are 30 GWh (59%) and 1.0 MIG (9%), which equates to AED 13.5 million in savings and reduces 12,900 tonnes of CO₂ emissions. By comparison, in 2018, there were savings of AED 13.34 million and 13,150 tonnes of CO₂ respectively.



DEWA's Head Office Receives Global Energy Management Insight Award

Management System to cover major operations that would include generation plants, substations, customer happiness centres and administration buildings and fleet. This system will allow DEWA to periodically review its energy performance, and identify and implement energy conservation opportunities with cost benefits. DEWA's key operation facility in Jebel Ali, uses auxiliary energy from its power and water production, as shown here:



* Note: DFO: diesel Fuel, MFO: Medium Fuel Oil

DEWA achieved a reduction in auxiliary consumption of 408,148 MWh in 2019 with respect to 2006. In addition, it has achieved fuel savings of 132,295,018 MMBtu in 2019 with respect to 2006 due to Gross Efficiency Improvement.

SUSTAINABLE PRACTICES IN GREEN BUILDINGS

To achieve the Dubai Plan 2021, DEWA worked with Dubai Municipality in publishing green building specifications for all new buildings in the Emirate. This paves the way for a healthier, pollution-free and clean city that encourages efficient electricity, water and energy consumption.

THE SUSTAINABLE BUILDING AT AL QUOZ

DEWA's Sustainable Building at Al Quoz is the world largest governments LEED platinum building to successfully integrate and implement many sustainable features, functions as a high-performance green building.

DEWA GREEN GARAGE

DEWA opened its Green Garage in June 2015. The garage and workshop houses DEWA's fleet vehicles, its repair and maintenance workshops, and all the facilities necessary to carry out complete vehicle repairs and maintenance. It was awarded a gold certification level in Leadership in Energy and Environment Design (LEED) for Building Design and Construction (BD+C) from the US Green Building Council.

DEWA RESEARCH AND DEVELOPMENT CENTRE

The R&D Centre provides a range of facilities for researchers and administration staff, to explore ways of integrating and implementing sustainable features and achieving a high performance green building.



"Data Hub Integrated Solutions LLC" (Moro) Signs MoU with "Alibaba Cloud"

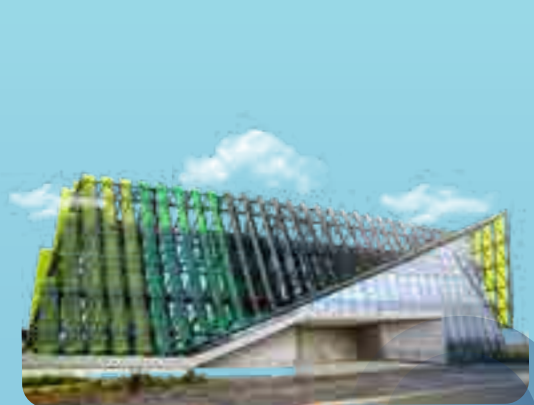
MORO HUB

Moro Hub (Data Hub Integrated Solutions LLC) provides state-of-the-art solutions and innovative business services. The Hub is a new subsidiary of DEWA and aims to exceed the expectations of customers by providing exceptional solutions.

PARKSMART

Parksmart is the world's only rating system that targets parking design and operation via advancements in sustainable mobility. In 2019, DEWA Sustainable Building in Al Quoz achieved the Parksmart Pioneer certification with 102 points.





2018

DEWA R&D CENTRE

Target Certification level was gold in LEED BD+C, final certification was platinum

- Annual energy saving **25.5%**
- **18.23%** of the energy is provided by Onsite renewable energy consisting of Solar Photovoltaic Panels
- Annual water savings of **50.84%** of potable water used for flush fixtures has been reduced.
- **51%** of the indoor water usage has been reduced by using efficient fixtures.
- The building is made up of **52.73%** Regional materials by cost, **31%** Recycled content, and **100%** Forest Stewardship Council FSC Certified wood.
- Annual Energy and Water Savings of **AED 1,520,901**
- ROI (Year) of **7 months**



2019

DEWA SUSTAINABLE BUILDING

First Building in the Middle East and North Africa to receive Parksmart certification (Pioneer Category)

- Reduce the environmental impact
- Encourage alternative mobility
- Manage parking-space efficiency



2017

MORO HUB

First LEED BD+C Platinum Data Centre in the Middle East

- Annual energy saving **37.76%**
- Annual Water Saving **46%**
- Diverted **95.26%** of construction waste from landfill
- Annual Energy and Water Savings of **AED 1,615,690.81**
- ROI (Year) of **2**



2014

DEWA GREEN GARAGE

The 1st group gold certified service facility in the middle East in LEED BD+C.

- Annual energy savings of **34%**
- Annual water savings **48.22%**



2012

DEWA SUSTAINABLE BUILDING

World Largest governments LEED Platinum Building

- Annual energy savings of **66.08%**
- Annual water savings of **48.82%**
- Annual Energy and Water Savings of **AED 1,040,936.7**
- ROI (Year) of **12**

■ Certification
■ Key Sustainability Outcomes and the benefits achieved by the initiative

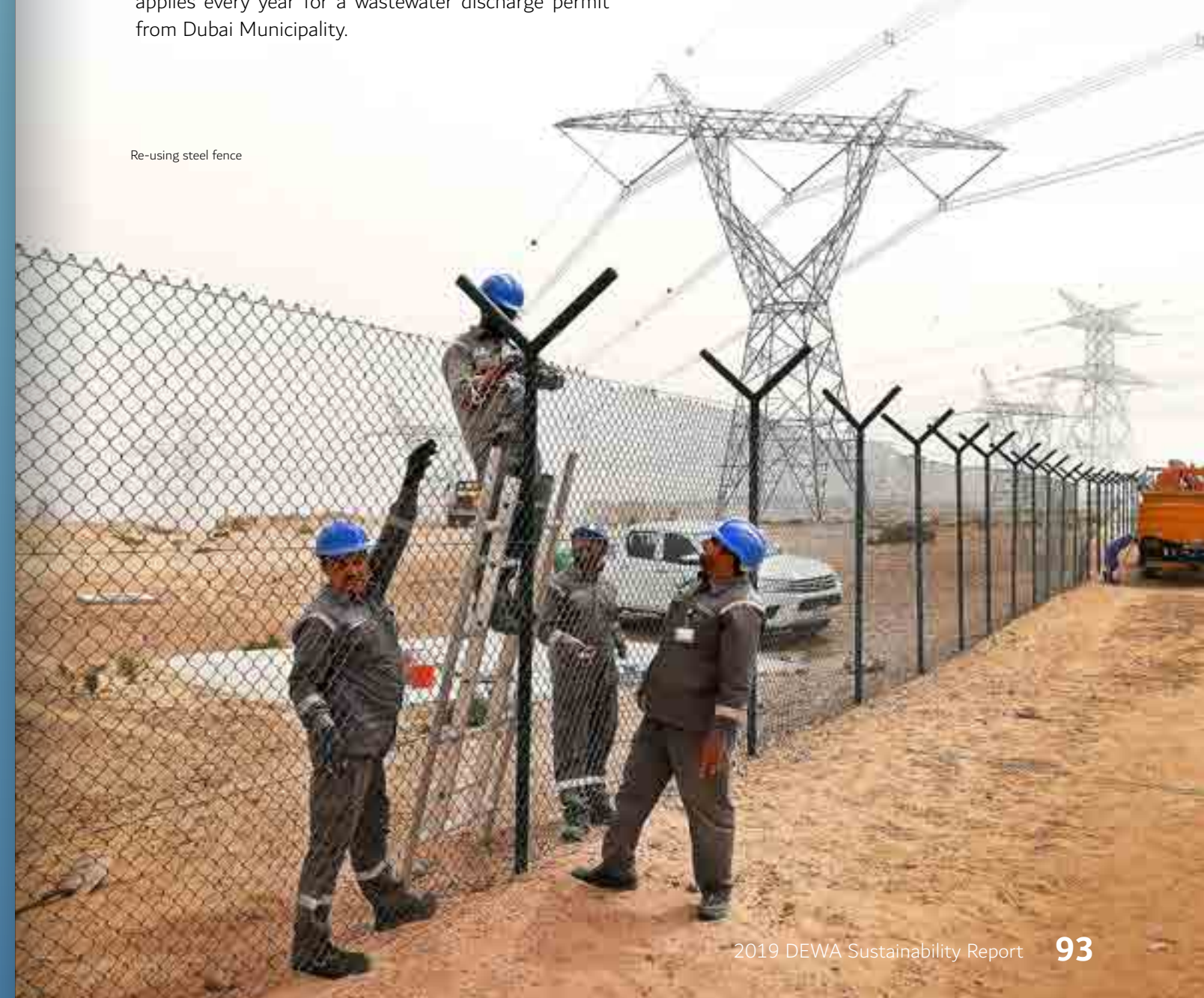
WASTE MANAGEMENT GRI 103-1, 103-2, 103-3, 306-2, 306-4, 306-5

DEWA has a set of rules and guidelines to decrease emissions and their impact on the environment. It also has an effective waste management system that focuses on solid and liquid waste produced at its generation sites. The system reduces the amount of solid and liquid waste produced by efficiently using resources, and recycling or recovering wherever possible. It also complies fully with all the relevant national and international regulations, policies, and procedures. To ensure that DEWA follows international best practices and standards, it constantly compares its waste management system with other global organisations. In addition, to ensure that the quality and quantity of the wastewater discharged from Jebel Ali Power and Desalination Complex are within the permitted discharge quality and quantity, DEWA applies every year for a wastewater discharge permit from Dubai Municipality.

DEWA's approach to environmental management has also been economically profitable. In 2019, it earned AED 5,647,269.48 from selling scrap waste materials from Jebel Ali PowerStation Complex. DEWA also significantly reduced its consumption of new oil, and minimised waste and the associated costs for waste disposal by using recycled oil at Jebel Ali. One example is to recycle waste oils from the lubricant, transformer and hydraulic oils in boiler furnaces when oil firing is required. In addition, DEWA recovered 23.636 litres of waste oil.

The following table shows that in 2019, a total of 68.89 tons of hazardous waste was transported and disposed to Dubai Municipality's hazardous-waste-disposal site, and no waste was shipped internationally.

Re-using steel fence



Waste Figures	Unit	Year		
		2017	2018	2019
General waste disposed at Dubai Municipality site	Tons	2,341.20	2,628.63	2,699.98
Volume of hazardous waste transported and disposed at Dubai Municipality site	Tons	138.75	49.25	68.89
Filters disposed at Dubai Municipality site	Tons	251.67	169.78	276.00
Reuse, Reduce Recycle initiatives				
Waste water recovered	MIG	195.97	226.59	193.24
Waste oil recovered	Litres	16,900.00	60,566.6	23,636
Wooden packing reused	Cubic Foot	14,629.00	16,409.00	7,049
Recycled Waste Paper	Tons	39.00	38.4	73.63
Reusing of hazardous waste by minimising the GRP drums waste & converting it into plantation usage	NO.	200	0	45
Reuse of IBC drums to make spill pallets and segregation waste bins	NO.	97	100	231
Revenue from scrap/waste materials	AED	2,082,713.95	1,126,817.32	5,548,069.48
Savings from selling waste oil	AED	16,560.00	30,432.00	138,880.00

DEWA has an effective management procedure for the proper handling and further use of its non-hazardous and waste materials to preserve valuable landfill space, and natural resources and to promote waste minimisation. In July 2019, DEWA's Transmission Power division finished using dismantled overhead line (OHL) corridor steel fencing at different locations. Instead, the scrapped dismantled fence has been reinstalled in Ras Al Khor to prevent the unauthorised parking and passage of non-DEWA vehicles in these areas. DEWA's Transmission Line Maintenance department (TLM-OHL) was involved in developing and implementing this initiative. As a result, 2.058 km of fencing in Ras Al Khor area was installed with as much of the available dismantled and scrapped OHL fence from Jebel Ali, along with additional purchased and other minor accessories. The proper use of DEWA's assets and resources and doing the work in-house

achieved estimated cost savings of AED 459,675.80. This initiative benefitted five staff from DEWA's TP-TLM- Patrolling section and 49 staff from DEWA's TP-TLM-OHL section by improving security in the area and avoiding vehicular damage to transmission towers and lines, which require expensive repairs and maintenance.

This initiative has helped achieve one of DEWA's strategic objectives (IPO1: Leading standards of availability, reliability, and efficiency through effective asset management). It has also improved the security of Transmission Overhead Lines Assets in Ras Al Khor, which is prone to unauthorised OHL corridor violations. DEWA intends to implement the same initiative to use scrap materials to add value to DEWA assets and resources.

CASE STUDY

Dubai is the First City in the Middle East and North Africa to Receive a Platinum Rating from LEED for Cities



In line with the directives of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to make environmental sustainability a key element in the development of projects, we have achieved a global milestone, represented by Dubai getting the Platinum Rating in the LEED (Leadership in Energy and Environmental Design) for Cities certification awarded by the US Green Building Council (USGBC). This makes Dubai the first city in the Arab world and the Middle East and North Africa to receive this certification that shows its strategic vision for a brighter future. It is also a testament to the dynamic cooperation between all governmental organisations that worked to achieve it and earned Dubai this accolade, to balance economic growth with sustainability. It also reflects the level of integration and cooperation between its government organisations, under the umbrella of the Dubai Plan 2021, to fulfil its goals.

The qualified cities were measured, within a comprehensive framework, according to 14 metrics relating to the energy and water sector, waste treatment, transportation, human experience, education, prosperity, equality, health, and safety. The platinum rating that Dubai achieved is the highest rating for a city's sustainability performance benchmark. It also supports the Green Economy for Sustainable

Development long-term economic initiative, the UAE Vision 2021, and the Dubai Government Carbon Abatement Strategy. This achievement has proven that Dubai is on the right track to become a smart, sustainable city that secures a green, safe, and happy living environment for current and future generations to come. It also strengthens DEWA's cooperation with the USGBC to instil and consolidate the concepts of sustainability, and exchange experiences and best practices adopted by similar international institutions and companies; making sustainability practices a daily work practice that contributes to the advancement of economic, social, and environmental development, in the region and around the world.

In conclusion, the LEED for cities certification has proven that Dubai has become a model for how a city can transform into one of the most sustainable and liveable cities in the world. DEWA will continue to reaffirm that it is world leader in energy production and sustainability. It will also continue its efforts to improve the mechanisms for achieving the strategic objectives of the government and the country by strengthening its partnerships with all government and private sectors and by employing science, knowledge, and the latest smart technologies, contributing to the preservation and protection of the environment.



DEWA IS RECOGNISED
AS **GREAT PLACE TO**
WORK IN 2019



DEWA HAS
GOT **IIP GOLD**
CERTIFICATION IN
2019



EMPLOYEE
HAPPINESS
INCREASED TO
89.9% IN 2019

AWARDED BRITISH
SAFETY COUNCIL
GLOBE OF HONOUR
FOR ENVIRONMENT
FOR THE **EIGHTH**
CONSECUTIVE YEAR
DURING 2019



83%
DECREASE IN
ACCIDENT INCIDENT
RATIO BETWEEN
2009-2019

Chapter 6

Employees



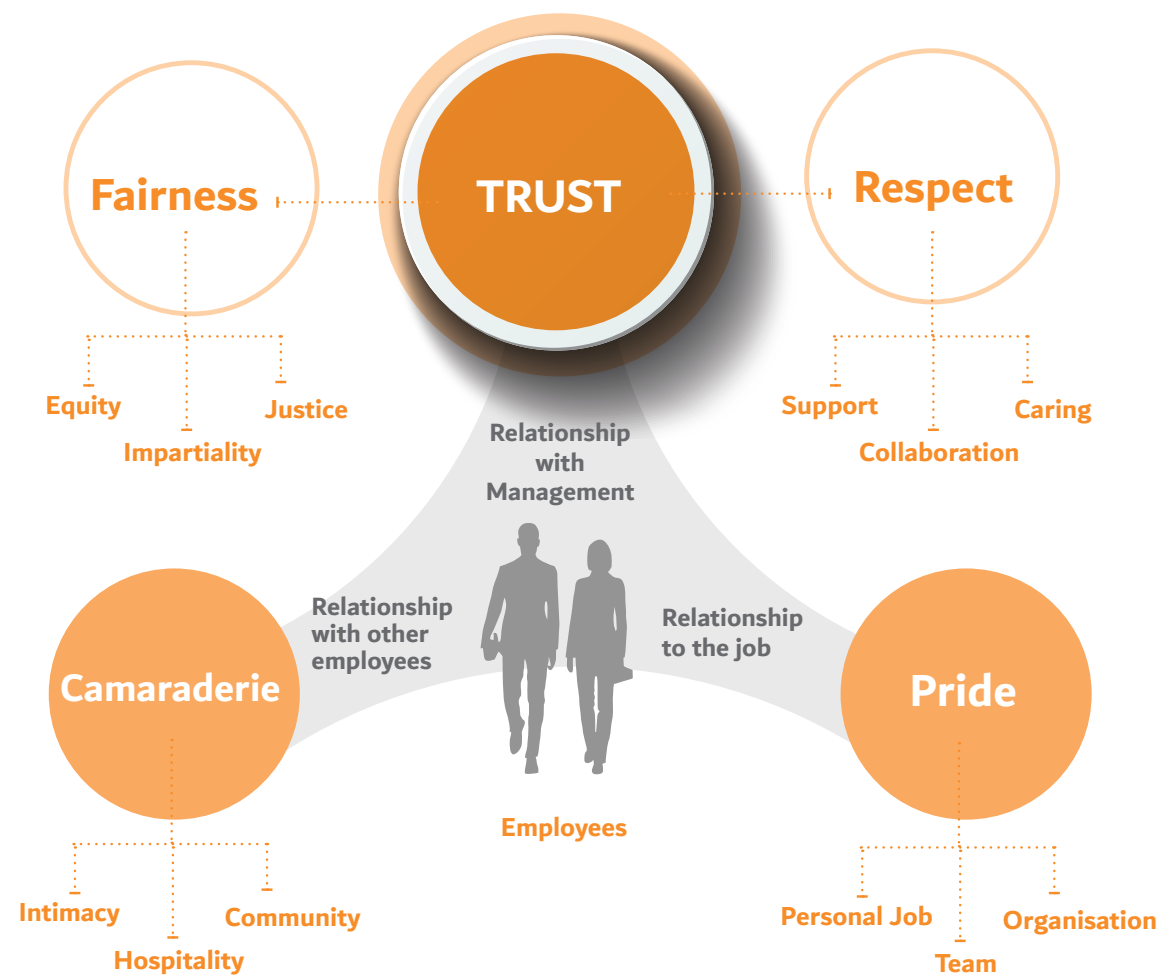
MANAGEMENT APPROACH GRI 103-1, 103-2, 103-3

DEWA aims to continue being one of the most responsible, trusted and favoured employers in Dubai. Its highest priority is to help its workers do their jobs as effectively and efficiently as possible, by providing them with a safe, positive and happy work environment. DEWA's leadership and management are dedicated to developing its employees. They have launched multiple employee relations programmes to ensure its employees are recognised for their achievements. This is to instil a culture of innovation and excellence, and maintain the highest levels of quality and efficiency in a positive environment. DEWA continually works to understand and respond to employees' needs and

expectations, which include employee welfare, recognition schemes, development, security, happiness and a positive work environment.

In 2019, the American Great Place to Work institute awarded DEWA the Great Place to Work Certificate. This certification is awarded to organisations in collaboration with Fortune magazine for their excellence in providing the best work environment.

DEWA's work environment was assessed as per the model shown below



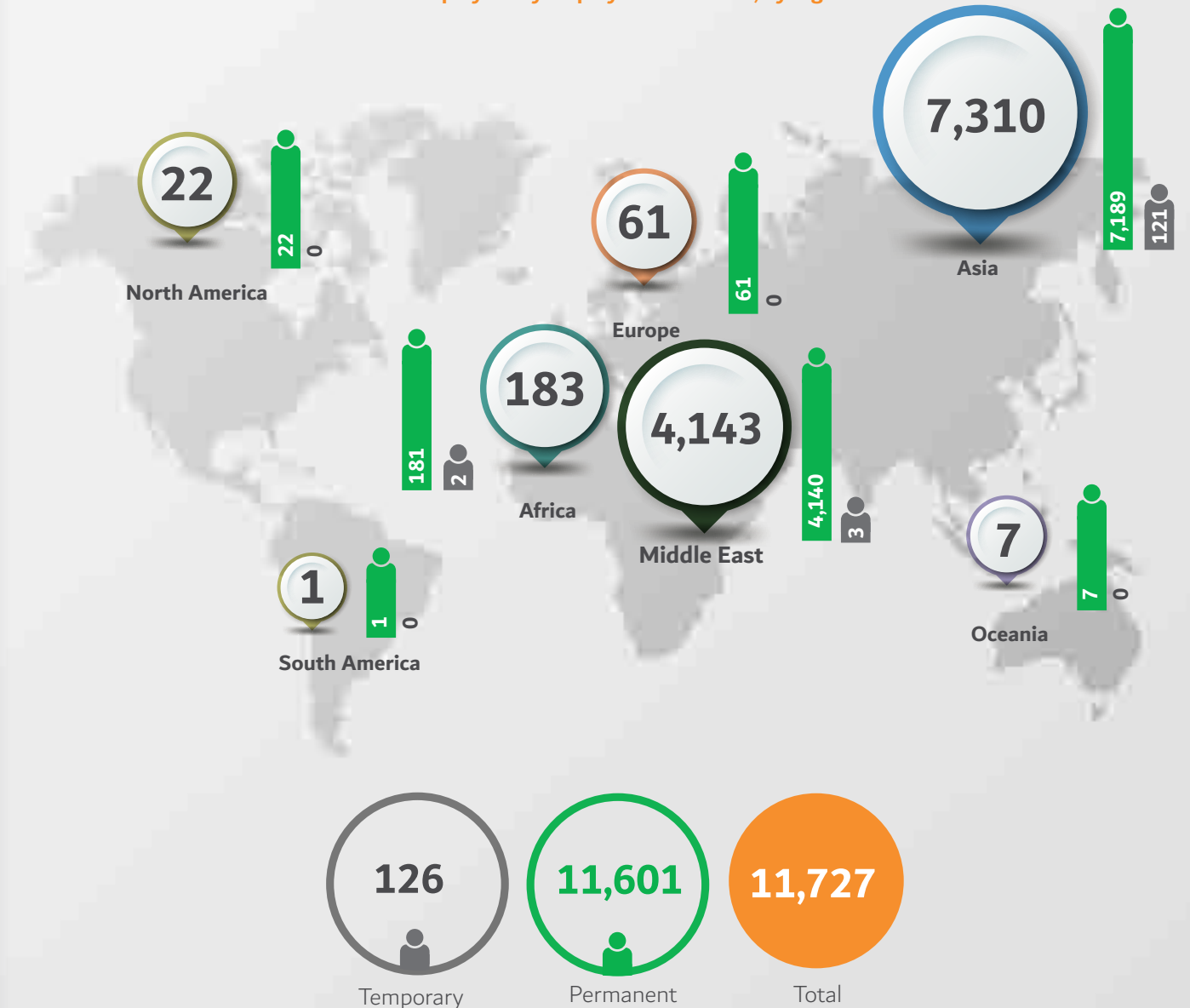
Diversity and equal opportunity foster competitiveness and creativity, thereby contributing to sustainable long-term growth. As such DEWA's policies ensure fairness for all its employees, regardless of sex, race, nationality, age, citizenship, religion, social status or disability. Some relevant policies for valuing and managing HR diversity include its Human Resources Policy, its policy for the Support and Empowerment of Women and its Code of Conduct. DEWA's policies comply with the laws and regulations of the UAE and the Emirates of Dubai, international treaties and conventions, as well as the strategic direction of DEWA.

A WORLD-CLASS WORKFORCE

In 2019, DEWA had 11,727 employees, making it one of Dubai's largest employers. Engineering is one of the most important professions for DEWA, not only because of its significant role in the utilities sector but also as a source of innovation and creativity. As a result, DEWA is an important hub for engineers in the UAE. It is dedicated to hiring people in other highly qualified positions in diverse fields including management, business modelling and finance. Furthermore, DEWA makes sure to train its employees by providing innovative programmes and special training courses for all its divisions and departments, giving employees the opportunity to become accustomed to the latest business and innovation models.

DEWA's employees have a wide range of skills, and it is taking strategic measures to develop and enhance their skills and career path through training and development. To ensure the sustainability of DEWA's organisation, it is also taking the necessary measures to monitor the retirement rate of DEWA's employees to replace their specialised proficiency with trained new joiners. This supports DEWA's strategic objective to invest in its workforce to enhance the productivity of its employees and develop their competitiveness.

Total number of employees by employment contract, by region 2019 GRI 102-8



New employee hires by age group, gender and region in 2019 GRI 404-1

Gender	Count
Female	51
Male	335
Total	386

Region *based on the world's 7 regions	Count
Africa	18
Asia	357
Europe	10
North America	1
Total	386

Age Group	Count
18 - 29	226
30 - 39	121
40 - 49	29
50 - 59	9
60 - 69	1
70 - 79	0
Total	386

Note: the special contracts category has been included in the calculations of new employee hires and employee hires.

Total number of employees by employment contract (permanent and temporary) by gender 2019 102-7

Status	Gender		Total
	Female	Male	
Permanent	1,933	9,668	11,601
Temporary	8	118	126
Grand Total	1,941	9,786	11,727

Total number of employees by employment type by gender in 2019 102-8

Status	Gender		Total
	Female	Male	
Full Time	1,941	9,786	11,727
Part Time	0	0	0
Grand Total	1,941	9,786	11,727

Employee turnover 2019* GRI 401-1

Category	Number of Employees
By Gender	
Female	47
Male	251
By Age	
Under 30	36
30-50	224
Over 50	38
By Region	
Africa	35
Asia	178
Australia	0
Europe	8
North America	6
Middle East	71
Total	298

* Special contracts category has not been included in 2019

Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region, 2019 EU15

Retirement 5 years					
Continent	Leadership	Management	Non-supervisory	Others	Total
Africa	-	1	1	-	2
Asia	-	20	59	54	133
Europe	-	4	-	-	4
Middle East	1	14	8	4	27
North America	-	-	-	-	-
Grand Total	1	39	68	58	166

Retirement 10 years					
Continent	Leadership	Management	Non-supervisory	Others	Total
Africa	-	-	3	-	3
Asia	-	24	77	92	193
Europe	-	2	-	-	2
Middle East	1	22	13	8	44
North America	-	1	-	-	1
Grand Total	1	49	93	100	243

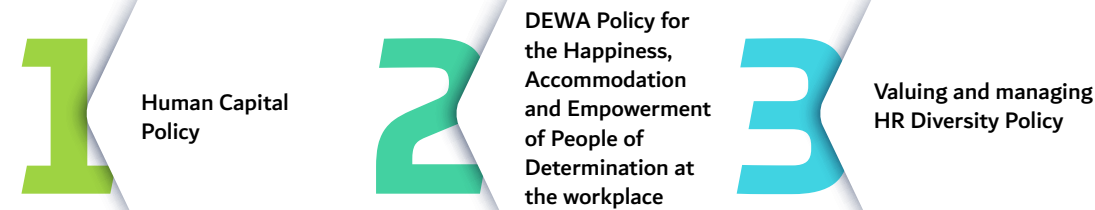


PEOPLE OF DETERMINATION INCLUSION AND EMPOWERMENT

In 2019, DEWA aligned its strategy with government requirements and designed a strategy for People of Determination that has 4 pillars: Employees, Customers, Community, and Partners. DEWA created a smart management system called 'Hemam Portal,' to manage this strategy's initiatives. DEWA made strategic achievements, including membership of the Committee for Inclusive Employment Standards in Dubai. DEWA also participated in preparing the manual for inclusive employment in collaboration with Dubai Government Human Resources Department, and also in a session endorsing the national policy for managing crises and catastrophic disasters for People of Determination.

In 2019, DEWA had 4,458 employees trained in how to support People of Determination and 22 employees who earned diplomas in sign language. Moreover, DEWA protects the rights of Employees of Determination and works on their happiness and satisfaction through a wide range of systems, policies, procedures and work guides.

Addressing their needs and rights including the following:



In addition to these points, DEWA formed the Committee for the Protection of People of Determination in Emergencies and Crises, and also developed DEWA Academy's capabilities in Inclusive Education.

DEWA also designed an inclusive Health and Safety Guide, and updated its HR inclusion and accommodation manual. DEWA has worked to expand ways to engage with People of Determination, and trained its staff in inclusive employment and POD job coaching.

The number of DEWA's Employees of Determination rose from 19 in 2017 to 26 in 2019. All Employees of Determination completed their annual training plan for 2019 and were provided with all their necessary supplies, equipment, and devices to enable them to carry out their duties in the best and equal opportunities with others. Their happiness rate was recorded at 99% in 2019 compared to 83% in 2015, while the happiness of relatives of Employees of Determination was 95%.



PROMOTING EMIRATISATION

In line with the UAE Vision 2021 to promote Emiratisation in the job sector, DEWA is committed to continuously recruiting skilled UAE Nationals with the most suitable academic qualifications into its workforce. This is achieved by initiating a number of supporting policies:

- Attract and encourage Emiratis to join DEWA.
- Give priority to Emiratis to fill in vacancies and facilitate their employment process.
- Replace expatriate staff with UAE Nationals whenever qualifications are available, provided that the quality of service is not compromised.
- Develop the career path of Emirati staff and equip them with the required expertise through knowledge transfer, and providing the necessary training.
- Empowerment and retention of Emirati staff and provide all necessary requirements for them to stay in DEWA.

DEWA believes that investing in national staff and helping the upcoming generation in developing their careers is a priority to prepare tomorrow's leaders and the cornerstone of the sustainable development



adopted by the wise leadership. During 2019, approximately 48.45% of newly hired employees were UAE Nationals, who also made up 86.89% of top management and leadership positions, 57.81% of middle management positions, and 34.66% of its non-supervisory positions.²⁰²⁻²

DEWA has a clear strategy to develop and train national staff to take responsibility for different leadership positions. It focuses on providing them with the skills they need to meet the changing work requirements. To achieve this, DEWA launched the following comprehensive training and developing programmes for its staff:

- Higher Studies Scholarships Programme (In the UAE and Overseas). In 2019 DEWA had 12 Employees from different divisions pursuing higher education.
- Online micro master's Programme at the Massachusetts Institute of Technology (MIT), USA:
 - in 2019, 24 employees participated in this programme.
- Leadership development programmes: DEWA provided a number of programmes to prepare its



leaders. Training programmes included Frontiers, Women in Leadership, and Future Leaders programmes to develop them and benefit from the expertise of others and implement them in the workplace. In 2019, 24 employees attended the programmes.

- Knowledge-Exchange Programme: DEWA has started a knowledge-exchange programme for qualified Emirati staff with major international (e.g. IRENA & RWE in Germany and First Solar in the USA) and local (e.g. PWC) organisations to train staff on the latest technologies and best practices in energy and water.
- Open Discussions with MD&CEO
 - Reaches out to DEWA's Emirati workforce to develop a joint consensus on DEWA's existing position and potential future opportunities for improvement through transparent and straightforward discussion and seminars.



TRAINING AND CAREER DEVELOPMENT ⁴⁰⁴⁻²

DEWA is committed to investing in its workforce and hire talented and skilled employees. It believes that employees are the most important component for continuous success and excellence. For that, DEWA provides various training programmes including technical training and leadership development programmes that focus on competencies, management and supervisory skills, interpersonal and behavioural skills. Trainings are offered through various methods

such as classroom and virtual trainings, by internal and external trainers and SMART Learning training on the My Portal site.

In 2019, DEWA achieved its training targets and noticed the increment in term of training hours in Management, Non-supervisory and UAE National categories in comparison with 2018.

	Average Training Hours per Employee-2016	Average Training Hours per Employee-2017	Average Training Hours per Employee-2018	Average Training Hours per Employee - 2019
Leadership	97.23	65.24	109.48	90.39
Management	51.4	47.74	49.31	55.73
Non-supervisory	33.39	34.52	41.11	43.77
UAE National	55.37	54.45	58.39	65.58



To further develop and preserve its world-class workforce, DEWA provides all possible support opportunities in term of career building to its employees to achieve a high level of ability as well as to strengthen their social cohesion. Performance appraisals help DEWA to systematically evaluate employees on their performance, and understand their abilities to develop them further.

ASSESSMENT AND DEVELOPMENT CENTRE

DEWA established its Assessment and Development Centre (A&DC) in 2015 to improve the abilities of its employees and ensure that it recruits the right people. A&DC used a variety of assessment methods and trained observers and assessors to evaluate against a pre-determined set of criteria linked to behavioural competencies. Activities included standardised psychometric tests and business simulations. These

identify potential strengths and development needs which can then form a basis for establishing a development plan, as opposed to a pass or fail event. The British Psychological Society (BPS) certified all of DEWA A&DC's experts in the use of psychometric and assessment tools and follow the BPS Assessment and Development Centre Standards. The final output of the Development assessment is individual bespoke

development plan for 24 months that includes various development activities including but not limited to on job training, training courses, reading etc.

Since its establishment, the A&DC has contributed to essential projects such as graduate recruitment, critical positions recruitment, Employee development and coaching, succession planning, scholarship and DGEP candidates' selection and development. It has evaluated over 2,300 candidates for various vacancies. The Centre has also evaluated over 1,400 students applying for scholarships, and 1,439 employees of different positions, for development. Some of DEWA's initiatives and programmes to develop and train its workforce includes:

KNOWLEDGE MANAGEMENT (KM)

Knowledge Management (KM) ensures that all employees in an organisation have access to the information, knowledge, skills, tools and techniques they need to complete their work safely, effectively and efficiently and supports the development of a sustainable culture of learning and innovation. DEWA has incorporated Knowledge Management across all operations since 2009.

DEWA has an integrated Knowledge Management system that includes a KM Policy, Strategy, Framework, Quality Procedures and a specialised Knowledge & Intellectual Capital (K&IC) Department to manage, execute and monitor knowledge related initiatives and projects. In August 2019, DEWA was the first utility in the world to be certified against International Standard ISO 30401: 2018 - Knowledge Management Systems. DEWA supports the development of employee Knowledge skills, competence and practices through the resources, tools and activities of the K&IC Department:

- Digital access to high quality, reliable curated external knowledge resources through the DEWA SMART Library, SMART Office Application and DEWA Online Catalogue for all DEWA employees.
- Access to physical collections and creative spaces through the 7 DEWA Knowledge Centres, 6 Knowledge Chairs and 3 Reading Trees for all DEWA Stakeholders.
- Activities that encourage the transfer of knowledge between individuals and groups such as Knowledge Days, KM Training, Share an Hour, Annual ShareK Recognition award, Communities of Practice, Marifa Collaboration Platform, Expert

Knowledge Sessions, LinkedIn Learning and the iAsk Reference & Research Service.

FORWARD SPRINT PROGRAMME

In 2019, DEWA launched the Forward Sprint Programme. The programme developed six digital new disruptive businesses and services to leverage DEWA's assets to support the Dubai Agenda 2021, developing the local economy and nurturing local talent.

DEWA worked with BCG Digital Ventures (BCG DV), a world-class Company-Builder firm with proven successful experience and large companies in Dubai such as ENOC, in innovating, incubating and launching disruptive 'digital' businesses.

Six high performing DEWA staff were seconded full time to the programme for the first 100 days. These employees worked on a daily basis side by side with the BCGDV team to build innovative concepts and bring innovation capability back to DEWA.

- Discover customer insights
- Develop innovative ideas
- Build bankable business concepts
- Pitch ideas to the board

FOSTERING INNOVATION

In support of the National Innovation Strategy to make the UAE one of the most innovative nations in the world, and the Dubai Innovation Strategy to make Dubai the most innovative city in the world, DEWA developed the innovation strategy in alignment with other strategies, and the European standard and 4G requirement, to steer all its innovation efforts with a clear innovation agenda supported by key Innovation enablers required to implement the strategy.

DEWA incorporated strategic innovation in its vision, mission and values, and raised its importance as a theme in the strategic map and included strategic objectives with a focus on innovation in: sustainability, stakeholders' happiness, operations, and technology. In addition to using innovation to drive business model changes and using innovation tools to encourage employees to innovate. One of the innovation tools that DEWA is using to foster innovation among its employees, is Afkari. This is a portal for DEWA's staff to encourage creativity and innovation in the workplace. DEWA is the first organisation in the region to use

HYPE Software, which allows staff to collaborate and vote on the best ideas submitted, similar to social media sites. The initiative focuses on improving the work environment and enhancing communication among staff. It facilitates studying and discussing their suggestions and ideas with all divisions and departments, including DEWA's management.

	2018	2019
Ideas	2,639	8,798
Participants used the Afkari platform	7064	7244
Proposed Ideas	AED 1.57 Million	AED 710 Thousand
Cost Saving	277	360
Number of implemented ideas	14	790
Number of ideas in progress	1587	4,997

Another initiative that DEWA is adopting in support of innovation is the innovation Fund, to enable employees to obtain sufficient support to implement and develop innovative ideas. Over 7 cycles, there have been 29 projects, of which 8 are now complete and 10 are still in progress.

AN INNOVATIVE IDEA FOR KNOWLEDGE SHARING - MOBILE TRAINING UNIT

In 2019, DEWA developed and implemented a new initiative to provide Safety and Technical live awareness training directly to projects and engineering field staff to their work sites. The mobile training unit is a DEWA Nissan pathfinder 4x4 Hybrid vehicle retrofitted with LED television and sound systems.

The main benefits of a mobile training unit include an increase of DEWA's brand value and providing more interactive sessions for employees. It also helps to meet staff training KPI targets, and the onsite practical trainings increase staff confidence more than classroom training. The mobile training unit also helps in knowledge sharing about safety alerts, incidents root causes, Tool Box Talk and all other awareness programmes to field staff, in order to prevent recurrence and to sustain a positive Quality Health, Safety and Environment-focused culture.

In 2019, DEWA conducted 42 training sessions for 912 site staff on 32 subjects. This initiative also helped DEWA to achieve the United Nations Sustainable Development Goal on Affordable and Clean Energy by reducing carbon emissions.

DEWA'S SMART DOCUMENT SYSTEM

To achieve two strategic objectives of the DEWA 2021 strategy (Smart & Sustainable City and Pioneering & Excellent Government), DEWA I&TF integrated enterprise requirements onto a smart mobile application called Smart Office. This application was made available on different operating systems for DEWA employees, and integrated with different systems with an easy to use interface. Smart Office application helped all employees at DEWA with their day-to-day activities, anywhere, at any time.

The purpose of the app is to provide a diversified list of services and processes for DEWA employees. It completely supports the transformation to a paperless government environment as per the directives of HH Shaikh Hamdan bin Mohammed bin Rashid Al Maktoum to transform Dubai Government of into a fully digital government, and become the first paperless government by the end of 2021.

In 2019, more than 1,299,563 procedures were completed and more than 197 services were provided through the application. This saved 19.35 tonnes of CO₂ emissions, and earned an 81% Employee Happiness score, with 75 self-service business processes digitised as well. This resulted in savings of AED 70,525,329, which equated to 268,565 hours saved.

DEWA employees used the Smart Office application over 9 million times, with actions such as approve and reject, using 70 processes available through DEWA's SAP platform.

RECOGNISING AND REWARDING EMPLOYEES

DEWA developed the internal excellence awards and different awarding schemes to spread a culture of excellence across the organisation and encourage positive competition among staff.

DEWA's Excellence Award & Recognition Programme recognises and rewards employees (individual or groups) who excelled in their achievements during their duties. In 2019, DEWA honoured 1,944 employees and rewarded 60 teams across DEWA.

DEWA honored in Excellence Internal Award programme 41 of its distinguished employees in the 1st cycle of 2019 and 43 in the 2nd cycle in different categories: Distinguished Innovative Employee; Distinguished Supervisory Employee; Distinguished Administrative Employee; Distinguished Technical or

Technological Employee; Distinguished Specialised Employee; Distinguished Field Employee; Distinguished New Employee; Unknown Soldier, and Innovative Administrative initiative. In addition, Knowledge Management Award SHAREK winners of 24 individuals and 3 teams with total of 38 employees have rewarded in 2019 2nd cycle ceremony beside CSR special recognition of 36 representatives.

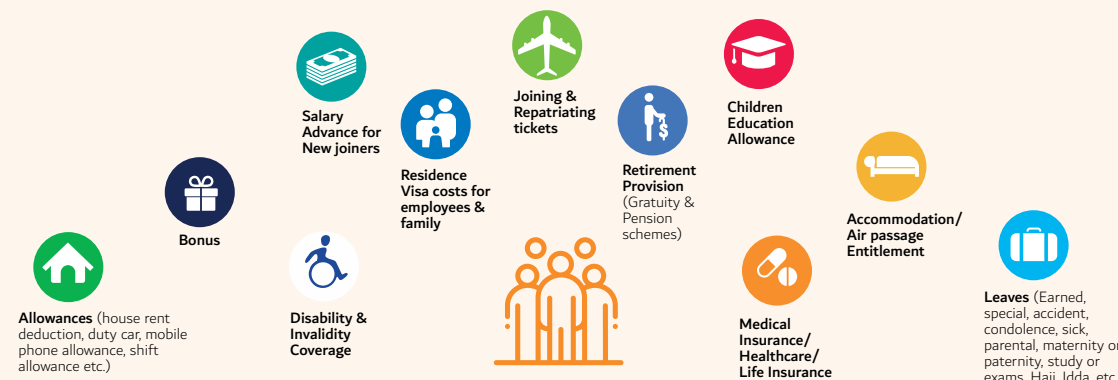
DEWA also honoured 24 employees that won in the Health & Safety Week Award 2019.

DEWA also implemented the Special Act award for employees who conserve its resources and make cost savings. In 2019, DEWA rewarded 1 employee and 5 teams with total of 307 employees for their special acts during the year that won local and international awards, saving costs, and completing various projects.

EMPLOYEE BENEFITS GRI 401-2, 401-3, 405-2

As a workplace with world-class standards, the target is to reward the employees fairly and generously, based on their performance. At DEWA, the Personnel Committee reviews employee performance appraisals, promotions, salary increments and other personnel matters. In addition, it also analyses job roles, coordinating them with people who have abilities, aptitudes and capabilities and give equivalent chances to fill the job requirements. All employees from grade 7 onwards can view their performance and profession improvement through SAP in my portal page. They can also check their details about their performance awards, training, and knowledge management related learning and others.

As per DEWA policies, remuneration is based on the grade or position of the employees and not their gender. Therefore, there is no difference between male and female employees. To have an optimum working environment and healthy working environment for its people, and to strengthen the engagement and the performance, DEWA offers for permanent employees a broad range of benefits listed below including medical insurance, leave, allowances, and accommodation entitlement.

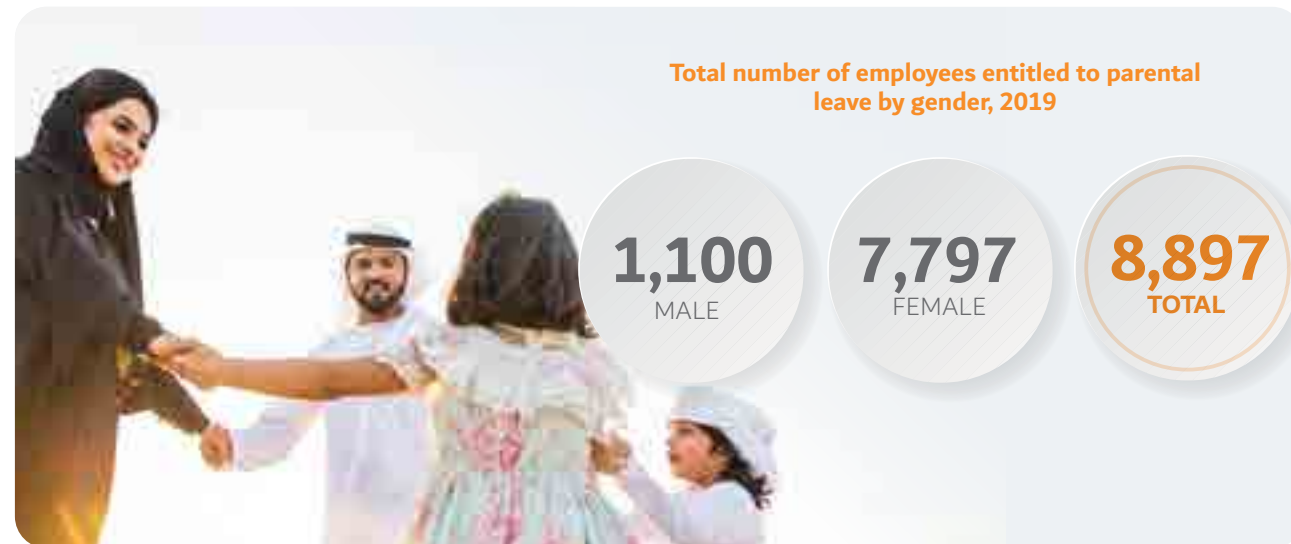


To further support the world-class workforce, DEWA's employees are entitled to parental leave. In 2019, 601 employees used parental leave. These employees all returned to work immediately after the end of their parental leave.

Employee Parental Leave and Resumed Duty, 2019 **GRI 401-3**

Leave Type	Total parental Leave Aailed	Returned to work	Returned to work Rate*	Retained Employees	Retention Rate**
Maternity Leave	227	226	99%	217	97%
Paternity Leave	374	374	100%	365	97%
Total	601	600		582	

The period considered for the parental leaves considers the following:
 - Male employees returning to work immediately from 4 January, 2019 to 4 January, 2020.
 - Female employees returning to work immediately from 1 January, 2019 to 1 May, 2020.
 **Male and female employees who availed parental leave between 1 January to 31 December 2018 and were still employed with DEWA 12 months after end of parental leave in this duration.



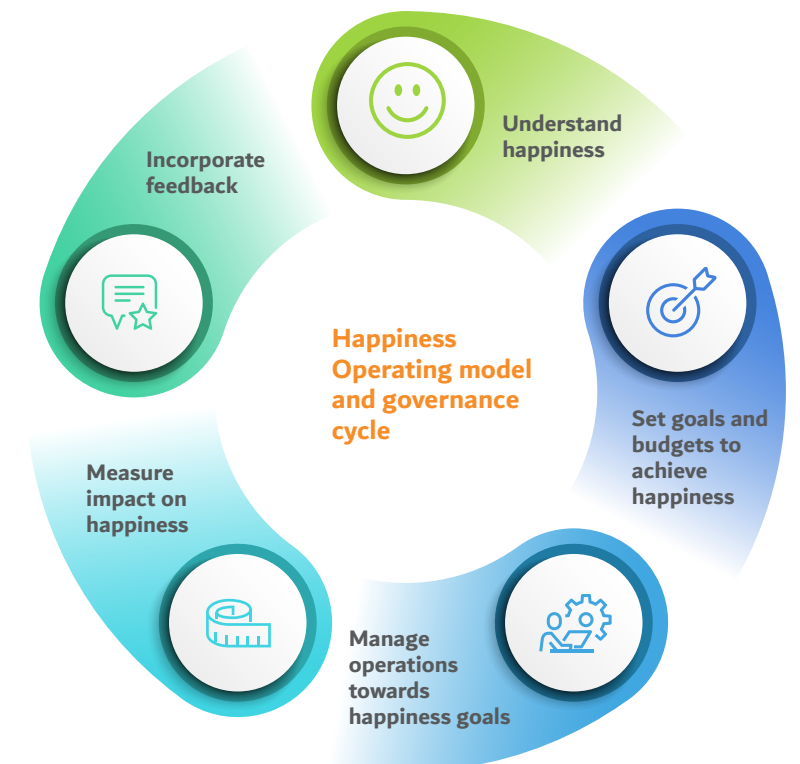
EMPLOYEE HAPPINESS **GRI 103-1, 103-2, 103-3, 401-2**

DEWA places employee happiness within its strategic priorities. It is learned from HH Sheikh Mohammed bin Rashid Al Maktoum, that employee happiness is essential to achieve community happiness. DEWA's Top management believes that having a happy and positive employee ensures the happiness of all those dealing with the employee. DEWA is a pioneer in with a core business support service for employees in the UAE, with an establishment of Employee Happiness Department in 2014. DEWA has worked to promote employee happiness and thus, raise the level of loyalty and belonging and enhance their productivity, and establish positivity as a fundamental value in the community. This supports the leadership's vision to make Dubai the happiest city in the world. For that reason, DEWA continued conducting the Happiness Survey for employees to express their views and suggestions on topics of interest to them, and to

measure their overall happiness regarding their work. In 2019, DEWA's overall happiness score was 89.9%, in 2018 was 87.75% and in 2017 was 83.22%. The analysis of the results of this study was used to benchmark and realign DEWA's initiatives to meet employees' expectations. DEWA also holds exit interviews with employees to find out the main reasons for their resignation to solve the issues, if any. In 2019, there were 209 resignations and 175 exit interviews. To ensure the integrity of the feedback and remove any possible feedback challenges, DEWA started a Post Exit Feedback process to improve its processes for employees' departures and provide employees an opportunity to share their experiences once they left DEWA for another work environment. Most ex-DEWA employees wish to re-join DEWA in future and over 90% and above would recommend DEWA as an employer to their friends and family.



DEWA's Employee happiness framework is based on four building blocks, which are broken down into 10 categories. This framework is a starting point to help DEWA understand what drives happiness for its employees. Employee happiness is also important in achieving a sustainable, productive, motivating and collaborative work environment. In DEWA, many areas support and improve the physical working environment of its employees such as the Happiness Lounge and Creativity Rooms. DEWA's Happiness department has run the Employee Assistance Programme to provide emotional support for employees going through psychological stress in 2016 and was the first Government Authority in Dubai to do so. There are other employee-engagement programmes, such as the Wasal Greeting programme, the Barzatna social gatherings, and the Tejori spot reward programme, to ensure that employees go through a holistic experience in their careers at DEWA.



INTERNATIONAL DAY OF HAPPINESS

To celebrate International Happiness Day, DEWA invited all its employees to enjoy the different activities taking place at DEWA's head office and branches. The first celebration in DEWA was in 2016 with a theme on Happiness Garden, Happiness Island in 2017, and in 2018 it was the Year of Zayed. In 2019, it organised the event in line with the Year of Tolerance.

DEWA CHILD CARE CENTRES

DEWA has three Child Care Centres that provide care for the children of DEWA employees during working hours. Parents can register children from 2 months to 4 years of age. This initiative has been an outstanding success in helping employees to balance family and work duties.

Preference is given to female employees with children for admissions. From 2010 to 2019, 1,036 female employees, and 1,561 children benefitted from these nurseries. The happiness rate for the childcare centre increased from 97.69% in 2016 to 99.30% in 2019 and the Al Quoz Branch received the KHDA Appreciation Award in 2019.

AL KHAIR FUND

DEWA also manages a co-operative fund programme, called the Al Khair Fund, to support employees in financial distress resulting from sudden emergencies. Subscription is open just to DEWA's employees, and DEWA contributes AED 500,000 annually to the Al Khair Fund.

DEWA deducts the subscription fees from subscribers' salaries every month, based on four categories:



In 2019, 686 staff received help from the Al Khair Fund.

ANNUAL STAFF WEDDING

DEWA organises and celebrates an annual mass wedding for its employees, which is a part of its corporate happiness strategy.

HAPPY BREAK

A surprise event-based programme held at DEWA's main branches to provide the employees with a happy break for 5 minutes, and the activities varied at each visit, including the following:

- Breathing and stretching desk-exercises
- Mind games, puzzles, and treasure-hunt-in-a-box to solve as a team

ESTISHARATI (DEWA EMPLOYEE ASSISTANCE PROGRAMME)

Estisharati (DEWA Employee Assistance Programme) is an employee-counselling programme to assist employees by providing an active problem-solving approach to tackling the problems in hand to live a happy, stress free and fulfilled life.

TEJORI AL SADAA

Tejori Al Sadaa is a reward programme for employees for their exceptional performance reinforced and encouraged through immediate recognition to foster a positive working environment. The rewards can be Happiness Cheques or vouchers from DEWA Stores. In 2019, 4,561 staff received Tejori Al Sadaa awards.

HAPPINESS LOUNGE

DEWA created a Happiness Lounge to offer a creative, relaxing, positive, and high quality work environment. The lounge provides a selection of services like online booking for workshops, brainstorming sessions, and various activities.

DEWA STORE

The programme provides competitive offers and discounts for DEWA staff from various shops, hotels, services, etc. Any new offers are announced and circulated to all employees through:

- Email shots
- Freejna
- Smart Office mobile application

ANNUAL GATHERINGS

DEWA conducts several events such as the Barzatna Programme gathering, Gala Dinner, and a Suhoor gathering during Ramadan to bring its staff together as one family.

WASL INITIATIVE

This initiative sharing and participating in any occasions where DEWA employees are involved based on life events such as New Joiners, Umrah, Condolences, Confirmation, and Graduation.

Other initiatives that aim to create happier employees are listed below:



DEWA SPORTS COMMITTEE

The DEWA Sports Committee promotes participation in sports, supports sporting excellence and enhances the happiness and wellbeing of DEWA employees. The Sports Committee organises internal inter-divisional sports tournaments, promotes, and manages employees to represent DEWA in external competitions.

DEWA confirmed its readiness to participate in the second Government Games initiative, which was launched by His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Executive Council of Dubai. The Government Games initiative are organised under the theme '1 Team 1 Spirit'. DEWA's Sports Committee completed the mental, psychological, and physical tests to select the employees who will participate in the competitions from 3 to 6 April 2019 at Kite Beach, Dubai.

DEWA sponsored the seventh Nad Al Sheba (NAS) Ramadan Sports Tournament during the Holy Month of Ramadan under the theme 'Limitless Abilities'; the NAS tournament is the biggest of its kind in number of sports and cash value of prizes. In 2019, DEWA organised a Cycling Challenge in cooperation with the Dubai Sports Council, with support from Trek Bicycles Store. 120 DEWA employees took part in the 26-kilometre race at Al Qudra, Dubai.

DEWA WOMEN'S COMMITTEE

The DEWA Women's Committee is committed to implementing the directives of the UAE's wise leadership to empower women as the main pillar of family cohesion, as the family is the core of the community. DEWA's senior leadership always provide a supportive and stimulating work environment to support women in everything they do. The committee organises all-year-round education, awareness and training to create promising generations who will build connected and happy families, to achieve social and sustainable development.

In 2019, the Women's Committee at DEWA organised 45 activities. It also celebrated many important days with female employees such as the 48th National Day, the International Women Day, and the Emirati Women's Day 5th Forum. The Committee has also launched the second batch of the 'For Her Programme' in collaboration with the Cambridge Sustainability Institute to qualify DEWA female employees with all the knowledge and abilities needed to represent DEWA perfectly.

The Women's Committee conducted six training sessions focusing on the development of female careers and education. The Women's Committee did not only focus on professional path of ladies, but also focused on their skills and hobbies by organising numerous workshops evolving around handcrafting, perfume making, colour psychology, and much more. The Committee also reached out to all DEWA female employees by organising field visits to DEWA's various branches. Its members met with female employees at DEWA's Head Office, Sustainable Building in Al Quoz, and DEWA offices in Al Hudaiba, Jebel Ali, and Warsan. The Committee organised brainstorming sessions on various topics, including sustainability, empowerment, society, the National Identity, and Year of Tolerance, to hear their feedback, suggestions, and objectives for activities in 2019 as well as identify their needs and discuss with them any challenges they face at work. The Committee organised different educational and cultural trips for the female employees to many landmarks, such as Dubai Frame, Dubai Opera, and the Mohammed bin Rashid Al Maktoum Solar Park. The Women Committee also offered DEWA female employees free sports classes conducted at the Head Office throughout the year, with certified gym trainers.

DEWA YOUTH COUNCIL

DEWA's Youth Council involves young employees in DEWA's efforts to achieve sustainability in its work. The council focuses on five main themes to address the needs of youth: National Identity and values, continuous education, professional development, Future Accelerators and Innovation, and Sustainability.

In 2019, DEWA organised the Youth Sustainability Forum to involve and engage young people in sustainability. The forum included interactive sessions, youth debates, and presentations in addition to panel discussions. The forum covered different topics such as the United Nations Sustainable Development Goals, the Year of Tolerance, and gender equality. The fourth Youth Talks took place with the theme 'Open Doors... Open Minds,' to discuss the history of the Sheikh Mohammed Centre for Cultural Understanding.

DEWA Youth Council held a youth circle on 'Youth contribution to localising the SDG's and harnessing technologies to achieve them' for its employees, attended by HE Dr Thani bin Ahmed Al Zeyoudi, UAE Minister of Climate Change and Environment, at the World Green Economy summit.



EMPLOYEE HEALTH AND SAFETY GRI 103-1, 103-2, 103-3, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-9

MANAGEMENT SYSTEM

DEWA is a strategy-focused organisation with an intricately written, communicated and cascaded Integrated Management System for ISO 9001, ISO 14001 and OHSAS 18001. DEWA has a dedicated Integrated Management System Policy aligned to its corporate IMS procedures and process maps. To strengthen the system it also has a dedicated communication policy, risk management policy, social responsibility policy, information security policy and guidelines for implementation and monitoring. The system is a legal requirement of government of Dubai as well as Dubai Vision 2030. It is also aligned to Federal Law Number 8 of 1980; Ministerial Order Number 32 of 1982; Dubai Municipality Code of Construction; Dubai Municipality Guidelines and the fourth Generation Dubai Government Excellence Programme and further complemented by the 10X Strategy of Dubai Accelerators, for generations to come. DEWA has a recognised corporate, divisional and departmental risk management approach segmented into High, Moderate and Low. This is aligned to DEWA's Health & Safety monitoring and crisis management system. DEWA's OHSMS Manual includes all related information for the scope of workers, activities, and workplaces covered by OH&S Management Systems. This also includes all temporary workers, consultants and contractors that are working in DEWA premises.

HAZARD IDENTIFICATION AND RISK ASSESSMENT

DEWA has an intricately written risk management procedure along with the risk management policy governed by Enterprise Risk Management of DEWA. IMS procedure IMSP03 covers risk identification, risk control and mitigation qualitatively and quantitatively. It also covers aspect impact analysis for environment. It covers routine and non-routine risks as per the HSG 65 guidelines of HSE, UK.

DEWA ensures staff competency through training and refresher trainings internally and British Safety Council certified trainings in which DEWA is certified as an affiliate trainer. It is mandatory for line managers and HSE coordinators and other all required DEWA staff to go through awareness for this throughout the year. DEWA uses the RADAR methodology to evaluate its Health & Safety results and performance. The results are collated for DEWA as an organisation, as well as for

its divisions and departments, in a Balanced Scorecard. It is later available for all employees to see on a dashboard.

The policies and procedures of H&S for workers are a part of OHSMS Manual, Integrated Management System and the HR regulations. Workers protected against reprisals as per the law of the local authorities and accountability procedures of DEWA's HR regulation governed by the Legal Department of DEWA. It also gets support from the Security Dept of DEWA.

In addition, the processes to investigate work related incidents is covered under DEWA's IMSP-10 procedure that identifies the hierarchy of controls and is aligned to corporate crisis management policies and external local authorities where applicable, such as Dubai Police and Dubai Civil Defence. IMPS 03 supports in identifying the risks, hazards and their control measures along with mitigation steps.

OCCUPATIONAL HEALTH SERVICES

DEWA has a dedicated Occupational Health section that governs occupational health and wellbeing at DEWA. It closely works with DEWA's corporate counselling and employee happiness and wellbeing teams.

The Occupational Health Procedure (SP12) is a corporate procedure aligned to Integrated Management system procedure. It also has a dedicated procedure for stress-management and counselling, welfare wellbeing and hygiene, control of substances hazardous to health and guidelines for People for Determination, vibration, musculoskeletal conditions and HACCP.

The OH team carries out health screening for employees, nutritional screening, stress screening and wellbeing status periodically in close coordination with HR. It has a dedicated process for OH awareness, workshops and trainings.

All workers have access to these services irrespective of the hierarchy in the organisation. The procedure; is aligned to corporate risk management procedure, evaluation of compliance, incident management and crisis management.

H&S COMMUNICATION AND REPRESENTATION

As a part of the IMS and to meet OSHAS 18001 and DGEP criteria, worker participation is one of the key drivers of DEWA's strategic intent. As a corporation, DEWA has a dedicated procedure and process for employee participation, consultation and development planning, vertical alignment to all functional procedures, and horizontal alignment to operational procedures.

Employee communication, participation and development are key clauses and sub-clauses of procedures of IMS and H&S. They involved in strategic development, trainings, workshops, and awareness along with annual participation in Employee Happiness Survey. H&S follows the methodology of internal and external communication to market H&S amongst its workers. They are involved in performance analysis, risk assessment drives, Management Worker engagement drives, H&S trainings and all workers also have access through Intranet portal and HSE mobile app.

DEWA's Health and Safety Committee includes representatives from DEWA and is headed by the Executive Vice President of Business Support and Human Resources. The committee plays an important role in avoiding work-related injuries and accidents in all its divisions and maintaining occupational health and safety procedures in the workplace as per the procedure (IMSP01-16) with assigned KPIs that have Target Achievement Levels (%TAL) apart from actual ones that make it more robust. It also ensures that measures to assist and retain health and safety rules, standards and procedures are carried out. The committee representatives meet at least once a month for high-risk departments, every two months for medium risk departments, and at least quarterly or when it is required for low risk departments.

H&S TRAINING

OH&S Staff extensively conduct training in DEWA both formal and In-house that including generic training and training on specific work-related hazards, hazardous activities, or hazardous situations. As per the scope of job, external parties conduct specific OH&S training as per the Training Needs Analysis (TNA). The OH&S training section and departmental HSE coordinators ensure that the workforce understands the importance of hazard communication and identification, and how to recognise and minimise unsafe acts and conditions at the workplace. They also

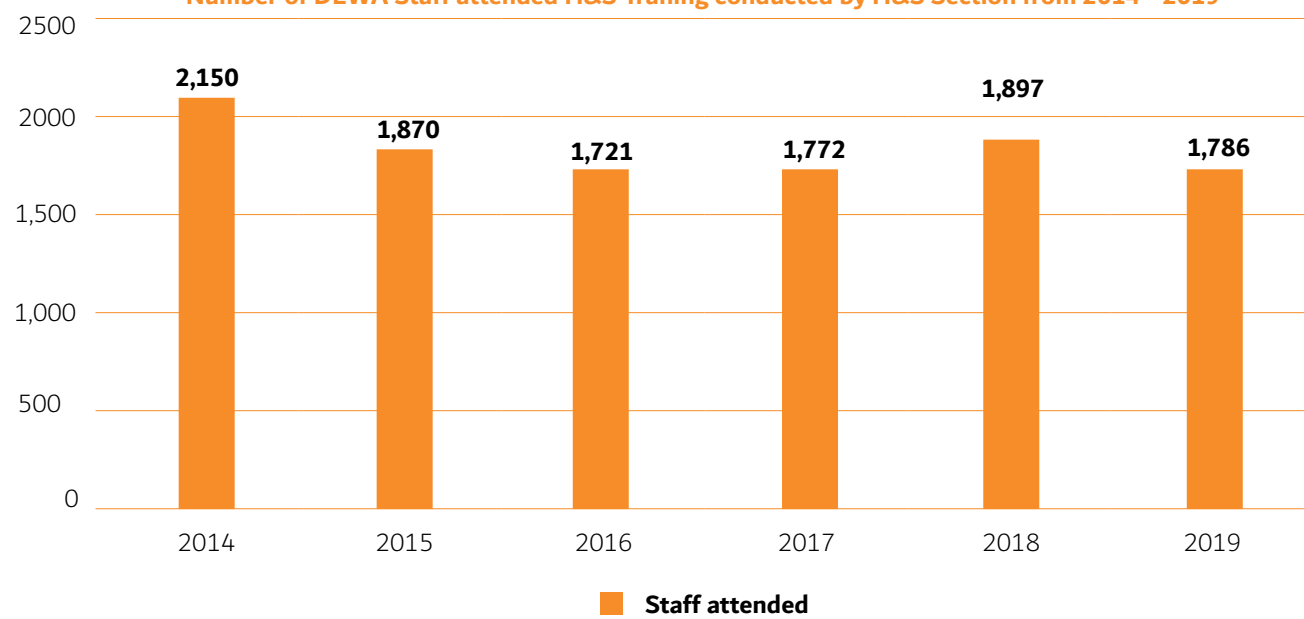
try to teach the skills and necessary attitudes to meet Departmental OH&S objectives. OH&S Training section provided the following 15 courses:

Sr. No.	Title
1.	Induction Training
2.	The Essentials of Health & Safety at the Workplace
3.	Office Ergonomics
4.	Emergency Planning & Preparedness
5.	Risk Assessment
6.	Hazard identification & Hazard communication (Urdu/Hindi)
7.	Accident prevention, Investigation & Reporting
8.	Preventing Back Injury
9.	Supervising Staff Safely in the Workplace
10.	BSC Level 1 Award in Health and Safety at Workplace
11.	BSC Level 2 Award in Health and Safety in the Workplace
12.	BSC Level 2 Award in Risk Assessment
13.	BSC Level 2 Award in DSE Risk Assessment
14.	E Learning – Back Pain Training
15.	E Learning – Display Screen Equipment

In 2019, there were 131 training sessions attended by 1,786 staff. After every course, an evaluation report was prepared with graphical representations of feedback from participants scoring less than average marks, who were asked to attend the training programme again.

The OH&S training section also prepared monthly staff awareness on different OH&S topics and sent them to all HSE coordinators to share and conduct toolbox talks for their staff.

Number of DEWA Staff attended H&S Training conducted by H&S Section from 2014 - 2019



PROMOTION OF EMPLOYEE HEALTH

Non-occupational and occupational healthcare services of DEWA workers are insured through a government organisation called Enaya. It covers medical requirements of DEWA employees worldwide. In DEWA, both on duty and off duty incidents are equally monitored and mitigated. All DEWA premises are covered for response to healthcare needs or injury for its stakeholders. Premises are comprehensively equipped with first aid boxes, evacuation chairs and provisions for People of Determination, such as braille text, tactile paving, vibration loops, and voice assist at customer care centres.

Voluntary health services are also a part of DEWA's OH&S promotion through workshops, campaigns, vendor programmes, awareness sessions and participation in health campaigns by workers for basic screenings, eye tests etc.

Infographics, intranet emails, campaigns, counselling sessions from third party and sports activities are all integral parts of DEWA's H&S services; with dedicated participation and satisfaction rates published annually in the H&S Departmental calendar and shared throughout DEWA. These plans based on the outcomes of screenings, surveys and monitoring tools. The Occupational Health section carries out campaigns based on the calendars from the World Health Organization, Dubai Health Authority and the United

Nations. Chronic ailments, heatstroke, stress, wellbeing, metabolic conditions, haemodynamic and musculoskeletal conditions along with non-work-related conditions are all integral part of DEWA's health promotions.

DEWA'S RESPONSIBILITIES

DEWA's OH&S covers all workers operating at its premises. DEWA has a responsibility to prevent and mitigate negative occupational health and safety impacts that are directly linked to its operations. DEWA has an obligation to its contractors, subcontractors and vendors, and complies with OHSAS 18001 and 18002 to ensure health and safety measures. DEWA's dedicated SPO6 Health and Safety Procedure for Contractors and Consultants is also in place to promote a culture of health and safety and to improve the standards in all its projects, activities, and operations. DEWA regularly audits its operations to assess how well it is performing with regards to health and safety. For H&S there is a corporate Global Hazard Code aligned to operations, products and services. The Supply Chain management follows the similar approach of H&S management from requisitions to deliverables along with quality and standards for H&S.

In 2019, DEWA has won the Sword of Honour (for H&S) and Globe of Honour (for Environment) for the last 12 and 8 years respectively. DEWA is the first utility in the world to win both of these prestigious awards simultaneously.

The Health and Safety at Corporate Level has categorised injuries into 'Major' and 'Minor'. A Major injury is, 'a non-fatal injury that does not result in permanent total disability or permanent partial disability, but results in more than 7 lost workdays'. Injury types are as under:



In 2019, DEWA had 12 major employee-related injuries and 12 contractor-related injuries (30 contractor related incidents reported). In 2019 DEWA recorded no employee- or contractor-related fatalities.

DEWA monitors and reports on the Accident Incident Rate (AIR). Frequencies are calculated based on 1,000,000 and AIR based on 100,000 as AIR has been calculated previously using the same denomination. DEWA defines Lost Time Injuries (LTI) as an injury sustained by an employee that results in loss of productive work, either in the form of absenteeism or delays as per international best practices.



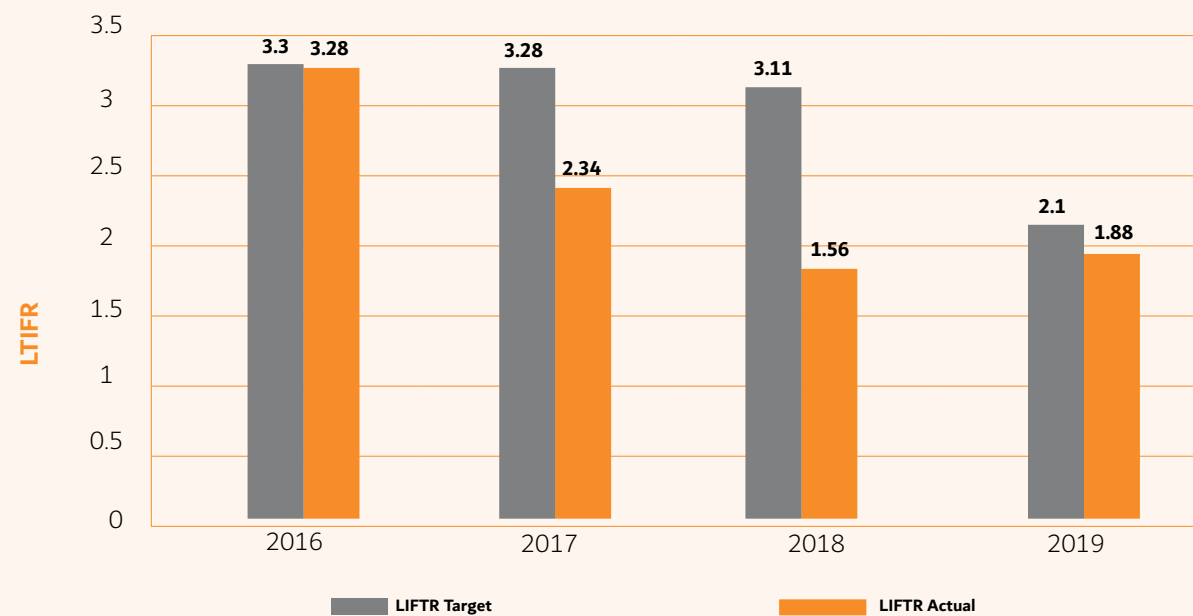
Lost Time Injury – 41 numbers in 2019
Lost Time Injury Frequency Rate (LTIFR) - 1.88

LTIFR = LTI x 1,000,000/ Working man-hours

41 X 1,000,000/ 21,787,500

Note: Please note that these 41 LTIs are injuries that resulted in claimed sick leaves or lost work- days by DEWA's permanent staff.

Loss Time Injury Frequency Rate (LIFTR) 2016- 2019



Note: Only DEWA permanent employees were considered for all injury-related calculations in this report. The work-related injuries for contractors are specified, wherever applicable.

All minor (first-aid level) injuries are excluded from the work-related injuries.



Man Days Lost: 741 man days
Total Hours Worked by DEWA employee: 21,836,250
Manhours

Total no. of staff x 7.5 (average working hours in a day)
x 250 (average number of days in a year)

11,646 x 7.5 x 250 = 21,836,250

One of the key indicators of safety performance is the Accident Incident Rate (AIR), which DEWA has successfully reduced by approximately 83% between 2009 and 2019.

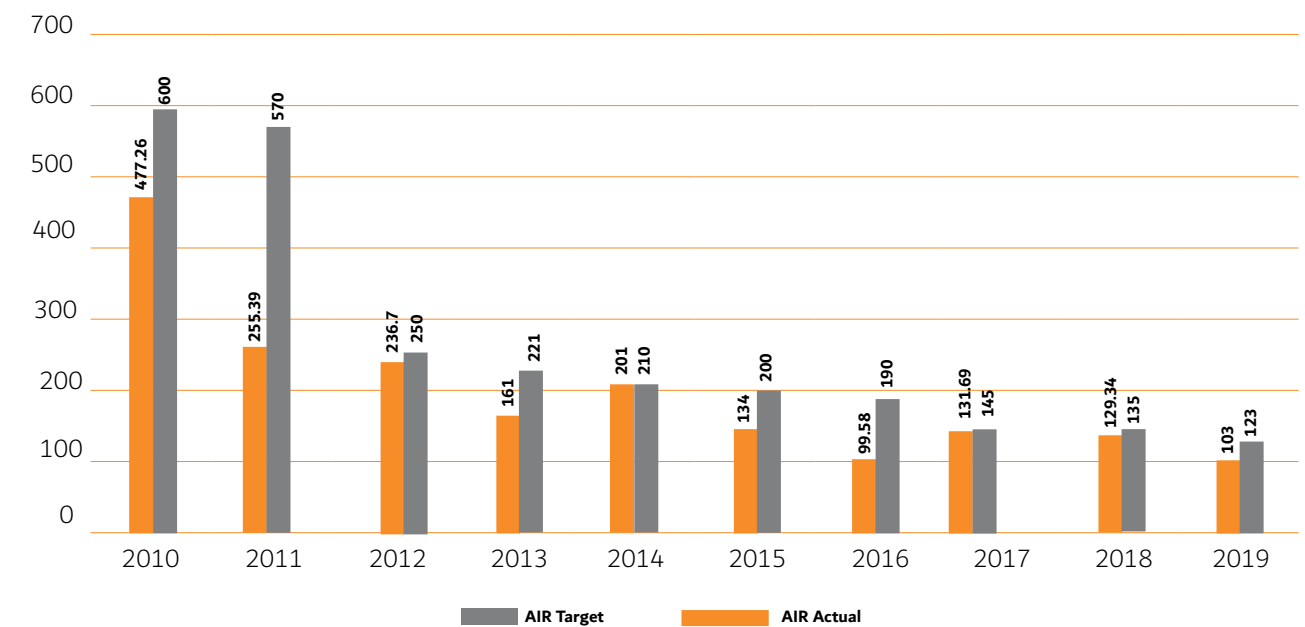


Accident Incident Rate (AIR) - 103
Number of RIDDOR incidents x 100000/ Total no. of staff =

12 x 100,000/ 11,620* = 103

* In this calculation, the Number of staff was based on an average of 13 months. Staff strength at the beginning of January, the end of January 2019 and the 11 subsequent months.

Key Performance Indicators -AIR



DEWA, identifies hazards with site inspections, risk assessments, and historical performance data analysis. It takes steps to mitigate them and control or remove any risks as per IMSPO3 Procedure of DEWA.

Many hazards cause or contribute to high-consequence injuries such as slips, trips and falls, road traffic collisions (predominantly caused by a third party), a foreign body entering the eye, sprains, and fractures. In 2019, no major injury or fatality occurred.

The hierarchy of control is intricately determined as per the IMSPO3 procedure on 'Elimination, substitution, engineering controls, administrative controls and Personal Protective Equipment (PPE)'. Corrective actions recommended and once the actions taken in an agreed period the corrections recorded and shared. DEWA has taken many steps to eliminate other work-related hazards and minimise risks through using the hierarchy of controls include predominantly elimination, administrative controls and regulated use of PPE. All permanent, contractual, temporary or outsourced workers in DEWA are included in DEWA's procedures, regulations and actions

CASE STUDY

Estisharati - DEWA Employee Assistance programme

Estisharati is designed for the emotional wellbeing of DEWA Employees making DEWA the first Government entity to start a counselling programme in Dubai. The programme has a proactive and preventative approach for the interests of employees, to identify and resolve personal issues much before they aggravate and have serious medical implications. Many public and private organisations have since benchmarked DEWA's programme.

The objective is to help employees with their emotional wellbeing, happiness and engagement by boosting their morale. This will help their career advancement, as they will be able to take deeper interest in their jobs and scope for advancement when their personal issues are put to rest. In addition, management, HR, Team Leaders, and Supervisors can devote more time focusing on the core business rather than handling employee issues, also to increased trust by stress free employees so they can focus more on the work at hand without getting caught up in their issues. The programme includes a survey to measure stress, sent by DEWA to its staff every quarter.

Programme highlights and achievements 2016 – 2019:

1. Stress Screening: - Quarterly stress screening is done by sending email survey link to all DEWA Employees. Participants are offered 3 choices of service support.

- Individual counselling/Coaching services
- Individual counselling sessions are provided by service providers;
 - American Centre for Psychiatry and Neurology (ACPN)
 - American Wellness Centre (AWC)
 - LifeWorks
- Coaching sessions are provided internally by certified coaches

2. Group support (for common issues) & workshops

Areas identified for Individual counselling seekers: Employee who are currently seeking support have

some of the following issues to address:

- Grief
- Death of loved one
- Critical illness of a family member
- Problems in marriage/Abuse
- Divorce
- Single Parenting,
- Trauma due to financial betrayal
- Suicidal tendencies
- Low self-esteem
- Obesity
- Sleeping disorder

Skill Development

There is a provision for manager referrals. Through this approach, managers can refer their employees who need emotional support to the Estisharati team. The main aim is to change their behaviour and habits to improve the performance and attitude of employees through counselling. Those performing poorly (Emirati only) at work can be referred for counselling, after getting approval from the divisional or departmental head.

Special Support for People of Determination

-included extended counselling services for Employees of Determination.

Automation project

DEWA's Estisharati automation project was implemented in 2019. To be aligned with Dubai Paperless Strategy, DEWA's Estisharati automation project was implemented in 2019 to make the entire process paper free through emails, SAP and iPads. 373 employees from different division have participated in the online stress test in 2019.

% of employees reported 0 stress post EAP Support as per employee Feedback received online.	
2018	2019
88%	93%

Launched Emotional Wellbeing Course

This was implemented from a suggestion received via DEWA's innovation portal Afkari. The suggestion was to provide an opportunity to employees with high and very high scores to work on their emotional wellbeing through a tailored course. It was designed and delivered from March to June 2019.

Trauma support for critical cases

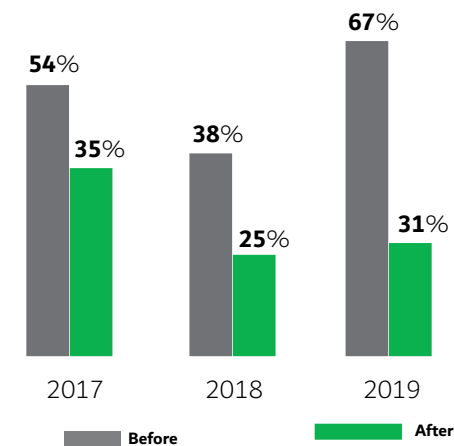
Cases are followed up with the therapist, family members and the hospital to ensure an effective rehabilitation.

In-house coaching support to develop in-house capabilities

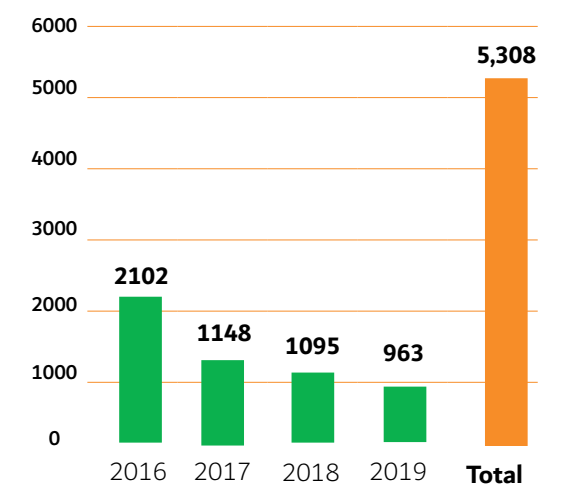
In June 2019, internal coaches were trained and certified to provide in-house coaching for employees who are not inclined to receiving counselling or seek in-house services.

Stress Test - Best and After from service providers

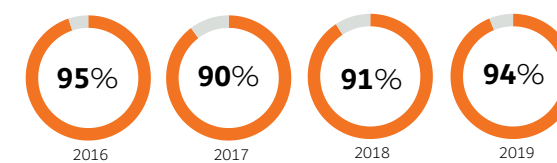
Stress Test Before and After - ACPN



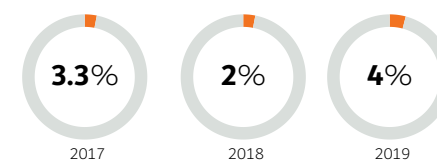
Stress Test Participants



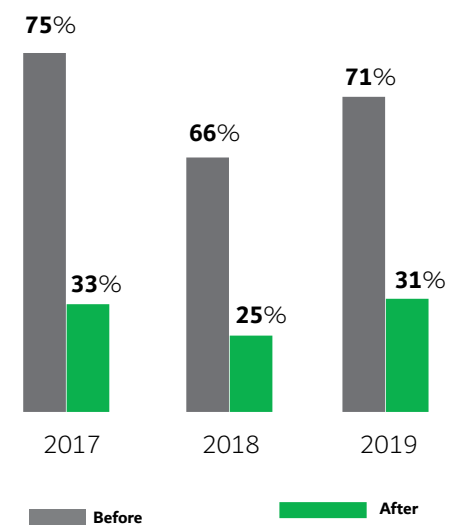
Estisharati Annual Survey - Happiness Rate



Employee Engagement Rate in Estisharati



Stress Test Before and After - AWC





1ST

DEWA WAS RANKED FIRST IN THE 2019 GOVERNMENT OF DUBAI CUSTOMER HAPPINESS AND MYSTERY SHOPPER INDEX WITH A SCORE OF 90.1%



94 %

DEWA GOT THE HIGHEST GOVERNMENT SCORE OF 94 % FOR SMART ADOPTION RATE IN 2019



140

IN 2019, 140 SOLAR EQUIPMENT MANUFACTURERS REGISTERED THEIR PRODUCTS WITH DEWA

Chapter 7

Customers



MANAGEMENT APPROACH

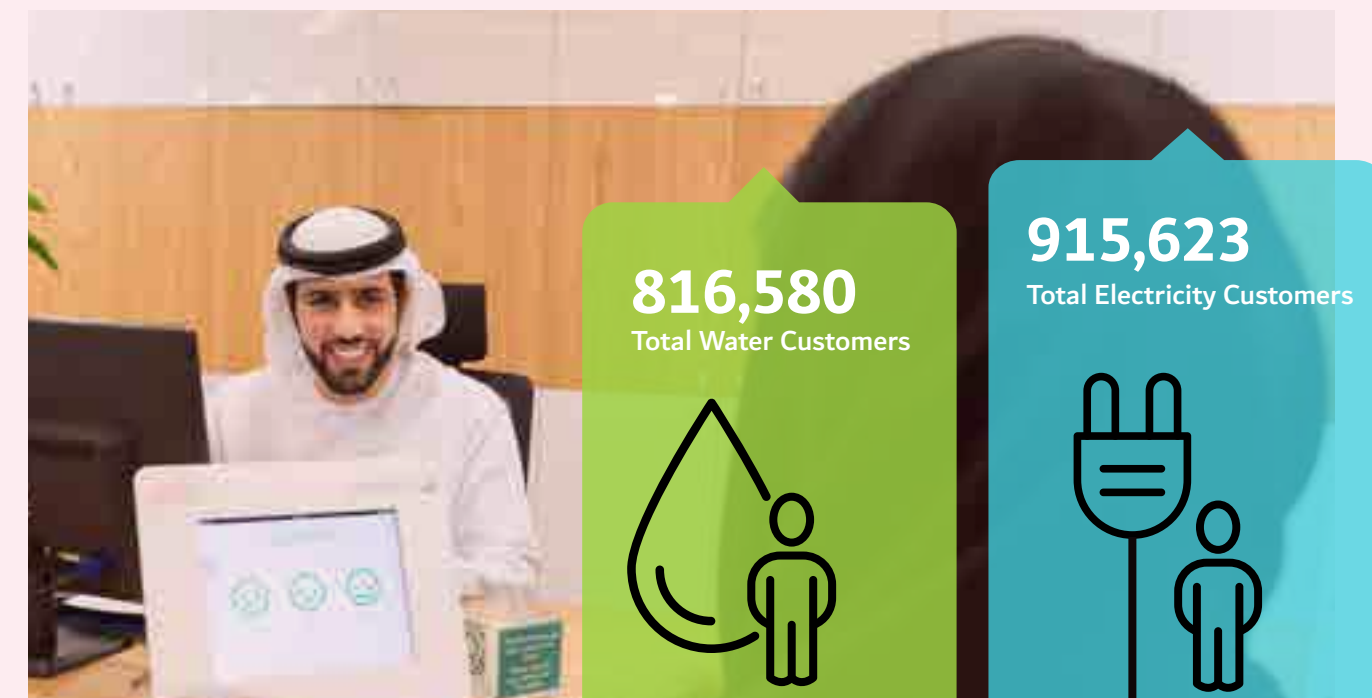
DEWA aligned its strategy to the Dubai Plan 2021 and the UAE Vision 2021, by adopting Happiness as a key pillar and adding the strategic objective (SO2: Engaged & Happy Stakeholders) to its corporate strategy map. As the exclusive provider of electricity and water services to Dubai, DEWA is committed to making its customers happy by continuously doing its best and dedicating the right resources to forecast, analyse, deliver, and exceed customers' needs and expectations.

Three main key areas to achieve customer happiness

1	2	3
Excellence in customer service Engage with customers among different categories to identify their needs Designing and listening and responding to customer needs and expectations Listening and responding to customer feedback, and suggestions	Digital services for more effective customer service Ensure providing best user experience and interface for our digital services Powering DEWA's operations with AI through: Rammas at Work, Powered by Rammas, and Rammas for You Providing customers with accurate, reliable, comparable and timely information and services online 24/7	Access to electricity and water services Providing access to services for all customer segments including people of determination The UAE, represented by DEWA, has maintained its 1 st global ranking, for the 3 rd consecutive year, with scores of 100% in all Getting Electricity indicators.

DEWA'S CUSTOMERS EU10

DEWA takes pride in its high standards to exceed customer satisfaction. Its customer base has been continuously growing to meet the demands of the expanding population and economy of Dubai..



Category Wise Number of Customer Accounts as of 31st December 2019 GRI 102-6,303-5,EU3

Description	Electricity		Water	
	No. of Customer Accounts	Percentage	No. of Customer Accounts	Percentage
UAE National	56,237	6.14%	52,583	6.44%
Expatriates	642,915	70.22%	623,202	76.32%
Commercial	204,646	22.35%	136,328	16.70%
Government organizations	6,559	0.72%	2,000	0.24%
Industrial	3,020	0.33%	1,600	0.20%
Exempted	1,075	0.12%	443	0.05%
EV	1,171	0.13%		
Port sales	-	-	424	0.05%
TOTAL	915,623	100%	816,580	100%

OPERATIONAL EXCELLENCE EU10, EU28, EU29, EU30

DEWA has been constantly enhancing its services and operations using the latest technologies to become one of the leading pioneers in system reliability, sustainability, and availability worldwide. Between 2006 and 2019, it achieved a cumulative efficiency improvement of 31.4 %, equivalent to 57.58 million tons of CO₂ emission reduction by optimising the design and utilisation of its power and water co-generation plants. DEWA's transmission network availability is typically above 99.9% reflecting world-class standards of performance. The operation management approaches adhere to DEWA's Integrated Management System (IMS) as per universally recognised standards for health, safety, environment, and quality (ISO 9001, ISO 14001 and OHSAS 18001).

DEWA uses 3 key indicators to observe and measure its overall performance in providing energy:

The System Average Interruption Frequency Index (SAIFI) is used to measure the average number of customers who experienced interruptions over a year. In 2019 DEWA's SAIFI was approximately 0.071 against the target of 0.087.

System average interruption frequency index (SAIFI) TARGET AND ACTUAL 2019		
YEAR	TARGET	ACTUAL
2019	0.087	0.071
2018	0.095	0.092
2017	0.105	0.100

CML (Customer Minutes Lost) measures DEWA's ability to restore power during emergencies such as power interruptions due to faults or unplanned outages. In 2019, DEWA achieved the lowest CML worldwide at 1.86 minutes against the target of 2.35 minutes.

CML Unplanned TARGET AND ACTUAL 2019		
YEAR	TARGET	ACTUAL
2019	2.35	1.86
2018	2.55	2.39
2017	3.00	2.68

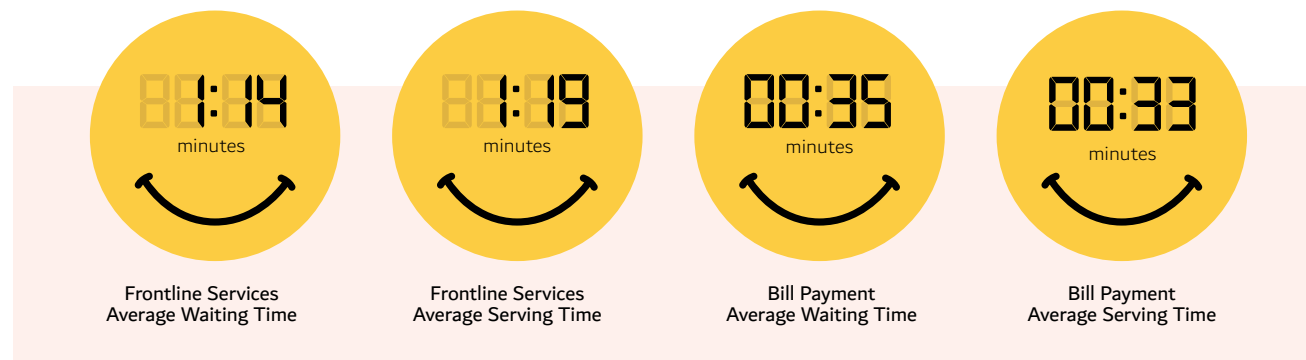
Availability Factor (AF) is a measure of the percentage of time that DEWA plants are available to produce power. AF is important, especially during summer because of the greater demand for electricity. DEWA is proud to report its availability factor of 99.18% in the summer of 2019 and with an annual availability factor of 92.10 % due to the maintenance conducted during the winter period.



Service Excellence

DEWA took first place in the Dubai Customer Happiness and Mystery Shopper Index with a score of 90.1%, and highest government score 94 % for Smart Adoption rate in 2019. DEWA maintained its top position in the Happiness Index for large Dubai government entities for the second consecutive year with a 95% happiness level in 2018.

Customer Happiness Centres



In 2019, the service feedback section **resolved 97%** of customers' complaints **within 3 working days**, and **100%** within **7 working days**. Additionally, **91% of customers' suggestions** were responded to within **0-3 working days**, and 100% **within 15 working days**.

AN INCLUSIVE ORGANISATION

As part of the UAE's efforts to bring a comprehensive community development, the UAE Government launched a national policy for empowering POD. The policy aims to create an inclusive society for them and their families, ensuring through services and facilities that accommodate their needs. HH Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince

of Dubai and Chairman of the Executive Council, launched the 'My Community... A City for Everyone' initiative to transform Dubai into a disability-friendly city by 2020. DEWA is committed to this initiative and is working to become an inclusive organisation.

From 2015 onwards, DEWA began to being more

inclusive towards POD and has accomplished many government requirements to be an accessible organisation for POD. DEWA has improved access for Customers of Determination into its buildings. This included physical and information accessibility, and staff have been trained to help and best support people with disabilities. DEWA has also redesigned all its facilities to meet all the Dubai Universal Code of Design, which is the building and design regulations for People of Determination. POD Customer Happiness Score achieved 94% in 2019.

DEWA also implemented several inclusive services including making its premises, website and smart app disability-friendly, in accordance with Dubai Government's standards. In 2019, DEWA website achieved 94% rating, which is the 1st in the (triple A) AAA Standard in the Web Content Accessibility Guidelines Evaluation. DEWA staff at the customer happiness centres were proficiently trained in both sign language and disability etiquette to help DEWA's Customers of Determination with all their requirements: 106 staff have been trained in sign language, and 10 staff hold the Intensive Professional Sign Language Diploma.

Inclusive Service for People of Determination

- Ash'ir initiative** (Arabic for 'to signal') is a service with a live video chat using sign language that enables hearing-impaired customers to directly communicate with DEWA's call centre staff or through the DEWA smart app.
- Braille versions of DEWA Customer Guide booklets** created in coordination with the Emirates Association for the Blind. In cooperation with the Community Development Authority (CDA), DEWA launched a series of initiatives to reduce the burden of electricity costs for residents with low-income jobs, including People of Determination who hold low-income jobs or come from less fortunate families.
- Launched in 2016, **Sanad Card** provides POD with priority services, and wheelchair services at all DEWA branches. The Sanad Card also provides a discount for service registrations, bill payment, and subscriber information charges.



SMART INITIATIVES GRI 103-1, 103-2, 103-3

DEWA is supporting Dubai's strategy to become a smart and sustainable city, by integrating smart and digital services in all its operations. This includes improving energy and water efficiency, and government work to the highest standards; to enhance customers' experience and make all its stakeholders happy.

DEWA initiated the 1st blockchain based electric vehicle charging network initiative in the region, by establishing a unified blockchain network to manage electric vehicle activities. These include electric vehicle registration, charging, billing and settlement, in coordination with government entities. DEWA is working with key partners in Dubai, including the public and private sectors, to establish a network of trust and a platform

to exchange information over blockchain network to digitize the process of leasing and renewing properties in Dubai, and harness the latest blockchain technology to establish a network of trust and information exchange among its stakeholders: SDG, DLD, WASL, Emirates NBD/EI & DNRD. It will also deploy a blockchain network for payment reconciliation and settlement for ePay transactions, in coordination with Smart Dubai and the Department of Finance.

The Smart Grid Strategy contains ten programmes, which will be completed over the short, medium and long-term, spanning from 2014 to 2035. These programmes are:



SHAMS DUBAI

DEWA provides regular Solar Photovoltaic Certification Training sessions and has an enrolment scheme for consultants and contractors. This is to ensure that they comply with its high standards of quality and safety, so Shams Dubai customers only use qualified professionals in solar photovoltaic work and projects. In 2019, 140 solar photovoltaic consulting and contracting companies enrolled with DEWA, and 600 solar engineers had successfully completed the Solar Photovoltaic Certification Training. This has resulted in a competitive equipment market with clear benefits for customers.

164.2MW CONNECTED (5,620 sites)

147MW additional applications registered.

523MW total interest expressed through NOC applications

How can you apply to install solar systems at your premises?

- You can reach out to one of the solar consultants or contractors listed on DEWA's website in order to discuss the feasibility and cost.
- Once you assigns a contractor or consultant for execution of the project, they will carry on all the required procedures with DEWA and with the competent civil authorities.
- Once the system is ready for connection you will signs the connection agreement and get connected.
- The solar system will be generating electricity and you will be benefiting from it.
- DEWA will also offset any surplus generation fed into the against your electricity consumption
Go solar and visit www.dewa.gov.ae/shamsdubai

SMART APPLICATIONS VIA SMART GRID AND METERS

DEWA's Smart Applications offer several benefits and new features to its customers, allowing them to get comprehensive information about their existing and historical consumption, along with predictive analysis. The data obtained automatically through smart devices will be available for its customers to monitor and compare their actual consumption patterns for specific periods of time that will help them to ensure more sustainable consumption. Smart meters communicate remotely with DEWA systems and provide consumption information at regular time intervals. DEWA has installed approximately 744,956 smart electricity meters and 815,872 smart water meters as of December 2019, thus replacing 100% of its mechanical water meters with smart water meters and 80% of its mechanical electricity meters with smart electricity meters.



GREEN CHARGER

The electric vehicle Green Charger Initiative was launched to set-up electric vehicle charging infrastructure for the public across Dubai, while taking into consideration international best practices and lessons-learned from similar initiatives worldwide. Before the launch of the initiative, there were limited numbers of electric vehicles in Dubai mainly due to the lack of an electric vehicle charging infrastructure. DEWA, as the electricity provider for Dubai, took the lead in setting up the first electric vehicle charging infrastructure in the region to encourage the public to switch over from petrol vehicles to electric vehicles. In 2015, DEWA developed and installed 100 electric vehicle charging stations in busy areas across the city, such as government offices, airports, petrol stations, shopping malls, parks, commercial offices, clinics and hospitals, residential complexes and tourist attractions. Since then, DEWA installed 200 charging stations across Dubai, with plans to further increase the total number of charging stations to 240 stations by the end of 2020. DEWA announced the incentive for free charging for to electric vehicle owners registered in the Green Charger Initiative from 1 September 2017 to 31 December 2019.



INNOVATIVE SMART SERVICES FOR CUSTOMERS

2019	<p>My Sustainable Living Programme</p>	<p>High Water Consumption Alerts</p>			
	<p>Smart Response - Electricity Enhance Customer journey in responding to Technical Notifications</p>	<p>Smart Response - Water Enhance Customer journey in responding to Technical Notifications</p>			
2018	<p>DEWA Store Added Value Service where they can benefit from DEWA's partners</p>	<p>Green Dubai Sustainable programme aiming to expand the usage of Smart Services</p>			
	<p>8080 Comprehensive programme to achieve 80% E-Adoption target</p>	<p>One Step Improving Move in service by integrating with RERA & Retail Estate Management Companies</p>	<p>Move To New service fulfilling needs of customer in transferring supply to new premises</p>	<p>Rammas DEWA Virtual agent supported by Artificial intelligence</p>	<p>Future Happiness Centre First Unmanned Happiness Centre facilitating customer migration to smart services</p>
2016	<p>Smart Centre Directing walk-in customers to co-design and to use smart services</p>	<p>Ideal Home Promote world-class home style living in collaboration with 8 government entities</p>	<p>EV-Green Charger Support Dubai Smart City by availing EV Charging Stations network</p>	<p>AI Waha Proof of concept for universal agent and single point of contact</p>	<p>AI Namoos Improving connection services for projects (below 150 kwh) as part of WB Doing business Report</p>
	<p>Shura Panel Proof of concept for smart engagement platform with customers</p>	<p>Pearl Collector Targeting to benefit from customer notification and feedback for continuous improvement</p>	<p>Shams Dubai Encouraging household to generate their own electricity</p>	<p>Takamul I Integration with RERA/ Supporting Partnership with public sector</p>	<p>Fawran Adoption of smart meters as part of dewa smart grid project</p>
2014	<p>Ash'ir 24/7 sign language video conference for People of Determination</p>	<p>Ashal Promoting & Training DEWA customers on smart services</p>	<p>Estareeh I Promoting Bill Payment through direct debit in partnership with banks</p>		

DEWA continuously strives to achieve customer happiness by adopting the latest technologies, providing high quality services in its transactional, informative and interventional services, while adopting the highest sustainability standards. This has resulted in DEWA, providing reliable end-to-end services available 24/7 to meet its customers' needs.

SMART MOBILE APPLICATION

The smart mobile application, or app, offers world-class automated services, such as end-to-end online form submission, automated back-end business processes using workflows, tracking of service requests, activation and de-activation of supply services, No-Objection Certificates (NOC)s, and estimates. The app includes a AI virtual assistant and is available on iOS and Android, as well as on IoT devices. The smart adoption rate of DEWA's online services on the smart app and website was 94 % by the end of 2019, and in the 4th quarter 2.2 million transactions were completed. This had a positive impact on the environment by reducing CO₂ emissions by 7.7 thousand tonnes. Furthermore, the smart adoption rate of helped DEWA's customers save AED 85 million, and helped DEWA save AED 6.7 million.

DEWA STORE

DEWA Store on DEWA's smart app provides exclusive offers and discounts to DEWA's customers, in cooperation with a number of public and private sector companies. The move is the first of its kind by a government organisation in the UAE. The Store offers discounts on telecommunication and internet packages, bank services, insurance, smart-home systems, maintenance companies, consultants, and logistics companies.

RAMMAS (AI)

Rammas is DEWA's virtual employee. DEWA launched it in January 2017 and was the 1st government organisation to launch an online chatbot service in English and Arabic that communicates with customers and respond to their enquiries. This initiative supports the directives of Dubai's leadership to reduce customer visits to customer care centres by 80% and to encourage the use of smart channels to support the Smart Dubai initiative. It also supports DEWA's efforts in artificial intelligence, in adherence with the UAE AI strategy.

DEWA FUTURE CUSTOMER HAPPINESS CENTRE (FCHC)

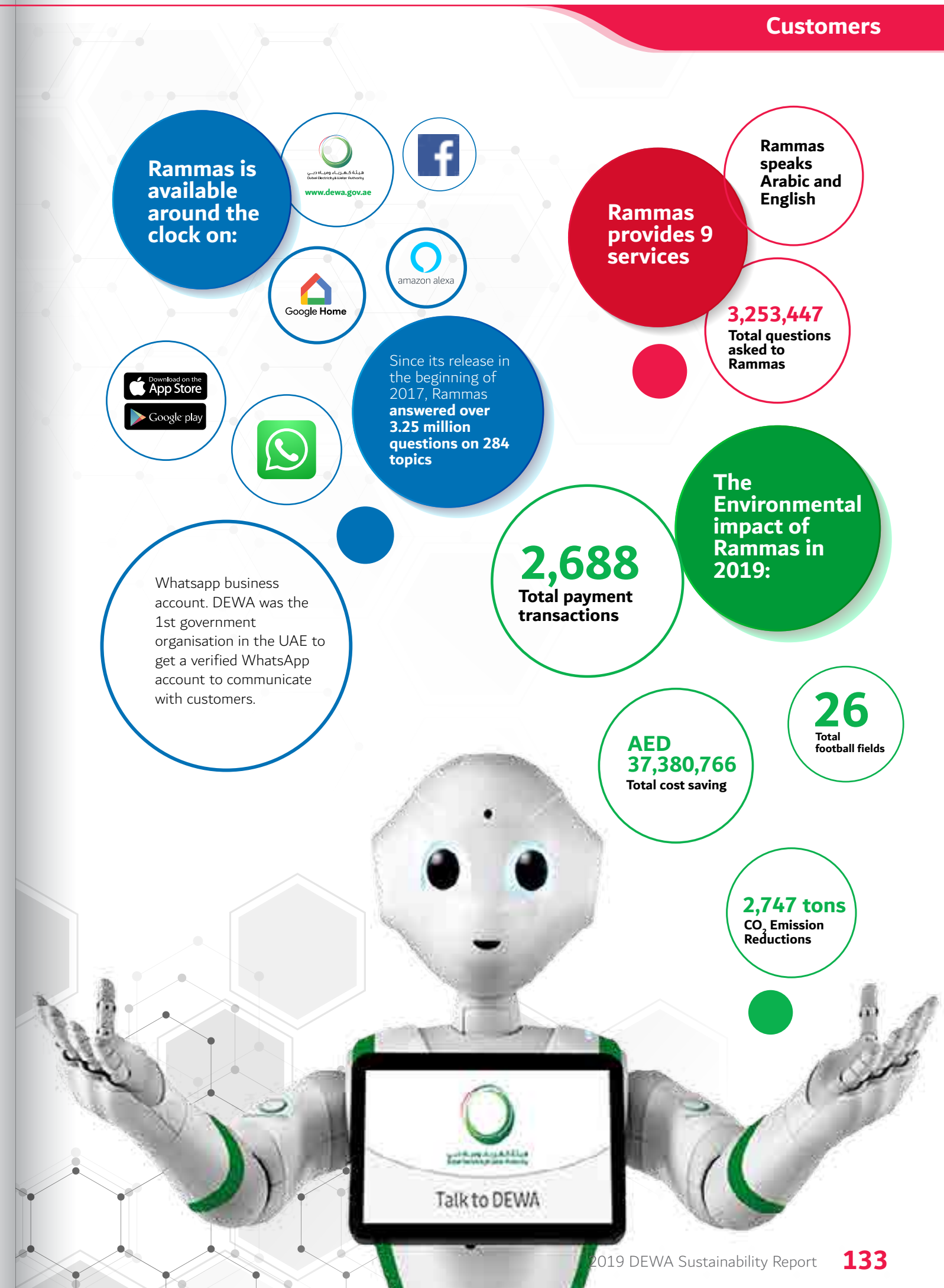
DEWA Future Customer Happiness Centre (FCHC) is the first integrated smart customer happiness centre in Dubai, which depends on Artificial Intelligence (AI) and Robotics, and provides smart and innovative services to all stakeholders. HH Sheikh Hamdan bin Mohammad bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Executive Council of Dubai, inaugurated the first centre at Ibn Battuta mall, in September 2017.

The centre achieves customer happiness and ensures that the government environment is completely paper-free by 2021, granting customers 7-star quality services experience. It relies on the latest technologies and smart self-service booths to help customers complete their transactions with ease. To continue the success of the Future Customer Happiness Centres, DEWA opened other branches in Dubai Festival City Mall, and Dragon Mart 2 since June 2018, and converted both its centre in Burj Nahar and Al Twar to FCHC as well. Additionally, DEWA Customer Service Centres were converted into SMART Centres providing world-class customer experience & services.

DEWA also maintained its top position in the Happiness Index in the large Dubai government entities category, for the second consecutive year with a 95% happiness level. It has also received The International Standard for Service (TISSE) certificate from The International Customer Service Institute (TICSI) after receiving a five-star mark with a score of 98.3%.

SMART RESPONSE

The smart response initiative for technical notifications on DEWA's smart app and website, provides customers with several features such as self-diagnosis of interruptions, reducing steps to deal with complaints from 10 to 6 steps by DEWA and only 1 step for the customers if they can diagnose the problem themselves. The service also reduces time needed to fix problems. It finds the best solutions to deal with, follow up and resolve technical notifications in a simpler and easier way. It also provides value-added service such as high water usage alerts. This led to DEWA achieving 91% in customer happiness, and allowed 56% of customers to solve the issues they are facing independently, and reduced the time required to fix the problems by 43%, in addition to saving 300 million gallons of water, and saving AED 17 million for customers.

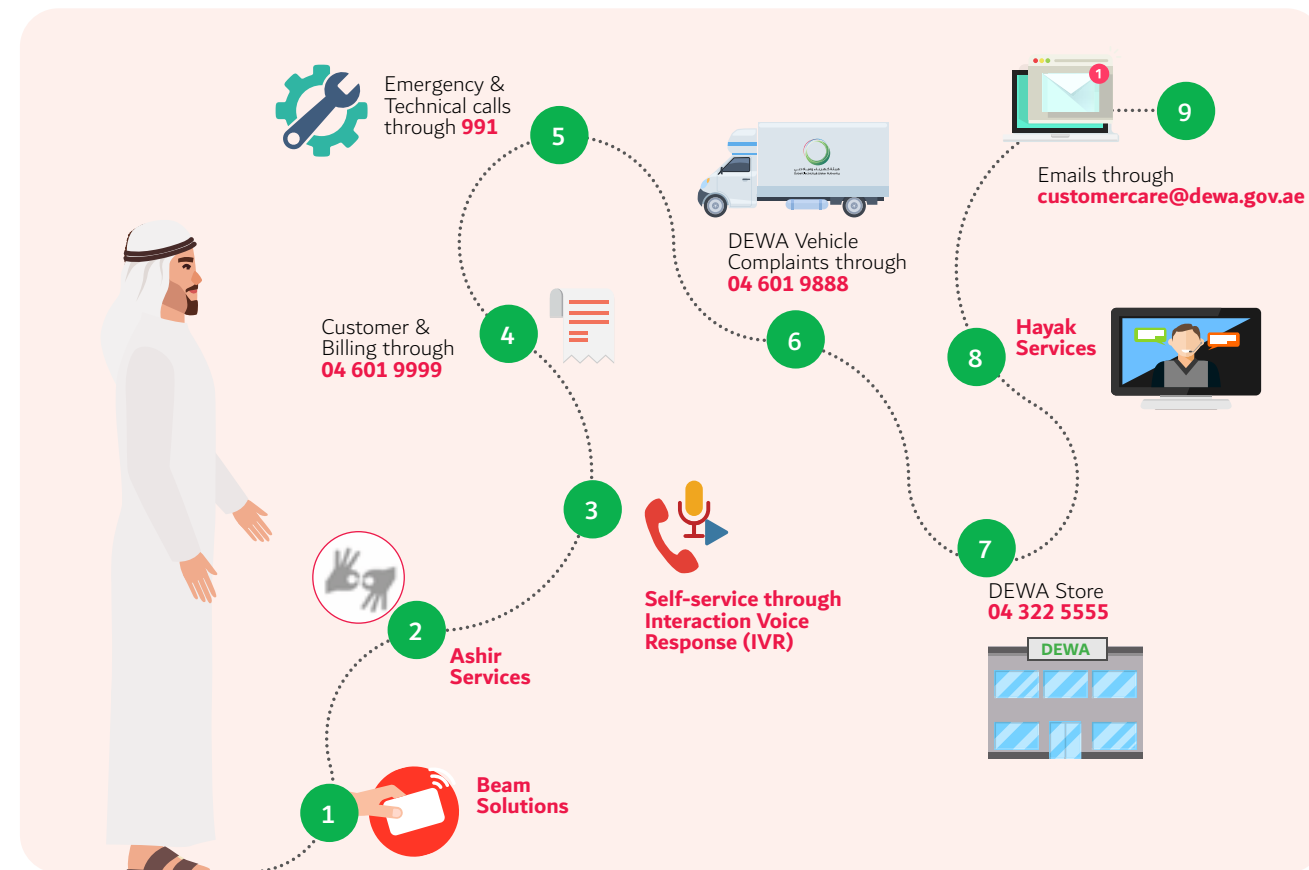




CUSTOMER HAPPINESS

DEWA's Customer Care Centre is always available to answer customer enquiries. In 2019, its Customer Care Centre scored 95.41% for service quality, and received over 1.34 million calls; 40% of which were handled by its Interactive Voice System (IVR), enabling customers to make use of its services smartly and efficiently. DEWA's Call Centre handled 852,815 calls, answering within an average of 12 seconds. The call centre also replied to 154,108 emails from different customers with varying requests and requirements. The call centre also received 23,225 online chats through its Hayak service, which is an online text, video and audio chat system for all customers.

The Customer Care Centre has a variety of touch points that meets customers' needs, which include:



CASE STUDY

Ideal Home Conservation Initiative



DEWA has launched multiple programmes, initiatives and campaigns for customers to make well-informed behavioural decisions, reduce their consumption, to protect the environment and natural resources. One is the Ideal Home initiative launched in 2016, which rolled out in collaboration with nine government organisations: Dubai Corporation for Ambulance Services, Community Development Authority, Dubai Health Authority, Directorate General Of Civil Defence Dubai, Dubai Municipality, Dubai Police, the Roads and Transport Authority, Dubai Smart Government, and the Federal Authority For Identity And Citizenship.

The objectives of the Ideal Home Service are:

- Raising, promoting and enhancing customer awareness and engagement levels about the best practices at homes on matters of sustainability, health and safety, security, environment, social responsibility and smart adoption. Thereby, help achieve happy homes in Dubai.
- Achieving the highest standards in sustainable

living by making it an embedded culture within households.

- Enhancing efficiency levels by maximising partnership opportunities for the purpose of provisioning unified government services.
- Enabling, and provide for, customer happiness through innovative services.

In 2019 the initiative ran again for the 3rd time in Dubai. It encourages customers and residents to compete with each other to adopt best utility-conservation, health, public safety, community responsibility, smart transformation, emergency preparation, confirming to residential laws and sustainability practices etc. Best performers within the participating households are recognised and suitably rewarded. The service brought about savings of 2.2 GWh of electricity, around 30 Million IG of water, a reduction of around 1,523 tonnes of carbon emission, and achieving financial savings of around AED 2.2 million.



39

SOCIAL AND
HUMANITARIAN
INITIATIVES IN 2019



26,623

VOLUNTEERING HOURS

DEWA'S CSR EFFORTS OVER THE LAST FEW YEARS HELPED INCREASE THE COMMUNITY'S SATISFACTION AND HAPPINESS FROM **89.01%** IN 2016, TO **93.05%** IN 2019



DURING 2019, NONE OF DEWA'S LARGE PROJECTS PHYSICALLY OR ECONOMICALLY DISPLACED PEOPLE WITHIN ITS OPERATIONAL BOUNDARIES. ^{EU-22}

Chapter 8

Community



MANAGEMENT APPROACH

DEWA is on the right track to achieve its vision through ambitious initiatives, programmes, and projects. These projects consolidate sustainability through its economic, social, and environmental aspects to ensure long-term results. In terms of social projects, DEWA believes in creating sustainable impact by supporting and giving back to society and communities both locally and globally. Right from an early stage, DEWA adopted a clear policy for CSR with an integrated framework, aligned with international best practices, regulations and laws. The framework includes social initiatives that are in line with the UAE Vision 2021, Dubai Plan 2021, DEWA Strategy 2021 and the Year of Tolerance. This strategy is constantly updated for Society Happiness and CSR based on stakeholder and community needs, to exceed society's expectations and satisfaction.

DEWA uses these channels of communication to determine its stakeholders' needs for CSR and to promote its initiatives:



YEAR OF TOLERANCE 2019

The Year of Tolerance highlighted the impact of tolerance, and expanded the scope and opportunities for communication and dialogue. To support this, DEWA introduced 39 programmes and initiatives; from community development projects such as school awareness programmes, charitable and humanitarian programmes in the UAE and abroad, to international sustainable projects.

FROM DEWA TO THE COMMUNITY

DEWA SUPPORTS THE 'WELL OF HOPE' COMPETITION

In response to the Well of Hope competition announced during the Holy Month of Ramadan in 2019 by His Highness Sheikh Mohammed bin Rashid Al Maktoum, DEWA dug 20 wells in drought-affected areas in 7 countries worldwide to help 34,000 people. The Well of Hope competition is an initiative that called public and private sector employees across the UAE to pump water through a mobile virtual interactive pumping device. Mohammed bin Rashid Al Maktoum Global Initiatives (MBRGI) will donate the amount of water

pumped as actual water to people living in communities that lack access to clean water. The competition promoted the importance of basic efforts by individuals in giving back to the community and in serving humanity. DEWA employees played a major role in this competition displaying their eagerness to pump as many gallons of water through the virtual pumping device. The 20 water wells are being built while some are completed, as planned.



DEWA REFURBISHES CLASSROOMS AT NATIONAL CHARITY SCHOOL IN DUBAI AND CHECKS ITS HEALTH AND SAFETY PROCEDURES

DEWA launched an innovative project to refurbish the classrooms at National Charity School in Dubai and met the needs of the school, teachers and students. DEWA also checked the health and safety procedures at the school. DEWA had more than 37 volunteers who put 296 volunteering hours into the project, to refurbish the school classrooms. The school has 1,700 students including many People of Determination and from families with limited incomes. The volunteers also refurbished the staffroom as well as the arts, music, and computer rooms. They also added an artistic touch to the school's open areas. The volunteers further checked the health and safety procedures at the school to ensure its alignment with the highest international standards.



RUWAAAD AMBASSADORS PROGRAMME 2019

DEWA sent a delegation of UAE national youth to China for two weeks as part of the 'Ruwaad Ambassadors of Innovation - Leaders of the Future' programme. Implemented by DEWA and Watani Al Emarat Foundation, the programme supports the UAE's efforts to empower young people through creativity and innovation, as well as volunteer work among DEWA's employees whilst promoting Emirati-Chinese relations. The training areas included renewable energy generation and storage technologies, AI systems, blockchain, fifth-generation network

technologies, smart systems for electricity and water infrastructure, and electric vehicle related technologies. This programme is part of a joint international project with the Chinese Government and is aligned with DEWA's CSR and strategy to build young Emirati's abilities and provide them with the necessary tools for innovation, while offering them the opportunity to train in areas that serve DEWA's strategic operations, in collaboration with leading international technology companies.

SCHOOL BAG INITIATIVE

The Society Happiness department at DEWA in collaboration with DEWA's Women Committee developed an initiative to support orphans, People of Determination and those less fortunate who live in the UAE; providing them with school bags and stationery at the beginning of the academic year for 2019/2020. This initiative focused on two schools, and two organisations that help People of Determination, and one non-governmental organisation to help 650 students. This initiative and DEWA's other social initiatives are an integral part of its strategy to serve the public good. This also supports the Dubai Plan 2021 to make Dubai an inclusive and cohesive society.



ENVIRONMENTAL INITIATIVES

COLLABORATION WITH EMEG

DEWA organised the International Coastal Clean-up Day in collaboration with Emirates Marine Environmental Group (EMEG) at Jebel Ali Marine Sanctuary on 21 September, 2019. Over 500 people attended, including 60 employees from DEWA and their families and some students from DEWA Academy. Participants cleaned the beach, collecting over 1,000 kilogrammes of waste.

DEWA VOLUNTEERING DAY

During Green Week, DEWA designed a volunteering day for its employees and their families, with the participation of the public and support from Water Alliance Association. The volunteers conducted different activities to create awareness on adopting sustainable behaviour and reducing plastic in daily lives.



EMPOWERING OUR YOUTH

7th FUTURE ENGINEERS CAMP

DEWA organised the 7th Future Engineers Camp to promote innovation and creativity amongst the next generation. Around 46 students aged 12—15 years old who are children of DEWA employees attended the camp at DEWA's 'Reading is Positive Energy' in Zabeel Park in Dubai. This year's camp introduced the 17 UN SDGs 2030, including fighting poverty and protecting the earth, using technology to protect future generations and learning to programme through Scratch and Blockly. The camp focused on the benefits

of the Internet of Things, and Artificial Intelligence to provide energy and water. In this way, students can look forward to promising careers by learning important technical skills. They learned about renewable energy through hands-on experience in technological creativity and engineering. The camp has achieved significant successes since its launch four years ago. It attracted 193 participants who came up with 80 promising projects from the interactive workshops and seminars under the supervision of specialists.



DEWA ACADEMY

DEWA Academy prepares the next generation of Emiratis in vocational fields by providing them with suitable knowledge and skills that match best international vocational practices. The goal of the Academy is the nationalisation of the entry-level technical positions in all DEWA departments.

290

STUDENTS IN DEWA ACADEMY UP TO 2019

112

STUDENTS GRADUATED FROM DEWA ACADEMY UNTIL 2019



DEWA VOLUNTEERS

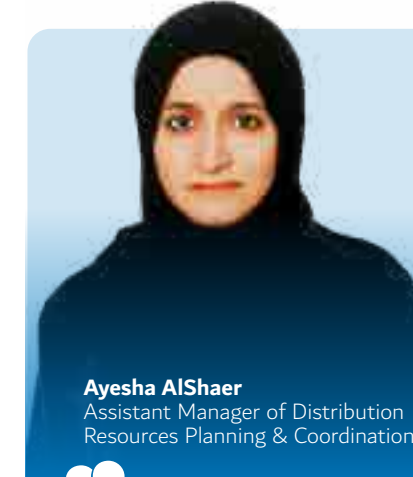
DEWA Volunteers are the backbone of its message to society. Here are some of the volunteers' testimonials reflecting on how they feel about giving back to the community.



Badr Al Ansari,
Senior Engineer - Project Support



"My passion towards volunteering started one year ago when I was chosen to volunteer in Zayed Camp in Bangladesh. Back then, I felt the need to help others and make a difference in society. The feeling has grown and the motivation got bigger. When you find a purpose to connect with the community you expand your horizons, strengthen your spirit and feel better. We always feel the need to meet other people, make a friend and have a meaningful conversation, which I have found throughout my volunteering work. I volunteered for the Zayed Al Khair camp in Bangladesh in 2019, where we worked in the hospital to support the medical team during the cataract operations over three days. We had to transfer patients, carry senior citizens, dress them and prepare them for surgery. It was the most wonderful experience I had participated in, I have discovered myself as a human being, with new sides and aspects in my personality and developed new skills and abilities."



Ayesha AlShaer
Assistant Manager of Distribution Resources Planning & Coordination



"The culture of giving back to society through volunteering or any other means is rooted in our Emirati family lifestyle. We follow the legacy of the late Sheikh Zayed bin Sultan Al Nahyan. We consider giving back and volunteering as a part of our loyalty to our country and following the journey of our country's founder. Our Emirati society is a community built on tolerance where our members support each other regardless of their nationality, ethnicity or religion."



Ali Majid
Senior Officer - E&W Conservation



"Volunteers are the only human beings on the face of the earth who reflect this nation's compassion, unselfish caring, patience, and just plain loving one another". This quote by Erma Bombeck has always inspired me to go that extra mile to give back to the community. It is either through my job role, by helping stakeholders save the environment through sustainable initiatives and now, by participating in the DEWA volunteers programme, I found opportunities to serve the nation and the society. We have conducted many activities in Dubai schools, on the occasion of World Water Day to spread awareness on reducing water. I have been also volunteering for the Ramadan Amaan campaign distributing meals to needy people and also at the airport."

26,623

TOTAL VOLUNTEERING HOURS IN 2019 FROM DEWA EMPLOYEES

DEWA VOLUNTEERING DIPLOMA

DEWA's approach has successfully incorporated community service into all aspects of the work culture. The organisation has been proactive in training its employees as volunteers for EXPO 2020 as part of its support as the official sustainable energy partner. It developed a DEWA Volunteering Diploma in collaboration with Amity University and already 80 employees have received this Diploma. The purpose of this diploma is to prepare the employees as volunteering champions during the EXPO 2020 exhibition and other future volunteering opportunities. The diploma has customised course material and subject matter for volunteering.



INCLUDING AND EMPOWERING PEOPLE OF DETERMINATION

DEWA has been proactive in creating an inclusive society that ensures empowerment and a decent life for POD and their families. DEWA works within the framework of the National Policy for Empowering People of Determination, launched by His Highness Sheikh Mohammed bin Rashid Al Maktoum, to empower POD in an inclusive environment that allows them to unleash their potential and prove their capabilities.

In 2019, DEWA sponsored several initiatives and social programmes to include and empower POD. This is part of DEWA's CSR to provide them with an inclusive environment. Between 2015 and 2019, there were 48

programmes & initiatives for People of Determination. These initiatives have helped reach 3,039,247 people. The Society Happiness score for DEWA's support to POD was 94% in 2019.

DEWA has made significant achievements to include and empower People of Determination. It redesigned all of its facilities, buildings and customer happiness centres to achieve 100% compliance with the Dubai Universal Design Code in 2019. DEWA's buildings have been equipped for all emergencies by placing audio and visual alarms, alarms in toilets, and evacuation wheelchairs on all floors. DEWA has also updated its website and smart app to help Customers of Determination.

DEWA launched the 'Inclusion People of Determination Innovation Incubator' initiative to encourage DEWA's subsidiaries on the inclusion of People of Determination. This supports knowledge transfer and customisation for the region, creating awareness, and capacity building to make Dubai a city of the future. The initiative includes programmes such as Motivating Leadership, Training, Knowledge Management, Benchmarking Visits and Successful Stories.

DEWA participated in the National Inclusive Employment Standards Committee in Dubai, prepared the included employment guide in Dubai, and launched the federal Recruitment Platform for People of Determination. DEWA also sponsored the Access Abilities Expo 2019.



DEWA SPONSORS DUBAI AUTISM CENTRE

DEWA continues to sponsor Dubai Autism Centre as part of its ongoing CSR initiatives. DEWA's support to the Centre includes providing utilities and services that will enhance social, cognitive skills and fitness to children. It also includes supporting training and occupational development, to keep pace with the latest developments and using state-of-the-art technologies; and educational and treatment rehabilitation

programmes. This will enhance the centre's services, and increase the reliability of electronic devices and smart applications to save time, effort and costs. DEWA supports the centre by providing the best environment in which to interact with people with autism, their families, and their careers.

DEWA's role as an organisation that supports people of determination

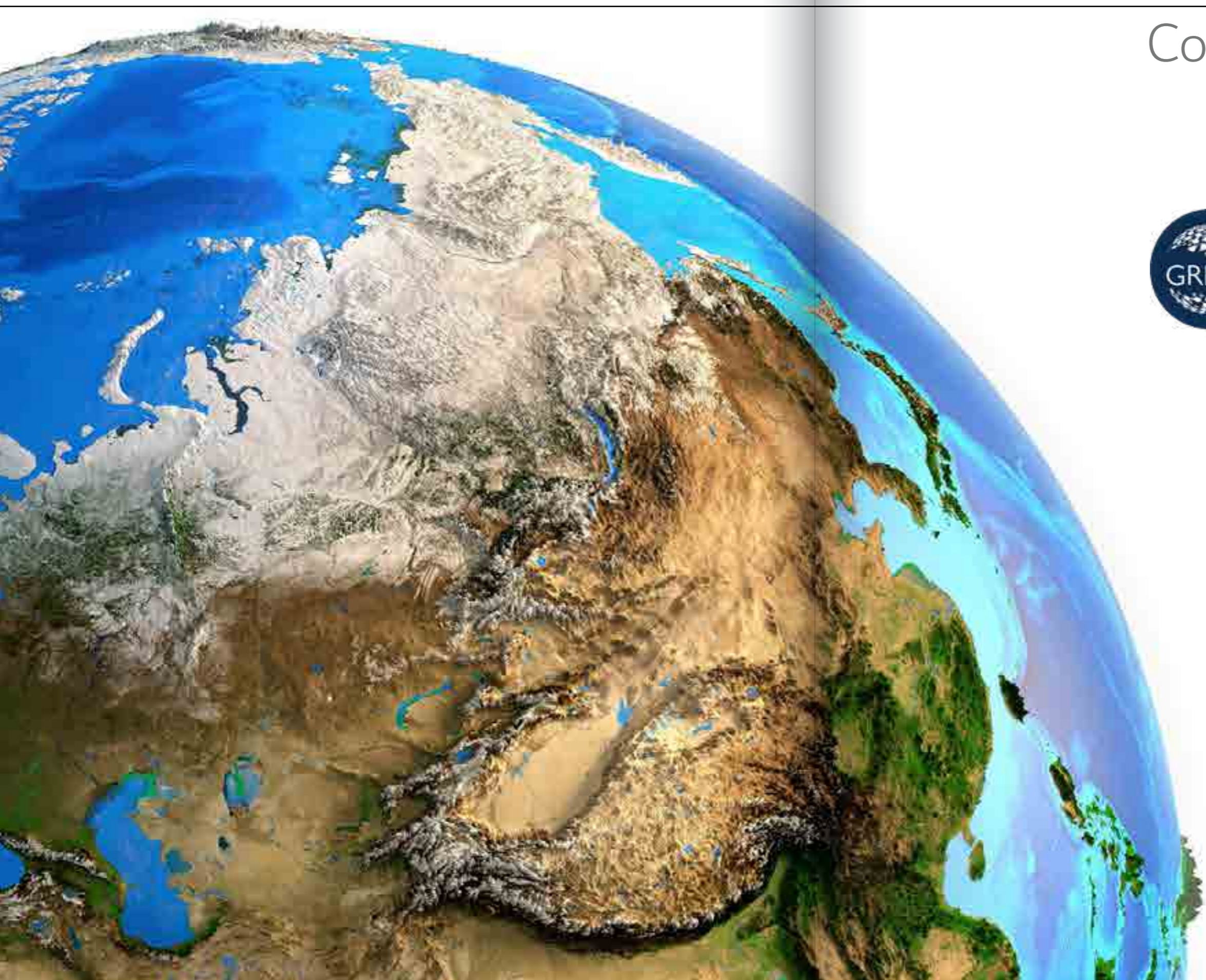


CASE STUDY

Zayed Al Khair Eye Camp in Bangladesh

DEWA organised a treatment camp in Bangladesh in cooperation with Noor Dubai called 'Zayed Alkhair'. This is part of DEWA's humanitarian and voluntary efforts during the Year of Tolerance. The Zayed Al Khair camp treated over 14,934 elderly people for cataract and other eye-related diseases. The programme includes early screening for children and distributing school bags to orphans. 11 male and female volunteers from DEWA took part in the seven-day camp at Narain, Khulna District, in Bangladesh.





GRI

Content Index



Material Topic environmental	Material within the organisation or external	Relevant External Stakeholders					
		Customers	Suppliers	Partners	Society	Government	Investors
Economic							
Availability and Reliability of Electricity	Both	✓	✓	✓	✓	✓	✓
Demand Side Management	Both	✓			✓	✓	✓
Economic Performance	Both	✓	✓	✓	✓	✓	✓
Procurement Practices	Both		✓	✓	✓	✓	✓
System Efficiency	Within						
Research and Development	Within						
Environmental							
Energy	Both	✓	✓	✓	✓	✓	✓
Emissions	Both	✓			✓	✓	✓
Water and Effluents	Both	✓	✓	✓	✓	✓	✓
Waste	Both	✓			✓	✓	✓
Climate Change	Both	✓	✓	✓	✓	✓	✓
Social							
Access to Electricity	Both	✓	✓	✓	✓	✓	✓
Sustainability Culture	Within						
Innovation	Both	✓	✓	✓	✓	✓	✓
Occupational health and safety	Both	✓	✓	✓		✓	✓
Employment	Both				✓	✓	
Diversity & Equal Opportunity	Within						
Disaster / Emergency Planning and Response	External	✓	✓	✓	✓	✓	✓
Customer Happiness	Both	✓			✓	✓	

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
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	102-2	Activities, brands, products, and services	16-17	
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	102-7	Scale of the organisation	17-18,26	
	102-8	Information on employees and other workers	99-100	8.5;8.6
	102-9	Supply chain	35-36	12.7
	102-10	Significant changes to the organisation and its supply chain	No significant changes	
	102-11	Precautionary Principle or approach	88	
	102-12	External initiatives	24-25	
	102-13	Membership of associations	21	
	102-14	Statement from senior decision-maker	11	
	102-16	Values, principles, standards, and norms of behaviour	18	
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	102-40	List of stakeholder groups	49	
	102-41	Collective bargaining agreements	No CBA in UAE	
	102-42	Identifying and selecting stakeholders	48	
	102-43	Approach to stakeholder engagement	49	
	102-44	Key topics and concerns raised	49	
	102-45	Entities included in the consolidated financial statements	16-17	
	102-46	Defining report content and topic boundaries	13	
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	102-49	Changes in reporting	No significant changes	
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102-51	Date of most recent report	13		
102-52	Reporting cycle	13		
102-53	Contact point for questions regarding the report	13		
102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards Core option		
102-55	GRI content index	151-156		
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GRI G4 Sector Disclosures 2013 Electric Utilities	EU1	Installed capacity, broken down by primary energy source and by regulatory regime	59	7.2
	EU2	Net energy output broken down by primary energy source and by regulatory regime	58-59	7.2
	EU3	Number of residential, industrial, institutional and commercial customer accounts	125	
	EU4	Length of above and underground transmission and distribution lines by regulatory regime	59	
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	103-3	Evaluation of the management approach	35-36	12.7
GRI 204 Procurement Practices 2016	204-1	Proportion of spending on local suppliers	35-36	
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GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its boundary	58-66	7.1
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GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its boundary	59, 63-64	7.3;8.4
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GRI G4 Sector Disclosures 2013 Electric Utilities	EU11	Average generation efficiency of thermal plants by energy source and by regulatory regime	63-64	7.1;8.4; 12.2;13.2
	EU12	Transmission and distribution losses as a percentage of total energy	54,59	7.1;8.4; 12.2
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GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its boundary	56,58	8.4
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	302-4	Reduction of energy consumption	89-90	7.2;7a;7b; 12.8;13.2
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GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its boundary	70-72	6.4;6.5; 12.2
	103-2	The management approach and its components	70-72	6.4;6.5; 12.2
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GRI 303 Water & Effluents 2018	303-1	Interactions with water as a shared resource	70-74,76-77	6.4;6.5; 12.2
	303-2	Management of water discharge-related impact	76-77	3.9;6.3; 12.4
	303-3	Water withdrawal	70-72	6.4;6.6; 14.3
	303-4	Water discharge	76-77	3.9;6.3; 12.4
	303-5	Water consumption	73,125	12.2;6.1; 6.4
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	103-2	The management approach and its components	86-87	3.9;13.1
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GRI 305 Emissions 2016	305-1	Direct (Scope 1) GHG emissions	86-87	3.9;12.4
	305-2	Energy indirect (Scope 2) GHG emissions	No Power Purchased during 2019	3.9;12.4
	305-4	GHG emissions intensity	86-87	3.9;12.4
	305-5	Reduction of GHG emissions	86-87	3.9;12.4; 13.2
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GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its boundary	76-77,93-94	6.3;6.6
	103-2	The management approach and its components	76-77,93-94	6.3;6.6
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GRI 306 Effluents & Waste 2016	306-1	Water discharge by quality and destination	67-77	3.9;6.3; 12.4;14.2
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			93-94	3.9;6.3; 12.5
	306-4	Transport of hazardous	93-94	3.9;6.3; 12.4;14.1
	306-5	Water bodies affected by water discharges and/or runoff	76-77,93-94	6.3;14.1
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GRI G4 Sector Disclosures 2013 Electric Utilities	EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region	101	8.3
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GRI G4 Sector Disclosures 2013 Electric Utilities	EU26	Percentage of population unserved in licensed distribution or serviced area	0%	1.4;7.1; 11.1
	EU28	Power outage frequency	125	7.1
	EU29	Average power outage duration	125	7.1
	EU30	Average plant availability factor by energy source and by regulatory regime	125	7.1
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Acronyms

4G	Fourth Generation
4IR	Fourth-Industrial Revolution
A&DC	Assessment and Development Centre
ACPN	American Centre for Psychiatry and Neurology
AF	Availability Factor
AFI	Areas for improvement
AI	Artificial Intelligence
AIR	Accident/ Incident Ratio
AMI	Advanced Metering Infrastructure
ASR	Aquifer Storage and Recovery
AWC	American Wellness Centre
BAIR	Berkeley Artificial Intelligence Research
BAU	Business As Usual
BCP	Business Continuity Plans
BDE	Business Development and Excellence Division
BIG	Billion Imperial Gallons
BPS	British Psychological Society
BSC	Balanced Scorecard
BSI	British Standards Institution
CAS	Carbon Abatement Strategy
CC&S	Climate Change & Sustainability Department
(CDA)	Community Development Authority
(CDM)	Clean Development Mechanism

(CEM)	Clean Energy Ministerial
(CER)	Certified Emission Reduction
(CISL)	Cambridge Institute for Sustainability Leadership
(CML)	Customer Minutes Lost
(COP21)	Conference of the Parties
(CSP)	Concentrated Solar Power
(CSR)	Corporate Social Responsibility
(DCES)	Dubai Clean Energy Strategy
(DCS)	District Cooling Services
(DER)	Distributed Energy Resources
(DEWA)	Dubai Electricity & Water Authority
(DFA)	Dubai Future Accelerators
(DGEP)	Dubai Government Excellence Programme
(DSM)	Demand Side Management Strategy
(DUSUP)	Dubai Supply Authority
(EDF)	Électricité de France
(EMS)	Environmental Management System
(EMWG)	Energy Management Working Group
(ENMS)	Energy Management System
(ERM)	Enterprise Risk Management
(EV)	Electric Vehicle
(FCHC)	Future Customer Happiness Centre
(GHG)	Greenhouse Gas
(GRC)	Governance, Risk & Control

(GRRC)	Group Risk & Resilience Committee
(GWP)	Global Warming Potential
(HRSGs)	Heat Recovery Steam Generators
(HVAC)	Heating, Ventilation and Air Conditioning
(i-RECs)	International Renewable Energy Credits
(IMS)	Integrated Management System
(IPP)	Independent Power Producer
(IVR)	Interactive Voice System
(IWP)	Independent Water Producer
(JAPS)	Jebel Ali Power Station
(KHDA)	Knowledge and Human Development Authority
(KM)	Knowledge Management
(KPIs)	Key Performance Indicators
(KV)	Kilovolt
(kW/h)	kilowatt hour
(LEED)	Leadership in Energy and Environmental Design
(LTI)	Lost Time Injuries
(MBRGI)	Mohammed bin Rashid Al Maktoum Global Initiatives
(MIGD)	Million Imperial Gallons Per Day
(MOE)	Ministry of Education
(MRV)	Monitoring, Reporting and Verification
(MSF)	Multi-stage flash
(MtCO₂e)	metric tons of CO ₂ equivalent
(MW)	megawatts
(NESA)	National Electronic Security Authority
(NOC)s	No-Objection Certificates
(NOx)	Nitrogen Oxide
(ODS)	Ozone-depleting substances
(OEM)	Original Equipment Manufacturer
(OHL)	overhead line
(P&WP)	Power and Water Planning
(PMO)	Project Management Office
(POD)	People of Determination
(ppm)	parts per million
(PTD)	Project Management—Transmission department
(PV)	photovoltaic
(PVRO)	PV and Reverse Osmosis
(R-22)	Refrigerant 22
(R&D)	Research and Development
(RFQ)	Request for Qualification
(RO)	Reverse Osmosis

(ROI)	Return on Investment
(SAIFI)	System Average Interruption Frequency Index
(SCADA)	Supervisory Control and Data Acquisition
(SDGs)	Sustainable Development Goals
(SDME)	Solar Decathlon Middle East
(SF6)	sulphur hexafluoride
(SLT)	Sustainability Leading Team
(SO2)	Sulphur Dioxide
(T&D)	Transmission and Distribution
(TESTIAC)	Turbine Inlet Air Cooling
(TICSI)	The International Customer Service Institute
(TISSE)	The International Standard for Service
(TLM-OHL)	Transmission Line Maintenance department
(TNA)	Training Needs Analysis
(TSE)	Treated Sewage Effluent
(UAV)	Unmanned Aircraft Vehicle
(UFW)	Unaccounted for Water
(UNFCCC)	United Nations Framework Convention on Climate Change
(UNGC)	UN Global Compact
(UPS)	Uninterrupted Power Supply
(USGBC)	US Green Building Council
(VPP)	Virtual Power Plant
(W&C)	Water & Civil
(WEF)	World Economic Forum
(WGES)	World Green Economy Summit
(WHO)	World Health Organization
EMEG	Emirates Marine Environmental Group



Independent Limited Assurance Report

To the Management of Dubai Electricity and Water Authority

Conclusion

Based on the procedures performed, and evidence obtained, we are not aware of any material misstatements in the Assured Sustainability Information, as described below, which is prepared in accordance with GRI Standards, as disclosed in the Dubai Electricity and Water Authority ("DEWA") Sustainability Report 2019 for the year ending 31 December 2019.

Assured Sustainability Information

The Assured Sustainability Information comprised of the following selected performance areas:

Selected performance area	GRI Indicator	Pages
Direct greenhouse-gas (GHG) emissions scope 1	GRI 305-1	Page 87
Water discharge by quality and destination	GRI 306-1	Pages 76-77
Work-related injuries	GRI 403-9	Pages 118-119
Average generation efficiency of thermal plants by energy source and by regulatory regime	EU11	Page 63
Power outage frequency: The System Average Interruption Frequency Index (SAIFI)	EU28	Page 125

Criteria Used as the Basis of Reporting

The criteria used as the basis of reporting are the GRI Standards (Core level of disclosures) as published by the Global Reporting Initiative.

Basis of Conclusion

We conducted our work in accordance with *International Standard on Assurance Engagements ("ISAE") 3000 Assurance Engagements other than Audits or Reviews of Historical Financial Information*. In gathering evidence for our conclusions our limited assurance procedures comprised:

- enquiries with relevant DEWA management and staff to understand DEWA's process for determining material issues;
- the process for developing the Selected Performance Areas within the DEWA Sustainability Report 2019;
- enquiries with relevant DEWA management and staff to understand the internal controls, governance structures and reporting processes for the Selected Performance Areas;
- analytical procedures over the Selected Performance Areas;
- walkthroughs of the Selected Performance Areas to source documentation;
- evaluating the appropriateness of the criteria with respect to the Selected Performance Areas;
- considering that the selected performance areas have been reported in accordance with the GRI Standards.

In accordance with the ISAE 3000 standard we have:

- used our professional judgement to plan and perform the engagement to obtain limited assurance that the Assured Sustainability Information is free from material misstatements, whether due to fraud or error;
- considered relevant internal controls when designing our assurance procedures, however we do not express a conclusion on their effectiveness;
- ensured that the engagement team possess the appropriate knowledge, skills and professional competencies.

How we Define Limited Assurance

Limited assurance consists primarily of enquiries and analytical procedures. The procedures performed in a limited assurance engagement vary in nature and timing, and are less in extent than for reasonable assurance engagement. Consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had reasonable assurance procedures been performed.

Use of this Assurance Report

This report has been prepared for the Management of DEWA. We disclaim any assumption of responsibility for any reliance on this report, to any person other than the Management of DEWA, or for any other purpose than that for which it has been prepared.

Management's Responsibility

Management are responsible for:

- determining that the criteria is appropriate to meet their needs;
- preparing and presenting the Selected Performance Areas in accordance with the criteria; and
- establishing internal controls that enable the preparation and presentation of the Selected Performance Areas that are free from material misstatement, whether due to fraud or error.

Our Responsibility

Our responsibility is to perform a limited assurance engagement of the Assured Sustainability Information, and to issue an assurance report that includes our conclusion.

Our Independence and Quality Control

Our work was performed in compliance with the requirements of the International Federation of Accountants (IFAC) Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) as well as the assurance firm (assurance provider) be independent of the assurance client, in relation to the scope of this assurance engagement, including not being involved in writing the Report. We have complied with the applicable independence and other ethical requirements of the IESBA code.

KPMG Lower Gulf Limited
Dubai
20 July 2020



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