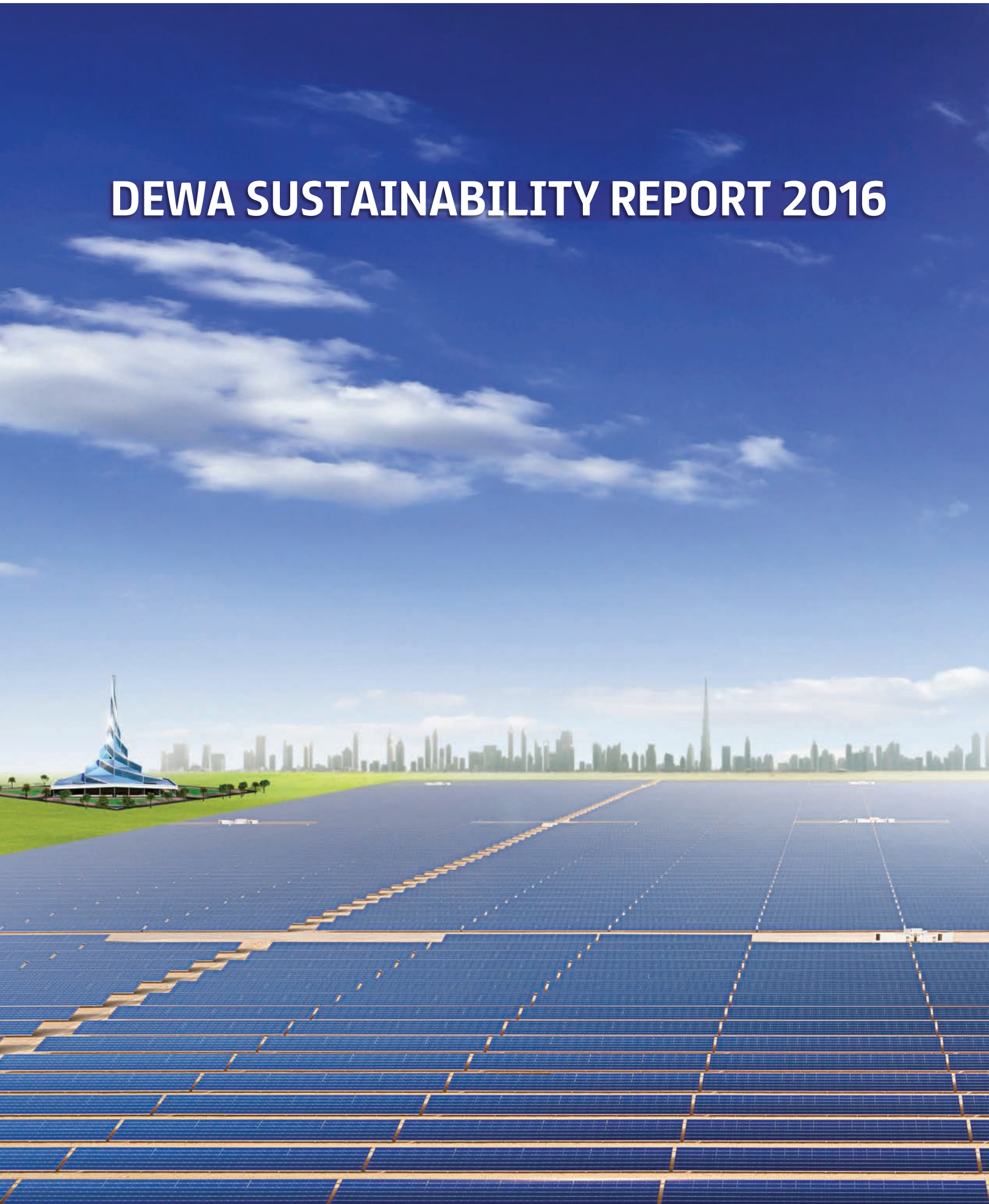
حكومة دبي
GOVERNMENT OF DUBAI

هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority

DEWA SUSTAINABILITY REPORT 2016



OUR VISION

A sustainable innovative world-class utility.

OUR MISSION

We are committed to the happiness of our stakeholders and promoting Dubai's vision through the delivery of sustainable electricity and water services at a world-class level of reliability, efficiency and safety, in an environment that nurtures innovation with a competent workforce and effective partnerships; supporting resources sustainability.

OUR 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

“

Protection of the environment and achievement of sustainable development in the UAE is a national duty; it has its own institutional structures, integrated legislature and advanced systems.

”

His Highness

Sheikh Mohammed bin Rashid Al Maktoum

Vice-President and Prime Minister of the UAE
and Ruler of Dubai

“

Our goal is to establish the UAE as a successful global model combining: economic growth, energy sustainability & a clean, safe environment.

”

His Excellency

Saeed Mohammed Al Tayer

Managing Director and Chief Executive Officer,

Dubai Electricity and Water Authority

MESSAGE FROM THE MD & CEO OF DUBAI ELECTRICITY AND WATER AUTHORITY

Dear Stakeholders,

The world's increasing population is having a major impact on the Earth's environment, including the depletion of natural resources, and an increase in carbon emissions. This is the result of a number of factors including the current unsustainable lifestyle of the world's population.

DEWA's strategy derives from the Dubai Clean Energy Strategy 2050, launched by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai to transform Dubai into an international hub for clean energy and green economy, by providing 7% of Dubai's total power output from clean energy by 2020, 25% by 2030, and 75% from clean resources by 2050. In addition, we work to achieve and support Dubai's Demand Side Management Strategy, to reduce energy and water demand by 30% by 2030, and the Dubai Carbon Abatement Strategy to reduce carbon emissions by 16% by 2021.

DEWA is also working according to the strategic objectives set by the long-term "A Green Economy for Sustainable Development" national initiative launched by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai; to develop a green economy in the UAE. We are also working hard to achieve HH Sheikh Mohammed bin Rashid Al Maktoum's Smart Dubai initiative, to transform Dubai into the smartest and happiest city in the world, with the lowest carbon footprint.

According to the World Bank's Regulatory Indicators for Sustainable Energy Report, the UAE ranked first regionally and 28th globally, alongside some of the leading nations in clean energy development. The report also noted that the UAE achieved the lowest bids globally for the cost of photovoltaic solar projects. One major factor is the establishment of the Mohammed bin Rashid Al Maktoum Solar Park, which is the largest single-site solar park in the world based on the Independent Power Producer model (IPP). It will generate 1,000 megawatts (MW) by 2020, and 5,000MW by 2030, with a total investment of AED 50 billion. The park will contribute to a reduction of approximately 6.5 million tonnes of carbon dioxide emissions per annum.

The solar park reflects DEWA's efforts towards achieving sustainable development, as we realise the important role that renewable energy plays, in finding a balance between achieving sustainable development and preserving the environment.

We will continue to place sustainability at the heart of our business strategy, incorporating it into all our activities as we strive to achieve our vision to become a sustainable innovative world-class utility, hence contributing to our people's happiness, providing electricity and water according to the highest international standards and enhance the leading position of the UAE.

I trust that you will find this report useful and transparent in recording our achievements, progress and our journey towards our goal of making the UAE one of the best countries in the world by the time we celebrate our Golden Jubilee in 2021 and urge you to join us in our long term quest to ensure future generations will have the right to enjoy a sustainable and qualitative life on planet Earth.

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EXPO 2020

ABOUT
DUBAI ELECTRICITY AND WATER AUTHORITY

ABOUT THIS REPORT

This is DEWA's fourth annual sustainability report. It reflects the ways in which we are fulfilling our long–term commitments towards sustainability by examining our material economic, environmental, social, and governance topics with the purpose to communicate our sustainability performance and management practices to our stakeholders and to further enhance our dialogue with them.

SCOPE AND BOUNDARY

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 Joint Ventures and subcontractors is not reported unless otherwise stated.

The performance data provided in the report covers the reporting period from January 1st to December 31st 2016. 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. Where differences do exist, this is clearly stated in the relevant section.

DEFINING THE CONTENT

DEWA's 2016 Sustainability Report provides information on our sustainability performance and it is aimed at all of our organisation's stakeholder groups. DEWA is committed to reporting on its sustainability performance annually, and this report follows the 2015 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. The process for defining the report's content was based on the new GRI Standards as well as GRI G4 Electric Utilities Sector Disclosures. The principles of inclusiveness, materiality, sustainability and completeness were implemented as well as those of the Accountability AA1000 Standard on inclusiveness, materiality and responsiveness.

TAKING SUSTAINABILITY REPORTING TO THE NEXT LEVEL

Believing that transparency is the result of providing comprehensive, credible and comparable information, we have again submitted 2016 Sustainability Report for external assurance (reasonable level) to an independent assurance provider in accordance with the International Assurance Standard 3000 (ISAE 3000). In addition, we have positioned ourselves at the forefront of reporting being part of the GRI Standards Pioneers Program. The Program includes 100 organisations worldwide which immediately adopted the first Global Standards for Sustainability Reporting launched by GRI on October 2016, thus demonstrating high maturity level in sustainability reporting.

COMMENTS

At DEWA, we constantly seek to evolve and improve our sustainability performance. Therefore, we greatly value feedback from our stakeholders, so please send your comments, questions, or suggestions for improvement with regards to our fourth sustainability report at: **sustainability@dewa.gov.ae**

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

DEWA AT A GLANCE

Dubai Electricity and Water Authority (DEWA) is a government owned utility with the sole responsibility for supplying electricity and water to the Emirate of Dubai. DEWA owns, operates and maintains power stations and desalination plants, aquifers, power and water transmission lines and power and water distribution networks in Dubai. Our power generation and water desalination stations are mainly fuelled by natural gas. We buy 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 our main business activities are in the production and supply of electricity and water, we also have a number of other related business interests:

Al Etihad Energy Services Co. (ETIHAD ESCO) provides buildings energy efficiency services and is fully-owned by DEWA.

DEWA owns 70% of **Emirates Central Cooling Systems Corporation (EMPOWER),** a major provider of district cooling services (DCS) in the region. Its activities include 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.

Dubai Carbon Centre of Excellence (DCCE) is an energy projects consultancy with a focus on renewable energy and carbon credits trading. DEWA has a 36% effective share in the company.

Ducab High Voltage Cable Systems (DUCAB-HV) manufactures and supply high-voltage cables and was established as a joint venture of DUCAB (50%), DEWA (25%) and ADWEA (25%).

RWE Power International Middle East (RWE PI ME) is an energy projects consultancy owned 51% by DEWA and 49% by RWE Technology, the subsidiary of RWE, a leading German electric utility.

Data Hub Integrated Solutions is a wholly-owned subsidiary of DEWA that was formed to provide Data Center space, Cloud solutions, Managed Business Solutions and Managed IT services for DEWA and for external public and private entities.

Shuaa Energy 1 was established in 2015 under the Independent Power Plant (IPP) model to complete the 2nd phase of the Mohammad bin Rashid Solar Park and produce 200 MegaWatts (MW) of solar power. It belongs 51% to Jumeirah Energy International and 49% to ACWA Power Solar Limited.

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

Hassyan Energy Phase 1 is the region's first clean coal IPP. It was created to provide 2,400 MW of power to DEWA's grid and contribute to Dubai Clean Energy Strategy 2050 (DCES) target. It is owned 51% by Hassyan Energy Holdings and 49% by ACWA Power Harbin Holdings Limited.

Jumeirah Energy International, Shuaa Energy 2 Holdings and Hassyan Energy Holdings are Special Purpose Vehicles owned 100% by Jumeirah Energy International Holdings LLC, which is DEWA's arm for investments in IPPs.

KEY FACTS ABOUT DEWA

HISTORY OF DEWA

The rapid development of Dubai as an expanding port city during the 1950s required a specialised authority to be responsible for potable water production and power generation. Therefore, the Dubai Electricity Company and the Dubai Water Department were formed respectively in 1959 and 1961. The Dubai Electricity Company established its first two generating stations "A" and "B", between 1961 and 1973, to supply electricity to the inhabitants of Dubai through its modest distribution network. These stations depended on diesel fuel to run and had a total capacity of 60MW. The early presence of these electricity and water services, rendered a strong basis for the rapid modernisation of Dubai. One of the first 360KW Diesel Engine-Alternator sets from "A" station can still be seen in our current headquarters, in Garhoud, Dubai. In 1992, the late Sheikh Maktoum bin Rashid Al Maktoum, issued Decree No. (1) for the institution of Dubai Electricity & Water Authority (DEWA) as an independent public authority to be fully owned by the government and responsible for electricity and water production in Dubai. Since then our generation capacity has expanded to 10,000 Megawatts (MW) and our water production capacity to 470 Million Imperial Gallons per Day (MIGD), as of the year 2016.

OUR STRATEGY

Sustainability is the core of DEWA's strategy, vision and mission. We have continued to work hard to place sustainability at the heart of our business and embed the concept of sustainability more fully into everything that we do. Our understanding of sustainability extends beyond our own operations, into our supply chains, our communities, the wider society and Dubai's economy. This reflects the views of our stakeholders, who expect DEWA to lead as a responsible corporate citizen.

Our strategy has evolved to embed the three dimensions of sustainability, economic, social and environmental goals alongside the financial ones, giving us a fully integrated sustainable business strategy. We have further increased our focus on creativity and innovation as indicated by the change of our vision from "A Sustainable World-Class Utility" to "A Sustainable Innovative World-Class Utility" and the update to our mission statement. Our strategic direction will continue to support the UAE and Dubai 2021 vision and objectives to ensure and endorse effective implementation of our national and local strategies.

OUR STRATEGY MANAGEMENT SYSTEM

At DEWA, our strategy management process is implemented on an annual basis which is broken down into strategic objectives, corporate Key Performance Indicators (KPIs) and initiatives split across the four perspectives:

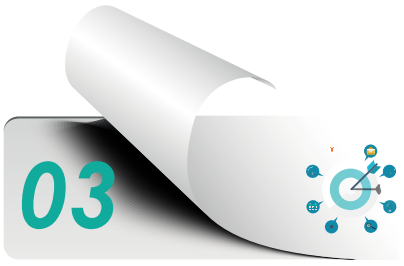
- **Triple-Bottom-Line Perspective:** It incorporates sustainability into business decisions through accounting for the three dimensions: financial, social and environmental thus, allowing us to manage performance in a broader business context.
- **Stakeholder Perspective:** It expands the focus of DEWA's value creation to all stakeholder categories.
- **Internal Processes Perspective:** It focuses on the strategic priorities for various business processes leading to the satisfaction of both customers and shareholders.
- **Support, Learning and Growth Perspective:** It focuses on the priorities to create an environment that supports organisational change, innovation, and growth to achieve excellence in our operations, and to create the necessary potential and improvements that should be available in DEWA.

STRATEGIC AMBITIONS INTO 2021

There are five themes in our 2021 strategy through which DEWA will achieve its long-term sustainability goals:

Sustainable Growth: Our strategy is rooted in reinforcing sustainability in all of DEWA's activities. Sustainable growth is our higher order goal that will allow us to mobilise our capabilities to contribute to the ambitious local and federal development plans, conserve our natural capital and ensure our lasting economic prosperity.

Operational and Smart Service Excellence: By implementing internationally recognised standards and management systems, adopting industry-leading practices and continuing to deliver world-class customer service, we aim to achieve excellence in the delivery of core services to our customers and stakeholders.



Stakeholder Engagement: Satisfying our stakeholders is a key enabler of our success as a public utility service provider, which is why we are moving forward with greater focus on engaging our different stakeholder groups to understand their needs and expectations.

Strategic Innovation: In the fast-moving energy and water sector, our ability to innovate is critical for preparing DEWA and Dubai for the future. This theme of our strategy will keep us focused on finding enduring and more appropriate solutions to the current and future challenges facing our business.

Competent Capabilities and Happy Culture that Fosters National Identity: Underlying our entire strategy are our people and capabilities – these are the foundation upon which we will implement our strategy. We remain committed to investing in our people and ensuring a happy, safe and productive work environment to support our business growth and success, while reinforcing and safeguarding the national identity of the UAE.

STRATEGIC PLANNING APPROACH

At DEWA, we understand that sustainability is a journey, not a destination. As part of our strategic planning approach, we conduct thorough research and analysis which provides us with a holistic inside-out view of our operational context that delivers a sustainable roadmap of the organisation. We examine major emerging political, social, environmental, technological, legal, industry and market trends as well as our historical performance to identify our strengths, weaknesses, threats and opportunities. We consider a number of scenarios based on emerging trends and underlying drivers. We then identify the strategic implications over the specified time frame. This planning cycle witnessed a major milestone, the development of DEWA 2021. It charts DEWA's direction for the next 5 years and describes the principal initiatives and projects necessary to achieve its mission.

Strategy

- Sustainable Growth
- Operational and Smart Service Excellence
- Stakeholder Engagement
- Strategic Innovation
- Competent Capabilities with Effective Emiratisation
- Strategic Scenarios

Stakeholder Engagement

- Executive interviews
- Stakeholder satisfaction surveys
- Stakeholder engagement workshops

Future Trends Analysis (PESTEL)

- Future trends
- Future electricity and water demand
- Supply issues
- Environmental challenges
- Regulatory Evolution

SWOT Analysis

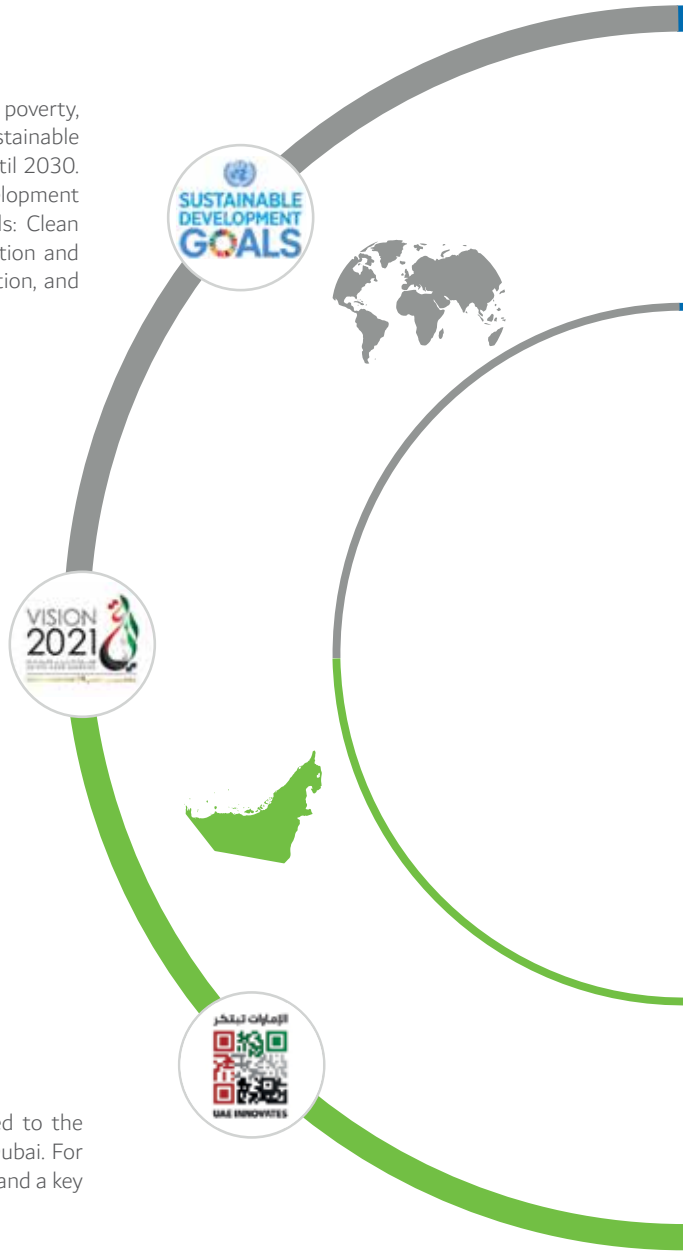
- Strengths: Strong leadership and high standard utility infrastructure
- Weakness (areas of improvement): Knowledge management strategy to be finalised
- Opportunities: Diversifying our business and power generation portfolio, and potential for interconnecting capacity with federal and regional grids, engagement with suppliers
- Threats: Uncertainty in demand forecasting, public concerns about sustainability impacts and rising costs

DEWA STRATEGY ALIGNMENT

Our strategy and roadmap are aligned to plans and goals at a global, UAE Federal and Dubai Emirate level.

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The UN Sustainable Development Goals are a set of goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved until 2030. DEWA firmly believes in the objective of the UN Sustainable Development Goals and directly supports with clear initiatives six of the 17 goals: Clean Water and Sanitation, Affordable and Clean Energy, Industry, Innovation and Infrastructure, Responsible Consumption and Production, Climate Action, and Life Below Water.



UAE VISION 2021 & NATIONAL AGENDA

The UAE is on a journey to position itself among the leading countries in the world. This journey will find its climax in the golden jubilee in 2021. To achieve its Vision 2021, a set of National KPIs grouped in six themes was developed to track progress.

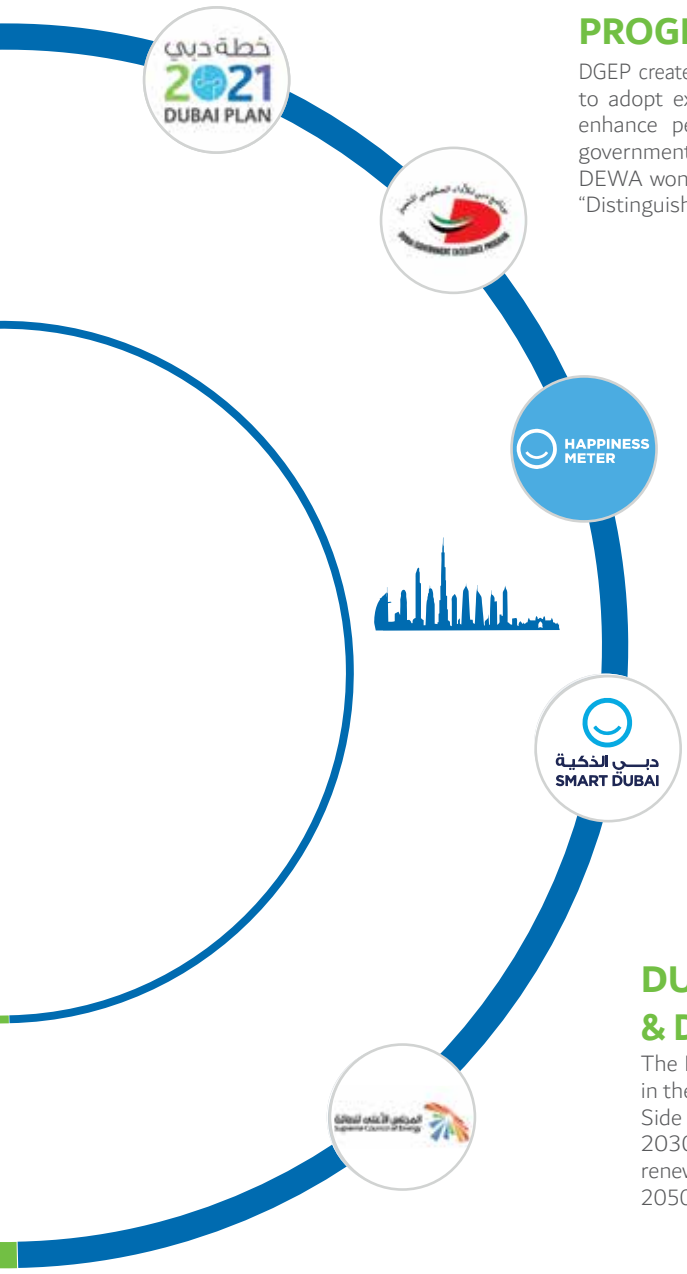
UAE AND DUBAI INNOVATION STRATEGY

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 our services and initiatives, and a key element for developing our strategies and work plans.

We have incorporated innovation in DEWA's vision, and created Strategic Innovation to raise its importance as a theme to encompass 40% of the DEWA2021 strategy. DEWA has developed a comprehensive Innovation Strategy and established the Innovation and The Future Department to ensure implementation. Furthermore, we continue to develop our Innovation and Research Centre and deliver innovative projects dedicated to the UAE and Dubai Innovation Strategies. Most recently we became an active partner to the Dubai Future Accelerators initiative.

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 GOVERNMENT EXCELLENCE PROGRAM (DGEP)

DGEP creates an environment that encourages government organisations 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. In 2016, DEWA won 6 awards during the 19th DGEP ceremony, including the "Distinguished Government Entity" category.

UAE AND DUBAI HAPPINESS

The UAE launched the visionary ambition of becoming the happiest country in the world. The Happiness ambition is reflected both in the UAE Vision 2021 as well as Dubai 2021 Plan. DEWA is among the first government organisations to apply the Happiness Meter launched by HH Sheikh Mohammed bin Rashid Al Maktoum Vice President and Prime Minister of the UAE and Ruler of Dubai by launching a set of eight initiatives.

SMART DUBAI

Smart Dubai is a strategy for transforming Dubai into the smartest city in the world before Expo 2020. It includes 100 initiatives transforming 1,000 government services into smart services. DEWA as a key stakeholder actively participated in the development of Dubai's Smart City vision and has launched three Smart initiatives: "Shams Dubai", Smart Applications via Smart Meters and Grids, and Infrastructure and Electrical Vehicles Charging Stations.

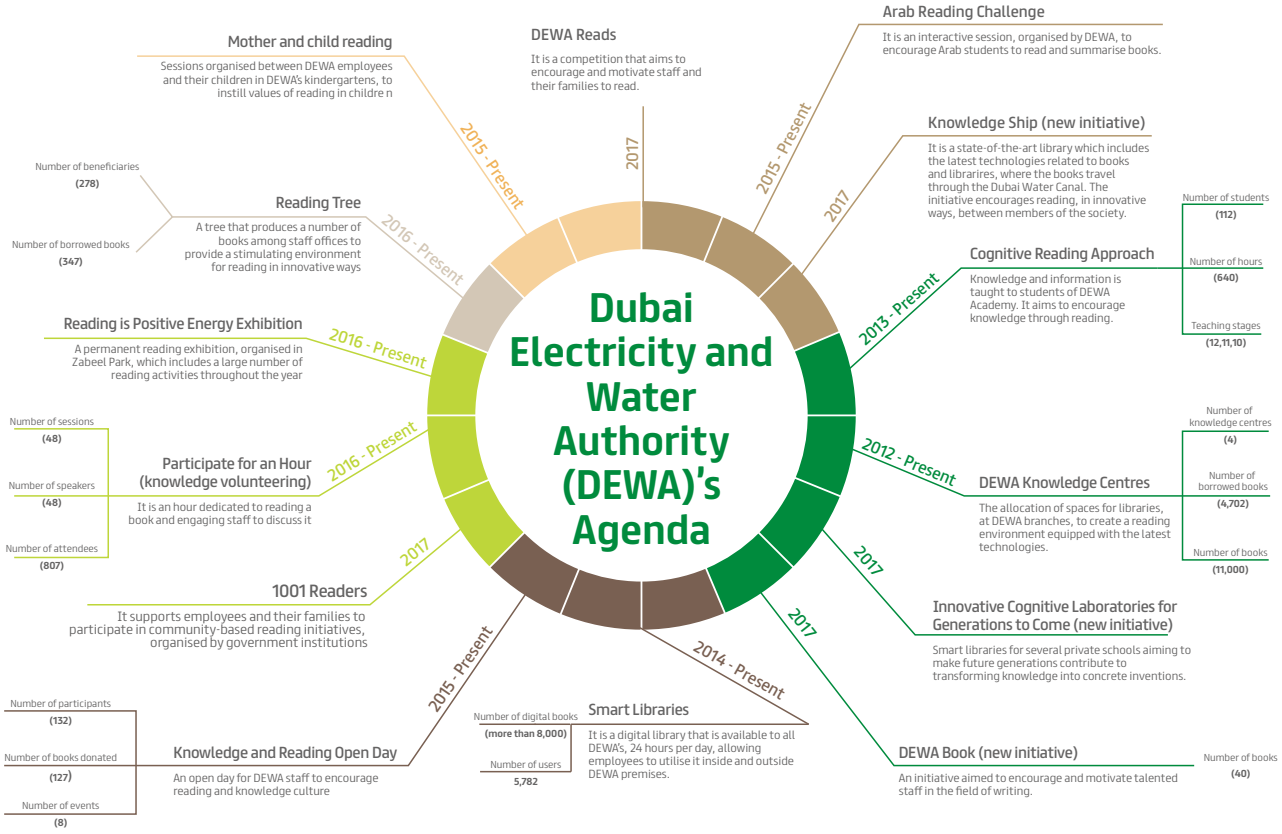
DUBAI CLEAN ENERGY STRATEGY 2050 & DEMAND SIDE MANAGEMENT STRATEGY

The Dubai Clean Energy Strategy (DCES) 2050 sets targets for 7% Clean Energy in the generation mix by 2020, 25% by 2030 and 75% by 2050, while the Demand Side Management Strategy 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 DCES 2050, which maps out Dubai's energy sector over the next three decades.

DUBAI CARBON ABATEMENT STRATEGY 2021

This strategy sets the course of actions to be adopted by Dubai Government in order to manage Dubai's Greenhouse Gas (GHG) emissions until 2021. The Carbon Abatement Strategy aims to reduce carbon emissions by 16% by 2021. DEWA covers power and water contributing to overall reduction target by 8% in 2021, equivalent of 5.15 Metric Tons of Carbon Dioxide equivalent (MtCO2e).

YEAR OF READING



DEWA is committed to its role as a socially-responsible government organisation that is not only limited to its electricity and water services but also establishing a knowledge environment that promotes passion for culture, reading, and knowledge in society. This is part of DEWA's efforts to support the directives of HH Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, who declared 2016 as the Year of Reading. DEWA strives to achieve the vision of the country's leaders to build a community of readers and a knowledge-based economy in the UAE. We realise the importance and impact of reading on peoples lives. Since the beginning of 2010, a department has been dedicated in DEWA's organisational structure to manage knowledge and reading activities. DEWA is one of the pioneering organisations to dedicate a department for knowledge management as an independent unit concerned with the implementation of reading and knowledge initiatives.

Furthermore, DEWA has developed a policy for knowledge management and related strategies and approaches in line with the strategic initiative of Dubai Government in order to be a sustainable educational organisation. DEWA also adopted the legislative procedures of the National Reading Law to make reading an integral part of our work as a government organisation.

In 2016, DEWA institutionalised reading through 14 initiatives targeting 11,000 employees. DEWA's reading agenda includes many integrated programmes and initiatives that work in parallel to promote reading over the next 10 years and make it a lifestyle and a daily habit among staff and their families. Some of these initiatives include knowledge sharing and Innovative Knowledge Labs for Future Generations, which have been developed in cooperation with multiple concerned organisations in the UAE.

CORPORATE GOVERNANCE

We are dedicated to conducting business in an ethical manner ensuring that accountability, fairness and transparency determine our relationships with all our stakeholders. We constantly seek to establish and maintain trust as well as act with integrity in everything we do, by adopting world-class standards of corporate governance and decision making. Taking into account all of these factors, we have adopted and implemented a Corporate Governance structure which provides us with a framework of principles and procedures with regards to stakeholder management, internal audits, and risk management, while promoting an ethical culture among our employees.

We have a Code of Conduct that sets forth the standards for conducting our day-to-day activities and decision making procedures. DEWA's top and senior management are bound to act as role models for all employees by leading the way and adhering to the Code of Conduct.

In 2008, we created a Corporate Governance Manual which provides a set of procedures, principles and standards in relation to matters such as DEWA's corporate structure, accountability and delegation of authority, internal audit, and establishment of management committees, risk management, internal and external reporting, social responsibility and retention of records. The manual also incorporates policies and procedures to protect against unlawful practices and corruption, including the acceptance of gifts and bribes, and enforces strict compliance of all employees.

OUR VALUES

We have defined corporate values that represent what we stand for and how we interact among ourselves and with others. These corporate values are reflected in our Code of Conduct, which is shared with all staff in their staff handbook upon joining, and is also accessible through our internal portal. The importance of applying our values in practice is frequently emphasised by senior management as we firmly believe in leading by example. This informal way of encouraging staff to behave professionally is further supported by formal communications and feedback systems. These enable our people to voice their opinions and provide feedback related to breaches of the Code of Conduct, the work environment and customer service, among others.

Stakeholders Happiness

We commit to continuously exert our best effort and dedicate the right and adequate resources to foresee, analyse, deliver and exceed our stakeholders' needs and expectations to surpass their satisfaction towards their happiness.

Sustainability

We commit to deliver value to our stakeholders while balancing environmental, social and economic impacts and act responsibly towards long-term preservation of resources for our future generations.

Innovation

We commit to continuously develop and seek new trends and realise our stakeholders' ideas which create new public values through an agile approach that appreciates risk and rewards principles.

Excellence

We commit to continuously be in a journey of excellence that drives continuous improvement towards implementing best in class efficiency and effectiveness practices delivering sustainable results to our stakeholders on all fronts.

Good Governance

We commit to abide by UAE laws and preserve the highest levels of transparency, integrity, fairness, involvement, effectiveness and accountability in our dealings and value delivery to our stakeholders.

DEWA'S BOARD OF DIRECTORS

The Board of Directors of DEWA monitors all of our corporate activities, serving as the top decision-making body. The fundamental roles of the Board are to ratify DEWA's annual budget, approve electricity and water supply services, authorise and enter into agreements with external parties. The Board furthermore approves administrative, financial and technical affairs and issues governing regulations. As the Dubai Government is DEWA's sole owner, the Board and the Managing Director & CEO are appointed directly by government decree. The current Board was appointed in 2015 and consists of 9 members. Matar Humaid Al Tayer currently serves as Chairman of the Board, while Saeed Mohammed Ahmad Al Tayer is DEWA's Managing Director & Chief Executive Officer and a member of the Board.

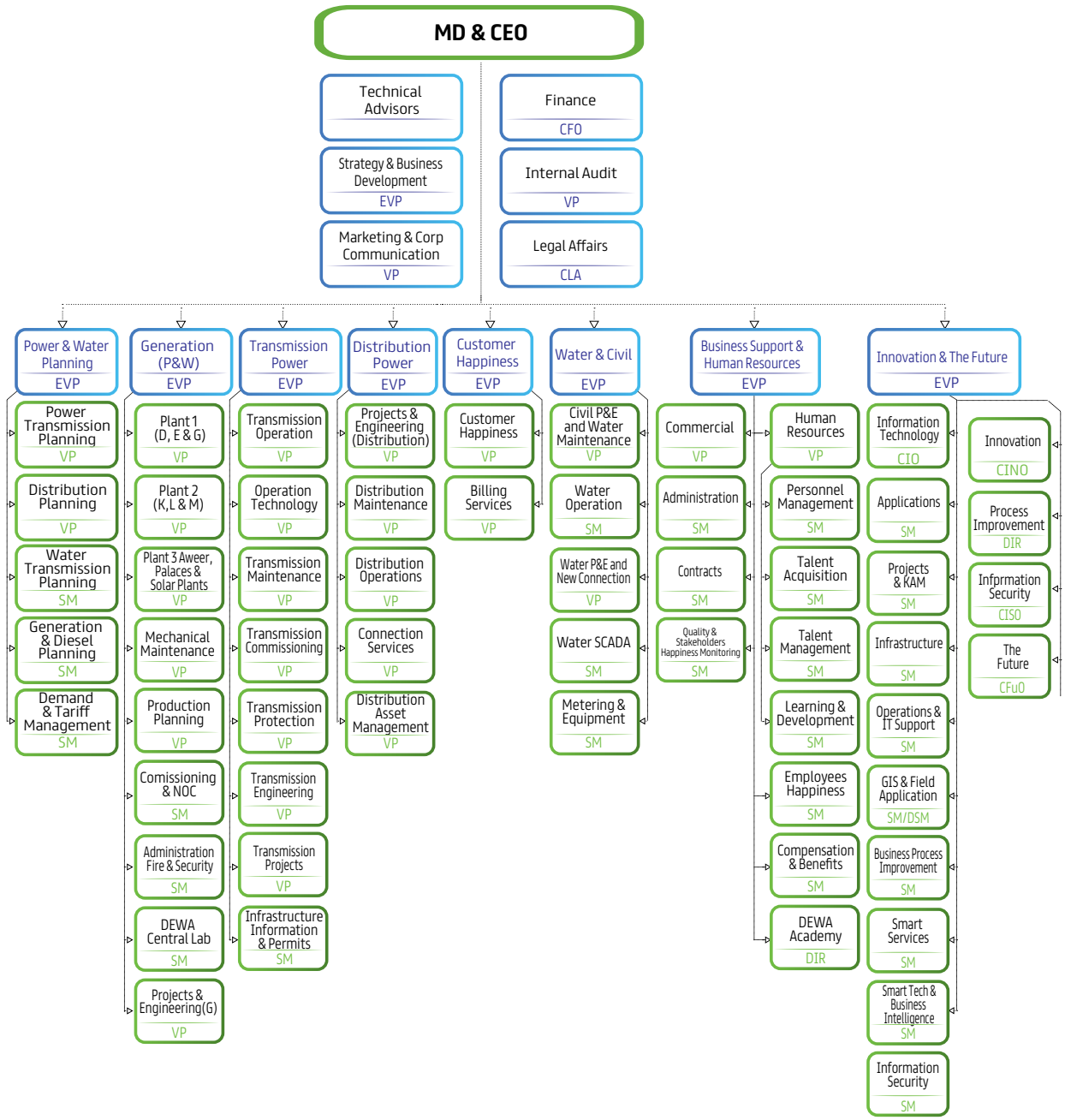
GOVERNANCE STRUCTURE

DEWA's Governance structure encompasses Corporate Governance, Internal Governance, Information Technology (IT) Governance, Project Governance, Sustainability Governance and the Governance structure for the 4th Industrial Revolution. There is an organisation wide governance matrix. The DEWA Board functions very cohesively and in case of matters requiring more analysis that what can be discussed at a full board, a sub-committee is formed with the purpose to examine the matter in detail and advise the full board. Various topics such as DEWA's financial budgets, etc; are assigned to sub-committees rather than the nine members discussing the matter together. The allocation of important subjects to sub groups within the Board enables specialised analysis of Board subjects and expert ideation. The Board and its committees can draw upon the advice of experts on any subject from both within DEWA and also from any external resource.

DEWA ORGANISATIONAL CHART

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

- General Management (Finance, Legal Affairs, Internal Audit, Strategy & Business Development, Marketing and Corporate Communications, Technical Advisors)
- Power and Water Planning
- Water and Civil Engineering
- Innovation and The Future
- Transmission Power
- Customer Happiness
- Generation (Power & Water)
- Distribution Power
- Business Support and Human Resources

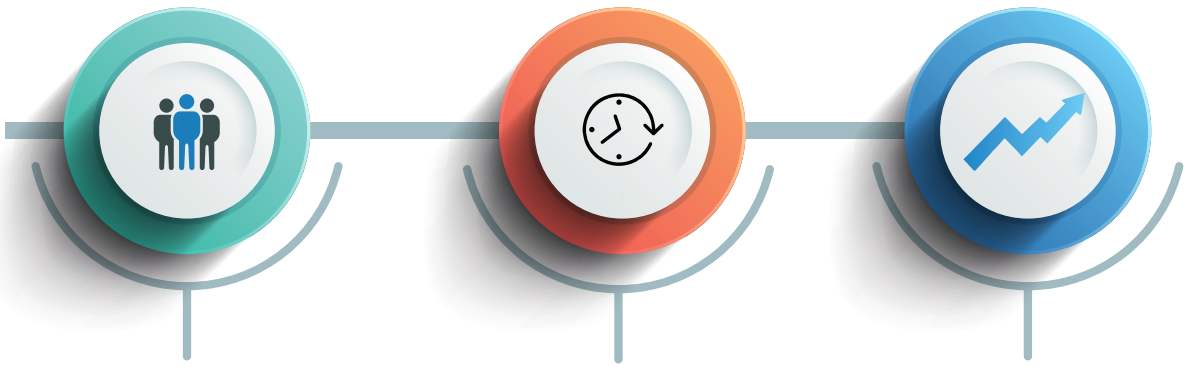


COMMITTEES

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. There are a number of other committees in DEWA such as the Grievance Committee, Personnel Committee, Women's Committee, DEWA Youth Committee, Investment Committee, Tender Opening Committee, Local Purchase Committee, Corporate Risk Management Committee, "Takaful" and "Theqa" Committee, Admin Violation Committee, Scrap Verification Committee, Liquidated Damage Committee, DEWA Excellence Award Committee, Crisis Management Committee, Operation Committee, Engineering Committee, Enterprise Risk Management Committee, HSE Committee, Corporate Governance Committee, Cyber Security Emergency Response Committee and others.

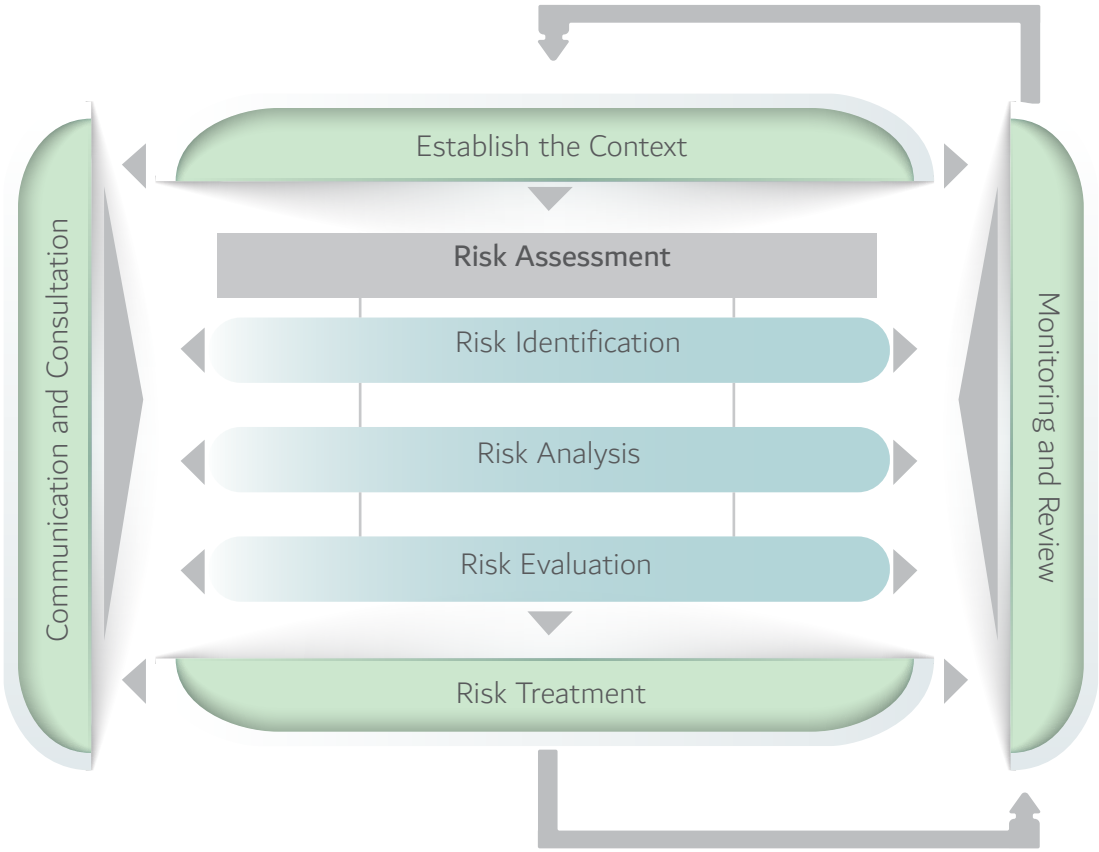
BUSINESS RESILIENCE

The nature of our operations and environment require some level of risk-planning in order to achieve our strategic objectives. DEWA is committed to adopt, embed and sustain risk management as a core competency and strategic decision making tool throughout our organisation. DEWA adopts three plans that create a clear communication platform and resilient framework that guides all DEWA's divisions to study, manage and mitigate risks.



Enterprise Risk Management

The Enterprise Risk Management Policy and Framework enables a formal, structured approach to Enterprise Risk Management that is appropriate to DEWA's activities and operating environment. The overall approach being consistent and compliant with the principles and guidelines set out in ISO 31000; the International Standard on risk management. ISO 31000 recommends a 7-step Risk Management Process which is deployed at corporate level and across all DEWA Divisions. In line with this Risk Management Process, 15 Corporate and Strategic risks have been identified which are considered the top risks facing DEWA. These risks are mapped to DEWA's Strategic Objectives and assigned Risk Owners. Progress on the status of mitigation strategy implementation for the top Corporate and Strategic risks facing DEWA are reported to the Enterprise Risk Management Committee (ERMC) twice annually.



ISO 31000 Risk Management Process

Business Continuity Management

Our Business Continuity Management System (BCM) identifies critical processes and impacts on our operations that help develop strategies to effectively deal with uncertainty and associated risks. The critical event risks on our operations are determined during the Business Impact Analysis (BIA) questionnaire that reveals any critical enablers to our organisation. The BIA is the foundation of our Business Continuity Plan(BCP) that helps identify our organisation's critical processes and recovery time objective. We have a dedicated BCP for each division at DEWA. This provides a clear resilient communication platform that is capable of effective response during emergencies. Each division also conducts a mock drill or a live test annually to test the plan effectiveness, changes to the system and to identify gaps as part of our emergency plan testing.

As part of our inclusive risk-aware culture, we ensure that our key stakeholders are well informed and aware of our BCM at DEWA by conducting internal awareness sessions to all DEWA employees. We also offer an in-depth training, the ISO 22301:2012 lead implementer training to our employees with key roles in Business Continuity Management System (BCMS). DEWA adheres and abide all laws, regulations and requirements that applies to the BCM standard on a national and international level.

DEWA is compliant with NCEMA 7000:2015 - UAE business continuity standard, the external party supervising the BCM in government entities. Furthermore, DEWA has successfully achieved the ISO 22301: 2012 BCM certificate in 2016.

Crisis Management

Our Crisis Management Plans clearly identify causes, consequences, preventive measures, corrective measures, and implementation status. We have also developed contingency plans to mitigate the consequences in case of occurrence of a number of scenarios such as the occurrence of an oil slick, red tide event, etc. Periodic audits and mock drills are conducted to test and improve performance of operation staff to handle these scenarios.

OUR SUPPLY CHAIN

At DEWA, we understand that our overall environmental and social impacts extend beyond our own direct operations. Therefore, we have implemented a Supplier Relationship Management (SRM) system, which allows us to establish and maintain long term relationships with our suppliers and improve the quality of services and value to our supply chain. Our suppliers are classified into 3 categories: "strategic"(54), "core"(885), and "basic"(2,585). During 2016, we worked with a total of 2,457 active suppliers. We consistently strive to involve local businesses in our operations and supply chain, which helps build capacity locally and fosters economic growth in Dubai which is our significant location of operations and the wider region. To increase our utilisation of local products and services, DEWA has established a Local Purchase Committee. The committee defines the criteria that has to be met before purchasing local products and services. In 2016, DEWA's purchases from local suppliers included a net order of AED 17.76 million with 70 Small and Medium Enterprises (SMEs). In this report we define local suppliers as SMEs registered in Dubai.

We aim to roll out our Green Procurement Programme throughout our supply chain. The programme aims to assess the environmental consequences of the products purchased by DEWA at the various stages of the product's lifecycle to help us avoid selecting products with adverse environmental impacts. We are also interested in purchasing products that reduce energy, contain recycled materials, are less toxic, and can help conserve water or address social impacts. At DEWA, we are committed to business practices that adhere to international standards. To reduce vulnerability and ensure continuity of our key suppliers, DEWA has developed a Supply Chain Risk Management Framework, in line with ISO 31000, which identifies and analyses exceptional risks along our supply chain based on continuous risk assessment.

STRATEGIC PARTNERSHIPS ALONG THE VALUE CHAIN

Partnerships have been a fundamental pillar to the success of our organisation in service delivery, achieving strategic objectives and contributing to the implementation of our strategic plan. DEWA engages in strategic relationships with suppliers, customers and other business partners, including through Joint Ventures. Such strategic partnerships help reduce transaction costs by building trust, enabling economies of scale, supporting risk management and fostering the exchange of knowledge, technology and best practices. DEWA has around 125 joint projects with its partners.

DEWA categorises its partners as either strategic or main based on their degree of importance and the intensity of their impact on DEWA. Through our dedicated Partnership Portal, we have further enhanced and strengthened relationships with our partners, while achieving integration with other government organisations within the UAE. Our partner's happiness rate increased by 4% comparing to 2015, this is reflected by continuously engaging with our partners through a number of workshops organised annually.

Each year, we ensure to establish partnerships with new businesses, academic institutions and other organisations to further promote DEWA's economic, social and environmental responsibility and operations.

WORLD-CLASS PERFORMANCE

Our financial strategy is to optimise costs and investments, provide a reasonable return to our sole owner the Government of Dubai and to ensure long-term financial sustainability for DEWA.

FINANCIAL SUSTAINABILITY

Long-term financial sustainability will enable DEWA to play a key role to achieve the goals of the UAE Vision 2021 and the Dubai Plan 2021. This vision aims to diversify the UAE economy away from oil and gas-related GDP growth, improve the business environment, attract Foreign Direct Investment, invest in innovation and knowledge, promote green economy and substantially increase the proportion of Emiratis in the workforce. DEWA makes significant investments annually to build a world-class utility infrastructure and strives to position Dubai as a smart city of the future and the world capital of the green economy. In addition, DEWA has established subsidiaries / joint ventures / public-private partnerships in related business to diversify its revenue streams. It has achieved spectacular success in attracting international investment into Dubai through the IPP model and built highly efficient solar PV plants, thereby significantly contributing to renewable energy generation and consequent emissions reduction. The investment grade BBB+ Rating from S&P with stable outlook recognises DEWA's outstanding performance, adoption of global best practice and its role as a key enabler of government's strategy to achieve economic growth and energy sustainability.

DEWA 2016 FINANCIAL DATA

10,955 AED Million	8.94%	21,193 AED Million	15.6%
Capital expenditure	Return on Equity ROE	Total revenue	Debt: Equity

PATHWAY TO EXCELLENCE

DEWA won 6 awards during the 19th Dubai Government Excellence Program (DGEP). DGEP was launched in 1997 by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to enable the government sector to actively manage the challenges faced by this new era and be the driving force behind the development of the public sector in Dubai. The DGEP develops, trains and assess the performance of the government organisations while complying with the best international practices, successful experiences and professional excellence standards.

DEWA's winning reinforces its vision to be a sustainable innovative world-class utility. We have received awards in the categories of Distinguished Government Entity, Financially Distinguished Performance, Distinguished Entity in Government Communications, Distinguished Creative Idea, Distinguished Technical/Engineering Employee, and the Unknown Soldier award.

DGEP creates an environment that encourages government organisations to adopt excellence and innovation. Towards that goal, DEWA provides world-class government services and adopts the best international practices, to make people as happy as possible. Innovation plays a major role in our daily operations to further develop our performance, and the efficiency of our services, while adhering to the highest international standards. DEWA will continue to achieve success with its ambitious initiatives, project development, and ongoing efforts to be at the forefront by adopting the highest international standards, in line with its vision to become a sustainable innovative world-class utility.

> **"We in the UAE share one direction, one vision and one goal. We all work for the interest of our country. Excellence has become an approach and a way of life for us."**
>
> HH Sheikh Mohammed bin Rashid Al Maktoum,
> Vice President and Prime Minister of the UAE and Ruler of Dubai.

CASE STUDY:
CORPORATE FINANCE DEAL OF THE YEAR

In line with the wise vision of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to make Dubai a global Centre for clean energy and green economy, and as part of its plans to fulfill Dubai's Clean Energy Strategy 2050, DEWA decided to innovate its business model in partnership with the private sector. Accordingly, an Independent Power Producer (IPP) was hired to establish Phase-II (200MW) of "Mohammed bin Rashid Solar Park": the largest single-site strategic solar energy project of its kind in the world, with planned production capacity of 5,000MW by 2030.

Managed by an experienced and dedicated cross-functional team, who meticulously worked through the complex, year-long tendering process with the help of renowned international consultants, DEWA succeeded in attaining the Lowest Levelised Cost of Energy (LCOE) world-wide (US Cents 5.62/kWh); which has been reduced further to (US Cents 2.99/kWh) in Phase-III of the Project (800MW). Moreover, this "win-win" partnership was designed in a way that not only ensures shared project returns, but also reduced the required capital investment by 92% and ensured bankability at lowest rates in the region.

In addition to the aforementioned key success factors, this deal contributed to tremendous benefits including, but not limited to:

- Placement of Dubai at the forefront of the global solar industry.
- Contribution to Dubai Clean Energy Strategy 2050 (calling for 75% Clean Energy) and Dubai's CO_2 reduction target of 16% by 2021.
- Avoidance of additional cost burden to customers.
- Generation of skilled job opportunities with in-built Emiratisation regulation.

As an acknowledgement of DEWA's great efforts and achievements throughout this deal, DEWA was the 1st Government Department in the Middle East to win the "Corporate Finance Deal of the Year" under the Institute of Chartered Accountants in England and Wales (ICAEW) Middle East Accountancy and Finance Excellence Award.

SUSTAINABLE DEVELOPMENT

MANAGEMENT APPROACH

DEWA has always been proactive in aligning its strategic plan and operating model with the latest industry and market trends as well as local and federal plans and strategies such as: the Dubai Clean Energy Strategy 2050, the UAE National Agenda 2021, Dubai Plan 2021, the National Innovation Strategy and, HH Sheikh Mohammed bin Rashid Al Maktoum's initiative, "A Green Economy for Sustainable Development". This commitment will lead to the long-term success of our organisation and ultimately the prosperity of Dubai.

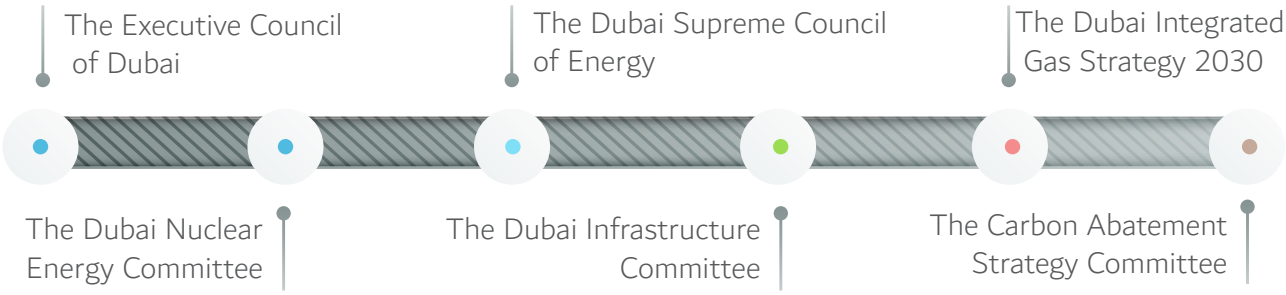
Acknowledging the immense impact of our organisation on the achievements of the national and local development plans, we undertake all necessary steps towards making DEWA an industry leader by creating an equilibrium between our financial results, environmental performance, and our commitment to the wellbeing of the community of Dubai and the UAE, thus creating sustainable value for all.

At DEWA, Emiratisation is one of our vital strategic objectives. It not only contributes to the economic and social security of the UAE but also forms an integral part of the community role by both public and private sectors towards achieving the strategic objectives of the Government of Dubai.

As one of Dubai's largest employers, we are committed to supporting and advancing the sustainable development of the UAE and therefore increase participation of Emirati nationals in this endeavour. In 2016, approximately 85.23% of our top management and leadership positions were held by UAE nationals. DEWA recruits, trains, and integrates UAE nationals at all levels of our organisation in an effort to enhance Emirati skills and knowledge along the way and ensure their continuous development.

ASSOCIATIONS/ORGANISATIONS

DEWA is part of various national organisations, councils and committees that lead to fruitful partnerships in the energy and industrial sectors. These collaborations aim to further ensure best sustainability practices. These organisations include but are not limited to:



WORLD GREEN ECONOMY ORGANISATION

The World Green Economy Organisation (WGEO) was launched in Dubai on 5th October 2016, at the World Green Economy Summit by HH Sheikh Mohammed Bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, and Helen Clark, Administrator of the United Nations Development Programme (UNDP). WGEO is a solution-oriented organisation enabling green economy projects globally, and supporting entrepreneurs in achieving their green business goals, particularly in emerging markets. WGEO partners with UNDP and its development and knowledge network of 132 country offices and five regional centres, covering 177 countries. WGEO is chaired by HE Saeed Mohammed Al Tayer.

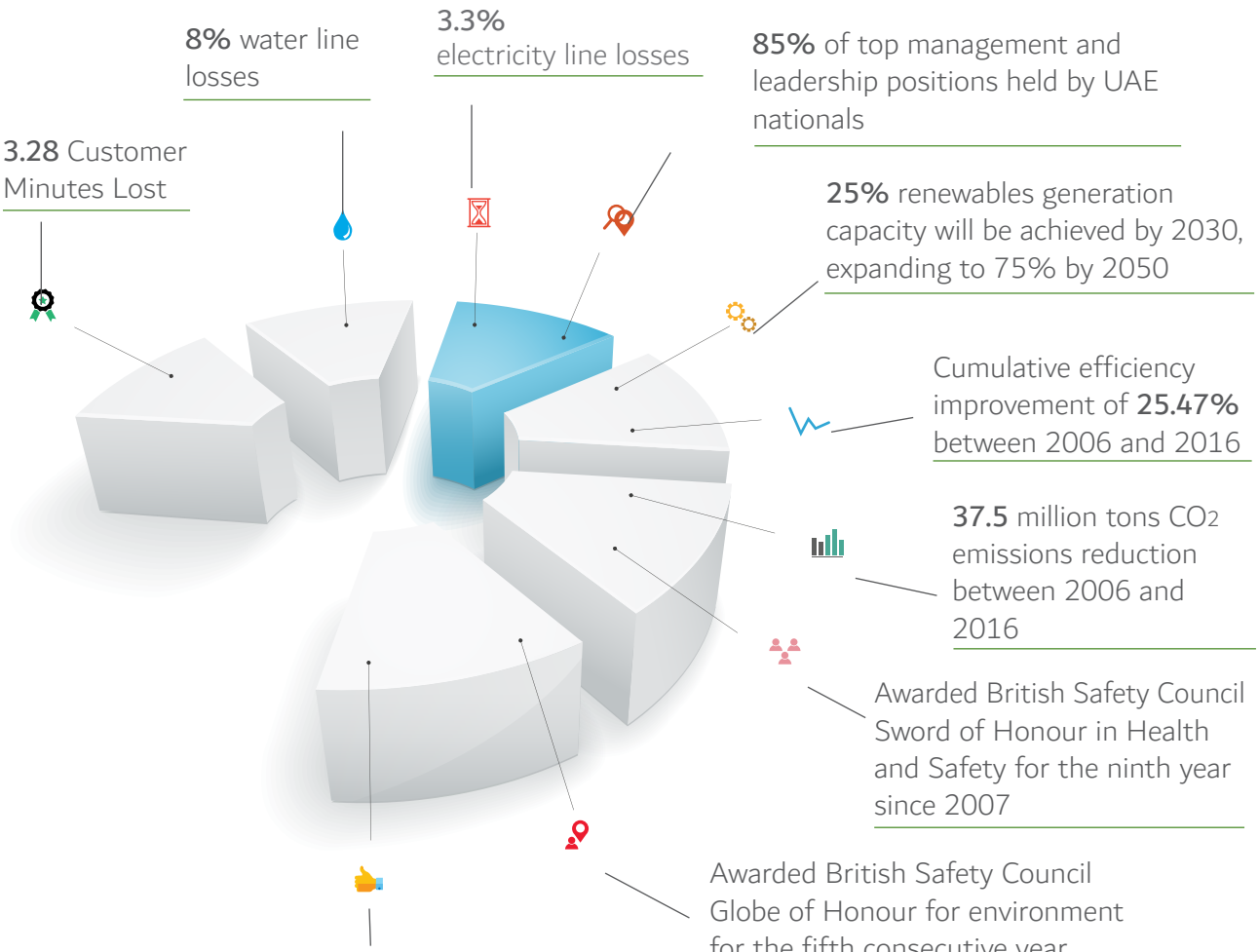
Following the commitments of the Paris Agreement and the central role of the multistakeholder partnership in contributing to green economic development and addressing climate change implications, the objectives of WGEO are to become a source of innovation, technology and finance for achieving progress on low-carbon, climate-resilience economy, energy efficiency, and the sustainable use

of water and natural resources. WGEO is the first international organisation to reflect a new partnership between governments, private sector, civil society, finance, academia and youth.

SUSTAINABILITY GOVERNANCE

The Sustainability Leading Team (SLT) has been established in DEWA since 2013. The members of the SLT are composed of representatives from every division in DEWA. Their role complements the Climate Change & Sustainability (CC&S) team in raising awareness about the importance of Sustainability, the effects of Climate Change and our mega projects in Sustainability. These awareness sessions are conducted by the SLT members with their employees. In 2016, there were more than 90 awareness sessions provided to approximately more than 2,000 employees. The SLTs also support the CC&S team in different sustainability projects to ensure the smooth flow of ensuring sustainability governance within the organisation. The SLT is chaired by the Climate Change and Sustainability Senior Manager, under the Strategy & Business Development Division. The DEWA management team receives updates regarding sustainability issues from the Executive Vice-President of Strategy and Business Development, who is also a member of DEWA's management team.

2016 SUSTAINABILITY MANAGEMENT HIGHLIGHTS



STAKEHOLDER MANAGEMENT

At DEWA, we cherish our stakeholders, and ensure that they have the maximum level of satisfaction starting from the employees we work with and ending with our customers, government, society, suppliers and partners. Our stakeholders include group of individuals, or institutions that contribute vitally in achieving DEWA's mission. Therefore, we ensure that our stakeholder's happiness is set through the core strategy in terms of providing reliable electricity and water infrastructure that is needed to ensure sustainable economic growth in Dubai.

There are different channels that we aim to connect with our stakeholders and those include satisfaction surveys and road-shows, joint ventures and collaboration with government authorities on regulatory priorities as described throughout this report. To ensure the effective communications, these channels occur on regular basis.

Through our stakeholder management framework, we aim 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 Guidelines.

Our key strategic objectives relating to our stakeholders include:

- Organising stakeholder engagement workshops for our key stakeholder groups
- Defining a compelling, overarching value proposition for each of our stakeholders
- 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

DEWA STAKEHOLDERS 2016

DEWA's stakeholders have been identified through a stakeholder prioritisation exercise, ranking them in terms of "power" and the "interest" of each one in DEWA's activities. 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 prioritised stakeholder groups' needs and expectations.

Stakeholder Groups	Stakeholder Sub-Groups
Government	Federal, Local
Employees	Board, Top Management, Middle Management, Non Supervisory, Other
Society and Future Generation	General Public, Environmental Entities, Media and Opinion Leaders
Partners	Strategic Partners, Main Partners
Customers	Contractors, Residential, Commercial, Industrial, Others
Suppliers	Strategic, Core, Basic
Providers of Capital/ Investors	Institutional investors both local and foreign, banks, financial services, solar manufacturers

DEWA STAKEHOLDER ENGAGEMENT ACTIVITIES

Inform
(One way process of providing information to stakeholder)

- Awareness sessions
- Marketing capaigns
- Media events
- Student visits
- Incentive programes
- Road shows
- Corporate strategy presentation sessions

Consult
(Stakeholder asking questions and organisation providing answers)

- Satisfaction Surveys for all Stakeholder groups
- Written and verbal communications
- Topic specific surveys
- Direct customer feedback
- Supervisor interaction

Involve
(Two way engagement & learning but stakeholders act independently)

- One on one meetings
- Supplier engagement
- Seminars
- Various programmes
- Customer suggestion schemes
- Mystery shoppers

Collaborate
(Joint learning, decision making and actions)

- Sustainability stakeholder workshops
- Joint ventures
- Public Private Partnerships

Empower
(Stakeholders play a role in governance)

- Actively supporting government policy & regulation

STAKEHOLDER NEEDS & EXPECTATIONS

At DEWA, we aim to adopt both a consistent and transparent approach when engaging with our stakeholders. Therefore, we engage with our stakeholder groups in a variety of ways. For every category of stakeholder, the following table shows the most important needs expressed during our engagement activities.

Stakeholder Category	Needs & Expectations
Government	• Aligning with national development plans and programmes • Commitment to good citizenship • Regulatory compliance
Customers	• Quality safety and cost - effectiveness of service • Reducing the environmental impact of organisation activities • Ethical business
Employees	• Secure working environment • Competitive salaries • Ethical behaviour • Career progression & recognition • Non-discrimination & equal opportunities • Investment in professional development
Partners	• Sharing best practices • Continuous and systematic dialogue and engagement • MoUs to collaborate on issues
Society and Future Generation	• Transparency and effective communication • Raising awareness on sustainability issues • Management of environmental impacts of organisation activities • Supporting social and cultural initiatives
Suppliers	• Supplier qualification based on cost and quality including environmental and social assessment • Transparent procurement processes • Profitability
Providers of Capital / Investors	• Creating value in the short & long term • Reliability, Profitability, Transparency

STAKEHOLDER HAPPINESS

Our annual Stakeholder Satisfaction Survey addresses our stakeholder's expectations regarding several issues related to both DEWA and each respective stakeholder group.
Since sustainability is embedded in DEWA's vision, mission, motto, and corporate values, it is vital that we ensure the effectiveness of our awareness around sustainability practices. Therefore, DEWA has developed sustainability related questions in each of our respective stakeholder surveys to assess its effectiveness.
The results of our 2016 stakeholder satisfaction survey reveal that the majority of our stakeholders were highly satisfied with our sustainability performance while the majority of our suppliers are ready to promote more environmentally friendly products as a result of DEWA's focus to manage and improve sustainability performance throughout its supply chain.

STAKEHOLDER SUSTAINABILITY SATISFACTION SURVEY 2016

I am satisfied with DEWA's overall sustainability performance

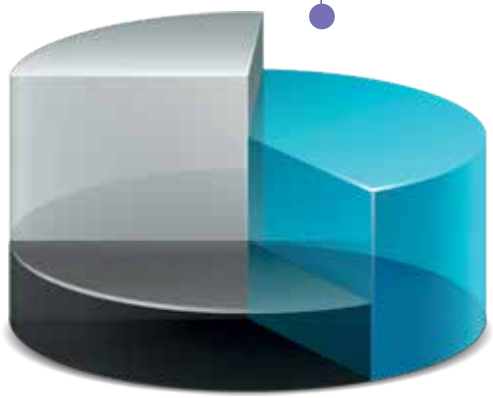
83.99%	Society (Community)
86.96%	Society (Business)
89.71%	Government
83.35%	Suppliers
85.32%	Customers
88.06%	Partners
90%	Investors
84.26%	Employees

I am ready to supply more sustainable and environmentally friendly products services to DEWA

84.72% Suppliers

I am aware of DEWA's sustainability performance and initiatives

82%	Employees
66%	Customers



SUSTAINABILITY CULTURE INDICATOR

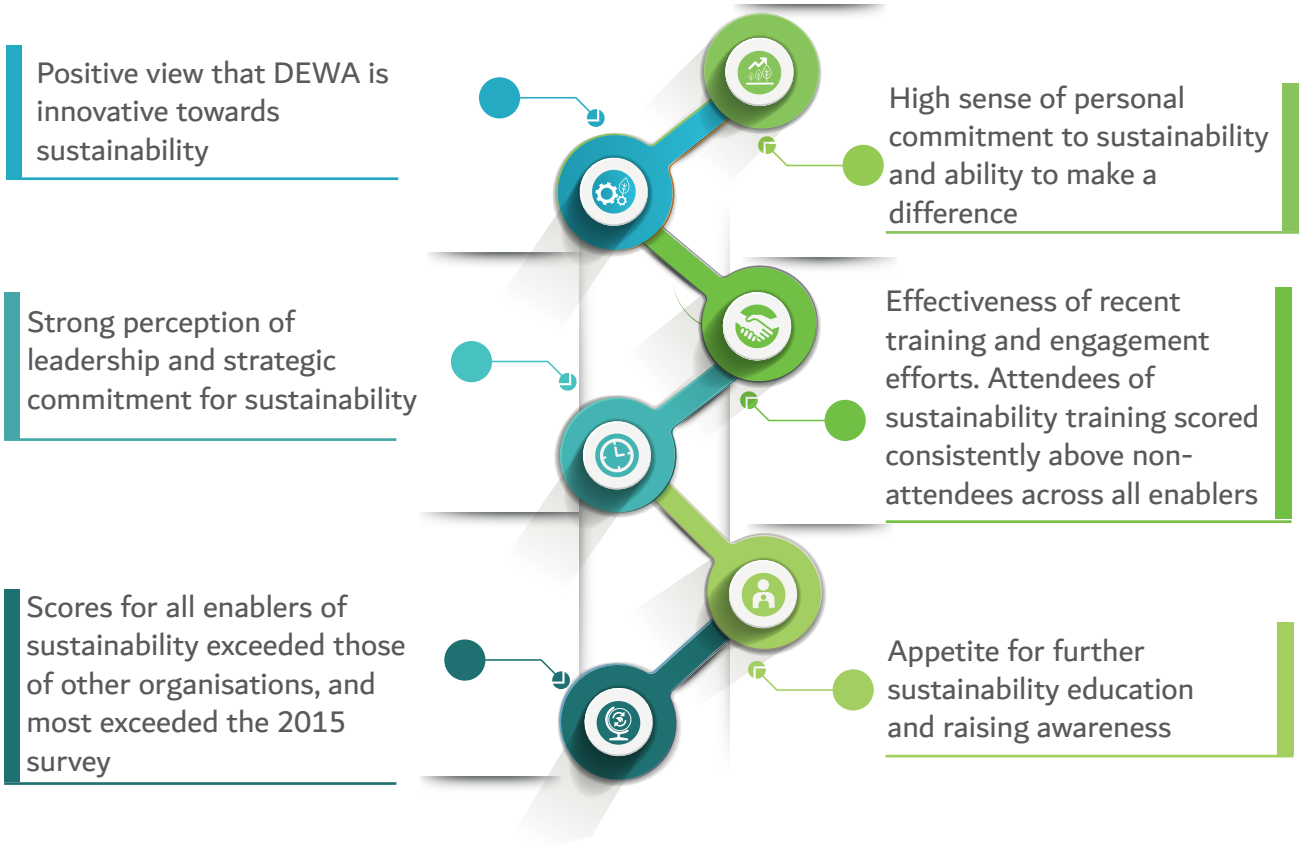
In an effort to further track our progress in embedding sustainability in our organisational culture and evaluate the effectiveness of our various engagement activities, DEWA utilises the Sustainability Culture Indicator (SCI). The SCI is a third-party produced employee survey, which measures the extent to which sustainability has been embedded within the culture of an organisation, including factors that measure organisational enablers, individual enablers and behaviours inside and outside the organisation.

According to the results in 2015, which emerged from the participation of over 2,000 of our employees, DEWA's effort with regards to sustainability was rated 5.1 out of 6 (equivalent to 85%), exceeding the average of all other organisations who have completed the SCI.

In 2016, for the third consecutive year, we have utilised the Sustainability Culture Indicator in an effort to further track DEWA's progress in embedding sustainability in our organisational culture and evaluate the effectiveness of our various engagement activities.

According to the results, DEWA's effort with regards to sustainability was rated 5.32 out of 6 (equivalent to 88.6%), exceeding the average of all other organisations who have completed the SCI (62%).

The following main areas of strength have been identified for DEWA:



Over the years it has become evident that DEWA's employees have more knowledge about sustainability and that they are actually practicing it inside and outside work. For 2016, we had more than 3,000 employees participating compared to 2014 where they were approximately 400 employees. The knowledge has increased as a result of the intensive awareness campaigns conducted by the Climate Change & Sustainability team throughout 2016 with the valuable support of the Sustainability Leading Team members.

OUR COMMITMENTS FOR A SUSTAINABLE FUTURE

At DEWA, we are committed to improving our sustainability performance and therefore we have set the following commitments for sustainable development:

- To ensure sustainability is fully embedded into our business strategy.
- To ensure our constant alignment with national and international strategies and best practices.
- To increase our direct and indirect economic contribution to the Dubai economy.
- To 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 our stakeholders' happiness.
- To minimise our environmental footprint and ensure that our operations satisfy all environmental regulatory controls.
- To increase Solar capacity to 7% by 2020 and 25% by 2030.
- To contribute to Dubai Carbon Abatement Strategy that targets the reduction of CO2 emissions by 16% in 2021.
- To improve water efficiency within our production and distribution networks.
- To reduce our employee turnover rate and increase the proportion of UAE nationals in our workforce.
- To fully integrate green procurement into DEWA's 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.

DEWA'S STAKEHOLDER ENGAGEMENT WORKSHOP ON SUSTAINABILITY

Stakeholder Engagement is vital in our approach to sustainability and a cornerstone in DEWA's Corporate Sustainability Programme. For the year 2016, the Climate Change and Sustainability Department used as a platform the Creativity Labs organised by the Strategy Department. Engaging with our stakeholders is essential for understanding their expectations, needs and concerns.

Throughout the sustainability sessions, we invited stakeholders' feedback on our sustainability report. We discussed their concerns and expectations and we finally ranked each topic on its importance to them. Our stakeholders' feedback was utilised as a basis for the 2016 materiality process and has also been acknowledged in decisions about the review of the annual corporate strategy planning.

MATERIALITY ASSESSMENT

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, or those matters viewed as most significant by its internal and external stakeholders. Within this context, and in order to ensure that we have identified the topics that affect our stakeholders, we have conducted a materiality analysis in line with the GRI G4 Standards framework. Materiality is the process of identifying the most important sustainability topics for DEWA. It helps us identify and prioritise the topics we should focus on in our strategies and programmes and report on in this edition of our Report. In selecting and ranking our material topics, we have used a detailed procedure based on the principles of relativity, importance, and ranking, as seen below:

Step 01 Determination and understanding of the topics deemed significant to our stakeholders, through a process of research and focus groups made up of employees, government, society, suppliers, partners and customers, through benchmarking in the electric utilities sector, and through alignment with UAE Federal and Dubai Emirate sustainable development objectives.

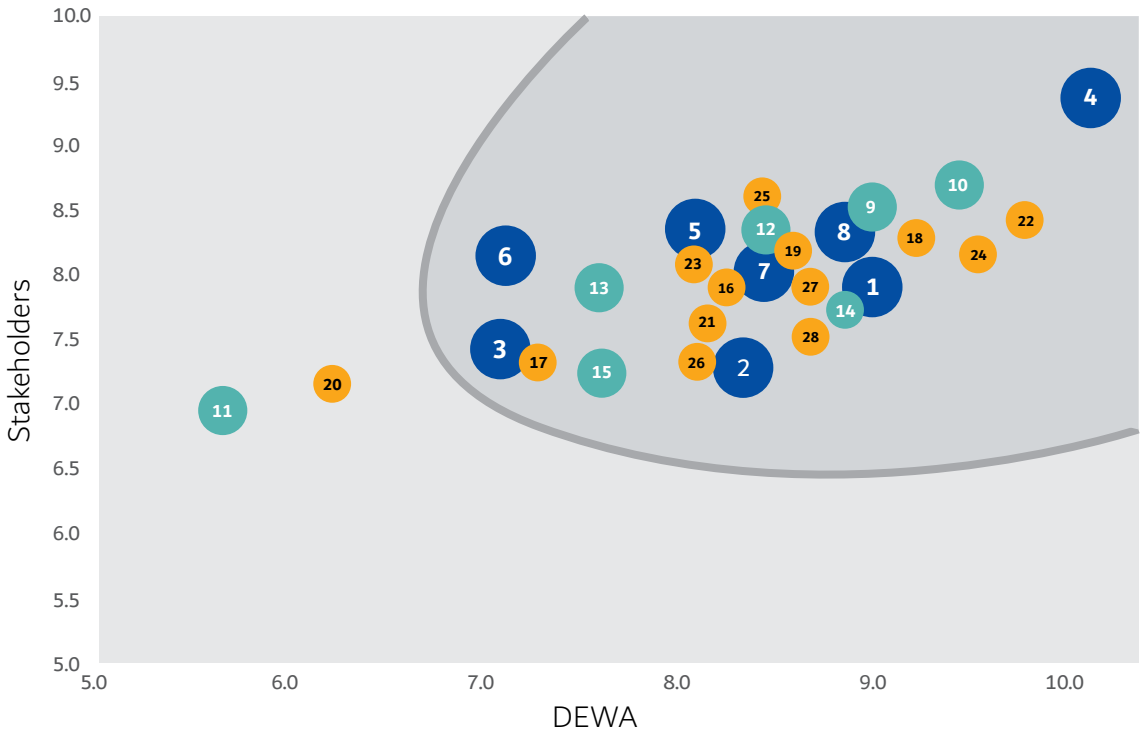
Step 02 Identification and understanding of significant topics, as these arise from the corporate strategy of DEWA, through internal procedures. For topics which can be measured in quantitative terms, such as greenhouse gas emissions, there are recognised methods of determining their materiality. For topics of a qualitative nature, various methods were used to assess their materiality, with the involvement of stakeholders and also through a benchmarking process.

Step 03 Bringing together of the results into a matrix, an evaluation of each topic was conducted on the basis of its social, environmental and economic impact. Each topic was evaluated and given a materiality ranking in accor dance with its importance to our stakeholders and to our organisation. Subsequently, the final materiality matrix was reviewed and approved by DEWA's Senior Management, with the topics located in the top right corner of the matrix regarded as the most material.

Step 04 Subsequently, the Report included all topics with the highest level of materiality. Topics of less materiality are mentioned only if they are affected by or dependent on topics of greater materiality.

Step 05 The topics included were checked for completeness, relativity and balance by an external assurance company.

The results of our 2016 materiality assessment process are illustrated in the materiality matrix below. This shows the relative importance of each topic for DEWA's performance and for our stakeholders. The boundaries for each material aspect can be found in Appendix 1.



Material Topics

Economic

1- Economic Performance
2 - Market Presence
3 - Procurement Practices
4 - Availability & Reliabilty of Electricity
5 - Demand Side Management
6 - Research & Development
7 - System Efficiency
8 - Anti-corruption

Environmental

9 - Energy
10 - Water Availability & Quality
11 - Biodiversity*
12 - Emissions
13 - Effluents and Waste
14 - Compliance with Environmental Laws and Regulation
15 - Supplier Environmental Assessment

Social

16 - Employment
17 - Labour - Management Relations
18 - Occupational Health & Safety
19 - Training and Education
20 - Supplier assessment for labour practices*
21 - Local Communities
22 - Access to Electricity
23 - Provision of Information for Customers
24 - Disaster/Emergency Planning and Response
25 - Customer Health and Safety
26 - Customers happiness
27 - Compliance with Laws and Regulations
28 - Diversity and Equal Opportunity

* Non - Material topics

RESEARCH AND DEVELOPMENT

In line with its vision to be a sustainable innovative world-class utility and strengthen the efficiency and reliability of electricity generation, distribution and transmission, DEWA continues to demonstrate strong commitment to supporting Research and Development initiatives. The focus of these initiatives spans across three dimensions: infrastructure, R&D projects, and people/capabilities.

DEWA is currently establishing R&D facilities at the Mohammed bin Rashid Al Maktoum Solar Park, with a total investment of AED 500 million up to 2020. Infrastructure includes a state-of-the-art R&D centre that will host most of the R&D activities, an Outdoor Testing Facility (OTF) for testing solutions and equipment under the harsh and hot environmental conditions of the UAE and the first 3D printed lab for R&D on Drones and Artificial Intelligence.

Our projects portfolio is organised across five R&D areas, namely Solar, Water, Energy Efficiency and Smart Grid Integration & Energy Storage, Drones & Artificial Intelligence. Examples of projects include soiling mitigation for solar panels, load forecasting, testing of components and development of interfaces and intelligence for smart grid applications, simulation of solar thermal energy systems for cost and performance optimisation, development of drones for utility applications, and 3D printing of components and facilities for our core operations. Additionally, we are exploring other opportunities for engagement in R&D activities spanning from ocean and geothermal, to wind and hydrogen. Finally, DEWA R&D is organising the Solar Decathlon Middle East 2018 and 2020: a sustainable solar houses competition hosting 22 teams from 37 universities and 16 countries. Proposals will be focused on solving the issues and needs for sustainable living in this region.

In parallel, through our R&D programmes and initiatives, we are building a strong network of local and international partnerships and collaborations with industry and academia, and contributing to the development of the future generation of scientists and engineers for DEWA and UAE. The quality of our work has already been recognised internationally, through our peer-reviewed publications in international journals, contributions to international conferences and involvement in world-class collaboration networks. The knowledge and IP generation within R&D will contribute to sustaining innovation and excellence at DEWA for the years to come, and provide the UAE with opportunities for further home-grown development and commercialisation of technologies.

CREATIVITY & INNOVATION AT DEWA

As a utility that adopts creativity and innovation as a part of its culture, DEWA strives to achieve the vision of the country's leaders and continuously exerts efforts to develop the concept of creativity and innovation among the clean energy and water sectors. In 2016, DEWA established its "Innovation and The Future" Division that merged two operating branches, the "Creativity and Innovation Department" and "Information Technology". Creativity and Innovation at DEWA mainly revolve around three function areas: Innovation planning and relations, Innovation facilitation, and Innovation administration.

In 2016, DEWA received the European Specification Certificate on Innovation Management Systems (CEN / TS 16555-1-2013), from the British organisation Lloyds Register, for its preparation and application of an integrated system for innovation management. DEWA is one of the first government entities to adapt and acquire CEN/TS 16555-1 accreditation. The accreditation provides guidance on establishing and maintaining an innovation management system (IMS). This new achievement reflects DEWA's commitment towards promoting innovation and creativity in adherence with the directives of the wise leadership, national objectives, and its vision to become a sustainable innovative world-class utility.

In line with UAE Innovation Week, DEWA organised its annual Innovation Week and Exhibition that provides DEWA's employees, innovators and emerging businesses with information regarding our most recent innovative projects. The Innovation Week featured various activities and events, including the Future Hub, which highlighted four main themes: Green Planet, Immersive Experiences, Smart City, and Connected World. DEWA also launched multiple interactive activities in its Future Dome including I-Talk sessions and Innovation Talk.

Dewa Innovative Forces

In line with our vision to be a sustainable innovative world class utility, DEWA launched the "Innovative Forces "campaign to recognise the creative minds among our employees and inspire others to innovate.

Maker
Yousuf Al Burei

Entrepreneur
Islam Abuhamdah

Facilitator
Dr. Abdulla Al Hammadi

Maker
Riham Helmi

Entreprenur
Ammar Makki

Interactions	55 Interviews Conducted, 3 Innovators Profiles identified
Process & Tools	Selection & Development, Content & Management
Research	Innovation in Corporations, Government & Startups, Expert Advise

2016 Main Initiatives & Programmes

DEWA Future Utility Cup
DEWA Future Utility Cup is a global competition to identify start-ups that can provide innovative solutions for DEWA and possible business collaboration and partnerships

Innovation Talk
Innovation talk is the way to create an environment that enables and encourages creative thinking. It is a series of inspirational sessions that will be conducted by an innovative and high profile guest speaker for DEWA employees and public. I-talk main objectives will spread the culture of innovation and present real experiences from local and international levels in many fields such as science, technology, business, culture or other fields that concerns DEWA. This experience will allow the employees to get a critical insight of how innovation is planned and executed.

Innovation Forces
It is a project that recognizes the creative minds in DEWA and inspires others to innovate.
5 DEWA innovators series videos were released.

"Shams Dubai" Solar Roller
"Shams Dubai" Solar Rollers is a challenge programe that will encourage students all over UAE to design, build, test and race solar-powered remote control cars. It will infuse clean energy learning through younger generations in a highly engaging manner and it will establish DEWA as a forward- thinking supporter of innovation & sustainability.

"AFKARI":
"AFKARI", My DEWA Ideas, is the official creativity and innovation scheme in DEWA. It gives all employees an opportunity to contribute to the success of DEWA with their ideas.

DEWA programmes with Free Electron:
Free Electron is the global energy startup accelerator programmes that connects the world's most promising startups with leading utility companies to co-create the future of energy and innovative customer solutions.

DEWA Hackathon
Hackathon is a competition based on ideas generation training which provides an introduction to how the creative process works. Participants gain a number of proven practical tools to support creativity and innovative problem solving. The first Hackathon was conducted for DEWA employees to encourage them to innovate and create new ideas to develop DEWA's services and achieve the happiness of its customers. The second Hackathon was conducted for university students.

Innovation Tool Kit
Innovation Department has created video tutorials for the different techniques of brainstorming to be used by all employees in DEWA and the public. In order to make meetings and brainstorming sessions more effective and engaging.

DEWA Robotics Competition
It is a Build It Yourself Robotics Kits project for students & employees starting from ages 6 to high school level. In addition to students, these robotics kits can also be used in DEWA's innovation centres for training of DEWA employees and further development exercises especially since they include the usage of light sensors, IR sensors, and ultrasound sensors.

DEWA Innovation Portfolio
DEWA developed its first innovation portfolio to capture and identify the innovative projects across the entire organisation.

"Ebtikari" Platform
"Ebtikari", My invention, is an open online competition platform which runs specific challenges on areas which are strategic for DEWA and serves as an active forward-looking tool of engagement with the global innovation ecosystem. Ebtikari aims to encourage inventors and designers from around the world to present their innovations using a smart platform.

AWARDS AND DISTINCTIONS FOR SUSTAINABILITY LEADERSHIP & INNOVATION 2016

- Distinguished Government Entity DGEP- Executive Council of Dubai
- Financially Distinguished Performance DGEP- Executive Council of Dubai
- Distinguished Entity in Government Communications DGEP - Executive Council of Dubai
- Distinguished Creative Idea DGEP - Executive Council of Dubai
- Dubai Quality Award - Gold Category & Dubai Human Development Award - Department of Economic Development (DED) - UAE
- Golden Shield Award for Excellence in Social Responsibility for Best Environmental practices: Conservations initiatives (Neighborhood Campaign) - Arab Organisation for Social Responsibility
- Golden Shield Award for Excellence in Technological innovation for water desalination for Suqia - Arab Organisation for Social Responsibility
- DEWAs smart app wins best m-Government Award in environment category - UAE Government
- DEWA wins best m-Government Award in environment category at World Government Summit - UAE Government
- Best Mobile Government Service category for its smart app - Hamdan bin Mohammed Award for Smart Government - Executive Council of Dubai
- Best New Government Service category for its Green Charger initiative - Hamdan bin Mohammed Award for Smart Government - Executive Council of Dubai
- Best Website category for DEWA's website - Hamdan bin Mohammed Award for Smart Government - Executive Council of Dubai
- Power Project of The Year for "Dubai Smart Soil" - Middle East Electricity Awards
- Lighting Project of the Year for "Project of Energy Management" - Middle East Electricity Awards
- HSE Project or Initiative of the Year for "Sustainable Contractor HSE-Management at DEWA" - Middle East Electricity Awards
- Best Strategic Partner award for Energy and Green Economy RTA
- DEWA Solar IPP for best financial deal Middle East and North Africa (awarded on March 21, 2016) - IJ Global Award, IJ Global -UK
- Distinguished Academic Performance - The Hamdan Bin Rashid Al Maktoum Award for Distinguished Academic Performance (HBRADAP)
- Public Sector award for CSR and programmes in sustainability - Arabia CSR Awards 9th cycle - The Arabia CSR Network
- Golden Globe Tigers Awards in Sustainability Leadership for Best Renewable Resources - Energy - Golden Globe Tigers
- Golden Globe Tigers Awards in Sustainability Leadership for Best Renewable Resources - Green Building Golden Globe Tigers
- Golden Globe Tigers Awards in Sustainability Leadership for Best Renewable Resources - Sustainable Transport - Golden Globe Tigers
- Best Smart City Initiative category for their Green Charger Initiative - Smart Cities Summit and Awards 2016 during World CSR Day - Smart Cities Congress & Awards
- Configuration and Deployment of Smart City Infrastructure 2016 category for its Dubai Smart Soil Initiative Smart Cities Summit and Awards 2016 during World CSR Day - Smart Cities Congress & Awards
- Award for Most Powerful Smart City Leaders-Smart Cities Summit and Awards 2016 during World CSR Day / Smart Cities Congress & Awards
- Middle East Utilities Usage and Management Excellence Award category - The Middle East Excellence Awards Institute
- Excellence in Corporate Governance - Golden Peacock Awards
- International Star for Leadership in Quality in the Gold Category for outstanding excellence and quality - Business Initiative Directions (BID)

CASE STUDY:
SUSTAINABILITY LEADERSHIP CONFERENCE

In line with DEWA's Strategic Plan 2021, the Sustainability Leadership Conference, a collaboration between Dubai Electricity & Water Authority and Cambridge Institute for Sustainability Leadership (CISL) was conducted in March 2017. The overall aim of the event was to promote sustainable and innovative business practices in Dubai. More specifically, the Programme focused on Knowledge, Skills, Innovation, Collaboration and Leadership. The programme included keynote speeches, panel discussions and interactive workshops, on two separate but interconnected days:

CEO Summit:

The first day was dedicated to CEOs and focused on exploring strategic priorities, and spread awareness on the importance of sustainability and sustainable growth. During the programme CISL and DEWA signed an MOU for further collaboration in the areas of sustainability. The topics during the first day included the following: Promoting city resilience, Sustainability and quality of life, Fostering innovation and leadership, Delivering the UN Sustainable Development Goals (SDGs), Sustainable Growth, Resource security, Competitiveness and Sustainable Business, and Mobilising finance behind a sustainable economy.

Sustainability Masterclass:

The second day included master classes that were dedicated to employees with a responsibility in fields related to sustainability, reporting, corporate responsibility, climate change, supply chains, stakeholders' engagement and communication, human resources. The topics during the second day covered the following: Setting leading Sustainability Strategies, Sustainability value in circular economy, Sustainable organisations workplace culture and engagement, Measuring and reporting progress, and Innovating thinking and sustainability.

CASE STUDY:
ENVIRONMENTAL INDUCTION FOR DEWA ACADEMY

DEWA partnered with the Business and Technology Education Council (BTEC), a British organisation that pioneered in vocational rehabilitation. Through this partnership, DEWA launched an Academy for Emiratis to support an Emiratisation policy building their technical skills in electricity and water sector. This Academy comes in line with the vision of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, and the UAE Vision 2021 that aims "to invest in its talented Emiratis and make the UAE one of the best countries worldwide" and led by DEWA's vision to become a sustainable innovative world-class utility".

The environment department in DEWA came up with an initiative of sending their specialised staff to deliver topics on Environmental Management Systems and basic concepts of an Environment System

to DEWA Academy students and distribute the topics based on their knowledge level. The goal of the initiative is to inspire a new generation to take better care of the environment and to foster environmental awareness while moving towards sustainability. This initiative will also lead students to be highly aware about the environmental issues that are occurring on a global scale.

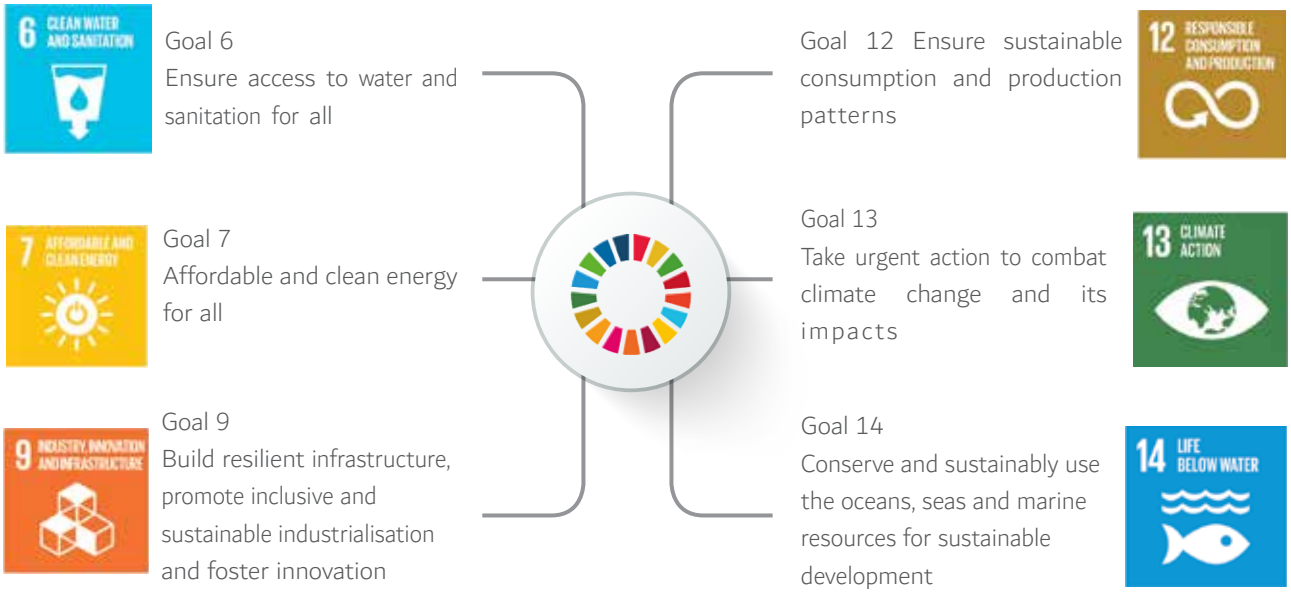
DEWA & THE SUSTAINABLE DEVELOPMENT GOALS

THE GLOBAL GOALS
For Sustainable Development

As an energy and water utility, DEWA's role is to support and encourage economic, social and environmental progress, leading to a better quality of life through the provision of high quality and reliable services to all the households and businesses within the Emirate of Dubai. We believe in taking the long view and going beyond mitigating harm to driving real sustainable progress, which is why sustainability forms an integral part of our corporate strategy.

The United Nations has played a substantial role in encouraging sustainable progress. The Sustainable Development Goals were born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012 with the aim to meet the urgent environmental, political and economic challenges facing our world. A set of 17 Goals to end poverty, protect the planet and ensure prosperity for all were adopted by world leaders on September 2015 and came into force in January 2016.
DEWA was committed to the former Millennium Development Goals and is now also supporting the current Sustainable Development Goals (SDGs). Though we indirectly contribute to many SDGs (Goal 3, 5 8, 11, 16 and 17 we can have the most impact on the goals that are aligned with our main impact areas and strategic priorities.

As an energy and water utility committed to empowering our customers and accelerating sustainability within our company as well as all our stakeholders, DEWA is directly linked to the below goals, thus settings our primary focus to:



Our primary contribution to the above SDGs is highlighted throughout this report.

ENERGY & CLIMATE CHANGE

- 60% improvement in NOx Emission Levels in 2016 with respect to 2007.
- 25% renewables generation capacity will be achieved by 2030
- Cumulative efficiency improvement of 25.47%, equivalent to 37.5 million tons of CO_2 emission reduction between 2006 and 2016 .
- 10,000 MW generation capacity for 2016.
- 3.3% electricity line losses for 2016, 30% improvement since 2007.

MANAGEMENT APPROACH

Climate change has risen to the top of the UAE political and business agenda due to the urgency and importance of the issue. In the UAE, we are vulnerable to the impacts of climate change. Key risks for the UAE include rising sea water temperatures, rising sea levels, adverse fluctuations in the hydrological cycle, and changes in the level of rainfall. These events could have an impact on DEWA's coastal power and water generation plants since the capacity of power generation and water production is dependent on sea water temperatures. This would lead to additional stress on our existing water and power resources.

The UAE government is committed to confronting climate change through innovative and coordinated action aimed at minimising the risks to its natural environment and economic activity. Several policies, from both the UAE Federal Government and Dubai Government, include objectives focused on the mitigation of climate change impacts and energy source diversification. Dubai in particular has established ambitious clean energy goals, with DEWA playing a critical role by increasing its renewable energy targets, managing energy demand, and further reducing carbon footprint in accordance with the comprehensive strategic guidelines established by the Dubai Supreme Council of Energy.

As Dubai's sole provider of power and water, we recognise that we have an integral role in helping to achieve these policy objectives by reducing the carbon intensity of electricity and water production and enabling our stakeholders to reduce their consumption and ultimately save costs. We believe that the challenges posed by climate change demand coordinated and decisive action. Our aim is to reduce our climate impact while maintaining a secure, reliable and affordable supply of power and water. Prior to the construction of any new DEWA project, an environmental impact assessment is first conducted by independent consultants, using international standards, before any construction can commence.

DEWA is implementing 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 resource. DEWA also works to instil a culture of conservation in society and to achieve the Dubai Demand Side Management strategy to reduce consumption by 30% by 2030, and the Dubai Carbon Abatement Strategy to reduce carbon emissions by 16% by 2021 which is line with UAE Vision 2021, Dubai Clean Energy Strategy 2050, and the Green Economy for Sustainable Development Initiative launched by His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai.

ENVIRONMENTAL PROTECTION AND COMPLIANCE

We continuously seek to minimise our impact on the surrounding ecosystem through reducing our air emissions, reducing our waste, and ensuring we are compliant with all relevant environmental legislation. At DEWA, we abide by the precautionary principle with regards to the environment. We have corporate policies and procedures that describe the preventative actions that should be taken to eliminate the cause of any potential non-conformity, defect, or other undesirable situations in order to avoid the occurrences and related environmental impacts. To ensure that we effectively manage these risks and meet industry and legal standards, we have implemented an ISO-14001 certified environmental management system (EMS) which has been maintained at the corporate level since 2006 and in our Generation Division since 1998. It has provided the foundation for continuous improvement in the way we manage our environmental impacts. DEWA's efforts to preserve natural resources and achieve environmental excellence has resulted in winning many prestigious awards in the field of environmental excellence during 2016. These include the Five Star Environmental Audit from the British Safety Council, for five consecutive years, and the Globe of Honour from the British Safety Council. DEWA was the first organisation in the MENA region to receive this prestigious award five years in a row.

DEWA complies with all relevant environmental regulations set forth by both the UAE Federal Government and Dubai Municipality. These regulations set standards for regulating aspects of health, safety, security and environmental quality and impose civil and criminal penalties for any violations. In addition, we also comply with any special permit provisions where we operate in environmentally sensitive areas. During 2016, we have not been in violation of any environmental regulations nor have we received any complaints relating to environmental matters.

POWER GENERATION

Our fundamental mission is to supply essential electricity and water to meet Dubai's current and future demand. We place the utmost importance on our duty to deliver electricity and water services to the market and our customers, and in doing so we strive for world-class standards of performance. DEWA owns, operates and maintains power stations and desalination plants, aquifers, power and water transmission lines and power and water distribution networks in Dubai. Our Generation division mainly manages, operates and maintains very reliable power generation and water desalination plants to meet Dubai's power and water needs at the highest standards of reliability, efficiency, quality and environmental safety. Our power generation and water desalination stations are mainly fuelled by natural gas. We buy 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. In 2016, our total gross generation was 43,091,953 MWh, which was produced mainly through the usage of natural gas.

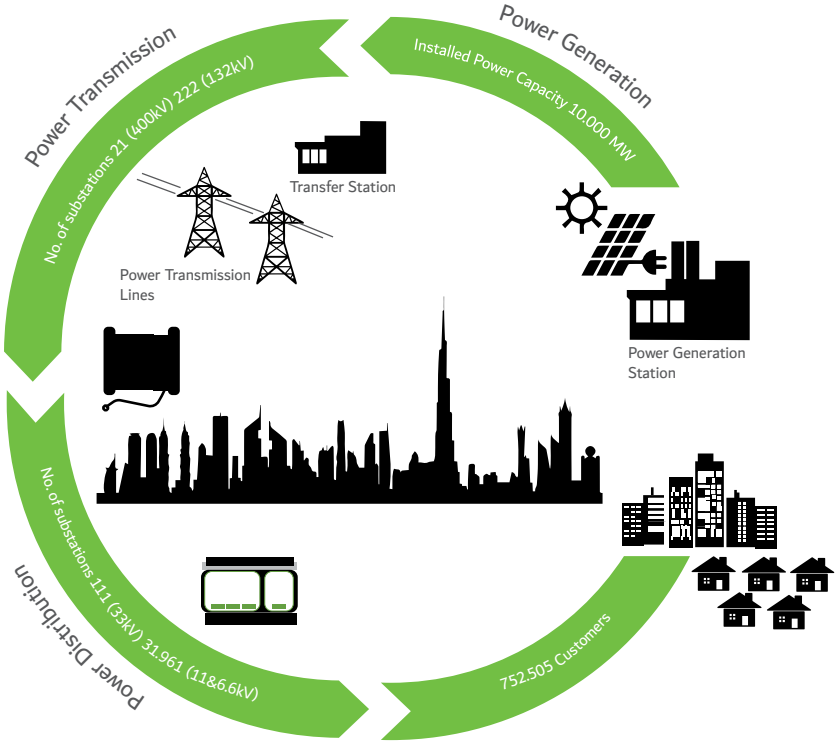


Table: Net Energy Output Broken Down By Primary Energy Source (2012-2016)

		Natural Gas		Diesel Fuel Oil		Medium Fuel Oil		Solar	
Year	Total Gross Generation (MWh)	Generation (MWh)	% of total generation	Generation (MWh)	% of total generation	Generation (MWH)	% of total generation	Generation (MWh)	% of total generation
2012	36,297,050	36,238,642	99.84	58,242	0.16	167	0.0005	-	-
2013	37,478,845	37,393,705	99.77	79,641	0.21	177	0.0005	5,322	0.01
2014	39,516,459	39,431,699	99.79	56,202	0.14	147	0.0004	28,411	0.07
2015	42,006,335	41,942,125	99.85	36,729	0.09	1	0.00003	27,479	0.07
2016	43,091,953	43,034,528	99.87	28,389	0.07	86	0.0002	28,951	0.07

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

DEWA'S INSTALLED CAPACITY

Table: DEWA's installed capacity for 2016

DEWA Installed Capacity		
Site	Station	Production Capacity Power (MegaWatts) at 50° C & 30% R.H.
Jebel Ali, Dubai	D	1,027
	E	616
	G	818
	K	948
	L	2,401
	M	2,185
Aweer, Dubai	H	1,996
Seih Al Dahal, Dubai	Mohammed bin Rashid Al Maktoum Solar Park	10
	Total	10,000 MW

CASE STUDY: M-STATION

Expansion of M-Station Power and Water Desalination Plant

Recognising that securing the supply of electricity and water, and ensuring their long-term sustainability is critical to achieving the vision of the wise leadership, in DEWA, we work to anticipate the future, to meet all future requirements and needs. The M-Station is a national landmark, and adds to DEWA's growing list of achievements over the last five decades. The M-Station was inaugurated in Jebel Ali Power Station in April 2013 by HH Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, Minister of Finance and President of DEWA.

The M-station is the largest power production and desalination plant in the UAE, with a current total capacity of 2,185MW of electricity and 140 MIGD. The station adopts the highest levels of availability, reliability, and efficiency, using the most advanced technologies in the world. It is equipped with the latest smart devices and sophisticated heavy-duty technological systems. M-Station was built at a cost of AED 10 billion and AED 150 million.

Since 2015, DEWA has worked with Siemens on the construction of the Jebel Ali M-Station expansion, as the total cost of M-Station construction along with the expansion project reaches AED 11.5 billion. The substation's total capacity will reach 2,885 MW when the project is completed in 2018. The expansion project includes the provision of new power generating units adding a further 700MW to the installed generating capacity of M-Station.

The expansion project includes the addition of two dual-fuel gas turbine generators, two heat recovery steam boilers, and one steam turbine with 90% of fuel efficiency. This will increase the plant's thermal efficiency from 82.4% to 85.8%, which is one of the highest thermal-efficiency rates in the world. DEWA has succeeded in enhancing the efficiency of fuel use between 84-90%, while improving production efficiency by 25.47% in 2016, compared to 2006, through the deployment of highly efficient technologies in the production of electricity, and water desalination. This will meet Dubai's present and future needs of electricity and water including the new urban expansion projects, complementing the prosperity and economic development of the Emirate of Dubai.

POWER TRANSMISSION & DISTRIBUTION

It is also vital that we transport electricity to our customers in a way that enhances both reliability and efficiency as it travels through our transmission and distribution (T&D) network. Our transmission line availability is typically above 99.9% reflecting world-class standards of performance.

Table : Total number of Transmission and Distribution substations, 2016

Voltage Category (kV)	Number of Substation
400	21
132	222
33	111
11 & 6.6	31,961

In DEWA, we also work to reduce our system losses from our networks by making substantial investments to implement and enhance our Intelligent Metering System and Smart Grid. One of DEWA's key optimisation systems we use to ensure a consistent transmission and distribution of electricity to our customers is our Supervisory Control and Data Acquisition (SCADA), a monitoring and control technology system of transmission and distribution Grids. Our continued efforts to optimise our network has resulted in our 2016 electricity line losses being 3.3%, a 30% improvement since 2007.

Table : Length of Transmission and Distribution Lines, 2016

Type	Voltage Category (kV)	Length Of Transmission And Distribution Lines (km)
Overhead Lines	400	1,125
	132	413
	33	113
Underground Lines	400	23
	132	1,800
	33	2,052
	11 & 6.6	29,384

In line with our commitment to adopt and employ green initiatives, DEWA established a LEED initiative under its Transmission Power Division to support and comply with green building criteria for our substations. The purpose of the initiative is to enhance energy and water consumption savings in DEWA's electrical substation in accordance with the requirements and standards of the LEED certificate. The LEED Certification is a green building rating system used to measure human and environmental, health, sustainable site development, water savings, energy efficiency, materials selection, indoor environmental quality, etc.

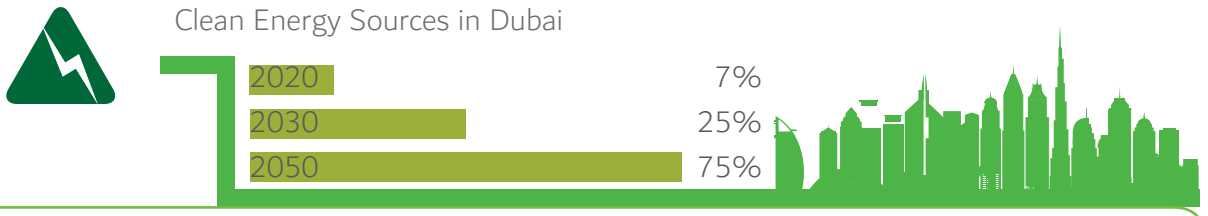
REGIONAL GRID CONNECTIVITY

To ensure a reliable supply of electricity throughout the UAE, the Emirates National Grid (ENG) was established to interconnect the electricity transmission grids of the four Authorities (given below) and allow them to purchase electricity from one another. The ENG forms part of a Gulf-wide regional grid system, linking the national grids of the Gulf Cooperation Council (GCC). DEWA has neither imported nor exported electricity in the year 2016 to meet its system requirements.

ENSURING LONG TERM AVAILABILITY & RELIABILITY

We recognise that high-dependence on natural gas makes us vulnerable to shortages and future commodity price fluctuations. Therefore, part of our long-term energy strategy is to diversify our energy sources, as part of the Dubai Clean Energy Strategy 2050, and ensure that future demand is met at all times. DEWA plays an essential role in achieving these goals by reinforcing the renewable energy sector to meet the objectives of the Dubai Clean Energy Strategy 2050, which maps out Dubai's energy sector over the next three decades. The strategy aims to provide 7% of Dubai's total power output from clean resources by 2020, 25% by 2030, and 75% by 2050. This contributes to dealing with environmental challenges the world is facing by establishing a sustainable model in energy conservation that supports economic growth without damaging the environment and natural resources.

Dubai Clean Energy Strategy

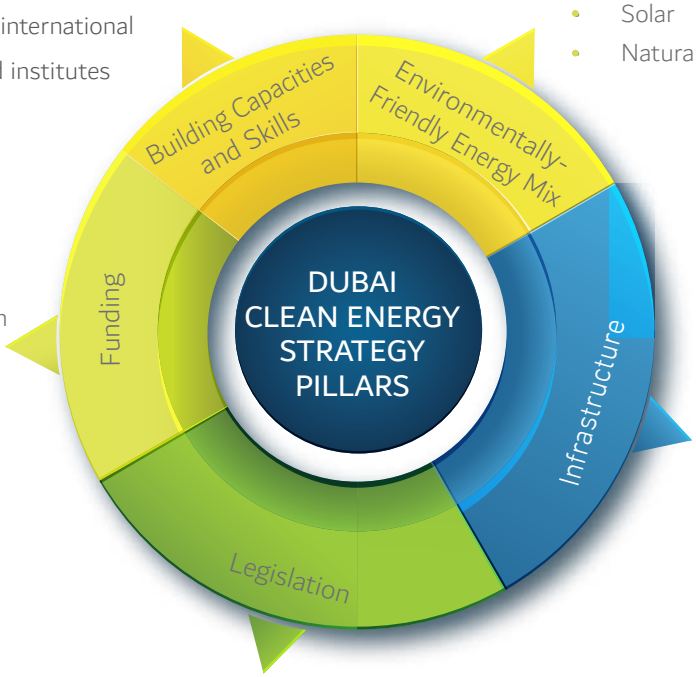


Dubai will be the city with the lowest carbon footprint in the world by 2050

To make Dubai a global centre for clean energy and green economy

To build employees capabilities by using training programmes in cooperation with international organisations and institutes

- Nuclear
- Clean Coal
- Solar
- Natural Gas



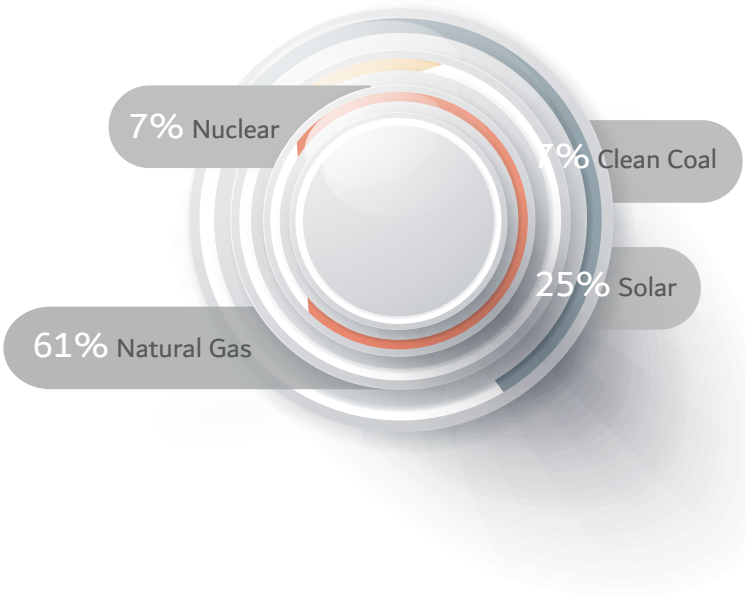
Establishment of Dubai Green Fund worth USD 27 billion

- Mohammed bin Rashid Al Maktoum Solar Park
- DEWA Innovation Centre
- Dubai Green Zone

- The first phase will be implemented by "Shams Dubai"
- The Second phase includes a set of plans on the integration of consumption conservation technology and energy production in buildings

DIVERSIFICATION OF FUEL MIX

DEWA is committed to meet and establish the growing interest in sustainable energy and diversifying its sources while preserving the environment and achieving sustainable development



SOLAR ENERGY

As part of DEWA's efforts to utilise solar energy and contribute to meet its clean energy strategy, DEWA works on multiple world class projects including the Mohammed bin Rashid Al Maktoum Solar Park and "Shams Dubai" Initiative.

Mohammed Bin Rashid Al Maktoum Solar Park

The Mohammed bin Rashid Al Maktoum Solar Park is the largest single-site solar park in the world located in Seih Al Dahal, Dubai with a total planned capacity of 5,000MW by 2030. The first phase of the project started operation in 2013 with a capacity of 13MW (under optimum weather conditions), which is the largest photovoltaic power plant of its kind in the Middle East and North Africa region. The second phase of the solar park was successfully launched in April 2017 with a total capacity of 200MW that is under the Independent Power Producer (IPP) model. DEWA announced the Abu Dubai Future Energy Company (Masdar) led consortium as selected bidder for the 800MW third phase of the solar park. The third phase will be implemented in stages until 2020. Upon completion, the solar park will reduce over 6.5 million tons of carbon dioxide emissions annually.

"Shams Dubai"

DEWA launched "Shams Dubai" in adherence with the Smart Dubai initiative, to transform Dubai into an innovation benchmark for smart cities seeking global sustainability and competitiveness. "Shams Dubai" encourages building owners to install photovoltaic (PV) panels on their rooftops to generate electricity from solar power. The electricity is used onsite and the surplus is exported to DEWA's grid.

CLEAN COAL ENERGY

Hassyan Clean Coal Power Project

DEWA launched the Hassyan Clean Coal Power Project to produce electricity using clean coal based on the Independent Power Producer (IPP). Hassyan clean coal power project will have a total coal-fired capacity of 2,400 MW, that will be fully-operational by 2023. The plant will be the first of its kind in the region and is fully-compliant with set international standards, adopting the use of ultra-supercritical technology. The project also meets flue gas emission limits more stringently than emission limits of both the Industrial Emissions Directive of the European Union and the International Finance Corporation Guidelines.

NUCLEAR ENERGY

To meet our nuclear energy target of 7%, as part of our diversification strategy, DEWA has initiated negotiations and dialogue with regards to nuclear power import from the Barakah Nuclear Plant in Abu Dhabi.

HYDROELECTRIC POWER STATION IN HATTA

In 2016, DEWA announced building a hydroelectric power station project in Hatta that will further contribute to diversifying the energy mix and develop the resources available to the community in Hatta to meet their social, economic, and environmental development needs. DEWA will build a hydroelectric power station that will make use of the water stored in the mountains next to Al Hattawi dam. This project is the first of its kind in the GCC, and will produce 250MW with a lifespan of 60-80 years.

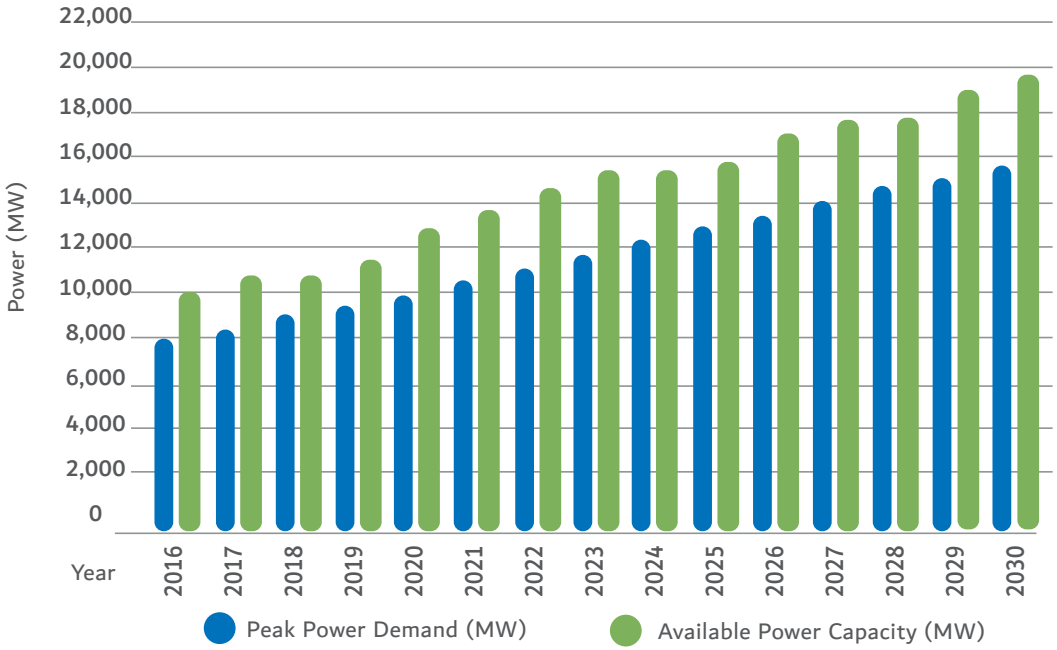
MEETING FUTURE DEMAND

While maintaining a reliable, high quality and efficient power and water supply to Dubai today, DEWA is committed to ensuring that this continues in the long run at a world-class level of reliability, efficiency and safety with due consideration to the sustainability of resources. Power and Water Planning Division at DEWA plays a key role in achieving that through defined and reliable planning processes. These planning processes are based on studies using state of the art tools and recognised international best practice methods to ensure all requirements are met in an optimal manner.

Planning processes start with demand forecasting up to 2030 which is updated annually considering demographic and econometric growth and captures the effect of future uncertainties through scenario planning. This ensures achievement of DEWA strategy 2021 and full alignment with Dubai and UAE key strategies. Based on Demand Forecast, all DEWA Master Plans are developed.

Master Plans provide infrastructure expansion plans of Power and Water systems including: generation and desalination capacity expansion plans up to 2030, power and water transmission network expansions up to 10 years and power distribution network up to 5 years. Master Plans are updated annually in order to meet Dubai power and water demands on time with a reserve margin minimum of 15% at a world class level of reliability, efficiency and safety, taking into consideration best resource utilisation. Resources for future power and water infrastructure expansions are identified and budgeted for, on an annual basis as per the Master Plans, to ensure meeting forecasted demand until 2030.

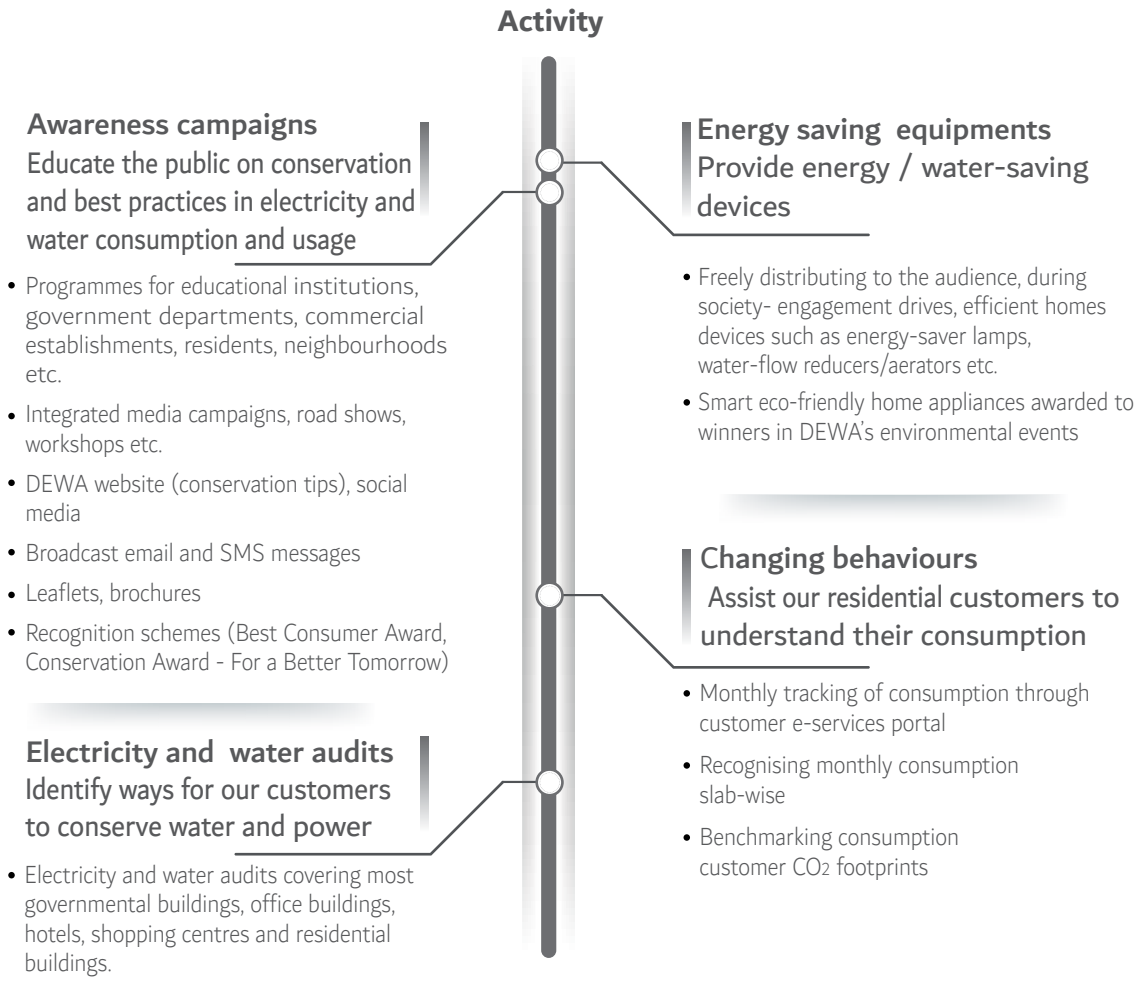
Graph: Peak Power Demand and Planned Capacity Additions (2016-2030)



DEMAND SIDE MANAGEMENT

The Demand Side Management (DSM) Strategy was launched by the Dubai Supreme Council of Energy in June 2013. DEWA supports the Demand Side Management 2030 strategy to reduce energy demand in Dubai by 30% in 2030, compared to the business as usual. Demand Side Management focuses on reducing energy demand, the rational use of energy, and the adoption of best international techniques and practices to reduce the consumption of resources, by raising awareness about the practices and techniques to save energy and reduce costs. The strategy has 9 main programmes in line with international best practices and similar programs implemented globally. These programmes address every facet of our everyday life and contribute to the sustainable development of Dubai. These include: green-building regulations, retrofitting of existing buildings, district cooling, wastewater reuse, laws and standards to raise efficiency, energy-efficient street-lighting, and the "Shams Dubai" initiative to enable building owners to install photovoltaic panels to generate electricity and connect it to DEWA's grid.

DSM Programs and Initiatives



ENERGY MANAGEMENT AT DEWA PREMISES

DEWA supports the Demand Side Management 2030 plan to reduce energy demand in Dubai by 30%, compared to the business as usual scenario, by 2030. In 2016, our electricity consumption from DEWA's Head Office and Customer Happiness Centres located at Al Hudaiba, Umm Ramool, Al Wasl and Burj Nahar is 10,705,237 kWh. In line with Demand Side Management Strategy, DEWA has launched a number of initiatives to enhance the efficient use of power and water. Through these initiatives, the annual per capita consumption of electricity and water has been reduced from 13,626 kWh and 38,554 IG in 2015, to 12,826 kWh and 36,391 IG in 2016.

Under the energy management of DEWA premises, many conservation measures including housekeeping measures were implemented by DEWA in 5 of its buildings. We have achieved 19% for electricity and 52% for water savings by end of year 2016. The cumulative savings during the period from 2013 to 2016 is 4.6 million AED.

In April 2016, DEWA inaugurated one of the largest single-rooftop arrays in the MENA region, a 1.5 megawatt direct current (MWdc) photovoltaic (PV) generation project at Jebel Ali Power Station, and successfully connected it to DEWA's grid. DEWA installed 5,240 PV panels on the roof of the water reservoir at the M-Station. The modules will produce 1.5MW by converting solar energy into electricity, which will be used to meet the station's energy needs, and will generate 2,666 MWh of clean electricity annually. The project aims to preserve the environment, and reduce the carbon emissions about 1,500 tons of the carbon dioxide annually. Furthermore, DEWA is using Uunmanned Aerial Vehicles (UAVs) to check on the PV panels situated on the roof storage water tank of M-Station in Jebel Ali.

DEWA'S SUSTAINABLE BUILDINGS

Al Quoz Sustainable Building

DEWA's Sustainable Building in Al Quoz inaugurated in 2013, is the first sustainable government building in the UAE, and the largest government building in the world to receive a Platinum Rating for green buildings, from Leadership in Energy and Environmental Design (LEED). The building uses 66% less energy, and includes an on-site 660 kilowatt (kW) solar power plant, which reduces water consumption by as much as 48%. In addition, 36% of construction material used was recycled content.

- **66%** energy saving based on ASHRAE 90.1-2007 baseline energy code
- **more than 75%** of construction waste diverted from the landfill
- **33.5%** vegetated roof
- **48%** water savings
- **36%** construction materials with recycled content
- **660 kW** (peak) on-site solar photovoltaic plant
- **98%** of wood based materials are FSC certified

“Al-Sheraa”, DEWA’s New Headquarters

As a utility that embeds sustainability and adopts creativity and innovation as part of its culture, DEWA has started construction of its new headquarters, named “Al-Sheraa” (Arabic for sail), that will be the tallest, largest, and smartest net Zero Energy Building (ZEB) in the world. The “Al-Sheraa” building is being built in the heart of the Cultural Village in Al Jadaf.

“Al-Sheraa’s” design was inspired by the UAE’s traditional houses, where enclosed spaces overlook an open courtyard. This latest achievement confirms Dubai’s global position as a role model for leading organisations in sustainability, innovation, and shaping the future.

The building will use the latest technologies including Internet of Things (IoT), Big Data and Open Data, and Artificial Intelligence (AI). “Al-Sheraa” is planned to be a Zero Energy Building (ZEB), where the total energy used in the building during a year is equal to or less than the energy produced on site during that year. DEWA’s new headquarters is targeted to receive platinum rating by LEED (Leadership in Energy and Environmental Design), where platinum is the highest certification. The project seeks also to achieve WELL Certification. The WELL Rating System focuses mainly on health and well-being of building occupants addressing 7 concepts which includes Air, Water, Nourishment, Light, Fitness, Comfort and Mind. The building will be completed and inaugurated in 2019.

SUPPLY SIDE ENERGY EFFICIENCY

DEWA produces electricity and water mostly by cogeneration; a process in which waste heat from the burning of natural gas to produce electricity is captured through Heat Recovery Steam Generators (HRSG) and used to produce steam (i.e. no fuel), which is used to produce water through the desalination process of multistage flashing or to generate additional free electricity through back pressure steam turbines. Over a number of years we have invested in efficiency improvements including converting many simple cycle gas turbine plants into more efficient combined cycle plants and installing cooling systems in our gas turbines. Overall, between 2006 and 2016, we have achieved a cumulative efficiency improvement of 25.47%, equivalent to 37.5 million tons of CO_2 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. In addition, we produce our own auxiliary power which is the electricity we consume to support primary electricity generation operations. By enhancing supply side efficiency we reduce our auxiliary power requirements thus reducing the carbon intensity of generation. We are proud to report a continuous year on year improvement on the amount of carbon saved through efficiency measures.

Optimum power plant design

For DEWA, deciding on the optimum design depends on the power to water requirements. In general, the optimum power and water production design is achieved in a hybrid system where water production is shared between several technologies – multi-stage flashing desalination and reverse osmosis, which will result in the minimum cost and highest efficient throughout the lifecycle of the plant.

Power augmentation

In the summer months, with ambient temperatures reaching 45°C, gas turbine generation capacity typically drops by around 20%, which reduces power output and efficiency, and increases emission intensity and costs. The recovery of this power loss and efficiency is possible using several cost effective and proven power augmentation options. Through the use of these technologies, DEWA has cost-effectively increased capacity by over 650 MW by 2016 with respect to 2006 and improved efficiency in the process, which reduced our emission intensity.

Innovative upgrades for gas turbines

After installing any gas turbine, DEWA continuously follows up with the original equipment manufacturers with regards to any new proven and cost-effective technologies and upgrades that have become available during the lifecycle of the gas turbine, which will increase capacity and/or improve efficiency and reliability. An example of this would be one of our key projects, Thermal Energy Storage and Turbine Inlet Air Cooling (TESTIAC) located at Jebel Ali, Dubai. TESTIAC improves the efficiency of three gas turbines by implementing an inlet air chilling system, it generates electrical energy with less fossil fuel consumption, thereby reducing greenhouse gas emissions.

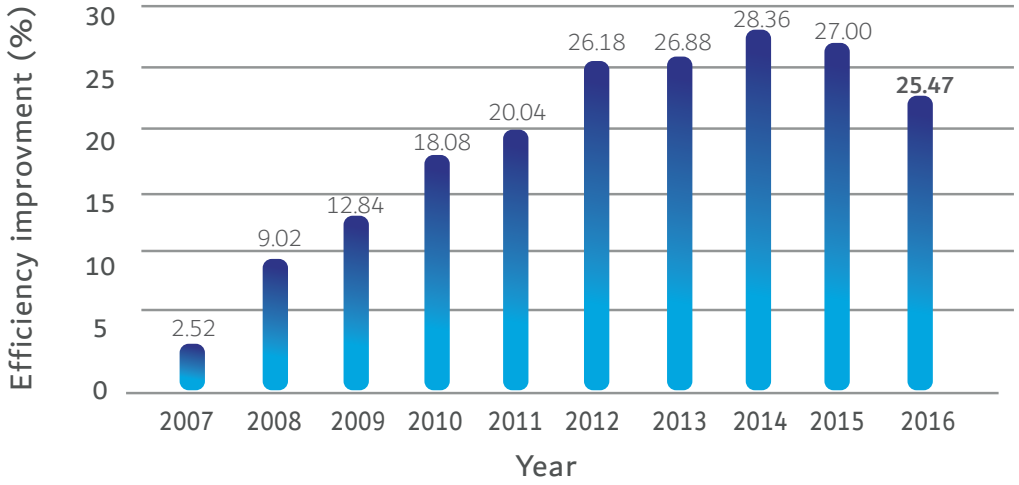
Optimised operation

During times of low demand, some electricity generation units have to be shut down to avoid running inefficiently at low load levels. In DEWA, cyclic operation of units is completed on the basis of less efficient units being shut down first in order to permit operation of the remaining units at higher loads and improved efficiency.

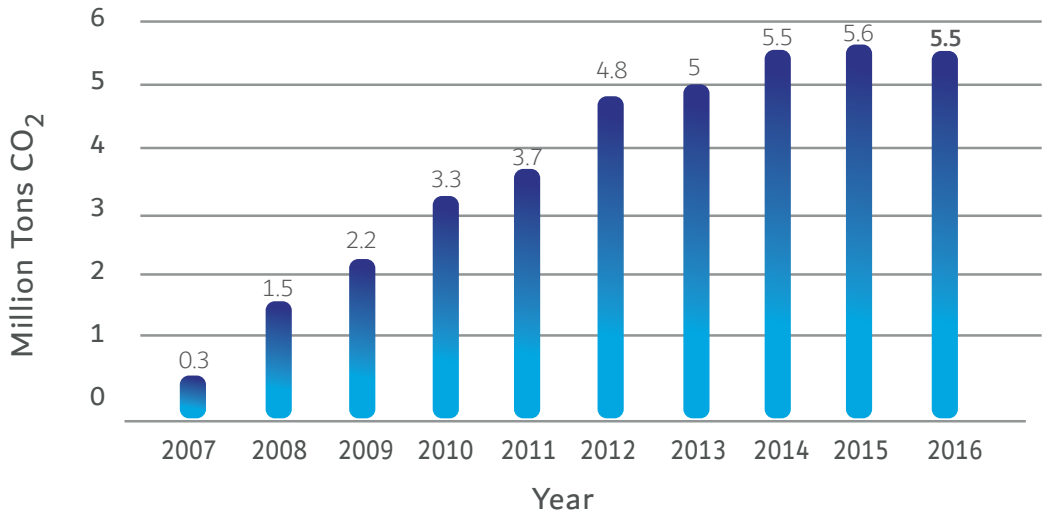
Outage planning

DEWA uses a management tool that coordinates all maintenance outage requests to minimise outages and meet demand with the highest efficiency and minimum fuel cost.

Graph: Efficiency Gains from improvement in Gross Heat Rate 2007-2016 with respect to 2006



Graph: Carbon reduction ($MtCO_2$) due to efficiency improvements with respect to 2006

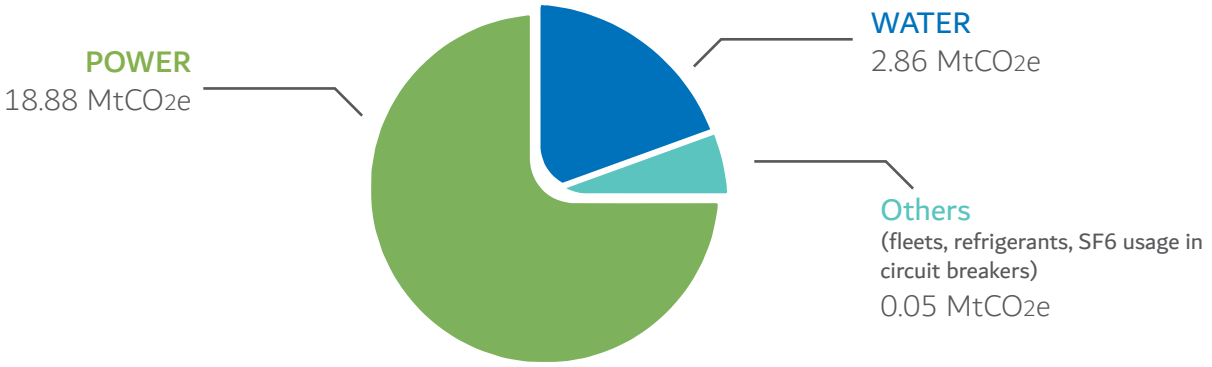


CO_2 EMISSION REDUCTION PROGRAMME

DEWA has developed a Carbon Dioxide Emission Reduction Programme, setting out the course of short, medium, and long term emissions reduction actions leading up to 2030, which takes into consideration Dubai's energy and water growth requirements, Dubai's water and electricity consumption rationalisation initiatives, DEWA's supply side efficiency improvements, and the diversification of DEWA's power and water generation plant additions. We are also one of the first entities in the region to be ISO 14064 certified for established corporate greenhouse gas monitoring, reporting and verification system. In DEWA, we believe that improved carbon efficiencies translate into effective resource management and associated economic benefits.

In 2016, our total carbon emissions were 21.79 million metric tons of CO_2 equivalent ($MtCO_2e$) compared to 24.60 $MtCO_2e$ business as usual estimate. The majority of our carbon emissions emitted comes from the combustion of natural gas to generate power and desalinated water. Our carbon emissions also comes from refrigerants, sulfur hexafluoride (SF_6) usage in circuit breakers and fuel combustion from DEWA's fleet vehicles. DEWA excludes any source that contribute less than 1% of its total emissions. Along with generation, the transmission and distribution of electricity needs to be included as a considerable mean of reducing emissions. DEWA is also meeting environmental and

Graph: Mt of CO_2e and percentage of CO_2e emissions by source, 2016

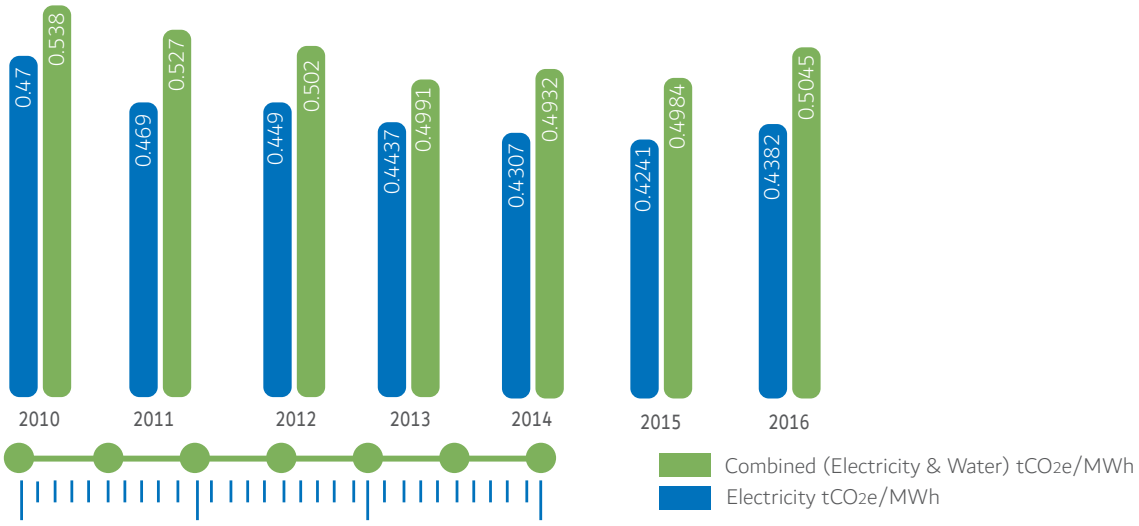


operational goals through cost-effective solutions to manage SF_6 in high voltage circuit breakers and phase out restricted refrigerants.

For DEWA, effective monitoring, reporting and verification (MRV) of greenhouse gas (GHG) emissions is critical for tracking progress towards the achievement of emission reduction targets. DEWA prepares the Carbon Footprint Report in full accordance with the Greenhouse Gas Protocol (GHG), the most widely used international carbon calculation methodology, compatible with the ISO 14064 – 1, which also allows for integration with national and international GHG registries.

The Carbon Footprint Report is intended to quantify and calculate DEWA's annual GHG emissions which include CO_2, CH_4, N_2O, SF_6, HFC and PFC. DEWA follows an operational control approach in consolidating, monitoring and reporting on its GHG emissions, quantifying them in terms of CO_2 equivalent. DEWA calculates its GHG emissions utilising emission factors for its consumed fuels as per the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines. The used Gross Warming Potential (GWP) factors for the respective greenhouse gases are as per IPCC Fourth Assessment Report, Climate Change 2007. DEWA's GHG Inventory base-year is 2012. Our 2016 Carbon Footprint Report was finalised using data management processes within monitoring, reporting and verification framework across all DEWA's divisions. DEWA also intends to introduce Electronic Emission Reporting System to automate the data collection process and to early detect the emissions trends and indicate our abilities and actions to mitigate adverse environmental impacts. Furthermore, the carbon intensity of electricity generated was relatively low, 0.4382 tCO_2e per MWh in 2016, due to DEWA's focus on improving the efficiency of generation, transmission and distribution of power and water, introduction of renewable energy in the grid, and reduction of customer demand through the promotion of energy conservation.

Graph: Carbon emissions intensity, tCO_2e per MWh of electricity generated, 2010-2016

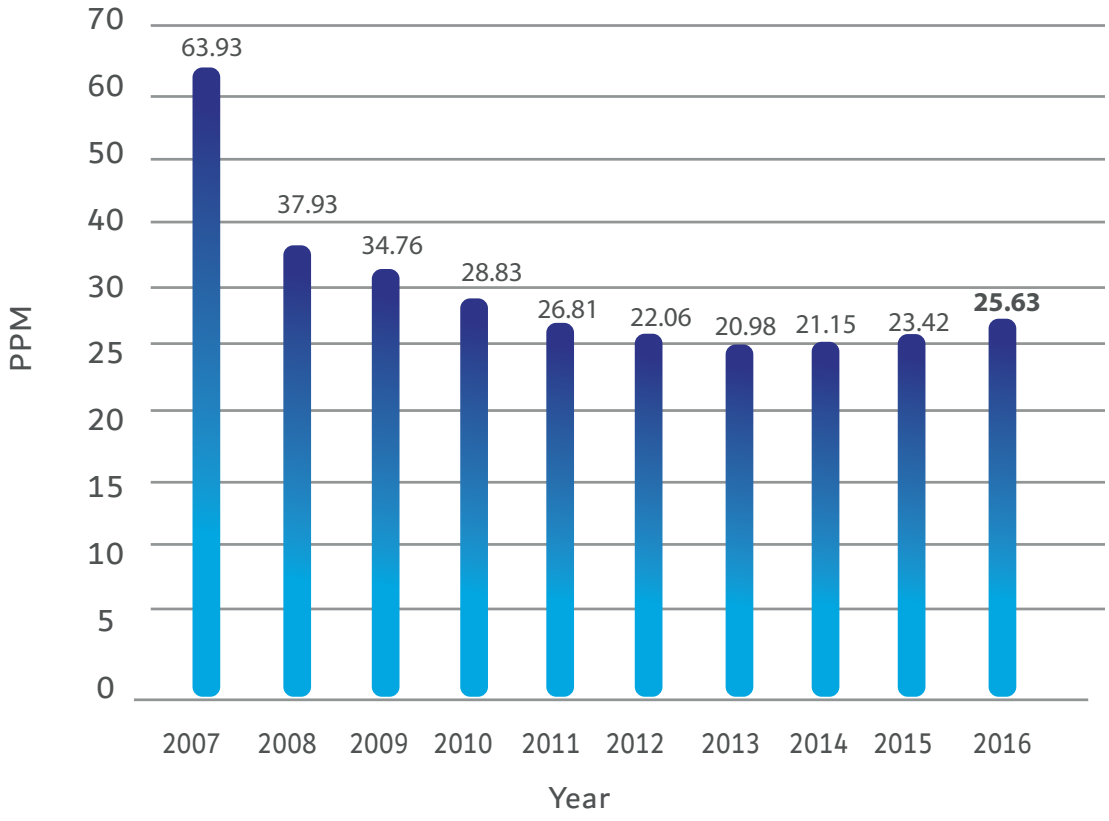


MINIMISATION OF AIR EMISSIONS

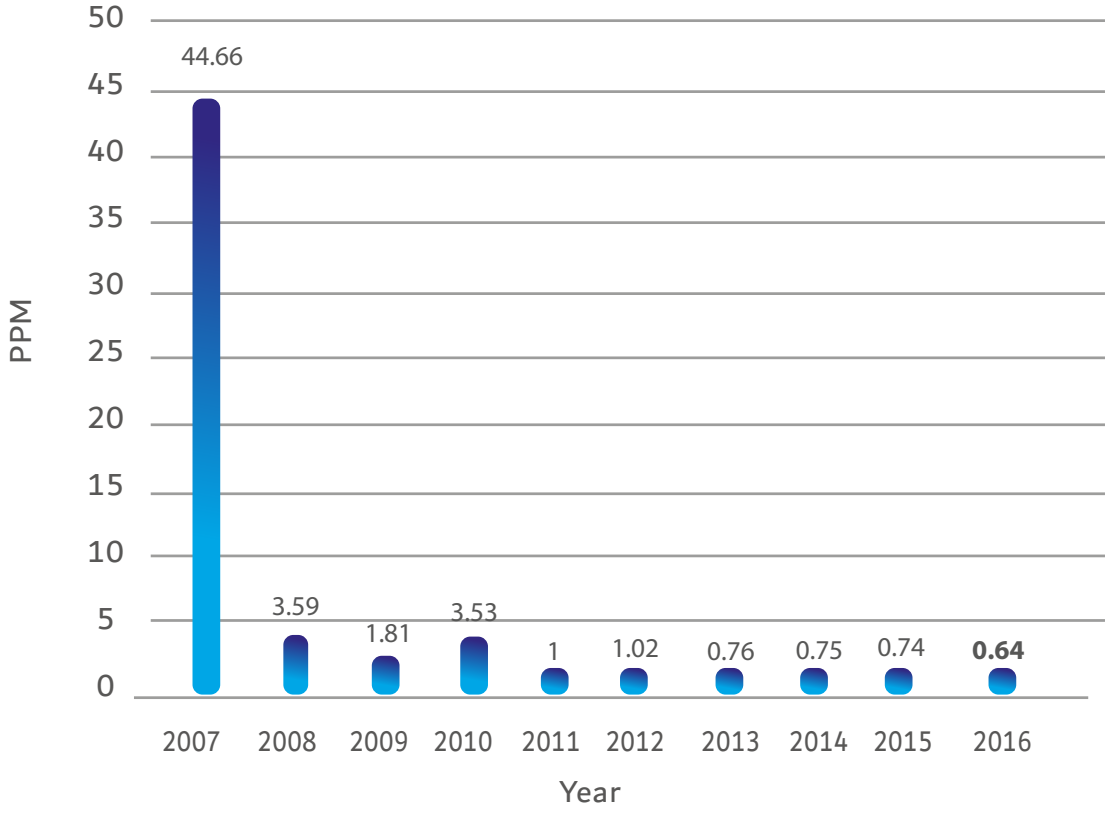
Air emissions have adverse effects on our local climate, ecosystems, and air quality. In Dubai, regulations are in place to control nitrogen oxides (NOx) and sulphur dioxide (SO_2) emissions. Due to continuous improvement in the efficiency of our plants, we have achieved excellence in NOx and SO_2 emission reduction. DEWA's strategy to reduce NOx emissions starts at the design stage of any power and water plant by specifying stringent NOx emission limits for gas turbines. For example, our average annual NOx emissions from all units for 2016 was 25.63 ppm, inclusive of all fuel types, gas turbines, and boilers, which is less than the UAE Federal Government requirement of 37ppm and the European Union Requirement (Large Combustion Plant Directive 2001 for Plant Built After 2003) of 27ppm. With regards to SO_2 emissions, DEWA has maintained very low emissions due to the burning of natural gas. Regarding the stand by diesel fuel, DEWA has started procuring diesel fuel with ≤10ppm sulphur content instead of ≤ 500ppm sulphur content, in line with the 2014 UAE Government Federal Regulations.

In 2013, DEWA also set an action plan in place to phase out all Ozone Depleting Substances (ODS) by 2020, an investment of approximately AED 11.66 million, in line with both the Montreal Protocol and the Dubai Municipality Technical Guideline #7, which seeks to phase out ozone depleting substances completely by the year 2030. Since implemented, 54.9% of R-22, a refrigerant, has been phased out, as of 2016. In addition to our major initiatives for reducing greenhouse gas emissions from our production facilities, we have also focused on a number of smaller-scale initiatives for reducing the leakage of a potent greenhouse gas called SF_6 from switch gears used to control, protect and isolate electrical equipment. SF_6 (Sulphur Hexafluoride) has a global warming potential of 22,800 times that of carbon dioxide and so any leakage could be significant. All SF_6 gas leaks from 132 & 400 kV Gas Insulated Switchgear (GIS) are promptly attended by our maintenance team with the aim of achieving 100% rectification of identified SF_6 gas leaks. Moreover, we also believe that low carbon practices should be embedded throughout our entire operations, including the way we manage our vehicle fleet, business processes and buildings. An excellent example of this is our sustainable building in Al Quoz, the largest government building in the world to be LEED Platinum-rated.

Graph: Annual NOx air emissions, 2007-2016



Graph: Annual SO2 air emissions, 2007-2016



CARBON MARKETS

DEWA, being one of the first entities in the region, has developed significant expertise in the field of carbon offsetting, having registered several Clean Development Mechanisms projects under United Nations' Framework Convention on Climate Change for Climate Change (UNFCCC). Registration of projects that involve innovative renewable energy and energy efficiency solutions allows DEWA to monetise certified carbon credits (CERs) and generate revenues over the next years.

The first phase of the Mohammed bin Rashid Al Maktoum Solar Park, a 13MW photovoltaic plant, has been awarded 10,635 carbon credits from the Clean Development Mechanism, CDM, Executive Board of the United Nations Framework Convention on Climate Change. Under the Clean Development Mechanisms Framework, DEWA also initiated the UAE Small Scale Solar Programme of Activities (PoA) to facilitate financing of projects and environmental programmes through certifying emission reductions by owners and developers of solar projects in the UAE. The PoA will also officially support "Shams Dubai", which is one of the nine programmes to drive sustainability that is part of the Demand Side Management Strategy launched by the Supreme Council of Energy. Furthermore, DEWA's Thermal Energy Storage Turbine Inlet Air Cooling (TESTIAC) project also qualified under the UNFCCC as a Clean Development Mechanism initiative due to the considerable reduction of greenhouse gases. The project generated a total of 55,373 and 39,824 tons of CO_2e in the years 2013 and 2014, respectively, which were issued as Certified Emissions Reductions (CERs) by the UNFCCC.

ACCELERATING CLIMATE ACTION

Countries across the globe adopted the historic international climate agreement at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP21) in Paris in December 2015. The UAE has submitted its Intended Nationally Determined Contributions (INDCs) together with 164 countries, demonstrating its strong commitment to tackle the issue of climate change and achieve the long-term goals of the Paris Agreement. The UAE seeks to adopt best practices and environmental leadership in energy through various strategies, action plans and initiatives. Dubai in particular has established ambitious clean energy goals, with DEWA contributing by increasing its renewable energy targets, better managing energy demand, and further reducing carbon footprint in accordance with the comprehensive strategic guidelines established by the Dubai Supreme Council of Energy.

DEWA has been a part of the UAE delegation to both the annual pre-COP and COP negotiations since 2012 and is a trusted partner of the UAE Ministry of Climate Change and Environment to lead technical negotiations on the matters related to the Clean Development Mechanisms and Mitigation under the Kyoto Protocol and the Paris Agreement, Article 6. As many other organisations worldwide, DEWA has systematically worked on cutting its emissions to support the global goal of avoiding the 2°C increase in the Earth's temperature through our Carbon Dioxide Emission Reduction Programme, which is one of the first of its kind in the region.

CASE STUDY: REMOTE MONITORING OF DISTRIBUTION SUBSTATIONS & EARTH FAULT INDICATORS (EFI)

To strengthen the efficiency and reliability of our Transmission and Distribution networks, DEWA introduced a remote motoring system to its distribution substations to identify fault location remotely in its distribution control centre (DCC). The system identifies and reduces supply restoration time and improve distribution network of our Customer Minutes Loss for the installed substations. The first phase of the project installed the system for 300 substations in February 2016. The second and third phase of the project will introduce the system for 2,000 substations by end of 2018.

The system enables faster restoration of supply during forced outages. It also improves the customer minutes loss to meet DEWA's target and further improves DEWA's customer satisfaction through faster service restoration. In 2016, the system facilitated 30% reduction in supply restoration time for the installed distribution feeders. Furthermore, there were 16.4% customer minutes lost improvement for the installed feeders. Overall, the system saves time, cost, manpower efforts, fuel travel consumption and CO_2 emissions.

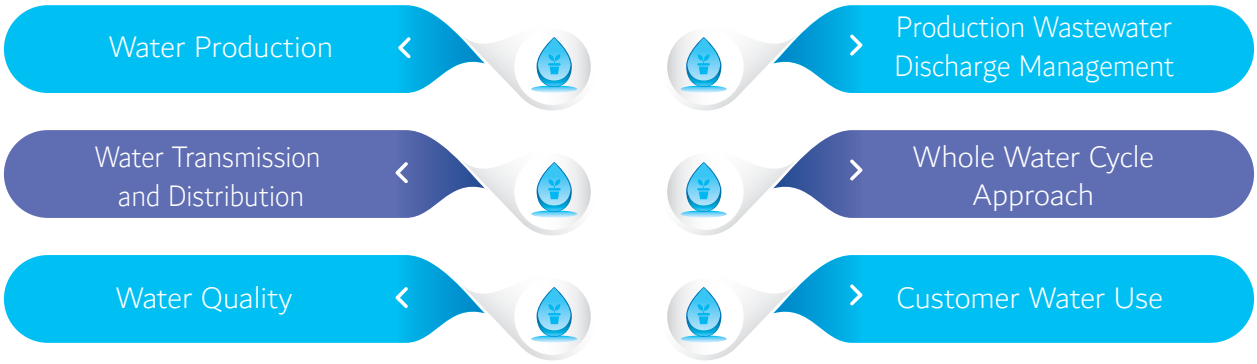
WATER

- During 2016, we reduced our water losses to 8%, one of the lowest worldwide, compared to approximately 11% in North America.
- DEWA met 100% of Dubai's water needs in 2016.
- Over 160,689 smart water meters were installed in Dubai during 2016.

MANAGEMENT APPROACH

We have continuously worked to maximise our water efficiency in our own operations and to encourage our customers to minimise their consumption. As such, we have set long term strategies and adopted various projects and initiatives to improve our efficiency and reduce consumption. We are committed to maintain the quality of the water delivered to our customers without compromising that of the fresh and marine water resources that we rely on to produce potable water.

We have identified six main focus areas in our water management approach which are:



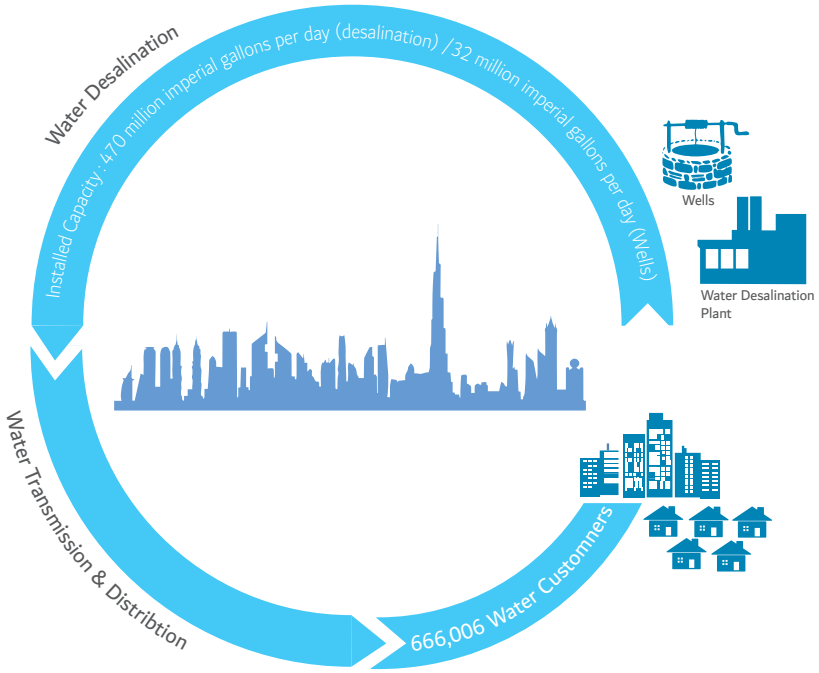
WATER PRODUCTION

The majority of the water we produce, comes from the desalination of the Arabian Gulf seawater. The seawater is pumped to our Jebel Ali Power and Desalination complex, where it is chlorinated, conditioned, and filtered, it is subsequently used for either water production or for cooling of power plant equipment. One challenge for DEWA is that the quality of the seawater intake can be impacted by rise in seawater temperature, oil spills, algal blooms, seasonal seaweeds, and high turbidity due to industrial development. The lower the quality of seawater intake, the higher the amount of energy required in the pre-treatment and desalination processes. Therefore, we continuously monitor the intake water quality situation. There are three main desalination processes, multi-stage flashing (MSF), multi-effect desalination process (MED), and reverse osmosis desalination (RO). At DEWA, we utilise mainly MSF technology in most of our water production facilities, with a small portion using RO technology.

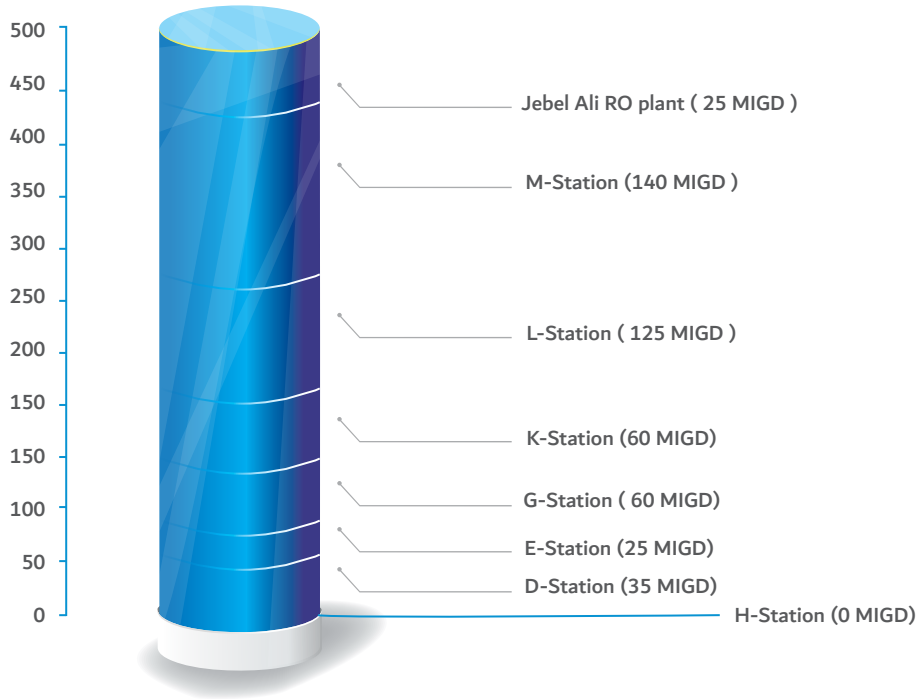
In 2016, our installed capacity from our desalination plants was 470 MIGD. with a total seawater withdrawal of 3,403 MIGD. The seawater intake volume is measured by adding our water production and discharge to the sea and subtracting water volumes that were not sourced from the sea. Furthermore, we met the peak daily and monthly demand for 2016, with substantial reserves. The peak daily water demand of 356 MIG was on 24 August 2016, an increase of 2.07% growth compared to 2015. The average daily water demand in 2016 was 319 MIGD compared to 312 MIGD of 2015, which is an increase of 2.42%. While the peak monthly average of 347 MIGD occurred in August 2016, an increase of 2.89% growth compared to 2015.

Our installed capacity from underground wells was approximately 32 MIGD. However, this is reserved for contingencies. During 2016, we utilised approximately 1.26 MIGD from underground wells. The underground water production is measured through meter readings on the respective pumps. In the UAE, groundwater abstraction from underground wells (driven largely by agriculture) is depleting groundwater reserves. We recognise that the use of water from underground wells needs to be managed carefully and therefore we mainly use the water during emergencies or when water is required in areas where water networks are unavailable.

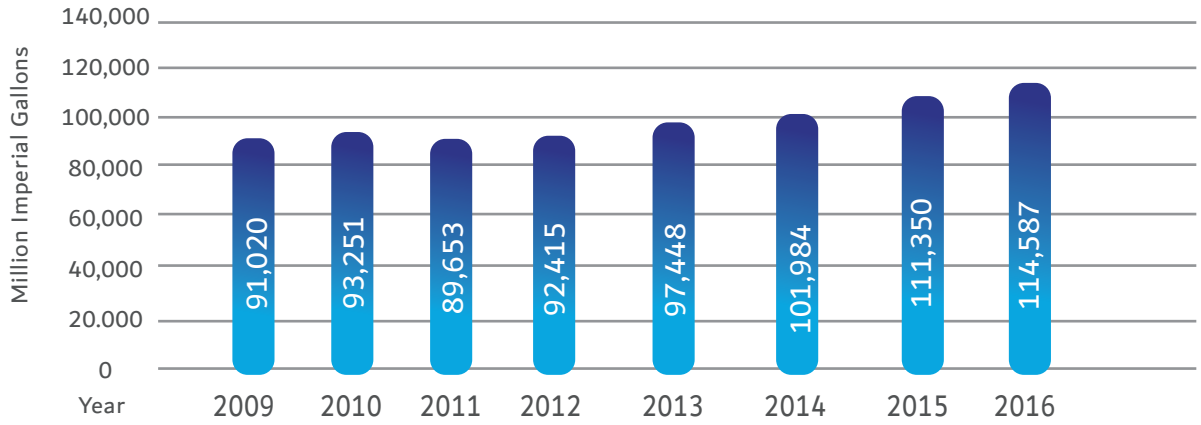
Graph : Water Production Cycle



Graph: Total water production capacity in 2016 (million imperial gallons per day)



Graph: Total water produced from 2009 to 2016 (Million Imperial Gallons)

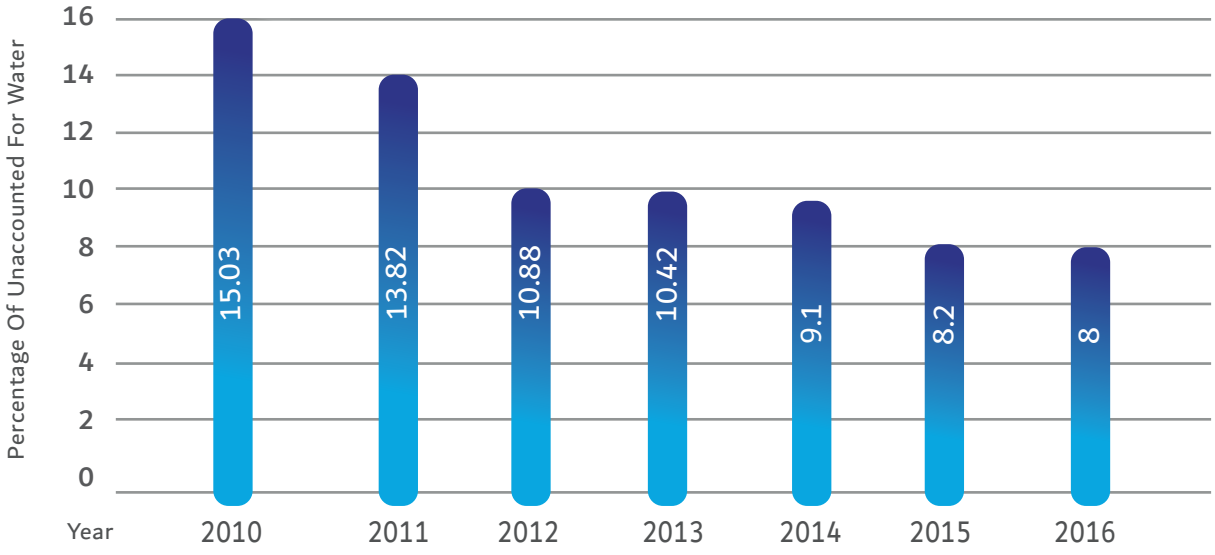


WATER TRANSMISSION AND DISTRIBUTION

In 2016, we continued our successes in satisfactorily meeting the water needs of 100% of our customers, reflecting our commitment to supply Dubai's population with its basic needs. To ensure that we never run short of water, we store water in our reservoirs to satisfy approximately 3 days of peak demand. Water drawn from the reservoirs is distributed to our customers through a network of pipes. We manage our water pipelines to minimise losses of water, for example through leakages or unbilled meters, which we monitor using our Unaccounted for Water (UFW) metric. We are happy to announce that, during 2016, our unaccounted for water was 8%. This was one of the lowest worldwide, compared to approximately 11% in North America. This was an improvement of 47% with respect to 2010.

This was possible due to launching a number of major projects to improve our water transmission and distribution networks. For example, we used Supervisory Control and Data Acquisition (SCADA) to survey the water network and identify and remotely manage potential leaks in the system. It provides high flexibility and enables fast decision making when managing the grid. In addition, we are continuously looking to improve and adopt the latest and most efficient technologies. We have adopted modern technology to scan the transmission and distribution networks to prevent cracks from causing leaks in the system.

Graph: Annual Unaccounted For Water (UFW) as percentage of total water supplied



WATER QUALITY

The safety and quality of potable water is of the utmost importance to DEWA. It is our responsibility to ensure that the quality of water from our production facilities meets our specifications, which are even more stringent than the World Health Organisation's Drinking Water Guidelines. Full compliance is ensured through our integrated management system (IMS), which is certified by external auditors. We monitor water quality across our network, collecting water samples from pumping stations, reservoirs and well fields across Dubai. Samples are tested by portable equipment on site to measure pH, turbidity, residual chlorine dioxide, and electrical conductivity, while the remaining sophisticated testing is performed in DEWA's central lab, to check conformance with DEWA's specifications. DEWA has also made great strides to ensure that our potable water is nearly 100% free from bromate.

Table: DEWA potable water specification with typical parameters

Component	Unit	WHO Guideline Values (Max)	DEWA Targets /Guidelines	DEWA JAPS Potable Water Specifications*
Calcium	(mg/L)	-	10 ~ 25	18.1
Magnesium	(mg/L)	-	2 ~ 20	4.1
Sodium	(mg/L)	200	10 ~ 200	39.1
Chloride	(mg/L)	250	25 ~ 250	68
Sulfate	(mg/L)	250	2 ~ 35	8.1
Bicarbonate	(mg/L)	-	30 ~ 75	58.1
Nitrate	(mg/L)	50	≤ 50	0.087
Carbonate	(mg/L)	-	0 - 10	0.20
Fluoride	(mg/L)	1.5	≤ 1.5	0.037
Total Hardness	(mg/L)	500	40 ~ 120	62.1
Total Dissolved Solids	(mg/L)	1000	100 ~ 450	165
pH		6.5 ~ 8.5	7.9 ~ 8.5	8.30

***Note:** DEWA JAPS typical figure is the average of individual station averages during the year 2016

It is estimated that roughly only 5% of water supplied to Dubai residents is used for drinking purposes, while the remaining 95% is used for other purposes such as washing, cooking, gardening, district cooling, soft drink production, and bottled water production. This is because, while water quality is good to the meter, once water is stored in tanks in residences, it is generally not well maintained. This water-quality problem can be rectified, at least in the short term, by having households fit water tap filters. To raise awareness of this issue, DEWA has run public awareness campaigns and we now put messages on household bills to emphasise the importance of tank cleaning and maintenance.

WASTEWATER DISCHARGE MANAGEMENT

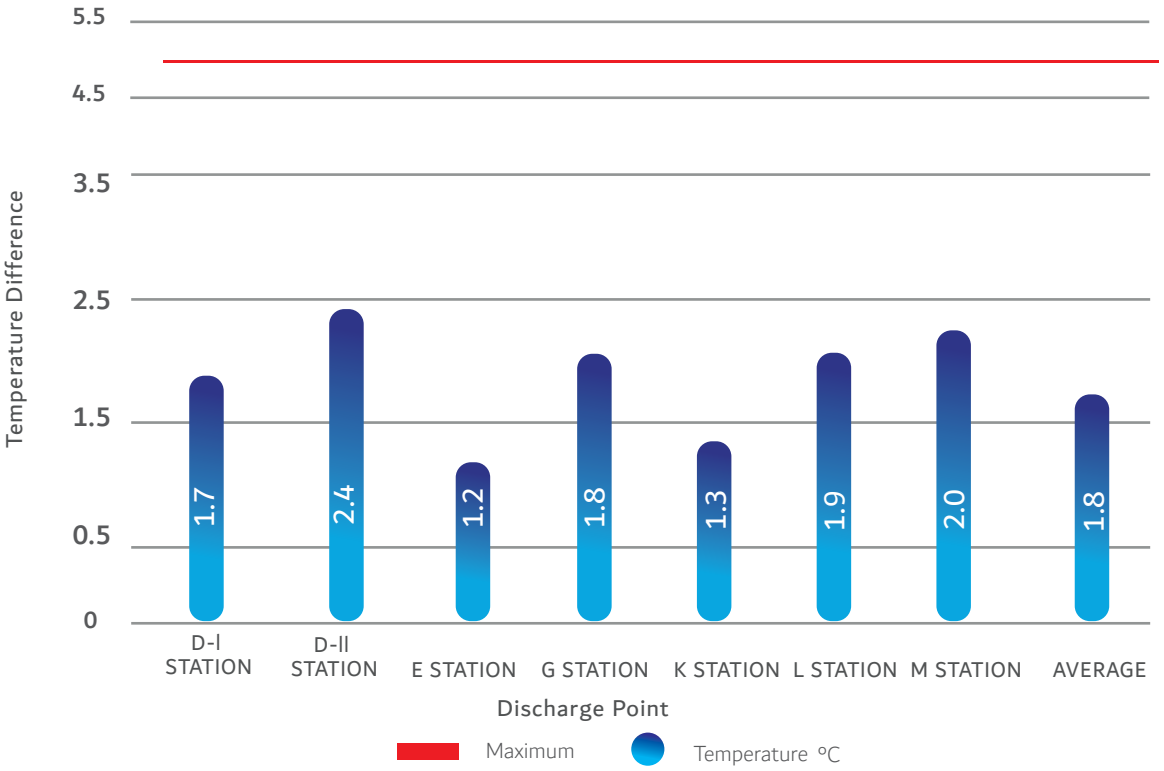
DEWA is responsible for managing the discharge process of wastewater generated from our desalination and power production plants. In Dubai, Dubai Municipality is responsible for wastewater treatment. In 2016, our total volume of wastewater discharge was 5,140.96 million cubic meters: primarily processed wastewater from our power and desalination plants, which is discharged to the Arabian Gulf. We also produced smaller volumes of effluent from our water treatment plants (78,453 m^3) and on-site treated sewage effluent (231,032 m^3), out of which 106,289 m^3 was discharged to land for landscape irrigation inside the premises and the remaining 124,743 m^3 of treated sewage was discharged to the sea along with other process wastewater. A total of 88.7% of the total wastewater (process wastewater and treated sewage effluent) generated was re-used in the Jebel Ali Power Station Complex.

Table: Volume of wastewater discharge (million m^3) by source 2016

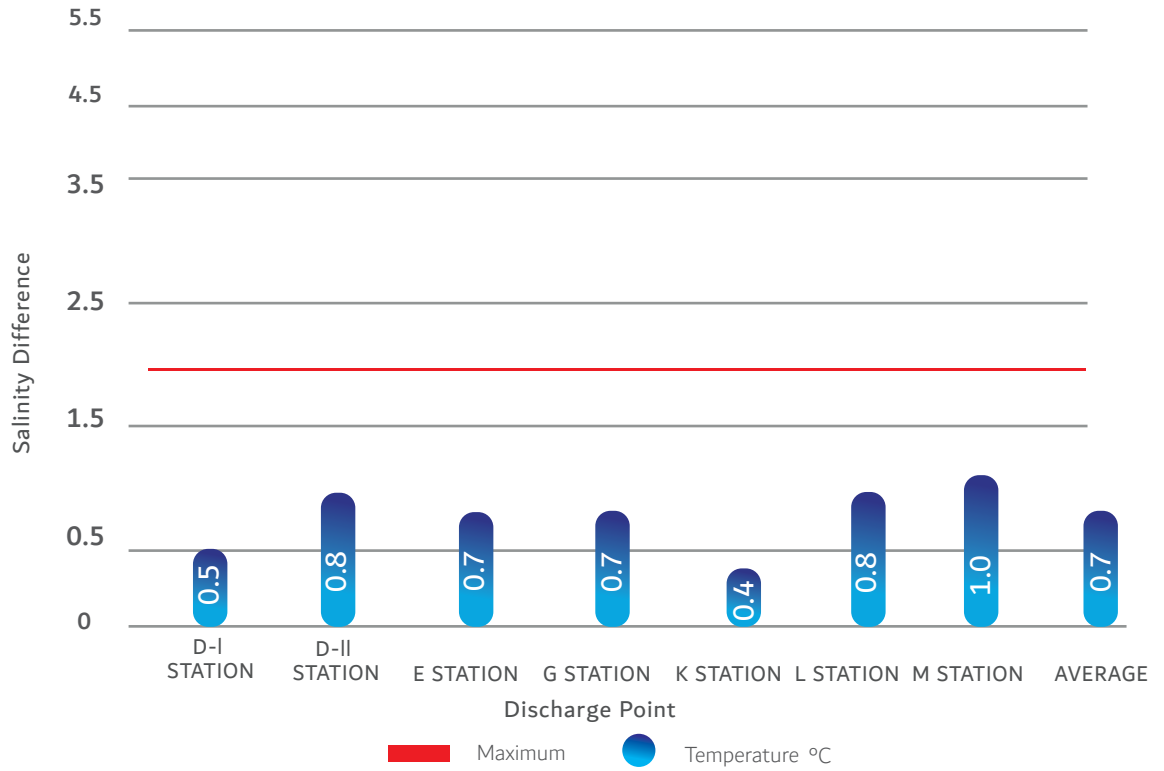
Type of effluent	Total volume (million m^3) discharge
Process water from power plant	1,702.290391
Process water from desalination plant	3,438.360138
Water treatment plant effluent	0.078453
Treated sewage water (to land)	0.106289
Treated sewage water (to sea)	0.124743
Treated sewage water	0.231032
Wastewater discharged to sea and land	5,140.960014

Our desalination plants produce brine, a high saline water that remains after freshwater has been extracted from the seawater. We recognise that brine outfall has the potential to impact the environment. We monitor our wastewater discharges monthly and collaborate with regulators to make sure we are within the permissible limits for wastewater discharge quantity and quality. We have installed a continuous monitoring system to monitor the temperature, salinity, and pH and dissolved oxygen at 500m, 1km and 1.5km away from the discharge points between D-Station and M-Station, for which real time data accessibility was given to Dubai Municipality. Bimonthly and quarterly ecological assessments (phytoplankton/zooplankton and macro benthos respectively) are also carried out at 300m and 1.5km away from the discharge points of D-Station, K-Station & L-Station, by a specialist environmental service provider, as per the requirements of the wastewater discharge permit issued to DEWA-JAPS by Dubai Municipality. Temperature and salinity difference between the mixing zone and ambient seawater measured on monthly basis were within the maximum allowed limits of 5^{o}C and 2ppt respectively.

Graph: Temperature difference between the seawater at mixing zone and ambient seawater (°C) 2016



Graph: Salinity difference between seawater at mixing zone and ambient seawater (ppt) 2016



Notes:

1. Seawater at mixing zone is sampled at a point 500m away from the wastewater discharge outlet point
2. Ambient seawater is sampled 1,500m away from the coastline and represents the condition of seawater outside the immediate influence of DEWA's wastewater discharge.
3. Readings are based on single random sampling performed monthly throughout the year.

WASTE MANAGEMENT

DEWA has implemented an effective waste management system, with which we aim to reduce the amount of solid and liquid waste we produce by using resources efficiently, and recycling or recovering where possible. Our waste management system allows us to be completely compliant with all relevant national and international regulations, policies, and procedures. We are also in the process of benchmarking our waste management system with other organisations internationally.

To further ensure that all divisions within DEWA are adopting best practices for waste management, our own environment department has conducted internal benchmarking since 2015. The benchmarking compares how well different divisions manage their waste. It is used to identify best practices, innovative ideas and highly-effective operating procedures within DEWA. Those practices are then implemented across other divisions where applicable.

Reducing our waste not only minimises our environmental impact, but also generates cost savings. In 2016, we earned AED 4,063,158 from selling scrap waste materials from our Jebel Ali Power Station Complex. An example of the business benefits of waste management is evident in our efforts to recycle waste oils. In the Jebel Ali power station complex, used lubricant, transformer and hydraulic oils are recycled for use in boiler furnaces when oil firing is required. Additionally, large amounts of insulation oil are used in distribution equipment for insulation and cooling. By using recycled oil we are able to significantly reduce our consumption of new oil and minimise waste (and the associated costs for waste disposal). In 2016, we recovered 4,700 litres of oil for reuse. Wastewater is recovered from our power stations and reused. During 2016, we recovered approximately 215.0MIG of wastewater.

Table: Waste Figures from the Jebel Ali power station complex, 2013-2016

Waste Figures	Unit	2013	2014	2015	2016
General waste sent to landfill	Tons	1,534	1,599	2,038	1,386
Hazardous waste disposal	Tons	57.9	71.2	264	20.35
Wooden packing reused	Cubic Foot	5,958	5,297	6,608	9,471
Waste water recovered	MIG	209	266	183.4	215.0
Waste oil recovered for use	Litres	126,421	19,143	6,025	4,700
Revenue from scrap /waste materials sold	AED	1,396,910	830,020	960,146	4,063,158
Savings from selling waste oil	AED	513,538	228,771	161,866	53,851.2

WHOLE WATER CYCLE APPROACH

At DEWA, we recognise that water production is both capital and energy intensive. Therefore, to fulfil our vision and mission, we want to successfully contribute to achieve Dubai's Demand Side Management (DSM) target to reduce demand by 30% compared to the Business As Usual (BAU) scenario by 2030. The overall demand side management initiatives at Dubai level have succeeded in achieving about 3.5 BIG of water reduction in 2016. In addition, the annual per capita consumption for water has been reduced to 36,391 IG in 2016 instead of BAU figure of 37,656 IG.
We are continuously improving our efficiency to minimise water losses as much as possible in our supply, transmission, and distribution operations.

We believe that advances in water production and treatment technology, combined with more integrated water resource management, will be an essential prerequisite for sustainable development in the Gulf region. We see water within the system wide context of the whole water cycle and believe that Dubai will need to employ more holistic approaches to water management to meet future water resource challenges.

CUSTOMER WATER USE

DEWA has implemented various initiatives to promote water conservation to its customers which include the Best Consumer Award, the Conservation Award, neighbourhood campaigns and the Ideal Home initiative. Each year, DEWA organises events for the United Nations World Water Day in collaboration with Dubai Municipality and other community organisations, to raise awareness about water efficiency. DEWA is also working to help its customers conserve their electricity consumption within their buildings, by providing an energy-auditing service free of charge.

DEWA introduced a slab tariff structure in 2008 and a surcharge component in 2011. In the slab structure, tariff rates change depending on the volume of water consumed and this involves a driver for conservation. DEWA has begun to implement, as part of Smart Grid initiative, its smart networks and meters project, through which all mechanical and electromechanical meters are replaced with state-of-the-art smart meters. The smart meters are part of a bidirectional digital communications system that can automatically send data to DEWA. The meters will also provide customers with detailed information on their consumption, so they can identify the best ways to reduce both water and electricity use and reduce their bills as well. We believe that we can work more closely with our customers to help them identify opportunities for reusing, recycling, and reducing water within their own processes.

CASE STUDY: EFFICIENCY IMPROVEMENT AND ENERGY OPTIMISATION OF PUMPS

As part of our strategic initiative to improve plant efficiency, we have initiated energy optimisation on pumps through efficiency improvement programmes. During the design phase of the project, the Original Equipment Manufacturer (OEM) normally assumes a design-safety margin in pump performance parameters, to take care of the eventual degradation of pump and process equipment over the course of time. Due to better maintenance practices of pumps followed in our plants, the actual reduction in performance due to degradation is significantly less than the original design margin. This provided an opportunity to revisit the original design, to reduce the design margins to the actual requirements, making savings in energy consumption. Additionally, the advent of modern technologies in hydraulic designs of pumps provides an opportunity for reducing the energy consumption.

Following a study of old large pumps, considering the importance of various pump, size, age, and opportunity to improve on other aspects, we shortlisted Brine Circulation Pumps at G-Ph1 desalination units as candidate pumps for energy optimisation. After conducting necessary feasibility studies to ensure the viability of the initiative, we concluded that the pump's efficiency can be increased to 89% from its operating efficiency of 79% at a 65-metre operating differential head at the same discharge flow of 6,840 m^3/hr. With the target of the pump efficiency to 89%, the expected motor output power calculated to be 1,414 kW compared to the actual 1,595 kW.

Since the start of the project in late 2014, we have completed modifications on 10 pumps out of 16 installed pumps. All the results so far match or exceed our projections. The project will increase power station efficiency through partial compensation of station auxiliary power consumption. Moreover, the project meets our strategic objective of reducing our environmental footprint by achieving a reduction in power consumption of 24,192 MWh/year corresponding to a reduction in CO_2 emissions by approximately 10,500 Tons/year during the remaining 20 years' life of the plant.

CASE STUDY: MOHAMMED BIN RASHID AL MAKTOUM GLOBAL WATER AWARD

مبادرات محمد بن راشد آل مكتوم العالمية
Mohammed Bin Rashid
Al Maktoum Global Initiatives

سقيا الإمارات
UAE WATER AID

UAE Water Aid Foundation, Suqia, is an entity under the umbrella of the Mohammed bin Rashid Al Maktoum Global Initiatives Foundation, and a non-profit organisation that provides humanitarian aid around the world and helps communities that suffer from water scarcity by providing them with potable water. Suqia has positively influenced the lives of over 8 million people in 19 countries up to the end of 2016. Suqia has been annexed to DEWA, to support the Foundation with any budget and operational requirements needed.

Tying in with the UAE's goal to become a knowledge-based economy with a strong focus on technology, R&D and innovation, HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, announced the launch of a USD 1 million global award to find sustainable solutions to water scarcity across the world.

The Mohammed bin Rashid Al Maktoum Global Water Award supports this goal, encouraging leading corporations, research centres, institutions and innovators from across the world to compete to find sustainable and innovative solar-energy solutions to the problem of water scarcity. The award is comprised of three categories: Innovative Projects Award, Innovative Research & Development Award, and Innovative Youth Award. The Innovative Projects Award and the Innovative Research & Development Award are further divided into two subcategories each.

The first cycle of the award was announced in February 2016 and it became open for applications on 22 March 2016 coinciding with World Water Day. Supported by DEWA, the first cycle of the Award was promoted through international and national roadshows including in the US at the UN General Assembly in NY, France in COP21, as well as the WETEX & Solar Show Roadshow in Holland, India, United Kingdom, China and Russia.

A total of 138 applications were received from 43 countries. The winners were announced at the Award ceremony that took place on 27 April 2017, at the Dubai World Trade Centre in the presence of H.H Sheikh Maktoum bin Mohammed bin Rashid Al Maktoum, Deputy Ruler of Dubai, where he honoured 10 winners from 8 countries.

CUSTOMERS

- In 2016, we served 752,505 electricity customers and 666,006 water customers.
- 1st in MENA, and 4th internationally as per World Bank's ranking of the UAE (represented by DEWA) for "ease of access" to electricity in the World Bank Doing Business Report 2017, for the fourth consecutive year.
- In 2016, Customer Minutes Lost from unplanned outages was 3.28 minutes, compared with approximately over 14 minutes recorded by counterparts in Europe and the US.

MANAGEMENT APPROACH

Anticipating our customers' needs and exceeding their expectations is one of DEWA's major objectives that has been incorporated into DEWA's overall mission, vision, core values and strategy. Being the sole provider of water and electricity for the Emirate of Dubai, we ensure the continuous delivery of high-quality water and efficient power for residential, commercial, industrial, and other customers all year round. Providing a sustained innovative service is our main goal, to achieve our vision to become a sustainable innovative world-class utility.
We commit ourselves to delivering customer happiness in everything we do through three key areas:

1- Excellence in customer service
- Improving the quality and speed of our customer interactions
- Listening and responding to customer feedback, needs and expectations.

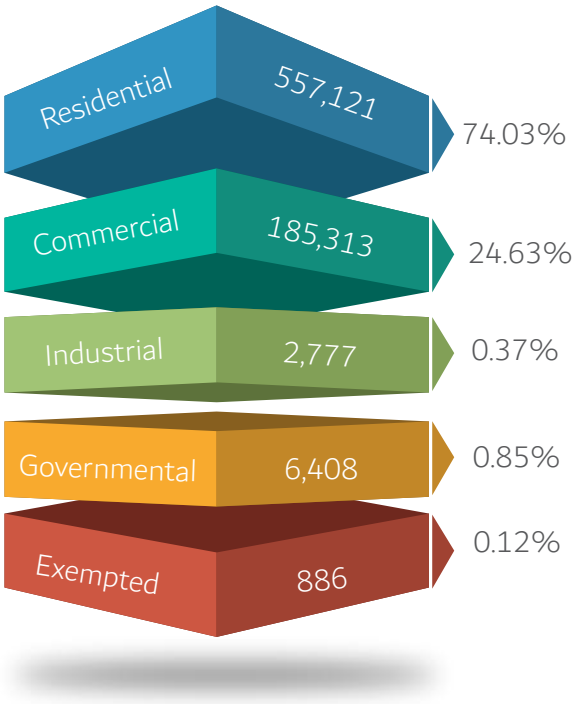
2- Smart technology for more effective customer service
- Providing our customers with accurate, comparable and timely information through e-services and smart services
- Investing in intelligent metering

3- Access to electricity and water services
- Ensuring easier connections
- Providing access to services for customers with language barriers and physical challenges

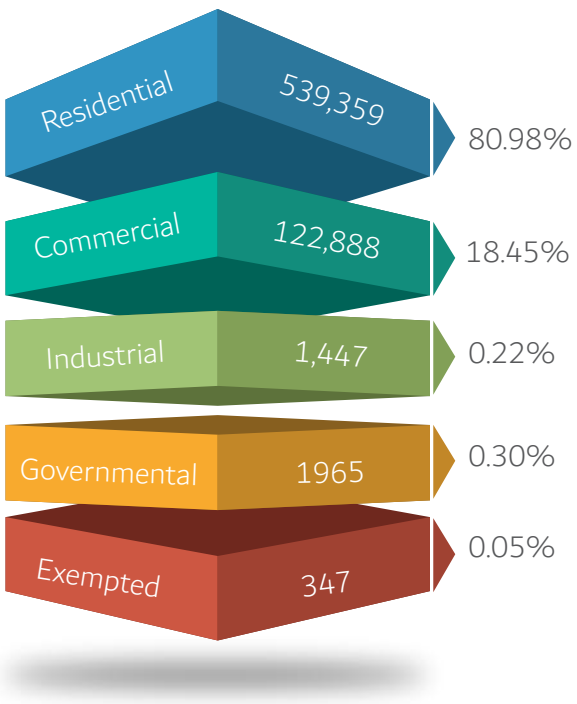
DEWA'S CUSTOMERS

DEWA's customer base continues to grow effectively to meet the growing demands of the increasing population and economy in Dubai. It sets high standards to exceed customers' satisfaction in the development of the city.

Total Electricity Customers: 752,505



Total Water Customers: 666,006



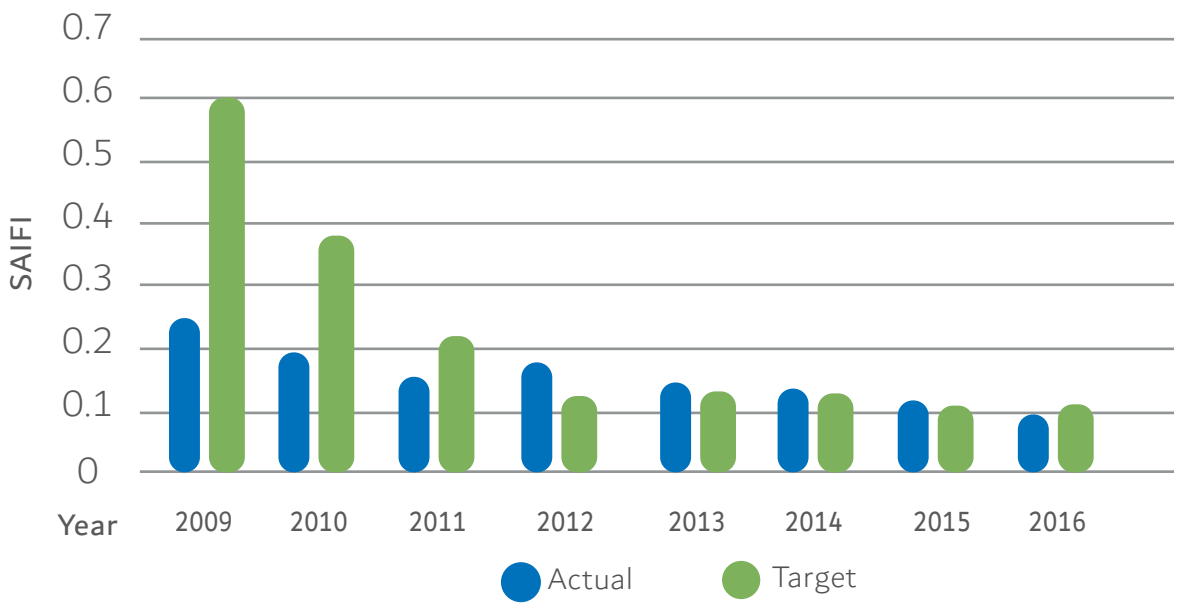
OPERATIONAL EXCELLENCE

Seeking to always stay up to date with the latest technological advancements and to further enhance efficiency in all its operations, DEWA continues to be one of the leaders worldwide in system availability, sustainability, and reliability.

In 2016, with respect to 2006, we achieved a 25.47% improvement in efficiency, primarily by optimising the design and operation of power and water plants. Our transmission line availability is typically above 99.9%. Our operational management approaches adhere to our Integrated Management System (IMS), which complies with internationally recognised standards for health, safety, environment and quality (ISO 9001, ISO 14001 and OHSAS 18001). Our business divisions know how to operate to meet DEWA's expectations for operational excellence. To measure our performance in supplying power, we look at three key indicators: System Average Interruption Frequency Index (SAIFI), Customer Minutes Lost (CML) and Availability Factor (AF). The SAIFI measures the average number of interruptions experienced by each customer over one year. In 2016, our SAIFI was approximately 0.11, continuing the downward trend since 2009.

In addition, CML (Customer Minutes Lost) measures our ability to restore power during unplanned outages (in emergencies). During 2016, our CML from unplanned outages was 3.28 minutes, which exceeded our target of 3.75 minutes, compared with approximately over 14 minutes recorded by counterparts in Europe and the US. Finally, the availability factor (AF) is a measure of the percentage of time that our plants are available to produce power. Power availability is especially important during the summer months, when the demand for electricity increases. We are proud to announce that, during 2016, our availability factor was 97.39% for the summer period, while our overall availability factor for 2016 was 85.94% due to maintenance conducted during the winter period.

Graph: System Average Interruption Frequency Index (SAIFI) Target and Actual, 2016



Graph: CML unplanned, Target and Actual, 2016

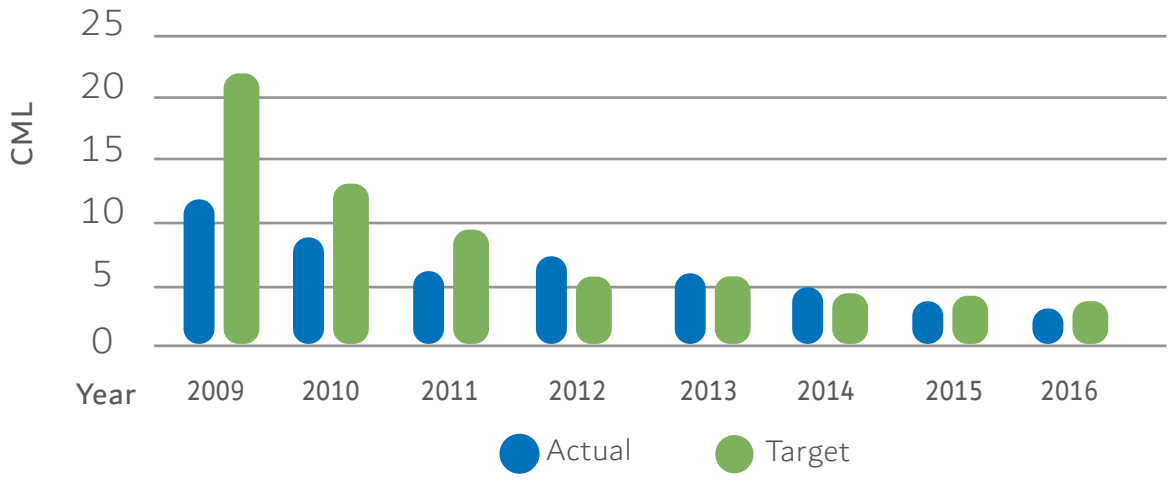


Table: Availability Factor (summer), Target and Actual, 2016

Year	Availability Factor (summer) Target	Availability Factor (summer) Actual
2009	98.00%	98.75%
2010	98.00%	98.70%
2011	98.00%	98.15%
2012	98.00%	95.63%
2013	98.00%	98.14%
2014	98.00%	99.23%
2015	98.00%	98.61%
2016	98.00%	97.39%

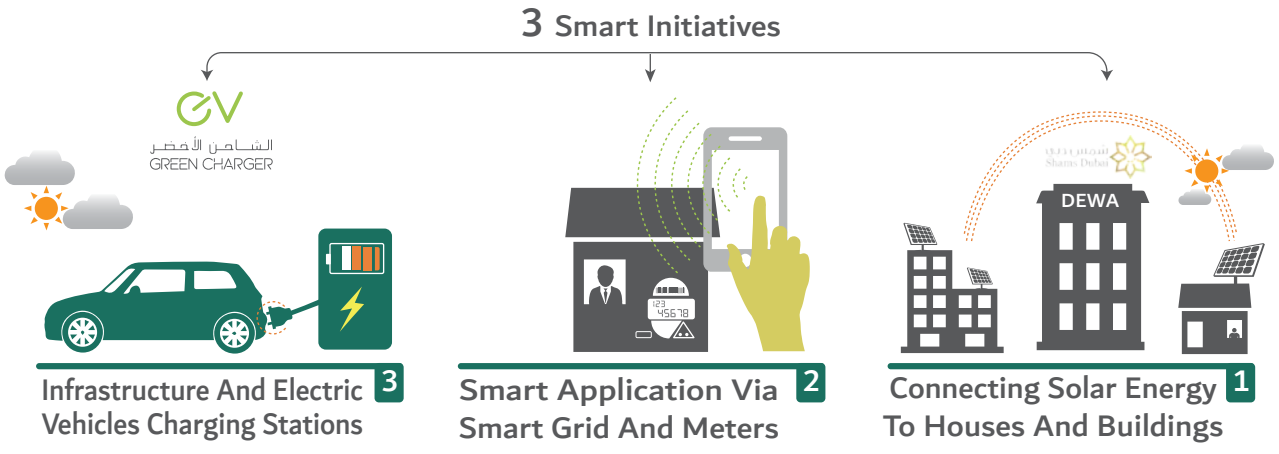
SMART INITIATIVES

The Smart Dubai Initiative, launched by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, aims to make Dubai the happiest and smartest city in the world. In DEWA, we continuously seek to enhance the efficiency of our systems by incorporating smart services in all our operations for a sustainable service and happier customers. We have also developed a comprehensive strategy to implement smart water and electricity infrastructure, which will provide advanced features and include automated decision-making and interoperability across the entire electricity and water network.

The Smart Grid strategy defines eleven programmes that will be completed over the short, medium and long term (2014-2035):

1. Advanced Metering Infrastructure for Electricity
2. Advanced Metering Infrastructure for Water
3. Asset Management
4. Demand Response
5. Distribution Automation
6. Information Technology Infrastructure
7. Substation Automation
8. System Integration
9. Telecommunication
10. Big Data and Analytics
11. Security

DEWA has also launched three smart initiatives to support the Smart Dubai initiative:



First initiative – "Shams Dubai"

DEWA launched "Shams Dubai" in adherence with the Smart Dubai initiative, to transform Dubai into an innovative model for smart cities seeking global sustainability and competitiveness."Shams Dubai" encourages building owners to install photovoltaic panels on their rooftops to generate electricity from solar power. The electricity is used onsite and the surplus is exported to DEWA's grid. An offset between exported and imported electricity units is conducted and the customer account is settled based on this offset. DEWA's "Shams Dubai" initiative in 2016 resulted in 296 buildings being installed with photovoltaic arrays. Apart from projects initiated by our customers, we are also installing solar panels at selected DEWA premises, and also sponsoring a number of projects for other Dubai Government bodies to show our commitment to this initiative, and to ensure cooperation and mutual support on sustainability.

DEWA also 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, and only engage qualified professionals in solar photovoltaic work and projects.
By the end of 2016, 50 solar photovoltaic consulting and contracting companies had enrolled with DEWA, employing 242 solar photovoltaic professionals who are trained and certified by DEWA. This shows how "Shams Dubai" is contributing to the creation of green jobs in the Emirate. At least 60 photovoltaic panel manufacturers and 10 inverter manufacturers have registered under the DEWA solar photovoltaic equipment eligibility scheme, creating a competitive equipment market with clear benefits for our customers.

Second initiative – Smart Applications via Smart Grid and Meters

Smart Applications through Smart Meters and Grids provide various benefits and new applications to our customers, enabling them to have an automatic and detailed reading of their consumption, both current and historical. The data obtained through these readings will be available to our customers to monitor their actual consumption for a specific period of time, to ensure a more sustainable consumption. Smart meters help find solutions to reduce the consumption of electricity and water, and will be able to send accumulated data via sophisticated means of communication, while at the same time providing a full history of consumption and its processes. DEWA successfully installed over 200,000 Smart Electricity and Water Meters by January 2016, and over 1,200,000 Smart Electricity and Water Meters will be installed by 2020.

Third initiative –Green Charger

Through this initiative, DEWA aims to encourage people to use sustainable transportation of hybrid and electric vehicles and to help reduce carbon emissions in the transport sector, which is the second highest contributor of greenhouse gas emissions in Dubai. Starting from 2015 and till the end of 2016, DEWA has successfully installed 100 electric charging stations in different areas in Dubai such as shopping malls, airports, commercial offices, residential complexes, gas stations, government offices, and residential establishments, as part of the Green Charger initiative. DEWA will double its electric vehicles charging stations across Dubai to 200 in 2018 to complete the second phase of the Green Charger initiative.

E-SERVICES FOR CUSTOMERS

Acknowledging that time is precious, at DEWA we ensure that all our services make our customers' life easier and comfortable. DEWA's smart mobile application have also added various options to our stakeholders, enabling them to apply for Clearance Certificate, Move in requests and many more, making activation of services and tracking of requests only a single tap away. In 2016, DEWA has also announced a new bill payment channel, called "Tayseer", allowing customers to deposit cheques using any Emirates NBD machines, for a smarter and more convenient way to pay bills.

DEWA has also launched a Smart Centre as part of the Customer Happiness Centre, which has contributed to achieve remarkable results with growth in smart adoption increasing from 63.7% in 2015 to 70.37% in 2016. DEWA's overall customer trust increased from 88% to 94%, and the customer happiness index also increased from 84% to 96% respectively. DEWA's Smart Centre results reflect its efforts to implement the directives of the wise leadership, to improve government work, the UAE vision 2021, and the Dubai Plan 2021, to ensure the UAE's Government is proactive with meeting the needs of the community. The following are the list of services we provide:

14 Customer Happiness Centres
To facilitate customer convenience our centres are available and spread all over Dubai.

E-Complain
In pursuit of organisation excellence addressing customer concerns is paramount to DEWA.

24/7 Customer Care Centre
Our customers can contact us with their queries about DEWA's services.

E-Suggest
It is a unified, decentralised electronic channel and system for DEWA to efficiently handle and process all suggestions received from customers.

Green Bill
For a fast, secure and eco friendly monthly consumption bill sent to the customer's registered email.

Multiple Ways to Pay
To provide added convenience to customers, multiple methods of payment were developed.

Mobile Services
With our smart applications available customers can efficiently transact; do business with DEWA

Smart Services
The gateway through the dewa portal, www.dewa.gov.ae for customers and stakeholder to enjoy a variety of general, customer and business-related services

"Rammas"

DEWA has recently launched its artificial intelligence Chatbot, called "Rammas", and incorporated it within its official webpage and on Facebook, to be the first public organisation to use an artificial intelligence platform to engage in real-time text conversations with its customers and answer their enquiries interactively. "Rammas" provides an innovative form of service delivery. It can accommodate a huge amount of data simultaneously, search for customers' records to find what they need, and answer their queries promptly and accurately. The service automatically adapts and updates to keep up with different customer requests and changes in the nature of queries and DEWA's services. This increases the service's efficiency and makes it easier for customers to get the requested service and make them happier.

PROVIDING ACCESS TO PEOPLE OF DETERMINATION

In 2016, DEWA renovated all its buildings and facilities to be friendly to people of determination, the respectful title assigned by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, for people with disabilities and special needs.The standards followed were in accordance with those set by Dubai Municipality and the best international practices, including the United Nations' Americans with Disabilities Act, the British Standard BSI 8300, and the British Building Regulations 2010 – Part M. Facilities were also designed and equipped such that people of determination can be evacuated easily in cases of emergency, attaining a matching score of up to 97% in 2016, aiming for 100% by 2017.

DEWA also implements various services to increase the accessibility to its products and services. For our visually-impaired customers, we provide Braille versions of our Customer Guide Booklet created in coordination with the Emirates Association for the Blind. For our hearing-impaired customers, we have staff proficient in sign language at our Customer Happiness Centres, to aid them with all their requirements. Moreover, our "Ash'ir" (Arabic for to signal), live video chat service enables customers to communicate directly with DEWA staff using sign language, a first for a government organisation in the UAE. The service is available on DEWA's smart app, which won the Mobile Applications Excellence Award at the 20th Middle East eGovernment and eServices Awards in 2015, offering over 150 services and features around the clock.

For our elderly customers, we are participating in the Community Development Authority's "Thukher" card programme, a discount programme for older Emiratis aged 60 and above in recognition of their contribution and their active role in building society and "Sanad" for customers with disabilities. Card-holders have access to wheelchair assistance at designated counters to better enjoy DEWA services. To meet the needs of customers with different cultural backgrounds, we print our communication materials in Arabic and English. In addition to this, we recruit employees who are able to deliver the services in different languages such as Farsi, Urdu, Chinese, French and many others.

EXCELLENCE IN CUSTOMER SERVICE

DEWA puts customer service excellence at its heart of the organisation and we have attained several awards in 2016 for this. DEWA won the majority of International Business Stevie Awards 2016 for excellence in its smart services and has also received the highest grade in The International Standard for Service (TISSE 2012) certification from The International Customer Service Institute (TICSCI) after 7 of its centres received a five-star marked with a score of 96.6%, the highest score to date, for making its customers happy. DEWA has also obtained the ISO 10001:2007 for Quality Management in Customer Satisfaction and Codes of Conduct for Organisations, the ISO 10002:2004 for Quality Management in Complaints Handling Process, and the ISO 10004:2012 for Quality Management in Monitoring and Customer Satisfaction.

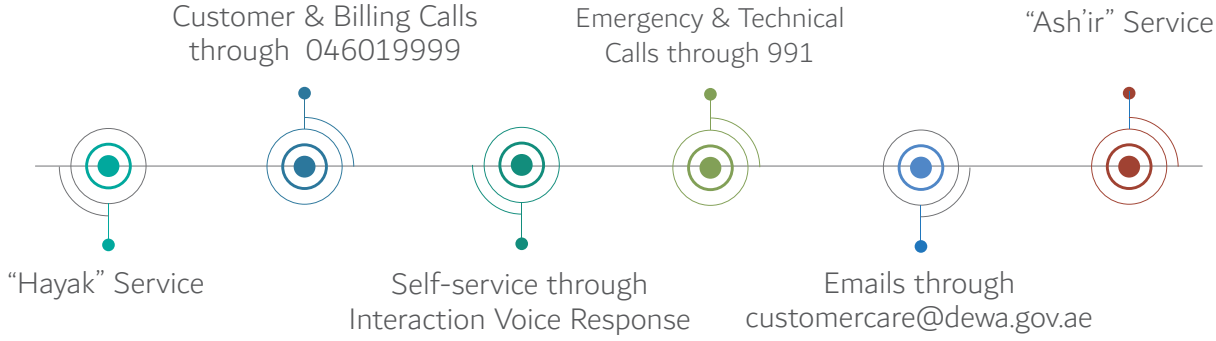
DEWA also launched the fifth phase of its 'Beyond Customers Expectations Programme', to provide customers with services that exceed their expectations. This provides staff with a comprehensive framework to ensure the highest quality standards in service provision and customer happiness for 134 employees from various Customer Happiness Division's departments and sections. The programme promotes happiness through refined customer skills, while instilling a culture of customer happiness among employees, to improve the quality of services provided. It also focuses on ways to deal with customers both professionally and efficiently, and to effectively provide services as quickly as possible, as well as enhance teamwork and communication strategies. Once completed, participants will undergo an examination to attain credit for the Certified Business Professional (CBP).

DEWA's initiatives have managed to reduce customers' complaints by more than 45% in 2016 when compared to 2012. The Customer Complaint Unit has also managed, in 2016, to resolve 96% of the complaints received within 3 working days.

CUSTOMER HAPPINESS

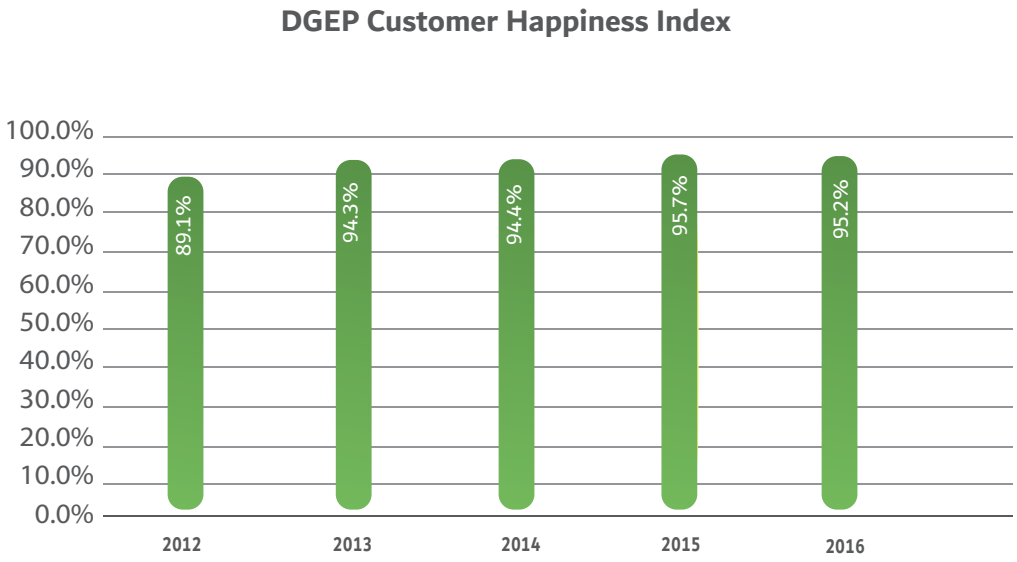
Supporting the directives of the wise leadership to achieve the UAE vision 2021, DEWA has adopted innovation within its vision and incorporated it within 40% of its strategy, to ensure the ease of access to services and happiness of all its stakeholders.

DEWA's Customer Care Centre is also available to answer all of our customers' enquiries. In 2016, our Customer Care Centre has received over 1.35 million calls, 48% of which were handled by Interactive Voice Response System (IVR), enabling our customers to make use of our services smartly and efficiently (Self-Service). DEWA's Call Centre, the Customer Care Centre's Service Star has also handled 718,242 calls professionally achieving 6 second Alert Time, thus recording an 85% at Service Quality Level. We have also received over 117,000 emails from different customers with varying requests and requirements achieving an overall handling satisfaction of 91%. In addition, we have received 21,282 Online Chats through "Hayak" Service, which is an online Text, Video & Audio chat system. Furthermore, "Ash'ir" Service has received over 782 video chats from our customers with disabilities (hearing difficulties). DEWA's Customer Care Centre operates 24/7, with a variety of touch points meeting customers' needs. These include:

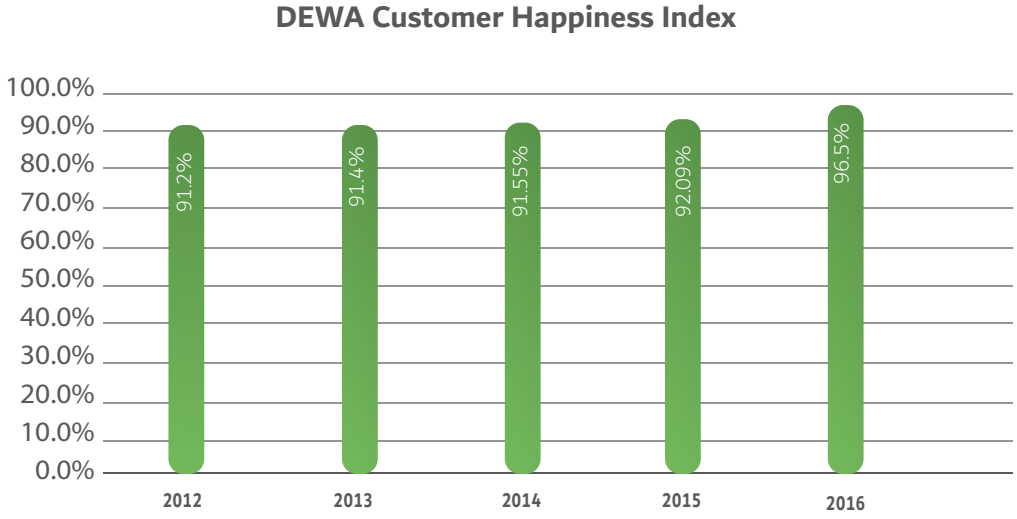


We also gain feedback from the annual Dubai Government Excellence Program (DGEP) customer studies which results in a "Customer Happiness Index" for DEWA. We conduct annual customer happiness surveys such as: a daily customer happiness index, mystery shopper studies (Direct Interaction & Mystery Calling), People of determination study, Customer Experience Study, Key Account Management (KAM) Study, in addition to customer complaints and suggestions to identify our current and future customers' needs and expectations and to improve DEWA's customer experience. For 2016, we also achieved 95.2% on the DGEP Customer Happiness Index results and obtained 96.5% on DEWA Customer Happiness Index. We will continue to engage our customers to continually improve our services for Dubai's residents and our other customers. Our customer happiness surveys are not just about ratings. We also gather feedback from customers on how we can improve our services / processes. Based on previous customer feedback, we have increased our focus on improving our turnaround times in responding to information requests, customer complaints and queries, improving the accessibility of information regarding our service offerings, and improving our transparency in our communications to our customers.

Graph: DGEP CHI for 2012-2016



Graph: DEWA CHI for 2012-2016



CASE STUDY: IDEAL HOME

Ideal Home is a pioneering and integrated public initiative launched in 2016 by DEWA. The service was designed and developed in cooperation with, and support from, 7 government bodies. The overriding goal of the initiative is to inform customers of the participating organisations about possible best practices for a home environment that will be ideal for the sustainable development of society.

The initiative is intended to instil and nurture a culture of an ideal home environment amongst families in Dubai, based on meeting the integrated requirements of eight government partners, by identifying and recognising the households that achieve highest standards of sustainability, health and safety, security, environment, social responsibility and smart adoption.

The concerted efforts of all the participating government organisations of the Ideal Home initiative achieved 100% in Customer Satisfaction and Trust Level. The overall awareness levels of the thematic messaging, before and after the implementation of the initiative, improved from 77.78% to 87%.

The objectives of the Ideal Home initiative are:

- Raise, promote and enhance 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.
- Achieve highest standards in sustainable living by making it an embedded culture within households.
- Enhance efficiency levels by maximising partnership opportunities for the purpose of provisioning unified government services.
- Enable and provide for customer happiness through innovative services.
- Support government vision, effectively.

The Ideal Home initiative has managed to provide an efficient solution and a joint-service to our customers and the whole society succeeding to encourage sustainable households only with 3 steps, compared to 15 prior to the service launch and implementation. The new customer-journey turnaround time now is 3 months compared to 15 months and 11 days prior to the launch of the initiative. Customers now no longer have to deal separately with 8 public bodies to have a sustainable and efficient house, they can now just directly access DEWA's integrated joint-service, Ideal Home.

EMPLOYEES

- Awarded British Safety Council Sword of Honour in Health and Safety for the sixth consecutive year during 2016.
- 75.42% decrease in accident incident ratio between 2009-2016.

MANAGEMENT APPROACH

In our drive to be the best employer of choice in Dubai, we firmly believe that we have a responsibility to support our employees in performing their jobs effectively and efficiently by providing them with a healthy and positive environment at work. Our leadership and management are committed to the development of our people and have launched multiple Employee Relations Programmes that allow our staff to be heard and recognised. Since 2009, we have achieved certification to the Social Accountability International SA8000 Standard, which is one of the world's first auditable social certification standards for decent workplaces based on conventions of the International Labour Organisation, United Nations, and National Law. The standard helps guide our operations to protect and empower all personnel within DEWA's scope of control and influence. That includes our employees and the employees of our suppliers, contractors and sub-contractors. At DEWA, we continually strive to understand and respond to our employees' needs and expectations, which include employee welfare, reward, development, security, happiness and positive work environment.

The key pillars of our approach to managing our workforce are:

A WORLD-CLASS WORKFORCE

In 2016, our total number of employees was 11,485 people, which makes us one of Dubai's largest employers. Our organisation is an important hub for engineers in the region. Engineering in its different fields is considered a high value-added activity and an important source of innovation to DEWA. We also recruit people in other highly qualified positions in various fields including management, business modelling and finance. Our people hold a wide range of talents and skills, and we are devoted to provide training and development opportunities and enriching their skills and career path. To ensure the sustainability of our organisation, we are also taking the necessary measures to monitor the retiring rate of our employees so as to be able to replace their specialised proficiency with trained new joiners.

Table: Total number of employees by employment contract (permanent and temporary), region, 2016

Contract	Africa	Asia	Europe	Middle East	N. America	Oceania	S. America	Total
Permanent	172	7,351	56	3,677	27	7	2	11,292
Temporary	10	160	-	23	-	-	-	193
Grand Total	**182**	**7,511**	**56**	**3,700**	**27**	**7**	**2**	**11,485**

Contract	Female	Male	Total
Permanent	1,824	9,468	11,292
Temporary	37	156	193
Grand Total	**1,861**	**9,624**	**11,485**

Table: New employee hires by age group, gender, and region, 2016

New employee hires 2016*	
Category	Number of New Hires
By Age	
Under 30	515
30-50	400
Over 50	7
By Gender	
Female	206
Male	716
By Region	
Africa	10
Asia	406
Europe	13
South America	1
North America	7
Oceania	1
Middle East	484
Total	**922**

Table: Employee turnover by age group, gender, and region, 2016

Employee turnover 2016**	
Category	Number of employees
Age	
Under 30	39
30-50	182
Over 50	25
Gender	
Female	39
Male	207
Region	
Africa	3
Asia	156
Europe	4
Middle East	83
Grand Total	**246**

*Special contracts category has been included in 2016 calculations.

**Special contracts category has not been included in 2016 calculations.

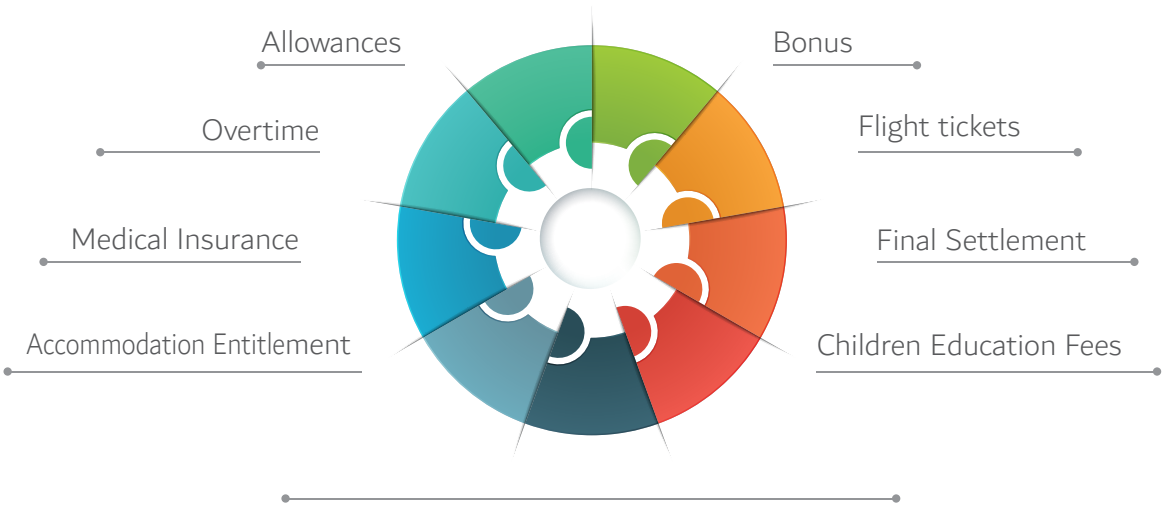
Table: Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region, 2016

Region	Retirement after 5 years			Grand Total
	Leadership	Management	Non-supervisory	
Africa	1	7	6	14
Asia	2	76	394	472
Europe	1	5	1	7
Middle East	6	18	36	60
North America	-	-	1	1
Oceania	1	-	-	1
Grand Total	**11**	**106**	**438**	**555**

Region	Retirement after 10 years			Grand Total
	Leadership	Management	Non-supervisory	
Africa	1	9	10	20
Asia	2	168	932	1102
Europe	2	12	1	15
Middle East	13	65	82	160
North America	1	1	-	2
Oceania	-	1	2	3
Grand Total	**19**	**256**	**1,027**	**1,302**

EMPLOYEE BENEFITS

Aiming to be a workplace with world-class standards requires us to consider how we reward our people fairly and generously and in line with their performance. To ensure that, our Personnel Committee reviews employee performance appraisals, promotions, salary increments and other personnel matters. We also review and analyse job roles, matching them with people that have the talents, skills and academic qualifications to fill the job requirements. Remuneration as per DEWA policies is based on the grade/position of the employees and not their gender. As a result, there is no difference between male and female employees. To sustain a positive, healthy and happy work environment, and to strengthen the engagement and the performance of our people, we offer our full-time employees an extensive range of benefits listed below including medical insurance, various leaves, allowances, and accommodation entitlement.



DEWA ensures that our employee's benefits plans are in line with our main strategy. We have also introduced other initiatives that benefits the employees too:

- "Al Khair" Fund: This fund is open only to DEWA employees and was launched in 2009 to provide financial support in case of emergencies. In 2016, we were able to provide more than AED 4 million to help approximately 397 of our employees during their times of need.
- "Waffer" Programme: The programme provides competitive offers and discounts for DEWA staff for various shops, hotels, and other services.
- Excellence Award & Recognition Programmes: This aims to appreciate and reward the employees (individual or groups) who have excelled in their achievements.

To further support our world-class workforce, our employees are entitled to parental leaves. In 2016, 386 of our employees availed parental leaves. 100% of these employees resumed working after their parental leave ended, which shows that we facilitate and ensure our employees' welfare.

Table: Employee Parental Leave and Resumed Duty, 2016

Leave Type	Availed Leave	Resumed Duty	Percentage
Paternity Leave	386	386	100%
Maternity Leave	194	152	78.35%
Total	**580**	**538**	**92.76%**

TRAINING & DEVELOPMENT

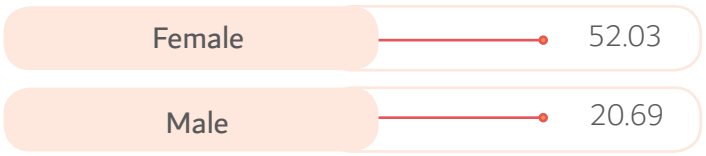
Our main focus being the growth and development of our people, in DEWA, we continuously support learning and development of leadership and employee skills through robust training programmes. Since 2010, we have witnessed a steady increase in average leadership training hours, manager training hours and non-supervisory employee training hours.

To further develop and retain our world-class workforce, we provide all possible support to our employees in order to improve their talents and skills, and strengthen social cohesion. As a result, we run a career development and succession-planning programme. In 2016, we also developed and updated our technical and behavioural competency frameworks. Succession management is equally critical in order for us to ensure continuity, retain and develop knowledge and intellectual capital for the future and encourage individual employee growth and development.

Table: Average Training Hours by Category, 2016

Average training hours by category	2010	2011	2012	2013	2014	2015	2016
Leadership	39.8	70.6	71.89	78.18	99.38	97.00	97.23
Management	39.02	47.22	43.85	44.76	52.13	51.37	51.40
Non-supervisory	31.94	30.02	24.44	33.51	32.87	32.54	33.39

Average Training Hours by Gender, 2016



CAREER DEVELOPMENT

At DEWA, we continuously seek to promote our workforce and hire talented and motivated employees who can contribute to the success of our organisation. DEWA is committed to both the personal and professional development of our employees. From job-focused trainings to general management trainings, our employees have the opportunity to further develop their careers. DEWA also conducts competency based programmes and trainings for skill management and lifelong learning based on 9 Behavioural Competencies. These were determined through an Assessment and Development Centre conducted for 887 employees based on their proficiency levels in 2014. We are currently building in-house capabilities to handle the next cycle, as a project cycle is from 18 months to 3 years. Performance appraisal is equally important, as it helps us evaluate in a systematic manner the performance of the employees, while also allowing us to better understand their abilities for the purpose of further growth and development.

EMPLOYEE HEALTH AND SAFETY

The health and safety of our people is our leading priority. As it is DEWA's duty to provide a safe and healthy workplace for its people, we have been developing a safe and healthy culture by applying international best practice standards in relation to health and safety management. The Health and Safety Department is an essential part of DEWA's organisation and handles a wide range of functions in safety, health and security of our employees, suppliers and contractors.

DEWA is ISO-9001, ISO-14001 and OHSAS-18001 certified, enabling continuous improvement and management of our systems.

DEWA has maintained the British Safety Council's Health and Safety Management 5 star certification since 2002. Those that achieve the certification can then compete for the Sword of Honour award, which DEWA has been awarded for the sixth consecutive year during 2016. We are proud to be the first utility in the MENA region to achieve this award. We have also been awarded the British Safety Council's Globe of Honour for environment for the fifth year in 2016.

We have a Risk Management Policy, in compliance with ISO-31000, which governs our activities and ensures that an appropriate assessment of risks (including health and safety risks) are considered prior to the approval of major activities, projects and changes to our business.

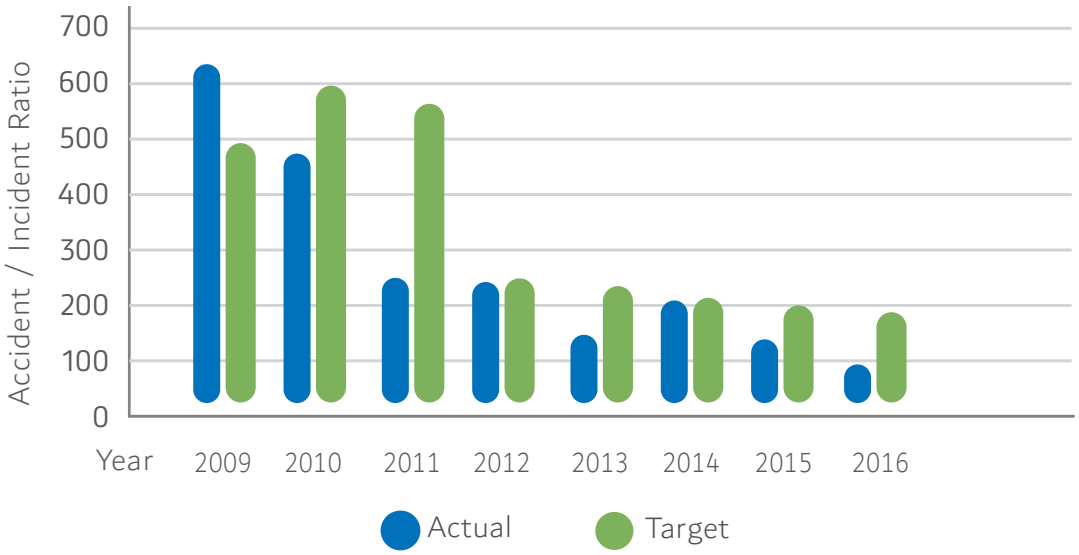
We also maintain quality control procedures for the purchase of any procurement irrespective of value.

DEWA's Health & Safety Committee involves representatives from DEWA and is headed by the EVP of Business Support & Human Resources. The committee plays a vital role in preventing work-related injuries and accidents in all our 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/powerful. 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.

We have an obligation to our contractors, subcontractors and vendors, and we comply with OHSAS 18001 and 18002 to ensure that health & safety measures are observed. In addition to this, our dedicated SP06 Health & Safety Procedure for Contractors & Consultants is also in place, and to raise safety awareness amongst our contractors, we have launched a Health and Safety Week as part of DEWA's strategy to enhance HSE and sustainability standards. Since 2011, we have also organised a Health & Safety Awareness Day for employees, contractors and consultants on an annual basis. We regularly audit our operations to assess how well we are performing to health and safety requirements.

To track our health and safety performance, we monitor indicators of safety at a strategic level and set ourselves targets to drive continuous improvement. One of the key indicators of our safety performance is the Accident/Incident Ratio (AIR). DEWA recorded an AIR incident rate of 145 in 2016, compared to 615 in 2009, an improvement of nearly 75% comparing the 2009 with the 2016 result . We are also pleased to state that we suffered no work-related fatalities during 2016.

Graph: Percentage of reduced Accident/Incident Ratio (AIR),(2009-2016)



Note: (Number of RIDDOR Accidents x 100000 / Total number of staff)

EMPLOYEE HAPPINESS

Our management has always encouraged spreading happiness and positivity among the work environment that is reflected on our people, work, and stakeholders. During 2014 we launched our Happiness Department to support our strategic objective and goals to achieve the happiness of all our stakeholders, including our employees. Our goal is to drive our people to adopt healthier and happier practices that ensure the continuity of the productivity of our organisation. Our happiness guiding principles revolve around our employees and they focus on satisfaction, happiness, and engagement. For that reason, we conduct surveys regularly to measure our employees' satisfaction regarding different work scope on the authority's level. Our happiness model consists of five main happiness indices which are: Job and Financial Security, Job Compatibility and Employee Development, Work-Life Balance and Health, Respect, Appreciation & Creative / Engaging Work Environment, and Fairness and Transparency.

Our employee happiness and engagement initiatives are keys to achieving a sustainable, productive, stimulating and collaborative work environment. The Employees Happiness Survey is one of our tools to understand and meet our people's expectations.

We continuously encourage our employees to participate in the survey to help us improve the identified and prioritised areas they acknowledge through the survey. In 2016, our overall happiness score reached 81.15%. The results of this study are used to benchmark and realign DEWA's initiatives to meet employees' expectations. To support and improve the physical working environment of our people, we have introduced the Happiness Lounge and Creativity Rooms to promote and encourage a positive work environment. The Happiness Lounge, located at our Head Office and Creativity Rooms at Al Warsan provide a selection of services from online booking for workshops and brain storming sessions to various activities, which encourage our employees to excel in a positive and high-quality work environment.

DEWA also launched a "Breathe Easy" initiative that encourages our employees to adopt exercise routines to ease pressure from work and maintain a healthy lifestyle. A total of 2,020 of DEWA staff took part on the initiative during July 2016. We also conducted "The Stress Survey" via email to have a clear understanding of our employees' feedback on their work environment. The stress survey aims to measure the amount of pressure the work environment puts on the employees. Adding to that, it is useful in understanding the difficulties and obstacles challenging our staff. The results from 994 employees showed that a large number of employees do not suffer from any form of stress at work. Other initiatives that aims to create a happier environment for employees are listed below:

- **Happiness Garden:** In celebration of the International Happiness Day that takes place on the 20th of March, DEWA initiated the Happiness Garden that features various activities to promote the happiness of our employees and customers including the happiness café, the happiness lounge and station, and the reading corner, as well as distributing roses and gifts to the staff to promote positivity, ambition, and optimism among our people.
- **Happiness Basket:** Promoting the happiness culture and philosophy among the employees by distributing cards containing positive statements among our employees.
- **"Estisharati" (Employee Assistance Programme):** The Happiness Department conducts various employee counselling sessions to support and meet the demands of the employees and workplace. Such sessions include the Employee Assistance Programme that includes circulating Stress Test Surveys among the employees, Conducting Stress Management workshops and individual counselling sessions.

DEWA is a government entity aligned with Dubai Government and regulations. Therefore, with regards to significant operational changes affecting our employees, while a specific notice period is not included in our standard employment contract, a sufficient notice period has historically been given when significant operational changes have been implemented. We also aim to create an environment that supports our employees' lifestyles. Part of this is achieved by encouraging gender diversity in our workforce. We have put the following initiatives in place for this purpose:

- **Women's Committee:** The Committee encourages women expanding their creative roles and supports women's insights into decision making to increase DEWA's female employee satisfaction.
- **DEWA Child Care Centres:** Our Child Care Centres, located in the Head Office, Al Quoz and Al Warsan were created to provide care during the working hours for our employees' children. This initiative has been an outstanding success in helping employees to balance family and work duties.

PROMOTING EMIRATISATION

In DEWA we have always believed that increasing the employment of Emiratis and helping the next generation develop and grow is one of our foremost responsibilities as it contributes to the UAE's economy and vision. Our strategy is actively focused on investing in our future Emirati workforce and we are committed to increasing the percentage of Emirati youth and to develop their training and expertise. Of the new hires during 2016, approximately 44.4% were UAE nationals. Additionally, within our organisation, UAE nationals held 85.23% of our top management and leadership positions, 47.85% of our middle management positions, and 33.89% of our non-supervisory positions during 2016. We continuously strive to attract qualified and talented young Emirati professionals and focus on strengthening their skills by providing them with scholarships and training courses at leading universities, colleges and institutes around the world.

We launched a scholarship programme aimed at educating Emirati students abroad on renewable energy. We also launched the DEWA Academy, accredited by the Business and Technology Education Council (Pearson BTEC) in the UK, which aims to foster a new generation of Emiratis both academically and vocationally. Additionally, we offer a number of scholarship programmes for local high school students in engineering fields to train the next generation of our workforce, particularly in relevant technical qualifications. Sponsorships for study and research projects connected with the nature of our work are also available to UAE nationals. We also offer a range of employee benefits that particularly appeal to UAE nationals to bolster our Emirati recruitment and retention rates.

RECOGNISING AND REWARDING EMPLOYEES

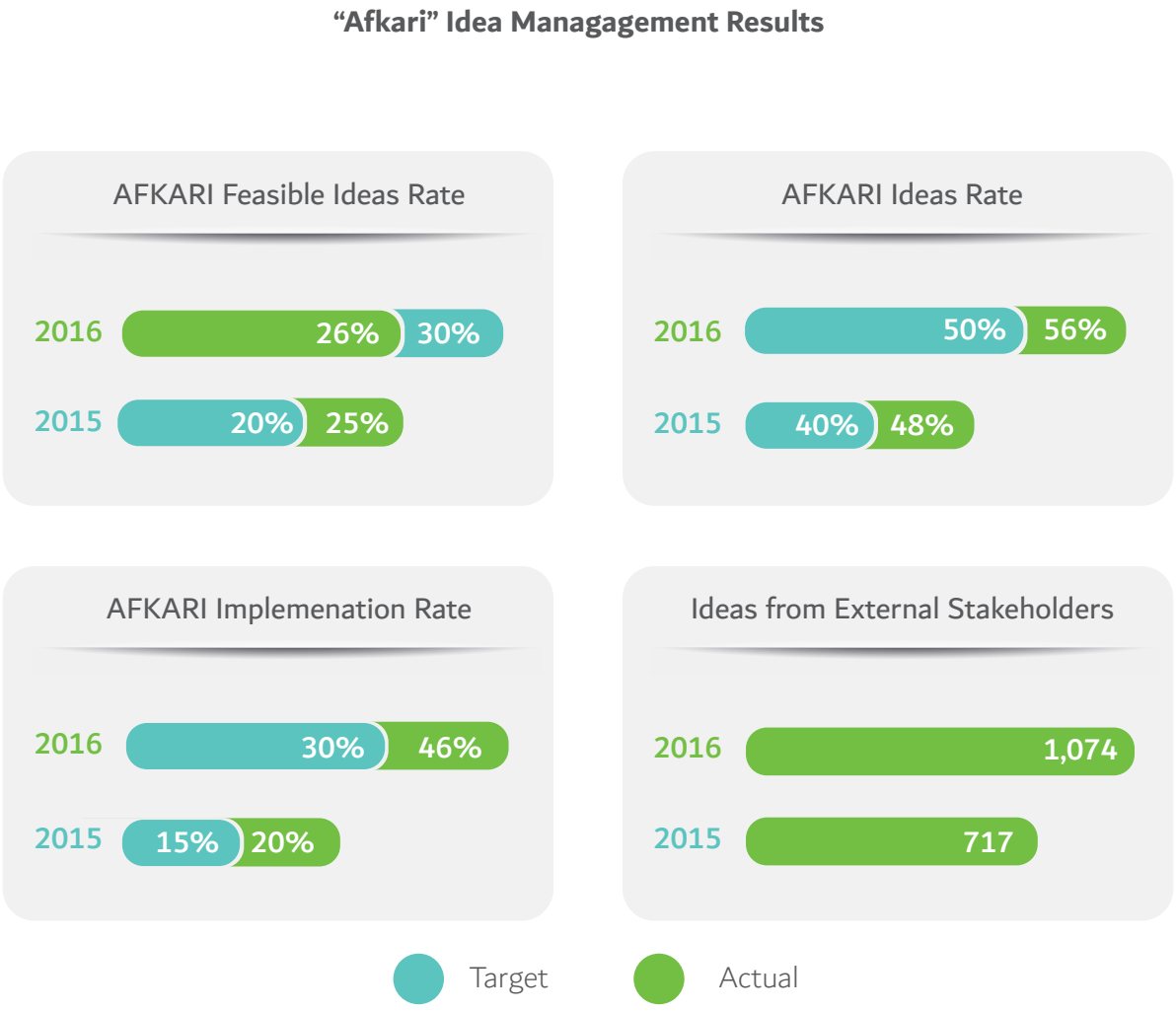
To ensure that DEWA's employees are continuously rewarded for their remarkable efforts and exceptional work, a rewarding program for our people called "The Internal Excellence Award & Recognition Programme" was formed that is applied at every level across DEWA. The award recognises the outstanding groups and individuals on their performance and achievements during their duties. It also promotes a culture of excellence and encourages positive competitiveness among the staff. In 2016, DEWA honoured 2,140 of its employees. As stated by H.E MD and CEO Saeed Al Tayer; "The award aims to create a culture based on implementing excellence principles in all DEWA operations, as well as recognising the performance

of our staff during the year and to motivate them to compete among each other when it comes to performance and excellence, and to spread positive energy among the workplace and the employees." In addition to that, we have also implemented the "Special Act" reward for those employees that help in conserving DEWA's resources and making savings in costs. In 2016 we have rewarded 609 employees for their special acts during the year to conserve DEWA's assets and budgets.

FOSTERING INNOVATION

Employees are encouraged to provide us with their innovative ideas on how to improve our working environment and services through our highly interactive platform known as "Afkari" (My DEWA Ideas). A number of ideas suggested by our employees have had an impact on our triple bottom line. In 2016 the number of participant on "Afkari" platform reached 889, while the number of proposed ideas reached 2,747 ideas in total. Since these innovative ideas saved us an amount of 725 million in 2016, we ensured rewarding 1,255 creative idea owners, noting that these rewards have reached up to AED 424,720 this year. Adding to that, we launched an internal initiative that aims to encourage innovation and creativity through posting videos and documentaries about creative minds at DEWA. During 2016, we conducted 55 interviews and published the profiles of 3 innovators.

Graph: Innovation Key Results



Note: Charts are scaled in reference to the maximum number in each group.

CASE STUDY:
DEWA2021 STREET ART COMPETITION

In our effort to endorse the culture of innovation among our people and align with the National Innovation Strategy in making the UAE one of the most innovative countries in the world, we have launched DEWA2021 Street Art Competition where employees illustrated pictures on walls to reflect the 5 strategic pillars of DEWA's Strategic Plan 2021. HE Saeed Mohammed Al Tayer, MD & CEO of DEWA expressed the importance of implementing the directives of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, in improving our services and performance and encouraging the innovative culture among our employees and most importantly improving the administrative work in the government by raising positive energy, creativity, and excellence to improve the work. Three innovative female employees won the competition for the year 2016: Wadha Al Saberi from Distribution Power Division, Sheikha Obeid Hasan from the Strategy and Business Development Division, and Rawda Khouri, from Business Support and Human Resources Division.

CASE STUDY : FUTURE ENGINEERS

In alignment with the UAE leadership directives that announced 2016 as the "Year of Reading" and DEWA's commitment in investing in the youth, we have successfully trained 47 students between the ages of 12 and 15 years for over 80 training hours through the "Future Engineer" initiative. The initiative that was part of the "Reading is Positive Energy" took place from 18 to 29 December 2016 to provide employees' children with an unforgettable experience through workshops and lectures. These encouraged students to be creative and innovative while developing their scientific skills such as analysis, observation, troubleshooting and deduction, as well as teaching them the basic principles of electricity.

The children expressed their interest and passion in participating in such programmes again in the future, with the results of the participant's happiness survey reaching 99%. HE Saeed Mohammed Al Tayer, MD & CEO of DEWA expressed his extreme support in developing the programme to help students as part of DEWA's social responsibility in discovering their future career and raising scientific research spirit and the love of science and technology among the young generation.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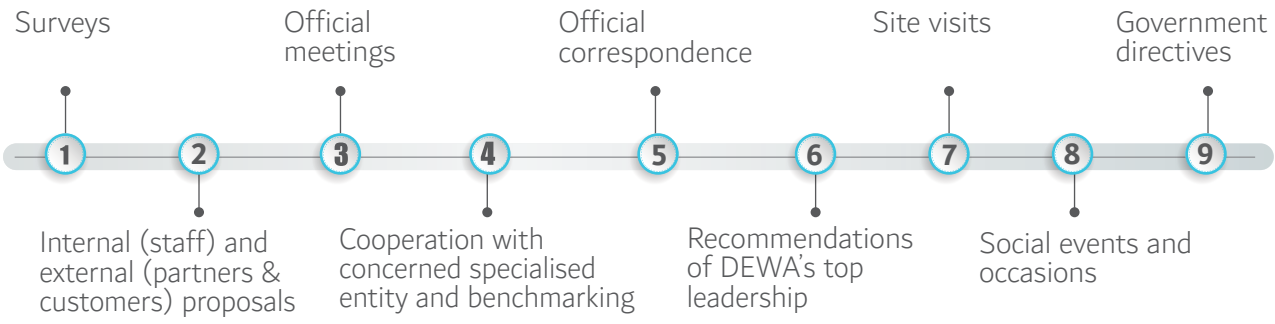
SOCIETY

- Rolled out 27 initiatives in 2016.
- 12,922 volunteering hours.
- DEWA's CSR efforts over the last few years have contributed to an increase in community satisfaction and happiness levels, from 82% in 2013, to 89% in 2016.

MANAGEMENT APPROACH

At DEWA, we are committed to giving back to the society and communities in Dubai. From an early stage, we have adopted an explicit policy for Corporate Social Responsibility (CSR) aligned to international best practices. We have also set an integrated framework which meets CSR standards, as we realise that our contribution to the local communities is essential. This framework include social initiatives that are aligned with the UAE Vision 2021, the Dubai Plan 2021, and the DEWA Strategy 2021. In order to develop and implement our CSR Strategy, we identified the actual needs of our stakeholders and developed an action plan around those needs. This maps out our objectives for sponsoring, implementing and assessing our internal and external CSR initiatives, and figuring out how they are meeting our stakeholders' needs. In line with the Year of Giving, which was launched by HH Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE in 2017, DEWA has approved 12 main programmes to provide 27 social and humanitarian initiatives. These initiatives are also aligned with the directives of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to support local communities.

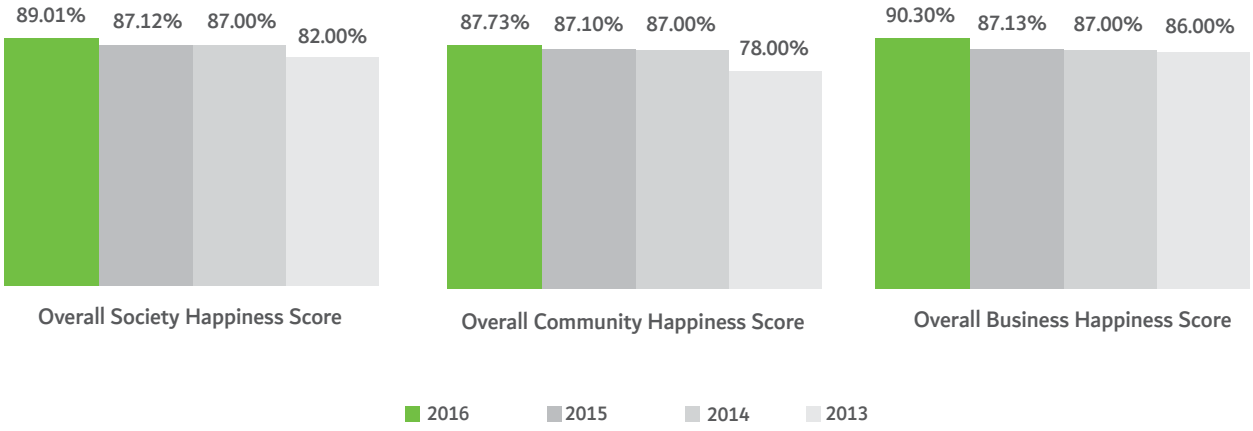
We are using various channels of communication to determine our stakeholders' needs for CSR initiatives such as through:



In addition, we value the input from our stakeholders especially that of the society, as it helps us constantly improve our social initiatives and projects. All departments in DEWA are supporting the management directives and contributing to the implementation of the common programmes related to society. We encourage internal volunteering participation on various CSR initiatives through incentives and award programs for all DEWA's employees.

OUR INITIATIVES

During 2016, none of our large projects physically or economically displaced people within our operational boundaries. Moreover, our Corporate Social Responsibility (CSR) Programme coordinates a network of 24 divisional representatives responsible for coordinating the social and community initiatives related to their respective division. Initiatives range from local community development programmes such as awareness programs in schools, to blood-donation drives, and Ramadan campaigns. We are proud to announce that during 2016, 93.8% of our social initiatives have been successfully implemented, exceeding our target. The constantly increasing trend of DEWA's overall society happiness score, reaching 89% for the year 2016 is a clear proof of a well-chosen and executed CSR plan.



PEOPLE OF DETERMINATION

DEWA has actively contributed to the different initiatives and programmes that support People of Determination, the title awarded to people with disabilities by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, according to the best international practices and standards. This directly supports the "My community, a city for everyone"initiative launched by HH Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Dubai Crown Prince, and Chairman of Dubai Executive Council, to transform Dubai into a fully disability-friendly city by 2020.

DEWA has given priority to people with special needs by launching initiatives to enhance its services for them. One of the initiatives we launched is "My wish", which makes the wishes of People of Determination come true. Through DEWA's Innovation Centre we have provided technology training for over 150 students with different disabilities and succeeded in bringing students with disabilities into new technological disciplines. The Innovation Centre will create an environment of innovation and creativity for disabled students.

To achieve Dubai's strategy to become a friendly city to people of determination, DEWA held in December 2016 its 1st annual conference for people with disabilities, with the theme "Inspiring Stories and Challenges" which covered the "My community.. A city for everyone" initiative launched by HH Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of Dubai Executive Council. The conference tackled the role of government and society in transforming Dubai to become a city friendly to people of determination and supported DEWA's strategy to empower People of Determination and further integrate them into society as individuals who are capable of innovation and creativity. The conference invited international and local speakers with disabilities to present their inspiring stories and the challenges they face in their working environment. During the event, DEWA considered a number of innovations to integrate people of determination within society.

DEWA'S IFTAR TENT

At DEWA, we bring our staff together within a multi-national environment. In this regards, we annually organise various charitable and Islamic activities to enhance brotherhood and the spirit of giving, in an environment that reflects the UAE's heritage and traditions, as well as Islamic values.

One of our annual initiatives that we organise to support the unity between employees and society is the annual Ramadan Tent during the Holy Month of Ramadan. The tent serves the basic meal of "Iftar" to employees from different departments across the Emirate whose shifts begin after "Iftar". The Ramadan Tent also serves members of the public from all nationalities.

SUMMER TRAINING PROGRAMMES FOR STUDENTS

During summer, DEWA annually provides training and development programmes to school and university students. These programmes are designed to accommodate students according to their studies related field. As the programme starts, the students will be placed in different departments and divisions of DEWA. The purpose of these programmes is for students to have a better understanding of the work environment and enhance their team capabilities when working as a team. They also learn more about time management, and prioritising tasks. Moreover, it will also provide them the sense of responsibility that will develop them to be leaders in the future. These programmes also aim to employ the highest number of Emirati students, and this comes is in line with DEWA's commitment in achieving Emiratisation.

"TAKAFUL" CONTRIBUTION FUND

As a part of DEWA's Corporate Social Responsibility, we launched in 2009 the "Takaful" contribution fund to provide financial support to DEWA's employees in case of potential emergencies. DEWA annually contributes AED 3,600,000 to this fund. During 2016, 220 employees benefited from this fund.

SOLAR DECATHLON MIDDLE EAST

Solar Decathlon Middle East (SDME) is an international competition created through an agreement between the Dubai Supreme Council of Energy, DEWA, and the US Department of Energy. Through this competition, universities from all over the world will compete to design, build, and operate solar-powered energy efficient houses, which not only contribute towards environmental protection but also are capable of adapting to the region's weather.

The Solar Decathlon is a unique opportunity for university students to gain important experiences, implement the theories they learn, and demonstrate their skills and capabilities in innovation and design to achieve a sustainable lifestyle. It is also an opportunity for the public to watch the teams in action as they compete and challenge each other. A total of 22 university teams from 16 countries have been shortlisted to the final stage of the Solar Decathlon. Qualified teams will design, build, and operate sustainable, cost and energy-efficient models of solar-powered homes, with a focus on protecting the environment, and taking into consideration the climate conditions of the region.

At DEWA, we have always invested in developing people capable of spearheading research and development in clean and renewable energy to further preserve natural resources and protect the environment. Dubai will host the first two rounds of the Solar Decathlon, which is to be held for the first time in the Middle East, in 2018 at the Mohammed bin Rashid Al Maktoum Solar Park and again in 2020 to coincide with World Expo in Dubai. Hosting this competition in Dubai underlines the efforts of DEWA to support the Dubai Clean Energy Strategy 2050 to consolidate Dubai's status as a place that encourages innovation, incubates creativity and to transform Dubai into an international hub for clean energy and green economy.

COMMUNICATION AND AWARENESS

DEWA has always strived to raise awareness among all its stakeholders about water and electricity conservation. This is achieved through integrated marketing communication campaigns and well-planned community outreach activities during the year. To ensure that our stakeholders do not waste electricity & water, we undertake energy audits for high-volume commercial customers, so that the finding report will enable us to take necessary remedial measures to reduce how much they use. We also participate in cause-related events such as Earth Hour, World Environment Day, and World Water Day. Likewise, the Holy Month of Ramadan is an important occasion for us to drive home the message of "responsible utility consumption". Between 2009 and 2016, our awareness campaigns and efficiency audits achieved electricity savings of 1,544 GWh and water savings of 6.2 billion imperial gallons, which is equivalent to cost savings of approximately AED 957 million.

EARTH HOUR

For 9 years in a row, DEWA has organised Earth Hour to educate Dubai residents on the importance and need to join in the conservation of energy through this global initiative.

Under the patronage of HH Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of Dubai Executive Council, and in partnership with the Dubai Supreme Council of Energy and the Emirates Wildlife Society (EWS), in association with the World Wide Fund for Nature

(WWF), and with the support of Dubai Properties Group, Earth Hour in Dubai is an international call for strengthening collaboration to promote the culture of conservation, and incorporating this into everyone's daily lifestyle.

The initiative greatly supports DEWA's efforts in promoting the sustainable development of Dubai in terms of minimising carbon emissions and greenhouse gases, and environmental pollution, and providing sustainable solutions for global warming and climate change. The community is encouraged to participate by turning off all non-essential lights and appliances for one hour from 8:30pm to 9:30pm. In that way we highlight the importance of preserving natural resources and protecting the environment, as well as that small conscious efforts can make a substantial impact if we work together.

DEWA received an official Certified Emission Reductions (CERs) cancellation certificate issued by United Nations Framework Convention on Climate Change (UNFCCC) for the successful offset of emissions during the Earth Hour 2016, in cooperation with Dubai Carbon Centre of Excellence (DCCE). DEWA is pleased to report an impressive reduction in electricity use of 222 MWh, as well as 96 Tons of reduced carbon dioxide emissions during Dubai's Earth Hour 2016.

VOLUNTEERING

In DEWA, we believe that volunteering is a major pillar in being more sustainable and this is aligned with our motto "For generations to come". In 2016, our employees contributed to a total of 12,922 voluntary hours. Volunteering has immense impacts on our employees as it gives them the opportunity to gain confidence, make a difference, meet people, be part of a community, and learn new skills.

Year	2010	2011	2012	2013	2014	2015	2016
Total voluntary hours	916	1,320	1,555	8,014	8,039	13,560	12,922
Total voluntary days	38	55	64	333	334	565	538

CASE STUDY:
CLIMATE CHANGE CHAMPION PROGRAMME

DEWA annually sends its employees to witness the first-hand effect of climate change and global warming around the world, as part of its Climate Change Champion Programme. This comes in line with our strategic objective of minimising our environmental footprint. The programme has started since 2015 where we sent our employees to Antarctica and to the Amazon in 2016. The employees came back as Climate Change Champions to raise awareness to internal and external stakeholders about the importance of taking action towards climate change.

In 2016, the Climate Change Champions covered over 2,000 stakeholders through external events including but not limited to: WETEX/Green Week, World Energy Day, Earth Hour, Quality, Health, Safety & Environment Conference, DEWA Strategy Week, Creativity Labs, Climate Change & Awareness Sessions held by the Sustainability Leading Team, university and school visits. During July 2017, DEWA will send the third batch of employees to Tanzania where they will encounter the breath-taking landscapes of Tanzania, from the soaring peak of Mount Kilimanjaro, Africa's highest peak to savannahs that abound with zebras and wildebeests. The team will also embark a trek via the road less travelled and explore the different environments. While trekking, the employees will be able to witness first-hand the effects of global warming on Kilimanjaro and the surrounding area, and learn more about the impact of climate change from the National Geographic Experts. The expedition will also include other activities such as joining the safari, visiting the national parks and meeting local stakeholders to discuss the impact of climate change in the region.


GRI
Empowering
Sustainable
Decisions

GRI CONTENT INDEX

APPENDIX 1 : MATERIAL ASPECTS AND THEIR BOUNDARIES

Material Aspects	Material within the organization or external	Relevant External Stakeholders					
		Customers	Suppliers	Partners	Society	Government	Investors
Economic							
Economic Performance	Both	√	√	√	√	√	√
Market Presence	Both				√	√	
Procurement Practices	Both		√	√	√	√	√
Anti-corruption	Both	√	√	√	√	√	√
Availability and reliability	Both	√	√	√	√	√	√
Demand side management	Both	√			√	√	√
Research and development	Within						
System efficiency	Within						
Environmental							
Energy	Both	√	√	√	√	√	√
Water	Both	√	√	√	√	√	√
Emissions	Both				√	√	√
Effluents and waste	Both				√	√	√
Environmental Compliance	Both				√	√	√
Supplier Environmental Assessment	Both	√	√	√	√	√	√
Social							
Employment	Both				√	√	
Labour/management relations	Both					√	
Occupational health and safety	Both					√	√
Training and education	Within						
Diversity & Equal Opportunity	Within						
Local Communities	Both				√	√	
Disaster/Emergency Planning and Response	Both	√	√	√	√	√	√
Customer Health and Safety	External	√			√	√	√
Compliance	Both				√	√	√
Access	Both	√				√	√
Provision of information	Both	√	√	√	√	√	√
Customer Happiness	Both	√	√	√	√	√	√

GRI CONTENT INDEX

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
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	102-2	Activities, brands, products, and services	15	
	102-3	Location of headquarters	16	
	102-4	Location of operations	15	
	102-5	Ownership and legal form	15	
	102-6	Markets served	15,86	
	102-7	Scale of the organisation	15,16,29	
	102-8	Information on employees and other workers	98,99	
	102-9	Supply chain	28	
	102-10	Significant changes to the organisation and its supply chain	No significant changes	
	102-11	Precautionary Principle or approach	53	
	102-12	External initiatives	20,21	
	102-13	Membership of associations	34	7.4
	102-14	Statement from the MD & CEO	9	
	102-16	Values, principles, standards, and norms of behaviour	23	
	102-18	Governance structure	24,25	16.3
	102-40	List of stakeholder groups	37	
	102-41	Collective bargaining agreements	No CBA in UAE	
	102-42	Identifying and selecting stakeholders	36-39	
	102-43	Approach to stakeholder engagement	36-39	
	102-44	Key topics and concerns raised	38	
	102-45	Entities included in the consolidated financial statements	14,15	
	102-46	Defining report content and topic Boundaries	14,41,42	
	102-47	List of material topics	43	
	102-48	Restatements of information	14	
	102-49	Changes in reporting	No significant changes	
	102-50	Reporting period	14	
	102-51	Date of most recent report	14	
	102-52	Reporting cycle	14	12.6

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
GRI 102: General Disclosures 2016	102-53	Contact point for questions regarding the report	14	
	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	123-131	
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	EU1	Installed capacity, broken down by primary energy source and by regulatory regime	16,54,55	
	EU2	Net energy output broken down by primary energy source and by regulatory regime	54,55	
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	EU5	Allocation of CO_2 emissions allowances or equivalent, broken down by carbon trading framework	66-68	
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Economic				
Economic Performance				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	29	
	103-2	The management approach and its components	29	
	103-3	Evaluation of the management approach	29	
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	29	7a;8.1; 9.1
	201-2	Financial implications and other risks and opportunities due to climate change	26,53	
Market Presence				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	106	
	103-2	The management approach and its components	106	
	103-3	Evaluation of the management approach	106	
GRI 202: Market Presence 2016	202-2	Proportion of senior management hired from the local community	34	8.2

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
Procurement Practices				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	28	12.7
	103-2	The management approach and its components	28	
	103-3	Evaluation of the management approach	28	
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	28	
Anti-corruption				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	23	16.5
	103-2	The management approach and its components	23	
	103-3	Evaluation of the management approach	23	
GRI 205 Anti- Corruption 2016	205-3	Confirmed incidents of corruption and actions taken	No incidents of corruption during the reporting period	
Availability & Reliability				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	58-61,87-88	
	103-2	The management approach and its components	58-61,87-88	
	103-3	Evaluation of the management approach	58-61,87-88	
GRI G4 Sector Disclosures 2013 Electric Utilities	EU10	Planned capacity against projected electricity demand over the long term by energy source	58-61	7.1;9.1;9.4
Demand Side Management				
GRI G4 Sector Disclosures 2013 Electric Utilities	-	Management Approach: DSM programs	61,62,81	7.b;8.4;9.4; 13.2;13.3
Research & Development				
GRI G4 Sector Disclosures 2013 Electric Utilities	-	Management Approach: R&D activity & expenditure	44	7.a;9.5

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
System efficiency				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	56-57,65-66	7.3;8.4
	103-2	The management approach and its components	56-57,65-66	
	103-3	Evaluation of the management approach	56-57,65-66	
GRI G4 Sector Disclosures 2013 Electric Utilities	EU12	Transmission and distribution losses as a percentage of total energy	56-57	13.2
Environmental				
Energy				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	53,54	8.4
	103-2	The management approach and its components	53,54	
	103-3	Evaluation of the management approach	53,54	
GRI 302 Energy 2016	302-1	Energy consumption within the organisation	62	7.b;9.4
	302-4	Reduction of energy consumption	62	7.2;7.b;13.2
Water				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	74-76,81	12.2
	103-2	The management approach and its components	74-76,81	
	103-3	Evaluation of the management approach	74-76,81	
GRI 303 Water 2016	303-1	Water withdrawal by source	74-76	6.4;6.6; 14.1
	303-2	Water sources significantly affected by withdrawal of water	74-76	6.3;6.6; 14.1;14.3
	303-3	Water recycled and reused	80	6.3;14.3
Emissions				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	53-54,66-70	3.9;13.1
	103-2	The management approach and its components	53-54,66-70	
	103-3	Evaluation of the management approach	53-54,66-70	

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
GRI 305 Emissions 2016	305-1	Direct (Scope 1) GHG emissions	66,67	
	305-2	Energy indirect (Scope 2) GHG emissions	No power purchased during 2016	
	305-4	GHG emissions intensity	66,67	
	305-5	Reduction of GHG emissions	66-67,70	12.4;13.2
	305-6	Emissions of ozone-depleting substances (ODS)	68,69	13.2
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	68,69	
Effluents & Waste				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	78-80	6.3;6.6
	103-2	The management approach and its components	78-80	
	103-3	Evaluation of the management approach	78-80	
GRI 306 Effluents & Waste 2016	306-1	Water discharge by quality and destination	78	14.2
	306-2	Waste by type and disposal method	80	12.5
	306-3	Significant spills	In 2016 there were no significant environmental impacts.	12.4
	306-5	Water bodies affected by water discharges and/or runoff	78	15.5
Environmental Compliance				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	53,54	
	103-2	The management approach and its components	53,54	
	103-3	Evaluation of the management approach	53,54	
GRI 307 Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	54	13.2;13.3
Supplier Environmental Assessment				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	28	
	103-2	The management approach and its components	28	
	103-3	Evaluation of the management approach	28	

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
GRI 308 Supplier Environmental Compliance 2016	308-2	Negative environmental impacts in the supply chain and actions taken	No such negative environmental impact in our supply chain has been reported during 2016	12.4;13.2; 13.3
Social				
Employment				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	98,104-106	8.8
	103-2	The management approach and its components	98,104-106	
	103-3	Evaluation of the management approach	98,104-106	
GRI 401 Employment 2016	401-1	New employee hires and employee turnover	The rate of new hires and turnover was not calculated in 2016 +p. 99	8.5;8.6
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	100	
	401-3	Parental leave	100,101	
	EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region	99	
Labour /Management Relations				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	98,104-106	
	103-2	The management approach and its components	98,104-106	
	103-3	Evaluation of the management approach	98,104-106	
GRI 402 Labour / Management Relations 2016	402-1	Minimum notice periods regarding operational changes	105	
Occupational Health & Safety				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	102,103	
	103-2	The management approach and its components	102,103	
	103-3	Evaluation of the management approach	102,103	

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
GRI 403 Occupational Health & Safety 2016	403-1	Workers representation in formal joint management–worker health and safety committees	102,103	
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	102,103	8.8
Training & Education				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	101	
	103-2	The management approach and its components	101	
	103-3	Evaluation of the management approach	101	
GRI 404 Training & Education 2016	404-1	Average hours of training per year per employee	101	4.3
	404-2	Programs for upgrading employee skills and transition assistance programs	101,104-106	4.4
Diversity & Equal Opportunity				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	100,104-106	
	103-2	The management approach and its components	100,104-106	
	103-3	Evaluation of the management approach	100,104-106	
GRI 405 Diversity & Equal Opportunity 2016	405-2	Ratio of basic salary and remuneration of women to men	100	5.1;5.5;8.5
Local Communities				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	112,113	
	103-2	The management approach and its components	112,113	
	103-3	Evaluation of the management approach	112,113	
GRI 413 Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	36-38, 112-113	1.4;9.1;11.4
GRI G4 Sector Disclosures 2013 Electric Utilities	EU22	Number of people physically or economically displaced and compensation, broken down by type of project	113	
Disaster/Emergency Planning & Response				
GRI G4 Sector Disclosures 2013 Electric Utilities	-	Management Approach	26,27	1.5;11.5; 11.6

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
Customer Health & safety				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	86,87,93	
	103-2	The management approach and its components	86,87,93	
	103-3	Evaluation of the management approach	86,87,93	
GRI 416 Customer Health & Safety 2016	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	No incidents during 2016	3.9
GRI G4 Sector Disclosures 2013 Electric Utilities	EU25	Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases	We suffered no work related fatalities during 2016	3.9
Socioeconomic Compliance				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	23,34	
	103-2	The management approach and its components	23,34	
	103-3	Evaluation of the management approach	23,34	
GRI 419 Socioeconomic Compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	No significant monetary or non-monetary sanctions for non-compliance with the laws and regulations in the social and economic area	16.3
Access				
GRI G4 Sector Disclosures 2013 Electric Utilities	-	Management approach: programmes, including in partnership with government, to improve or maintain access to electricity and customer support services	89-93	
	EU26	Percentage of Population unserved in licensed distribution or serviced area	0%	1.4;7.1
	EU28	Power outage frequency	87,88	
	EU29	Average power outage duration	87,88	
	EU30	Average plant availability factor by energy source and by regulatory regime	87,88	

GRI Standard	Disclosure	Description	Page	SDGs Linkage to GRI
Provision of Information				
GRI G4 Sector Disclosures 2013 Electric Utilities	-	Management approach: practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services	92,114	1.4;7.1
Customers Happiness				
GRI 103 Management Approach 2016	103-1	Explanation of the material topic and its Boundary	86-87,93-94	
	103-2	The management approach and its components	86-87,93-94	
	103-3	Evaluation of the management approach	86-87,93-94	
NON GRI DISCL	-	Results of surveys measuring customer happiness	94	

Building a better working world

Ernst & Young
P.O. Box 9267
28th Floor
Al Saqr Business Tower
Sheikh Zayed Road, Dubai
United Arab Emirates

Tel: +971 4 332 4000
Fax: +971 4 332 4004
dubai@ae.ey.com
ey.com/mena

Independent Assurance Statement

To the Management of Dubai Electricity and Water Authority, Dubai, UAE

DEWA's 2016 Sustainability Report (the Report) has been prepared by the management of DEWA, who are responsible for the collection and presentation of the information reported. Our responsibility, in accordance with DEWA's management instructions, is to provide a 'limited level' assurance on selected sustainability information presented in the Report. Our responsibility in performing our assurance activities is to the management of the Company only. We do not accept or assume any responsibility for any other purpose or to any other person or organization. Any reliance any such third party may place on the Report is entirely at its own risk. This assurance statement should not be taken as a basis for interpreting the Company's overall sustainability performance, except for the aspects outlined in the scope below.

Scope of Assurance

The scope of our assurance covers:

- Data and information relating to DEWA's sustainability performance, for the period 1 January 2016 to 31 December 2016 , specifically the sustainability performance indicators listed below as identified within the Report's Global Reporting Initiative, GRI Standard Index :

GRI 204-01	Proportion of spending on local suppliers
GRI 303-01	Water withdrawn by source
GRI 305-01	Direct Greenhouse Gas (GHG) emissions (Scope 1)
GRI 401-01	New employees hires and employee turnover
GRI 404-01	Average hours of training per year per employee by gender and by employee category

- The Company's internal processes and controls relating to the collection and collation of the above sustainability performance data.

Level of assurance

This assurance engagement was planned and performed in accordance with International Federation of Accountants ' International Standard for Assurance Engagements other than Audits or Reviews of Historical Financial Information (ISAE 3000).Our evidence gathering procedures were designed to obtain a 'limited level' of assurance (as defined by ISAE 3000) for the purpose of devising our conclusions. The extent of evidence gathering procedures performed is less than that of a reasonable assurance engagement (such as a financial audit) and therefore a lower level of assurance is provided for the aspects described under the scope of work.

Our Approach and Methodology

In order to understand the process used by DEWA to ascertain key sustainability issues and impacts, we reviewed the Sustainability Reporting process associated with the stakeholder engagement workshops that were performed by the Company. Our assurance team also visited DEWA's premises in Dubai (UAE) to review the selected topic-specific disclosures outlined in the *Scope of Assurance* above to review systems and processes for collecting, collating and reporting sustainability data. Evidences in support of the selected claims made in the Report were reviewed and clarifications sought where necessary. Our key steps were as follows:

- Engagement with key selected personnel (managers and data owners at DEWA headquarters and Jebel Ali Generation offices) to understand existing processes and controls for related sustainability activities;
- Engagement with the Sustainability Specialist and the Sustainability Team to understand current status of sustainability activities;
- Reviewed selected topic-specific data as per GRI standards mentioned under scope of assurance; and
- Reviewed and challenged supporting evidence for all selected indicators listed under the scope of assurance.

Our Assurance Team

Our assurance team, comprising multidisciplinary professionals, has been drawn from our MENA Climate Change and Sustainability Services Team, all of whom have undertaken similar assurance engagements with a number of other regional and global businesses.

Our Independence

This is the first year that Ernst & Young (Middle East) has provided independent assurance services in relation to DEWA's Sustainability Report. We have provided no other services relating to DEWA's approach to sustainability reporting.

Limitations of Assurance

The assurance scope excludes:

- Aspects of the Report and data/information other than those mentioned under the *Scope of Assurance ;*
- DEWA's statements that describe an expression of opinion, belief, aspiration , expectation and future intention; and
- Our work did not include physical inspections of any of operating assets and we did not verify the accuracy of source data. Our review was limited to the headquarter offices of DEWA and Jebel Ali Generation offices. Our assurance activities relating to energy consumption, environmental emissions, and GHG emissions assessed the collation and accuracy of data conversion.

Observations

Our observations and main areas of improvement on the Report are as follows:

- DEWA has internal processes in place to identify and engage with stakeholders across the organization. They have conducted materiality sessions with their stakeholder groups to identify its material topics.
- We have seen a structured data collection process for DEWA's sustainability report related to the above topics. The respective departments had internal control measures to ensure high quality data.
- DEWA could consider implementing internal assurance processes between the departments and the sustainability team to avoid the occurrence of any misstatements.
- We recommend examining the feasibility of implementing an integrated sustainability data management software that could streamline data collection.
- We recommend further training on GRI Standards to the data owners to avoid omissions and misinterpretation of the reporting requirements.

Our Conclusion

On the basis of our review and in accordance with the terms of reference for our work, nothing has come to our attention that would cause us not to believe that the Report presents DEWA's material performance covering key areas mentioned in the *Scope of Assurance;*

Ernst & Young

Ernst & Young (Middle East)
Dubai, United Arab Emirates
July 19th, 2017

ACRONYMS LIST

ADWEA	Abu Dhabi Water and Electricity Authority
AF	Availability Factor
AGC	Automatic Gear Controller
AI	Artificial Intelligence
AIR	Accident/Incident Ratio
BAU	Business as Usual
BCM	Business Continuity Management System
BCP	Business Continuity Plan
BIG	Billion Imperial Gallons
BIA	Business Impact Analysis
BSC	British Safety Council
BTEC	Business and Technology Education Council
CBP	Certified Business Professional
CC&S	Climate Change & Sustainability Department
CDM	Clean Development Mechanism
CERs	Certified Emissions Reductions
CH_4	Methane
CHI	Customer Happiness Index
CISL	Cambridge Institute for Sustainability Leadership
CML	Customer Minutes Lost
CO2	Carbon Dioxide
COP	Conference of the Parties
COP21	2015 Paris Climate Change Conference
CSR	Corporate Social Responsibility
DCC	Distribution Control Centre
DCCE	Dubai Carbon Centre of Excellence
DCES	Dubai Clean Energy Strategy
DCS	District Cooling Services
DED	Department of Economic Development
DEWA	Dubai Electricity and Water Authority
DGEP	Dubai Government Excellence Program
DSCE	Dubai Supreme Council of Energy
DSM	Demand Side Management
DUCAB-HV	Dubai High Voltage Cable Systems
DUSUP	Dubai Supply Authority
EFI	Earth Fault Indicators
EMPOWER	Emirates Central Cooling Systems Corporation
EMS	Environmental Management System
ENG	Emirates National Grid
ERMC	Enterprise Risk Management Committee
ERP	Emission Reduction Program
ETIHAD ESCO	Al Etihad Energy Service Company
EWS	Emirates Wildlife Society
FEWA	Federal Electricity and Water Authority
GCC	Gulf Cooperation Council
GDP Growth	Gross Domestic Product Growth
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
GWh	Gigawatt hours
HFC	Hydro Fluorocarbons
HH	His Highness
HRSG	Heat Recovery Steam Generators
HSE	Health, Safety and Environment
ICAEW	Institute of Chartered Accountants in England and Wales
IG	Imperial Gallons
IMS	Innovation Management System
IMS	Integrated Management System
INDCs	Intended Nationally Determined Contributions
IoT	Internet of Things
IPP	Independent Power Producer

ACRONYMS LIST

ISAE 3000	International Assurance Standard 3000
ISO	International Standards Organisation
IT	Information Technology
IVR	Interactive Voice Response System
JAPS	Jebel Ali Power Station
KAM	Key Account Management
KPI	Key Performance Indicators
kW	kilowatt
kWh	kilowatt-hour
LCOE	Lowest Levelised Cost of Energy
LEED	Leadership in Energy and Environmental Design
LLC	Limited Liability Company
Masdar	Abu Dhabi Future Energy Company
MED	Multi-Effect Desalination process
MENA	Middle East And North Africa
MIG	Million Imperial Gallons
MIGD	Million Imperial Gallons per Day
MRV	Monitoring, Reporting and Verification
MSF	Multi-Stage Flashing
Mt	Metric tons
MtCO2e	Metric tons of CO2 equivalent
MW	Megawatts
MW/h	Megawatt hours
MWdc	Megawatt Direct Current
N_2O	Nitrous oxide
NCEMA	National Centre for Economic Management and Administration
NOx	Nitrogen Oxides
ODS	Ozone Depleting Substances
OEM	Original Equipment Manufacturer
OTF	Outdoor Testing Facility
PoA	Programme of Activities

PFC	Perfluorocarbons
ppm	Parts-per million
PV	Photovoltaic
RH	Relative Humidity
RO	Reverse Osmosis
RWE PI ME	RWE Power International Middle East
SAIFI	System Average Interruption Frequency Index
SCADA	Supervisory Control and Data Acquisition
SCI	Sustainability Culture Indicator
SDGs	Sustainable Development Goals
SDME	Solar Decathlon Middle East
SEWA	Sharjah Electricity and Water Authority
SF6	Sulphur Hexafluoride
SLT	Sustainability Leading Team
SMEs	Small and Medium Enterprises
SO_2	Sulphur Dioxide
SRM	Supplier Relationship Management
T&D	Transmission and Distribution
tCO_2e	Tons of Carbon Dioxide Equivalent
TESTIAC	Thermal Energy Storage Turbine Inlet Air Cooling
TICSCI	The International Customer Service Institute
TISSE	The International Standard for Service Excellence
UAE	United Arab Emirates
UAV	Unmanned Aerial Vehicles
UFW	Unaccounted for Water
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WGEO	The World Green Economy Organisation
WWF	World Wide Fund for Nature
ZEB	Zero Energy Building

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