



# DEWA SUSTAINABILITY REPORT 2014





## 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 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 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



“Green Economy is a key component of the nation’s strategic thinking which is clearly stated in the UAE Vision 2021 and as evident in January 2012, when the UAE launched a national long-term initiative to make our country one of the international leaders in the green economy and a centre for export and re-export of green economy products and technologies.”



His Highness

**Sheikh Mohammed bin Rashid Al Maktoum**

Vice President and Prime Minister of the United Arab Emirates  
and Ruler of Dubai



“The UAE exerts utmost effort to ensure sustainability of overall development in our country and commit to our responsibilities towards our sons and daughters, grandchildren and the coming generations so as to enable them to live in dignity and prosperity in our beloved country in which citizens enjoy security, stability and contentment.”



His Excellency

**Saeed Mohammed Al Tayer**

Managing Director and Chief Executive Officer, DEWA

A stylized black ink signature of Saeed Mohammed Al Tayer.



## A MESSAGE FROM THE MD AND CEO



Dear Stakeholders,

Sustainability has been an integral part of DEWA's vision and mission as we have continued to work hard to place sustainability at the heart of our business strategy and embed sustainability more fully into everything we do. At DEWA, we have a vision to become a sustainable innovative world-class utility and we will achieve this based on our strategic priorities to ensure the happiness of our stakeholders, to adopt socially-responsible business practices, and to deliver electricity and water to the highest international standards.

At DEWA, we have the following long-term priorities:

- Economic priorities: to optimise our costs, revenue and investments and to support sustainable economic development in Dubai through operational and service excellence, strategic innovation, Emiratisation and a diverse local supply chain.
- Environmental priorities: to rationalise the use of natural resources and minimise our environmental footprint.
- Social priorities: to ensure that we adhere to the highest standards of governance, business ethics and social responsibility while delivering value to our customers, employees, suppliers, business partners, local communities and government.

We remain positive about our plans and goals for the future which are outlined in the Dubai Integrated Energy Strategy 2030 to diversify the

energy mix so that 15% of Dubai's total power output will be generated from solar energy, 7% from nuclear energy and 7% from clean coal, and to decrease demand by 30% compared to the business as usual scenario by 2030. In 2014, DEWA's efforts to diversify into solar power continued with the tender for the second phase of the Mohammed bin Rashid Al Maktoum Solar Park for a 100MW plant, which has since been expanded to a 200MW plant. We also seek to expand the production capacity of our M-Station, the UAE's largest power and water desalination plant, from 2,060MW of electricity to 2,700MW by 2018.

In 2014, we recorded further progress in increasing electricity system availability and reliability, reducing water line losses, reducing emissions and supporting our communities. During our reporting period DEWA also became the first government organisation to fully deliver its award-winning smart services via apps on smartphones and tablets to reduce unnecessary trips by customers to our customer care centres. DEWA has also become a pioneer of the Balanced Scorecard in the Middle East and was the first Middle Eastern organisation to be inducted into the Hall of Fame. We have a mature performance management framework in place to ensure that we measure our targets against our performance in an objective and measureable manner. DEWA aims to be a leader in sustainability, contributing towards both Dubai's and the UAE's strategy for sustainable development while also meeting the projected needs of the Dubai Expo in 2020.

# CONTENTS

|                                                                                            |           |
|--------------------------------------------------------------------------------------------|-----------|
| <b>ABOUT THIS REPORT</b>                                                                   | <b>15</b> |
| <b>ABOUT DEWA</b>                                                                          | <b>16</b> |
| <b>ECONOMIC DEVELOPMENT</b>                                                                | <b>28</b> |
| <b>ENERGY &amp; CLIMATE CHANGE</b>                                                         | <b>36</b> |
| CASE STUDY: ADVANCED COMPRESSOR COATING OF GAS TURBINES                                    | 45        |
| CASE STUDY: REPLACEMENT OF PORCELAIN WITH COMPOSITE INSULATORS<br>IN 400 KV OVERHEAD LINES | 45        |
| CASE STUDY:GOOGLE GLASS SMART APP                                                          | 46        |
| CASE STUDY:MAINTENANCE FREE SOLAR PV POWERED STREET LIGHTS                                 | 47        |
| CASE STUDY:EXPEDITION TO ANTARCTICA                                                        | 49        |
| <b>CUSTOMERS</b>                                                                           | <b>50</b> |
| CASE STUDY: ASH'IR: LIVE VIDEO SIGN LANGUAGE                                               | 56        |
| <b>WATER</b>                                                                               | <b>60</b> |
| <b>ENVIRONMENTAL PROTECTION</b>                                                            | <b>68</b> |
| CASE STUDY: LINEAR HEAT DETECTION (LHD) CABLES                                             | 71        |
| <b>EMPLOYEES</b>                                                                           | <b>74</b> |
| CASE STUDY: ARWEEHOM CAMPAIGN                                                              | 79        |
| <b>STAKEHOLDERS AND COMMUNITY</b>                                                          | <b>82</b> |
| CASE STUDY: INSPIRING THE NEXT GENERATION                                                  | 88        |
| <b>APPENDIX 1</b>                                                                          | <b>90</b> |
| <b>GRI CONTENT INDEX</b>                                                                   | <b>91</b> |





# ABOUT THIS REPORT

This is DEWA's second annual sustainability report. Its purpose is to communicate our sustainability performance and management practices to our stakeholders. Please note that an electronic version of this report can be found on our website: [www.dewa.gov.ae](http://www.dewa.gov.ae)



## GUIDELINES

This report has been prepared "In accordance" with the Global Reporting Initiative (GRI) G4 Guidelines' Core option. The GRI, produces a globally recognised sustainability reporting standard, used by organisations around the world to communicate their sustainability performance and impacts. We intend to further develop our reporting processes by obtaining external third party assurance on our future reports.

## REPORTING PERIOD

The performance data provided in the report covers the reporting period 1 January to 31 December 2014 unless otherwise stated. Ongoing initiatives and activities commenced in earlier years have also been included in this report. However, the main report covers the most important initiatives and activities of 2014. Additionally, information deemed significant from our previous report has also been included.

## SCOPE OF THE REPORT

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.

## FEEDBACK

Our approach to managing and reporting our sustainability performance continues to evolve. DEWA greatly values feedback from our stakeholders, so please send your comments and queries, with regards to our second sustainability report, to Nadia Nasser bin Lootah at [sustainability@dewa.gov.ae](mailto:sustainability@dewa.gov.ae)

# ABOUT DEWA



## OLD DUBAI

Prior to the introduction of electricity to the Emirate of Dubai during the 1950's, the people of the Emirate depended on candles and the kerosene lantern, locally known as *Fanar*, for lighting their homes. Their homes utilised thatched palm leaves, silt from the salt marches located near the creek, and coral stones. They also used the wind tower, locally known as *Barjeel*, for air ventilation and indoor cooling, through the evaporation of floor water under the tower. These wind towers became a distinctive feature of the Emirate and allowed the people of Dubai to avoid the high temperatures of the summer months. For fresh water, the local people would draw water from wells found across the Emirate of Dubai.

Additionally, the creek provided the inhabitants of Dubai with a main port that had a strategic position on the old commercial road between Europe and India. This turned Dubai into a water and supplies station for sailing ships, which eventually developed into an unparalleled commercial center in the Gulf, where goods such as gold, pearls, and spices were traded. Due to the increased prosperity, there was a greater need for local departments and utilities to meet the needs of the increasing population.

# HISTORY OF DEWA

Due to the development of Dubai as an expanding port city, the need arose for a specific authority to become 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 60 MW. 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, His highness Sheikh Maktoum bin Rashid Al Maktoum, Vice President and Ruler of Dubai 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.





## DEWA AT A GLANCE

The 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 company 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. DEWA has undergone restructuring in four of our divisions (Distribution Power Division, Transmission Power Division, Information Technology Division, and Water & Civil Division) during the 2013-2014 period.

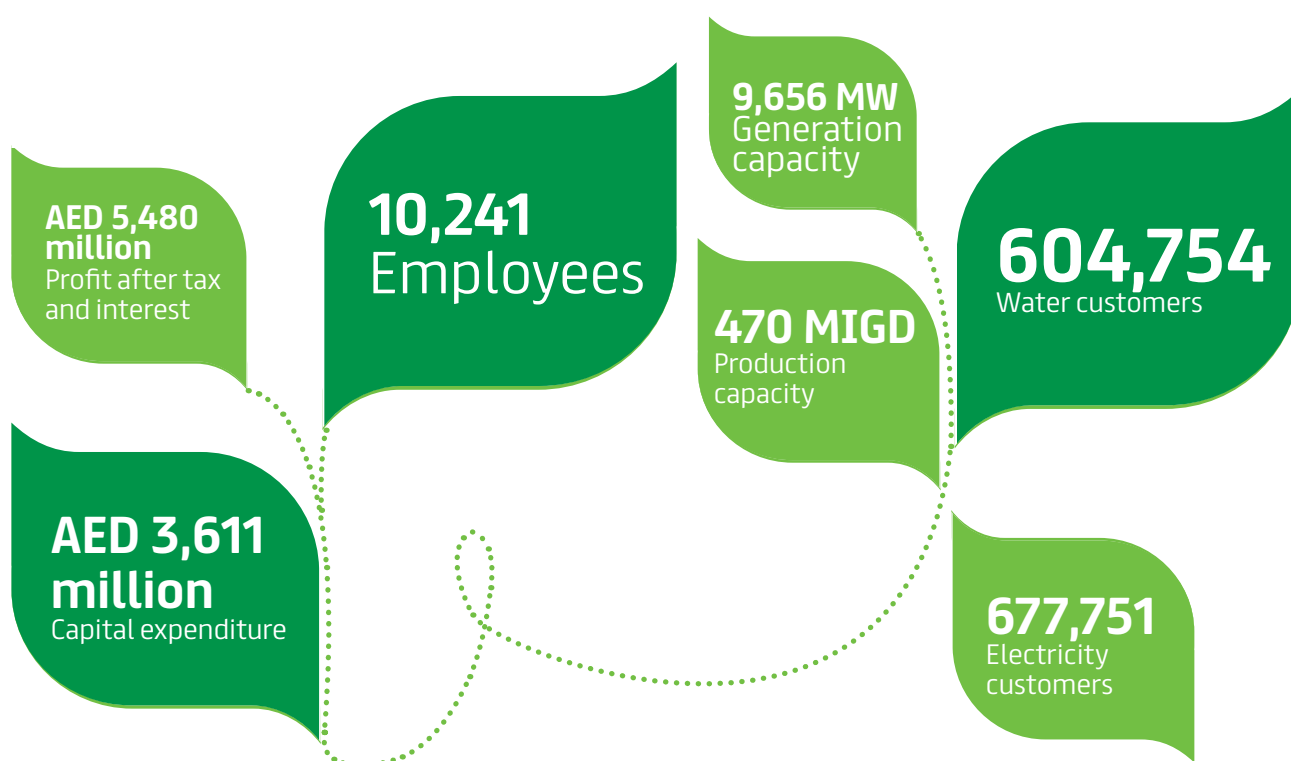
**Although our main business activities are in the production and supply of electricity and water, we also have a number of other related business interests:**

- Emirates Central Cooling Corporation (EMPOWER) (70% investment)
- Dubai Carbon Centre of Excellence (DCCE) (35% investment)
- Ducab - High-Voltage Cable Systems (25% investment)
- Mai Dubai Water Bottling (100% investment)
- RWE Energy Middle East (50% investment)
- Etihad Energy Services Company- ESCO (100% investment)
- Emirates National Grid (30% investment)

Additionally, DEWA also participates in a number of committees and councils such as:

- The Executive Council of Dubai
- The Dubai Supreme Council of Energy
- The Dubai Integrated Gas Strategy 2030
- The Carbon Abatement Strategy Committee
- The Dubai infrastructure Committee
- The Dubai Nuclear Energy Committee

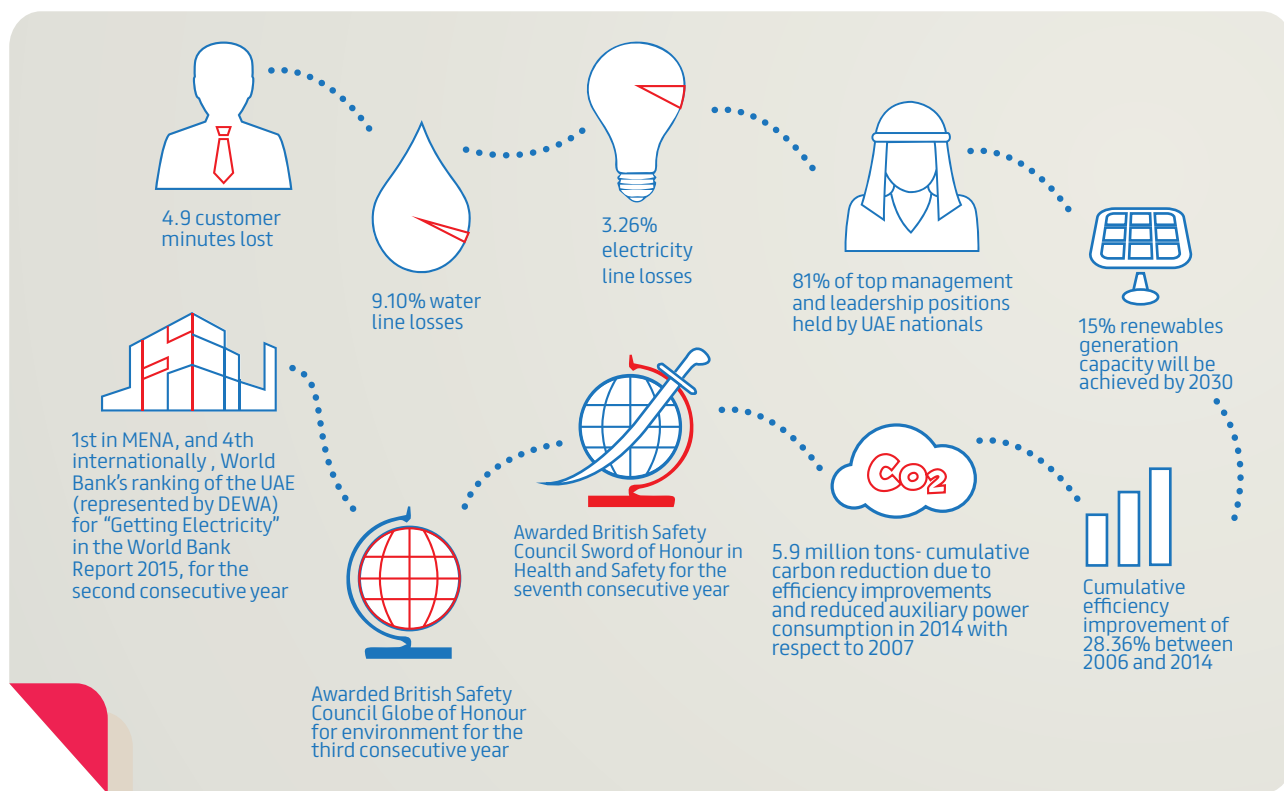
#### KEY FACTS ABOUT OUR ORGANISATION IN 2014



## THE SUSTAINABILITY CHALLENGE FOR DEWA AND DUBAI

Since the formation of the United Arab Emirates in 1971, energy and natural resources have been closely linked to its growth. Today, availability and the use of energy and water have become key factors in our efforts to promote economic and social development and the preservation of the environment. As the sole supplier of power and water to Dubai's residents, Dubai's major sustainability challenges are also challenges for DEWA. As such, sustainability is central to DEWA's mission, vision and values. At DEWA, we understand that being a sustainable innovative world-class utility is not just about our bottom line. To us, being a sustainable innovative world-class utility means running a responsible business - one that manages its social, economic and environmental impacts in addition to financial health - so that we can continue to provide electricity and water to meet Dubai's growing needs, for generations to come.

# 2014 SUSTAINABILITY MANAGEMENT HIGHLIGHTS



## OUR STRATEGY

Sustainability has been an integral part of DEWA's vision and mission since 2012. 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 is extending 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 place overarching economic, social and environmental goals alongside financial goals, giving us a fully integrated sustainable business strategy. In 2014, the UAE launched a National Innovation Strategy, which seeks to position the UAE as one of the most innovative countries in the world. Therefore, we have 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" in 2015 and the update to mission statement.

### 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 thriving.
- **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

As part of our strategic planning approach, we conduct thorough strategic research and analysis which provides us with a holistic inside-out view of our operational context. 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 7 years and describes the principal initiatives and projects necessary to achieve its mission. Our strategy and roadmap are aligned to plans at the Dubai Emirate and UAE Federal level, including the UAE National Agenda 2021, Green Economy Initiative, Dubai Strategic Plan, the Dubai Integrated Energy Strategy 2030 and HH Sheikh Mohammed bin Rashid Al Maktoum's initiative, 'A Green Economy for Sustainable Development', and the recently launched National Innovation Strategy.

### Future trends analysis (PESTEL)

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

### Stakeholder engagement

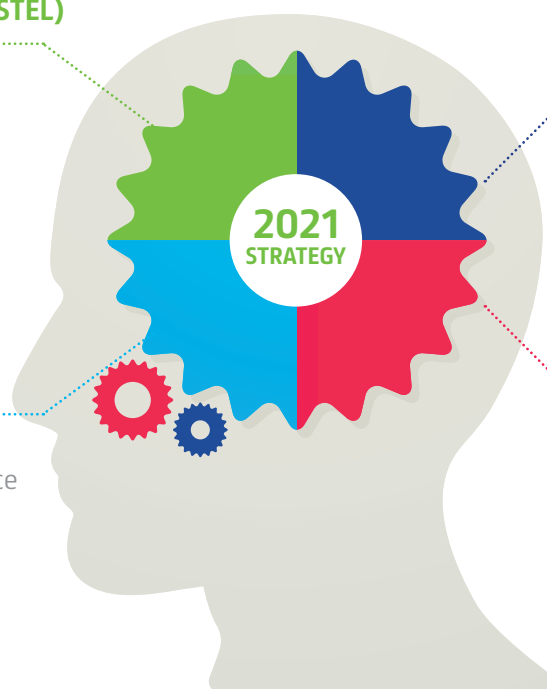
- Executive interviews
- Stakeholder satisfaction surveys
- Stakeholder engagement workshops

### Strategy

- Sustainable growth
- Operational and smart service excellence
- Stakeholder engagement
- Strategic innovation
- Competent capabilities with effective Emiratisation

### SWOT analysis

- Strengths: Strong leadership and high standard utility infrastructure
- Weaknesses (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



# 2014 MATERIALITY ASSESSMENT

During 2014, we engaged with our stakeholders to understand their expectations of DEWA with respect to sustainability performance and management. This engagement was a key step in our materiality assessment process, which is the process by which we identified and prioritised social, environmental, economic, and market issues. This began with a review of relevant guidelines and standards, peer company reports, government policy and regulation and DEWA's internal information on strategic risks and opportunities to identify a long list of relevant social, economic and environmental issues for

DEWA. The second step in the process was to engage with our stakeholders to understand their expectations of DEWA with respect to sustainability performance and management. Finally, we undertook an iterative process of prioritisation and management review to arrive at our final selection of material issues. The results of our 2014 materiality assessment process are illustrated in the materiality matrix below. This shows the relative importance of each issue for DEWA's performance and for our stakeholders. The boundaries for each material aspect can be found in Appendix 1.



Importance to  
Stakeholders



Potential impact on DEWA's performance

## GOVERNANCE & ETHICS

We are dedicated to acting in an ethical, transparent and accountable way in everything we do. To ensure this, we aspire to world-class standards of corporate governance and decision making. We have created a corporate governance structure that aims to ensure decisions are made in a transparent way and with the involvement of the right individuals. Our corporate governance structure is supported by robust systems of internal control, risk management as well as mechanisms to encourage responsible behavior by our staff. We have a Code of Conduct that sets out how we expect our top management, senior management and employees to behave.

Furthermore, we have several mechanisms in place to ensure employees put this into practice. In 2008, we created a Corporate Governance Manual which sets forth our corporate governance standards. The manual 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 practice, including the acceptance of gifts and bribes, and enforces strict compliance of all employees. For 2014, we received no regulatory fines or warnings.

## CORPORATE VALUES AND RESPONSIBLE BEHAVIOUR

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.

## OUR CORPORATE VALUES

|                                        |                                                                                     |                                                                                                                                                                                                                                                                                              |
|----------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Integrity</b>                       |    | Integrity is the foundation of our business. We are committed to the highest standards of business and work ethics, complying with all applicable laws, in all our communications and actions.                                                                                               |
| <b>Fairness</b>                        |    | We treat our stakeholders impartially, honestly, with dignity and respect.                                                                                                                                                                                                                   |
| <b>Transparency</b>                    |    | We conduct our business with openness and transparency. We recognise our stakeholders' right for access to relevant information.                                                                                                                                                             |
| <b>Teamwork</b>                        |   | We share our resources and skills, exchange knowledge and expertise, and we promote cooperative efforts that create synergies within teams and in a workplace that enables people to get involved in making decisions that advance our corporate objectives.                                 |
| <b>Industry Leadership</b>             |  | We seek to be at the cutting edge with our key processes. We apply world-class technology to our products and services, and we strive for operational excellence to provide objective and innovative solutions to critical problems.                                                         |
| <b>Professionalism</b>                 |  | We execute our work with the highest standards of competence, expertise and thoroughness. We follow our organisation's rules, procedures, and policies, and we develop positive relationships to deliver quality products and services, and satisfy our stakeholders.                        |
| <b>Corporate Social Responsibility</b> |  | We take our responsibility towards society seriously. We contribute to the communities in which we live and work, through public involvement and respect for society and the environment.                                                                                                    |
| <b>Customer Focus</b>                  |  | We anticipate our customers' needs and we seek to exceed their expectations through our commitment to continuous improvement in product- and service-quality. We constantly focus on customer satisfaction.                                                                                  |
| <b>Sustainability</b>                  |  | We continuously strive in an economic and efficient way in all our operations to effectively preserve the ecosystem, natural resources and environment of Dubai; promote conservation of electricity and water and care for our customers and society; both now and for generations to come. |



## BOARD OF DIRECTORS

Our organisation's most senior body is the Board of Directors. The fundamental roles of the Board are to ratify DEWA's annual budget, approve electricity and water supply services and 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 2012 and consists of 9 members. Matar Humaid Al Tayer currently serves as Chairman of the Board and has done so since 2004. Saeed Mohammed Ahmad Al Tayer is DEWA's Managing Director & Chief Executive Officer and is a member of the Board as well.

## DEWA'S BOARD OF DIRECTORS

|                                      |                       |
|--------------------------------------|-----------------------|
| Matar Humaid Al Tayer                | Chairman of the Board |
| Hilal Khalfan Bin Dhaher             | Member                |
| Abdulla Al Sayed Mohammad Al Hashemi | Member                |
| Khalfan Ahmad Harib                  | Member                |
| Majid Hamad Al Shamsi                | Member                |
| Obeid Saeed Bin Meshar               | Member                |
| Saeed Mohammad Al Sharid             | Member                |
| Nabil Abdul Rahman Arif              | Member                |
| Saif Moorshid                        | Member                |

## OUR CORPORATE GOVERNANCE STRUCTURE

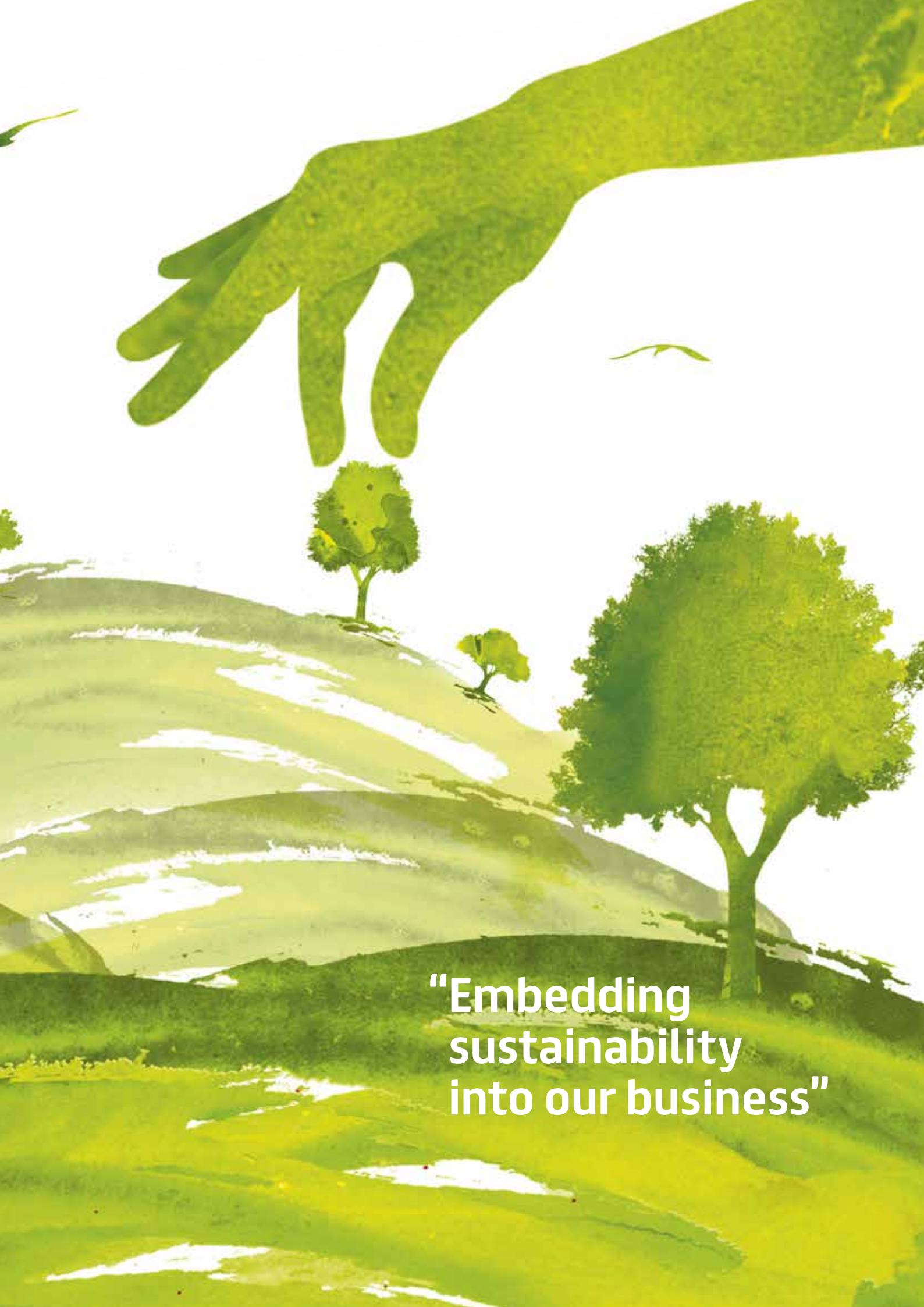
Beneath the Board of Directors there are a number of subcommittees and management teams that govern the way our business operates. The current Board has two subcommittees. The first is the Budget Committee, which is responsible for reviewing and approving DEWA's annual budget and the remuneration of DEWA's staff. The second committee of the Board is the Risk Committee, responsible for reviewing and approving DEWA's risk management processes and reviewing any risks that are escalated to it. While the daily running of DEWA is the responsibility of the Management team, working closely with DEWA's divisions to set strategy and monitor performance. The Management team is responsible for ensuring sustainability is properly managed at DEWA. 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, 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 and others.

# SUSTAINABILITY GOVERNANCE

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In 2013, we created a cross divisional committee to address sustainability. The Sustainability Leading Team (SLT) is composed of representatives from each of DEWA's divisions. The SLT has played a pivotal role in highlighting the implications of sustainability for DEWA as a whole, and the respective roles of each of the divisions in responding to the needs that arise out of this. Its members oversee DEWA's current efforts with regards to embedding sustainability into our business. They act as champions in their respective divisions, by engaging with colleagues and setting up division-specific sustainability action plans and initiatives. The SLT is chaired by the Climate Change and Sustainability Senior Manager, under the Strategy & Business Development Division. Some of the Climate Change and Sustainability Department's key responsibilities include the coordination of all sustainability efforts across DEWA's divisions, stakeholder engagement and external reporting. The DEWA management team receives updates regarding sustainability issues from the EVP of Strategy and Business Development, who is also a member of the management team.





**“Embedding  
sustainability  
into our business”**

# ECONOMIC DEVELOPMENT



**AED 3,611 MILLION**  
our capital expenditure in 2014

**10,241 PEOPLE**  
our direct employment  
as of 2014

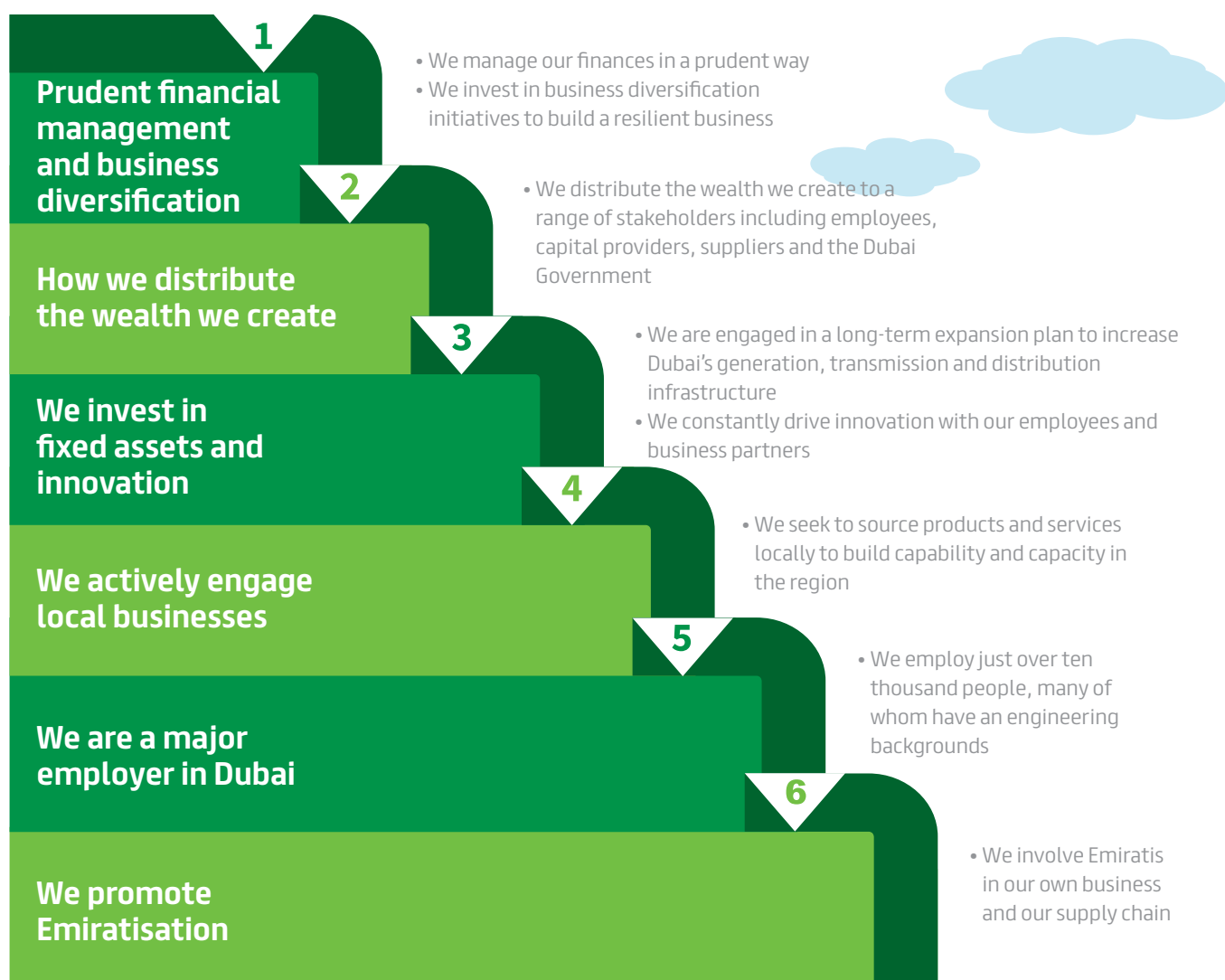




# MANAGEMENT APPROACH

At DEWA, our corporate strategy is designed to closely align with strategic government initiatives, such that we contribute to achieving the UAE's and Dubai's vision and goals for a sustainable economy. A leading example of this is the UAE Vision 2021, which places a high priority on the development of a competitive knowledge economy. 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, and substantially increase the proportion of Emiratis in the workforce. We effectively contribute both directly and indirectly to the Dubai and UAE economies. We aim to maximise our direct economic contribution through sound management of our core business, our investments and innovation, and through the development of our people. Our indirect contribution is a consequence of our procurement, investments and the involvement of local people and businesses in our supply chain. Furthermore, we have a catalytic impact on the Dubai and UAE economies through our provision of essential electricity and water services, which create an attractive business environment.

## We manage our economic development impact through:



## STRATEGIC PARTNERSHIPS ALONG THE VALUE CHAIN

"Partnerships are among the main pillars of DEWA's success story. Our valuable partners are part of our major resources needed to operate successfully, achieve our strategic objectives and contribute to the successful execution of Dubai's Strategic Plan. We regularly cooperate with our partners to improve operations and mutual performance, and provide quality services to our customers. In this respect, we are guided by the directives and aspirations of our wise leadership."

His Excellency Saeed Mohammed Al Tayer, Managing Director and Chief Executive Officer, DEWA

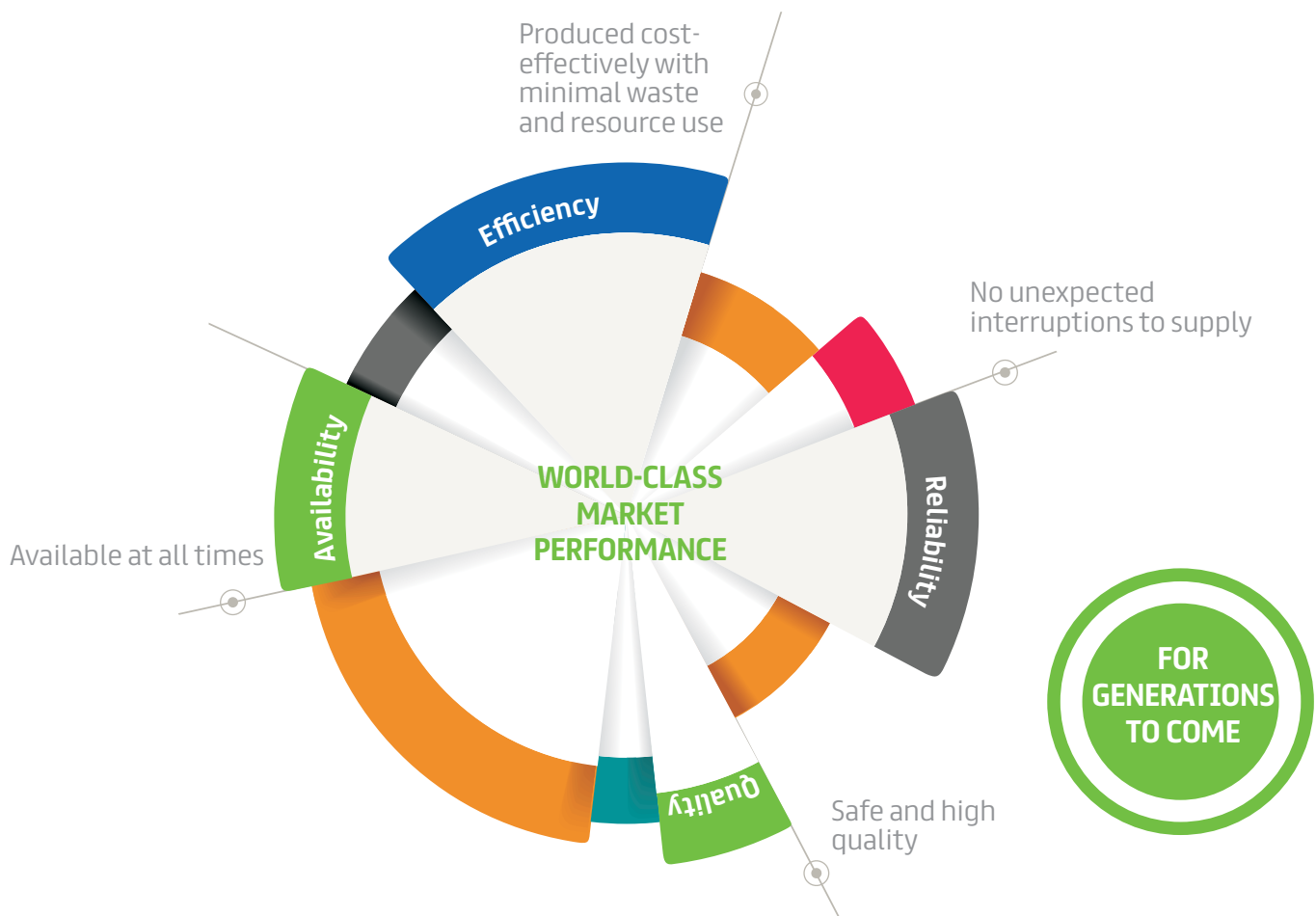
DEWA engages in strategic relationships with suppliers, customers and other business partners, including through Joint Ventures. Such strategic partnerships help reduce transaction costs by building trust, enabling economies of scale, supporting risk management and fostering the exchange of knowledge, technology and best practices. Additionally, DEWA categorises its partners as either strategic or main based on their degree of importance and the intensity of their impact on DEWA. In 2014, DEWA launched a dedicated Partnership Portal, a communication channel to further enhance and strengthen the relationships between DEWA and its partners and achieve integration with other government departments.

### DEWA Value Chain



## WORLD-CLASS MARKET PERFORMANCE

At DEWA, it is our fundamental mission to continue to deliver world-class electricity and water services to meet Dubai's current and future needs, which is the underlying foundations for economic development.



## FINANCIAL MANAGEMENT AND BUSINESS DIVERSIFICATION

By being a financially resilient organisation, DEWA can provide that same security to all the households and businesses that depend on our essential services and therefore positively contribute to Dubai's economy. To manage our costs, we have applied a range of cost-reduction initiatives such as optimising our operations, re-engineering our business processes and long-term contracting. Additionally, our tariffs are set by the government at a level which is both affordable for our residential and business

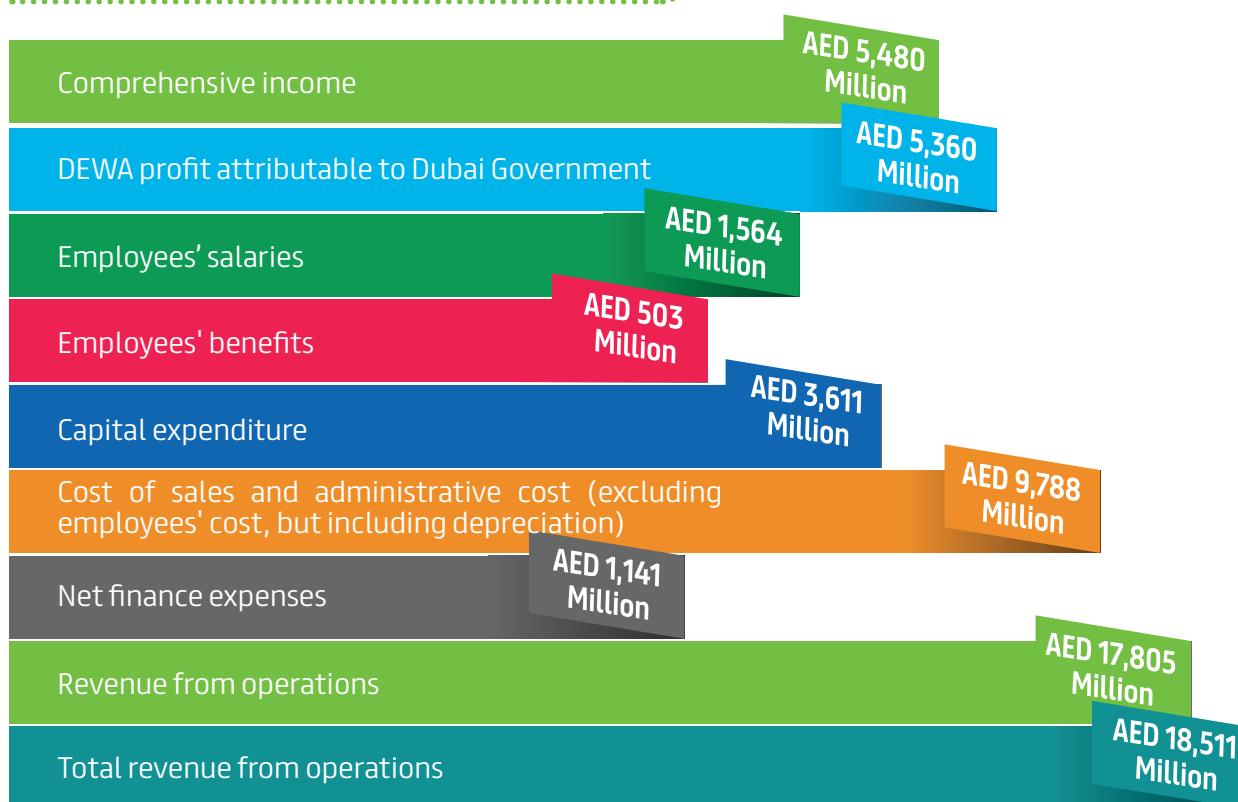
customers and ensures that we cover our costs, support our investments, and provide a reliable income source for our sole shareholder, Dubai Government. Part of our approach to remaining a financially resilient company is through the diversification of our own business. We constantly look for new business opportunities that add to our revenue stream while building on the core strengths of our organisation. We have already established a number of Joint Venture projects such as Emirates Central Cooling Corporation

(Empower), Emirates National Electricity Network, Ducab High Voltage Cable System, and Dubai Carbon Centre of Excellence. We have also set up other business diversification initiatives such as Mai Dubai and RWE Energy Middle East.

## DISTRIBUTION OF WEALTH

In 2014, we generated AED 17,805 million in revenue from operations. Along with other diversified income sources, total revenue amounted to AED 18,511 million. Profit after tax and interest was AED 5,480 million. This wealth is distributed between a wide range of stakeholder groups, including our employees, capital providers, suppliers and the Dubai Government. Our procurement activities generate a ripple effect through the local economy, contributing to the generation of additional wealth and employment in Dubai and the UAE. Such procurement provides for the profits and wages of our suppliers and business partners, while simultaneously stimulating additional economic activity further down in the supply chain. In 2014, AED 3,611 million was spent on capital expenditure involving a range of industry players locally and from abroad.

## DEWA Financial Data 2014



## WE INVEST IN FIXED ASSETS AND INNOVATION

So as to continue to meet the demand for electricity and water in Dubai, we have long-term plans for expanding our generation capacity. Therefore, we require substantial capital investment in our fixed assets (power and desalination plants and infrastructure), which creates a significant impact on the regional economy.

We also invest in our human and intellectual capital through funding for research and development, and we encourage knowledge sharing, technology transfer and foreign direct investment through our partnerships and joint ventures.

## WE ARE A MAJOR EMPLOYER IN DUBAI

In 2014, our employees reached a total of 10,241, which makes us one of Dubai's larger employers. Our organisation is an important employer particularly of engineers in the region. Our water and electricity generation, transmission and distribution divisions jointly employ over 6,500 people. Engineering is considered a high value-added activity and an important source of innovation. We also employ people in other highly qualified job positions including management, business modelling and finance. Our people possess a wide range of skills, and we are committed to their continuous development.

### WE ACTIVELY ENGAGE LOCAL BUSINESSES

We strive to involve local businesses in our operations and supply chain. This helps build capacity locally and fosters economic growth in Dubai and the wider region. In addition to sourcing products and services locally, we have created a wide range of strategic partnerships with companies in Dubai and the rest of the UAE. Engaging with these companies enables the exchanging of best practice, knowledge and new technologies. DEWA is also a founding member of the Dubai Green Economy Partnership (GEP) which was launched during May 2014 by His Highness Sheikh Hamdan Bin Mohammed Bin Rashid Al Maktoum, Crown Prince of Dubai. Its members, from both the public and private sector, are committed to the sustainable and green growth development of Dubai and the UAE through the investment and acceleration of green projects and technologies.

## WE PROMOTE EMIRATISATION IN OUR BUSINESS AND SUPPLY CHAIN

Emiratization is an important government priority in the UAE and we have developed a range of initiatives to foster Emiratisation in our business. In 2014, UAE nationals held 81% of our top management and leadership positions, 44.5% of our middle management positions, and 32.6% of our non-supervisory positions within DEWA. To enhance our Emirati skill-set, we support UAE nationals through a number of scholarships for students who wish to study a number of engineering degrees. These scholarships are complemented by work placement opportunities dedicated specifically for Emiratis.

## RESEARCH AND DEVELOPMENT

Our 2014 capital expenditure was AED 3,611 million. We have a project approval and investment appraisal process in place to assess all requests for investment. During this process, our expert teams consider the technical feasibility and risk profile of the investment. Their assessment is passed to management for approval, who then allocate investment budget accordingly. We plan to review our investment appraisal process with the aim of incorporating sustainability criteria into our investment decisions. At DEWA, we are committed to investing in our assets, research and people so that we can continue to deliver electricity and water services at a world-class level. Therefore, for 2014, we allocated AED 5 million to be spent on research and development with the aim to further improve the reliability of our electricity and water supply. We are also planning to launch our R&D center, which seeks to provide research infrastructure and build capabilities to support our strategic projects, with a focus on 4 research areas (renewable energy generation, smart grid, energy efficiency, and water).





# ENERGY & CLIMATE CHANGE



CUMULATIVE EFFICIENCY IMPROVEMENT OF 28.36%

**BETWEEN 2006 AND 2014**

EQUIVALENT TO

**CO<sub>2</sub> EMISSION REDUCTION OF  
27 MILLION TONS**

**15% RENEWABLES**

GENERATION CAPACITY WILL  
BE ACHIEVED BY 2030

**3.26% ELECTRICITY  
LINE LOSSES**

COMPARED WITH 6-7% AVERAGE IN THE EU AND US





## MANAGEMENT APPROACH

Due to the urgency of the issue, climate change has risen to the top of the UAE political and business agenda. 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 significantly impact 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. 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 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 secure, reliable and affordable supply of power and water.

DEWA is implementing innovative solutions to improve supply side efficiency, to apply demand side management initiatives, and to reduce transmission and distribution losses, under the umbrella of our smart grid initiative, which is line with UAE Vision 2021, Dubai Integrated Energy Strategy 2030, and the Green Economy for Sustainable Development Initiative by His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Prime Minister and Vice-President of the UAE.



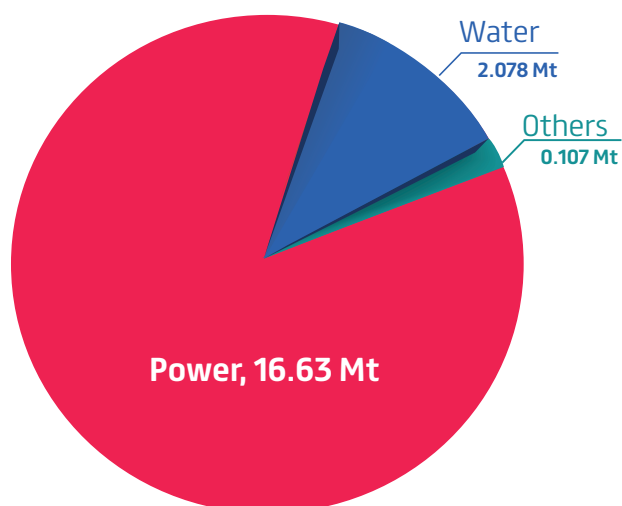
**"Committed To  
Confronting Climate  
Change"**

# CO2 EMISSION REDUCTION PROGRAM

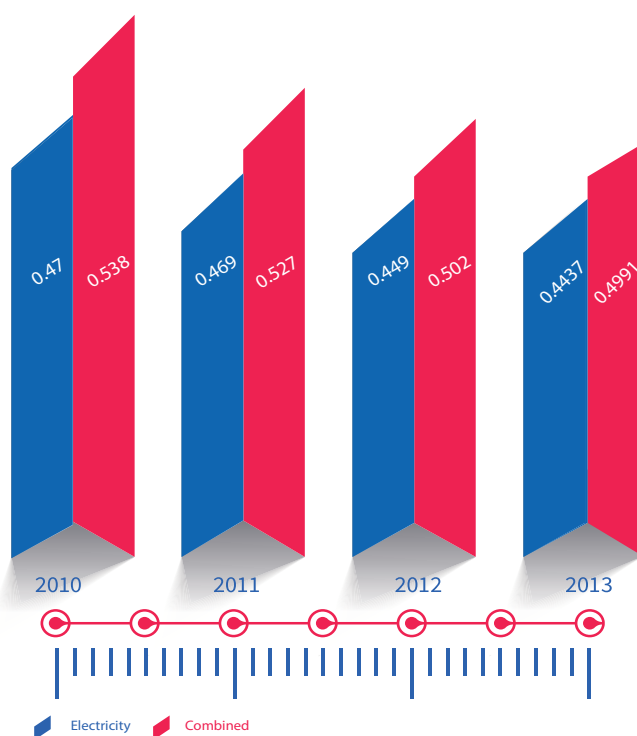
DEWA has developed a Carbon Dioxide Emission Reduction Program, with clear short, medium, and long term smart emission reduction targets leading up to 2030, which take into consideration Dubai's energy and water growth requirements, Dubai's demand side management initiatives, DEWA's supply side efficiency 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 GHG emissions accounting and reporting. In FY2013, our total carbon emissions, in million metric tons of CO<sub>2</sub> equivalent (MtCO<sub>2</sub>e) was 18.813 MtCO<sub>2</sub>e. The majority of our carbon emissions emitted comes from the combustion of natural gas to generate power and desalinated water. Along with generation, the transmission of electricity also needs to be considered as a means for reducing emissions. By improving the efficiency of our transmission and distribution network, we will reduce our line losses and fuel consumption,

thereby reducing our CO<sub>2</sub> emissions. In 2013, the carbon intensity of electricity generated improved up to 0.4437 comparing to 0.4491 tCO<sub>2</sub>e per MWh for 2012, 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. 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. Our 2014 carbon footprint is currently being finalised using our data management processes within GHG MRV framework established in line with UNFCCC requirements. DEWA MRV framework provides assurance to stakeholders that GHG emissions are carefully monitored and reported by each division of DEWA, and that the data are verified.

Mt of CO<sub>2</sub>e and percentage of CO<sub>2</sub>e emissions by source, 2013



Carbon emissions intensity, tCO<sub>2</sub>e per MWh of electricity generated, 2013



## ENSURING LONG TERM AVAILABILITY & RELIABILITY

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. In 2014, our total gross generation was 39,516,459 MWh, which was produced mainly through the usage of natural gas. 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 Integrated Energy Strategy 2030 (D.I.E.S 2030), and ensure that future demand is met at all times.

### Net Energy Output Broken Down By Primary Energy Source

| Year | Total Gross Generation (MWH) | Natural Gas      |                       | Diesel Fuel Oil  |                       | Medium Fuel Oil  |                       | Solar            |                       |
|------|------------------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|
|      |                              | Generation (MWH) | % of Total Generation | Generation (MWH) | % of Total Generation | Generation (MWH) | % of Total Generation | Generation (MWH) | % of Total Generation |
| 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                  |

Note: Diesel fuel oil and medium 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.

## DIVERSIFICATION OF FUEL MIX

### Solar Energy

This includes the Mohammed Bin Rashid Al Maktoum Solar Park and potential for distributed generation via rooftop solar panels. The Mohammed Bin Rashid Al Maktoum Solar Park, is a photovoltaic power plant in Seih Al Dahal. The first phase of the project started operation in 2013 with a capacity of 13MW, which is the largest photovoltaic power plant in the Middle East. The second phase of the solar park will be under the independent power producer (IPP) concept and have a capacity of 200MW. The aim is to expand to approximately 3,000MW by 2030.

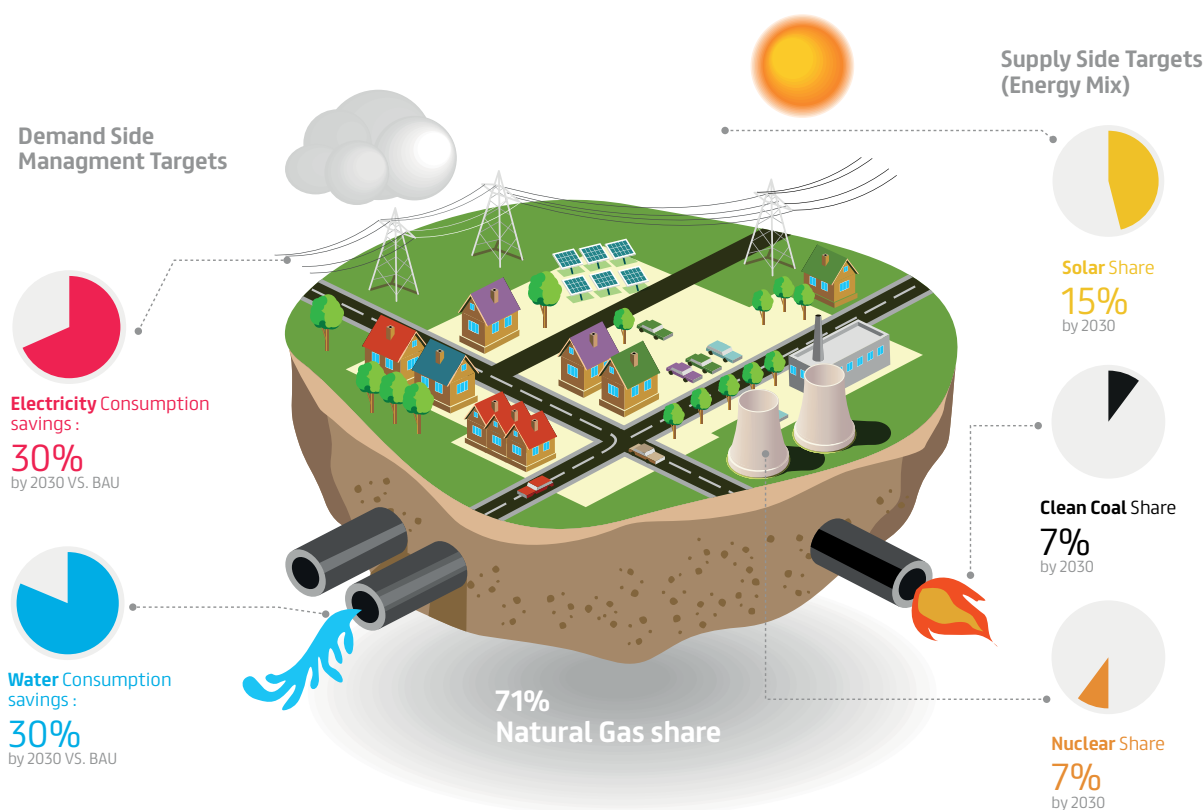


### Clean Coal Energy

We are currently under the tendering and evaluation process to construct a clean coal facility at Hassyan by 2030. We are working with our independent power producer (IPP) partners to ensure that Hassyan follows European Union standards for clean coal, which are the most stringent standards worldwide in terms of emission levels. With regards to waste management, we plan to implement the best practices available.

### Nuclear Energy

To meet our nuclear energy target, 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. DEWA is also investigating the feasibility of constructing a nuclear power plant in Dubai, as a potential second option.



### Regional Grid Connectivity

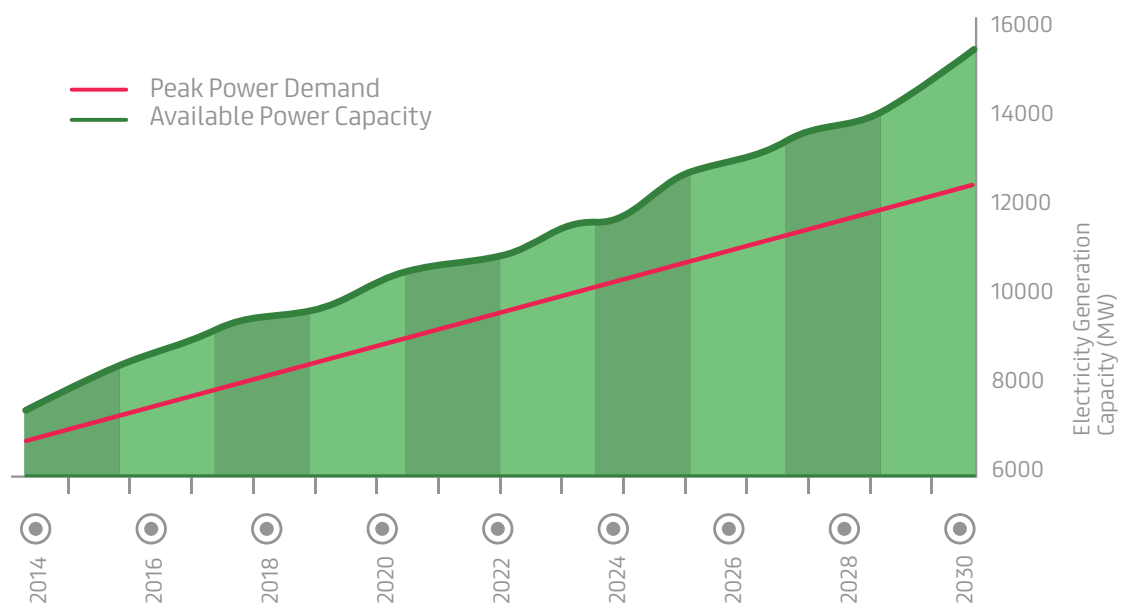
To ensure a reliable supply of electricity throughout the UAE, the Emirates National Grid (ENG) was established to interconnect the electricity transmission grids of the four Authorities and allow them to purchase electricity from one another. The ENG forms part of a Gulf-wide regional grid system, linking the national grids of the Gulf Cooperation Council (GCC).

- **ADWEA:** Abu Dhabi Water and Electricity Authority
- **DEWA:** Dubai Electricity and Water Authority
- **FEWA:** Federal Electricity and Water Authority
- **SEWA:** Sharjah Electricity and Water Authority

## MEETING FUTURE DEMAND

Whilst ensuring that Dubai has a reliable, available, high quality and efficient water and electricity supply today is a priority for us, we are also committed to safeguarding long-term energy and water security. Our Power and Water Planning division gathers and analyses demand growth data, anticipating demand growth and producing short and long-term demand forecasts. They maintain a Master Plan that combines demand analysis with fuel forecasts and planned additions or upgrades to our generation capacity and distribution networks. They use system modelling techniques to provide our business with intelligence that allows us to develop our strategic plan for the future, which ensures that summer peak demand of electricity and water are met with a reserve margin minimum of 15%. Resources for future DEWA plants' additions have already been identified and budgeted on an annual basis as per the Master Plan, which will allow us to meet forecasted demand until 2030.

Peak Power Demand and Planned Capacity Additions (2014-2030 Likely Scenario)



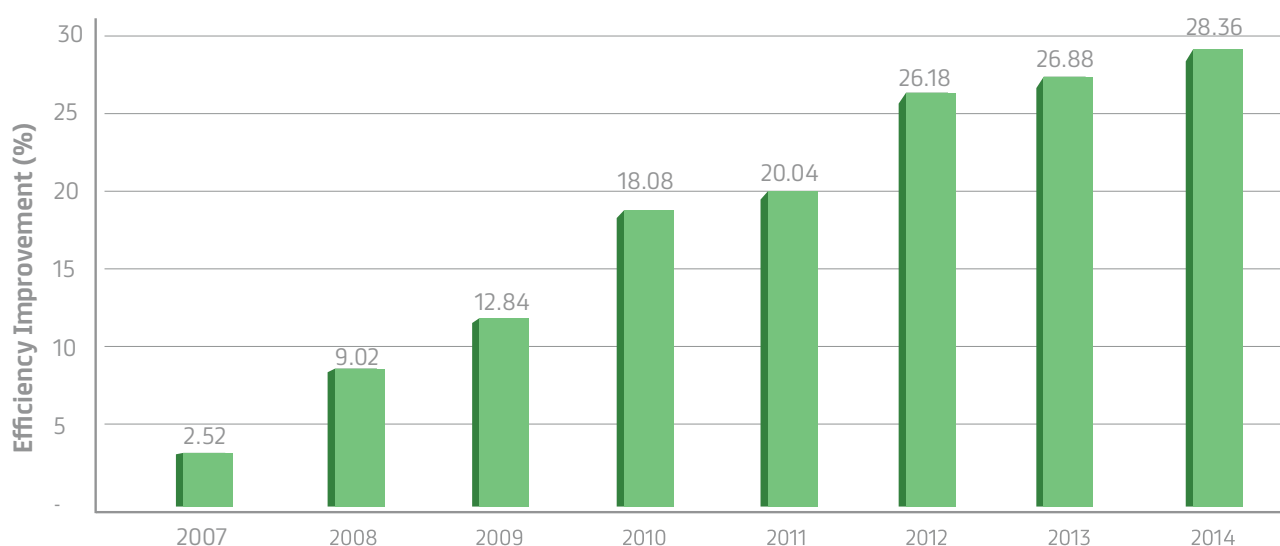
## SUPPLY SIDE ENERGY EFFICIENCY

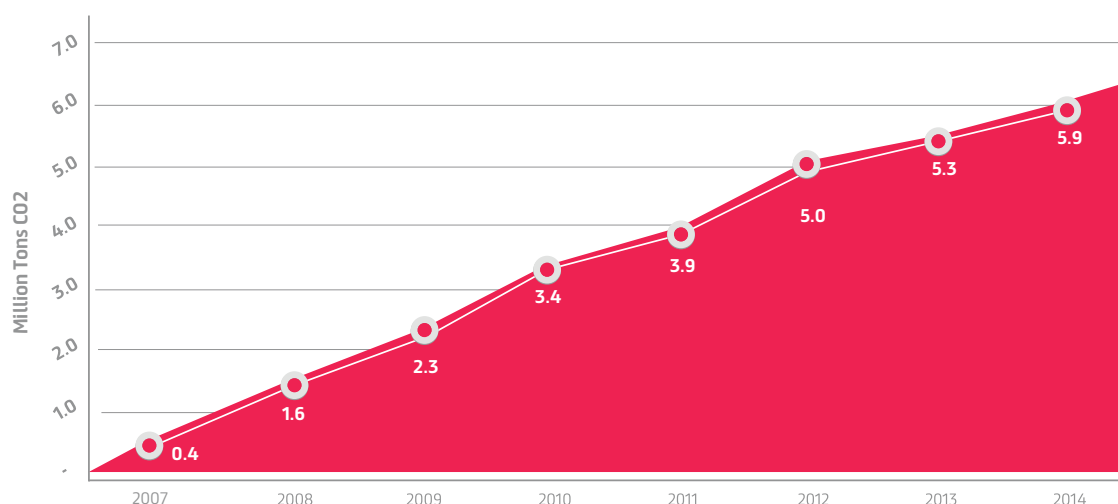
DEWA produces electricity and water mostly by cogeneration; a process in which waste heat from the burning of natural gas to produce electricity is captured through heat recovery steam generators (HRSG) and used to produce steam (i.e. no fuel), which is used to produce water through the desalination process of multistage flashing or to generate additional free electricity. 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 2014, we have achieved a cumulative efficiency improvement of 28.36%, equivalent to 27 million

tons of CO2 emission displacement. 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 400MW by 2014 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 the advanced compressor coating on gas turbines.
- **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.

Cumulative Efficiency Gains from improvement in Gross Heat Rate 2006 -2014





## CASE STUDY:

### ADVANCED COMPRESSOR COATING OF GAS TURBINES



Over the life cycle of a gas turbine, the efficiency reduces due to the erosion and corrosion of the compressor blades, a natural process caused by the aging of the turbine. In 2014, DEWA opted to apply the newest gas turbine technical upgrade and implement the advanced compressor coating on the “F” class power generation units, which have a larger power output, in L2-Station and M-station. This increased the efficiency of the gas turbines and reduced the power reduction due to the aging of the turbine. The coating placed on the stationary blades, rotating blades, and the vanes ensures smoother surfaces and thus improves their aerodynamic performance. The coating is also expected to reduce the amount of corrosion and erosion of the compressor blades and vanes, since it acts as a protective layer, and thus defers the need for compressor recoating during routine maintenance. Overall, the advanced compressor coating ensures improved efficiency resulting in the reduction of approximately 31,498 tons of CO<sub>2</sub> per year in L2-Station and 46,985 tons of CO<sub>2</sub> per year in M-Station.

## REDUCING SYSTEM LOSSES

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. We are making substantial investments to reduce losses from our networks through new substations and the implementation of our Intelligent Metering System and Smart Grid. Our continued efforts to optimise our network has resulted in our 2014 electricity line losses being 3.26% compared to 6-7% in US and EU.

### Transmission and Distribution Lines, 2014

| Type        | Voltage Category (kV) | Length of Transmission and Distribution Lines (km) |
|-------------|-----------------------|----------------------------------------------------|
| Overhead    | 400                   | 1,119                                              |
|             | 132                   | 437                                                |
|             | 33                    | 112,604                                            |
|             | 6.6&11                | 692.68                                             |
| Underground | 400                   | 23                                                 |
|             | 132                   | 1,638                                              |
|             | 33                    | 2047                                               |
|             | 6.6&11                | 26876                                              |

### CASE STUDY

#### REPLACEMENT OF PORCELAIN WITH COMPOSITE INSULATORS IN 400 KV OVERHEAD LINES



Before (Porcelain Insulators)



After (Composite Insulators)

In DEWA's 400kV overhead line transmission network, there are approximately 101 single circuit towers with porcelain insulators. Since these insulators are exposed to the open environment, they often collect sand on their surfaces, which can lead to a short circuit. Therefore, they require routine washing to maintain their performance. Maintaining these insulators incurs significant costs due to the requirement of routine washing and monitoring, performed during the night hours. Therefore, DEWA has replaced porcelain insulators with maintenance-free composite insulators in the towers, saving approximately 303,235 gallons of water per year. Additionally, it has helped in enhancing the transmission system due to improved performance and less maintenance requirements.

## CASE STUDY

### GOOGLE GLASS SMART APP



To reduce the chances of information loss during patrols by engineers on site, DEWA has launched its smart app for Google Glass. The app, which has been developed for internal use, allows patrolling engineers to capture and record any faults in stations or substations, immediately, and send them to DEWA's enterprise resource planning system, where they can be addressed. The notifications are sent automatically with images of the fault or defect, voice recordings, and geo coordinates. This will improve the availability and reliability of our electricity supply to our customers.

## LOW CARBON OPERATIONS

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<sub>6</sub> from switch gears used to control, protect and isolate electrical equipment.

SF<sub>6</sub> (Sulphur Hexafluoride) has a global warming potential of 22,800 times that of carbon dioxide and so any leakage could be significant. All SF<sub>6</sub>

gas leaks from 132 & 400 kV GIS are promptly attended by our maintenance team with the aim of achieving 100% rectification of identified SF<sub>6</sub> 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 is our service centre in Al Quoz, the largest government building in the world to be LEED Platinum-rated.

# RENEWABLE ENERGY ACCESSIBILITY

In addition to managing the Mohammed Bin Rashid Al Maktoum Solar Park, DEWA has initiated an implementation program to set up a regulatory framework to enable the connection of distributed solar systems within our electricity grid. It is the one of the three Smart Dubai initiatives to be implemented by DEWA, with the aim to encourage households and businesses to install solar PV panels within their premises. These grid-connected solar systems will enable users to produce their own electricity and export

any surplus to the electricity grid. DEWA has made tremendous effort to ensure that the highest technical, safety and compliance standards have been adopted. These technical standards and guidelines provide customers with the requirements for the solar PV system, equipment manufacturers with the required equipment standards, and contractors and consultants with information regarding applications for connection to the grid.

## CASE STUDY

### MAINTENANCE FREE SOLAR PV POWERED STREET LIGHTS



Standard (non PV) Light Pole



Conventional (PV panel) Light Pole



Maintenance-free (PV) Light Pole



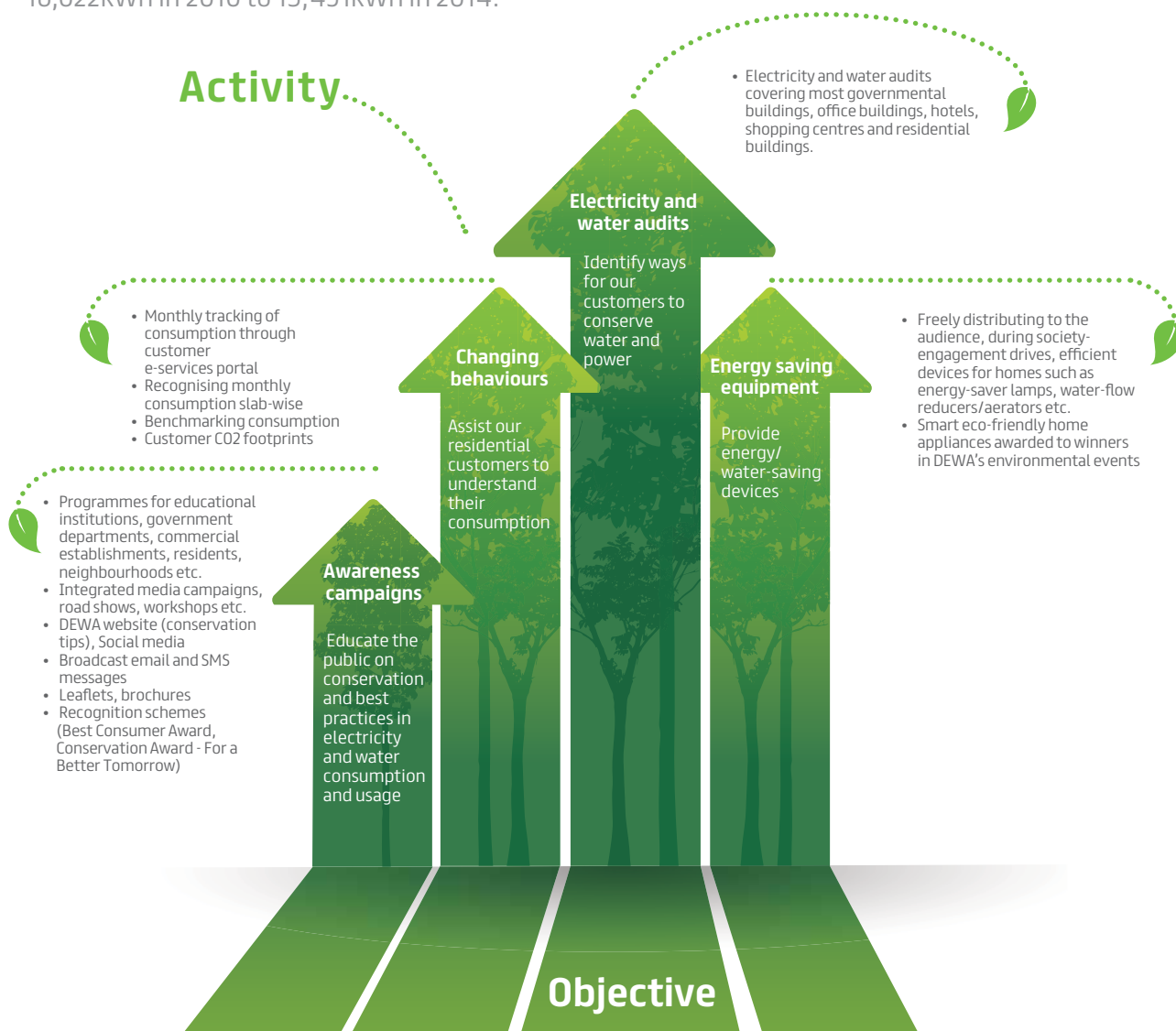
DEWA is constantly seeking to promote and invest in innovative maintenance-free renewable energy technologies for the Emirate of Dubai. In 2014, along the internal roads of the Jebel Ali Power Station Complex, DEWA installed Solar PV powered street lights with photovoltaic collectors wrapped around the pole, as part of an initial pilot project to replace the existing Solar PV powered street lights, which feature flat solar PV panels. This project applies a modern and cost-effective solution to address the issue of the extended maintenance required for the existing solar PV powered street lights, which deteriorate due to the impacts of dust and humidity. By using such technology, DEWA incurs zero operating and maintenance costs during the light pole's minimum lifetime of 10 years. The solar PV collectors used are safely stored within the base of the pole, are coated for protection from chemical and mechanical damage, are more effective on converting the sunlight to energy, and are more weather resistant. Due to reduced maintenance, each installed light pole will save approximately 1 ton of CO<sub>2</sub> per year.

# CARBON MARKETS

DEWA and the Dubai Carbon Centre of Excellence are working together on a project-based Clean Development Mechanism (CDM) under the Kyoto Protocol that enables the generation and issuance of certified emission reductions (CERs) from eligible CDM project activities. Such a mechanism is designed to control the volume and reward the reduction of carbon dioxide equivalent. The credits can be used to meet our own emission reduction commitments or to generate additional revenue by trading them in the international carbon markets. We are currently in the process of registering a number of carbon reduction projects with the CDM Executive Board, while three of our CDM projects have already been registered. From the start of its electricity production to the end of July 2014, the first phase of Mohammed Bin Rashid Al Maktoum Solar Park, with an installed capacity of 13MW, has reduced 10,635 tons of CO<sub>2</sub> and is on the verge of certifying its carbon emission reductions.

## DEMAND SIDE MANAGEMENT

DEWA supports the Demand Side Management 2030 plan, under the Dubai Integrated Energy Strategy, to reduce energy demand in Dubai by 30%, compared to the business as usual scenario, by 2030. DEWA has launched a number of initiatives to enhance the efficient use of power and water. Through these initiatives, we have succeeded in reducing the annual per capita consumption rate of electricity from 16,022kWh in 2010 to 15,491kWh in 2014.



## RAISING AWARENESS

Through integrated marketing communication campaigns and well-planned community outreach activities, DEWA continuously seeks to raise awareness and educate our stakeholders on water and electricity conservation. We also undertake energy audits for high volume commercial customers so that the finding-report will enable them to take necessary remedial measures towards reducing their consumption levels. We also participate in cause-related events

such as Earth Hour, World Environment Day, World Energy 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 2014, our awareness campaigns and efficiency audits achieved electricity savings of 1163 GWh and water savings of 5.9 billion imperial gallons, which is equivalent to cost savings of approximately AED 752 million.

### CASE STUDY EXPEDITION TO ANTARCTICA



In line with DEWA's strategic objective to minimise our environmental footprint, DEWA has sent 5 employees on the International Antarctic Expedition 2015, with Sir Robert Swan, founder of 2041, as part of a climate change awareness campaign. The selected employees arrived in the town of Ushuaia, on the southernmost tip of Argentina, where they began a 2 week life-changing journey to Antarctica, the last great frontier, accompanying climate change experts. Our employees have successfully returned from the expedition as climate change champions, witnessing firsthand the visible impacts of climate change on our planet and wishing to share their knowledge with our employees and the public.

# CUSTOMERS

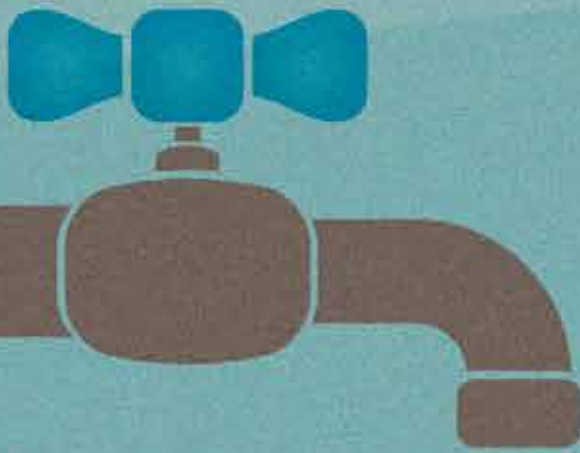


IN 2014, WE SERVED

**677,751 ELECTRICITY  
CUSTOMERS**



**604,754 WATER  
CUSTOMERS**





1ST IN MENA, AND 4TH INTERNATIONALLY,  
WORLD BANK'S RANKING OF THE UAE  
(REPRESENTED BY **DEWA**) FOR **"EASE OF ACCESS"**  
TO ELECTRICITY IN THE WORLD BANK REPORT 2015,  
FOR THE SECOND CONSECUTIVE YEAR

## MANAGEMENT APPROACH

As the sole power and water utility for the Emirate of Dubai, we strive to ensure that all of Dubai's residents, businesses and organisations have access to both power and water. Therefore, the provision of access to electricity and water for all of Dubai's residents is of utmost importance to us, as clearly reflected in our mission, vision, core values and strategy.

With regards to customer service our vision is as follows: "We anticipate our customer's needs and we seek to exceed their expectations through our commitment to continuous improvement in products and services quality. We constantly focus on customer satisfaction."

We define our responsibilities for delivering customer satisfaction in three key areas under the overall theme of excellence in customer service:

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
  - Investment 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

As Dubai's population and economy continues to grow, so does our customer base. At DEWA, our four main customer categories are: commercial customers, residential customers, industrial customers and other customers (including government).

### Electricity Customers, 2014

|             |         |         |
|-------------|---------|---------|
| Residential | 499,347 | 73.68 % |
| Commercial  | 168,583 | 24.87 % |
| Industrial  | 2,526   | 0.37 %  |
| Other       | 7,295   | 1.08 %  |
| Total       | 677,751 | 100 %   |

### Water customers, 2014

|             |         |         |
|-------------|---------|---------|
| Residential | 488,102 | 80.71 % |
| Commercial  | 112,781 | 18.65 % |
| Industrial  | 1,364   | 0.23 %  |
| Other       | 2,507   | 0.41 %  |
| Total       | 604,754 | 100 %   |



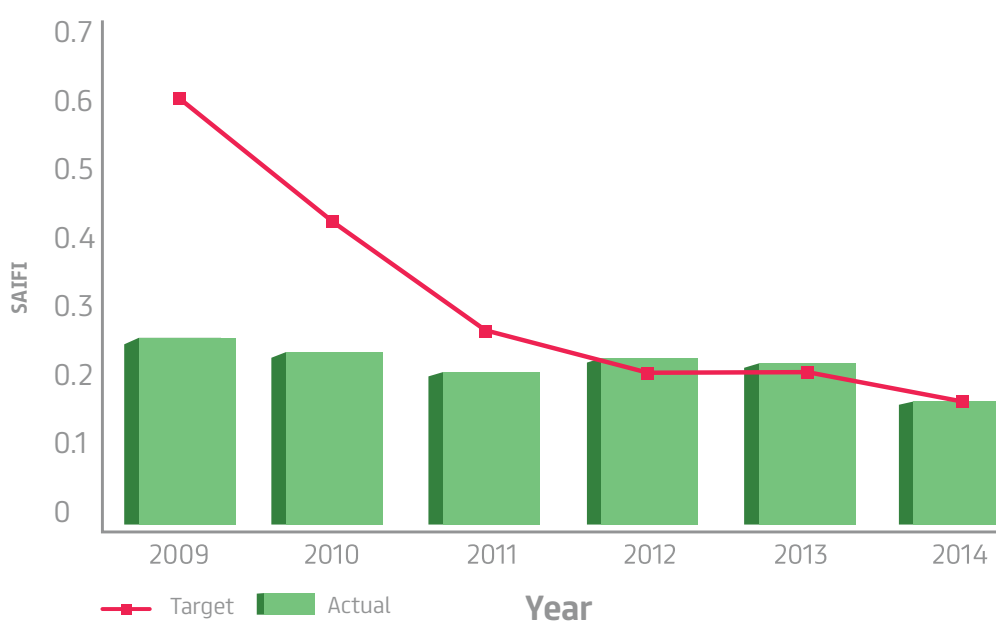
## OPERATIONAL EXCELLENCE

At DEWA, excellence has been embedded in all aspects of our operations. We continue to be leaders in system availability and reliability by upholding the highest standards and deploying the latest technological advancements. In 2014, with respect to 2006, we have achieved a 28.36% improvement in efficiency, primarily through optimising the design and utilisation of power and water co-generation plants. While our transmission line availability is typically above 99.9% reflecting world-class standards of performance. Our operational management approaches adhere to our Integrated Management System (IMS). Our IMS complies with internationally recognised standards for health, safety, environment and quality (ISO 9001, ISO 14001 and OHSAS 18001) and provides guidance to all business divisions about how activities should be executed to uphold DEWA's expectations for operational excellence.

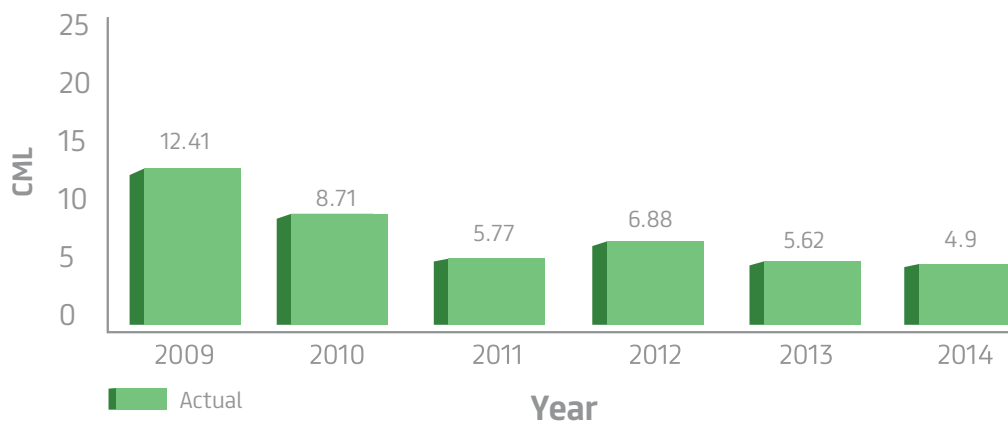
To measure our performance in supplying power, we look at three key indicators: System

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 in one year. In 2014, our SAIFI was 0.15, continuing the downward trend since 2009. While CML (Customer Minutes Lost) measures our ability to restore power during planned outages for maintenance and unplanned outages (in emergencies). This year, our CML from unplanned outages was 4.9 minutes, compared with approximately over 15 minutes recorded by counterparts in Europe and the US. Subsequently, 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 2014, our availability factor was 99.23% for the summer period. While our overall availability factor for 2014 was 88.15% (higher than our target of 87%), due to maintenance conducted during the winter period.

System Average Interruption Frequency Index (SAIFI): Target and Actual, 2014



#### CML unplanned: 2014



#### Availability Factor (summer): Target and Actual, 2014

| 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%                              |

At DEWA, we know that your time is precious. This is why we ensure that all our services make your life comfortable, so that you can enjoy it with total peace of mind. Rest assured, we are there when you need us, with Hadhreen - At Your Service.



### The following are the list of services we provide:



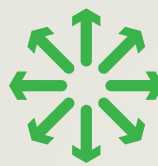
#### E-services

The gateway through the dewa portal, <https://e-services.dewa.gov.ae> for customers and stakeholder to enjoy a variety of general, customer and business-related services.



#### Mobile Services

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



#### Multiple Ways to Pay

To provide added convenience to customers, multiple methods of payment (around 17 channels) were developed.



#### GreenBill

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



#### 15 Customer Service Centres

To facilitate customer convenience our centres are available and spread all over Dubai.



#### 24/7 Customer Care Centre

Wherein our customers can contact us with their queries about DEWA's products and services.



#### E-suggest

It's a unified, decentralised electronic channel and system for DEWA to efficiently handle and process all suggestions received from customers.



#### E-complain

In pursuit of organisation excellence; addressing customer concerns is paramount to DEWA.

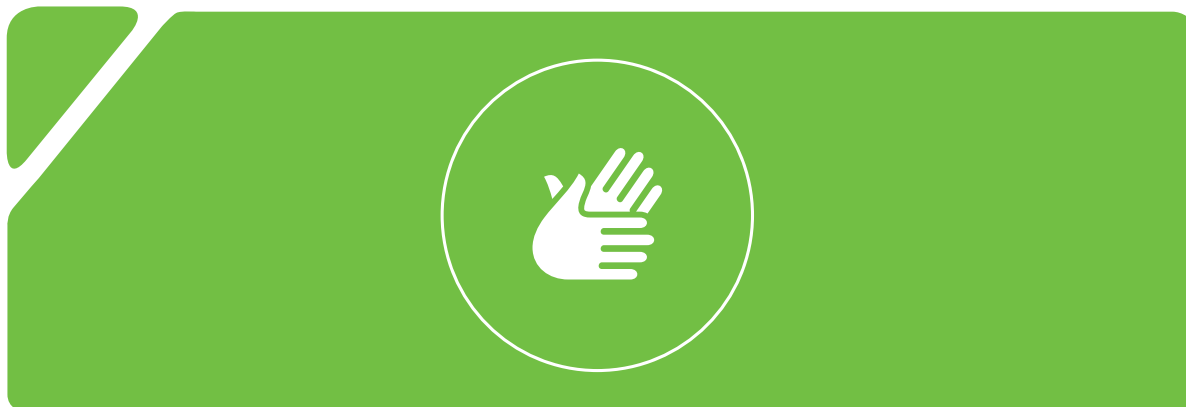
## PROVIDING ACCESS TO CUSTOMERS WITH LANGUAGE BARRIERS AND PHYSICAL DISABILITIES

In line with Dubai's strategy, we have implemented a range of processes at our customer service centers to increase the accessibility to our products and services. For our visually-impaired customers, we have introduced 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 Service centres, to aid them with all their requirements. Moreover, during 2014, DEWA launched a new service channel called Ash'ir, which allows customers to communicate directly with DEWA staff using sign language. For

our elderly customers, we are participating in the Community Development Authority's "Thukhr" Card Program, Elder Emirati discount program (Above age 60) and "Sanad" for customers with special needs. Card-holders have access to wheelchair assistance at designated counters where they can enjoy DEWA services. To meet the needs of customers with different cultural backgrounds, we print our communication material 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 more.

## CASE STUDY

### ASH'IR: LIVE VIDEO SIGN LANGUAGE



In line with DEWA's keenness to reach out to all segments of our society, DEWA has launch a service that caters to people with speech and hearing impairments, a first for a government organisation in the UAE. Ash'ir (Arabic for "to signal") is a live video chat service that enables people with speech and hearing impairments to communicate directly with Dewa's call center staff using sign language. This service is available on DEWA's smart app on iOS and Android, which offers over 150 services and features around the clock. DEWA, in collaboration with the Community Development Authority in Dubai, trained the first group of its customer service staff on using sign language to prepare them for the Ash'ir service. Another group is currently undergoing training on live video chatting using sign language. This service highlights how DEWA is continuously-innovating on its services to be closer to its customers and provide the best standards of service possible.

## SMART SERVICES

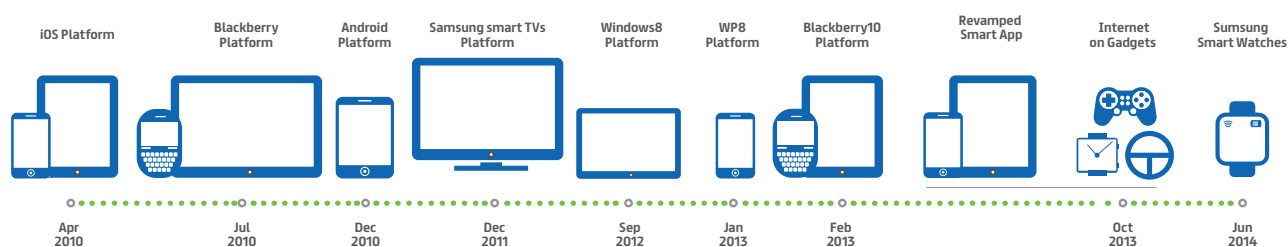


The Smart Dubai Initiative launched by His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President of the UAE and Ruler of Dubai, seeks to significantly advance customer services, transform Dubai into the smartest city in the world with all services and utilities run by integrated and connected smart systems, and support the sustainable development of Dubai. To support this initiative, DEWA completed the smart transformation of all of its services during 2014. We first initiated our plans in 2009 to transform our services to smart services through the deployment of our first smart application in 2010. The application has proven successful, with

over half a million downloads since its launch. In 2014, we also unveiled plans for 3 major initiatives to support the smart transformation of Dubai. Launched on March 15th 2015, the first initiative, known as Shams Dubai, is a campaign that encourages residents and building owners to install solar panels to generate electricity, which would be connected to DEWA's power grid. The second initiative is to set up smart meters and grids across Dubai. While, the third initiative involves the construction of infrastructure for electric vehicle charging stations in various locations across Dubai.



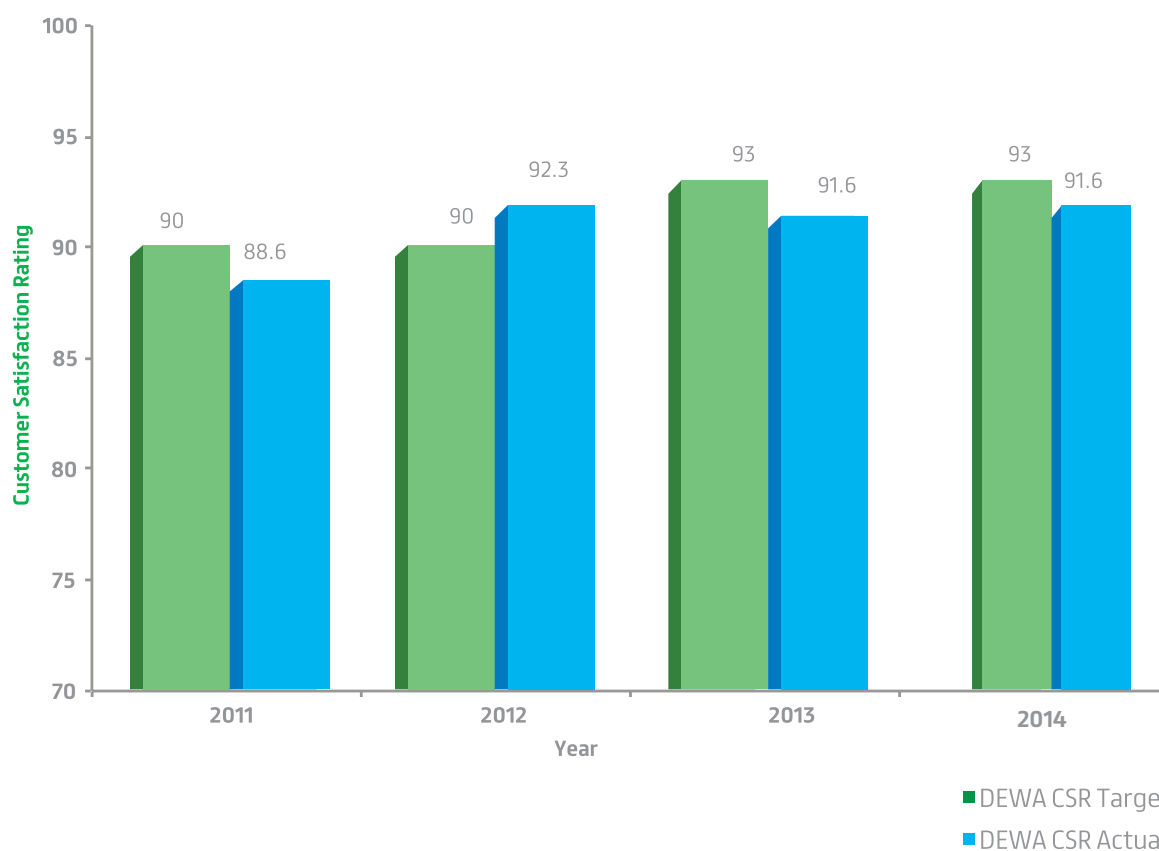
## SMART APPLICATION

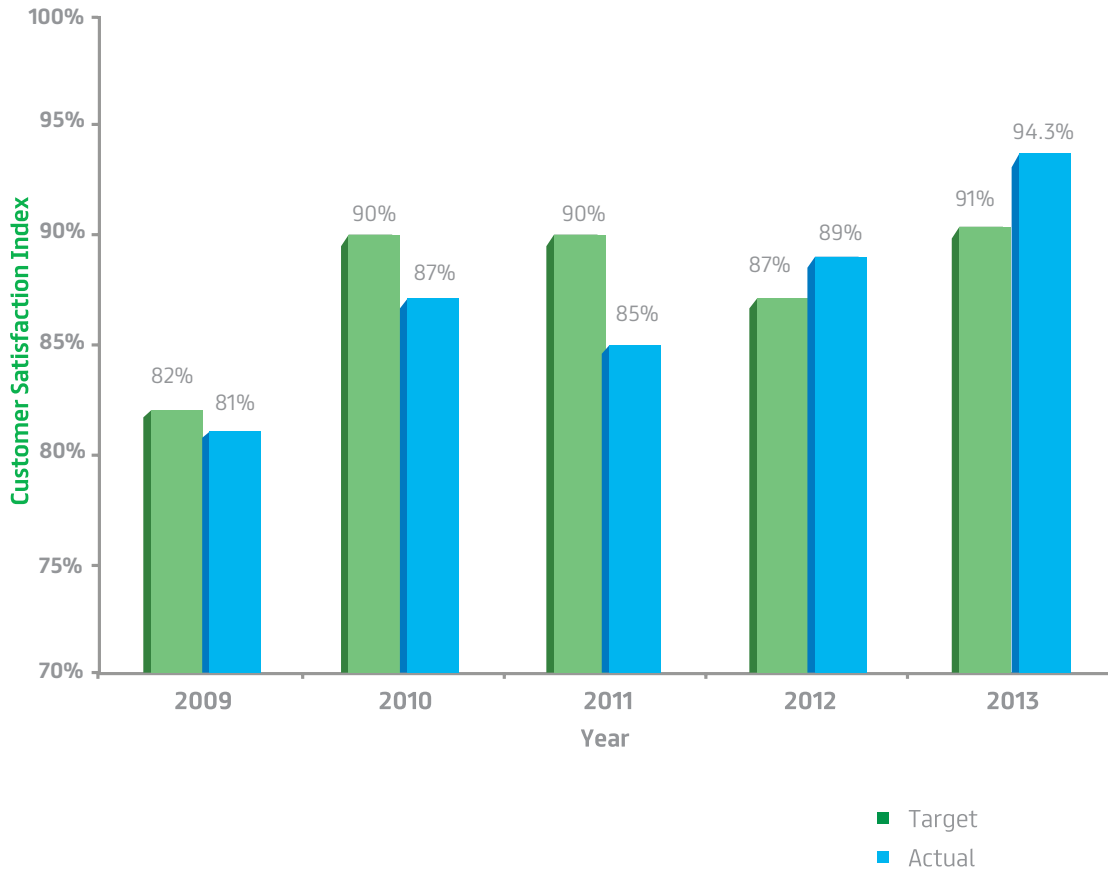


## CUSTOMER SATISFACTION

Since 2013 we have been undertaking annual customer satisfaction surveys to understand how we can improve our customer service. We also carry out shopper studies and mystery customer calls and visits to our customer service centers. We combine the results of these surveys and activities into an overall DEWA Customer Satisfaction Index. We also gain feedback from the annual Dubai Government Excellence Program (DGEP) customer studies which results in a 'Customer Satisfaction Index' for DEWA.

### DEWA Customer Satisfaction Index 2014





We are pleased to report that in 2014, our Customer Satisfaction Rating was 91.6%. We also achieved 94.3% on the Dubai Government Excellence Program (DGEP) Customer Satisfaction Index (CSI) results, where DEWA ranked 1st among Dubai Government entities in the large category in 2013, while 2014 results will be announced in April 2015. We will continue to engage our customers to continually improve our services for Dubai's residents and our other customers. We have also received the ISO-10002 certification for quality customer service. Our customer satisfaction

surveys are not just about ratings. We also gather feedback from customers on how we can improve. 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.





**"WE ARE ALWAYS  
LOOKING AT  
AVENUES ON HOW  
WE CAN BRING OUR  
CUSTOMERS THE  
BEST SERVICES"**



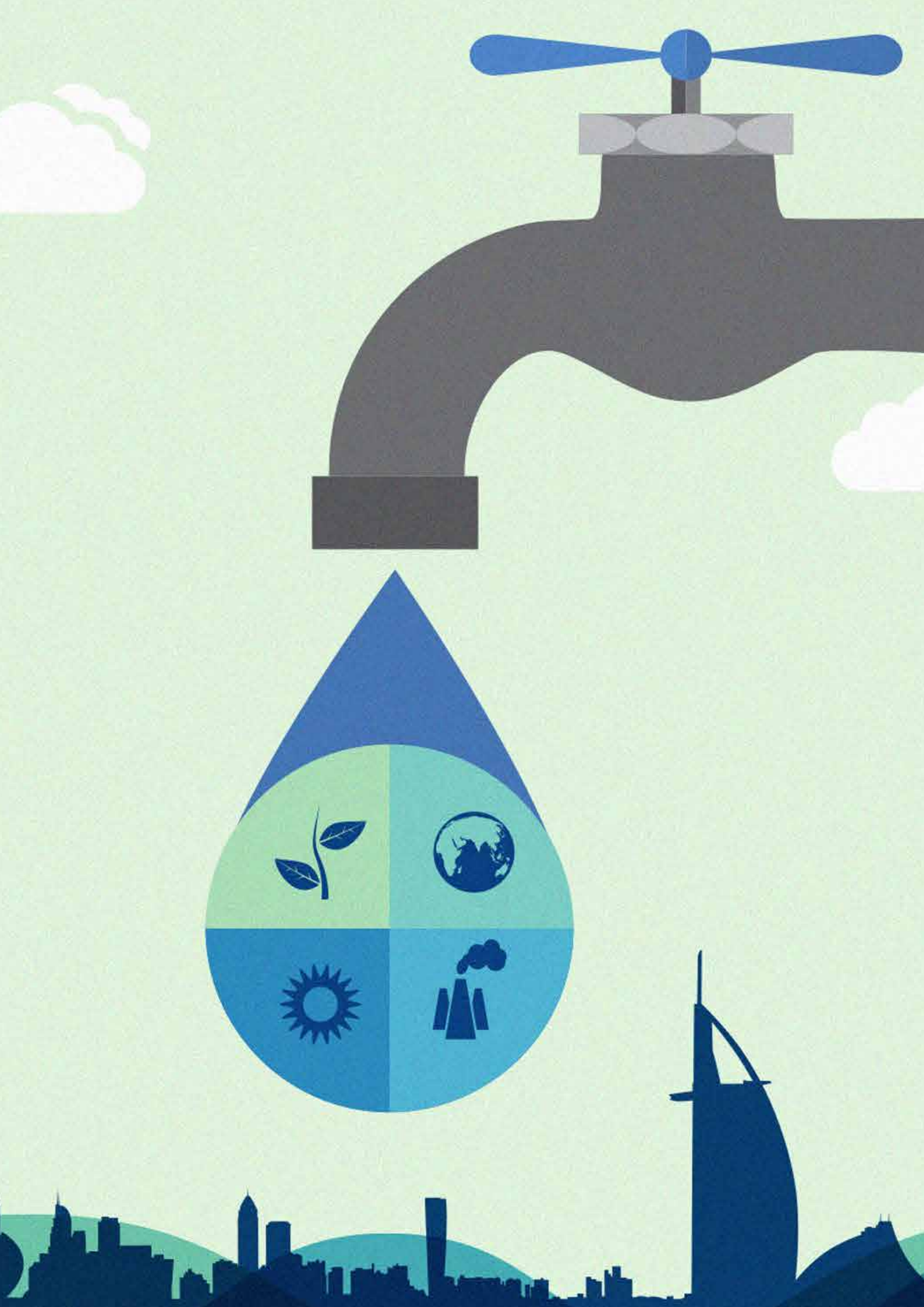


During 2014, we reduced our water losses to **9.10%**, one of the lowest worldwide, compared to approximately **15%** in North America

## MET 100% OF DUBAI'S WATER NEEDS DURING 2014

Implementing our smart networks and meters project



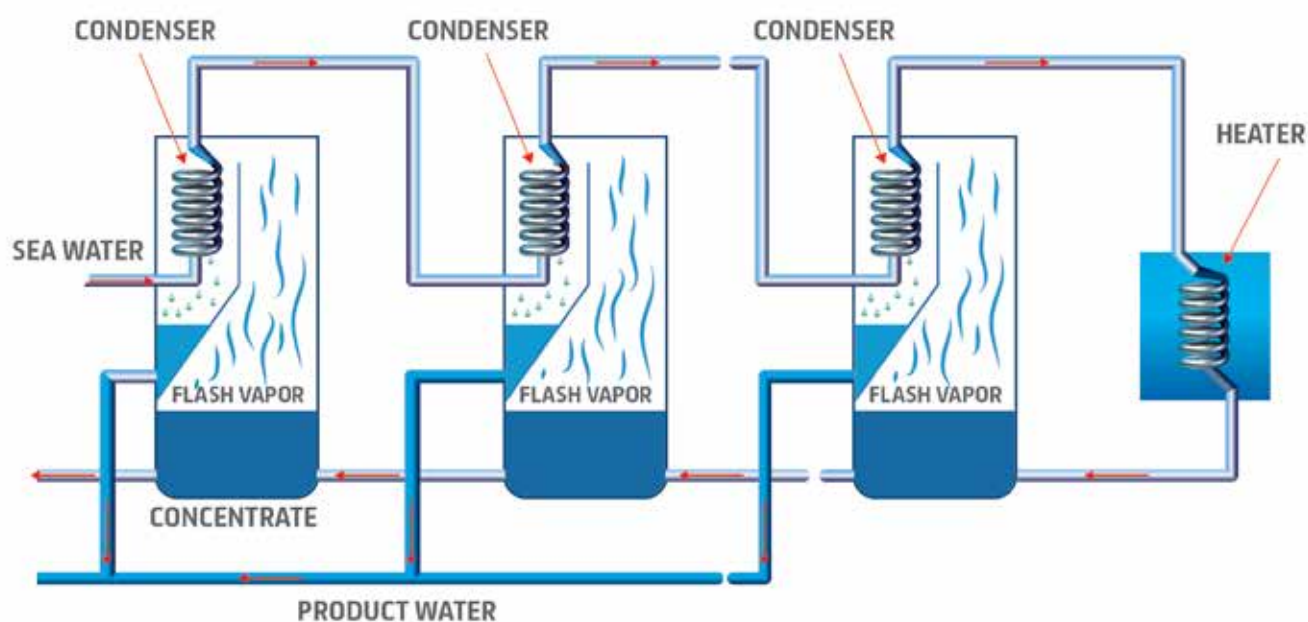


## MANAGEMENT APPROACH

At DEWA, we continuously seek to maximise water efficiency in our own operations and to help our customers minimise their usage of water. We are committed to maintaining water quality – not only with regards to the water that we deliver to our customers, but also that of the fresh and marine water resources that we rely on to produce potable water. Our management approach with regards to water issues focuses on six main areas:

- Water Production
- Water Quality
- Wastewater Discharge Management
- Water Transmission and Distribution
- Whole Water Cycle Approach
- Customer Water Use

## WATER PRODUCTION

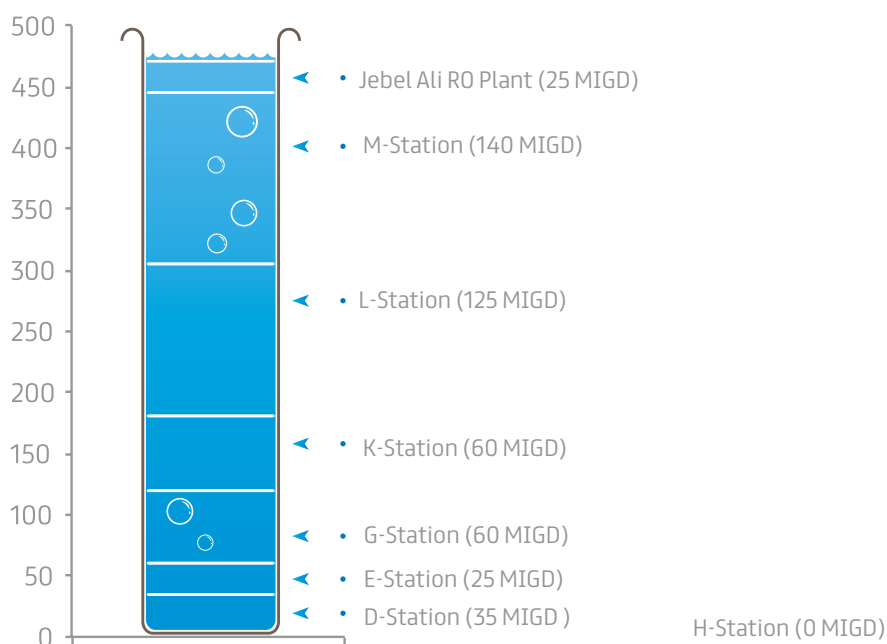


The majority of the water we produce, comes from the desalination of the Arabian Gulf seawater. The seawater is pumped to our Jebel Ali Power and Desalination complex, where it is chlorinated, conditioned, and filtered, it is subsequently used for either water production or for cooling of power plant 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.

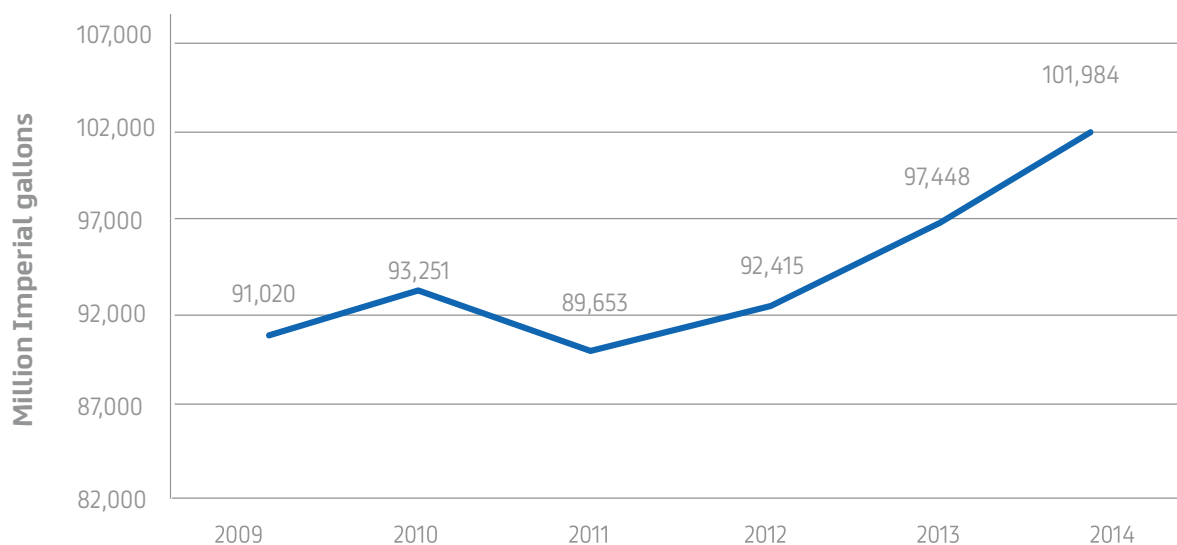
In 2014, our installed capacity from our desalination plants was 470MIGD. We met the peak daily and monthly demand for 2014, with substantial reserves. The peak daily water demand of 325MIG was on the 21st of September 2014, an increase of 5.95% growth compared to 2013. While the peak monthly average of 316MIGD also occurred in September 2014, an increase of 6.68% growth compared to 2013.

Our installed capacity from undergrounds wells, mainly used as a reserve for contingencies, was approximately 35MIGD, which amounts to 11% of total peak water production during 2014. During 2014, we utilised approximately 1.44MIGD from underground wells, approximately 4% of the installed capacity of the underground wells. 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.

Total water production capacity 2014 (million imperial gallons per day)



Total water produced from 2009 to 2014 (million imperial gallons)

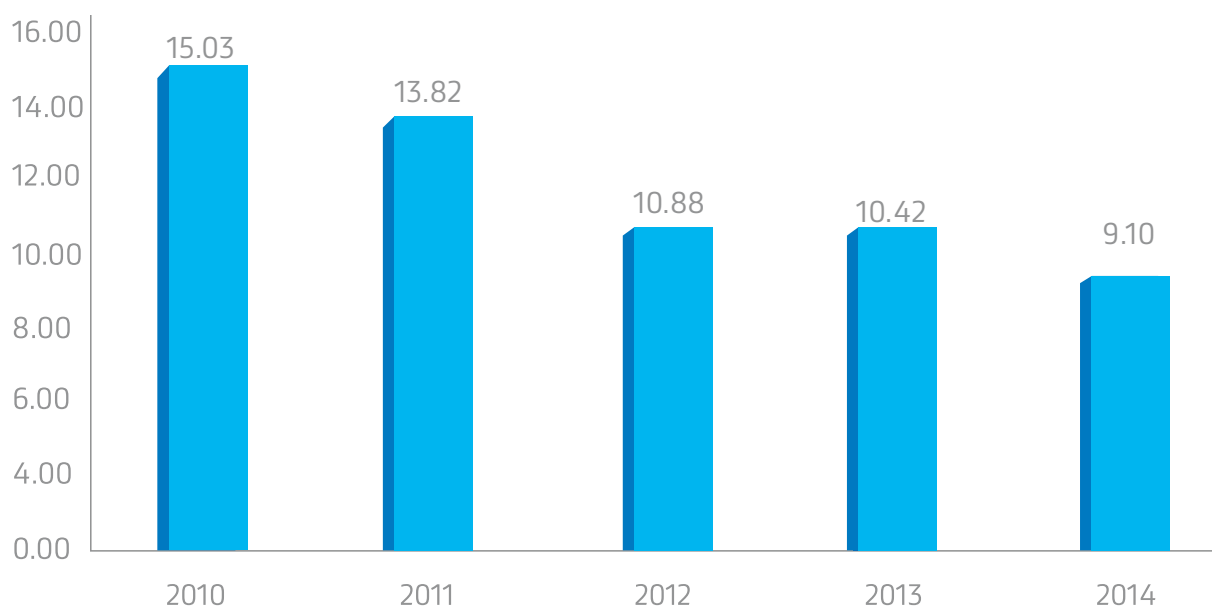


## WATER TRANSMISSION AND DISTRIBUTION

In 2014, we continued to be successful in meeting the water needs of 100% of our customers, reflecting our commitment to supplying Dubai's population with basic needs. Once produced, potable water is stored in the Jebel Ali reservoir complex. To ensure that we never run short of water, we store enough in our reservoirs to satisfy around 2.7 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 proud to announce that, during 2014, our unaccounted for water was 9.10%, one of the lowest worldwide, compared to approximately 15% in North America. This was an improvement of 39% with respect to 2010 and a reduction of CO<sub>2</sub> emissions by 508,835 tons and NO<sub>x</sub> emissions by 326 tons. This was possible due to launching 11 major projects to improve our water transmission and distribution networks.

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 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 both boron and bromate.



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, bottled water production, etc. This is because, although water quality is good to the meter, thereafter water is stored in tanks in residences

and these are generally not well maintained. This problem with water quality 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 of process wastewater generated from our desalination and power production plants. In Dubai, municipal wastewater treatment falls under the responsibility of Dubai Municipality. In 2014, our total volume of wastewater discharge was 4849.345 million cubic meters, primarily comprising process 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 (85,659 m<sup>3</sup>) and on-site treated sewage effluent (230,329 m<sup>3</sup>), out of which 133,730 m<sup>3</sup> was discharged to land for landscape irrigation inside the premises and the remaining 96,599 m<sup>3</sup> of treated sewage was discharged to the sea along with other process wastewater.

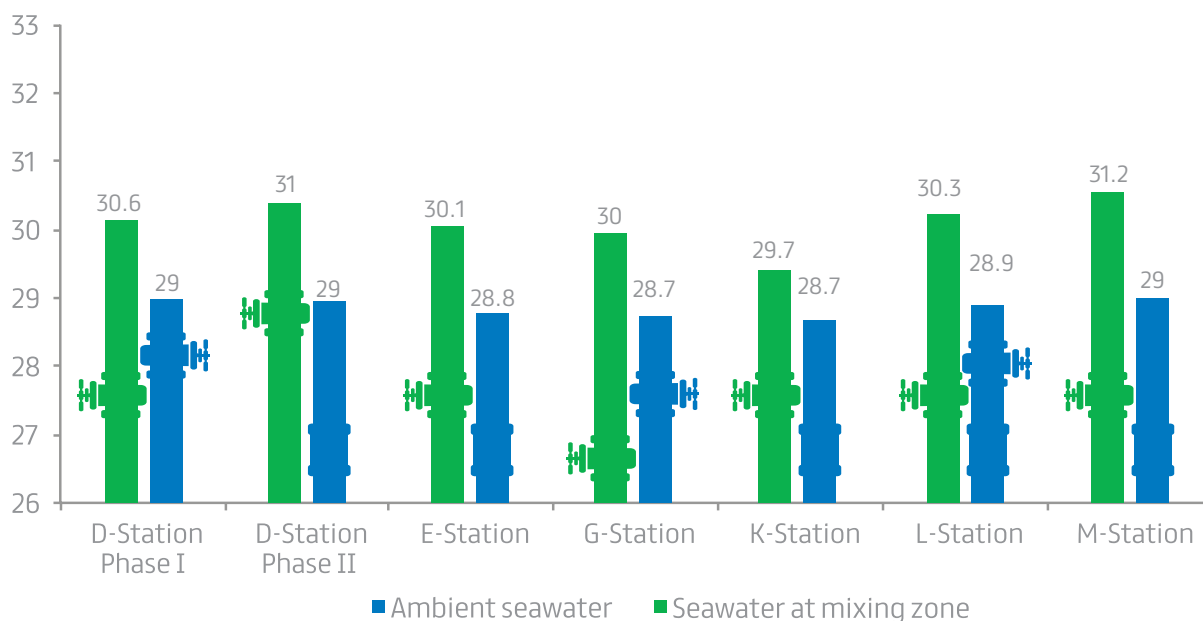
Volume of wastewater discharge (million m<sup>3</sup>) by source 2014

| Type of effluent                          | Total volume (million m <sup>3</sup> ) discharge |
|-------------------------------------------|--------------------------------------------------|
| Process Water from Power Plant            | 1615.199                                         |
| Process Water from Desal Plant            | 3233.830                                         |
| Water Treatment Plant Effluent            | 0.085659                                         |
| Treated Sewage Water (to land)            | 0.133730                                         |
| Treated Sewage Water (to sea)             | 0.096599                                         |
| Treated Sewage Water                      | 0.230329                                         |
| Waste Water Discharged to Marine and Land | 4849.345                                         |

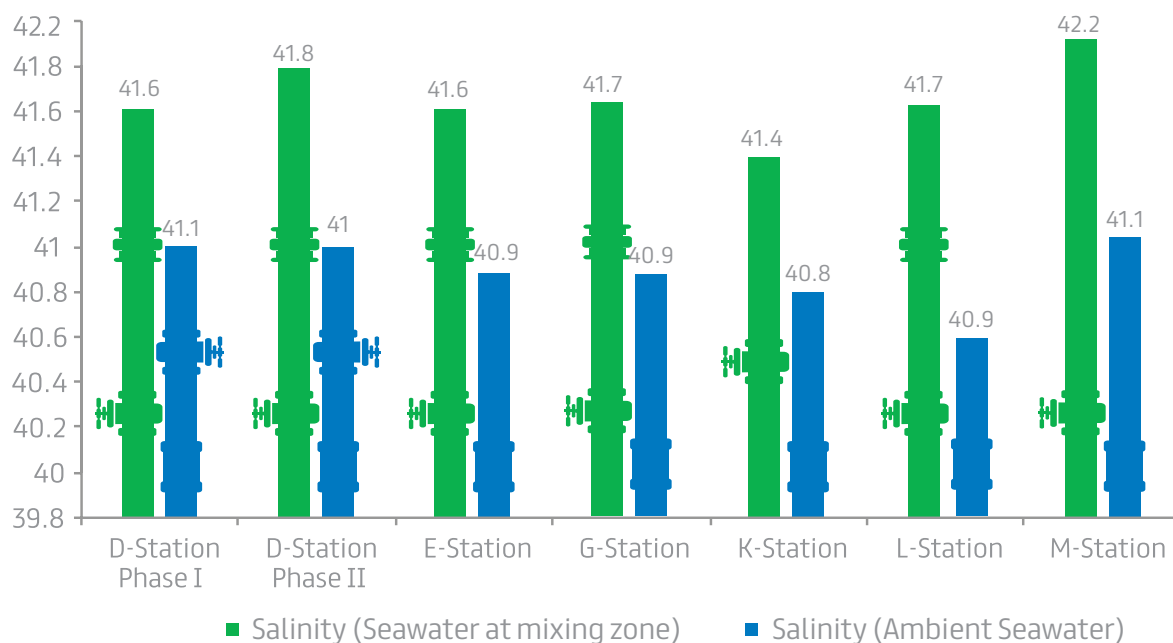
Our desalination plants produces brine, a high saline water that remains after freshwater has been extracted from the seawater. We recognise that brine outfall has the potential to impact the environment. We monitor our wastewater discharges monthly and collaborate with regulators to make sure we are within the permissible limits for wastewater discharge quantity and quality in terms of salinity and temperature. We have installed a continuous monitoring system to monitor the temperature, salinity, 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 specialised international companies, as per the requirements of the wastewater discharge permit issued to DEWA by Dubai Municipality.

### Seawater temperature (°C) 2014



### Seawater salinity (ppt) 2014



#### 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.

## WHOLE WATER CYCLE APPROACH

At DEWA, we recognise that water production is both capital and energy intensive. Therefore, to ensure the fulfillment of our vision and mission, we are keen to successfully implement the Demand Side Management 2030 plan, set by the Dubai Supreme Council of Energy, to reduce demand by 30% compared to the business as usual scenario by 2030. On the supply, transmission, and distribution side, we are continuously improving our efficiency and reducing losses. While on the customer side, we are implementing many program to promote water conservation. We believe that the advancement 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 water management approaches to meet the water resource challenges ahead. 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.

We have already begun to close the water cycle in the following ways:

- Process wastewater from washing of limestone filters in our plants is recovered to the drinking water system.
- Treated process wastewater and treated sewage effluent wastewater from some of our stations is used for landscape irrigation.
- Treated sewage effluent wastewater is used for secondary (non-drinking water) purposes at some of our staff accommodation sites.

## CUSTOMER WATER USE

Under our demand side management strategy, we have succeeded in reducing the annual per capita consumption rate of water to 41,723 gallons in 2014. We aim to reduce water consumption in Dubai to 37,592 gallons per capita per year by 2017. Each year, DEWA organises events for the United Nations World Water Day in collaboration with Dubai Municipality and other community organisations, where we raise awareness about water efficiency. DEWA also provides a program for free power and water audits that provides DEWA customers with recommendations for electricity and water conservation. We introduced a slab tariff structure in 2008 and a surcharge system in 2011. Our tariffs rates change depending on the volume of water consumed. Tariff design is one area that we continue to analyse to better understand how we can incentivise water efficiency. However, DEWA still continues to offer water at competitively low rates. As part of our smart grid initiative, we have begun to implement our Smart Networks and Meters project, which has already been budgeted for and an action plan set with target dates for implementation. The project will see the replacement of mechanical and electromechanical meters with state-of-the-art smart meters. The intelligent meters are part of a bi-directional digital communications system that can automatically send data to DEWA. The meters will also provide customers with detailed information on their consumption, so that they can identify the best ways to reduce both water and energy use and their bills.





# ENVIRONMENTAL PROTECTION



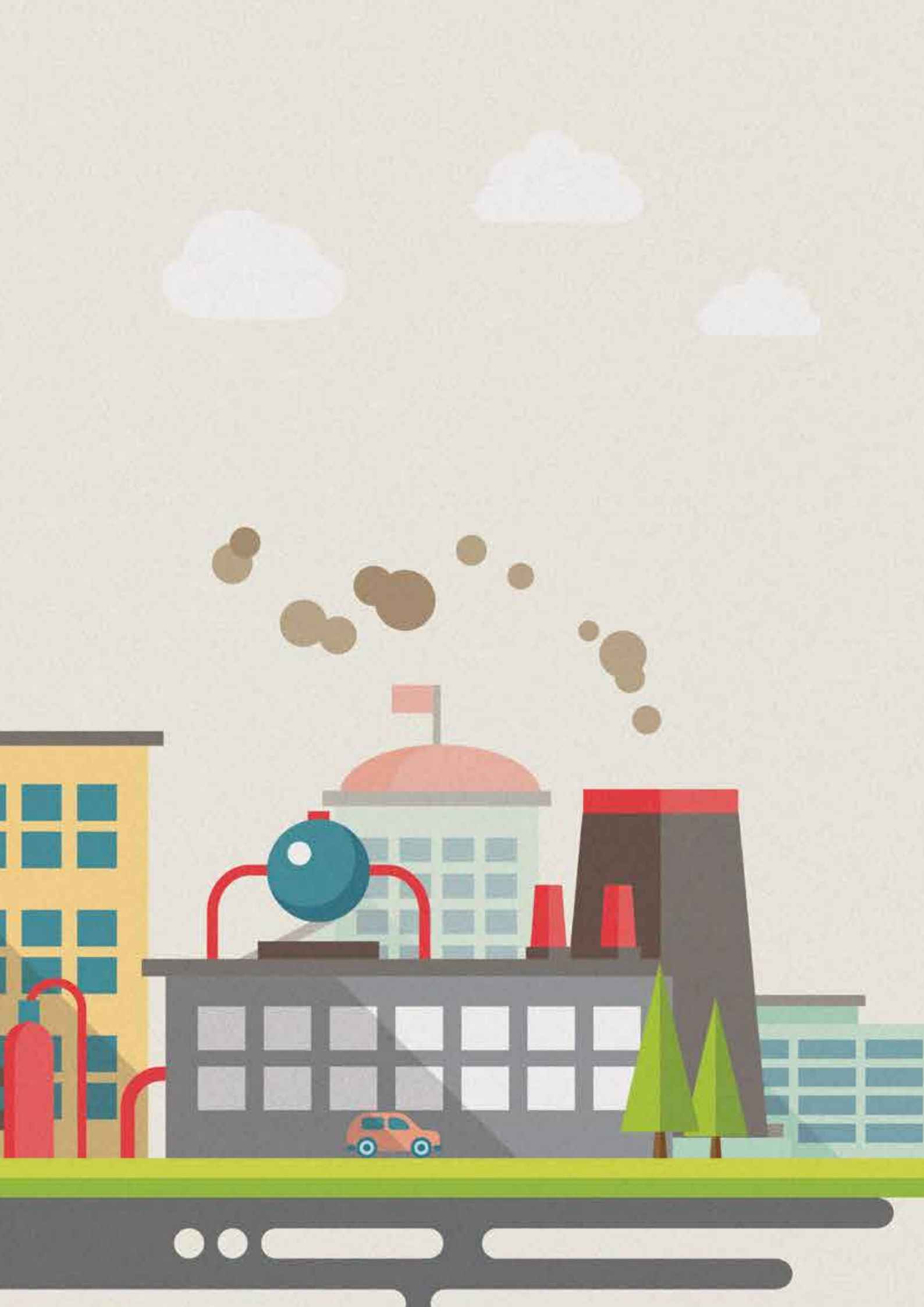
British Safety Council's Globe of Honour for Environment awarded to DEWA for the 3rd consecutive year for

## EXCELLING IN ENVIRONMENTAL MANAGEMENT

ISO-14001 Certification maintained continuously at the corporate level since 2006

67% improvement  
in NOx Emission Levels  
in 2014 with respect to 2007





## MANAGEMENT APPROACH

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At DEWA, we understand that environmental protection is a key requirement for the continued success of our organisation and ensuring the wellbeing of future generations, therefore we have embedded the concept into both our vision and mission. We believe that environmental protection should be upheld throughout the entire value chain of our operations, in the way we purchase products and services, the way we manage operations, and the way we educate our customers on water and energy conservation. 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 occurrence. 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. The success of our environmental management system has been recognised by the British Safety Council (BSC), with DEWA maintaining the BSC Environment 5 Star certification since 2011. DEWA has also won the BSC's Globe of Honour, achieving full marks for the third consecutive year in recognition of our commitment to achieve all-round excellence in environmental management. DEWA was the first utility in the MENA region to achieve this award and one of only four companies worldwide to be awarded with both the Globe of Honour and the Sword of Honor in Health and Safety from the British Safety Council in 2014.

## ENVIRONMENTAL COMPLIANCE

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DEWA complies with all relevant environmental regulations set forth by both the UAE Federal Government and the 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 2014, we have not been in violation of any environmental regulations nor have we received any complaints relating to environmental matters.

## ECOSYSTEM PROTECTION

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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. To ensure a healthy marine ecosystem, DEWA also commissions specialist consultants to conduct ecological surveys throughout the year so as to monitor the populations of marine organisms in our area of operations. While environmental specialists monitor our wastewater discharge points to identify any potentially harmful algal blooms that could lead to 'red tide' events – these are events where algae grow out of control, produce toxins and deplete oxygen in the water, which is harmful to other marine life and our water production facilities. Additionally, contingency plans are in place to combat red tide and oil slick events in the Arabian Gulf to ensure our potable water is safe and in line with the World Health Organisation's Drinking Water Guidelines.



## CASE STUDY

### LINEAR HEAT DETECTION (LHD) CABLES

IDEAS UK 2014 AWARD (Idea of the year)



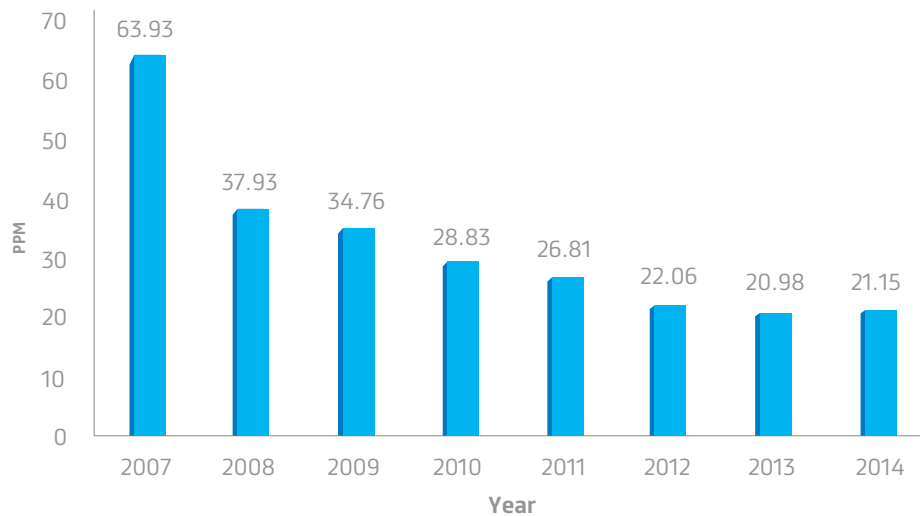
The critical equipment found in any distribution substation often risks overheating, which can result in fire incidents. Such incidents may adversely affect the health and safety of people and assets in the nearby vicinity and the reliable supply of electricity to customers. Therefore, DEWA has invested in a smart tripping system within its distribution substations. The smart tripping system utilises LHD cables with temperature-sensitive insulation, which melts at a predetermined temperature. This creates a short circuit and automatically trips the fuse switch and triggers an alarm. The system has proven successful at two pre-set temperatures and DEWA plans to implement the system in phases for its network of approximately 28,000 11-6.6kV distribution substations.

## MINIMISATION OF AIR EMISSIONS

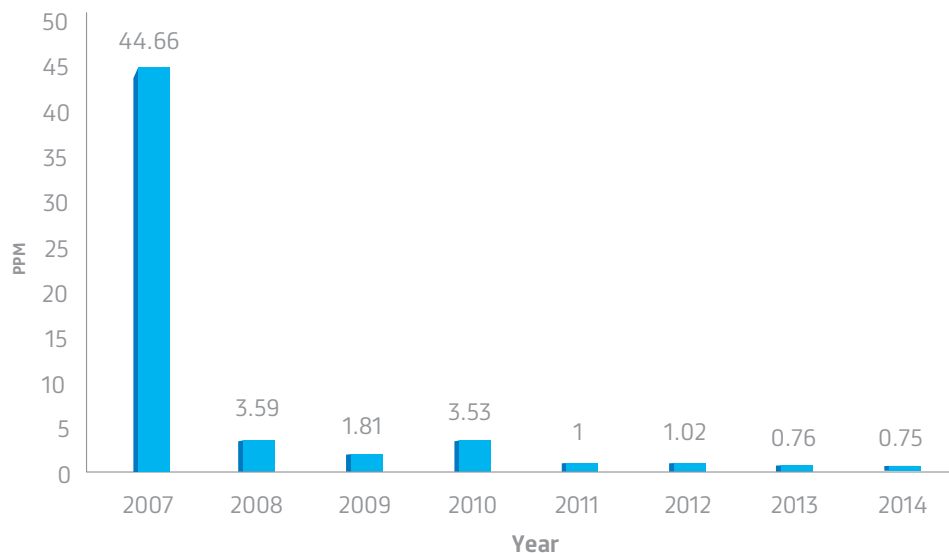
Air emissions have adverse effects on our local climate, ecosystems, and air quality. In Dubai, regulations are in place to control nitrogen oxides (NOx) and sulphur dioxide (SO2) emissions. Due to continuous improvement in the efficiency of our plants, we have achieved excellence in NOx and SO2 emission 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 2014 was 21.15ppm, 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. Additionally, DEWA has introduced innovative technical solutions, which have resulted in single digit NOx emission levels in our major stations. With regards to SO2 emissions, DEWA has maintained very low emissions due to the burning of sweet 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.

Annual NOx air emissions, 2007-2014



Annual SO2 air emissions, 2007-2014



## WASTE MANAGEMENT

DEWA has implemented an effective waste management system, through which we aim to reduce the amount of solid and liquid waste we produce by using resources efficiently and recycling or recovering when 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.

Reducing our waste not only minimises our environmental impact, but also generates cost savings. In 2014, we earned AED 830,020 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 2014, we have recovered

19,143 liters of oil for reuse. While closed loop gas analysers at substations are used to reduce SF6 gas emissions. Additionally, wastewater is recovered from our power stations and reused and during 2014 we recovered 266 MIG of wastewater.

Waste Figures from the Jebel Ali power station complex, 2013-2014

| Waste Figures                           | Unit       | Year      |         |
|-----------------------------------------|------------|-----------|---------|
|                                         |            | 2013      | 2014    |
| General waste sent to landfill          | Tons       | 1,534     | 1,599   |
| Hazardous waste disposal                | Tons       | 57.9      | 71.2    |
| Wooden packing reused                   | Cubic Foot | 5,958     | 5,297   |
| Waste water recovered                   | MIG        | 209       | 266     |
| Waste oil recovered for use             | Liters     | 126,421   | 19,143  |
| Revenue from scrap/waste materials sold | AED        | 1,396,910 | 830,020 |
| Savings from selling waste oil          | AED        | 513,538   | 228,771 |

## EMBEDDING SUSTAINABILITY VALUES THROUGHOUT THE 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. We categorise our suppliers as either "strategic", "core", or "basic", based on our expectations of the suppliers. During 2014, we worked with a total of 1,819 suppliers, of which 57 were strategic suppliers, 424 were core suppliers and 1,338 were basic suppliers. 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. During 2014, we conducted 10,359 local transactions. We have also launched the Green Procurement Program at WETEX 2013, with the aim of rolling it out throughout our supply chain. The program

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. Contracts are awarded based on a range of conventional criteria, but suppliers with certified environmental management systems have an additional advantage. 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. Since 2009, DEWA has been certified to SA8000. An internal network of SA8000 representatives and auditors ensure compliance in this area, on a regular basis, through a process that includes conducting site visits and awareness sessions for our employees. We are extending this commitment to good labor standards to our supply chain, including our contractors, subcontractors and suppliers.

# EMPLOYEES



**91%** of employees completed their performance appraisal for Cycle 2013 in 2014.

Awarded British Safety Council Sword of Honour in Health and Safety for the seventh consecutive year

**68%** decrease in accident incident ratio between 2009-2014





## OUR MANAGEMENT APPROACH

We firmly believe that we have a responsibility to provide a happy and positive work environment that supports our people in doing their jobs effectively and efficiently. Our leadership is committed to the development of those employees and has launched multiple Employee Relations Programs that enable staff to actively participate, to be heard and to be recognised for performance excellence. 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, respect, security and transparency about pay increases and promotions as well as providing a safe and positive work environment.

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

- Happy and positive work environment
- Employee health and safety
- Attracting and retaining a world-class workforce
- Promoting Emiratisation

Total workforce by gender, type, and region, 2014

| Region        | Female       | Male         | Percentage of Workforce |
|---------------|--------------|--------------|-------------------------|
| Europe        | 9            | 37           | 0.45%                   |
| Asia          | 215          | 6,751        | 68.02%                  |
| Africa        | 57           | 689          | 7.28%                   |
| Middle East   | 1,244        | 1,211        | 23.97%                  |
| North America | 8            | 15           | 0.22%                   |
| Oceania       | 1            | 4            | 0.05%                   |
| <b>Total</b>  | <b>1,534</b> | <b>8,707</b> |                         |

## DEWA'S WORK ENVIRONMENT

During 2014, we launched our Happiness Department to support our strategic objective to achieve the happiness of our stakeholders, especially our employees. A key part of providing our people with a happy, secure, productive and positive environment is the physical working conditions. In our LEED Platinum Certified Sustainable Building in Al Quoz, employees have the ability to adjust their own working environment through air conditioning and heat controls to optimise their comfort. There is also a green roof, which provides space for a garden under our solar panels. Gym facilities are also present in our offices in Al Quoz and Al Warsan. Employees are also encouraged to provide us with their ideas on how to improve our working environment and services through our TAWASOL Employee Suggestion Scheme. A number of initiatives suggested by our employees have had an impact on our triple bottom line. While with regards to operational changes affecting our employees, there is currently no set notice period provided to employees prior to the implementation of significant operational changes.



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 Centers:** Our Child Care Centers, located in the Head Office, Al Quoz and Al Warsan were created to provide care during the working hours for up to 167 of our employees' children. This initiative has been an outstanding success in helping employees to balance family and work duties.

We recognise that making DEWA a workplace with world-class standards also requires us to consider how we reward our employees. Our Personnel Committee reviews employee performance appraisals, promotions, salary increments and other personnel matters to ensure that our employees are rewarded fairly and in line with their performance. Periodically, we review and analyse job roles, matching them with people that have the skills and academic qualifications to fill the requirements, to ensure that these are kept updated. We offer our employees a range of additional benefits through initiatives such as:

- **TAKAFUL:** This fund is open only to DEWA employees and was launched in 2009 to provide financial support in case of emergencies. In 2014, we were able to provide approximately AED 2.3 million to help our employees during their times of need.
- **Waffer Program:** The program provides competitive offers and discounts for DEWA staff for various shops, hotels, and other services.
- **Excellence Award & Recognition Program:** The program aims to appreciate and reward the employees (individual or groups) who have excelled in their achievements.

## EMPLOYEE HEALTH AND SAFETY

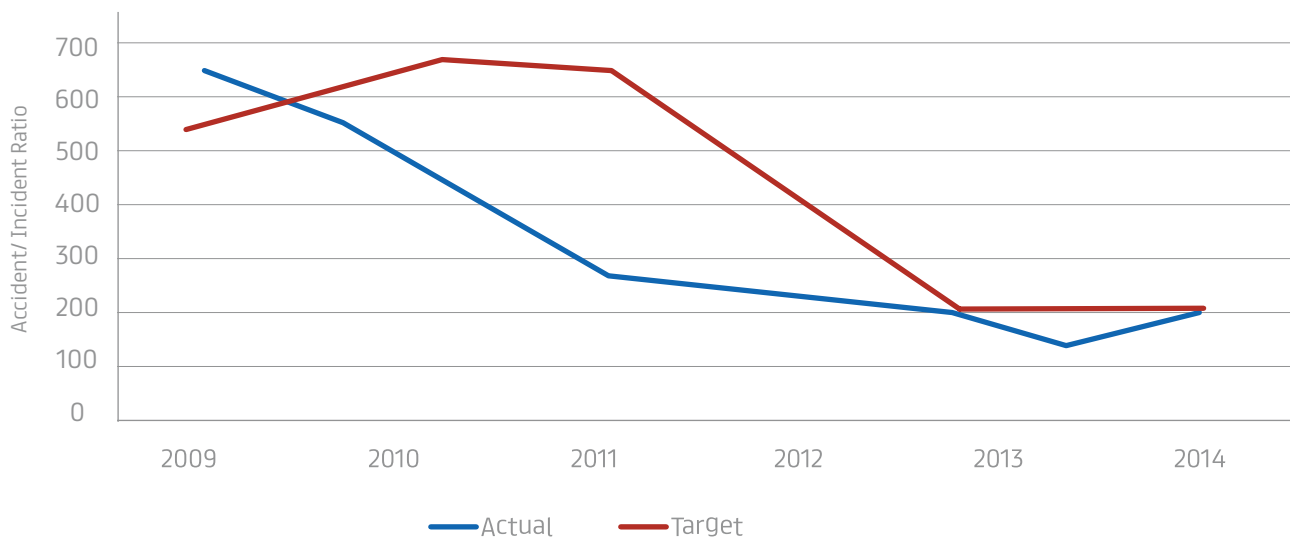
The health and safety of our people is our leading priority. We are committed to applying international best practice standards in relation to health and safety management and we strive for continuous performance improvement in this area. Our management approach to the health and safety of employees, suppliers and contractors is enshrined in our policies and management systems.

- 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 7 years starting from 2007. 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 third consecutive year.
- We have a dedicated QHSE Approach governed by a series of assessments and we use Document & Controlled Procedures (IMSP01-16 & SP01-15) to ensure that we implement best practice OH&S standards. We use proactive monitoring such as inspections, surveys, surveillance, health screenings and internal audits.
- 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 require all contractors and technicians to qualify for an Electrical Contractor's Competency License in order to install electrical connections in any dwelling or building in Dubai.

- We also maintain quality control procedures for the purchase of any equipment exceeding AED 1 million in value.

We have an obligation to our contractors, subcontractors and vendors, and we comply with OHSAS 18001 and 18002 to ensure that safety measures are observed. In addition to this, our dedicated SP06 Contractor Safe Working Procedure is also in place. To raise safety awareness amongst our contractors, we 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 contractors' 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. This includes assessments conducted by our Internal Audit team, and also by independent external auditors certification of our health and safety systems is also re-verified once every three years. 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, which we have successfully reduced by 68% between 2009 and 2014. We are pleased to state that we suffered no work-related fatalities during 2014.

#### Accident/Incident Ratio (AIR), 2014



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



## CASE STUDY

### ARWEEHOM CAMPAIGN



To promote best practices for building a stimulating work environment, DEWA has organised its Arweehom (Arabic for 'Quench their Thirst') campaign for the third consecutive year, based on its success over the previous two years. The campaign shows our appreciation towards our employees and our contractors' employees by providing them with meals, bottles of cold water, food-storage bags, and leaflets on the importance of remaining hydrated during the summer months. The 2014 campaign delivered supplies to 1,200 laborers compared with 400 laborers in 2013. At DEWA, we constantly seek to expand on our social initiatives.

## A WORLD-CLASS WORKFORCE

During 2014, some 1,023 people were hired to work for DEWA, while 461 people left our organisation. To further develop and retain our world-class workforce, we provide all possible support to our employees to further improve their talents and skills, and strengthen social cohesion. One of the key ways in which we support our employees at all levels of the organisation is by providing training to continually enhance their skills. Since 2010, we have witnessed a steady increase in average leadership training hours, manager training hours and non-supervisory employee training hours. We also run a career development and succession planning program at DEWA. In 2014, we developed our technical competency frameworks and updated our behavioral competency frameworks. While a portion of our employees attended our development centers, with individual development plans produced for each delegate. Training plans will be developed to assist delegates to fulfil their individual development plans. Succession planning for up to 80 critical positions in the organisation will also be carried out, with 80% of the positions to be held by UAE nationals.

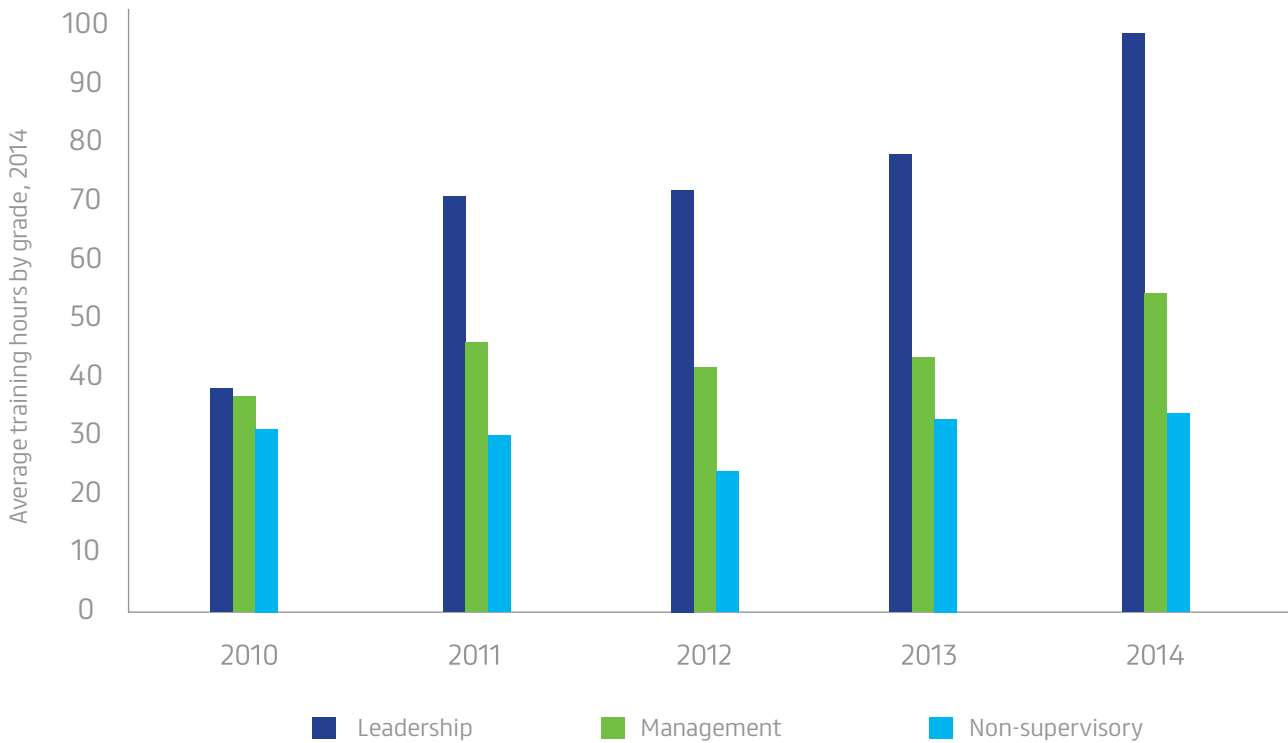
New employee hires by age group, gender and region, 2014

| Category         | Number of New Hires | Percentage |
|------------------|---------------------|------------|
| <b>By Age</b>    |                     |            |
| Under 30         | 527                 | 51.5       |
| 30-50            | 489                 | 47.8       |
| Over 50          | 7                   | 0.68       |
| <b>By Gender</b> |                     |            |
| Female           | 243                 | 23.75      |
| Male             | 780                 | 76.25      |
| <b>By Region</b> |                     |            |
| Europe           | 9                   | 0.88       |
| Asia             | 87                  | 8.50       |
| Africa           | 1                   | 0.10       |
| Middle East      | 926                 | 90.5       |

Employee turnover by age group, gender and region, 2014

| Category         | Number of Employees | Percentage |
|------------------|---------------------|------------|
| <b>By Age</b>    |                     |            |
| Under 30         | 113                 | 24.5       |
| 30-50            | 161                 | 34.9       |
| Over 50          | 187                 | 40.6       |
| <b>By Gender</b> |                     |            |
| Female           | 45                  | 9.8        |
| Male             | 416                 | 90.2       |
| <b>By Region</b> |                     |            |
| Europe           | 1                   | 0.2        |
| Asia             | 300                 | 65.1       |
| Africa           | 4                   | 0.9        |
| Middle East      | 154                 | 33.4       |
| North America    | 2                   | 0.4        |

Average training hours by grade, 2014



## PROMOTING EMIRATISATION

DEWA continuously seeks to support government efforts to increase local employment as well as to train the next generation of professionals. DEWA is committed to increasing the proportion of staff who are UAE nationals and to develop their training and expertise. Of the new hires during 2014, 88.3% were UAE nationals. Additionally, within our organisation UAE nationals held 81% of our top management and leadership positions, 44.5% of our middle management positions, and 32.6% of our nonsupervisory positions within DEWA during 2014. We strive to attract new and qualified UAE-national professionals and focus on strengthening their skills by providing them with scholarships and training courses at various universities, colleges and institutes around the world. In this way, we support the burgeoning demand in the educational sector, whilst also

driving our own strategy and investing in our future workforce. We launched a scholarship program in 2013, aimed at educating Emirati students abroad on renewable energy. We also launched the DEWA Academy, which aims to foster a new generation of Emiratis both academically and vocationally. Additionally, we offer a number of scholarship programs 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.

# STAKEHOLDERS AND COMMUNITY



In 2014, **DEWA** employees  
**contributed 7,338**  
volunteering hours

Rolled out 71 community  
initiatives in 2014

Second annual sustainability  
stakeholder workshops held  
in 2014





## MANAGEMENT APPROACH

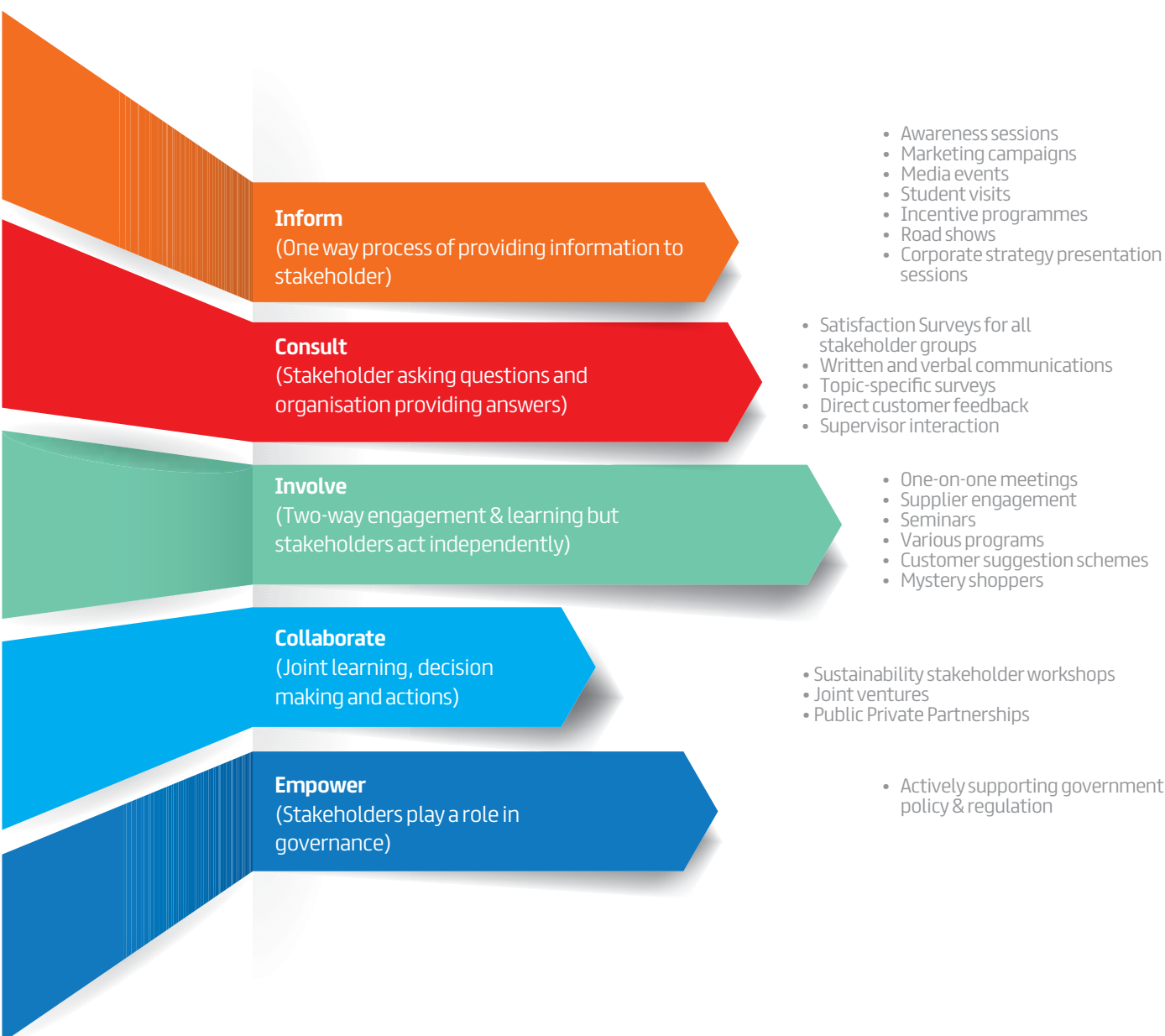
Our business is answerable to Dubai's residents, the communities we work in, our own employees and those we work with including our government, suppliers and partners. Our stakeholders are identified as those categories of individuals, groups and institutions whose contribution is required for DEWA to carry out its mission. As such, we place our stakeholder's needs and expectations at the core of our strategy to provide reliable electricity and water infrastructure needed to sustain Dubai's economic growth. To gauge our stakeholder expectations, we aim to continuously engage a broad set of stakeholder representatives from government, customers, employees, business partners and community groups, as can be seen in our stakeholder map. It is important that we effectively engage with all our stakeholders so that we can understand what is expected from us on important issues. To achieve this we have established arrangement of engagement channels including satisfaction surveys and road-shows, joint ventures and collaboration with government authorities on regulatory priorities. Furthermore, we employ a variety of different engagement methods designed for specific purposes and desired outcomes.

Our key strategic objectives relating to our stakeholders include:

- Hosting stakeholder engagement workshops on sustainability for our key stakeholder groups
- Defining our stakeholder value proposition for each group
- Responding to stakeholders' needs and expectations
- Seeking new opportunities to collaborate with key partners to advance sustainable development
- Establishing community initiatives that benefit Dubai and the UAE

## DEWA STAKEHOLDERS, 2014





## ENGAGING WITH STAKEHOLDERS

Our annual Stakeholder Satisfaction Survey addresses our stakeholder's expectations regarding several issues related to DEWA and each group. Sustainability is embedded in DEWA's vision; therefore, it is important to ensure the sustainability knowledge is well communicated to our stakeholders and based on that, DEWA has developed tailored questions that are related to sustainability in each of its stakeholder surveys. The 2014 results of the stakeholder satisfaction surveys reveals that, across all of our stakeholder groups, the majority of respondents are highly aware of DEWA's approach to sustainability and were broadly satisfied with our performance.

# STAKEHOLDER SUSTAINABILITY SURVEY RESULTS, 2014

Sustainability is an important consideration for DEWA when selecting product / services

Suppliers

83.9%

I am able to supply more sustainable products / services to DEWA

Suppliers

84.5%

DEWA demonstrates leadership in sustainability across the public sector

Government

82.9%

You are aware of the role that DEWA plays in driving the sustainability agenda

Government

89%

I can explain DEWA's approach to sustainability

Employees

82%

Satisfaction with DEWA's approach to sustainability

Society (business)

82%

Society (community)

80%

Customers

86.5%

I am aware of DEWA's approach to sustainability

Employees

84%

Society (business)

74%

Society (community)

93%

0% 20% 40% 60% 80% 90%  
% positive response to survey questions

## DEWA'S STAKEHOLDER ENGAGEMENT WORKSHOPS ON SUSTAINABILITY

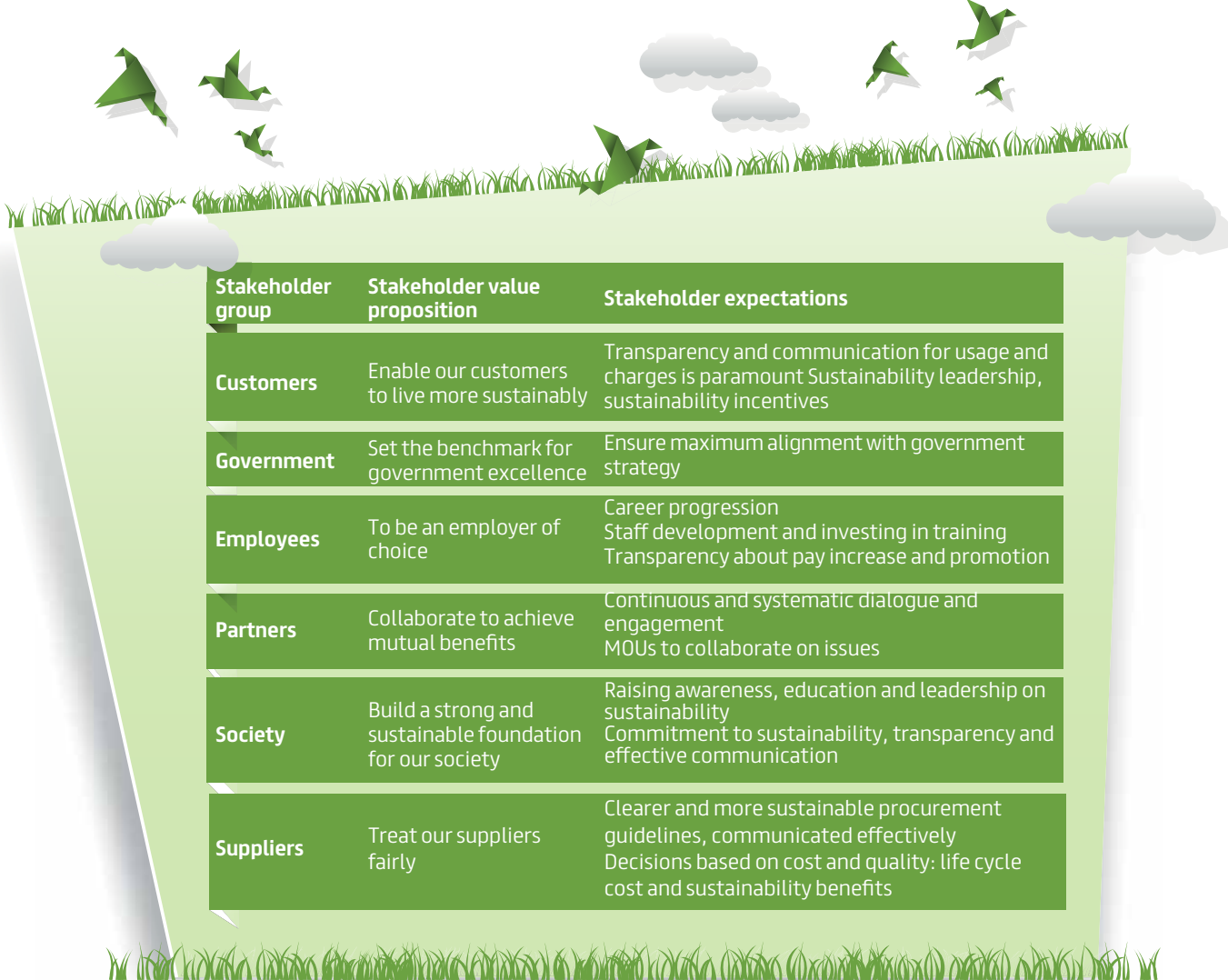
In 2014, for the second consecutive year, we hosted our annual stakeholder sustainability workshops in DEWA's sustainable building in Al-Quoz, to further the dialogue on sustainability with our stakeholders. The findings from the workshop have provided us with deep insight into what our stakeholders' value and which sustainability issues are most important to them. Some of the key issues and/or recommendations that were raised through our stakeholder engagement included the following:

1. **Stakeholder Engagement & Communication:** All stakeholder groups unanimously cited the benefits of the two way communication between DEWA and its stakeholders. Stakeholders acknowledged the quality of the conducted workshop and encouraged it to continue as a future practice. They recommended that the existing means of communication between DEWA and its stakeholders should be maintained.

2. **Local Partnerships:** Stakeholders were interested in collaborating with DEWA on future projects. An emphasis on local partnership was also brought up as an area of potential improvement in collaboration between DEWA and its stakeholders.
3. **Public Awareness:** Stakeholders emphasised on the importance of educating DEWA employees and the public about sustainability as there still remains limited awareness regarding it.

## STAKEHOLDER EXPECTATIONS AND VALUE PROPOSITION

The messages which we receive from our stakeholders we use to guide and inform the development of our strategy objectives. One of the ways in which we have done this is to explicitly identify the unique value-proposition that DEWA aspires to offer its stakeholder groups.



| Stakeholder group | Stakeholder value proposition                             | Stakeholder expectations                                                                                                                                          |
|-------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customers         | Enable our customers to live more sustainably             | Transparency and communication for usage and charges is paramount Sustainability leadership, sustainability incentives                                            |
| Government        | Set the benchmark for government excellence               | Ensure maximum alignment with government strategy                                                                                                                 |
| Employees         | To be an employer of choice                               | Career progression<br>Staff development and investing in training<br>Transparency about pay increase and promotion                                                |
| Partners          | Collaborate to achieve mutual benefits                    | Continuous and systematic dialogue and engagement<br>MOUs to collaborate on issues                                                                                |
| Society           | Build a strong and sustainable foundation for our society | Raising awareness, education and leadership on sustainability<br>Commitment to sustainability, transparency and effective communication                           |
| Suppliers         | Treat our suppliers fairly                                | Clearer and more sustainable procurement guidelines, communicated effectively<br>Decisions based on cost and quality: life cycle cost and sustainability benefits |

## LOCAL COMMUNITY

At DEWA, we understand that responsibility towards the wider society and communities in Dubai is essential. For the year 2014, none of our large projects physically or economically displaced people within our operational boundaries. Additionally, our Corporate Social Responsibility (CSR) Program coordinates a network of 28 divisional representatives who are responsible for coordinating our social and community initiatives. We are proud to announce that we have delivered 71 community initiatives in 2014, contributing approximately 7,338 volunteer hours. Initiatives range from local community development programs such as awareness programs in schools, to blood-donation drives.

### CASE STUDY INSPIRING THE NEXT GENERATION



DEWA continuously seeks to support the sustainable development of Dubai, especially with regards to creating awareness on the importance of environmental protection amongst the youngest in our society. Therefore, we have gladly supported Alathba Primary School for Girls in Dubai by installing solar powered street lights and energy-efficient floodlights within their school premises. The school had previously lacked sufficient outdoor lighting which prevented them from hosting outdoor sporting events, activities, and programs after sunset. To further educate and inspire students, an exhibition was also created with the assistance of Lootah Technical Centre, to showcase how solar energy can be utilised to power regular day items such as fans, pianos, lights, phone chargers and cars.



# Appendix 1

## MATERIAL ASPECTS AND THEIR BOUNDARIES

| Material Aspects               | Material within the organisation or external | Relevant External Stakeholders |           |          |         |            |
|--------------------------------|----------------------------------------------|--------------------------------|-----------|----------|---------|------------|
|                                |                                              | Customers                      | Suppliers | Partners | Society | Government |
| Economic                       |                                              |                                |           |          |         |            |
| Economic performance           | 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                                         |                                |           |          | ✓       | ✓          |
| Products and services          | Both                                         | ✓                              | ✓         | ✓        | ✓       | ✓          |
| Compliance                     | Both                                         |                                |           |          | ✓       | ✓          |
| Social                         |                                              |                                |           |          |         |            |
| Employment                     | Both                                         |                                |           |          | ✓       | ✓          |
| Labour/management relations    | Both                                         |                                |           |          |         | ✓          |
| Occupational health and safety | Both                                         |                                |           |          |         | ✓          |
| Training and education         | Both                                         |                                |           |          |         | ✓          |
| Local communities              | Both                                         |                                |           |          | ✓       | ✓          |
| Compliance                     | Both                                         |                                |           |          | ✓       | ✓          |
| Product and service labelling  | Both                                         | ✓                              | ✓         | ✓        | ✓       | ✓          |
| Access                         | Both                                         | ✓                              | ✓         | ✓        | ✓       | ✓          |
| Provision of information       | Both                                         | ✓                              | ✓         | ✓        | ✓       | ✓          |



# GRI CONTENT INDEX

| GRI Indicator                                     |                                                                                                                      | Page          |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------|
| <b>General Standard Disclosures</b>               |                                                                                                                      |               |
| <b>Strategy and analysis</b>                      |                                                                                                                      |               |
| G4-1                                              | Statement from the MD and CEO                                                                                        | 11            |
| <b>Organisational profile</b>                     |                                                                                                                      |               |
| G4-3                                              | Name of the organisation                                                                                             | 18            |
| G4-4                                              | Brands, products and services                                                                                        | 18            |
| G4-5                                              | Location of the organisation                                                                                         | 17            |
| G4-6                                              | Where the organisation operates                                                                                      | 18            |
| G4-7                                              | Nature of ownership and legal form                                                                                   | 18            |
| G4-8                                              | Markets served by organisation                                                                                       | 18, 52        |
| G4-9                                              | Scale of the organisation (number of employees, operations, sales, products and services provided)                   | 18-19         |
| G4-10                                             | Employees (total workforce categorised by employment type and gender)                                                | 73, 76        |
| G4-11                                             | Collective bargaining agreement rates                                                                                | No CBA in UAE |
| G4-12                                             | Organisation's supply chain                                                                                          | 73            |
| G4-13                                             | Significant changes to organisation during the reporting period                                                      | 18            |
| G4-14                                             | Precautionary principle                                                                                              | 70            |
| G4-15                                             | Externally developed charters, principles and initiatives the organisation subscribes / endorses                     | 21            |
| G4-16                                             | Memberships of associations and national or international advocacy organisations                                     | 19            |
| EU1                                               | Installed capacity, broken down by primary energy source and by regulatory regime                                    | 18-19         |
| EU2                                               | Net energy output broken down by primary energy source and by regulatory regime                                      | 18, 40        |
| EU3                                               | Number of residential, industrial, institutional and commercial customer accounts                                    | 52            |
| EU4                                               | Length of above and underground transmission and distribution lines by regulatory regime                             | 45            |
| EU5                                               | Allocation of CO2 emissions allowances or equivalent, broken down by carbon trading framework                        | 48            |
| <b>Identified material aspects and boundaries</b> |                                                                                                                      |               |
| G4-17                                             | List of entities included in the organisation's financial statements and identify entities not covered in the report | 18            |
| G4-18                                             | Process for defining the report content and aspect boundaries                                                        | 20-22         |

|                                               |                                                                                           |              |
|-----------------------------------------------|-------------------------------------------------------------------------------------------|--------------|
| G4-19                                         | Material aspects identified in the process for defining report content                    | 22, 90       |
| G4-20                                         | Aspect boundaries for each material aspect within the organisation                        | 90           |
| G4-21                                         | Aspect boundaries for each material aspect outside the organisation                       | 90           |
| G4-22                                         | Explanation of restatements of information from previous reports                          | 15           |
| G4-23                                         | Significant changes from previous reporting periods in the scope and aspect boundaries    | 15, 90       |
| <b>Stakeholder engagement</b>                 |                                                                                           |              |
| G4-24                                         | List of all stakeholder groups                                                            | 84           |
| G4-25                                         | Basis for identification and selection of stakeholders                                    | 84           |
| G4-26                                         | Organisation's approach to stakeholder engagement                                         | 84-86        |
| G4-27                                         | Key concerns raised through stakeholder engagement                                        | 87           |
| <b>Report profile</b>                         |                                                                                           |              |
| G4-28                                         | Reporting period                                                                          | 15           |
| G4-29                                         | Date of most recent (previous) report                                                     | 2013         |
| G4-30                                         | Reporting cycle                                                                           | 15           |
| G4-31                                         | Contact point for questions regarding the report or its contents                          | 15           |
| <b>GRI content index and assurance policy</b> |                                                                                           |              |
| G4-32                                         | GRI content index                                                                         | 91-94        |
| G4-33                                         | External assurance policy                                                                 | 15           |
| <b>Governance</b>                             |                                                                                           |              |
| G4-34                                         | Governance structure of organisation                                                      | 25           |
| <b>Ethics and Integrity</b>                   |                                                                                           |              |
| G4-56                                         | Organisation's values, principles, standards and norms of behaviour                       | 24           |
| <b>Specific Standard Disclosures</b>          |                                                                                           |              |
| <b>Economic</b>                               |                                                                                           |              |
| <b>Economic performance</b>                   |                                                                                           |              |
| G4-DMA                                        | Management approach to economic performance                                               | 30           |
| G4-EC1                                        | Direct economic value generated and distributed                                           | 33           |
| <b>Availability and reliability</b>           |                                                                                           |              |
| G4-DMA                                        | Management approach: to ensure short and long term availability of electricity            | 40-45, 53-54 |
| EU10                                          | Planned capacity against projected electricity demand over the long term by energy source | 40-42        |
| <b>Demand side management</b>                 |                                                                                           |              |
| G4-DMA                                        | Management approach: demand side management programs                                      | 48-49        |
| <b>Research and development</b>               |                                                                                           |              |
| G4-DMA                                        | Management approach: research and development activity and expenditure                    | 34           |



|                                         |                                                                                                                                           |                     |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>System efficiency</b>                |                                                                                                                                           |                     |
| G4-DMA                                  | Management approach                                                                                                                       | 42-45               |
| EU12                                    | Transmission and distribution losses as a percentage of total energy                                                                      | 45                  |
| <b>Environmental</b>                    |                                                                                                                                           |                     |
| <b>Energy</b>                           |                                                                                                                                           |                     |
| G4-DMA                                  | Management approach                                                                                                                       | 40-49               |
| G4-EN6                                  | Reduction of energy consumption                                                                                                           | 48-49               |
| <b>Water</b>                            |                                                                                                                                           |                     |
| G4-DMA                                  | Management approach                                                                                                                       | 62-67               |
| G4-EN8                                  | Total water withdrawal by source                                                                                                          | 62-63               |
| G4-EN9                                  | Water sources significantly affected by withdrawal of water                                                                               | 62-63               |
| <b>Emissions</b>                        |                                                                                                                                           |                     |
| G4-DMA                                  | Management approach                                                                                                                       | 38-39, 70-71        |
| G4-EN15                                 | Direct GHG emissions (Scope 1)                                                                                                            | 39                  |
| G4-EN18                                 | GHG emissions intensity                                                                                                                   | 39                  |
| G4-EN19                                 | Reduction of GHG emissions                                                                                                                | 44                  |
| G4-EN21                                 | NOX, SOX and other significant air emissions                                                                                              | 71-72               |
| <b>Effluents and waste</b>              |                                                                                                                                           |                     |
| G4-DMA                                  | Management approach                                                                                                                       | 65                  |
| G4-EN22                                 | Total water discharge by quality and destination                                                                                          | 65                  |
| G4-EN23                                 | Total weight of waste by type and disposal method                                                                                         | 72-73               |
| G4-EN25                                 | Weight of transported hazardous waste (and proportion shipped internationally)                                                            | 73                  |
| G4-EN26                                 | Identity of habitats impacted by discharges of water                                                                                      | 65, 70              |
| <b>Products and services</b>            |                                                                                                                                           |                     |
| G4-DMA                                  | Management approach                                                                                                                       | 48                  |
| G4-EN27                                 | Extent of impact mitigation of environmental impacts of products and services                                                             | 43-44, 64-65, 71-73 |
| <b>Compliance</b>                       |                                                                                                                                           |                     |
| G4-DMA                                  | Management approach                                                                                                                       | 70                  |
| G4-EN29                                 | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations | 70                  |
| <b>Social</b>                           |                                                                                                                                           |                     |
| <b>Labour practices and decent work</b> |                                                                                                                                           |                     |
| <b>Employment</b>                       |                                                                                                                                           |                     |
| G4-DMA                                  | Management approach                                                                                                                       | 76-81               |

|                                       |                                                                                                                                                                                    |        |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| G4-LA1                                | Total number and rates of new employee hires and turnover by age group, gender and region                                                                                          | 80     |
| <b>Labour/management relations</b>    |                                                                                                                                                                                    |        |
| G4-DMA                                | Management approach                                                                                                                                                                | 76-81  |
| G4-LA4                                | Minimum notice periods regarding operational changes, including whether these are specified in collective agreements                                                               | 76     |
| <b>Occupational health and safety</b> |                                                                                                                                                                                    |        |
| G4-DMA                                | Management approach                                                                                                                                                                | 77-78  |
| G4-LA6                                | Type of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities                                                  | 78     |
| <b>Training and education</b>         |                                                                                                                                                                                    |        |
| G4-DMA                                | Management approach                                                                                                                                                                | 79-81  |
| G4-LA9                                | Average hours of training per year per employee by gender and employee category                                                                                                    | 81     |
| G4-LA10                               | Programs for skills management and lifelong learning that support continued employability of employees and assist them in managing career endings                                  | 74, 79 |
| <b>Society</b>                        |                                                                                                                                                                                    |        |
| <b>Local communities</b>              |                                                                                                                                                                                    |        |
| G4-DMA                                | Management approach                                                                                                                                                                | 84, 88 |
| EU22                                  | Number of people physically or economically displaced and compensation, broken down by type of project                                                                             | 88     |
| <b>Compliance</b>                     |                                                                                                                                                                                    |        |
| G4-DMA                                | Management approach                                                                                                                                                                | 23-26  |
| G4-S08                                | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations                                                        | 23     |
| <b>Product responsibility</b>         |                                                                                                                                                                                    |        |
| <b>Product and service labelling</b>  |                                                                                                                                                                                    |        |
| G4-DMA                                | Management approach                                                                                                                                                                | 52-58  |
| G4-PR5                                | Results of surveys measuring customer satisfaction                                                                                                                                 | 57-58  |
| <b>Access</b>                         |                                                                                                                                                                                    |        |
| G4-DMA                                | Management approach: programs, including in partnership with government, to improve or maintain access to electricity and customer support services                                | 52-55  |
| EU28                                  | Power outage frequency                                                                                                                                                             | 53-54  |
| EU29                                  | Average power outage duration                                                                                                                                                      | 53-54  |
| EU30                                  | Average plant availability factor by energy source and by regulatory regime                                                                                                        | 15, 54 |
| <b>Provision of information</b>       |                                                                                                                                                                                    |        |
| G4-DMA                                | Management approach: practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services | 55     |





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