Tcwa power أ



# Trusted, healthy and vibrant

ACWA Power Sustainability Report 2015





**King Salman bin Abdulaziz Al-Saud** The Custodian of the Two Holy Mosques



Prince Mohammed bin Naif bin Abdulaziz Al-Saud Crown Prince, Deputy Prime Minister and Minister of Interior



Prince Mohammed bin Salman bin Abdulaziz Al-Saud Deputy Crown Prince, Second Deputy Prime Minister and Minister of Defense

# A big year for sustainability

At ACWA Power, we strive to create value for our shareholders by delivering growth through successful project development, align our interests to those of our wider stakeholder community and increasing our focus on fast growing markets. We are a business committed to financial growth with sustainable returns. social progress and avoidance of harm to our people, partners and the environment. ACWA Power prides itself on the commitment to build lasting partnerships with the people and communities where we operate and maximizing the potential that our projects can bring to remote parts of the world. Sustainability is integral to delivering the Group's strategy and is a driving force behind our record business achievements.





# About ACWA Power 06

We are committed to producing electricity and desalinated water in a responsible manner. We hold ourselves to the highest ethical and moral standards and behave in ways that earn the trust of our stakeholders.



# Our People 14

Creating value through our people is one of the core components of our business model and is fundamental to the achievement of our objectives.



# Our Business 16

ACWA Power firmly believes that a business has the right to make a profit by taking and managing risks while simultaneously behaving responsibly.



# Highlights of 2015

A year of continued progress

# 749.2 million m<sup>3</sup>

### Desalinated Water exported:

749.2 million m³, commercial availability: 93%, dispatch: 2 million m³/day.

92%

## Localization of employees

for international operations (excluding KSA & UAE).

# 24,119 MW

Total power asset portfolio as of December 2015

(under development, in construction and operation).

# 12 countries

## **Geographical Span**

Increased to 12 countries with 8 offices.

# 45

## Community based projects

With investment of SAR 6.74 Mn.

# 480 kgCO<sub>2</sub>/MWh

Carbon intensity of electricity

# 0.04

# **HSE** performance

Sustained LTI rate of 0.04 supported by no fatalities, fines or environmental pollution incidents during 2015.

# >1 **GW**

# Renewable Power Portfolio

Grew to 1,030 MW as of December 2015 which is 4.25% of total capacity.

# **6,791 hours of**

Video Conferencing

# 84,284 GWh

# Electricity delivered

84,284 GWh, +21.8% yoy, commercial availability: 95%

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# Leadership Statement

# Making a positive contribution to society

We have an important role to play in delivering reliable energy and clean water to meet growing global demand. We endeavor to support the ambitions of our host governments to realize their development goals, while staying true to our values.

It is our pleasure to present to you this second edition of our sustainability report as a measure of our commitment to transparency and best practice. We have continued to ensure that our operations surpass legal and regulatory compliance requirements, all the while holding ourselves accountable to creating shared value with our stakeholders and championing a sustainable future for power and water generation.

Before we delve into our philosophy and performance in the area of Sustainability, we are saddened to note a fatality resulting from a serious incident at the Noor III project construction site at Ouzazarte, Morocco in May 2016. An incident management team has been activated and a thorough investigation is underway as we go to press on this 2015 Sustainability Report.

At ACWA Power we focus on providing power and desalinated water efficiently, reliably and safely at the lowest possible cost in conjunction with supporting the communities in which we operate. We are very conscious of the fact that our people and plants can often make the difference to keeping lights switched on and taps running.

Water and power are essential commodities which are not just basic needs, but which provide the foundations for social development and economic growth. That is why sustainability has been a cornerstone of the way in which we operate since our establishment more than ten

Our sustainability focus is on three areas: social and economic development by maximizing value retention in the local economy; protecting and contributing to environmental sustainability; and ensuring the health and safety of our workforce and the communities in which we operate.

We understand that in a rapidly changing world confronted with greater industrialization and urbanization, the demands on those companies which produce power and water will increase.

Companies like ours have a responsibility to drive fundamental change in our industry through efficiencies and reduction in the carbon intensity of electricity and desalinated water production.

"At ACWA Power we focus on providing power and desalinated water efficiently, reliably and safely at the lowest possible cost in conjunction with supporting the communities in which we operate."

### **ENSURING COMPLIANCE**

In our highly regulated sector we are constantly ensuring compliance with all relevant legal obligations as such that the safety of our employees is critical to maintain our license to operate. In this respect legal compliance and avoidance of health, safety, social and environmental (HSSE) impacts are fundamental as part of good business practices.

Our compliance priorities extend to include good governance, ethics and corporate responsibility, and all our projects meet the World Bank/IFC Environmental and Social Performance Standards in order to enable funders to comply with their obligations under the Equator Principles.

# DRIVING SOCIO-ECONOMIC DEVELOPMENT

A key factor in our success has been our policy of being investors in the facilities which we develop, build and operate and so we have deep interest in the success of the operations throughout their 25 year life cycles.

This long view means that we become just as invested in the prosperity and stability of the nations in which we operate as the citizens and governments of those nations themselves.

This business model ensures that we are fully committed to supporting the host communities where we operate. We do this through skills training and development to provide a technically proficient local workforce, while also fostering local SMEs in our supply chain. In 2015 we funded 45 community projects with a value of SAR 6.74 Mn to support local communities



develop additional revenue streams from activities as wide ranging as farming improvements to commercial arts and crafts development.

# **CHAMPIONING A SUSTAINABLE FUTURE**

At ACWA Power we have focused our responsibility towards developing a sustainable future by reducing our carbon emissions through maximizing efficiency of fuel utilization and developing a broader fuel mix with a focus on renewables.

We have fast-tracked our renewables portfolio and, in the year covered by this report, we won the Sheikh Mohammed bin Rashid al-Maktoum Solar Park in Dubai by offering the lowest global off-take price of just US\$ cent 5.86 kWh. We have subsequently inaugurated the world's largest solar plant in Ouzazarte, Morocco, and a similar plant in Bokpoort, South Africa.

In 2015, our asset portfolio avoided emitting 1,500 ktCO $_2$  of which 453 ktCO $_2$  was ACWA Power's share (based on net equity shareholding) as a result of technology advances and improved efficiency over the year.

Paddy Padmanathan President and CEO

**Thamer Al Sharhan** Managing Director

# **About ACWA Power**

# Delivering sustainable energy and water

We are committed to producing electricity and desalinated water in a responsible manner. We hold ourselves to the highest ethical and moral standards and behave in ways that earn the trust of our stakeholders.

ACWA Power is a lead developer, investor, co-owner and operator of an international portfolio of electricity generation and desalinated-water plants. We produce and sell electricity and water in bulk to off-takers comprising state utilities and industrial majors through long-term contracts.

By the end of 2015, ACWA Power's asset portfolio comprised 36 assets in 12 countries with the ability to generate 21.5 GW and 2.5 million m³/day of desalinated water. Founded in 2004 in Saudi Arabia in response to government liberalization of the energy market, we've defined and refined the Public Private Partnership (PPP) model. We've done this by viewing the governments in the markets in which we operate as partners.

By focusing on countries with a commitment to PPP we've been able to build up real expertise using this model to offer our government partners quick time to market and efficient plus reliable ongoing operations.

## SHAREHOLDERS

ACWA Power, incorporated in the Kingdom of Saudi Arabia, is owned by a group of prominent shareholders comprising Sanabil Direct Investment Company (owned by the KSA Public Investment Fund), the Saudi Public Pensions Agency, the International Finance Corporation (IFC) plus eight Saudi industrial and financial conglomerates. Please see accompanying Business Report for more details.











### SUSTAINABILITY IN OUR CULTURE

Sustained performance over the 20 to 25-year life cycle of our projects is critical, not only to meet our contractual obligations to our off-take customers, but also because a significant portion of the return on our investment arises in the second half of the investment tenure.

Equally, because we are often the dominant local employer in the locales where our plants are located, we deeply respect our obligation to create long-term, sustainable socio-economic value to the local community to provide shared benefits.

We aim to create a virtuous cycle of sustainable development with the communities in which we operate.

We do this through skills training to provide career opportunities in our facilities, sourcing through local SMEs, funding for broader employment opportunities in the community, and supporting community health, agricultural and educational programs to meet the development goals of local governments.

Our focus on maximizing economic value for local economies has led to us becoming a partner of choice in our current and prospective markets.

# What is Important and Why

# Meeting stakeholder expectations

At ACWA Power, we aim to be open and transparent in all that we do. We believe in honest engagement and seek to address the issues raised by all stakeholders impacted by our business.

### **SUSTAINABILITY AND REPORTING**

ACWA Power is committed to meeting international best practices on disclosure and reporting. This report confirms with the Global Reporting Initiative's (GRI) G4 Sustainability Reporting Framework at the Core level and has been independently assured as such by Environmental Resources Management (ERM). Please see page 38 for the assurance statement.

### **SCOPE AND MATERIALITY**

This report covers our operations and performance in the calendar year 2015, and includes our assets, joint ventures and operations over which we have majority management control, as per GRI guidance. The two exceptions are the Marafiq IWPP and Qurayyah IPP in which we have a minority stake but which we include for completeness. The Electricity Utilities (EU) sector supplement was

used in addition to the standard GRI G4 reporting framework in undertaking a materiality assessment of our economic, environmental and social issues. 21 material issues were identified from the 54 generic and EU specific issues covered in the GRI G4 framework.

These 21 issues (tabulated below) form the basis for the management discussions and performance data presented throughout our 2015 sustainability report.

### ACWA Power's Material Issues

Economic	Environmental	Social
Economic Performance	Energy	Occupational Health & Safety
Indirect Economic Impacts	Effluents & Waste	Diversity & Equal Opportunity
Procurement Practices	Biodiversity Security Practices	
Availability and Reliability	Environmental Compliance Indigenous Rights	
Research & Development	Supplier Environmental Assessment Anti-Corruption	
System Efficiency	Emissions	Anti-Competitive Behavior
		Regulatory Compliance
		Emergency Planning & Response
		Local Communities









# STAKEHOLDER ENGAGEMENT

The expectations and requirements of our stakeholders are taken into consideration in strategic decision-making, goal-setting, and then throughout project delivery and operation. The general public, the ultimate end users of our water and electricity, are important to us

even though we do not, as a business to government organization, have frequent direct contact. ACWA Power directly engages with end users through initiatives that address and promote efficient and responsible consumption of water and electricity, and that address local power and water needs.

## Primary Stakeholders Engagement Framework

Locus	Stakeholders	Focus	Responsibility
Assets & Facilities	Employees, Government agencies, Project shareholders, Primary suppliers, Finance institutions, Labor Groups, Contractors	Local communities, surrounding areas, regional initiatives, operations, compliance, environmental, health and safety management	Project Development Team, Project Company, Asset CSR Team, and O&M Service Provider
Regions	Employees, Offtakers, Regulators	National initiatives, office staff initiatives, diversity and inclusion	Regional Office Leadership and CSR team
Corporate	Employees, Company Shareholders, Suppliers, International organizations, Competitors	Strategic, international, Group-wide initiatives, partnerships & memberships, innovation & technology	Corporate Leadership Team and CSR Committee

# **ACWA Power's Assets**

# Unlocking the potential for sustainable growth

ACWA Power's asset portfolio comprises 36 assets (2014: 25) in 12 countries.

Our strategy is to participate in projects where we are the lead partner with majority or shared control in its development. This structure enables ACWA Power to retain influence with the facilities' management and operations that are carried out by each asset's Special Purpose Vehicle Project Company (ProjectCo). We support each of the asset-specific ProjectCos, focusing on business performance, operations and maintenance, key personnel and risk management and we share best practices from across the portfolio to raise overall Group performance.

In 2015, ACWA Power's asset portfolio capabilities grew to 24.1 MW, 2.5 million m³/day of desalinated water and averaged 1,230 tonnes per hour of steam. The growth in desalinated water production capacity in 2015 was modest, while the increase in steam capacity almost doubled with the Rabigh II IWSPP. The growth in our power portfolio was more significant as we added six facilities which has resulted in an additional 7,953 MW, which is a 53 percent increase in gross capacity and a net increase in ACWA Power share of 3,437 MW.

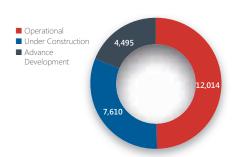
As a direct consequence of our portfolio growth, total fuel consumption increased from 2014 to 2015 by 13.6% as detailed in our performance section (from page 30). Our portfolio uses a range of fuels, including oil, gas and solar energy as inputs to develop our products. We are conscious that certain fuel types produce higher  $\text{CO}_2$  emissions than others and wherever possible, we aim to minimize the environmental impact of our operations. Heavy crude oil is used in Shuqaiq, heavy fuel oil in Rabigh 1 Independent Power Project (IPP) & Rabigh IWSPP, whereas Shuaibah IWPP uses light crude oil.

The Central Electricity Generating Company (CEGCO) uses heavy fuel oil, diesel and gas. Marafiq IWPP, Qurayyah IPP & Barka IWPP use natural gas as their fuel source. Importantly, with the entry into full production at the Qurrayah plant, the percentage of electricity generated from natural gas in our portfolio has increased to approximately 60% with the contribution from heavy and light fuel oil and diesel falling to approximately 40%. This conscious shift in fuel use has positively

impacted our carbon intensity with natural gas producing nearly one third lower carbon emissions when compared to oil.

ACWA Power wholly owns the First National Operation and Maintenance Company (NOMAC) which is a leading provider of operations and maintenance (O&M) services to the independent power and desalination industry. Established in 2005, NOMAC has continued to develop and enhance its employee base, employing over 1,200 employees to support its growth in assets under management.

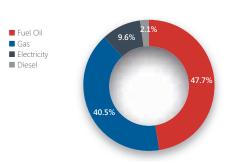
### Power Plant Status (MW)







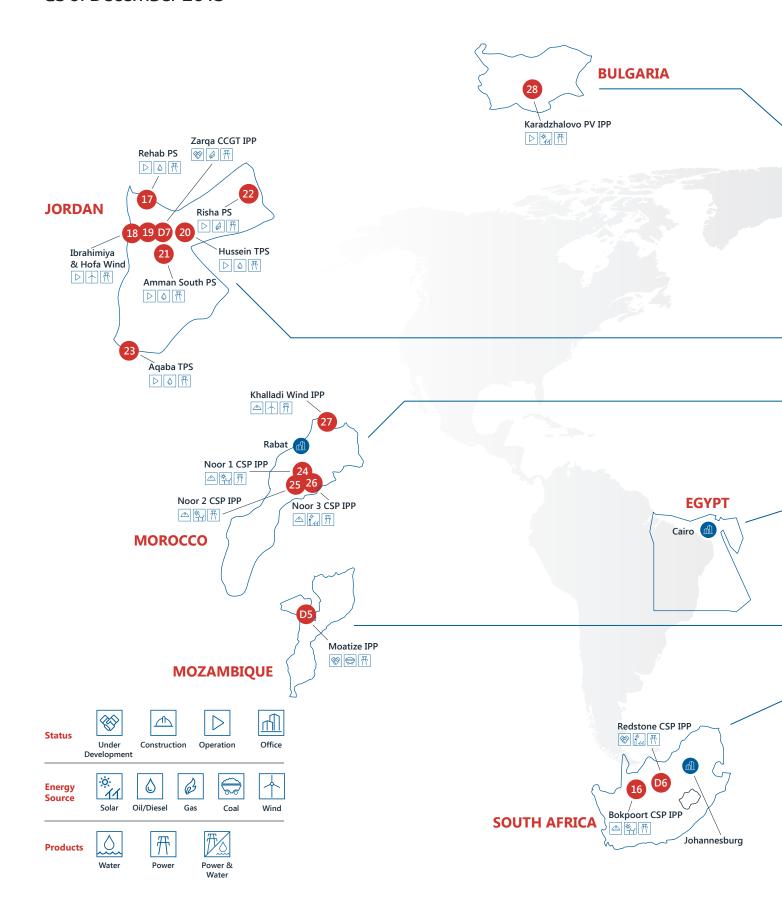
# Fuel for Desalinated Water (%)



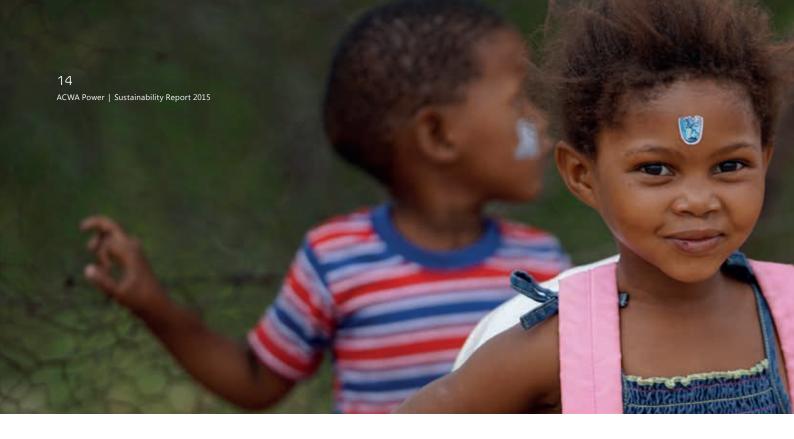
# Assets and Operations as of December 2015

C41153-1-	Asset	ProjectCo.	Product	Status	PCOD	Owner- ship	Fuel	Capacity	Thermal Storage	Operator
SAUDI ARAB	IA Bowarege IWP	International Barges Company	Water	Operational	2008	65%	Diesel	50,000m³/day	-	NOMAC
	Petro Rabigh	for Water Desalination  Rabigh Arabian Water &	Power, Water	Operational	2008	37%	Heavy Fuel Oil	360 MW 134,000m³/day,	_	Rabigh Power
2	IWSPP Petro Rabigh 2	Electricity Company Rabigh Arabian Water &	& Steam Power, Water	Under Construction	2016	37%	, i	29,520 ton/day Steam 160 MW		Company
3	IWSPP	Electricity (RAWEC)	& Steam	Orider Construction	2010	3/70	Heavy Fuel Oil	55,000m³/day, 24,360 ton/day Steam	_	Rabigh Power Company
4	Rabigh 1 IPP	Rabigh Electricity Company	Power	Operational	2013	40%	Heavy Fuel Oil	1,204 MW	-	ROMCO
5	Rabigh 2 IPP	Al Mourjan for Electricity Production Company	Power	Under Construction	2017	50%	Natural Gas	2,060 MW	-	NOMAC
6	Shuaibah II IWPP	Shuaibah Water & Electricity Company	Power & Water	Operational	2010	30%	Electricity	900 MW 880,000m³/day	-	ALIMTIAZ   NOMAC
7	Shuaibah Expansion IWP	Shuaibah Expansion Project Company	Water	Operational	2009	30%	Electricity	150,000m³/day	-	ALIMTIAZ   NOMAC
8	Shuqaiq IWPP	Shuqaiq Water & Electricity Company	Power & Water	Operational	2011	40%	Heavy Fuel Oil	850 MW 212,000m³/day	-	NOMAC
9	Marafiq IWPP	Jubail Water & Electricity Company	Power &	Operational	2010	20%	Natural Gas	2,744 MW	-	Engie &
10	Qurayyah IPP	Hajr Electricity Production Company	Water Power	Operational	2015	17.5%	Gas	800,000m³/day 3,927 MW	-	NOMAC NOMAC
	B EMIRATES		-	_	-	-	_		_	_
<b>①</b>	Mohammed bin Rashid Solar Park – Phase 2 IPP	Shuaa Energy	Power	Under Construction	2017	41.65%	Solar – PV	260 MWp 200 MW AC	-	NOMAC
<b>01</b>	Hassyan Clean Coal IPP		Power	Financial Closing	2020	34.3%	Coal	2400 MW	-	NOMAC
VIETNAM D	Nam Dinh 1 IPP		Power	Development	2018	50%	Coal	1,200 MW	-	NOMAC
OMAN					0010	1001		1071 1111 01 000 311		
12	Barka 1 IWPP	ACWA Power Barka SAOG (APB)	Power & Water	Operational	2010	42%	Natural Gas	427MW/ 91,000m³/day	-	NOMAC OMAN
B	Barka 1 Phase 1 Expansion IWP	ACWA Power Barka SAOG (APB)	Power & Water	Operational	2014	42%	-	45,460m³/day	_	NOMAC
14	Barka 1 Phase 2 Expansion IWP	ACWA Power Barka SAOG (APB)	Power & Water	Under Construction	2016	42%	-	57,000m³/day	-	NOMAC
03	Sohar 3 IPP	Shinas Generating Company	Power	Financial Closing	2019	44.9%	Gas	1,700 MW	-	NOMAC OMAN
04	Ibri IPP	Ad-Dhahirah Generating Company	Power	Financial Closing	2019	44.9%	Gas	1,450 MW	-	NOMAC OMAN
<b>1</b> 5	Salalah 1 IPP and Expansion	Dhofar Generating Company	Power	Operational and Under Construction	2018	45%	Gas	718 MW	-	NOMAC OMAN
MOZAMBIQI	JE .									
OUTU AFDI	Moatize IPP		Power	Pre-Construction	2017	-	Coal	275 MW	-	NOMAC
SOUTH AFRI	Bokpoort CSP IPP	ACWA Power Solafrica Bokpoort CSP	Power	Under Construction	2015	50%	Solar – Parabolic	50 MW	9 hours	NOMAC
<u>0</u>	Redstone CSP IPP	Power Plant	Power	Financial Closing	2017	50%	Solar – Tower	100 MW	12 hours	NOMAC
JORDAN					_	_			_	
<b>①</b>	Rehab Combined Cycle Power Station	Central Electricity Generating Co.	Power	Operational	2011	41%	Various Fuel Oil+ Natural Gas	322 MW	-	CEGCO
18 19	Ibrahimyah & Hofa Wind	Central Electricity Generating Co.	Power	Operational	2011	41%	Wind	1.5 MW	-	CEGCO
20	Hussein Thermal Power Station	Central Electricity Generating Co.	Power	Operational	2011	41%	Fuel Oil+Diesel	183 MW	-	CEGCO
<u> </u>	Zarqa CCGT IPP		Power	Financial Closing	2018	56.95%	Natural Gas	485 MW	-	CEGCO
<u>a</u>	Amman South	Central Electricity Generating Co.	Power	Operational	2011	41%	Diesel	27 MW	-	CEGCO
<u>0</u>	Power Station Risha Gas Power	Central Electricity Generating Co.	Power	Operational	2011	41%	Natural Gas	135 MW	-	CEGCO
<u></u>	Station Aqaba Thermal	Central Electricity Generating Co.	Power	Operational	2011	41%	Fuel Oil+	609 MW	-	CEGCO
MOROCCO	Power Station						Natural Gas			
24	Noor 1 CSP IPP	ACWA Power Ouarzazate	Power	Under Construction	2015	68%	Solar – Parabolic	160 MW	3 hours	NOMAC
25	Noor 2 CSP IPP	ACWA Power Ouarzazate	Power	Under Construction	2017	75%	Solar – Parabolic	200 MW	7 hours	NOMAC
26	Noor 3 CSP IPP	ACWA Power Ouarzazate	Power	Under Construction	2017	75%	Solar – Tower	150 MW	7 hours	NOMAC
27	Khalladi Wind IPP	UPC Renewables	Power	Under Construction	2017	75%	Wind	120 MW	-	NOMAC
BULGARIA										
28	Karadzhalovo – PV IPP	ACWA Power CF Karad PV Park	Power	Operational	2012	42%	Solar	60 MWp 50 MW AC	-	NOMAC
TURKEY 29	Kirikkale IPP	ACWA Güç	Under	Under Construction	2017	90.1%	Gas	950 MW	-	NOMAC

# ACWA Power's Assets and Operations as of December 2015







# Our People

# Maximizing the contribution of our people

Creating value through our people is one of the core components of our business model and is fundamental to the achievement of our objectives.

We address our employees as a community of individuals who share the organization's values and long-term vision. People at ACWA Power are considered part of an extended family, allowing us to build a solid employer-employee relationship that creates value for both the organization and the individual. ACWA Power promotes a harmonious workplace by creating a vibrant, pleasant and efficient working environment that strengthens our "family approach". The Infrastructure & People team organizes healthy living activities on a regular basis, including walks, cycling classes and meditation classes. ACWA Power is introducing employee volunteering initiatives, aiming to both increase employee satisfaction as well as strengthen ACWA Power's engagement with local communities.

ACWA Power provides employment to more than 3,100 people of which 65.8% are local nationals and 56 are women (please see table on page 42). The largest concentration of personnel is within NOMAC. We monitor the workdays of our contractors who worked a total of circa 2.85 Mn man-days across our asset portfolio to support construction, operations and maintenance.

# DIVERSITY AND EQUAL OPPORTUNITY

Diversity and equal opportunity currently falls within standard business practice and are implemented through our CSR Policy. Diversity and equal opportunity practices include employment of women throughout our organization as per local customs. The organization has demonstrated significant progress from 2011, when there were no female employees in KSA to currently providing employment to 14 women of whom 5 are in managerial and/or executive roles. We apply an equal remuneration policy for men and women performing the same job.

Our Riyadh office has one and CEGCO, Jordan, has four employees with physical disabilities. Further we have not denied employment to persons with disabilities in any of our other entities. We have no recorded incidents of discrimination on the basis of race, religion, gender or nationality from either the whistle blower hotline or our internal reporting processes.

## **LOCAL EMPLOYMENT**

Localization, employment and development of national personnel represent key sustainability risks and opportunities. ACWA Power appointed a Saudi national as Managing Director in 2013 and has two more nationals on the Leadership Team so that Saudi nationals comprise 28% of our senior management team in the Kingdom. 48.5% of ACWA Power's Saudi Arabian employees are local nationals. We have been recognized for our efforts in employing local professionals through the awarding of a "Green Rating" in the Ministry of Labor's Nitaqat Program and our training Institute contributes to supporting local employment. Across the group, 65.3% of our employees are local nationals while our international (excluding KSA and UAE) ProjectCos and Assets are 95.6% staffed by local nationals. This demonstrates our strong commitment to employing and training locals in addition to creating valuable long-term employment opportunities wherever we operate.



# COMPLIANCE WITH GLOBAL WORKPLACE REQUIREMENTS

ACWA Power has committed to respecting global standards and local requirements, and as such, we have made a public declaration in our CSR Policy against discrimination and child labor. Recently, we updated our policies, procedures and standard contracts to ensure compliance with the IFC's Environmental and Social Performance Standards.

ACWA Power works within all relevant local laws regarding freedom of association and collective bargaining. To date, no violations of such rights have been reported, as employees are free to participate in relevant initiatives where available. ACWA Power enables freedom of association through its industrial management systems in Jordan and South Africa.

# EMPLOYEE PERFORMANCE AND SATISFACTION

ACWA Power measures employee productivity and performance through formal appraisal processes. Employees are assessed annually, and their performance is graded on a four-point scale. In 2015, 99% of ACWA Power employees received a performance and career development review. The performance appraisals are used to establish individual training and development plans, succession planning plus bonus remuneration. Employee satisfaction is monitored through surveys and the performance appraisal process. ACWA Power's turnover of corporate employees was 15.8% in 2014 which reduced to 10.1% in 2015.

# **BENEFITS AND REMUNERATION**

ACWA Power rewards employees with compensation packages that comply with all regional legislation and legal requirements. We regularly engaged in salary and compensation benchmarking exercises in order to assess our competitiveness in the markets where we operate.

The overall outcome is that we offer above-average market-related remuneration. On top of attractive salaries and bonuses, ACWA Power offers comprehensive employee benefits packages, including private international healthcare, gym/health club allowances, and annual leave packages.

### TRAINING

Our approach to training is a combination of decentralization to local levels, with training opportunities tailored to the needs of each employee plus co-ordination and oversight from the Corporate Learning and Development team.

The primary focus areas for our training are:

- Core Skills Training: improving skills related to employees' job functions and fields of expertise;
- Technology & Innovation Training: improving understanding of key technology concepts that the company is built upon or uses in its operations; and
- HSSE Training: teaching key safety and social measures in the workplace and behavioral norms and expectations.









ACWA Power's core business is the delivery of electricity and desalinated water through the operation of assets in which the company has enough investment to be able to exercise operational control. As we are a developer, investor and operator of plants, our value chain starts with Business Development and extends to Asset Management & Assurance which are our two primary line functions.

## **FINANCIAL PERFORMANCE**

The economic and financial contributions made by ACWA Power and its projects include the direct impact of salaries paid to employees, contractors and their respective supply chains, plus the revenue generated from equipment and services procured from local and international suppliers over the course of a project's typical life span of more than 20 years. The socioeconomic shared value created and distributed by ACWA Power significantly exceeds by several multiples the direct financial contributions and initial capital outlay of our projects. This added value provides the main impetus to our business' vision and mission, which is intergenerational in nature. ACWA Power continued its steady financial performance and achieved Income from Main Operations of SAR 956 Mn and a Net Income of SAR 706 Mn for the financial year ended 31 December 2015. This is an increase of 32.6% in the Net Income year on year when

## Direct Economic Value Generated (SAR in Thousands)

Particulars	2015	2014
Economic Value Generated		
Revenue	4,403,288	6,696,339
Share in net income of associates and joint ventures	299,247	367,114
Other income	106,129	172,691
Economic Value Generated	4,808,664	7,236,144

Economic Value Distributed		
Operating costs		
Cost of material and services bought from outside	3,089,161	5,622,662
To employees		
as remuneration	402,888	374,047
To government		
as taxation	54,678	50,180
To providers of capital		
Dividend to MI	128,856	125,891
as non-controlling interest	92,730	68,818
as finance charges	188,474	217,948
Economic Value Distributed	3,956,787	6,459,546

Economic Value Retained	851,877	776,598



SAR 852 Mn of Economic Value Retained.

compared to SAR 532 Mn for the year ended 31 December 2014. Earnings per share (EPS) attributable to net income for the year is SAR 1.29 against SAR 1.01 for the corresponding previous year, an increase of 27.7%. The EPS is based on weighted average numbers of shares, and includes the effect of equity injection from the International Finance Corporation.

### **ECONOMIC VALUE**

ACWA Power was instrumental in accounting for SAR 852 Mn of Economic Value Retained (i.e. Direct Economic Value Generated less Economic Value Distributed) in 2015, a 9.7% increase from 2014.

The table alongside presents our 2015 economic contributions as per the GRI disclosure standards.

### **RISK MANAGEMENT**

ACWA Power has a rigorous risk management process with centralized internal controls and procedures, supported by local risk champions who oversee performance in each of our business functions and groups.

Sustainability and business risks differ from region to region and so are managed at project and operational levels. Furthermore, project-

and country-based risks are assessed prior to bidding for each new project. At an operational level, ACWA Power's ownership of NOMAC is a further risk control mechanism.

Our primary sustainability risks are presented below. These nine high-level risks guide our business efforts.

# CORPORATE AND PORTFOLIO GOVERNANCE AND ASSURANCE

Corporate governance is ACWA Power's main strategic tool for assuring fiduciary and risk management. We have established a robust governance framework that is founded on the principle of engagement and transparency, which in turn enables improved accountability through recognition and management of risks.

The ACWA Power Board of Directors, which has nine members, including independent non-shareholder directors, meets on a quarterly basis. Members are mainly from the Kingdom of Saudi Arabia but also from other countries and are of varying ages. Decision-making processes are monitored through four Board Committees, namely the Board Investment Committee, the Board Audit and Risk Management Oversight Committee, the Related-Party Transactions and Conflicts Management Committee, and the Nomination and Remuneration Committee. Full

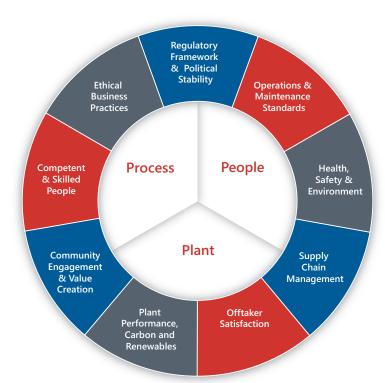
details of the Board and Board Committees activities are contained in our annual report that accompanies this sustainability report.

We ensure that the governance structures at the project company level are aligned with ACWA Power's standards. Therefore, the majority of our project company board members are non-executive directors, while the key board committees are chaired by an independent director.

Our Conflict of Interest Policy stipulates that all board directors, the chairman, board committee members and management must disclose their related party interests in relevant transactions to avoid conflicts of interest. If any conflicts arise, the member is restricted from voting.

Each project company is required to implement a risk management framework based on ISO 31000 within 18 months of formation. This provides a formal structure for the management of key risks arising from, among other issues, construction and commissioning, pricing, insurance, fuel supply, operations & maintenance, economic & financial, health, safety & environmental management as well as contractual and legal obligations.

# Sustainability Risks







# **SAR 6.74 Mn**

Total amount of CSR and charitable donations for 2015.

# **Our Business** Continued

### ETHICS AND CODE OF CONDUCT

We have articulated our approach to business ethics through a Code of Conduct, which is accompanied by anti-corruption and anti-bribery policy commitments. Signed by all personnel upon joining ACWA Power, the Code of Conduct includes standards for responsible and appropriate behavior and highlights that unethical activity is a disciplinary offence that could lead to dismissal.

Ethics-awareness initiatives such as training sessions for new employees are conducted as part of the orientation process. ACWA Power monitors ethical practices and closely engages with project managers on a regular basis to ensure effective internal application of our standards.

ACWA Power has a grievance procedure which is supplemented with an independent whistle blower hotline process that was established in 2012. The arrangements include a 24/7 grievance hotline and email available to all internal and external stakeholders, including contractors, subcontractors, suppliers, clients and advisors. ACWA Power has contracted an international independent external provider with recognized expertise and experience to operate the hotline.

During 2015, we received three complaints that were reported through the whistleblower process. These included cases relating to discrimination and harassment; competition and fair dealing; and procurement and purchasing practices. These cases were referred to and duly reviewed by our assigned internal professionals. All of the cases were effectively resolved using internal processes in a timely manner with none leading to litigation. During 2015, no other material issues concerning ethics, corruption, bribery or anti-competitive behavior were addressed at a Senior Management level within ACWA Power.

### CORPORATE SOCIAL RESPONSIBILITY

Corporate social responsibility is interwoven into our business model and enshrined in our dedicated CSR policy called "Our Commitments". (which is available from our website).

The group CSR committee under the direct sponsorship of the Chairman of the board and chaired by the Managing Director consists of 10 executives, including ACWA Power's Executive Director of CSR, representatives of the corporate business development and legal teams, and representatives from each of our main business regions: Morocco, South Africa, Jordan, Turkey and Oman. The committee includes an independent external advisor who provides a fresh, independent and critical external perspective.

A primary aim of the CSR committee is to ensure that best practices are shared across ACWA Power's asset portfolio and regional CSR personnel so that the actual social value of each project far exceeds its direct investment and resource input.

At the local and project levels, ACWA Power has implemented a framework of socio-economic development standards and guidelines to be adopted at the commencement of operations in a new country. Each framework is based on local context and needs around education, health and training programs, partnerships and foundations.

# SUSTAINED SOCIOECONOMIC IMPACT

We align our community investment and engagement strategies with issues that are mutually material not only to the management of our assets but also to the benefit of the surrounding communities. These practices build a strong, long-term foundation for the creation of shared value for ACWA Power and the local economies

Our CSR programs are focused on five primary concerns that are central to improving and support socio-economic development. Each of these is presented below and then evidenced with project specific case studies and examples.

# Mandating Local Hiring and Skills Improvement

ACWA Power is pro-actively engaging in supporting partnerships that share our vision of local skills development, especially around the areas of our technical expertise. We include stringent requirements on local recruiting and training of local workers in the development contracts of new assets focusing on the construction, operation and maintenance phases.

We recognize that availability of quality local skills is one of the key challenges that requires immediate action as technical training and skills development quickly leads to salary increases for formerly untrained employees, which provides material quality of life improvements.

"ACWA Power is proactively engaging in supporting partnerships that share our vision of local skills development, especially around the areas of our technical expertise."







In this way ACWA Power helps reduce poverty and promotes sustained prosperity through local hiring and skills-development programs that go further than typical practices by developing both semi-skilled and unskilled employees. We are thus responding to regional needs plus creating tangible long-term business benefits of loyalty from skilled employees who live and work in their home regions.

Through local employment and technical expertise, ACWA Power helps eliminate the need for expatriate skills over the long term. We currently have a 95.6% local employment rate for our international (excluding KSA & UAE) operations.

### Investing in Local Infrastructure

ACWA Power's indirect impacts are visible through the development of local and regional infrastructure that is not directly related to the organization's core operations such as improved transport and educational and healthcare services. ACWA Power is committed to creating a decent living environment for plant workers, especially as many of our operations are built in remote and underdeveloped areas.

### **Enforcing Local Procurement Practices**

Off-taker agreements typically last for 20 to 25 years and so ACWA Power engages with local suppliers to form long-term relationships. Our strategy is to lead by example and to persuade supply chain partners to apply our values of local procurement, employment and training of the local workforce, and technology transfer.

We aim to ensure that between 30% and 40% of the value of the project is sourced through local suppliers – taking into consideration the local availability of both technologically simple and advanced equipment. We thus provide significant value to local supply networks, given that for every direct investment in the local supply chain there is a multiplier effect for a larger network of regional providers. When products and services are sourced and supplied locally, they can be expected to be locally repaired and maintained over the plant's life, which is a key element of the resilience of our facilities. This is one reason we insist on our EPC and O&M contractors using local suppliers.

We monitor our ProjectCo contacts for local procurement and drive conformance during the construction and operational phases by including local procurement as a contractual obligation.

# **Impacting Local Communities**

Local empowerment has been actively supported by ACWA Power not only as a form of giving to the community, but also as part of our long-term regional business plans. The strategy comprises activities focused on the short, medium and long term. In the short term, we look for the creation of quick income generating opportunities, such as employment or training for local populations. In the medium term, we look at the improvement of living standards through building partnerships to support local associations and healthcare centers. In the long term, we aim to impact development in the local area in terms of education, livelihoods and agricultural practices that have intergenerational benefits.

The remote context locations are inhabited by scattered small communities which provides the opportunity to incubate micro and small enterprises that can supply ancillary products and services, such as livestock, agriculture, laundry and cleaning services, personal care, carpentry and plumbing.

These projects run in parallel to and so support government initiatives aimed at avoiding continued urbanization. We actively monitor progress and outcomes of our local community investments and activities, and continuously update our guidelines and processes from our learning experiences on each project, thus leveraging successful partnership models and initiatives to new locations.

## **Engaging in Charitable Donations**

As part of our CSR program, we participate in and offer financial support to regional NGOs and academic institutions. ACWA Power donates to causes through local project companies which identify and support community and regional charities. The total amount of CSR and charitable donations for 2015 was SAR 6.74 Mn across 45 projects.

All events and programs organized are consistent with our core values and aimed at strengthening the collaboration and creating shared value with the local communities often partnering with the local and national governmental agencies.

# Community and Social Programs

### CEGCO, AMMAN, JORDAN

CEGCO is, and has been for many years, heartily committed to having a lasting impact on the local communities around its operational facilities and the corporate office in Amman. The company focuses its efforts on key social programs around poverty and healthcare. Below are a few examples of CSR projects delivered in 2015:

**Free medical days:** CEGCO held four free medical days in the areas of Rehab, Al-Mogableen, Al-Sukhneh and Al-Ruwaished. Doctors from various specialists offered medical services to approximately 2,250 patients, including carrying out cholesterol and diabetes tests.

**Blood Drive:** CEGCO organized four blood donation days in collaboration with the National Blood Bank of Jordan. The events took place in the company's headquarters and at CEGCO's plants area (Zarqa, Rehab, and Aqaba).

**Winter Clothing:** CEGCO distributed 925 winter coats to governmental schools pupils in the area of Al-Hashmia and Rehab.

**Computer Donations:** Donated computers to local schools to enhance the education and improve student's skills.

## Refurbishments:

- Refurbished the Al-Hashmia Civil Defence Centre and Jordanian Association for The Care of Diabetes by providing furniture and electrical appliances.
- Furnished Al-Soha and Al-Mdawar mosques that are close to the Rehab facility and contributed to the solar energy project of the Ibn Taimia mosque.
- Provided air conditioning for the local police station and governor of Rehab.
- Refurbished Al-Shula sports club & Special Module Education Centre.

### BARKA, IWPP, OMAN

Throughout 2015 the team at Barka in Oman continued with its commitment to provide lasting solutions to improve the lives and environment of those living near to the power and water plant. The main activities included:

**Smart Education Project:** Aimed at introducing the smartest and latest education technology in a local government school. This project helped to improve the education standards of students, allowing them to use E-books through a web-based system. In parallel, NOMAC Oman provided the school with 30 iPad devices to ensure take up.

Family Counseling Project: Initiated a Family Counseling program with the Association for the Welfare of the Handicapped children in Barka. The Program educated families and provided them with the necessary knowledge to support disabled children and included the provision of a class room with all the necessary and latest technology and furniture.

I Love Oman Project: In collaboration with the Oman Women Association the program promoted good citizenship and the advancement of positive thinking. The outcomes were advancement in scientific, intellectual and literacy, moral values and to inculcate national identity for pre-school children.









## **ACWA GÜÇ, TURKEY**

ACWA Güç supports the local communities in and around the Kirikkale region in order to improve social and economic development. During 2015, the focus of the CSR projects was on the Yahşiyan District covering public and governmental institutions, and included:

Vocational Courses: Supporting vocational courses under the authority of Yahsihan Community Education Centre. The company has established a furniture fabric bedding atelier where young people undergo training. After graduation, the students are well positioned to find work in the local community. 12 students attended the program of which nine received their certification.

Access Road Opening Ceremony: A 12km access road to the site has been constructed by ACWA Power, and was unveiled at a ceremony attended by the Kırıkkale Governor, Yahsihan Sub governor, ACWA Güç Project Director.

Yahsiyan residents and land owners who live close to the new road and construction site, are using it and have reported that the road provides a significantly more comfortable and secure route that is enhancing their livelihoods.

**Reading and Chess Classes:** Established a reading and chess class for 450 students who are living in Yahşihan. In order to encourage reading, the class is designed as an engaging and inspirational area. ACWA Güç designed the classroom and purchased carpets, chess sets, chairs, books, and decorated throughout. The simplicity and grass roots approach of this project has exceeded our expectations as it is changing the lives of many of these young people.

Bayram Ceremony with Orphanage Children: ACWA Güç organized a Bayram ceremony for children who are living in a local orphanage. The 70 children had a day to remember as they danced and played.

"The company focuses its efforts on key social programs around poverty and healthcare."

# **Community Case Study:** Higher Institute for Water and Power Technology

# Giving young Saudis the skills for the jobs of tomorrow

Fifty percent of Saudi Arabia's population is below 25 years, while the digitalization of business and greater automation mean that the jobs of today will disappear over the next decade.

The International Monetary Fund's (IMF) country report on Saudi Arabia indicates that a staggering number of young people will enter the local job market over the next decade, and that creating a sufficient number of rewarding jobs is a key challenge to head off rising unemployment among Saudis which already stands at around 30 percent.

The IMF has noted that Saudi Arabia needs to reduce reliance on public sector jobs and improve the competitiveness of Saudi workers in the private sector by equipping young people with effective education and training to ensure the youth bulge is transformed into an asset.

The Saudi Arabian government responded several years ago and is very focused on young people and their education. More than US\$ 54 Bn from the 2013 budget was channeled into education, a staggering 25 percent of the government's annual spending, and around 10 percent of its GDP.

In 2015 Saudi Arabia was ranked as the world's highest spending nation on education. However, while education and training are critical, it is equally important to ensure that young Saudis are equipped with the right skills to drive economic diversification and create industries that will provide the jobs of tomorrow.

One of the industries for which there is a growing – and never ending – demand for reliable supply is the generation of power and water. These are essential commodities to meet basic needs, and also provide the foundations for social development and economic growth.

With a need to train and develop young Saudi talent to manage and operate our growing number of power generating and water desalination plants, ACWA Power established as the founding sponsor, the Higher Institute for Water and Power Technologies (HIWPT).

Created as a non-profit, industry-focused polytechnic institute to train and qualify Saudi youth as certified operators and maintenance technicians, the Institute commenced operations in September 2011 with 100 trainees under an agreement with the Technical and Vocational Training Council (TVTC).

In 2015 there were 305 students sponsored by 13 organizations and the Institute is becoming a model of excellence of global partnerships developing sustainable technical talent for the water and power industry. Core to the success of the Institute has been its market driven strategy to avoid generic training and instead delivering sector-specific skills and competencies to cover the existing skills shortage. The Institute is self-funded by providing training opportunities for the private sector.

With US\$ 58.6 Mn of financial support approved by the Ministry of Finance there are advanced plans to increase capacity to 2,000 students on the 200,000m² of land which has been granted for expansion. The TVTC has already started construction on a US\$ 19.6 Mn housing facility to accommodate 800 students and 100 faculty.

The three year student program comprises a foundation in year one, a technical diploma in year two and on-the-job training in year three.

The foundation year includes modules in English language, the science of plant technology, interpersonal and life skills, computer literacy and work ethics, before commencing the diploma year in technical training. The final year of on the job training is run in cooperation with the sponsoring organization.

Last year saw the first graduation ceremony of trainees from the Higher Institute of Water and Power Technologies under the patronage of H.E. Eng. Adel M. Fakeih, Minister of Labor, and in 2013 HIWPT won the Al Hariri best Arab training institute in the Operation & Maintenance category.









# Community Case Study: Ouarzazate

# Skills training to create a local cooperative business

Improving people's lives is at the very heart of what we do at ACWA Power. The power and water which our operations generate provide the foundations for social development and economic growth on a national scale. In parallel we are ever conscious of our responsibility to the local communities. These are often in remote locations with harsh environments that leads to our project being the only major, and hence dominant, employer.

Our CSR programs in Ouarzazate are typical of how we have helped to support the development of the local community. The city is known as the Door to the Desert and is renowned as a film location for productions such as Lawrence of Arabia and Game of Thrones because of its wild beauty and remoteness. It is now also known as the location of the world's largest solar power park.

While ACWA Power has been on-site developing the solar park, we have simultaneously achieved remarkable success in nurturing projects that have materially and directly benefited the local community. These have included the training of skilled and certified welders, creating an arts and crafts collective for the production of traditional embroidery and ironwork for export, giving children holiday facilities, connecting the school to the power grid, and training farmers in modern methods of sheep and crop husbandry to improve productivity and, in turn, raise incomes.

Each project has been developed in conjunction with and support from the local authorities, national training organizations and relevant government ministries to ensure that they are appropriate and properly resourced to maximize impact for the local people.

One example of which we are particularly proud is the partnership we established with the Ministry of Craft, Social Economy & Solidarity to develop the local arts and crafts industry. Training sessions where arranged for young adults from the surrounding villages at the Institute of Traditional Arts of Ouarzazate, and then a collective structure was established to produce local handicrafts under a brand that is now benefiting from promotion nationally and internationally.

ACWA Power has provided all the required resources including tool kits, raw materials and supplies, funding for trainers, transport costs and insurance. The four month training program results is each artisan receives a certified training qualification and can immediately add to the collective output of the village and generate an income stream.

"While ACWA Power has been on-site developing the solar park, we have simultaneously achieved remarkable success in nurturing projects that have materially and directly benefited the local community."











# Community Case Study: Bokpoort

# Enhancing lives through high impact community projects

At ACWA Power our commitment to the communities in which we operate is fundamental to our sustained success.

Our investment in community projects is just that – an investment and not a cost. It is an investment in the training and development of the local community to provide the necessary skills to support construction and then operation and maintenance over the long term. It is an investment in nurturing local SMEs, education and healthcare facilities to foster social development and economic growth.

In parallel the local communities invest their time and talent in acquiring skills and know-how to provide a brighter long-term future for them and their families. It's a perfect symbiotic partnership.

Our community involvement in Bokpoort, the solar plant located in a remote part of the Northern Cape in South Africa, is a fine example of how we work with the local community to give them the skills for a better future and ACWA Power access to skilled, trained talent for successful plant operations.

The challenges faced in Bokpoort are not unusual for the context. From day one we have developed 16 clearly identified, planned, managed and resourced projects which have each contributed either to skills development, education and healthcare or community infrastructure.

The education development program started by providing 30 computers with internet connectivity to Groblershoop High School. Educational support was then extended to providing bursaries comprising either full support to university students or accommodation and transport for students at local technical colleges.

School shoes were distributed to all the pupils at Uitsig Primary School as more than 50 percent of the pupils did not have footwear, and 80 bicycles and safety equipment were provided to assist with daily travel for the schoolchildren. Financial assistance was provided to support the school with an additional teacher for science subjects.

At Topline Intermediate school a solar powered geyser was installed. This had immediate benefits by providing hot water for cooking and washing dishes which otherwise had to be boiled using a gas supply. The avoided gas costs were redirected to buying food. The geyser also provides sufficient hot water to disinfect and clean utensils which has improved hygiene.

Pre-school children have benefited from our programs with all seven crèches within the !Kheis Municipality were provided with educational material distributed in conjunction with the Department of Social Development and the municipality.

Five apprenticeships were awarded with mentors allocated to each student for shadowing, to provide a pool of talent for the skilled jobs required in operations and maintenance at the Bokpoort facility.

For semi-skilled jobs we partnered with a local training center – The Palms – to provide basic electrical and mechanical training. To date 137 individuals have benefited from the course with nearly 50 percent of them female. All have found employment on site by working for various contractors.

Two key infrastructure projects have been completed in the local community. A roof top solar power scheme was developed for the Duineveld community which has provided electricity to more than 300 homes and created local jobs for installation and maintenance engineers. The project provides electricity for lighting and television, radio and cellphone charging and is being used as a platform to electrify more houses through the Department of Energy.

A further 20 bicycles were donated to !Kheis Municipality to provide transport for the field workers who are carrying out maintenance on the domestic solar projects within the Municipality.

The final project of our first phase was a scheme to provide water by extending the reticulation ring main to 77 families in the Topline community.

The key to successful implementation of community projects in and around Bokpoort was a bottom up approach through community consultation meetings in all towns within the !Kheis Municipality and jointly with the Bokpoort operating company and contractors.

The verification process for identified schemes was supported by !Kheis Municipality to ensure that the identified projects were in line with the local government Integrated Development Plan.

The outcome has been the rapid implementation of a number of high impact projects which have enhanced the skills of the local workforce, provided essential infrastructure and developed educational resources and, as such, are aligned with ACWA Power's CSR strategy.







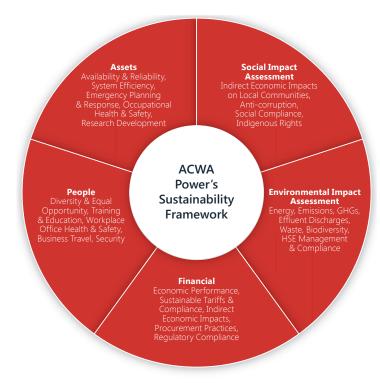
# Assets Development, Management and Performance

We have mapped our health, safety, social and environmental (HSSE) management and performance onto a typical project's life cycle with the sustainability story spanning our two primary functions of Business & Project Development and Asset Management & Assurance.

In this second part of the Report, we present our sustainability management and performance highlights and challenges from 2015 as they would occur in the chronological development and operational life of a typical power and desalination asset.

This Report demonstrates that our sustainability agenda is not a stand-alone initiative. ACWA Power's business model incorporates and links to various aspects of the company's sustainability agenda. Our efforts across our sustainability framework – Asset, People, Environmental, Financial and Social Sustainability – are woven into the fabric of our operations, guiding how we do business and thus contributing to local communities. These practices are implemented by dedicated and trained individuals with associated roles and responsibilities.

# **ACWA Power Sustainability Framework**





# OUR COMMITMENT TO INTERNATIONAL BENCHMARKS

ACWA Power monitors and implements current sustainability standards in the power and desalinated water sectors to ensure our license to operate meets and, whenever possible, exceeds legal obligations. In this way, ACWA Power's benchmarks often exceed regional and local standards as we proactively comply with the latest and most demanding project requirements at the global level. From our very first IPP project in 2007, we have committed to and followed the current IFC/ World Bank requirements to ensure that our financial partners and lenders can readily comply with their Equator Principles commitments. For example in Saudi Arabia, we comply with the IFC air emissions standards which are more stringent than the local standards. Recently, as part of an internal assessment, we also updated our policies, procedures and standard contracts to ensure compliance with the IFC's eight Environmental and Social Performance Standards as detailed in the illustration opposite.

# Integration of IFC's Environmental & Social Performance Standards across the Asset Life Cycle



# Asset Management and Assurance

# Seeking the highest standards of excellence

We operate large scale, complex projects that are managed in a responsible way that respects the interests of all stakeholders.

# PERFORMANCE OF OPERATIONAL FACILITIES

During 2015, ACWA Power maintained the positive momentum of previous years and delivered improved performance across the portfolio. The performance reaffirms the company's position as the region's largest independent developer, owner and operator of power and water desalination facilities head guartered in the GCC. The Group delivered 90,557 GWh of electricity, with exceptional year-on-year growth of 20.5%. This performance was born out of an overall commercial availability of 95% and load factor of 85%, both of which improved year on year. Desalinated water exports totaled 749 million m<sup>3</sup> which demonstrates another year of sustained performance in output. The commercial availability for the desalinated water infrastructure was 93% and load factor at 87%. Steam generation from Rabigh IWSPP totaled 9.7 Mn tons and was delivered to the Petro-Rabigh refinery complex.

ACWA Power's Saudi plants account for 58% of total electricity export and 93% of desalinated water export.

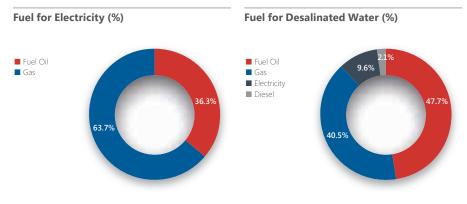
The bulk of renewable energy was generated by the Karadzhalovo PV plant in Bulgaria, exporting 74.9 GWh which is an improvement of 5.3% against 2014. The Bulgarian plant's generation was supplemented by power generated from wind turbines in Jordan and the Bokpoort and Noor 1 concentrated solar power plants that exported electricity during their final commissioning in South Africa and Morocco respectively. In line with our ambitions to develop a more efficient and greener portfolio of energy producing assets we generated power from six renewable plants in 2015. Currently, renewable energy contributes less than 0.5% of ACWA Power's output though this is expected to change as the two CSP plants complete commissioning and enter commercial operation.

### Electricity and Desalinated Water-Production and Exported

Year	Electricity Gross Generation (GWh)	Electricity Net Export (GWh)	ACWA Power's Share of Net Electricity Exported (GWh)	Water Exported (million m³)	ACWA Power's Share of Water Exported (million m³)
2015	90,557	84,284	22,875	749.2	218
2014	71,965	65,940	19,782	747.4	215
2013	61,530	55,822	17,301	745.0	213

# Electricity and Water Production by Region for 2015

	Net Electricity (GWh)	Regional Split %	Desalinated Water Exported (million m³)	Regional Split %
KSA	49,215	58%	699,4	93%
International	35,069	42%	49,8	7%
Total	84,284		749.2	





At our Qurayyah IPP in Saudi, we use combined-cycle gas turbine (CCGT) technology. This technology recycles hot gases to generate electricity and has made a major contribution in the improvement of heat and carbon emission rates, operating at 57% efficiency. The plant has contributed 29% of ACWA Power's total electricity exported and forms part of our developing portfolio of assets that utilizes cleaner natural gas to produce energy.

# **REWARDING SUCCESS**

Recognizing the good work achieved by our people is important, not least because it provides the opportunity to share operational improvements and engenders ownership amongst our employees. ACWA Power runs an Assets Awards Program and, in its second year, extended the criteria to include non-KSA assets. The awards are based on strict criteria analyzing performance data and are presented at the Saudi Power and Water Forum to share best practices with the industry. The award for Safety was won by the Bowarege project company, who are responsible for the desalination facilities docked in Rabigh. A special commendation was awarded to CEGCO for their continued improvement in safety performance.

The award for performance, based on plant availability and reliability was won by the Shuqaiq Water and Electricity Company for the accomplishments at the Shuqaiq IWPP. The Saudization award went to the Hajr Power Company, owner of the Qurrayah IPP for its "considerable effort in attracting, training and retaining Saudis to their remote location". This program commenced before COD and has delivered tangible benefits. ACWA Power intends to further extend the awards during the third cycle in 2016 to accelerate learnings from across the business and to help us improve our performance.

# AVAILABILITY, RELIABILITY AND EFFICIENCY

Power and Water Purchase Agreements (P(W) PAs) govern the relationship between the Project Companies and national off-takers and all include strict performance standards covering reliability and availability. The availability and reliability of each of our assets are key to our success and directly relate to and impact our financial, operational and reputational performance. Accordingly we monitor and report on the underlying and overall performance indicators daily, weekly and monthly as part of all management reports and quarterly as part of the board report.

We experience seasonal shifts in the demand for our products. The summer months form a critical, peak period as increased demand for electricity and water coincides with the Holy month of Ramadan and the annual Haj in Saudi Arabia. In 2015, we maintained our commercial availability at an average of 96.6% for our power plants. The water plants' average summer commercial availability was 98.1%, which was higher than the budget weighted estimate of 91%. Our primary IWPP facilities have all delivered on reliability and availability throughout the year, which have supported our year-on-year performance. Rabigh IWSPP, Barka 1 IWP, Marafiq IWPP and Shuqaiq IWPP performed particularly well during the peak summer demand period.

Relative to much of the existing regional infrastructure, our asset portfolio is comparably new. Our facilities are designed to be more economically, operationally and environmentally efficient and therefore benefit from significantly higher-than-average resource efficiency. In 2015, the Qurrayah IPP came on stream and its exceptional efficiency and significant contribution to our operational capacity has contributed to another year on year improvement in overall heat rates and resource efficiency. An Improvement of 3% seems marginal but leads to a significant relative reduction in fuel consumption and carbon intensity (see page 34). The performance of the majority of our facilities was better than budgeted. Efficiency and thermal heat rates (a measure of efficiency) for ACWA Power's asset portfolio has improved as a result of technology advances and performance with Shuaibah IWPP, Shuqaiq IWPP, Rabigh 1 IPP, Marafig Jubail IWPP Barka IWPP and Salalah all delivering better than contracted heat rates.

# Asset Heat Rate & Efficiency

Year	Average Heat Rate – Combined kJ/ kWh	Average Heat Rate for Electricity only kJ/kWh	Efficiency for Electricity Production %	Overall Heat Rate for KSA Assets – Electricity Only kJ/kWh	Overall Heat Rate for International Assets – Electricity Only kJ/kWh
2015	9,476	7,828	46%	7,023	9,716
2014	10,712	8,461	43%	8,198	9,878
2013	11,181	8,676	41%	8,344	10,317

# Asset Management and Assurance Continued

### SECURITY PRACTICES

We have limited direct control of security practices within our operations, as these are the remit of the project company and its supply chain. However, all security operations are required to fully comply with local security industry and national legislation. Security management and resources of construction and operational sites are the contractual responsibility of the EPC contractor or O&M service provider respectively. All power stations and desalination plants are considered key national assets and typically additional security is provided by the host countries through their national defense force or industrial security services that augment the sites' capabilities and resources.

IFC environment and social performance standards list specific requirements regarding the training and management of security, especially with regard to its potential impact on local communities. We include these requirements in development contracts for all assets.

## **EMERGENCY PLANNING AND RESPONSE**

All construction and operational sites have formal emergency prevention, detection and response plans, which include crisis communication structures. All sites have formally appointed competent resources for managing emergency situations. We undertake six monthly emergency drills and training, including a minimum of quarterly tests. We monitor all drills and generate formal reports with lessons learned to ensure continuous

improvement. Facilities that are co-located or share sites with other power and desalination plants arrange combined emergency drills that test the sites' overall preparedness. These drills are periodically observed and monitored by local authorities and civil defense personnel.

### **RESPECTING INDIGENOUS RIGHTS**

ACWA Power takes a clear approach to protecting local populations in places where we operate, and includes the assessment of indigenous and cultural rights in its project due diligence and subsequent ESIA phases. Where an indigenous rights issue is identified, its management is based on international standards and practices, active local stakeholder engagement programs and current IFC standards.

# HEALTH, SAFETY, SOCIAL AND ENVIRONMENTAL MANAGEMENT

Our integrated Health, Safety, Social and Environmental (HSSE) management system meet IFC's stringent guidelines. We believe we are leading HSSE improvement and enabling culture change in several of the locations in which we invest and operate, based on our ongoing international benchmarking activities and activate coaching of local teams.

During the feasibility assessment and development or acquisition phases for new assets, HSSE issues are identified and managed by undertaking HSSE due diligence assessments and then commissioning environmental & social impact assessments (ESIA) that are completed by independent consultants.

Asset performance-related and technical issues with HSE consequences are covered by ACWA Power's minimum technical specifications which are applied to all projects and are based on ensuring compliance with local legislation and the WB/IFC EHS Guidelines.

At the start of construction, project-specific HSE and social action plans are established as part of the implementation of the ESIA which is also a contractual obligation.

ESIA compliance is monitored by both the project company's and the corporate HSSE teams, who are supported by independent environmental consultants that conduct audits on the lenders' behalf.

At an operational level, NOMAC has an integrated management system that covers HSE and has been certified to the ISO and OHSAS standards since 2010. We perform an annual occupational health check-up for at risk operational employees covering a range of parameters, including lung tests and audio tests. All construction sites have access to on-site nurses and doctors, with remote sites having on-site ambulances and emergency-response resources.

ACWA Power offers rewards programs to motivate stakeholders to abide by the company's HSSE policies. They include recognition, bonuses and cash incentives for good performance and rewarding reporting of near-misses. We believe that incentives combined with a zero-tolerance enforcement





of standards are instrumental in driving HSSE in action and fostering a safety culture across all of ACWA Power.

Emergency and critical health and safety incidents are reported through agreed channels within four hours to enable the deployment of formal emergency response plans. All incidents are followed up through formal investigations to identify root causes and lessons learned, the outcomes of which are shared. Incidents and noncompliance events are reported monthly and collated for publication in ACWA Power's annual corporate report.

We conduct periodic management and performance audits which are followed by a detailed report of findings, conclusions and recommendations. These are then monitored and tracked until closure.

# IMPACT OF CLIMATE CHANGE ON ASSETS

The direct effects of climate change are currently considered to be immaterial to our assets and business operations. Our plants have been designed in recent years with due regard for potential sea level rises, and the majority of our sites are not located in vulnerable or exposed coastal areas.

Potential temperature increases would not particularly affect performance efficiency as such increases are predicted to be, at worst, moderate over the next two decades. Furthermore, we have mitigated against the risk of increased and more violent seasonal storms in the design of our facilities.

The only potential long-term climate change challenge could be water abstraction from aquifers and rivers which would have regional consequences affecting ACWA Power's plant locations. Water is an issue we manage carefully, and our plants are designed to minimize water consumption.

### **COMMITMENT TO QUALITY**

Quality management has been purposefully decentralized to each team, and into each team's processes and KPIs, in order to leverage employees' expertise. Our quality management process includes hold-points, internal and external reviews, and assurance checks.

During the final-stage of each bid, a comprehensive presentation is delivered to the Board's Investment Committee which includes two independent Board members in order to review and approve development and investment decisions. Debriefing and look-back sessions are held after the completion and submission of each bid.

The Board Audit and Risk Committee, supported by the head of Internal Audit, has responsibility for assessing, reviewing and reporting on our conformance to internal procedures and best practices.

# RESEARCH AND DEVELOPMENT

We are continually seeking best-in-class methods to improve the capacity, efficiency, productivity and environmental performance of all our operations. The technology team supports our assets by assisting current units to create more power while optimizing their waste streams and utilizing mineral extraction for commercial use and minimization of waste.

# ALIGNING OUR SUPPLIERS

We require our supply chain to adhere to our own good practices and compliance system by including these requirements into contracts. We engage with prospective suppliers during project-development to outline our HSSE requirements and undertake comprehensive HSSE due diligence assessments.

ACWA Power conducts periodic HSE and quality inspections and audits of our suppliers and their sites. Labor practice audits are undertaken and, if any violations are identified, such as non-payments to employees, then the supplier is highlighted as a potential future risk.

### **ENVIRONMENTAL RESPONSIBILITY**

ACWA Power follows a strict policy of always specifying the more stringent of either the local or WB/IFC EHS and technical performance specifications. For example, in Saudi Arabia, the IFC specifications are followed for air emissions, while the national Saudi Arabia requirements are observed for water management and discharge.

Each ESIA is accompanied by an Environmental Management Plan (EMP) that is integrated into the EPC Contractor's and O&M Service Provider's project specific environmental management system and contracts. ACWA Power ensures that these plans and standards are implemented and met through local authorities' audit processes, periodic independent inspections, corporate site visits and annual performance reports to the IFC.

### **BIODIVERSITY**

Biodiversity is an integral issue of the ESIA of all assets, as we aim to gain knowledge and understanding of the ecosystems in the areas in which we operate and to assess their vulnerability. We mandate monitoring and action plans according to IFC and IFI standards. ACWA Power does not currently hold any assets directly adjacent to areas of significant biodiversity or vulnerability and as of today, no material long-term issues have been identified. A condition of the lending agreements includes periodic marine surveys of the intake and outfall areas of coastal areas – these are undertaken by independent environmental scientists.

# Asset Management and Assurance Continued

# HEALTH, SAFETY AND ENVIRONMENTAL PERFORMANCE

We work very hard to maintain the safety and wellbeing of our employees, as well as to manage our impact on environment within reasonable limits. ACWA Power's 2015 Health, Safety and Environmental (HSE) performance was the best on record and we look forward to improving on this in years to come. There were no fatalities during 2015 and across the entire portfolio there were nine Lost Time Incidents (LTIs). Four LTIs occurred at operational sites and five at construction sites leading to 153 lost days which equates to an LTI rate of 0.04 and Lost Time Severity Rate of 3.69 for ACWA Power. Whilst we are very pleased with this performance, we remain committed to operating zero harm environments. We have conducted reviews of each incident and seek to implement these learnings across all our operations.

Full year HSE performance is detailed on page 40, demonstrating year-on-year improvements. Significantly, we beat our internal corporate targets which are comparable to international benchmarks. As a result of our 2015 performance we have reduced our LTI targets for 2016 to 0.18 and 0.2 for operational and construction facilities respectively.

We are committed to maintaining high operating standards and the integrity of our management systems. During the year, all the operating & maintenance (O&M) service providers with certified HSE management systems retained their ISO 14001 and OHSAS 18001 certifications. NOMAC Barka, the O&M service provider at the Barka IWPP and IWP expansions in Oman, retained its zero-LTIs since PCOD in 2003, which is a remarkable achievement. In Jordan, CFGCO's Agaba Thermal Power Station team won a "Certificate of Excellence in occupational Safety & Health" from Jordanian Social Security Corporation and the Hussein Thermal Power Station achieved 1,000,000 man hours without an LTI - this was the first time ever that a CEGCO facility has achieved this milestone. ACWA Power extended its HSE awards scheme to include all operational assets. The 2015 recipient was

Bowarege for the desalination barges and a special commendation was given to CEGCO. NOMAC, ACWA Power's O&M subsidiary, recorded 4,782,547 man-hours worked (387 days) without a LTI as at 31 December 2015 and continued into 2016 to achieve 5 Mn man hours without an LTI. Five construction projects (Bokpoort, Rabigh 2, Kirikkale, Barka IWP Phase 2 and Rabigh 2 IWSPP) had zero LTIs over the year and accumulated 28.365 Mn man hours. The HSE reportable KPI is a composite indicator that covers fatalities, LTIs, dangerous occurrences, environmental pollution incidents and occupational diseases. Overall there were six environmental incidents (none of which resulted in off-site or irreversible damages), no occupational diseases and dangerous occurrences are infrequent events.

We use a blend of performance and management indicators to balance the evaluation of HSE outcomes with the input and active effort of the site and corporate leadership and HSE teams. We conduct systematic HSE tours, inspections and audits are meeting expectations with the result that near-miss observation rates continue to increase year-on-year and are now matching our targets. Near-miss reporting will again be one of the main focus areas for 2016, especially on construction sites, plus retaining the emphasis on process and fire safety, housekeeping, developing professional staff.

# GHG AND AIR EMISSIONS

As per previous years, we account for carbon emissions across all of our facilities and operations in accordance with the scope boundaries and guidance of the Greenhouse Gas (GHG) Protocol and the GRI G4 Guidelines. Scope 1 GHG emissions arise from the combustion of fuels by our assets during the production of electricity and desalinated water. Indirect GHG emissions, Scope 2, arise from purchased electricity used as back up supply and for production of desalinated water using reverse osmosis. Our other indirect GHG emissions, Scope 3, arise from the on-site management and business operation of our assets and regional offices. Our GHG emissions for Scope 1 and 2 are tabulated below. Scope 3 are not included as they are deemed immaterial compared to the sum of Scope 1 and 2.

### **GHG** Emissions

CO <sub>2</sub> Emissions			SO₂ En	nissions	NOx E	missions		
Year	CO₂ ′000 Ton	ACWA Power's share of CO <sub>2</sub> '000 Ton	CO <sub>2</sub> intensity of Electricity kgCO <sub>2</sub> / MWh	CO <sub>2</sub> intensity of Desal Water kgCO <sub>2</sub> /m³	SO <sub>2</sub> Ton	ACWA Power's share of SO <sub>2</sub> Ton	NOx Ton	ACWA Power's share of NOx Ton
2015	53,244	15,963	480	10.10	177,310	70,425	39,681	14,643
2014	48,237	15,520	525	14.04	221,615	89,040	39,408	15,000
2013	42,689	13,984	538	10.29	171,971	69,113	38,348	14,604





GHGs, SOx and NOx from our assets are calculated based on chemical equations using actual performance data that are regularly checked with field measurements combined with acceptable carbon-estimation techniques based on national grid data plus data supplied by our service providers.

Total  $CO_2$  emissions for 2015 were 53,244 kt $CO_2$ , of which 15,963 kt $CO_2$  was ACWA Power's share based on our percentage ownership of each asset. The improved performance is predominately attributable to the natural gas fire CCGT Qurrayyah IPP which had a measured carbon intensity of 370 kg $CO_2$ /MWh for 2015 and enabled the avoidance of emitting 3.459 Mn tonnes  $CO_2$  (based on 2013 carbon intensity and using like for like production).

The weighted average carbon intensity of our electricity producing portfolio was 480 kg/MWh and 10.10 kgCO<sub>2</sub>/m³ of desalinated water. For comparison Public domain data indicates that a regional state owned utility's assets' carbon intensity ranges from 700-900 kgCO<sub>2</sub>/MWh and European average carbon intensity for electricity production in 2012 was 567 kgCO<sub>2</sub>/MWh. These benchmarks contextualize ACWA Power's performance as world class and support our rise in the EI New Energy Top 100 Green Utilities, based on carbon emissions and renewable energy to 71st in 2015.

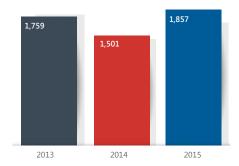
During 2015, we had one case of emissions non-compliance which has been reported to the authorities and has not resulted in regulatory action findings. The incident is the continued inoperability of the flue gas desulphurization plant of the Rabigh 1 IPP, a feature that removes the air pollutant Sulfur dioxide from being emitted. An engineering solution has been presented to the authorities and the Project Company is awaiting approval before implementation that is expected during 2016.

# **BUSINESS TRAVEL CO<sub>2</sub> EMISSIONS**

We have not re-assessed the indirect Scope 2 emissions arising from our office operations, as based on our published 2012 data and an estimate of 2014 data, their contribution is less than 0.01% of our total carbon disclosure. However, we believe that all organizations with international locations should manage and report on air travel as it is a significant environmental issue that is independent of its relative contributions to the organization's carbon footprint.

 ${\rm CO_2}$  arising from air travel has increased, year on year, by 19%. However taking into account the increase in head count and projects in construction and operation, then the  ${\rm CO_2}$  per person has reduced by 9%. This reduction has

### Business Travel CO<sub>2</sub> Emissions (tCO<sub>2</sub>)



been supported by the increased use of ACWA Power's video conferencing facility that was rolled out during 2014. In 2015, the organization held 3,891 video conference meetings for a total duration of 407,465 minutes connecting more than 11,000 people across 65 countries. The take up of video conferencing has doubled between 2014 and 2015 and is now the preferred method of collaborating and engaging with colleagues as it enhances our employees' work life balance and significantly reduces travel. The service provider, BlueJeans, estimates that the cost savings are more than US\$ 1.3 Mn and CO<sub>2</sub> emissions avoided in the region of 1,680 tons which is equivalent to 90% of our actual air travel emissions.

# EFFLUENT DISCHARGES, WASTE AND CHEMICAL MANAGEMENT

All of ACWA Power's greenfield facilities have been designed and built in the last eight years and so our water performance continues to be better than the industry average. Our effluent discharge rate has decreased year-on-year, and this is primarily attributable to the performance of the combined cycle gas fired Qurrayah IPP. Seven environmental spillages were reported during 2015, with a total volume of less than 10 cubic meters plus one of which was a fly ash spillage. None of these incidents extended off-site, and all were completely remediated.

We have an effective waste management process that extends throughout our asset life cycle. All operational sites and construction projects have formal waste management arrangements that are implemented as part of the site HSE management system and CEMP respectively.

Each of our sites has a storage mechanism for collecting excess or redundant materials for re-use and/or ultimate recycling. Site managers encourage their teams to use these materials, where appropriate, before making further procurement decisions. Underlying this improved resource stewardship is the recognition of the economic and environmental benefits attributable to ACWA Power. Our effluent discharges, chemical consumption and waste arising data is tabulated on page 41.

# Reflection on Performance and Progress

# Building a resilient business for the future

Our core vision is to deliver our services with the core principles of 'Safety, People, Performance' in mind.

Each year, we review our materiality assessment to determine and understand the key sustainability risks that may affect our business and the delivery of our strategy, as well as the stakeholders directly and indirectly impacted by our activities. In 2015, we identified nine material sustainable risks (see page 17) that provide a management framework.

We strive to ensure that our business activities are conducted in a manner that avoids harm to our people and the environment. We were extremely pleased to report significant improvements in our 2015 HSE performance. We will continue to embed our improved HSE practices during the forthcoming year. Process safety remains the top priority for our operational facilities, with assurance of EPC Contractors' HSE management and performance the priority for the construction sites. ACWA Power's HSE management system has been upgraded to comply with the international ISO 14001 and OHSAS 18001 management system standards and will be certified during 2016.

Governance at all levels remains a central pillar of our success and ability to grow. We are proud of our governance framework and during the year we embedded the principles into each newly established Project company. Importantly, we have made necessary additions to our internal audit team to make certain that it has the resources to effectively support the business and delivery the same rigour in assessment. During the coming year we will continue to focus on the effectiveness of the Board Audit Committee and ensuring that we demonstrably uphold the highest levels of fiduciary responsibility.

We seek to mitigate the risks presented in the operation and maintenance of our assets through improved management processes that govern O&M activities. In 2015, we reported a reduction in Forced Outage Rates and an increased availability and reliability of our assets, meaning we were more productive and could even better meet customer expectations.

We have strengthened the O&M teams across our assets and pursued recruitment programs that complement the expectations of many of our stakeholder groups. The impact our projects have on local communities can be extremely positive with the benefits felt for generations to come. We acknowledge that a focus on hiring engaged local personnel has the added incentive for ensuring that we collectively deliver high standards of excellence over many generations.

O&M management performance will always be a key business driver and assets will remain central to our balanced business scorecard and a key determinant for successful growth. A revision of our O&M key performance indicators was implemented and is used during our regular management meetings to track performance and progress against our obligations and objectives. The objective for the coming year is to establish and maintain our highest standards at our newly commissioned renewable plants. We are working with recently formed teams of local personnel to operate and maintain cutting-edge technology, which is seeing a step change in the operating models in the renewables sector.

Carbon emissions management remains a key risk for our industry, especially as this issue gains greater prominence on the world stage. Year-on-year improvements in plant efficiency and reductions in carbon intensity rates support our long-term strategic objectives for investing in the efficient design and placing more emphasis on renewables. The carbon intensity at the Qurrayah IPP is even lower than the design standard resulting in a first year performance of approximately 370gCO<sub>2</sub>/kWh. This performance coupled with the commissioning of our first two utility scale CSP plants during early 2016 bodes well for a sustained reduction in carbon intensity of our electricity and desalinated water. The focus for the future will be on the reliable commissioning and operation of the new renewable plants making certain that we meet our own and our offtakers' performance expectations.

Market knowledge and building positive relationships is key to any business entering a new market. During 2015 we met with our objective of undertaking robust due diligences of new markets before investing. In doing so, we came to understand some of the key challenges facing many economies around the world and as such have become a leading authority in global energy discussions, particularly when it comes to addressing affordability and environmental considerations. As such, we were active participants at the COP21 climate change discussions in Paris, in June 2015. Similarly, senior management are regularly engaged in high-level private and media facing events that position the power and water renewables sector at the nexus of social and economic development.

Engagement with the local communities neighboring our facilities remain positive and our regional stakeholders recognize the value delivered by our range of projects and initiatives. We have formalized our sustainability strategy and are actively sharing our experiences across the asset portfolio via regular meetings and mutual site visits. During the coming year we will continue to focus on community based projects by establishing a CSR committee in Dubai to address the projects in the UAE and initiating CSR teams in O&M service providers and Project Companies.

Supply chain management is a strategic focus for ACWA Power, particularly when we work with partners for the first time or take new technology into new regions. Establishing and maintaining the expected HSE and Social standards of all our suppliers is a multifaceted challenge that also presents opportunities. We continually engage with the supply chain, throughout the life-cycle of an asset, to make certain that the performance standards meet expectations. We support our suppliers and share best industry practices during regular meetings, through joint risk assessments and periodic site visits. The past 12 months has seen a step change in our engagement with the supply chain and has enabled us to drive improved operating practices. We will continue to deliver progress through a recently established program that requires due diligence visits to assess Tier 1 suppliers' management of the supply chain and subcontractors.

ACWA Power has seen an impressive year of growth, particularly in emerging economies that are dependent on energy to support their development. We are mindful of the need to support the development of local personnel and generate a pool of local talent that can support our activities as they mature from project construction through to commissioning, and full operations. We are and will continue to focus on investing in our people plus attracting the most competent and motivated professionals. We offer training and development of both hard and soft skills and we are in the process of rolling-out a groupwide training and learning development management system.

Our offtakers and end-users' satisfaction with our reliability and service delivery is of utmost importance and has been assured by our performance during 2015. Our 2015 sustainability report, which was our first stand-alone GRI G4 compliant sustainability report, was well received and praised by our offtakers, international finance institutions, end-users and broader stakeholders. The report was recognized at the 2015 Asia sustainability reporting awards where it won in the category for "Best first time sustainability report." Our objective for 2015 was to extend the sustainability report to include an assurance statement which is included at the end of this report.

ACWA Power has reached several important milestones and made very good progress as a company during 2015. Our understanding of sustainability continues to deepen — from evaluating our personal values and safety behaviors to considering operational and environmental risks — and it remains a commitment that binds us. We will continue to seek the input from all of our stakeholders as we shape the company for a better future, supporting the ambitions of our host nations and delivering our operations in a safe and responsible manner. We look forward to the opportunities ahead and thank you reading this report.

# Michael Nates

Executive Director, Corporate Responsibility & Sustainability



## YOUR FEEDBACK:

We value your thoughts and observations on our second Sustainability Report and our corporate performance. Please contact us via our website: www.acwapower.com, our local offices or directly to CSR@acwapower.com



# External Assurance Statement



### 2015, GRI G4 CORE "IN ACCORDANCE" REPORT

Environmental Resources Management (ERM) – Abu Dhabi Branch was commissioned by ACWA Power to complete an independent review of its printed 2015 Sustainability Report and to provide an external assurance statement for the report.

### **SCOPE OF ASSURANCE**

The project was designed to obtain a 'limited level' of assurance and is based on International Standard on Assurance Engagements (ISAE 3000). The assurance process covered one indicator each from the following material aspects:

- Environment Category: Energy, Emissions, Effluents and Waste;
- · Economic Category: Economic Performance, Indirect Economic Impacts, Availability and Reliability; and
- · Social Category: Occupational health and safety, Diversity and equal opportunity and Compliance.

### **OBJECTIVES AND SCOPE**

The assignment's scope includes whether the information on ACWA Power's materiality assessment and stakeholder relationships and other selected disclosures (for the reporting year January to December 2015) are fairly reported in accordance with the reporting criteria.

### **METHODOLOGY**

To undertake the assignment, we carried out the following activities:

- Visit to ACWA Power's Dubai office to obtain the necessary information and explanation necessary to arrive at our assurance
  conclusions. We met with the relevant staff and organised conference calls at other locations to better understand the
  systems and processes used for collecting and reporting the information and performance data for the selected disclosures;
- Review of emission factors and calculations used to report the 2014-2015 GHG Data;
- Spot checked information related to sustainability pertaining to specific indicators related to the above mentioned categories;
- Reviewed 2015's materiality assessment outcomes against GRI's technical protocols informing the assurance review; and
- Mapped disclosure items, plus disclosure on management approach, to GRI requirements, enabling ACWA Power to close some reporting gaps.

# **CONCLUSIONS**

Based on the assurance conducted, ACWA Power's disclosure approach is consistent with protocols for transparent sustainability reporting. According to ERM's findings, ACWA Power's general Standard Disclosures fulfil the GRI G4 Core "In Accordance" Level and has considered the correct level of detail for the aforementioned material indicators.

### STATEMENT OF INDEPENDENCE AND LIMITATIONS

ERM is an independent professional services firm dedicated to sustainability related services. We have not been involved in the development of this report or in any data collection processes. We have conducted this engagement as an independent third party and, to our knowledge, there has been no conflict of interest. ERM ensures that the assurance team possessed the required competencies, maintained neutrality and performed ethically throughout the engagement. Prior year data, where reported in assured G4 disclosures, have not been assured. Financial information has been extracted from third party audited financial statements provided by ACWA Power and has not been through any further validation by ERM.

### **OUR OBSERVATIONS**

Through the process of data assurance, we understand that ACWA Power regularly interacts with its stakeholders as part of its day to day business activity. However, the materiality assessment for the report is largely based on discussions with internal stakeholders along with the assistance of an external consultant, who provided with views of external stakeholders. It is recommended that an external stakeholder survey is carried out in subsequent years so that the materiality assessment is informed by stakeholders' opinions. The future reports can then focus on the most material issues for ACWA Power's internal as well as external stakeholders.

Recommendations on minor changes in reporting mechanism to further improve on reporting content and alignment with GRI Guidelines have been communicated to ACWA Power management.

Reg Eayrs

Managing Partner

Environmental Resources Management – Abu Dhabi

30th June 2016



# **HSE Data**

# ACWA Power 2013-2015 Health & Safety Performance

HSE KPI	Calculation	2013	2014	2015	HSE Targets
Operational Facilities					
Hours Worked	Total	8,562,852	7,429,579	8,091,352	-
Lost Time Incident (LTI)	Total	10	14	4	0
LTI Rate	Average Rate	0.23	0.38	0.10	<0.2
HSE Incidents (reportable)	Total	36	24	16	0
HSE Incident Rate	Average Rate	0.84	0.65	0.40	<1.0
Near-Misses	Total	2,659	3,105	5,308	_
Near-Miss Rate	Average/sites	0.62	0.84	1.31	> 4/person/pa
HSE tours, inspections & audits	Total	3,343	4,301	10,521	
HSE tours, inspections & audits rate	Average/site	0.78	1.16	2.60	>3.5
Construction Sites					
Hours Worked	Total	27,548,298	34,929,869	33,317,218	-
Lost Time Incident (LTI)	Total	4	14	5	0
LTI Rate	Average Rate	0.03	0.08	0.03	0.35
HSE Incidents (reportable)	Total	16	26	20	0
HSE Incident Rate	Average Rate	0.12	0.15	0.12	1
Near-Misses	Total	313	4,054	9,906	_
Near-Miss Rate	Average/sites	0.02	0.23	0.59	> 4/person/pa
HSE tours, inspections & audits	Total	895	4,357	11,209	_
HSE tours, inspections & audits rate	Average/site	0.06	0.25	0.67	>3.5
ACWA Power					
Hours Worked	Total	36,111,150	42,359,448	41,408,570	_
Lost Time Incident (LTI)	Total	14	28	9	0
LTI Rate	Average Rate	0.08	0.13	0.04	_
HSE Incidents (reportable)	Total	52	50	36	0
HSE Incident Rate	Average Rate	0.29	0.24	0.17	_
Near Misses	Total	2,972	7,159	15,214	_
Near-Miss Rate	Average/sites	0.16	0.34	0.73	> 4/person/pa
HSE tours, inspections & audits	Average/sites	4,238	8,658	21,730	_
HSE tours, inspections & audits rate	Average/sites	0.23	0.41	1.05	>3.5

# Notes:

- LTI definition as per OHSA.
- LTI Rate and HSE Incident Rate calculated per 200,000 hours worked.
- HSE Incidents and HSE Incident Rate Calculated per 200,000 noors worked.

  HSE Incidents includes, and is the sum of, fatalities, LTI, Dangerous Occurrences, Environmental Incidents and Occupational Diseases.

  Near Miss Rate and HSE Tours, Inspections and Audits Rate Calculated per 2,000 hours worked which equivalent to per person.

  Restatement of 2014 Construction Hours worked to include Rabigh 2 IWSPP and recalculation of rates accordingly.

  UK Energy Industry 2010-2014: LTI Rates 0.21.

- Australian Heavy & Civil Engineering and UK Construction Sectors' 2013 LTI Rates: 3.0-3.2.

  Data on absentee rate is currently not been recorded by ACWA Power. However, we will endeavour to report this figure in subsequent reports.

# Fuel and Energy Consumption

Year	Electricity Imports MWh	Natural Gas million m³	Fuel Oil '000 Ton	Diesel Ton	Fuel for Electricity %	Fuel for Water %	Energy Consumption for Electricity TJ	Energy Consumption for Water TJ	Total Energy Consumption TJ
2015	321,309	12,344	9,078	200,802	82.6%	13.7%	659,765	109,720	798,710
2014	315,069	5,885	11,953	16,749	78.0%	22.0%	567,032	121,377	724,621
2013	332,150	6,277	10,202	21,362	77.0%	23.0%	484,341	109,660	625,073

Note: 3.7% of energy was consumed for steam production.

# Sea Water Discharges

Year	Power Plant million m³	Water Plant million m³	ACWA Power's Share of Sea Water Discharge million m³	Discharge/Fuel Consumption m³/GJ	Sea Water Discharge/ Gross Generation m³/MWh	Environmental Incidents
2015	9,080	2,280	3,620	14	125	25
2014	7,523	4,237	3,851	17	163	10
2013	6,308	5,088	3,612	18	185	6

# Chemical Consumption, Waste Generated and Environmental Incidents

Year	Chemical Consumption Ton	Hazardous Waste Ton	ACWA Power's Share of Hazardous Waste Ton	Fly Ash Ton	ACWA Power's Share of Fly Ash Ton	Non-Hazardous Waste Ton	ACWA Power's Share of Non-Hazardous Waste Ton
2015	85,091	2,654	1,009	48,881	18,810	574,394	180,534
2014	70,107	1,691	580	33,971	13,099	19,604	5,537
2013	77,234	26,170	10,443	28,165	10,970	287,123	106,399

# Our People

Organization Name	No. of FTE	s (Full Time Em	ployees)	Lo	ocal Nationals		Local Directors/Managers		
	Men	Women	Entity Total	Men	Women	Local % of Entity	Men	Women	Entity Total
ACWA Power:									
Riyadh	86	9	95	34	8	44%	23	4	27
Dubai	116	23	139	1	0	0.7%	1	0	1
Beijing	2	2	4	1	2	0.8%	1	0	1
Istanbul	9	6	15	8	6	93%	6	2	8
Johannesburg	17	7	24	15	7	92%	11	2	13
Maroc, Sarl (Rabat)	13	9	22	11	9	91%	5	2	7
Egypt	8	2	10	8	2	100%	5	0	5
Vietnam	3	1	4	3	1	100%	1	0	1
First National O&M Co.									
NOMAC KSA Division	758	5	763	272	5	36%	29	0	29
NOMAC International Division	274	16	290	230	15	84%	17	1	18
ROMCO	138	0	138	53	0	38%	2	0	2
RPC	281	0	281	120	0	43%	4	0	4
HIWPT	35	0	35	35	0	100%	0	0	0
Project:									
Shuaibah IWPP	24	0	24	15	0	63%	6	0	6
Shuaibah Expansion IWP	6	0	6	3	0	50%	0	0	0
Petro-Rabigh IWSPP	42	0	42	26	0	62%	0	0	0
Bowarege	6	0	6	4	0	67%	2	0	2
Jubail Water and Power Company	15	0	15	7	0	47%	1	0	1
Shuqaiq IWPP	17	0	17	13	0	76%	4	0	4
Rabigh IPP (RABEC)	21	0	21	9	0	43%	2	0	2
Barka 1 IWPP (including Expansions)	7	1	9	4	1	56%	2		2
CEGCO Assets	946	40	986	946	40	100%	42	6	48
Qurayyah IPP	17	0	17	8	0	47%	2	0	2
Khalladi Wind Project UPCR	14	2	16	10	2	75%	3	0	3
Noor 1 CSP	6	2	8	6	2	100%	3	0	3
Noor 2 CSP	14	3	17	12	3	88%	3	0	3
Noor 3 CSP	19	3	22	16	3	86%	5	0	5
Bokpoort CSP IPP	7	3	10	6	3	90%	2	1	3
Rabigh 2 IPP\Al Mourjan	34	0	34	8	0	24%	2	0	2
ACWA Power Beatona BioEnergie W2E	13	1	14	13	1	100%	1	0	1
Kirikkale CCGT	18	1	19	18	1	100%	4	0	4
Moatize IPP	2	0	2	2	0	100%	2	0	2
Total	2,968	136	3,105	1,917	111	2,028	191	18	209

<sup>•</sup> Data on diversity of employees based on age group is currently not disclosed in the report. However, we will endeavour to report this figure in subsequent reports.

# Terms and Abbreviations

**CCGT** Combined Cycle Gas Turbine

**CEGCO** Central Electricity Generating Company

**CEMP** Construction Environmental Management Plan

**COD** Commercial Operation Date

**CSP** Concentrated Solar Power

**EHS** Environment, Health and Safety

**EMP** Environmental Management Plan

**EPC** Engineering, Procurement, Construction

**ESIA** Environmental and Social Impact Assessment

**GCC** Gulf Cooperation Countries

**GHG** Greenhouse Gas

**GRI** Global Reporting Initiative

**HIWPT** Higher Institute for Water and Power Technologies

**HSE** Health, Safety, and Environmental

**HSSE** Health, Safety, Social and Environmental

**IFC** The International Finance Corporation, member

of the World Bank

**IPP** Independent Power Project

ISO International Organization for Standardization

**IWP** Independent Water Project

**IWPP** Independent Water & Power Project

**KSA** Kingdom of Saudi Arabia

LTI Lost Time Incident

**NOMAC** First National Operation & Maintenance Company

NTP Notice to Proceed

**OEM** Original Equipment Manufacturer

Offtaker Contracted buyer of power and/or water

**OHSAS** Occupational Health and Safety Assessment Scheme

**OTS** Owner's Technical Specification

**O&M** Operations and Maintenance

**PCOD** Project Commercial Operation Date

**PPA** Power Purchase Agreement

**ProjectCo** Project Company

**PV** Photovoltaic

**PWPA** Power and/or Water Purchase Agreement (P(w)PA)

**SMEs** Small and Medium Enterprises

**SPV** Special Purpose Vehicle WPA Water Purchase Agreements

**UAE** United Arab Emirates

WB World Bank
YoY year on year

# **GRI Index**

### **GENERAL STANDARD DISCLOSURES**

In terms of General Standard Disclosures (GSD), we believe there is sufficient data to cover 37 out of the 58 GRI indicators. To be compliant with core level GRI G4 reporting a company must report on 34 out of the 58 indicators. Additionally, 3 sector-specific indicators can be reported on as part of the GSD (EU 1-3).

### **General Standard Disclosures**

Indicator Category	Indicator	Page
Strategy and Analysis	G4-1	4
	G4-2	4, 7, 14
Organizational Profile	G4-3 to G4-8, G-12, G-13, EU-3	6
	G4-9	6, 14,16
	G4-14	29
	G4-15	4, 15, 29
	EU-1	10, 11
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Stakeholder Engagement	G4-24 to G4-27	9, 20-27
Report Profile	G4-28	8
	G4-32	8, 42
Governance	G4-34 to G4-52	17-19
Ethics and Integrity	G4-56 to G4-58	18

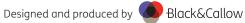
# MATERIAL ISSUES SPECIFIC STANDARD DISCLOSURES

All material issues identified in the Materiality section of the report. In addition, a few non-material issues are included in as we have available information covering Market Presence, Materials and Employment. Page references are provided to each Disclosure of Management Approach (DMA) and the relevant indicators.

# Specific Standard Disclosures/Material Issues

	Indicator	DMA	Data
	Economic Performance (EC-1)*	8	16,17
Economic	Indirect Economic Impacts (EC-7/8)*	14, 15, 18	14, 19-27, 40
	Procurement Practices (EC-9)	28, 36	19,29
00	Availability and Reliability (EU-10)*	4, 6, 10, 11, 31	10, 11, 30, 31
ŭ	Research & Development (EC-4)	8	33
	System Efficiency (EU-11)	4, 30	31
_	Energy (EN-3)*	8, 30	30, 39
ent.	Biodiversity (EN-12)	8, 33	33
Ĕ	Emissions (EN-15/18)*	34	35, 39
5	Effluent & Waste (EN-22/24)*	34	35, 39
Environmental	Environmental Compliance (EN-29)	29, 33	33, 35, 39
	Supplier Enviro. Assessment (EN-32)	29, 33	33
	Local Communities (SO-1/2)	4, 8, 19	19-27, 40
	Anti-Corruption (SO-3/4)	8, 18	18
	Anti-Competitive Behavior (SO-7)	8, 18	18
<u>-</u>	Regulatory Compliance (SO-8)*	32,33	32, 33, 35
Social	Emergency Planning & Response	32	32
	Security Practices (HR-7)	32	32
	Indigenous Rights (HR-8)	29, 32	32
	Occupational Health & Safety (LA-6)*	29, 32	34, 38
	Diversity & Equal Opportunity (LA-12)*	14, 15, 17	14, 15, 17, 42

Note: Indicators with  $^{\star}$  have been included in the scope of the external independent assurance.



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