

2016 AES SUSTAINABILITY REPORT



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ORGANIZATIONAL PROFILE

The AES Corporation (NYSE: AES) is a Fortune 200 global power company founded in 1981. The company's headquarters are in Arlington, Virginia, United States (US). AES is publicly traded company, incorporated in Delaware and governed by a Board of Directors.

Our vision is to be the world's leading sustainable power company by leveraging our unique electricity platforms and the knowledge of our people to provide the energy and infrastructure solutions our customers truly need. Our people share a passion to help meet the world's current and increasing energy needs, while providing communities and countries with the opportunity for economic growth due to the availability of reliable, affordable electric power.

We are organized into six market-oriented strategic business units (SBUs). Within our six SBUs, we have two lines of business. The first business line is generation, where we own and/or operate power plants to generate and sell power to customers, such as utilities, industrial users, and other intermediaries.

The second business line is utilities, where we own and/or operate utilities to generate or purchase, distribute, transmit and sell electricity to end-user customers in the residential, commercial, industrial and governmental sectors within a defined service area. In certain circumstances, our utilities also generate and sell electricity on the wholesale market.

AES also has the most comprehensive and accomplished fleet of battery-based energy storage in the world, with 166 Megawatts (MW) in operation in four countries.

The AES Corporation (as of December 31, 2016) (Figure 1)

- Total number of countries/operations/utilities
 - 17 countries
 - 111 generation facilities
 - 7 utilities
- Total number of employees 19,000
- Net revenue US \$13.6 billion
- Total assets US \$36 billion
- Quantity of products or services provided (gross)
 - 36,693 MW CAPACITY
 - 69,242 UTILITY GWH
 - 9.4 million customers
- Beneficial Ownership
 1. BlackRock – 11%.
 2. The Vanguard Group, Inc. – 11%.
 3. T. Rowe Price Associates, Inc. – 9%.
 4. State Street Global Advisors (SSgA) – 5%.
 5. Capital Group – 5%.

FIGURE 2 – MW IN OPERATION BY FUEL TYPE (INCLUDES ENERGY STORAGE)

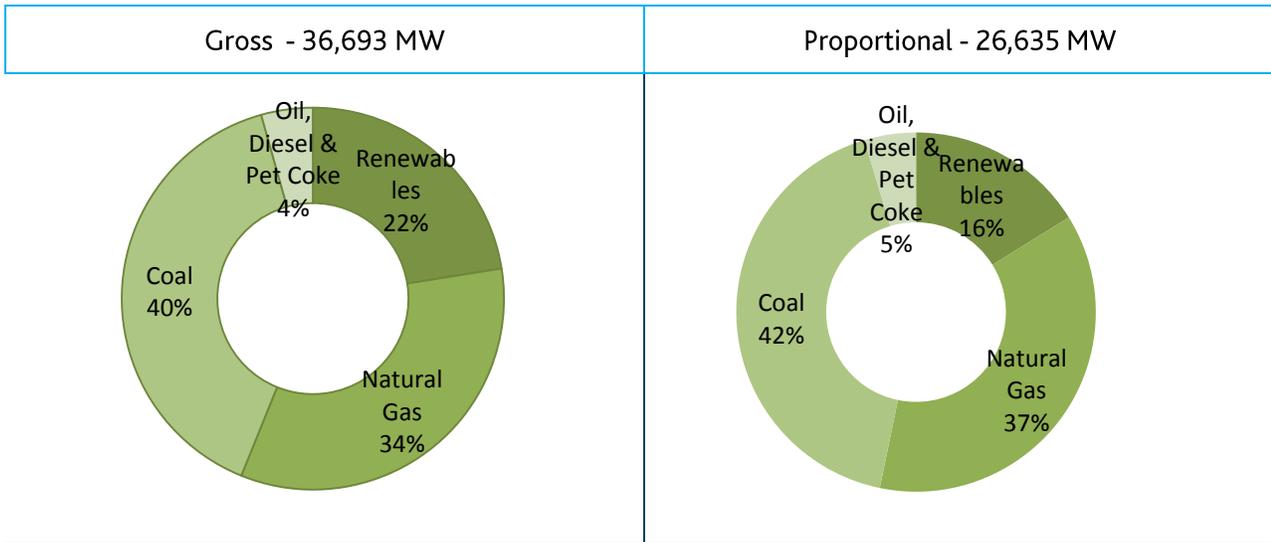
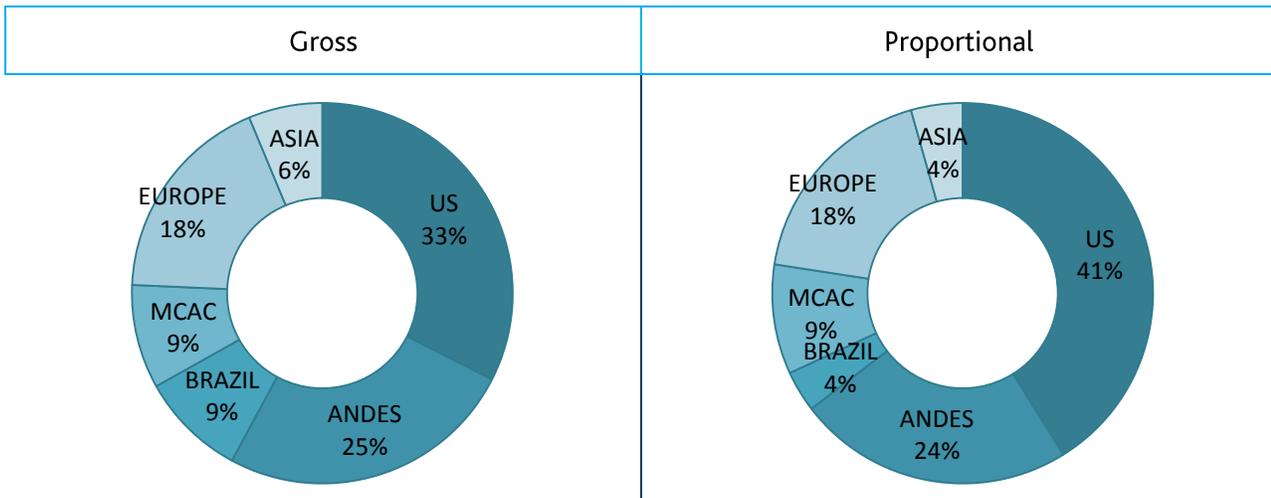


FIGURE 3 – MW IN OPERATION BY STRATEGIC BUSINESS UNIT (INCLUDES ENERGY STORAGE)



MATERIAL ASPECTS HIGHLIGHTED IN THIS REPORT

This report has been prepared in accordance with the recommendations of the Sustainability Reporting Guidelines, version 4.0, of the Global Reporting Initiative (GRI Guidelines). We have chosen to prepare the report in accordance with the criteria listed under the “core” option and include responses to guidance specifically for Electric Utility Sector Disclosures.

We have also responded to several aspects and disclosures listed under the “comprehensive” option. This report is structured to present the following “material aspects” within the context of our five broad strategic initiatives.

FINANCIAL EXCELLENCE

- Economic Performance
- Investment Return on Capital Allocation

OPERATIONAL EXCELLENCE

- Availability, Reliability and Access to Electricity
- Cybersecurity
- Disaster/Emergency Planning and Response

ENVIRONMENTAL PERFORMANCE

- Air Emissions
- Water
- Effluents and Byproducts
- Biodiversity

STAKEHOLDER ENGAGEMENT

- Impacts on Education and Living Standards in Our Communities
- Public Safety

OUR PEOPLE

- Global Talent Management
- Occupational Health and Safety

FINANCIAL EXCELLENCE

We manage our financial performance in line with our corporate strategy set by our CEO and Executive Leadership Team and approved by our Board of Directors. We have selected the Standard and Poor's (S&P) 500 Utilities Index as our peer group index to compare our performance.

Financial success enables us to continue to attract capital and talented people as well as invest in innovative solutions for our customers. Most of our businesses –in both developed and rapidly growing developing markets– are low-cost, flexible and reliable electricity providers with strong locational advantages. Our knowledge of these markets also puts us in a position to take advantage of growth opportunities or quickly respond to changing conditions.

We operate our portfolio to generate capital for growth investments, create value for our shareholders, manage debt repayment, and deliver shareholder dividends. We have an investment decision-making process in place to ensure our investment opportunities align with management objectives. The process includes the participation from functional areas at the corporate and local levels to incorporate a comprehensive analysis of the economic, environmental and social risks. For major projects, the approval process includes a presentation to the Board of Directors.

In alignment with this process and our overall strategy, we are focusing our growth on platform expansions in markets where we already operate and have a competitive advantage to realize attractive risk-adjusted returns.

Another important element of our governance and financial management is the anticipation, identification and management of risks. The risk identification process is integrated within the company through an Enterprise Risk Management program and risks are managed both at the corporate and SBU levels. Further details on risk management are available on our [website](#) and also our [2016 AES Annual Report and Form 10-K](#) discloses information on the different risks that could have an impact on the performance of the company.

ASPECT: Economic Performance and Investment Return on Capital Allocation

In 2016, we delivered on our financial guidance, continued to meet our commitments to our shareholders and extended our progress on our strategy. In terms of future growth in free cash flow and earnings, we expect 8%-10% growth in our financial metrics through 2020.

Our top priority is to maximize risk-adjusted returns to our shareholders, by taking a long-term perspective on investing our free cash flow. Consistent with our capital allocation plan, we are reducing complexity, and re-deploying our excess cash into debt repayment, share repurchases, dividends and growth projects. As a result of our actions during the year we:

- Generated Proportional Free Cash Flow of US \$1,417 million, an increase of US \$176 million from 2015, and Parent Free Cash Flow of US \$579 million;
- Achieved an Adjusted EPS of US \$0.98, just below the mid-point of our guidance range;
- Announced or closed US \$500 million in proceeds from the sales or sell-downs of eight businesses;
- Returned about a third of our cash (US \$369 million) to shareholders:
 - Increased our quarterly dividend by 9.1 percent to US \$0.12 per share, beginning in the first quarter of 2017
 - Completed share repurchases of US \$79 million
- Advanced 3,389 MW of construction projects which are expected to come on-line through 2019.

Since 2011 we have generated substantial cash by executing our strategy:

- Used US \$2,263 million to prepay and refinance Parent debt, reducing Parent debt by US \$1.8 billion or 28 percent;
- Returned US \$2,402 million to shareholders through share repurchases and a quarterly dividend;
- Invested US \$1,336 million in our subsidiaries, largely for projects that are currently under construction and driving our future growth.

We continued to reshape our portfolio and improve our overall risk profile. Aligned with our goal of reducing complexity, we have exited certain businesses and markets where we do not have a competitive advantage. Since 2011, we have exited 11 countries and raised US \$3.6 billion in equity proceeds from asset sales. Our goal is to continue to optimize our portfolio and improve our risk-adjusted returns.

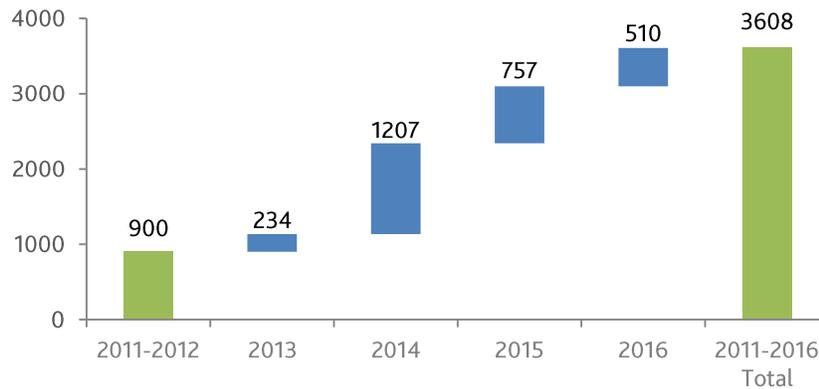


FIGURE 4 - EQUITY PROCEEDS FROM ASSET SALES (US \$ IN MILLIONS)

Partnerships help us to reduce risks and enhance our returns, as they provide an additional market read on our projects. Overall, our current partners can be placed in three broad categories: local, international and institutional/multilaterals. Since 2011, we have raised approximately US \$2.5 billion by incorporating financial partners on our construction projects and our plan is to continue to bring more partners on board.

We have a portfolio of assets that is generating strong cash flow and a construction and development pipeline that is driving growth in cash flow and earnings. Our global platform, diverse portfolio mix by generation sources and technologies, and leading presence in many growing markets, make us well positioned to meet evolving customer needs and maximize shareholder value. We will continue to execute on our strategic objectives and seek to be the low-cost operator of assets in attractive markets, while exercising disciplined capital allocation that strengthens our credit and reduces overall volatility.

OPERATIONAL EXCELLENCE

Striving for excellence is one of our core values. We built and grew the company by applying innovation, creating solutions to address our industry's biggest challenges, and improving the way people work and live today. As we look to tomorrow, finding new solutions to best meet our customers' needs will be essential to accelerating a cleaner energy future for everyone.

Our definition of operational excellence comprises not only supplying reliable, affordable electricity and ensuring our plants are available to run as much of the time as possible — but also managing physical and cybersecurity, disasters and emergencies, public safety and environmental performance.

Our management approach includes the establishment of a uniform system of Key Performance Indicators (KPIs) for all of our distribution and generation businesses. On a yearly basis, the Operational KPIs are set to measure how efficiently and reliably we operate our plants, meet our customers' electricity needs and manage collections. The performance of the KPIs is tracked and reported in the Executive Leadership Monthly Performance Review meetings.

KPIs for generation businesses include commercial availability, equivalent forced outage factor, equivalent availability factor, heat rate and days sales outstanding. Similarly, KPIs for distribution businesses include system average interruption duration, system average interruption frequency, customer satisfaction, days sales outstanding and non-technical losses.

Operational performance, established by the Compensation Committee, is included in the Performance Incentive Plan Payouts of the base salary of Executives and all AES people. Additional information can be found in our [2017 Proxy Statement](#).

Our businesses ensure they operate in compliance with local applicable regulations. Because millions of people rely on the energy our businesses provide, our people continually improve the way we work and strive to deliver energy in the most efficient, safe, and reliable manner we can.

The Nueva Renca plant in Chile, part of AES Gener, became the first plant in the country to be certified for its Asset Management System according to the requirements of ISO 55001:2014.. Also, the Amman East plant, part of AES Jordan, was certified for the ISO 50001 Energy Management standard, which supports organizations in all sectors to use energy more efficiently, through the development of an energy management system. Amman East is the first business in the Jordanian electricity sector to earn the certification.

Asia SBU recognized for its operational excellence

Three of our power plants in the Asia SBU were recognized at the 2016 Asian Power Awards. These recognitions are a testament to our continuing commitment to excellent performance and in partnering with the region in moving the energy industry forward.

AES India OPGC won the Gold Award in the Power Plant Upgrade of the Year category for its Pressure Reducing and De-Superheating System. In the Philippines, AES Masinloc received the Gold Award in the Environmental Upgrade of the Year category for its partnership with the United Nations Industrial Development Organization. Masinloc Power Plant also was recognized as the Power Utility of the Year in the Philippines for its Performance Enhancement program.

AES Vietnam's Mong Duong II received the Power Utility of the Year in Vietnam for its commitment to meeting the country's growing energy demands and contributing to the socio-economic development of the country.

ASPECT: Availability, reliability and access to electricity

Guaranteeing a steady supply of electricity to our customers requires that our businesses use modern technologies for power generation and delivery and monitoring system reliability. It also requires a deep understanding of our service areas and customer base. Through innovative solutions and flexibility, our businesses seek to understand, monitor and serve all our customers' needs for power.

Our generation businesses help local electric systems in the markets they operate to meet their existing and growing demand for energy, while our utility businesses deliver electricity to more than 9 million customers.

Generation

We currently own and/or operate a generation portfolio of 30,378 MW, excluding the generation capabilities of our integrated utilities. Our generation businesses sell electricity under medium- or long-term contracts or under short-term agreements in competitive markets.

Our power generation facilities employs a broad range of fuels suited to the different markets in which we operate, including coal, gas, fuel oil, biomass and renewable sources such as wind, solar, hydroelectric power and energy storage. This diversified generation portfolio reduces the risks associated with dependence on any one fuel source. During 2016 our proportional net energy generated was 104,312.01 Gigawatts/hours (GWh).

TABLE 1 - 2016 NET ENERGY GENERATED (GWH) BY FUEL TYPE (EQUITY ADJUSTED VALUES)

Fuel type	Net Energy Generated ¹
Coal	59,680.4 GWh
Natural Gas	24,071 GWh
Renewables (Hydro, Wind, Biomass, Landfill Gas, Solar)	16,559 GWh
Oil, Diesel & Petcoke	4,001.7 GWh
Total	104,312.1 GWh

Performance drivers of our generation businesses include types of electricity sales agreements, plant reliability and flexibility, fuel costs, seasonality, weather variations and economic activity, fixed-cost management, and competition.

The consolidated performance of our generation portfolio in terms of commercial availability in 2016 improved mainly driven by better availability of some of the coal units as well as the retirement of older coal plants.

In the countries where our businesses are located, governments and other authorities perform studies to anticipate energy needs and address projected long-term electricity demand. In general, we are expecting stronger growth in GDP and electricity demand in most of our markets. In Brazil, demand is expected to grow 1 percent in 2017 versus a decline of 3 percent in 2016. In Chile, demand is expected to grow 2-3 percent versus 1 percent in 2016.

¹ Refers to our own energy generated, adjusted by ownership. Does not include heat and energy used for self-consumption.

TABLE 2 - COMMERCIAL AVAILABILITY BY ENERGY SOURCE, 2013-2016

Commercial Availability (CA) ²	2013	2014	2015	2016	2016 target
AES Total	93.50%	90.50%	89.85%	94.35%	93.88%
Coal	88.40%	83.51%	85.13%	92.56%	
Gas	90.40%	95.31%	94.15%	94.1%	
Hydro	98.30%	97.0%	99.41%	99.85%	
Oil	100%	95.47%	100%		
Wind ³	96.30%	95.65%	95.12%	92.79%	

To meet growing demand, our businesses can develop and construct new generation facilities. Our priority for development is platform expansion opportunities, where we can add on to our existing facilities in key markets where we have a competitive advantage. Also, for our utility businesses, new plants may be built in response to customer needs or to comply with regulatory developments.

Since 2011 we have brought 23 projects on-line for a total of 6,612 MW. In 2016, this included nine projects for a total of 2,976 MW in Colombia, Chile, the Philippines and the United States, including 60 MW of energy storage. We also completed the construction of the new turbine at the Ust-Kamenogorsk power plant in Kazakhstan.

Some of these projects represented important milestones for our markets, like the first Advancion energy storage project in the Philippines or AES Gener's first photovoltaic generation facility to start commercial operations in Chile: Andes Solar. The Carbon Credits of Andes Solar were accepted and registered by the United Nations Framework Convention on Climate Change (UNFCCC) as a Clean Development Mechanism (CDM).

Improving reliability and efficiency in Kazakhstan

In 2016 AES Kazakhstan commissioned a new 120 MW turbine at the Ust-Kamenogorsk power plant in Eastern Kazakhstan, bringing our total installed capacity in the country to 2,776 MW.

This new investment not only increases the generating capacity of the plant, contributing to reducing the energy deficit in Eastern Kazakhstan, but it also introduces valuable modern technology—thereby improving reliability and efficiency and contributing to safe and reliable power supply in the region. The new turbine is the first of its class in the region and one of the largest investment projects in the country's energy sector.

Over the past 20 years in Kazakhstan, we have worked to update and modernize our facilities in order to be more efficient and environmentally friendly. We have also been working introducing innovation and world-class standards and setting the safety of all our employees as a top priority.

² Commercial Availability: Actual variable margin, as a percentage of potential variable margin if the unit had been available at full capacity during outages.

³ Commercial Availability of a wind farm is determined using a different methodology, that is why it is not included in the AES total.

In addition, in Indiana, in the United States, we completed a multi-year US \$550 million rate-based investment in environmental upgrades to our coal plants and the repowering of several units from coal to gas. We will further shift the fuel mix of Indianapolis Power and Lights' (IPL) away from coal when we complete the 671 MW Eagle Valley CCGT in 2018. The combined impact of these investments will be to reduce the gigawatt hours IPL produces from coal by about 35 percent.

At a high level, we are already seeing changes in some of our markets due to the entry of natural gas and low-cost renewables. However, we are generally well positioned to take advantage of these changes because we have already begun to invest in these technologies and because most of our largely contracted portfolio has locational and cost advantages.

The future growth across our markets will be heavily weighted towards lower carbon emissions generation. Our AES Distributed Energy business was identified as a top 10 leading national commercial and industrial developer in the US non-residential landscape, according to a Greentech Media report. The report indicated that AES is a part of a unique group of companies leading not just in megawatts installed but in other factors—such as innovative financing, ancillary products offered and focus on growth opportunities like community solar.

Growth in renewables not only provides an opportunity for direct investment in wind and solar generation, but creates a market for energy storage. The energy storage market is entering a new growth phase; Navigant Research projects that more than 11 GW of energy storage capacity will be installed annually by 2020 in 22 countries. New technologies, commercial approaches, and regulatory frameworks are enabling advanced energy storage to emerge as a reality.

TABLE 3 - GENERATION PROJECTS THAT CAME ON-LINE DURING 2016

Country	PowerPlant	Fuel	GrossMW
Chile	Andes Solar	Solar	21
	Cochrane	Coal	532
	Cochrane Advancion [®]	Energy Storage ⁴	20
Colombia	Tunjita	Hydro	20
United States	Warrior Run Advancion [®]	Energy Storage	10
	Harding Street Advancion [®]	Energy Storage	20
	IPL MATS Upgrades	Coal	1,713
	Harding Street Units 5-7	Natural Gas	630
Philippines	Masinloc Advancion	Energy Storage	10

⁴ Energy Storage MW are power plant equivalent dispatchable resource, including supply and load capability.

Additional hydro capacity in Colombia

In 2016, AES Chivor inaugurated AES Tunjita, a 20 MW hydroelectric power plant in Boyaca, Colombia. The project was designed to take advantage of the existing infrastructure of the Chivor hydroelectric plant. As a result, energy is generated both in the Tunjita and Chivor hydro plants with the same water resource.

The plant can be controlled remotely from Chivor's hydroelectric central. This remote technology was recognized by Colciencias as an example of a business that contributes to the development of Colombia using technology. Colciencias is a Colombian association that promotes science and technology integration into enterprises.

In addition, as part of its sustainable design, AES Tunjita was certified by the United Nations Environmental Committee in 2014 with a Clean Development Mechanism. This recognition allows the company to sell carbon bonds in the market because of its low environmental impact.

We expect 152 MW of new construction to come on-line in 2017: the closing of the cycle at DPP in the Dominican Republic, for an additional 122 MW of capacity and 30 MW of solar and energy storage. Additionally, we expect to complete the IPL wastewater upgrades. We have another five projects totaling 3.3 GW that are expected to come on-line in 2018 and 2019.

TABLE 4 - MEGAWATTS UNDER CONSTRUCTION BY THE END OF 2016

Country	Power Plant	Fuel	Gross MW
Chile	Alto Maipo	Hydro	531
Dominican Republic	DPP (Los Mina) Conversion	Natural Gas	122
	Dominican Advancion®	Energy Storage	20
India	OPGC 2	Coal	1,320
Panama	AES Colón	Natural Gas	380
Philippines	Masinloc 2	Coal	335
United States	Eagle Valley CCGT	Gas	671
	Various	Solar	10

In 2017, we will break ground on the 1,284 MW combined cycle gas repowering at our Southland plant in California in the United States. The project is expected to receive final environmental approvals and reach financial close prior to beginning construction by mid-2017.

Distribution

AES operates seven utility businesses that distribute electricity to 9.4 million people in Brazil, El Salvador and the United States. Our two utilities in the United States also include generation capacity totaling 6,314 MW. Our utility businesses have a variety of structures, ranging from integrated utility to pure transmission and

distribution businesses. Generally these businesses sell electricity directly to end-users—such as homes and businesses— and bill customers directly.

During 2016 AES completed the sale of its wholly-owned subsidiary, AES Sul, a distribution business in Brazil, to CPFL Energia S.A. Over the past 19 years we served more than one million customers at Sul, while improving safety, systems and operations. The sale of Sul is part of the strategy of the company to optimize our portfolio for future value creation.

TABLE 5 - LENGTH OF DISTRIBUTION AND TRANSMISSION LINES (BY SBU AND COUNTRY)

Profile by SBU	Country/ Business	Transmission Lines (Km) (High Voltage)		Distribution Lines (Km) (Low Voltage)	
		OVERHEAD	UNDERGROUND	OVERHEAD	UNDERGROUND
United States	IPL	1,361	-	11,487	9,070
	DPL	2,951	6	16,931	5,820
	<i>TOTALUS</i>	<i>4,312</i>	<i>6</i>	<i>28,418</i>	<i>14,890</i>
Andes	Chile	1,520	-	-	-
Brazil	Eletropaulo	1,647	202	38,739	2,269
MCAC	El Salvador	-	-	36,500	84
Total AES		7,479	208	103,657	17,243

We track the reliability of the distribution networks by the average number and duration of interruptions per customer. The values are consolidated and reported based on ownership-adjusted EBITDA. In addition, we also set targets for customer satisfaction based on the percentage of customers that are satisfied and greatly satisfied.

The system average interruption duration index (SAIDI) represents the total minutes of interruption the average customer experiences annually, while the system average interruption frequency index (SAIFI) represents the average number of interruptions the average customer experiences annually.

As showed in Table 6 and Table 7, the performance in the reliability KPIs improved overall for AES. Atypical climatic conditions due to the effect of La Niña severely impacted the indicators for AES El Salvador's distribution businesses (especially in the months of June and July).

Compared with 2015, AES Eletropaulo obtained over 30 percent improvement in the SAIDI, resulting from the investments made in the Quality Recovery Plan and more agile recovery actions. In the same period, AES Eletropaulo's SAIFI slightly worsened, influenced by the expansion of program network maintenance – preventive maintenance and pruning of trees– which increased the frequency of interruptions.

In the United States, IPL was recognized for the second year in a row by PA Consulting Group. as a recipient of the 2016 ReliabilityOne™ Award for Outstanding Midsize Utility. Awards are given to utilities that excel in delivering reliable energy to their customers.

TABLE 6 - SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI), 2013-2016

Business	2013	2014	2015	2016	2016 Target
Actual AES	5.96	6.13	6.49	3.25	3.04
AES El Salvador	18.31	19.38	14.91	17.42	
AES Eletropaulo	7.99	13.25	23.42	15.85	
Dayton Power & Light (DP&L)	1.32	1.82	1.75	1.27	
IPL	0.81	0.95	0.81	1.03	

TABLE 7 - SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX (SAIFI), 2013-2016

Business	2013	2014	2015	2016	2016 Target
Actual AES	2.97	3.70	3.50	2.0	1.90
AES El Salvador	6.92	5.93	5.71	6.22	
AES Eletropaulo	4.34	3.81	6.41	6.90	
Dayton Power & Light (DP&L)	0.58	0.92	0.92	0.76	
IPL	0.73	0.71	0.66	0.74	

Customer Satisfaction

As one of five KPIs for utility businesses that impacts annual compensation of business leaders, AES sets annual targets for customer satisfaction. The targets and actuals are tracked on a monthly basis in the monthly Management Performance Review meeting.

AES utilities participate in national and/or regional third-party surveys. These include CIER (Regional Energy Integration Commission) for our El Salvadoran utilities, ABRADÉE (Brazil Association of Energy Distributors) for Brazilian utilities, and Power & Associates for IPL and DP&L. The surveys' statistically significant representative samples cover our distribution businesses complete 9.4 million customer base. The results are used to calculate the overall customer satisfaction index.

The results shown in Table 8 represent residential retail and commercial results from all AES distribution business for the past four years. Our generation businesses also focus on customer satisfaction, which is measured through surveys and discussions related to long-term purchase power agreements.

TABLE 8- AES CONSOLIDATED CUSTOMER SATISFACTION FOR DISTRIBUTION BUSINESSES, 2013-2016

	2013	2014	2015	2016	2016 Target
% of customer satisfaction	86.4	85.6	83.9	88.5	86.7

Our utility businesses are continuously innovating to provide the best service to its customers, diversify communication channels, increase customer satisfaction and reduce operation costs. During the year, for example, IPL upgraded its E-Bill options to include the ability to receive a PDF of a bill via email and to pay directly from that PDF instead of having to log-in to IPLpower.com. IPL also announced an improved, mobile-friendly outage map on its website that offers better navigation, zoom capabilities and improved outage location information.

Also, our distribution companies in Brazil and El Salvador expanded digital service options for their customers. AES Eletropaulo created a free smartphone app to improve and streamline customer services, which allows its customers to request services, such as issuing a second copy of a bill and requesting a consumption history. AES El Salvador created another app that allows customers to inquire, raise issues and pay invoices on-line with a credit card.

AES Eletropaulo also completed the implementation of the On Site Billing project, which ensures delivery of the printed energy bill to customers at the time the meter is read. Bills are issued directly by the readers and delivered to the residents, reducing the risk of loss and non-payment due to failure to receive the bill. The company also advanced the scope of electronic billing, which allows customers to receive the bill by e-mail. More than 500,000 customers have already chosen this option—an increase of 124 percent from 2015.

Some of the customer satisfaction highlights include:

- AES Eletropaulo was recognized at the 2016 Smart Awards with two Gold Trophies in the Innovation in Relationship and the Relationship Technology categories. The Smart Award acknowledges the best customer relationship practices in the utilities and telecommunications industries.
- AES Eletropaulo was also one of the four finalists in the 18th Abradee (Brazilian Electrical Energy Distributors Association) Awards in the Quality of Management category. The award evaluated factors such as energy loss solutions, continuity of supply, occupational safety, quality of invoicing and delinquency, and the quality of customer service.
- DPL was ranked above average for overall satisfaction in the Midwest midsize region, in JD Power's 2016 Electric Residential Satisfaction study, with diverse distinctions: first among investor-owned utilities in Ohio; first in corporate citizenship and price performance among investor-owned utilities in Ohio; top 10 for "professionalism of utility employees" in the midsize/cooperative category; top 10 in overall customer satisfaction improvement in the last five years.
- IPL was ranked as first among Indiana investor-owned utilities, in JD Power's 2016 Electric Residential Satisfaction study, with diverse distinctions: sixth in the Midwest Midsize category; eighth in the Midwest Region overall; top quartile in price, billing and payment, corporate citizenship, and communications; above average in overall satisfaction in the Midwest Midsize region; top 10 in the "professionalism of utility employees" category in the midsize/cooperative category.

Energy Storage

AES businesses are dedicated to improving the lives of customers and energy storage reduces the cost of delivering electricity, supports renewable generation, and enables unmatched grid reliability and resiliency.

Renewable energy has surged to become the fastest growing source of electricity in the United States today. [Grid-scale wind and solar made up 67 percent of new capacity additions in 2015](#), and are projected to make up a similar share of global power investments through 2040. That shift is transforming the grid as we know it.

Forward-thinking utilities are discovering that using battery energy storage as a complement is enabling them to more efficiently integrate renewable energy into their portfolios. Energy storage is vital for transforming

electric power systems into flexible, resilient energy networks that are ready to meet the needs of the rapidly changing energy landscape and allow us to accelerate renewables in energy markets around the world.

Since AES started our energy storage journey in 2006, we have grown with our customers, pioneering ways that storage can help utilities better control, scale and ensure the reliability and availability of electricity.

AES operates the world's largest fleet of advanced grid batteries with 166 MW in operation and 270 MW in construction or late stage development across seven countries, four continents and eight different power markets. Most of these projects have been the first battery-based energy storage project ever in the market and often serve as a reference project and catalyst for additional growth in the country and region.

This experience has helped us stay agile as a solutions provider and to be ranked as the [leading energy storage systems integrator by Navigant Research](#) for the second year in a row. In addition, AES received diverse recognitions during the year, including the electric industry's most prestigious award, the Edison Award from the Edison Electric Institute (EEI).

AES UK & Ireland was selected as one of the Top 100 Businesses for the development of energy storage solutions. It also was recognized as the United Kingdom's energy storage leader by the British Renewable Energy Awards and received POWER Magazine's 2016 Smart Grid Award. The editors of POWER Magazine chose the installation of the Kilroot Advancion[®] Energy Storage Array into a working coal-fired power station as the strongest global example for innovation in the energy sector.

EEI 2016 International Edison Award

AES was recipient of EEI's 2016 International Edison Award for the development and deployment of Advancion[®] 4, the fourth generation, grid-scale, battery-based energy storage platform.

Advancion[®] 4 creates a standardized storage platform that allows access to the largest battery suppliers globally, as well as avoids costly project by project integration and obsolescence as the technologies evolve by enabling new batteries to be installed in the future using the best technology at the time.

This is our fifth International Edison Award in nine years. The Edison Award is presented annually by EEI to honor companies for their "distinguished leadership, innovation and contribution to the advancement of the electric industry for the benefit of all."

Building on our experience, we are working with system operators, regulators, utilities, energy ministries, and other stakeholders around the globe to accelerate the growth of energy storage in new markets. During 2016, we commissioned 60 MW of energy storage in three different countries:

- **Indiana - United States:** IPL Advancion[®] 20 MW Energy Storage Array located at the Harding Street Generating Station is the first grid-scale, battery-based energy storage system in the 15-state Midcontinent Independent System Operation (MISO) region. The facility will lower emissions by enabling more efficient dispatch of existing generating assets and support the ongoing integration of renewable power sources.
- **Atacama, Chile:** AES Gener teamed up with Mitsubishi Corporation to build Gener's second hybrid thermal power plant, located in the Northern Grid in Chile. The additional 20 MW of energy storage freed up the equivalent 20 MW of generation, bringing total energy storage in northern Chile to 52 MW.
- **Philippines:** Masinloc 10 MW Advancion[®] Array is the first grid-scale energy storage project in the Philippines and the first Advancion unit in South East Asia. Working closely with the grid operator this

Advancion array helps to fill a critical need for frequency regulation and ancillary services on the Luzon grid.

As part of the AES initiative with select leading companies to ensure global availability of the Advancion energy storage platform. During the year, we announced the signing of alliance agreements with Eaton Corporation and Mitsubishi Corporation, to offer the Advancion energy storage platform to their customers across Europe, the Middle East, and Africa (Eaton) and Asia and Oceania (Mitsubishi).

ASPECT: Cybersecurity

Directly aligned to our first value of putting safety, the mission of our global cybersecurity program is to keep our systems, assets, data, and people protected by employing a multi-layered approach to inform, detect, mitigate and respond to cyber threats.

This is important as the energy sector is increasingly under siege from cyber criminals, organized crime, and hacktivists that disrupt the sector’s critical infrastructure. A successful cyberattack on one of our plant control systems could impact generation capabilities; similarly, a breach causing loss of personal data could cause financial and reputational impact to our customers and employees.

According to the [Department of Energy’s Quadrennial Energy Review](#), the global electricity system faces “imminent danger” from more sophisticated and frequent attacks: “*Cyber threats to the electricity system are increasing in sophistication, magnitude, and frequency. The current cybersecurity landscape is characterized by rapidly evolving threats and vulnerabilities, juxtaposed against the slower-moving deployment of defense measures.*”

In 2013, AES initiated a strategy to create a Global Cybersecurity program. Over the years, this strategy has evolved to include an operating model, governance, mandatory cybersecurity guidelines, training, awareness, shared technologies and intelligence that we employ to guide our global program across our diverse businesses.

We regularly communicate this strategy with the corporate leadership, the Board of Directors and our global cybersecurity team through monthly cybersecurity council meetings and an annual off-site summit (held at AES Corporate Headquarters in 2016). Additionally, as part of our global strategy, we self-assess compliance with our stated guidelines and cooperate with our Corporate Internal Audit function to audit compliance. Similarly, the businesses conduct external penetration tests to assess the sustainability of the data system and plants. The Global Cyber Security Program is organized into four core areas, with an underlying training, awareness and messaging component (see Figure 5 below).



FIGURE 5 - CYBERSECURITY PROGRAM COMPONENTS

Operating a global cybersecurity program in 17 diverse markets where AES has a presence requires a flexible strategy to work with different internal stakeholders across the businesses, including our regional presidents, local information technology (IT) directors, plant managers, cybersecurity program managers, and the internal audit and technology teams.

This adaptability has made our program successful. For example, while we audit our businesses against cybersecurity guidelines, they have the discretion to deliver cyber awareness information customized to their own people and local culture. This global view includes hosting our cybersecurity program managers and IT directors at an annual summit, where they can be trained and network with their colleagues from around the world.

We are continually exploring new ways to improve the strategic direction of our program. To that end, in 2016, we expanded our cyber risk process with the incorporation of Cyber Risks as part of the corporate risk heat map. As such, we developed repeatable quantifiable processes to identify and aggregate cyber risk at the business and corporate level as part of the Risk Management process.

Awareness and education

As part of our awareness function, we design training and activities for collective use among SBUs. This way, Cyber Program Managers in each SBU can focus on executing awareness activities without having to create and design from scratch. Among the activities are newsletter articles, internal briefings (formal briefings and informal gatherings), relevant film screenings, email reminders, group area reminders (such as tabletop reminder cards), employee training and employee awards.

A key component of the awareness function is effectively communicating that cybersecurity is the responsibility of each employee and contractor. In fact, 91 percent of all cyber-attacks globally start with a phishing email.

Conditioning AES people not to click malicious emails is critical. To that end, AES works with anti-phishing training company PhishMe to reduce employee susceptibility to phishing attempts. We administered 56,000 exercises to AES people in 2016. The result was reduced reduction of susceptibility rates from 12 percent in 2015 to 7.4 percent in 2016. For comparison, the susceptibility rate for all energy sector companies is 8.2 percent.

Similarly, we participate in Cyber Security Awareness Month, an annual international campaign to raise awareness about the importance of cybersecurity by engaging and educating through events and initiatives. Observed every October, Cyber Security Awareness Month was created in 2003 as a collaborative effort between government and industry. In 2016, AES used the global program's messages to build awareness by speaking to all internal groups at their monthly safety meetings and by holding internal events with outside speakers.

Monitoring and response

The security of our assets requires a global view of cyber events. To that end, the Global Cybersecurity team has begun to implement plans for its first in-house Security Operations Center (SOC), located in Indianapolis, Indiana, in the United States. Building off the capabilities of the existing SOC used by the US SBU, all SBUs will be serviced by the global SOC with such offerings as threat intelligence, vulnerability management, "dark-web" reporting and incident response.

During 2016 the team worked on assembling a large set of security analysts and other support personnel to handle the demands of a global SOC. The SOC roadmap is designed to provide a single view of cybersecurity across IT and operational assets and is planned to be operational in 2017.

Intelligence and advocacy

As we know that collective knowledge is an imperative, we actively participate in numerous utility, energy and cybersecurity working groups, including those led by government, industry and the private sector. Some of these

working groups include: Department of Homeland Security, Federal Bureau of Investigation's InfraGard Program, EEI, Electricity Information Sharing & Analysis Center (E-ISAC), North American Electric Reliability Cooperation (NERC), the Institute for Critical Infrastructure Technology (ICIT), as well as several additional commercial partners that provide paid collaboration and intelligence services.

Additionally, we participate in a Cooperative Research and Development Agreement (CRADA) with DHS to share and receive industry and company actionable information. At the local level, some businesses also collaborate with local agencies, including FBI Field Offices and Global Legats, the Brazilian Policia Federal, and the Chilean Cybercrime Investigation Metropolitan Police.

Next-Generation technology

The sustainability of our cybersecurity program depends on our adaptability to the changes in our business. With regard to next generation technology, in 2016 we launched an Original Equipment Manufacturer (OEM) Control System strategy to ensure any new construction or industrial control systems (ICS) re-provisioning for the company includes cybersecurity prevention, detection and maintenance components. These guidelines are specific to AES ICS environments and are complementary to the AES Cybersecurity Guidelines that support our mission by protecting AES personnel and assets, as well as the operation of AES businesses. AES Global Cybersecurity is responsible for overseeing the review, revising as necessary, and disseminating these guidelines on at least an annual basis to reflect changes in business objectives, technology or the risk environment.

As a result of the efforts by our Global Cybersecurity program, AES has not had a significant cybersecurity event—including the capture of a control system, unauthorized exposure of company data, or breach of customer records.

ASPECT: Disaster/Emergency Planning and Response

AES businesses face possible risks and scenarios that can disrupt operations and the service they provide. Safe, fast and effective power restoration following emergency events is essential to the reliability of electric power generation and distribution systems.

Hence, as a provider of essential services, our businesses have diverse programs in place to ensure our operations are prepared to manage unusual disruptions. The goal is to keep our business and operations running effectively, safely and securely.

Our management approach includes a set of emergency preparedness standards describing requirements for the development, review and implementation of Business Continuity Plans (BCP) at each AES location. These plans also consider local regulations and include preparedness for: operational emergencies; off-site emergencies that will have a significant impact on operations or staff; physical security measures, including evacuation of our employees in case of unrest; and emergencies involving nature, e.g., severe weather, floods, earthquakes, tsunamis, etc.

Our Safety Management System and the Global Safety Standard on Emergency Preparedness describes minimum requirements for emergency preparedness plans that address the risk associated with operational activities, man-made emergencies, natural disasters and anticipated industry hazards. Also, the Safety Standard require for emergency response drills and training to our people. In addition, when necessary, our businesses establish an educational program with the local communities.

Training personnel for emergency response

As an integral part of the BCP established at AES Chivor in Colombia, the company has an Emergency Care and Prevention Plan, which integrates procedures in the areas of environment, safety and operations. There is also an Emergency Brigade, trained in first aid, firefighting, height rescue, rescue in confined spaces, rescue in fast waters, water rescue, vehicular rescue and rescue in collapsed structures.

During 2016, AES Chivor selected 11 members for the Brigade in which. These people will take part in a training process focused on reaching the level of training of the current members of the Brigade. Currently, the AES Chivor Brigade is considered the best emergency care business group in the Tenza Valley.

Besides the emergency preparedness standards, each business has a comprehensive playbook that includes diverse plans such as: Business Continuity, Cybersecurity, Physical Asset and Personnel Security, Crisis Communication, Stakeholder Management, and Succession.

To ensure business continuity, businesses define scenarios followed by action plans to maintain an acceptable level of operational capability while restoring operations. Some of the procedures include monitoring of weather systems; staging of resources prior to anticipated emergencies; mobilization to restore outages; continuous improvement of our emergency response capabilities based on past performance; and extensive storm response training, including detailed storm simulations.

In the United States, for example, IPL and DP&L are part of a mutual aid agreement with several utilities to assist in bringing electricity back to customers following severe weather conditions. The same agreement enables IPL and DP&L to request help from other utilities when severe weather impacts our ability to serve our customers in Ohio or Indiana.

AES' US utilities awarded for their power restoration efforts

The Edison Electric Institute (EEI), an association that represents US investor-owned electric companies, gave DP&L and IPL awards for their role in helping restoration work after severe weather events.

In October 2016, Hurricane Matthew hit the southeastern coast of the United States. At the storm's peak, roughly 23,000 people were without access to power. DP&L sent 120 people and crew members to Florida to help restore power to the impacted areas.

IPL's assistance was instrumental in restoring service to customers in Indiana following winter storm Petros. IPL crews devoted nearly 700 worker-hours of assistance over four days to assist neighboring electric companies. In responding to these severe weather events, crews endured intense snowfall, wind, cold temperatures, and dangerous road conditions to help restore service to customers in three counties across the NIPSCO service territory in northwest Indiana.

Stakeholder collaboration and engagement is also an important part of our safety and recovery the plans. Our procedures include clear and frequent communications and collaboration with customers, neighboring communities, the media, contractors and government officials. To create awareness with key stakeholders, businesses also can share information with surrounding communities about safety and how to act during an emergency, bad weather conditions, or spill overs, among others.

AES Panama brings awareness to local communities

In 2016, AES Panama held diverse activities with the communities close to its power plants. In August, in collaboration with security agencies and local authorities, AES Panama organized an awareness-raising activity in the District of Chepo, to reinforce the importance of being aware of potential risks, having a family plan in case of any type of emergency, and responding in a timely manner. This activity was carried out simultaneously in 55 communities located downstream of the Bayano hydroelectric plant, reaching approximately 3,500 inhabitants of the district.

Later in the year, AES Panama revisited some communities in Chepo to talk about prevention in the face of the heavy rains that hit the country. The company also met with security forces and local authorities in Bayano to coordinate preventive measures due to the heavy rains.

ENVIRONMENTAL PERFORMANCE

Our environmental management and performance approach reflects our values and our vision of being the world's leading sustainable power company that safely provides reliable, affordable energy. We encourage our businesses to go beyond simply meeting environmental standards and to develop the right energy solutions and operating practices for the markets in which they operate.

The Nominating, Governance and Corporate Responsibility Committee of the Board of Directors monitors environmental compliance of AES businesses, and reviews and approves the scope of the internal environmental compliance audit programs. In addition, SBU leaders have responsibility for complying with environmental regulation and managing their operations to minimize environmental impact.

We monitor our business activities under our [Environmental Management System \(EMS\)](#) Framework which builds on the AES' [Environmental Policy](#) principles that are applicable to all our operating businesses and construction projects.

The EMS, is based on industry best practices and is consistent with the principles of the ISO 14001 standard and sets environmental program guidelines for each AES business. Under the EMS, each operational business and construction project is required to establish an environmental program that allows for continuous environmental performance monitoring, environmental risk assessments and periodic integrated environmental, health and safety audits.

While all our operating businesses and construction projects adhere to our EMS framework, more than 85 percent of the AES workforce is located in businesses that have voluntarily certified their EMS to the ISO 14001 international standard.

The EMS is comprised of environmental management and technical standards that cover topics such as general environmental requirements and prohibitions, PCB (polychlorinated biphenyl) management, hazardous waste and chemicals management, biodiversity protection, spill prevention and control, and contractor environmental management. In some cases, the requirements of these standards are more stringent than local environmental regulatory requirements.

Our integrated Environmental Health and Safety (EHS) audit program internally verifies compliance with the EMS framework and environmental standards. Each audit finding is accompanied by a corrective action plan and a completion date, with the overall audit performance reported periodically to the executive leadership.

The environmental programs assist each AES business in achieving environmental compliance, addressing significant environmental impacts and striving for continuous performance improvement.

AES used the services of Lloyd's Register Quality Assurance Inc. (LRQA) to verify and conduct a limited assurance for 2013-2016 of AES businesses':

- Air emissions data;
- Water withdrawal and discharge data; and
- Coal combustion product (CCP) generation and recycle/reuse data.

In addition to third-party verification, we use an internal AES quality assurance/quality control (QA/QC) process to validate reporting every year.

2016 environmental goals

Based on the baseline assessment carried out last year in the areas of air emissions reduction, biodiversity, and water resource conservation, our 2016 global environmental goals focused on identifying opportunities for improvement of our existing environmental programs and initiatives:

2016 GLOBAL ENVIRONMENTAL GOALS	Result
<p>1) Environmental incident reporting and management training.</p> <p>The objective behind this goal was to ensure better understanding and compliance with the new environmental standard “AES Environmental Incidents (ENEs and Near Misses) and EOE Management” implemented in 2015. The standard sets new requirements for environmental near-miss identification, investigation, analysis and reporting for all AES operating businesses and construction projects.</p>	Goal Achieved
<p>2) Develop waste, water or air emission-related environmental improvement initiative.</p> <p>Each operational business and construction project was required to actively consider development of one wastewater use/wastewater discharge/water consumption, or air emission-related management or control improvement initiative.</p>	Goal Achieved

Additionally, we also have in place a set of six environmental leadership KPIs, which support accomplishment of the annual environmental goals. These KPIs track environmental performance in areas of environmental awareness training participation, environmental audits performance, environmental operating events, and regulatory proceedings, fines, etc. Each business leader’s performance against these KPIs is continually tracked using our global EHS Management Information System (EMIS), the AESOnline System.

ASPECT: Air emissions

Many factors influence emissions, including generation diversity and efficiency, demand for electricity, weather, fuel availability and prices, and emission controls deployed. Depending on the fuels used to generate power, these air emissions may consist of sulfur dioxide (SO₂), nitrogen oxides (NO_x), particulate matter (PM), mercury (Hg), as well as greenhouse gases such as carbon dioxide (CO₂) and trace emissions of methane (CH₄) and nitrous dioxide (N₂O).

Different fuel sources are managed to achieve maximum operational efficiency and compliance with all applicable environmental laws.

Our businesses manage air emissions using a combination of power generation plant combustion unit and air pollution control equipment design, and proper operation of these two systems. The installation of air pollution control systems is primarily dictated by locally applicable environmental laws and regulations. Because air emissions are directly related to the amount of fuel used, each AES business continuously monitors its power generation efficiency and takes action to improve efficiency when necessary.

In addition to power generation, the use of light and heavy duty vehicle fleets, as well as other equipment, represents another source of direct emissions, which is monitored and accounted for at our businesses.

All air emissions (direct and indirect) are consolidated using an equity share approach and are voluntarily disclosed via this Sustainability Report, the Annual Report, CDP Climate Change program and other means of communication.

Direct Greenhouse Gas Emissions

We follow the principles and requirements of the GHG Protocol's Corporate Accounting and Reporting Standard. Our GHG emissions inventory includes all GHGs covered by the Kyoto Protocol, except for PFCs and NF₃, since these are not used in our operations.

Our 2016 greenhouse gas emissions in CO₂ equivalent (CO₂e) result primarily from the following sources:

- Major fuel-fired power generation stationary sources (e.g., boilers, gas turbines, reciprocating engines), used for power generation;
- Non-power generation sources, such as smaller fuel-fired sources (e.g., emergency generators, space heating, portable equipment), vehicles, and releases of CH₄, SF₆ and HFC-based gases.

Complete details related to our inventory and methodology can be found on the CDP website.

TABLE 9 - DIRECT GHG EMISSIONS (SCOPE 1), 2013 – 2016

		2013	2014	2015	2016	2016 Target
Total direct GHG Emissions (Scope 1) ⁵		75,863	79,630	70,339	70,273	81,144
<i>Power Generation</i>	Thousand MT					
CO ₂		75,609	79,363	70,105	69,981	
CH ₄		29	30	26	26	
N ₂ O		225	238	208	204	
<i>Other Sources</i>						
CO ₂		N/A	42	43	42	
SF ₆ , HFCs and CH ₄	N/A	50	18	19		
Emissions Intensity for Total Generation	MT / MWh	0.660	0.693	0.711	0.674	

Direct SO₂, NO_x, and Other Emissions

The data in Table 10 refers to SO₂, NO_x and mercury emissions resulting from our businesses' major fuel combustion units during the last four years.

⁵ Equity adjusted values.

TABLE 10 – METRIC TONNES OF SO₂, NOX AND OTHER EMISSIONS, 2013 - 2016⁶

	2013	2014	2015	2016	FY 2016 Target
NOx	78,208	81,802	70,106	68,561	82,542
SO₂	196,811	235,505	142,186	111,305	236,057
Mercury	0.43	0.73	0.56	0.42	0.74

The primary reason for a decrease in NOx emissions since 2014 was fuel conversion projects, decommissioning and the sell-down of several fossil fuel-fired units. SO₂ emissions have trended down due to new installation of emission controls and better operation of existing SO₂ emission controls at some of our facilities in Indiana, in the United States and AES Gener in Chile.

Air emissions data related to mercury primarily consists of emissions from coal-fired electric power generation units. The 2013 mercury emissions data presented in Table 10 only reflects emissions available for the majority, but not all, of our US SBU coal-fired units, and this data has not been externally verified. For 2014-2016, the reported values include mercury emissions from all our global coal- and petroleum coke-fired power plants and have been externally verified.

Emissions from biologically-sequestered carbon

AES' 2016 CO₂ emissions from biologically sequestered carbon include emissions from our landfill gas (Nejapa, El Salvador, MCAC SBU) and biomass (Laja, Chile, Andes SBU) burning power plants.

TABLE 11 - CO₂ EMISSIONS FROM BIOLOGICALLY SEQUESTERED CARBON, 2013 – 2016

Biogenic CO ₂ Emissions (Equity Adjusted)	2013	2014	2015	2016
	THOUSANDS METRIC TONNES			
Biomass	97	82	69	63
Landfill Gas	26	22	32	24
TOTAL	123	104	101	88

Additionally, in 2016 some of our businesses used E85 fuel for their vehicles, which represented a small fraction of the overall CO₂ emissions from biologically sequestered carbon (199 metric tonnes of CO₂). These emissions are not included in the table above. AES did not track emissions from E85 in the past, but will continue reporting them in future reports.

⁶ Equity adjusted values.

Indirect GHG Emissions

Through the end of 2013 we tracked Scope 2 greenhouse gas (GHG) emissions only at our Brazil SBU, which is reflected in the lower data coverage percent compared to the other years. Beginning in January 2014, AES expanded its global Scope 2 GHG emission tracking on a monthly basis. The enhanced Scope 2 GHG emissions tracking process includes tracking of:

- Electricity purchased from non-AES generated sources for a business's own use;
- Transmission and distribution losses of non-AES generated electricity sold to end users, of AES distribution companies;
- Sales to customers by our distribution businesses (Scope 3);
- Business air travel for our global operations (Scope 3).

TABLE 12 - INDIRECT GHG EMISSIONS (SCOPE 2 AND 3), 2013 - 2016

	2013	2014	2015	2016
THOUSAND METRIC TONNES CO ₂ e				
Electricity-Related Indirect Emissions (Scope 2*), Equity Adjusted				
Location Based Method	90	290	367.8	306
Market Based Method	90	290	368.1	309
Other Indirect Emissions (Scope 3*), Equity Adjusted				
Emissions due to Sale of Electricity to End Users	<i>No Data</i>	5,853	6,238	5,864
Emissions due to Business Air Travel*	<i>No Data</i>	1.4	3.2	1.8

*Note: 2013 Scope 2 emissions represent emissions from our Brazil SBU only, and Scope 3 air travel emissions are not adjusted for equity ownership.

A portion of the electricity we generate is used for "station service" (or own use), thus in many cases, it is not necessary to purchase energy from the market. Exceptions to this general rule of thumb include periods of outages, when electricity is purchased from the market to support our energy needs.

Additionally, our transmission and distribution businesses purchase electricity for their own use either from the grid or from AES-owned power plants. In the case of purchases from the grid, a certain degree of double counting may be present due to the fact that our portfolio consists of both generation and T&D businesses.

REDUCTION OF AIR EMISSIONS — ENERGY EFFICIENCY FOR OUR CUSTOMERS

Our businesses are continuously looking for ways to improve power generation efficiency and reduce emissions. During 2016, AES operating businesses implemented diverse emission reduction projects through process improvements and equipment replacements. A total of 104 emissions reduction projects were completed, resulting in estimated annual CO₂e savings of 2,796,755 metric tonnes.

Examples of projects that were implemented during the year include process equipment efficiency improvements, such as heat rate improvements and unit conversion projects, as well as low carbon energy installation, including solar panels like the ones installed by AES El Salvador and AES Panama for self-consumption in three of their facilities.

Additionally, our battery-based energy storage system can enhance the performance of power generation facilities by storing excess energy and delivering it to the grid when needed, making the power system more reliable while reducing emissions. For example, by displacing regulation services provided by traditional power plants, our energy storage systems in PJM (a regional transmission organization in the US) are estimated to reduce air emissions by 62,000 tons of CO₂ annually—the equivalent of removing around 11,000 cars from our highways.

Diverse businesses also implemented improvements at some power plants to reduce “conventional” air emissions. For example, AES Gener in Chile completed an environmental improvement plan focused on reducing air emissions with the commissioning of the new particulate matter (PM) and SO₂ abatement systems of three units at the Guacolda plant, and selective catalytic reduction (SCR) equipment for the abatement of NO_x emissions in Unit 1 of the Guacolda plant. Similar equipment for the abatement of PM and SO₂ started operations during 2015 at Ventanas and Norgener. The environmental improvement plan required investment of around US \$473 million.

IPL Petersburg MATS Project Completed

The Mercury and Air Toxic Standards (MATS) brownfield construction project at IPL Petersburg, in Indiana, in the United States, reached its substantial completion milestone on 2016. Four thermal generating units at this facility had design provisions installed to meet the US Environmental Protection Agency's requirements.

The new controls include a pulse air fabric filter system (also called a bag house), flue gas desulfurization (FGD) system upgrades and continuous emissions monitoring systems.

The completion of the project is a significant milestone for the Petersburg plant and the US SBU as it will enable them to provide long-term power with reduced emissions.

Furthermore, our distribution businesses offer a variety of energy efficiency, renewable energy and demand-side programs, which result in GHG emission reductions by their customers. The type of programs offered by each utility depends on market conditions.

In 2016 IPL was ranked by the Department of Energy Laboratories as one of the nation's "Top 10 in Green Power Sales". IPL's Green Power Option allows customers to specify a percent of their monthly electricity use to be generated by renewable power. IPL was also named a 2016 Utility Environmental Champion by Market Strategies International's Cogent Reports' study, which reflects the extent to which customers believe IPL supports environmental causes, commitment to environmentally-friendly energy resources, and offering tools to help customers manage their energy usage.

Some examples of the programs and efforts carried out for residential and industrial customers to leverage energy efficiency and load optimization include: modernization of lighting in public schools, health centers and public buildings; LED replacements in traffic lights; supporting the removal and recycling of lower efficiency appliances; providing energy efficiency manuals for customer awareness; and energy management consulting for optimization of electricity use. For example:

- In the United States, DPL's energy efficiency and educational projects contributed to the reduction of 188,898 MWh in electricity consumption by customers in 2016.
- In Brazil, AES Eletropaulo has been helping schools and municipalities to reduce their energy consumption. Through the "AES Eletropaulo in Schools" project, 220 schools reduced their electricity consumption by 15 percent after the educational actions in 2016. Also, the Municipal Energy Management projects advise municipal administrators on the efficient use of electric energy. In 2016, AES Eletropaulo signed agreements with eight municipalities for the implementation of Municipal Energy Management resulting in an estimated 7 percent savings on the electricity consumption.

Helping the Sacramento Kings to create the "greenest" arena in the world

In 2016, AES Distributed Energy completed the installation of a 700 Kw rooftop solar system at the Sacramento Kings Golden 1 Center arena, located in Sacramento, California in the United States. This innovative project showcases how sports and entertainment venues can use environmentally sustainable solutions.

The project is LEED (Leadership in Energy and Environmental Design) certified and is the first indoor arena in the US to achieve the certification. LEED is a national certification system developed by the U.S. Green Building Council, to encourage the construction of energy and resource efficient buildings that are healthy to live in.

The rooftop solar system along with another array in Herald, California will supply the arena with 100 percent of its electricity demands. The Golden 1 Center is expected to be the first indoor arena in the world to receive its entire power supply from solar energy sourced within 50 miles of the facility.

ASPECT: Water

Water availability is a critical risk factor for the electric power industry and for our operations at locations where we need water to operate efficiently. On an annual basis, our individual facilities may use from only a few hundred cubic meters of water (like wind generation sites) to more than 700 million cubic meters of water (such as in a large thermal power plant).

The water is predominantly used for the steam cooling process at our thermal plants. As part of the process, a small portion of the water evaporates while most of it is returned to the water source body. As we strive for excellence, we work to develop solutions that will result in lower withdrawals from freshwater aquifers, which is especially important in arid areas. As an example, we use salty/brackish water from the ocean or from existing wastewater sources that reduce the amount of wastewater discharged into waterways by treatment plants or other organizations.

Water use is also key to our hydroelectric power plants, since water flowing through turbines is used to generate electricity. However, these waters are immediately returned to the environment at similar or higher quality as raw water extracted.

Risk Management

Considering the significance of this resource for our operations, AES instituted a company risk management process. As part of this process, the AES Hydrology Risk Committee identifies, monitors and establishes best

practices around hydrology risk on both a portfolio and individual business basis. Based on input from the businesses, this committee reports to executive leadership on areas of mid- to high-risk where the potential exists to disrupt operations due to water availability.

AES also evaluates physical, regulatory and reputational water-related risks using the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI) Global Water Tool, the AES Environmental Impacts Assessment tool and the Annual Environmental Questionnaire. This risk assessment covers our direct operations.

The tools establish relative water risks in a company's portfolio to prioritize actions, assist with long-term water management strategy and serve as a strategic tool during the evaluation of new project development initiatives.

Additionally, as part of the EMS Framework, our businesses manage and monitor water quality and environmental-related issues during operations, and some businesses perform periodic analysis and stress testing of water availability on a local and aggregate basis. We also monitor the management of water resources and compliance with regulatory requirements through periodic external and internal EHS audits. Findings are properly addressed and closure actions are established.

Water Withdrawal and Discharge

AES follows GRI guidance on reporting water withdrawal and discharge data. Our water inventories include:

- Cooling water, including those from once-through and recirculating cooling water systems;
- Process water;
- Potable/drinking water (with the exception of bottled water).

Water used for generation of electricity at our hydroelectric power plants, as well as water evaporation from cooling towers in our closed-circuit cooling systems, domestic sewage, rainwater and storm water effluents is not included in our water inventory.

Because of the once-through cooling systems on many of our coal-fired plants, almost 99 percent of the water is returned to the source and available for other uses.

Water withdrawal and discharge data is consolidated using an operational control approach.

TABLE 13 - WATER WITHDRAWAL AND DISCHARGE, 2013 - 2016

	UNIT	2013	2014	2015	2016	2016 Target
Total water withdrawn		8,117	6,553	6,393	7,512	8,197
Surface		8,053	6,503	6,324	7,491	
Municipal	<i>Million Cubic Meters</i>	7	6	5	4	
Groundwater		57	44	64	18	
Total water returned to the source (at similar or higher quality as raw water extracted)		7,805	6,219	6,135	7,386	

Sustainability at our operational bases

AES Eletropaulo in Brazil is building new, more sustainable operational bases. In 2016, AES Eletropaulo inaugurated the first reading and delivery bases built with modern techniques and resources that reduce environmental impact.

The construction system used at the new base replaced masonry with steel material that, in addition to being recyclable, results in construction work with reduced water savings of 80 percent compared with the traditional method. In addition, the site has rainwater harvesting and storage systems, which are used to wash the yard and outdoor areas.

The bases are also designed to make better use of natural daylight and have LED bulbs to illuminate areas when necessary.

Because water is a shared natural resource, AES businesses engage with local communities and other stakeholders located in the same watershed areas on a bi-lateral or multi-lateral basis. These engagements include communication campaigns, such as public hearings, community engagement programs, development of contingency plans, social responsibility programs, and participation in governmental and inter-governmental initiatives.

For example, OPGC, our power plant in India, has provided safe and potable drinking water to 17 periphery villages from its own Water Treatment Plant since 2006. The plant has established a Drinking Water Supply Management Committee, comprised of members of nearby villages, which supervises the drinking water pipeline system and assists in performing day-to-day maintenance activities.

In 2016, AES Chivor, a hydroelectric plant in Colombia, had partnerships and cooperation activities with a variety of NGOs. During the year an agreement was signed with the Macanal Mayor's Office and the NGO Drops of Water ("Gotas de Agua") for the maintenance of the bioengineering works installed in the Caño Cangrejo basin, as a strategy for risk management in the Santa María municipality, where the plant is located, and to prevent the repetition of avalanche-type events such as those presented in 2012 and 2013.

ASPECT: Effluents and Byproducts

Fossil fuel-fired generation plants may produce coal combustion byproducts (CCBs), solid wastes (e.g., small quantity hazardous waste, municipal waste), cooling water discharges and other wastewater effluents.

Water discharges may include cooling water and process water discharges, which can impact the quality of receiving streams such as temperature and pH. These impacts are managed through diligent control and monitoring of all water discharges. The control may also include monitoring of upstream and downstream areas from our water discharge sources as well as monitoring of groundwater around our ash ponds. The results of these measurements are reported to regulators on a periodic basis.

The AES EMS and global environmental standards establish minimum requirements for the management of hazardous and special wastes, chemical and raw material management, and spill prevention and control through assessment of hazards, management actions, and establishing preventive and control measures. Each AES business is required to have emergency response plans, including spill prevention and containment plans. All spills are reported on a monthly basis through our EMIS.

With the exception of coal combustion products (CCPs), the byproduct streams from electric power generation, transmission and distribution businesses consist of small mass and volumetric quantities, and may include municipal solid wastes, construction and demolition debris, and hazardous and special byproducts such

as PCBs, solvents, used oils, herbicides, etc. Specific AES environmental standards—which represent industry best practices—govern proper handling and management of these wastes and byproducts. Adherence to these standards is monitored through our program of internal and external audits on a periodic basis.

Coal Combustion Products Generation & Recycling

AES businesses are committed to the safe and economic recycling of coal combustion residuals CCRs. CCRs are materials formed when coal is burned to generate electricity, and include bottom ash, fly ash, synthetic gypsum (also referred to as flue gas desulfurization (FGD) gypsum), FGD solids and cenospheres.

CCRs are used as a valuable ingredient in a wide range of concrete products and as a structural fill material in place of soil or other mined materials. Gypsum, which is produced as part of the air emissions control process, is recycled and used in wallboard for the construction industry, as a raw material in the production of cement, or for use as a soil stabilizer in agriculture.

TABLE 14 - CCPs GENERATION AND RECYCLING/REUSE, 2013-2016⁷

	2013	2014	2015	2016	2016 TARGET
CCPs generated (metric tonnes)	7,278,372	7,507,371	9,550,936	9,024,417	10,016,088
CCPs recycled/reused (%)	36.7	38.5	33.9	31.9	34

Coal combustion generation and recycle/reuse data above is consolidated using an operational control approach.

The increase in CCP generation rates in 2015 and 2016 was driven by (1) the addition of new controls systems (FGD) at Norgener (Chile, Andes SBU) and at Ventanas (Chile, Andes SBU), and 2) the commissioning of a new power plant Mong Duong 2 (Vietnam, Asia SBU) in the second half of 2015.

Our businesses also promote environmental awareness through their community outreach programs and encourage community members to take proactive action with regards to the environment. In Brazil, AES Eletropaulo's "Recycle More, Pay Less" program offers discounts on the power bill to customers who deliver recyclable material (paper, plastic, metal, glass) in the collection points distributed across the concession area. In three years, the initiative has already benefited approximately 19,900 customers. Approximately 4,900 tons of waste were collected, which prevented 11.9 tons of CO₂ from being released into the atmosphere, and saved approximately 21,200 MWh of electricity.

In the Dominican Republic, AES Dominicana promotes the "Recycle with Clean Points" program to create change in the lifestyle of young people and adults in the communities of Boca Chica, Haina and Los Mina t as well as to encourage a reuse, reduce, recycle culture in the area.. Similarly, AES' distribution companies in El Salvador promote a culture of recycling with the program "AES Recycles," by providing to its customers and

⁷ The values in the table are not equity adjusted.

community members with a practical and accessible way to recycle paper by using its commercial offices as recycling centers.

AES Eletropaulo Implements Concrete Pole Reuse Project

In 2016, AES Eletropaulo in Brazil started a project to reuse some of AES Eletropaulo's utility poles. The AES Eletropaulo Logistics Support Office, in collaboration with Environment Management and Technical Services Management department, implemented a process to review the procurement and placement process for concrete poles.

Previously, AES Eletropaulo sold old poles for proper disposal and purchased new poles to be installed. The team recognized that some of the old poles were still in great condition and could still be used. The new project uses a detailed technical analysis to tests the pole resistance and determine if the pole can continue to be used. After the tests, a technical report proving the possibility of reusing the pole is published.

The project will save roughly 215 poles per month. The project is expected to save 26,500 thousand liters of water per year, while avoiding the consumption of other materials, such as cement, grit, sand and gravel.

Spills & Environmental Incidents

Our EMS and environmental standards set up a foundation for identifying, monitoring, controlling and following-up on any environmental events/conditions that could lead to non-conformances and financial impacts on the business.

Our "AES Environmental Incidents (ENEs and Near Misses) and EOE Management" standard requires each business to establish a process for identification, investigation, analysis and reporting of environmental non-conformance events and near misses. As part of this standard, all environmental incidents are categorized as either significant or non-significant using a risk matrix, which in turn determines further actions, such as a requirement to perform a root cause analysis.

For example, environmental non-conformance events could be those related to oil and chemical spills. AES standards define reportable spills as any liquid spills reported to local environmental regulators and/or lost off an AES business property into the environment at a quantity equaling or exceeding 55 gallons (210 liters). In 2016, AES businesses recorded a total of ten reportable oil and chemical spills, caused primarily by equipment leaks or failures, and were cleaned up. None of these spills resulted in significant environmental impact, regulatory enforcement actions and/or significant fines/penalties, which is why they were not addressed in our 2016 Annual Form 10-K.

ASPECT: Biodiversity

Protecting and encouraging biodiversity helps boost ecosystems and keep them healthy for all life forms to thrive. AES' operations associated with generation and transmission and distribution of electricity, as well as construction of various scale projects will inevitably lead to interactions with various ecosystems, populations and species. It is therefore one of our focus areas in environmental management.

Our approach to managing biodiversity impacts at our operating and construction sites is built upon three major principles outlined in our Environmental Policy and embedded in our EMS' AES Biodiversity Assessment & Protection Standard:

- **Risk and impact assessment** through analysis of our activities, their potential impacts, and necessary control measures. Activities built on this principle include the Aspects and Impacts Assessment (AIA) process, Project Execution Framework (PEF) process for pre-construction studies, as well as monitoring during and after construction, and local biodiversity studies if required;
- **Mitigation and control** through implementation of monitoring programs and plans, engineering and other controls, and habitat restoration and protection; and
- **Communication and awareness** through collaboration with local scientific communities and other stakeholders, internal and external training and education, etc.

Our approach has the objective of ensuring that all AES businesses identify, assess, document and take proper mitigation action on biodiversity matters to avoid or, if avoidance is not possible, to minimize negative biodiversity impacts and to promote positive biodiversity impacts.

Due to their specificity, biodiversity risks for construction projects are assessed and mitigated during the pre-construction permitting and environmental impact assessment phases using methodologies that consider various alternatives and establish corrective measures to avoid, mitigate or offset possible impacts on ecosystems and biodiversity. Usually, information on the environmental impact assessments for our projects under development or construction are made publicly available on dedicated webpages either by the businesses or the regulatory bodies.

TABLE 15 - LINKS TO THE PUBLIC WEBSITES CONTAINING EIA/AIA RESULTS

Major Construction Project	Country	Link to the public website containing EIA/SIA results
Alto Maipo	Chile	http://seia.sea.gob.cl/expediente/ficha/fichaPrincipal.php?modo=ficha&id_expediente=2933044
DPP (Los Mina) Conversion	Dominican Republic	http://ifcextapps.ifc.org/ifcext/spiwebsite1.nsf/78e3b305216fcd8a85257a8b0075079d/2fe252d3888252a285257d4900591eb2?opendocument
OPGC 2	India	www.moef.nic.in/www.opgc.co.in
Colón	Panama	http://www.miambiente.gob.pa/index.php/en/
Masinloc 2	Philippines	The Environmental Performance Report and Management Plan (EPRMP) is not available in digital format, but is available for local communities at the Department of Environment & Natural Resources (DENR) Central Office (Quezon City) and at DENR Pampanga

Protecting biodiversity and restoring habitats

Each business and construction project demonstrates adherence to our environmental management principles, as well as compliance with local and national regulatory requirements, by developing biodiversity protection programs and plans, and addressing biodiversity risks in four major areas: awareness campaigns, site clean-ups,

reforestation activities and habitat protection and restoration. Below some examples of initiatives carried out during the year:

Awareness Campaigns

- During the year, AES El Salvador held its first seminar on urban arboriculture with the slogan “the right tree in the right place.” The objective was sharing knowledge to help cities achieve greater harmony between the natural environment and electricity infrastructure. The seminar brought together representatives from municipal governments, construction companies, government agencies and non-governmental organizations (NGOs) related to the environment. A specialist and arborist certified by the International Society of Arboriculture presented to the group. This seminar represents AES El Salvador's continued commitment to make a difference through environmental conservation, while also ensuring safe and high-quality electricity for the communities it serves.
- AES UK & Ireland published a pocket-sized Wildlife Identification Guide in celebration of its 10-year partnership with Ulster Wildlife. The guide helps AES people and visitors identify some of the more notable plants and animals found at AES sites in Northern Ireland.

Site Clean-Ups

- IPL in the United States, celebrated their sixth year of restoring parks in the Indianapolis area. Hundreds of IPL people volunteered in the parks by planting trees, removing fences, rehabilitating playgrounds and refreshing murals. Day in the Parks is IPL's signature event and the company's largest volunteer program. Several community partners collaborated to make the event possible: Indianapolis Parks Foundation, Keep Indianapolis Beautiful, Inc. and Indy Parks and Recreation. Local television station Fox 59 covered IPL Day in the Parks. To see the video coverage, click [here](#).

Reforestation Activities

- AES Colón and AES Panamá volunteered for the Second National Reforestation Day organized by Panama's Ministry of the Environment. Reforestation days are part of the national program “Alliance for the Million” that aims to plant one million acres of trees across the country in the next 20 years. More than 30 AES people and their families volunteered for the program in two locations. One project is in Chepo near our Bayano hydroelectric plant and the other is close to the AES Colón project.
- AES Tietê in Brazil reforested 409 hectares surrounding its reservoirs, as a result of their own initiatives and investments, as well as partnerships with the SOS Mata Atlântica Foundation, universities, companies and municipalities. AES Tietê itself produces the seedlings used in this project in a nursery located in the Promissão plant. Annually, AES Tietê produces approximately 1 million seedlings of more than 120 tree species. Part of this production is donated to city halls, NGOs, and owners of land near the reservoirs in order to encourage reforestation.
- AES Tietê also launched the Mãos na Mata (Hands in the Forest) program, aimed at promoting the reforestation of 3,000 hectares around AES Tietê's 12 reservoirs.

Habitat Protection and Restoration

- In 2016, AES Colón worked to fulfill the local and legal requirements to receive Notice to Proceed for the construction of its facilities. The local team removed vegetation, including 2.5 hectares of mangrove areas, and leveled the ground. The clearing of the vegetation area was done in compliance with the Environmental Study plans. The flora and fauna rescue team rescued over 50 species of mammals, reptiles, amphibians and birds, as well as three different species of orchids.
- AES Tietê saved the Piracanjuba fish (*Brycon orbignyanus*) from being an endangered species through its Fishing Management program. The salmon-like fish has a high commercial value and was declared

an endangered species in Brazil 30 years ago. Through the program, AES Tietê is slowly bringing back the species to its natural habitat. AES Tietê's Fishing Management program aims to provide a conducive environment for six endangered native fish species to reproduce, while also monitoring and actively managing the water quality in its reservoirs.

- AES Changuinola, a hydroelectric power plant in Panama, built the first hydro-biological station in Central America and the Caribbean to maintain the river's fauna by studying and reproducing migratory fish and shrimp from the Changuinola river basin, for the repopulation of the watershed and human consumption. The community can use the shrimp and fish for food and for livelihood activities.

STAKEHOLDER ENGAGEMENT

At AES, Stakeholder Engagement refers to the process of developing strong, proactive, long-term and consistent relationships with key stakeholders of the company. This is integrated into the company's global strategy as we recognize that it is not just a critical part for sustainability, but also important for our businesses' success and their licenses to operate.

Because AES businesses engage with diverse stakeholders across the globe, having a common engagement approach is key. Since 2014, we have internal guidelines for Global Stakeholder Engagement. The guidelines, developed based on the AA1000 Stakeholder Engagement Standard, highlight the key elements of our engagement strategy and outline steps to ensure our relationships are successful and long-lasting. The content covers topics from identifying and prioritizing stakeholders, to deciding on the appropriate engagement methodology, to performing risk assessments.

In addition, as part of our management approach, we use a customized platform to better anticipate and prepare for stakeholder risks, map stakeholders and effectively manage each stakeholder engagement strategy. We identify key stakeholders based on the unique characteristics of each market and country where our operations are located. This identification is determined based on position or favorability, level of influence, level of involvement, and level of interest or concern.

Stakeholders

Our stakeholders include a wide variety of individuals, organizations, governments, communities and other market players. Customers, employees, suppliers, lenders and investors are also stakeholder groups with whom we want to maintain solid relationships.

We strive to develop and strengthen those relationships through meaningful engagements. We work to structure interactive stakeholder engagement activities so we can receive effective feedback. Table 16 below summarizes our current stakeholder groups and provides examples of engagement methods, issues discussed and how those issues are usually addressed. The examples provided are typical, but may not apply to all of our businesses.

AES Colón launches Radio show "AES Colón in your community"

AES Colón in Panama created the live radio show, "AES Colón in your community," on Portobelo Stereo, a regional radio station in Colón. Airing weekly, the show delivers information about the 380 MW CCGT and LNG terminal project under construction and give local stakeholders the opportunity to ask questions, raise concerns and get immediate feedback from our people.

Every episode includes various AES Colón people as guests. During the show, the audience can call or write to the station to ask questions or engage with the speakers.

At the corporate level, key relationships (such as heads of state, investors, government policy makers, trade associations, government officials, ambassadors and international institutions) are managed through dedicated people at our headquarters. At the local level, AES Market Business Leaders (the highest senior leader at a country level) are directly responsible for overseeing Stakeholder Engagement at the local level with the support of functional area leads.

TABLE 16 – MAIN STAKEHOLDERS

AES Stakeholders	Engagement	Key Issues	How Issues are Addressed
<p>Suppliers</p> <p><i>We hold our suppliers and contractors to the same high ethical standards we have</i></p>	<ul style="list-style-type: none"> • We promote suppliers' success through clear policies, procedures, terms and conditions • It is important to ensure our suppliers are aligned with our values and have standards as high as ours 	<ul style="list-style-type: none"> • Direct contact between vendors and AES' supply chain buyers and sourcing specialists • Supplier performance score cards • Published policies and guidelines, such as safety requirements, environmental guiding principles and supplier diversity objectives 	<ul style="list-style-type: none"> • Centralized management of key supply chain categories, such as fuel sourcing • Develop and communicate safety, environmental, and diversity guidelines to existing and prospective suppliers
<p>Investors</p> <p><i>We operate our portfolio to create value for our shareholders</i></p>	<p>We regularly communicate with our investors via:</p> <ul style="list-style-type: none"> • Quarterly earnings presentations • Investor Relations website • Investor calls • Rating Agency discussions • Investor and public forum events • Annual shareholder meeting • Annual and corporate social responsibility reports • Proxy communications • Traditional and social media 	<ul style="list-style-type: none"> • Strategy and growth plans • Company management • Return on investment • Capital allocation • Governance • Financial performance and liquidity • Shareholder returns, including dividends • Risk management • Environmental performance 	<ul style="list-style-type: none"> • Maintain a healthy balance sheet and sufficient liquidity • Ensure that investors are provided timely information on key issues • Corporate reorganization to streamline the business for profitability
<p>Customers</p> <p><i>We serve a broad base of customers across the energy value chain and we are committed to maintaining good relationships with them</i></p>	<p>We are invested in understanding our customers' perspectives and addressing their concerns via:</p> <ul style="list-style-type: none"> • Customized energy management solutions • Wholesale and retail power and gas market participation • Internet-based feedback interface • Customer satisfaction surveys • 24/7 customer call centers • Publications and reports • Energy efficiency and demand response programs • Residential customer education programs • Sustainable energy solutions • Traditional and social media • Participation in public events 	<ul style="list-style-type: none"> • Managing energy use with new technologies • Reliability and quality of service • Lowering energy costs • Using cleaner energy sources, including renewables • More efficient energy use • Safety 	<ul style="list-style-type: none"> • Provide information and energy management tools via our websites • Peak demand management programs • Conduct advanced metering and dynamic pricing pilots • Deploy on-site renewable energy systems for commercial customers • Conduct energy efficiency audits and building retrofits, and provide incentives for numerous energy efficiency measures • Provide risk management services for wholesale and retail customers

AES Stakeholders	Engagement	Key Issues	How Issues are Addressed
<p>Governments</p> <p><i>It is important to develop sound energy policies that balance reliability, affordability and environmentally sound practices</i></p> <p><i>Many government entities and authorities, from local to state/provincial and federal agencies, are significant stakeholders</i></p>	<p>We communicate with local, state and federal government officials via:</p> <ul style="list-style-type: none"> • Meetings with elected officials in communities surrounding power plants and utility infrastructure • Power plant tours • Emergency planning exercises conducted with local/state agencies • Policy white papers, testimony and briefings • Regulatory proceedings and rate cases • FERC and NERC reporting • Reporting in compliance with national and local requirements across the globe 	<ul style="list-style-type: none"> • Reliability • Security, affordability and sustainability of electricity supply • Energy market structure and regulation • Job creation • Environmental compliance • Federal policies • Financial/OTC derivatives • Safety • Fuel diversity and balanced energy matrix 	<ul style="list-style-type: none"> • Investment in new technologies to keep long-term electricity supply reliable, affordable and sustainable • Engage in discussions with federal governments, partnership groups and EPA about environmental performance and policy • Engage directly on financial reform legislation, GHG policy, clean energy standards and federal loan guarantees
<p>Industry Observers</p> <p><i>We value our dialogue and collaboration with local communities and NGOs that represent local communities and global observers</i></p>	<p>We engage in dialogue with NGOs and other industry observers around the world through:</p> <ul style="list-style-type: none"> • Industry organizations, conferences and direct dialogue • Participation in advisory councils, business alliances of NGOs • Collaboration with NGOs in facilitating policy making dialogues • Website • Traditional and social media 	<ul style="list-style-type: none"> • Employment • Business development • Infrastructure • Trends in the sector • Environmental performance and policies • Job creation • Safety • Skilled work force development 	<ul style="list-style-type: none"> • Engage in NGO-sponsored dialogues on energy and environmental policy topics, including GHG policy, clean energy standard and renewable energy incentives • Participate in events as experts in the field to discuss trends in the sector
<p>Community</p> <p><i>We engage with local communities to ensure that we are listening to and considering their views as we conduct our business</i></p>	<p>We invest in, support and ensure dialogue with the communities where we operate via:</p> <ul style="list-style-type: none"> • Periodic community meetings in communities surrounding our facilities • Career fairs • Volunteer projects and social sustainable programs • Participation in community events • Website • Traditional and social media 	<ul style="list-style-type: none"> • Employment of local talent • Business development in local communities • Infrastructure • Environmental performance and policies • Job creation • Safety • Skilled work force development • Social benefits 	<ul style="list-style-type: none"> • Updates on key issues and projects and feedback mechanisms on website • Skilled workforce development programs with industry and labor stakeholders at community educational locations • Social sustainable programs • Education on safe, adequate and efficient use of energy

AES Stakeholders	Engagement	Key Issues	How Issues are Addressed
<p>AES People</p> <p><i>Our people make us the company we are and they set the foundation of our ability to achieve the long-term goals we have set for the company</i></p>	<p>We engage through a variety of different channels:</p> <ul style="list-style-type: none"> • Company intranet • Multi-lingual update communications from company executives • Electronic newsletters • Employee Helpline • Yearly performance reviews • Online courses, classroom training and college degree programs • Leadership and employee development opportunities • Employee surveys 	<ul style="list-style-type: none"> • Workplace safety • Career opportunities • Job stability • Diversity and inclusion • Salary and benefits • Company strategy and leadership • Positive corporate image 	<ul style="list-style-type: none"> • Promote two-way communications • Increase feedback mechanisms • Increase involvement in company related activities

ASPECT: Impacts on education and living standards in our communities

AES businesses have implemented varying levels of engagement with local communities. Whether entering a new location or operating at an existing facility, we are focused on programs that can make a community stronger economically, socially or environmentally, through impact assessments and development programs.

Wherever we operate or undertake new projects, we work to bring new power solutions and additional benefits to the local population. While the programs we invest in may differ from community to community, we are consistently focused on long-term commitments. We encourage our businesses to custom-tailor community engagement programs to ensure the most effective and beneficial local contribution. Additionally, we encourage AES people to get involved in volunteering programs and community activities. Every year, our volunteers participate in a variety of activities that include reforestation, education and training, clean ups, among others.

Where practical, our team involves stakeholders in the planning, implementation and evaluation of community programs. We encourage our businesses to identify sustainable programs that consider AES business priorities, national strategies and the needs of local communities.

AES businesses also engage in partnerships with various stakeholders to maximize the benefits of the programs and make a long-term, positive impact for the communities. Partners include government agencies, development agencies, municipalities, NGOs, universities and technical institutions, business partners and subcontractors.

Certification of women electricians

El Salvador is working towards incorporating women into jobs that historically were filled by men. To strengthen the inclusion of Salvadoran women through technical training, AES El Salvador partnered with the Secretariat of Social Inclusion - Ciudad Mujer, and Don Bosco University, to develop a workshop for women electricians in 2016.

The program trained and certified women for residential electrical installations. They received the necessary knowledge for the reliable, safe and efficient installation of a residential electrical system, thus offering them the possibility of employment in this occupation and improving their quality of life by opening new income opportunities, as well as professional development.

AES has internal company-wide guidelines for developing Sustainable Corporate Social Responsibility Programs. The guidelines are suitable to different local contexts and provide tools for AES businesses to develop and implement sustainable social responsibility programs that are beneficial for our core business and the sustainable development of the communities in which the company operates.

Every year, AES businesses develop over 100 community-oriented investment programs in the areas of infrastructure, education, culture, environment, safety, health and social welfare. Some of these programs improve education and living standards, and include access to electricity and basic services, vocational training and employment opportunities for young people, and safety education, among others.

During 2016, 54 percent of community-related activities, programs, donations and sponsorships were in the areas of education, social welfare and safety. Also, 12.5 percent of the money allocated to community-related activities, programs, donations and sponsorships were for infrastructure projects. These programs include provision of electricity for underserved populations, education on safety, vocational training and provision of school supplies, among others.

For example, AES Changuinola in Panama inaugurated a rural electrification project to provide electricity to roughly 1,500 residents in five communities. Also, AES El Salvador developed a pilot photo-voltaic solar project that allowed 14 rural families to receive electricity for the first time.

AES Eletropaulo in the Schools

AES Eletropaulo, in São Paulo, Brazil, developed a public-school program called "AES Eletropaulo in the Schools" to invest in the formation of more conscientious citizens and to promote changes in the way students use electric energy and natural resources.

As part of the program, students play the main role in actions for consumption awareness in the use of power and water at school and at home. Actions in their schools. During 2016, there were over 520 participating schools, with more than 1,500 trained teachers and 454,000 students directly involved in projects. The results were very positive saving around 12.5 percent of electricity, with an approximate reduction of 700 MWh, enough to supply power to 3,500 families.

The contribution to the communities of some of these programs was recognized locally. In 2016, our businesses received more than 20 recognitions. For example:

- AES Gener received the Good Citizen Award in the Innovation category for its program, *Tu suelo, es mi suelo* (Your land is my land), an initiative developed near the Guacolda facility in the province of Huasco, Chile.
- AES Philippines, was recognized during the 6th Asia Best Corporate Social Responsibility Practices Awards. AES Academy, the country's capability development program for its electric cooperative customers, received the Best CSR Integrated Business Award while the Masinloc Training Facility was given the Best Community Development and Best CSR Impact Initiative awards.
- AES UK & Ireland won the prestigious Responsible Business Awards in Northern Ireland for its commitment and contribution to protecting and enhancing biodiversity. The recognition was given by Business In The Community.
- AES El Salvador received the Jaraguá Award in recognition for contributions to the economic, social and cultural development at the local and national level in El Salvador.

- AES Panamá received recognition for its commitment to Corporate Social Responsibility. The award was granted by an institution that promotes mediation, inclusion of genders and minorities, education in human rights and various national campaigns in favor of respect for human rights.

ASPECT: Public Safety

As an operator of electric generation and transmission and distribution facilities, the infrastructure necessary to conduct our operations is located in the communities our businesses serve. Because contact with this infrastructure can be dangerous, AES businesses take preventive steps via the design of our facilities such as installing security fencing around the sites or locating live electrical systems away from easy public access.

In addition, where appropriate, we communicate these risks to the public by various means, such broadcast media, information sessions at schools and community centers, and by other public outreach campaigns like the web pages of our distribution businesses.

However, even with such precautions, there may be occasions when a member of the general public inadvertently comes into contact with one of our businesses' systems and suffers a fatal injury. This is most true for the electric distribution networks located throughout the communities our businesses serve. Some situations in which community members can come into inadvertent contact with power lines include: residential construction and vegetation pruning activities; touching downed electrical lines; playing and kite flying around electrical wires; and attempting illegal network connections or thefts of network equipment.

We track public injury and public fatality cases, which are investigated by local AES businesses. Based on the results, mitigation measures are implemented as needed.

In 2016 we experienced a total of 27 public fatal incidents due to individual members of the public coming into contact with our businesses' distribution infrastructure in the countries of Brazil and El Salvador (note this number does not include traffic incidents involving AES' businesses infrastructure, such as power poles, which are not tracked and over which we have no control). As shown in Table 17, this result represents an increase in the number of public fatal incidents compared to 2015.

TABLE 17 – PUBLIC FATAL INCIDENTS, 2013-2016

Fatal Incident Cases	2013	2014	2015	2016*
General Public	44	30	21	27

* Fatalities that occurred in 2016 took place in the following two countries: Brazil (25) and El Salvador (2).

Note that the cases reported in Table 17 include electric transmission and distribution businesses we had management control over during the last four years. But during this period we exited a number of such businesses in the countries of Ukraine, Cameroon and Brazil.

Although our overall geographic risk profile for such incidents was decreasing during the last four years, our largest transmission and distribution business, AES Eletropaulo in Brazil, had an increase in annual public fatal incidents which contributed to the increase in total cases across AES in 2016. Despite our continued public safety outreach programs, it is believed that an increase in informal and unskilled labor performing new construction and remodeling work contributed to a greater frequency of such workers coming into close contact with AES Eletropaulo's electrical distribution network without taking the proper precautions to protect themselves.

The key element of our public safety program includes educating people in the communities where we operate about the electric systems and facilities, how to work safely around them, and other safety hazards. This program is implemented through visits to schools or communities, participation in fairs and other public events, and television and radio campaigns.

For example, outreach was performed throughout our power generation businesses in Panama during 2016, where an entire week was spent on an event titled “The Prepared AES Family.” Lectures and drills were presented in the areas of home emergency planning, first aid, and response to natural emergencies, such as floods and earthquakes. A total of six AES Panama sites were involved, and almost 300 AES people and contractors participated in the events.

In addition, our distribution businesses also provide safety information on their websites, such as safety precautions during power outages or when power lines are down, severe weather, seasonal and indoor/outdoor safety tips. Because we are inspired by our first value of putting safety first, we also look for ways to enhance public safety in our communities in areas beyond our sector. AES people volunteer to create awareness about safety in different situations. For example:

Farm Safety Program

At our generation businesses in Northern Ireland, Employee Engagement Champions identified an opportunity to improve lives by sharing the AES safety culture with the rural agricultural community surrounding the Ballylumford and Kilroot plants. They invited all of the farmers in the local area to the plant and discussed how adopting elements of the AES safety program could support them. As a result, several projects will be adopted and pursued, including:

- Joining the Health & Safety Executive Northern Ireland’s (HSE NI) farm safety program;
- Hosting site visits for National Farmers’ Union local branches, with a particular focus on Young Farmers groups; and
- Setting up a farm safety helpline to provide signposting for local farmers.

High School Student Traffic Safety Training

Mong Duong High school, the only high school in the vicinity of our power plant in Vietnam, received a special visit from an AES Vietnam employee volunteer group during the company’s 2016 Values Day celebration. A traffic safety awareness campaign was organized and 600 high-quality motorbike and bicycle helmets were provided to all students, teachers and guests. Traffic signage was also provided and placed at the school’s gate.

Industrial Safety and Basic Tools Use Training

Our distribution businesses in El Salvador provide education in low income communities in order to prevent accidents with electricity, as well as to provide training for construction jobs. Through these trainings, participants learn the proper use of personal protection equipment and the adequate use and maintenance of basic construction tools

Electricity and Safety Lectures to Fourth Graders

Volunteers from AES Headquarters , located in Arlington, Virginia, educate Arlington Public Schools fourth graders about key energy topics. Lectures create the opportunity for students to learn about the different ways electricity is generated, the importance of energy efficiency, and the safety and personal protection equipment used when working at electric companies. Students also participate in a hands-on exercises to generate electricity using a hand-cranked generator to light LED, fluorescent and traditional light bulbs. To learn more about this program [click here](#).

OUR PEOPLE

AES people contribute to fueling quality of life around the world by creating the energy solutions that will meet tomorrow's needs. We work on projects with global impact – from improving processes to applying innovative solutions to critical issues – in teams that combine people with diverse specialties, perspectives and cultures. We recognize that our people are our greatest asset, and they set the foundation of our ability to achieve our strategic objectives. The success we have achieved would not be possible without the leadership, diversity, skills and knowledge that our people bring to the work they do.

As of December 31, 2016, 66 percent of our 18,865 permanent full-time people were covered by collective bargaining agreements. With nearly 19,000 people, we have a unique opportunity to celebrate diverse backgrounds, cultures and disciplines. We do not view diversity simply as a responsibility to be met, a policy to implement, benefits to offer or a program to run. Instead, we leverage our diversity and integrate it into how we work and how we compete to win in the global marketplace. As a result of the integration of these practices into how we work and the ways in which we select and promote talent, more than 50 percent of our Executive Leadership Team (ELT) are from traditionally underrepresented groups today, including minorities and women.

The people who work in our businesses, who track our finances, run our plants and restore power after storms, reflect the customers and communities whose lives we are improving through the services we provide and the investments we make in local safety, infrastructure, education and environmental programs. We don't just work at AES. We work for AES. *We are AES.* The only limit to our influence and impact is our own commitment. We care as much about how we act as what we do, at work and in life.

Changing How We Work to Better Serve Our People

Just as the energy industry is changing, so is the nature of work. Through a multi-year effort, we optimized the way we support our people by realigning our human resources (HR) efforts into three areas during 2016:

- Centers of Expertise (COEs) that create global networks of expertise in specific knowledge-areas to develop HR-related strategies;
- HR Business Partners implement strategy and provide local HR leadership; and
- HR Operations, consisting of Global Talent Acquisition, Global Payroll, and HR Shared Services Centers, provide the everyday HR solutions our people need.

These changes created growth opportunities within our organization. We added new team members in Buenos Aires, Argentina and Sofia, Bulgaria with the launch of our two Shared Services Centers. We also created growth and development opportunities for existing HR team members by realigning our resources to develop a more agile and nimble organization. This new service delivery model ensures global consistency while addressing local challenges to better serve our people.

In addition to optimizing the way we work, we also continued to empower our people with technology. We successfully launched Workday, our global human capital management system, at the end of 2015 to empower our people to manage their careers and provide new insights with data to inform decision-making processes. During 2016, we continued to harness Workday's power by implementing new recruitment, onboarding and absence management modules even making them available from a mobile device. We also began engaging managers to become an accountable partner in the recruitment process and provide a common experience for our new hires to integrate them into the company. In addition to launching new system functionality, we also examined how we recruit top talent to the organization and developed a global recruitment brand.

All of our efforts to optimize our processes and empower our people with new technology necessitated change within the organization. That's why it was important for us to develop and implement a change management approach to help our people navigate the changes. None of our transformation activities would have been successful without the development and application of our change management methodology and the commitment of our change team to ensure our people had the information and training they needed to embrace the changes.

TABLE 17 - 2016 AES PEOPLE DEMOGRAPHICS BY STRATEGIC BUSINESS UNIT (SBU)

Strategic Business Unit	Permanent - Full time Employees		Total operational and construction contractors
	Female	Male	
Andes	305	1,723	6,805
Asia	121	460	8,762
Brazil	1,460	6,951	5,694
Europe	435	1,677	1,208
MCAC	316	1,642	4,187
US	724	2,719	4,121
Corporate	116	216	40
Total	3,477	15,388	30,807

ASPECT: Global Talent Management

We know we need to have the right people in the right place at the right time to meet the company's commitments and sustain our success, which is why we have a comprehensive approach to managing our talent and developing leaders. Our global talent management strategy considers the full life-cycle of an AES person with a framework that enables us to help people reach their potential at AES.

First, we understand the business needs for a particular position, the value and contribution the position will add and the skills, attributes and experiences needed. Next, we identify top talent by first leveraging existing AES people and then external talent if needed. Once the appropriate candidate is identified and on-boarded, we focus on long-term engagement.

We use three primary mechanisms to help our people reach their potential, as well as challenge and enhance their personal growth:

1. Formal learning, which comes from our ACE Academy for Talent Development;
2. Assessment and career planning, which includes a development planning, objective-setting and feedback; and
3. Experience and exposure to new career development opportunities.

ACE Academy for Talent Development

ACE Academy for Talent Development is our talent management framework that provides the tools and experiences our people need to grow their professional skillset, evolve their leadership competencies and take their career to the next level.

Every year, AES people receive training and development related to competencies essential to the company's business, such as leadership, compliance and safety. Our people also receive technical and leadership training to further develop their skills related to their positions. Training and development programs are provided through formal classroom training, online resources and on-the-job learning opportunities. In 2016, each AES person averaged 39 hours of training.

During 2016 we also held our second Global Executive Leadership Retreat. In partnership with Georgetown University in Washington, DC, leaders participated in a five-day on-site transformational experience to further develop competencies in areas that we have identified as critical to our business both now and into the future.

Assessments and Career Planning

Our performance management process helps our people understand their role and responsibility in the organization, as well as the skills they need to develop. Our process includes objective setting, development goal setting and performance reviews. For career planning, we conduct routine sessions to review, measure and understand our talent. These sessions are also used to identify development opportunities and action plans for people.

Experience and Exposure

We believe the development of our people is enhanced by gaining a variety of on-the-job experiences that help people expand their skills and hone their capabilities. We strive to purposefully give people a set of experiences that not only challenge them, but also help them to reach their fullest potential at AES. For exposure, our ELT and other senior leaders are committed to engaging our global talent, including high potential talent. Our high potential talent is given the opportunity to interact one-on-one or through group sessions with the leadership team.

For example, AES Brazil has a comprehensive training program for recently graduated students that is designed to minimize the learning curve for high potential performers. This results in a new and fresh perspective that increases our talent pool to innovate processes, develop high impact projects and share best practices. The AES Brazil Trainee Program is a two-year program with rotations in different areas every six months focused on high impact projects. In 2016, there were more than 60 new trainees in the program.

Rewarding Our People

We invest significant time and resources to ensure our compensation programs are competitive and reward the performance of our people. Every year, AES people who are not part of a collective bargaining agreement are eligible for an annual merit-based salary increase. In addition, individuals are eligible for a salary increase if they receive a significant promotion. We also offer profit-sharing in 12 countries, including the United States.

The following table includes the ratio of compensation for the highest-paid individual in each country to the compensation for all people, and the increase in compensation for the highest-paid individual to the median increase for all people.

TABLE 18 - 2016 ANNUAL COMPENSATION RATIOS AND COMPENSATION INCREASES BY COUNTRY

Location	Ratio	Increase	Location	Ratio	Increase
Argentina	7	0.94	Kazakhstan	9	0.50
Brazil	4	0.42	Mexico	8	0.91
Bulgaria	7	1.06	Netherlands	3	1.36
Chile	4	0.51	Panama	7	1.04
Colombia	4	1.07	Philippines	11	0.46
Dominican Republic	9	0.98	Puerto Rico	4	1.57
El Salvador	4	0.31	United Kingdom	4	1.85
India	4	0.31	US	11	0.57
Jordan	9	0.38	Vietnam	17	0.17

Being Recognized as a Great Place to Work

One of our strategic objectives in 2016 was to be recognized as a great place to work, and we use external recognition, such as the Great Place to Work rankings to measure the success of our workplace initiatives. AES businesses participate in assessments and our people participate in questionnaires from recognized institutions that make a comprehensive evaluation of our company's programs, policies and benefits. In 2016, our businesses received 25 designations as a great place to work from various reputable organizations—nearly 10 more than the previous year.

TABLE 19 - 2016 HR AND WORKPLACE RECOGNITIONS

Country	Business	Recognition/Award	Institution
Argentina	AES Argentina	Best Workplaces in Argentina, more than 500 employees	Great Place to Work Institute
	AES Servicios America	Best Workplaces in Argentina, less than 250 employees	Great Place to Work Institute
Brazil	AES Brazil	HR Award, HR Practices Category	Época Negócios 360°
	AES Eletropaulo, AES Sul and AES Tiete	Top 150 Companies to Work in Brazil	Guia Você S/A
Chile	AES Gener	2016 Carlos Vial Espantoso Award	Catholic University of Chile
	AES Gener	Best Workplaces to Work in Chile	Great Place to Work Institute
Colombia	AES Chivor	Best Workplaces in Colombia	Great Place to Work Institute

Dominican Republic	AES Dominicana	Best Workplaces in Dominican Republic & Best Workplaces in the Caribbean	Great Place to Work Institute
	AES Dominicana	Best Companies to Work in the Dominican Republic	<i>Revista Magazine</i>
El Salvador	AES El Salvador	Best Workplaces in El Salvador & Best Workplaces in Central America, 1,000 employees category	Great Place to Work Institute
Mexico	AES Mexico	Best Workplaces in Northeastern Region in Mexico 2016	Great Place to Work Institute
	AES Mexico	Best Workplaces in Mexico	Great Place to Work Institute
Panama	AES Changuinola	Labor Compliance Award	Panama's Ministry of Labor and Workforce Development
	AES Panama	Best Workplaces in Panama & Best Workplaces in Panama, 100-1,000 employees category	Great Place to Work Institute
	MCAC SBU	Best Workplaces in Central America, Multinational Companies	Great Place to Work Institute
US	AES Puerto Rico	Best Employer in Puerto Rico	AON
	AES Puerto Rico	Best Workplaces in Puerto Rico & Best Workplaces in Caribbean	Great Place to Work Institute

AES Performance Excellence: Improving lives by improving the business

To achieve operational excellence, AES businesses around the world use the AES Performance Excellence (APEX) program. APEX employs cutting-edge and time-tested continuous improvement tools and methodologies such as Lean, Six Sigma and PDCA (Plan Do Check Act). These tools help our extraordinary people harness their curiosity, problem-solving and analytical nature to improve our business so we can better execute on our mission of improving lives. The solutions we develop come in many forms that make our business better—from protecting the safety of our people and our contractors, to running our operations and better serving our customers.

More than 66 percent of our people have been trained to use APEX methodology and tools, and we have implemented nearly 4,300 projects in the past decade. In 2016 alone, approximately 330 projects using APEX translated into US \$110 million in benefits for AES, with 37 percent of benefits representing hard dollars of new revenue and 20 percent of benefits in reduced operational expenses.

Each year, we host an APEX Global Awards competition to recognize the efforts of our people utilizing APEX tools and methodologies. Award finalists shared their success stories during roundtable discussions with company leaders and experts. In addition, subject matter experts discussed trends and disruptions in the power sector, such as drone technology, machine learning and operational flexibility, and how AES' businesses can continue to create and replicate excellence in our industry going forward. See the table below for the projects recognized during the Summit.

TABLE 20 – 2016 APEX AWARDS

<\$2M over first five years of implementation	\$2M - \$10M over first five years of implementation	>\$10M over first five years of implementation	REPLICATION AWARD
First Place: Masinloc, Philippines <i>Fresh Water Treatment Improvement</i>	First Place: AES Ergos, Brazil <i>Increase Revenue on the Process of New Business Distribution</i>	First Place: Ohio Generation, US <i>Coal Combustion Optimization</i>	AES Gener, Chile <i>Use of Unmanned Vehicles in People Safety Improvement</i>
Second Place: AES Ballylumford, Northern Ireland <i>Energy Conservation and Process Optimization</i>	Second Place: Mong Duong, Vietnam <i>Optimization of Furnace Sootblower System</i>	Second Place: AES Ballylumford, Northern Ireland <i>Ballylumford B Station Life Extension</i>	
Third Place: AES Merida, Mexico <i>Improving the Efficiency and Reliability of Demineralized Water Plant</i>	Third Place: North Complex, Chile <i>Performance Improvement in a Photovoltaic Solar Plant</i>	Third Place: Guacolda Complex, Chile <i>Implementation of SPS for Reducing Transmission Constraints in Guacolda</i>	

AES businesses also received external recognitions for our performance excellence efforts.

TABLE 21 – 2016 EXTERNAL PERFORMANCE EXCELLENCE AWARDS

Country	Business	Recognition/Award	Institution
Chile	Andes SBU	Finalist in the Best Technology-Enabled Process Improvement Project category	International PEX Awards
India	OPGC	Power Plant Upgrade of the Year	Asian Power Awards
Jordan	Amman East and IPP4	Best Practice Award	<i>Combined Cycle Journal</i>
Kazakhstan	AES Kazakhstan	Second Place Award	2016 HR-Brand Awards in Central Asia
US	AES Buffalo Gap	People's Choice Award for Best Use of Data	American Society for Quality

ASPECT: Occupational Health and Safety

At AES, we always put safety first — for our people, contractors and communities. We are committed to protecting our employees from work-related hazards, as well as promoting their health while at work and at home. Accordingly, our goal is to provide our people with a safe and healthy working environment at all times.

We strive for excellence in everything we do. Safety is not an exception. The AES Safety Management System (SMS) Global Safety Standard requires continuous safety performance monitoring; risk assessment; and performance of periodic integrated environmental, health and safety (EHS) audits. The SMS standard is consistent with the OHSAS 18001 standard, and many of our businesses have elected to formally certify their

SMS to the OHSAS 18001 international standard. As of 2016, approximately 80 percent of our people were working at businesses that have formally certified their SMS to the OHSAS 18001 international standard.

The foundation of our SMS is comprised of [AES Safety Beliefs and Safety Principles](#) established to continuously reinforce the importance of safety.

The SMS covers 18 functional elements in the areas of leadership, structure, and processes and actions. It provides consistent framework for all AES operational businesses and construction projects to set expectations for risk identification and reduction, measure performance and drive continuous improvements.

For example, businesses have to establish and maintain a planning process to identify hazards, evaluate the occupational health and safety risks and implement effective control measures for its facilities and work activities. Additional risk identification and assessment requirements are determined by the local Job Safety Analysis & Pre-Job Briefing safety program. Additionally, the AES Nominating, Governance and Corporate Responsibility Committee maintains initial oversight of a diverse set of risks, including those related to workplace safety.

The SMS also includes specific operational and construction safety standards that are based on global electric utility best practices. These standards cover areas such as fall prevention, electrical grounding, contractor safety management, job safety analyses and more. As an example, all AES businesses have implemented an “incident management” safety program that requires safety incidents, ranging from occupational fatalities down to near miss events, to be reported via a global data management and reporting system. It also requires the businesses to investigate, perform a root cause analysis and implement corrective actions. Findings are also communicated internally to disseminate lessons learned to help us deliver on our goal to create a workplace free of incidents.

Part of our safety program includes a culture in which all people are responsible and empowered, able to speak freely and ask questions and voice concerns when it comes to safety. Since 2014 the Speaking Safely Helpline is a secure and anonymous way to report safety concerns or violations. It is available anywhere in the world.

During 2016, our efforts in safety were recognized by various external organizations and institutions, which is the highest accolade to our businesses and construction projects for leading the way in improving safety in our industry. Examples include:

- Our businesses in the Europe SBU (Bulgaria, Jordan, Kazakhstan, the Netherlands and Northern Ireland) were recognized by the Royal Society for the Prevention of Accidents (RoSPA) with Occupational Health and Safety Awards.
- Our businesses in Bulgaria, Jordan and the Netherlands were also recognized by the British Safety Council with an International Safety Award;
- Our Laja and Ventanas power plants in Chile were recognized by Mutual de Seguridad; and
- Our Levant Jordan and Amman East power plants in Jordan were recognized for their safety achievements by the EEI.

2016 Global Safety Goals

Our annual safety goals represent our commitment to our people, our contractors and the communities in which our businesses operate and these goals set our path to achieve world-class safety performance. Another mechanism used to instill leadership commitment to EHS goal progress is the AES Leadership EHS KPIs program — under which 16 separate KPIs, related to safety, are continuously tracked and whose attainment support accomplishment of EHS management and performance improvement.

In addition to the EHS KPIs, the global safety goals established for 2016 were:

Goal	Result
<p>1) Establish a process to document, track and analyze performance of Safety Walks by all levels of leadership using an Online EHS Data Management System.</p> <p>Since 2010, the Safety Walks program is one of the cornerstones of our proactive safety management program and emphasizes the importance of identifying and addressing workplace hazards and unsafe behaviors as well as providing effective feedback on our people's behavior and safety practices. Over 100,000 Safety Walks were performed across AES businesses in 2016. A Safety Walk performance tracking process for all levels of the organization using an online data management system allows for a higher level of visibility and analysis, and provides data for continuous improvement of the proactive safety program.</p>	The process has been established
<p>2) Establish a process to identify potential areas and times of increased risk at operational businesses through implementation of a predictive model.</p> <p>The AES Predictive Safety Incident Risk Model is a tool that generates 30-day risk indices for each operational AES business location. The numerical risk index represents the likelihood of Significant Incidents and Potentials (SIPs) and/or Lost Time Incidents (LTIs) occurring at a specific operating location over the next 30 days. This model allows for the identification of potential areas and times of increased risk at operational businesses, and the deployment of resources accordingly.</p>	Predictive model implemented
<p>3) Achieve 50 percent reduction in Contractor LTIs from 2015 baseline.</p> <p>In 2015, a significant increase in contractor LTIs compared to previous years triggered a series of Contractor Safety Workshops, to identify gaps in contractor safety management practices and processes. As a result of these workshops, a number of tangible action plans with specific metrics have been created by the SBUs, with a goal of achieving a reduction in 2016 contractor LTI performance compared to 2015. We were able to achieve 14 percent reduction in overall contractor LTIs in 2016 compared to 2015 and additional steps were taken in 2016 that should continue to lower contractor LTI cases in the future (see next section).</p>	Partial reduction achieved

Reactive and Proactive Safety Performance

During 2016 AES experienced a setback in our reactive safety indicator performance for both AES people and contractors compared to the preceding three years as evidenced by:

- A total of eight occupational fatality cases (Table 22); and
- An increase in its annual LTI rate for AES people and construction contractors (Figure 6).

TABLE 22 - OCCUPATIONAL FATALITY CASES, 2013-2016

Occupational Fatalities	2013	2014	2015	2016
AES People	1	0	1	3
Contractors	3	1	1	5

Six of the fatal incidents occurred at three individual sites (two fatal incidents at each site), representing a small fraction of active AES operational and construction locations during 2016. The increase in occupational fatalities has also contributed to an increase in LTI rates for both AES people and contractors in 2015 and 2016.

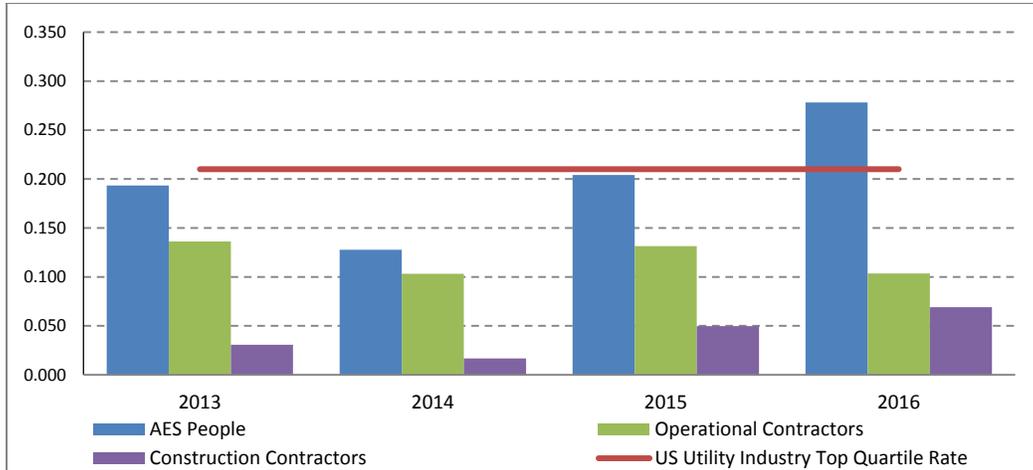


FIGURE 6 – LOST TIME INCIDENT RATE FOR AES PEOPLE AND CONTRACTORS, 2013-2016⁸

AES businesses calculate LTI rates for their employees and contractors based on OSHA standards, so they are comparable across any industry or group. The standard is based on 200,000 labor hours, which equates to 100 workers who work 40 hours per week and 50 weeks per year.

Our target for LTI rates was set to be below the U.S. utility industry's top quartile benchmark LTI rates. During the three-year period from 2013 to 2015 we met the performance benchmark. For 2016 we slightly exceeded the performance benchmark for AES people, while maintaining the contractor LTI rates below the benchmark.

Although the overall LTI rate performance for AES employees in 2016 was slightly above the target, it should be noted that the LTI performance for our people has remained better than the overall U.S. utility industry's average during the previous four years.

In response to this emerging trend and building upon the foundations of the SMS, Safety Beliefs and Safety Principles, AES businesses took several system-wide targeted actions throughout 2016 to enhance its overall occupational safety performance and that of its contractors. These included:

- **COO-led safety pauses** – our Chief Operating Officer (COO) led several company-wide safety pause events attended by thousands of AES employees and contractors.
- **Contractor safety workshops** – we conducted workshops with all six SBUs and the construction project team to develop hundreds of improvement action plans in the areas of contract administration, pre-qualification, pre-job risk assessment, training and orientation, and post job evaluations.
- **Front-line leader survey** – A comprehensive survey was administered to about 2,290 AES and contractor leaders to get their improvement recommendations, and to develop targeted action plans in 12 proactive safety areas.

⁸ 2014-2016 LTI rates for AES people and contractors have been verified by Lloyd's Register Quality Assurance Inc. (LRQA), which conducted a limited assurance of our LTI rate data and results.

- **Quality safety walks focus** – A mandatory review process at each AES location was instituted where leaders evaluate the quality of Safety Walks performed by their direct reports. In addition, all leaders who conduct Safety Walks completed an e-learning course for safety walks.
- **Non-injury significant incident and potential (SIP) focus** – Throughout the year all AES locations were encouraged to identify, investigate and share the lessons from non-injury SIPs, those near miss and workplace hazard situations that could have led to a serious or fatal injury.
- **Timely sharing of all SIP incidents** – A process was put into place to share within 72 hours across all of AES the occurrence of an SIP incident via an “Incident Alerts.”
- **Mathematical predictive incident model** – During 2016, AES implemented a predictive safety incident mathematical model to rank monthly safety incident risk at all our operational businesses. The model creates a unique algorithm for each business using various inputs.

These seven targeted actions, along with the execution of our ongoing SMS elements such as conformance to our global safety standards, conducting leader-led Safety Walks, work teams preparing Job Safety Analyses (JSAs), conducting safety audits and training as well as sending leadership communications was our response to the occupational safety trend we began observing during 2016.

OPGC 2 Safety Rover Program

OPGC 2, a construction project in India, started a program to reinforce AES' Safety Beliefs, Values and procedures. The Safety Rover Program aims to enhance the safety culture at our various construction sites.

The program brings Safety Champions from various AES SBUs to review and compare current practices, and coach existing personnel to ensure the proper steps are taken for every task being performed by OPGC people and contractors.

The main role of the Safety Rovers is to provide onsite mentoring on the job by engaging with people in real time, enhancing the safety culture and safe work practices. In addition, part of the Safety Rover Program is to evaluate our line management accountabilities and responsibilities metrics, safety personnel, motivation and awareness, and training and development using the AES SMS scorecard elements.

Deterioration of lagging indicator performance put an additional emphasis on our proactive initiatives to identify actual and potential risks and hazards through quality safety walks, safety inspections, and internal and external audits to address them before an incident occurs. By identifying near miss events and workplace hazards, including those having a potential to lead to a serious incident (SIP events), AES businesses seek opportunities for incident prevention through knowledge sharing across all locations. These efforts translated into strong proactive indicator performance during 2016.

TABLE 23 – PROACTIVE SAFETY INDICATORS, 2013-2016

Proactive Safety Indicator	2013	2014	2015	2016
Safety Walks	115,885	109,241	104,294	101,289
Workplace Hazards	93,906	71,573	75,602	93,005

Safety Walks are performed to identify potential safety risks and improve safety culture in the field. As we shift focus on the quality of the Safety Walks, we expect to see a decrease in the number of Safety Walks performed. We can also prevent incidents and save lives by reporting, collecting, sharing and analyzing near miss and workplace hazards cases that, if not addressed, may lead to a more serious injury.

AES Safety System Upgrade

During 2016, AESOnline (our global environmental, safety and audit data collection and reporting system) underwent enhancements aimed at improving the gathering, facilitation and interpretation of data input and output. One new addition to AESOnline is the Safety Walk Application for computers and mobile devices.

The Safety Walk Application will help improve the quality of our individual Safety Walks and our Safety Walk programs across our businesses. The application has the capability to understand trends, findings and observations and share them among AES people.

With what we learn, we can respond quickly to changes and challenges at our businesses to increase the safety of our workplaces, and ensure our people and contractors go back home safely every day.

Safety Training, Committees and Recognition

Because of the potential safety risks at electric generation plants, transmission and distribution networks, and construction projects, workforce training and competency building are fundamental parts of individual AES location EHS management systems.

At the local level, AES businesses and construction projects are responsible for ensuring that all regulatory and AES EHS standard required safety training is planned and performed, and the materials presented are understood and put into practice. Under the AES SMS framework, all AES people and contractors must undergo training to mitigate work-related risks and occupational health hazards.

Operating businesses and construction projects must maintain an EHS training matrix that outlines training requirements for AES employees. The extent and type of training is dictated by the safety and health exposure each individual has – from operational and maintenance employees attending a substantial number of hours of training annually to administrative staff participating in at least monthly local safety meetings, where safety and health performance updates and awareness are conveyed.

Relevant safety topics and issues, including safety management, culture and performance initiatives, at our operational businesses and construction projects are also routinely discussed during local safety committee meetings, with representation by all levels of staff. For example, the Arlington Office Safety Committee plays an active role in ensuring safety and increasing awareness of AES employees, contractors and visitors through facilitation of safety meetings, emergency drills and coordinating safety training relevant to administrative functions within the office.

AES also recognizes that its people are the foundation of its ability to achieve its long-term goals. The energy that AES people bring to their work makes everything possible. This is the main reason why recognition of our people's efforts is paramount to our success.

As part of the overarching theme of being "[Always On](#)" and the "I'm Always On for Safety" individual recognition program, AES celebrated everyday "safety heroes" – people who do the right thing, the safe thing, at work, at home and in the community – during 2016. Overall, during 2016, more than 80 people were

recognized for their flagship commitment to safety, leadership and ability to influence other people's safety perception and behaviors in a positive way.

Additionally, the Golden Hard Hat Award recognition program honors an AES business each year that makes significant improvements in comparison to their past safety performance, that develops and rolls out new safety techniques and practices, or that implements systematic proactive practices.

Health and Wellness Management

AES believes that good health and disease prevention is a mindset. AES businesses are committed to protecting its employees from work-related hazards, as well as promoting their health so they can be fit and lead healthy lives, both at work and at home.

Wellness initiatives, which are locally and culturally relevant for our diverse portfolio of businesses, are available to employees through our business locations and cover such topics as nutrition, stress management and employee assistance, mental health, life-work balance, smoking prevention, ergonomics assessment, vaccinations, and musculoskeletal disorders prevention.

An example of such initiatives is AES Live Well, a health and wellness program that rewards employees for participating in health and wellness activities. Offered as part of the AES benefits program in our Headquarters, this program makes cash contributions to personal healthcare accounts for completing health and wellness-related activities.

Similarly to tracking occupational incidents, AES uses its data management system to track new cases of occupational diseases based on the requirements of its Incident Management Standard. Additionally, AES' safety standards on hearing protection and noise reduction as well as heat and cold stress prevention establish requirements for each business on identifying work hazards and selecting appropriate levels of control to prevent hearing issues and temperature-related illnesses.

+Saude program to improve the well-being of its people

AES Brazil SBU launched a campaign named +Saude (more Health) to improve the overall health and well-being of AES people and their families. Throughout 2016, the program discussed various topics and provided tips for wellness and prevention in addition to the conscious use of the health plan. AES people in Brazil learned about the diseases transmitted by the Aedes Aegypti mosquito, H1N1, hepatitis, obesity, diabetes, and breast cancer, among other topics.

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