Financial Excellence 1st place

Project: AES Portfolio Optimization: Fuel Flexibility

Authors: Luis Sarrás, John Bigalbal, John Woodham, Bryon Kohls, Daniel Garrido

Business: Chile and Corp.

Project summary: AES can utilize its Portfolio and its businesses Fuel Flexibility in a fuel purchasing strategy to create value from the fuel markets. The purpose of this paper is to describe a strategy executed between AES Gener and AES Hawaii. AES Hawaii needed to buy coal competitively at a fixed price. The Fuels Committee sourced a competitively priced coal but unfortunately the coal could not be delivered to AES Hawaii economically. AES Gener stepped into the transaction offering to buy the discounted coal subject to a trial shipment. The Fuels Committee orchestrated physical swaps of coal supply, which brought parts of the value of the transaction to each of the AES businesses.

Financial Excellence 2nd place

Project: Integrated Fuels Management

Authors: Diego Sellar, Eduardo Echániz

Business: Argentina

Project summary: An IT support suitable to the fuel process was developed. The system has functions according to the management needs. Currently, it has several modules that enable a correct Fuel Management process. The stock displays the coal stock yard and tanks, together with the consolidated fuel consumption, and the world price indicators speed up the report process in order to improve the purchase process, thus reducing the management periods. Also, the new system reduces unload waiting periods, as the controls over the port agenda and vessel arrivals are optimized.

As a result of this new way of handling the information, good financial results were obtained for the company. Some results came from: reduced inventory levels at 20%, reduced internal transfers, optimized qualities, reduced stock loss due to shrinkage or fire. Savings with a NPV of 4 MMU$S and Potential Loss Avoided of 6 MMU$S summarize the results of the system.
**Leveraging Platforms 1st place**

Project: Geographic Information System For Field Services Management  
Authors: Gilson Löser, Bruno Sousa, Vanderson Rodrigues  
Business: AES Sul, Brazil  

Project summary: Integrated Services Management is the name of the project developed at AES Sul to innovate the model of field services management. It is an audacious project that has challenged the company to shift paradigms, improve the work production chain through process innovation and use of resources in a synergistic way, aiming at maximizing results. This project has changed the culture of the company, which now reaps the results on the same scale of the challenges faced.

Each year 30% of operational expenses (OPEX) and millions of dollars in capital expenses (CAPEX) are applied by AES Sul in the maintenance, expansion of the power grid and power supply to their customers through the management of field services. It involves approximately 600 work crews or 1,200 electricians daily. The improved performance has a direct impact on the company’s financial results proportionally. Use of IT (Information Technology) resources leveraged changes and increased results. The Geographic Information System (GIS) was a strategic pillar, which combined with other tools, allowed the development of a technology platform that supports the field services process.

**Leveraging Platforms 2nd place**

Project: Dust Suppression System (DSS) of Slag, Ash and Gypsum Landfill Ensuring Zero Dusting  
Authors: Petar Petrov, Tenko Palazov, Anatoliy Terziev, Svilen Zlatev, Angel Avramov  
Business: Bulgaria  

Project summary: Maritza Waste Disposal Facility (WDF) performs dry disposal of the waste product (bottom ash, fly ash and gypsum) of electric power generation from TPP AES Maritza East 1, the expected amount of waste product being 3 200 000 tons per year. Therefore a system has been constructed as follows: conveying system, cell for disposal and contact leachate storm water pond to collect storm water that contacts the disposed waste product.
People 1st place

Project: Improvement of Knowledge Acquisition and In-house Training of Employees

Authors: Maria Orlova, Gulmira Dossymova

Business: Kazakhstan

Project summary: Due to a lack of training facilities for employees in Eastern Kazakhstan AES developed an in-house facility, the AES Kazakhstan Corporate Learning Center (or ‘CLC’), which includes training in safety, technical, soft skill (computer, language) and online courses on different topics from the CLC site. The CLC was opened in 2010 with the mission to improve enterprises’ performance by the development of professional competencies, skills and experience relevant to modern international and national business requirements. There are now more than 60 classroom-based and 12 online courses available.

People 2nd place

Project: AES Brazil – Innovation forum

Authors: Maria de Fátima Rodrigues dos Santos, Guilherme de Mauro Favaron, Antonio Sergio Farias, Belisario Antonio Thome, Marcio Gonçalves

Business: AES Sul Brazil

Project summary: Based on the crowd-sourcing concept, the Innovation Forum is a web solution that allows integration between employees for the production of innovative ideas that can be applied in AES businesses. This environment can be defined as “collective intelligence”, which means that, by thinking collectively, employees are more efficient in solving problems and in creating new technologies related to new products and services.

The collaborative innovation environment provided by the Innovation Forum allows employees share their own ideas internally and invite other people to learn about that and receive contributions to turn ideas into implementable projects. In general, the contribution makes the original idea better for the benefit of AES.
Safety 1st place

**Project:** Short-Circuit Simulating Scenographic Device in Aerial Distribution Networks

**Authors:** Jose Aparecido da Silva, Samuel Fernandes Braz, Denesio Carvalhoç

**Business:** AES Eletropaulo, Brazil

**Project summary:** In 2010 there was a fatal accident with an electrician who, while awaiting, leaned on the truck when one tree branch unexpectedly fell over the RDA (Aerial Distribution Network), causing a short-circuit; he was frightened by the noise and ran towards the street being ran over by a vehicle that was passing by at that moment, having sustained fatal injuries. Considering that the learning approach of adults is based on the Interest for the subject and practice.

The Operational Training Team developed a device capable of producing a RDA situation during the electricians training phase the equipment was developed using scenographic device, in a safe and controlled way, with an explosion followed by a luminous flash and smoke. With this device, the challenge of forming 3,500 of new electricians in the following years was met and similar events have not happened since then.

Safety 2nd place

**Project:** 100% Fall Protection When Climbing and Working On Transmission Towers

**Authors:** David Pate, David Baldwin

**Business:** IPL

**Project summary:** In 2011, IPL Corporate Safety, Power Delivery Safety, Lines Training, and Lines revisited the Transmission Tower Climbing task procedures to ensure mitigation of the tower work hazards. The OSHA 1910.269 Regulation allows a “Qualified Climber” to climb without using fall protection. Prior to these assessments, “free climbing” was the acceptable method for climbing transmission towers. After performing Fall Hazard Assessments, IPL determined if a worker fell while “free climbing” or working at heights without 100% fall protection, the worker would sustain serious or fatal injuries.

Upon review and development, IPL has implemented a 100% Fall Protection program for climbing and working on transmission towers. Employees are trained and receive annual refresher training for this program.
Stakeholder Management 1st place

Project: Marketing In A Competitive Power Sector

Author: Chrysogonus F. Herrera

Business: Philippines

Project summary: The project focuses on the market position development for AES Philippines in a competitive power sector under a law empowering distribution utilities with choice who to buy electricity from. AES adopted three strategy guideposts: first, to not regard electricity as a commodity where competition is in price; second, to stake marketing on value-added from customization of supply arrangements and strong customer engagement, third; to regard that a long-term contract is the loyalty a customer awards its trusted seller. Developing a distinctive position called for AES to introduce customized power supply arrangements and to pioneer novel industry practices such as: discounts based on business-critical performance norms, widened CSR coverage, the “AES Academy”, customer satisfaction survey, and confidence-building initial contract term. The results are exemplary with a survey feedback that the AES experience is “professional but personal” and with customers renewing contracts for 10 more years or longer despite its relatively higher prices.

Stakeholder Management 2nd place

Project: Training with Energy and AES POETA: Two sustainable initiatives adding value for community empowerment through training and employment in Bocas del Toro

Authors: Vera Muñoz, Susana Lezcano, Surany Gomez

Business: Panama

Project summary: AES concluded the largest infrastructure project in Panama’s recent history, being the only company able to do so in Bocas del Toro, a highly conflicted area with radical union groups, major unaddressed needs, an 8.1% unemployment rate, and a median schooling of 6.3 years. Beyond an unrecorded investment of $630 million, the Changuinola I hydroelectric project revitalized the economy of this depressed former banana enclave in northwestern Panama, generating of more than 3,500 jobs and the disbursement of $1,087 million in salaries and Social Security payments. However, in 2011, research confirmed locals highly value private sector initiatives that directly improve their employment and opportunities, but feared, as construction ended, the economic growth they experimented, as well as AES social programs, would disappear. AES addressed this challenge through a long-term sustainable strategy geared toward community empowerment through training and employment.
Business Innovation 1st place

**Project:** Improved Commercial Availability, Lower Operating Cost, and Longer Asset Life through Proactive Management of Market Dispatch

**Authors:** Jay Geinzer, Brett Galura

**Business:** Energy Storage

**Project summary:** A new type of control system has been designed, tested and placed into commercial operation for battery-based energy storage systems. This control system monitors conditions inside and outside the system and automatically implements an appropriate operating regime. This control system has been in commercial operation for more than two years and has resulted in operational savings, higher availability and increased yearly revenues. Next generation control systems will incorporate many more internal and external factors into the dispatch decision and will be capable of managing multiple battery types.

Business innovation 2nd place

**Project:** Use of Synthetic Gypsum from Flue Gas Desulfurization Process as an Agricultural Soil Amendment

**Authors:** Nicholas M. Grimmer, Dana Meier

**Business:** IPL

**Project summary:** Coal combustion releases sulfur dioxide (SO2) into the flue gas. Calcium carbonate is used to capture the sulfur dioxide and forms calcium sulfite (CaSO3). Calcium sulfite is oxidized and produces calcium sulfate (CaSO4), also known as synthetic gypsum. Synthetic gypsum has a wide range of beneficial uses and is widely marketed to the wallboard and concrete industries as an economical substitute for natural gypsum. In addition, synthetic gypsum has been proven to have profound beneficial impacts as an agricultural soil amendment. Indianapolis Power & Light Company (IPL) has worked closely with farm commodity marketers, soil conservation agents, local university earth science professors and farm industry regulators to develop a local agricultural market for synthetic gypsum, resulting in additional savings for the business along with a number of positive environmental impacts related to this use.