

PAKISTAN UTILITY EXECUTIVES EXAMINE AUSTRALIA SAFETY PRACTICES

EXECUTIVE EXCHANGE IN SYDNEY AND MELBOURNE, AUSTRALIA

SYDNEY AND MELBOURNE, AUSTRALIA – Senior managers from eight of Pakistan’s electricity distribution utilities recently met their counterparts to review Australian best practices in utility organization, operations and management, commercial operations and safety. The U.S. Agency for International Development (USAID) supported this exchange to improve Pakistan distribution utility performance.

USAID’s Power Distribution Program (PDP) is a three-year project conducted jointly with government-owned electric power distribution companies in Pakistan to improve their performance in the areas of loss-reduction, revenue collection, and customer services. As part of the Power Distribution Program’s capacity-building efforts in Pakistan, a delegation of ten distribution executives engaged in meetings, presentations, roundtable discussions, and technical site visits at Ausgrid and Origin Energy in Sydney, Australia, and CitiPower/Powercor in Melbourne, Australia to identify the latest strategies in operations, customer service and billing, training and safety utilized in the Australian electricity distribution sector.

EXECUTIVE EXCHANGE HIGHLIGHTS

The Pakistan executives spent five days visiting Ausgrid, Origin Energy and CitiPower/Powercor. The primary objectives of this program were:

- Gain exposure to the **organization and management and planning** of Australian distribution utilities, including:
 - Staffing qualifications
 - Change management
 - Optimal organizational structures
 - Planning and programming distribution system improvements
- Gain knowledge in **operations management**, including:
 - Reliability standards and emergency response
 - Project/work scheduling
 - Assignment of responsibilities
 - System rehabilitation
- Gain exposure to **commercial operations** of private distribution utilities, including:
 - Loss reduction programs
 - Billing, metering and collections
 - Advanced Meter Reading (AMR)
 - Human Resources management
 - Customer service



Pakistan distribution executives survey overhead distribution system in residential areas.



Ausgrid

Ausgrid, a state owned corporation, has been in operation for 100 years and operates one of the leading electricity networks in Australia, distributing electricity to the Sydney, Central Coast and Hunter regions of NSW across a 22,275 square kilometer area.

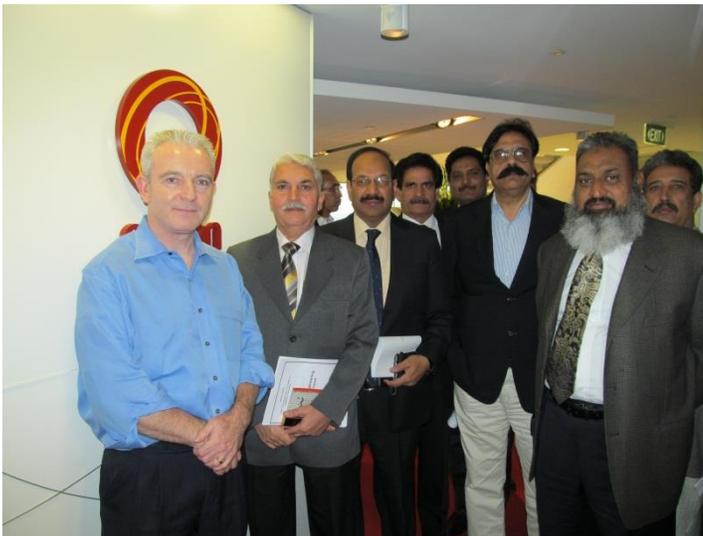
Ausgrid’s main activities are:

- Asset ownership and management of the electricity distribution and transmission network
- Infrastructure related construction and maintenance services
- A range of other services, including street lighting, safety check-ups, energy reviews, metering and 24-hour electrical repairs.

Above left: Muzafar Iqbal and Javeed Ghumman practice installing a safety platform on a wood pole at the Ausgrid Training facility. These platforms can also be used on concrete and steel poles in areas where a bucket truck cannot be used. Several members of the Pakistan delegation, including IECSO, will recommend their companies purchase these safety platforms to improve linemen safety.

Above middle: An Ausgrid training supervisor demonstrates the correct way to put on the safety harnesses linemen wear on Riaz Shah. Safety is a core issue at Ausgrid and involves all levels of the company. Employees who walk by unsafe conditions and do nothing can be disciplined and fired.

Above right: Mohammed Kahlon and Muhammed Syed talk with an Ausgrid supervisor as they watch apprentice linemen climb poles using ladders, safety platforms and personal safety harnesses. Ausgrid has had no fatalities in over a decade and reduced their injuries to 408 recordable incidents in 2010-11.



Origin Energy

Delegates met with Tim O’Grady of Origin Energy. Origin Energy is the leading Australian integrated energy company with diverse operations across the energy supply chain, from gas exploration and production to power generation and energy retailing. Discussions centered on Australia’s energy market, Origin’s generation mix and customer interaction.

Left (from left to right): Tim O’Grady of Origin Energy, Riaz Shah, Mehboob Bhatti, Muzafar Iqbal, Muharram Shah, Aktar Randhawa, Javed Ghumman and Syed Shah.



Citipower/Powercor

CitiPower and Powercor's combined networks deliver electricity to more than one million customers throughout Victoria, from central Melbourne, west to the borders of South Australia to New South Wales. **Powercor Australia** is Victoria's largest electricity distributor, which supplies electricity to regional and rural centers in central and western Victoria, and Melbourne's outer western suburbs. Powercor services approximately 700,000 distribution customers with more than 500,000 poles and 82,000 kilometres of power lines. **Citipower** owns and manages the 157 square kilometer electricity distribution network that services more than 310,000 customers in Melbourne's central business district and inner suburbs.

Above left: Riaz Shah, Javed Ghumman and Muzafar Iqbal watch as Citipower trainers demonstrate the Personal Protective Equipment (PPE) used for live line maintenance, including rubber gloves, sleeves and blankets.

Above center: The Pakistan delegation examines a bucket truck and the equipment stored on the truck.

Above right: Delegates talked with Citipower apprentices and reviewed the equipment on their tool belts, their safety harnesses and other tools used on day-to-day maintenance work. The delegates received information on suppliers of the equipment as they are interested in purchasing better tools and safety equipment for their linemen.



Pakistan Delegation at Powercor/Citipower Training Facility

From left to right: Akhtar Randhawa, Javed Ghumman, Syed Shah, Riaz Shah, Mian Mussarat Gul, Muzafar Iqbal, Muharram Shah, Mehboob Bhatti, and Muhammed Syed.

BACKGROUND ON PAKISTAN'S POWER & ELECTRICITY DISTRIBUTION SECTOR

Pakistan's power sector is confronted by significant challenges. These include the limited availability of reliable and affordable electric power, aging and inadequate transmission and distribution networks, and utility policies and practices that lag behind those of advanced utilities elsewhere in the world. Additionally, the distribution utilities lack a robust technological infrastructure that can enable efficient back-office operations, such as handling customer service requests.

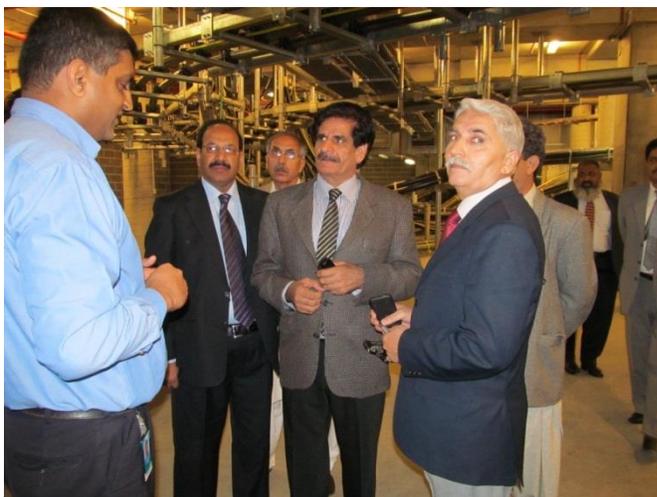
For major electric distribution utilities in Pakistan, these deficiencies translate into levels of financial performance that are not self-sustaining. Financial self-sufficiency is becoming critical, as Pakistan's power industry is undergoing sweeping changes. These changes include transitioning from wholly Government-owned utilities to fully autonomous companies that will engage in power generation, transmission, and distribution under the Government's aggressive reform agenda. A similar industry structure exists and functions smoothly in many other countries today. In Pakistan, however, outdated policies, procedures, and work practices, as well as low investment in infrastructure, pose barriers to a successful transition.

RESULTS

The Pakistani delegation observed the management, maintenance and operations best practices, and training and safety strategies of three advanced electricity utilities for one week in Australia.

As a result of this program, the delegates:

- Learned **safety management systems** used by Australian utilities that have resulted in zero fatalities in the last 20 years. Specific strategies included tying in safety indicators to all management performance reviews, making safety a company-wide priority, disciplining both the worker engaged in unsafe practices and any person who noticed it but did nothing to correct the behavior, and using a Total Recordable Injury Frequency Rate (TRIFR) to note all fatalities, loss of work days, restricted work days and medical treatment cases.
- Will recommend they purchase safety platforms for use in climbing poles.
- Will recommend installing smart meters as a pilot project.
- **Ausgrid** and **CitiPower/Powercor** shared the following documents with the Pakistan executives:
 - AS 40-801, the Australian law that states the minimum requirements for safety management systems.
 - Safety incident report documents
 - Corporate documents outlining safety policies – “Be Safe” campaign at Ausgrid
 - Employee training book called a Skills Passport that documents all training classes and certifications completed
 - Occupational Health and Safety Regulations 2007
 - Health and Safety Act 2004
 - Safety Equipment Apparel Checklist
 - Job scheduling and workflow charts
- **Ausgrid** and **CitiPower/Powercor** also shared the following best practices:
 - Maintenance and construction scheduling to minimize outages
 - Personal Protective Equipment and other safety gear to minimize lineman injuries
 - Asset management and condition monitoring strategies
 - Smart Meter and Automated Meter Reading technology
 - Debt recovery and disconnect policies
 - Reliability management and performance incentive schemes
 - Lineman training programs and set up of training facilities
 - Customer service practices, including use of interactive voice recognition (IVR)



TransGrid 340 kv Substation

The Pakistan delegation visited the Haymarket 330 kv substation operated by TransGrid that connects to Ausgrid's distribution network at 132 kv. The substation uses gas insulated (SF6) transformers and switchgear. The Haymarket substation is located in the heart of Sydney in a partially underground multi-story building that occupies 20% of the space required for a conventional outdoor substation.

UTILITY EXCHANGE PROGRAM PARTICIPANTS

1. Akhtar Ali Randhawa, Superintending Engineer TS, FESCO - Faisalabad Electric Supply Company
2. Javed Iqbal Ghumman, Manager Operations, GEPCO - Gujranwala Electric Power Company
3. Muhammad Saleem Kahlon, Superintending Engineer, HESCO - Hyderabad Electric Supply Company
4. Riaz Ali Shah, PD Construction, IESCO - Islamabad Electric Supply Company
5. Mahboob Alam Bhatti, Superintending Engineer, LESCO - Lahore Electric Supply Company
6. Muzafar Iqbal, Manager GSO, , LESCO - Lahore Electric Supply Company
7. Muhammad Aslam Tahir, Superintending Engineer Operation, MEPCO - Multan Electric Power Company
8. Mian Mussarat Gul, Manager (S&I), PESCO - Peshawar Electric Supply Company
9. Muharram Shah, Superintending Engineer, PESCO - Peshawar Electric Supply Company
10. Muhammad Abbas Taqvi Syed, Superintending Engineer Operation, SEPCO - Sukkur Electric Power Company

For additional information, please contact Tricia Williams at twilliams@usea.org or +1-202-312-1258.