

# NOJA POWER®

## NEWS EDITION 20

### MISSION STATEMENT

We offer our customers integrated solutions using innovative products, combined with unrivalled service and reliability worldwide.

### AMPLA SMART GRID INITIATIVE

The successful deployment of AMPLA's automation scheme has opened more business for RMS Electric/NOJA Power. AMPLA has installed 80 more NOJA Power OSM reclosers and more SMART GRID initiatives are on the way.

"Whether its 2 or 2000 reclosers, RMS Electric / NOJA Power work hard to ensure the best technical solutions are delivered to our customers and their requirements are achieved to complete satisfaction. The successful long term relationship of RMS and AMPLA, is one example of the many successful projects in Brazil" says Bruno Kimura from RMS Electric.

AMPLA Energia e Serviços SA distributes electricity to 66 cities in the state of Rio de Janeiro covering over 73% of the state territory which equals 32,188km<sup>2</sup>. Today AMPLA provides services to approximately 2.3 million customers. Over 99% of the residences within AMPLA's region have access to electricity. Since the privatization of AMPLA, the company has invested about R\$1.4 billion in quality development, growth and modernization of the power grid.

AMPLA is owned and operated by the Endesa Group, which is the largest Power Utility in Spain and has positioned itself as the leading electricity utility both in generation and distribution in the country.

After the initial presentations of the NOJA Power recloser product, AMPLA awarded RMS Electric with the changeover switch project. This project involved replacing two gas switches (installed in the front of AMPLA head office) with NOJA Power's OSM automatic reclosers which provided both advanced



protection and remote communication capabilities.

Bruno Kimura from RMS Electric along with Oleg Samarski and Brian O'Sullivan from NOJA Power designed a simple and reliable changeover switch scheme using two OSM15 automatic circuit reclosers.

The principle of operation involves one recloser staying in a normally closed position, supplying electricity to AMPLA's head office, while the second recloser stays in a normally open position isolating the load from the backup feeder. When the main feeder is lost, the loss of supply under voltage element (UV3) trips and the NC recloser operates to lockout. The same loss of supply triggers the Auto Back Feed Restoration (ABR) element on the NO recloser which will close and re-establish the supply to the load after a preset time.

Both units are integrated with AMPLA's SCADA system through radios which allows for full remote control and monitoring. AMPLA's automation engineers were very satisfied with the powerful capabilities provided by the DNP3 protocol implemented in the device and the flexibility offered from the TELUS configuration software.

All Protection, communication and automation capabilities used in this scheme, including the algorithms; Under Voltage (UV), Voltage Reclosing Control (VRC) and Automatic Backfeed Restoration (ABR) and hardware such as voltage measurement on all six bushings, are some of the standard features offered by the NOJA Power OSM Automatic Recloser Product range.

### IN THIS EDITION

- AMPLA Smart Grid Initiative
- NOJA Power Expands Its Type Testing Capabilities
- NOJA Power Commissioned To Supply Switchboard for Airport Link Project
- NOJA Power Commitment to Sustainability Accrediting ISO14001

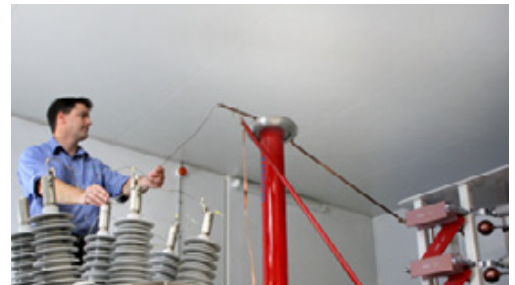
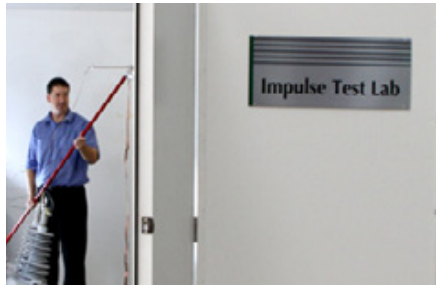
## NOJA POWER EXPANDS ITS TYPE TESTING CAPABILITIES

NOJA Power has recently expanded its testing capabilities by introducing two new in-house test laboratories; The Impulse Test Laboratory and the Salt Fog Test Laboratory.

These test laboratories allow NOJA Power Engineers to timely and efficiently type test OSM reclosers under harsh environment simulations, such as heavy salt mist, high humidity coastal areas and thunderstorms.

droplets within 5-10 microns. A fan installed within the enclosure ensures the fog density is kept uniform around the test objects.

Levels of salinity are kept within the specified tolerance and are continually monitored and adjusted accordingly.



The new Impulse Test Laboratory is capable of simulating lightning strikes and switching surges in accordance to IEC, ANSI/IEEE international standards. The Impulse Voltage generator is rated at 300 kV (15 kJ) and simulates lightning impulse waveform of 1.2/50  $\mu$ s. These in-house facilities provide flexibility to examine and improve existing product design and prove new prototype design concepts which greatly reduces the time and cost of development.

The new Salt Fog Test Laboratory monitors and logs the level of applied voltage, frequency, leakage current, ambient temperature and humidity. Leakage current levels generated by the test objects are automatically recorded for review. This allows Engineers to test against quality standards such as IEC61109 2008 and IEC62217.

The laboratory enclosure is built using graded stainless steel, with glass windows on all four sides to allow Engineers to carefully inspect the test objects. Fog is generated inside the enclosure using ultra sonic mist makers that are able to consistently generate

The main applied voltage can be set to approximately 20kV and is kept within the 5% tolerance set by the standard with the use of an Automatic Voltage Regulator.

These facilities have significantly improved the modelling and type testing procedures of NOJA Power which has ultimately increased the overall reliability and quality of NOJA Power's recloser products range.



## NOJA POWER COMMISSIONED TO SUPPLY SWITCHBOARD FOR AIRPORT LINK PROJECT

NOJA Power has recently been awarded a contract from Thiess-John Holland Joint Venture to supply low voltage switchgear for the Airport Link and the Northern Busway Project. The \$4.8 billion project is currently Brisbane's most significant upgrade to its Transport Infrastructure.

The Thiess-John Holland Joint Venture is building the Airport Link 6.7km toll road, which is mainly underground, connecting the Clem 7 Tunnel, Inner City Bypass and local road network at Bowen Hills, to the northern arterials of Gympie Road and Stafford Road at Kedron, Sandgate Road and the East West arterial leading to the airport.

In addition, the project will extend the Northern Busway from Bowen Hills and as a two-lane, two way road for buses only, connecting the Royal Brisbane & Women's Hospital to Kedron via the Lutwyche Road and Gympie Road corridor.

The Tunnel will boast a variety of cutting edge, redundant electronic systems such as automatic traffic incident detection, ventilation control, air quality monitoring, CCTV monitoring, thermal detection and fire safety systems, directional signs, and an electronic tolling system providing national compatibility.

These systems require high quality and reliable switchgear to provide for continual and uninterrupted operation which will be manufactured and tested in the NOJA Power Factory in Murarrie, Brisbane Australia.

NOJA Power Switchgear Pty Ltd will be supplying approximately 500 switchboards for this project.



## NOJA POWER'S COMMITMENT TO SUSTAINABILITY - ACCREDITING ISO14001

NOJA Power is committed to its environmental responsibilities through continuous monitoring of its environmental impact. NOJA Power has successfully implemented a continuous improvement Environmental Management System (EMS) in accordance with ISO14001.

ISO14001 is an international standard developed to help organisations to minimize negative impact on the environment. It certifies organisations to have complied to applicable laws, regulations, and environmentally oriented requirements. It also ensures the continual improvement of their EMS. ISO14001 is now implemented in more than 159 countries and more than 220,000 organisations today.

NOJA Power is minimising its impact on the environment by observing the requirements of the ISO14001 standards. The environmental policy encourages environmental awareness through internal and external reporting of the environmental performance.

“NOJA Power’s ISO 14001 Environmental Management System (EMS) has proved to be beneficial for the business and will ensure sustainable development” said Dr Rabiul Alam, NOJA Power EMS Management Representative.

NOJA Power supports the principles of sustainable development by promoting environmentally responsible work practices with compliance to all legal and statutory requirements and ensures all activities are conducted in the safest and most environmentally friendly manner possible.



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