

Aiding prevent blackouts through protection enhancements

Following an island-wide system blackout incident in 2005, EA Technology were appointed by BELCO (International Transmission and Distribution Network Operators) to carry out a protection system performance review to identify significant protection performance and protection grading issues and to plan, manage and implement protection enhancements and upgrades to maximise network stability and reduce risk of future outage.

Challenge

- Investigate and execute protection enhancements and upgrades on the city and central 24kV substations as a turnkey contract.

Action

EA Technology were responsible for the timely and effective delivery of the project from assessment to implementation. A specialist team was assembled utilising the expertise of both in-house and associate consultants and engineers for the effective completion of the full work scope. Key deliverables included:

- Detailed survey with risk assessment
- Drawing reconciliation & Scheme Protection
- Test Plan production
- Setting Calculation
- Material & Equipment specification & procurement
- Fabrication, Installation & commissioning
- Maintenance Testing
- As-built drawing production
- Training & hand back

Output

- Production of power system and protection system software models (including protection relay and load shedding relay models) to enable load flow, short circuit and dynamic study.
- Protection system assessment report offering conclusions and recommendations for backup protection enhancements, relay settings and upgrades, current circuit breaker fail protection enhancements and overcurrent and earth fault protection settings revisions.
- Implementation plan for the city and central area 24kV protection enhancements and upgrades.

If you are considering an investment in any electrical or energy related technology, get an expert opinion first from EA Technology.

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