

# Costello Associates

Serving Ontario Electricity Distributors



1. - Municipal Transformer Stations: When faced with TS's nearing rated capacity, more and more distribution utilities are building their own MTS stations in order to meet their growing load requirements. We help utilities analyze the need for additional capacity, work with the transmitter to explore options, assist in the negotiation of supply contracts, develop budgets for the MTS, and do cost-benefit analysis to lead to a decision for how to provide new capacity. Should the client opt for building a new station, we can then help the utility to coordinate all the engineering and construction aspects of the project, and act as the owners independent consultant in managing the project to ensure that the project is on-time, on-budget, and is completed safely.



2. - Smart Metering: The Government of Ontario has mandated the installation of smart meters in all homes, condominiums, and small businesses. We assist Ontario utilities in understanding the regulatory requirements as well as the technical solutions that are being constantly developed. We are involved in the development of technical specifications for AMI systems, vendor negotiations and selection, pilot testing, network planning, and deployment.



3. - Storm Response: We provide operational support during utility emergencies to assist in the restoration of service in a timely and safe fashion. We have seasoned personnel that can help in many areas, such as patrolling, preparing material lists, supervising re-construction and repairs, and coordinating crews and logistics. Our service vehicles are equipped with GPS technology, laptop computers, two-way radios, mapping software, spotlights, safety equipment, and emergency lighting. We can install utility radio frequencies on our radios in advance of emergencies and can also import operating diagrams into our laptops in order to be prepared in advance of any emergency.



4. - Asset Condition Assessments and Asset Management Plans: Utilities are under growing pressure to demonstrate that they are proactively assessing and managing their assets. We assist Ontario LDC's with their Asset Condition Assessments (ACA) and Asset Management Plans (AMP) to support short and long term planning strategies and to support applications made to regulators. Along with our clients, we develop priorities for assessing substations, overhead and underground power systems, as well as associated support systems such as GIS, SCADA, and asset management applications. Asset management plans are created to prioritize programs to maintain and replace assets, and to improve reliability.



5. - Utility Voice and Data Wireless Communication - we assist utilities in the design, construction, configuration, and troubleshooting of their wireless voice and data networks that are used for operational support. Voice communication has become indispensable to field personnel for safety and reliability reasons. Voice networks must have necessary range, and tower sites must be secure and have backup power supplies. Wireless data networks are being used for Scada and distribution automation, as well as for mobile data applications such as field GIS, dispatching, work order management, AVL, email, and records access. Data networks must be secure and in some cases meet federal standards for IT security.



6. - Customized Training: working with our customers, we develop and deliver custom technical training. We specialize in the creation of custom technical training videos that become property of the client, and can be delivered on demand. A perfect safety meeting solution that can be pulled off the shelf on short notice (i.e. for inclement weather).

7. - Construction Management: We understand the need to complete projects on time, on budget, and to maintain the highest safety standards. Our associates have extensive project and construction management experience, and are trained in the requirements of the OHSA and Construction Regulations in Ontario.



8. - Scada and Distribution Automation: We have specified, procured, programmed, and commissioned numerous Scada systems for Ontario municipal utilities. We have also coordinated the interconnection of several muni-Scada systems with Hydro One and the IESO through ICCP protocol. We have hands-on experience in programming, communications, hardware, and IED integration.

9. - Utility computer systems are considered valuable targets for cyber terrorism. The North American Electric Reliability Corporation (NERC) has developed standards for the protection of critical infrastructure. We assist utilities in understanding the NERC requirements, and the implementation of the new CIP standards. We also analyze systems to identify all vulnerabilities and make recommendations for IT security.



10. - Grow House Detection: Our associates have successfully investigated dozens of illegal grow houses, in many cases leading to the recovery of the cost of stolen power. We also work with utilities, police, municipalities, and public service organizations in training how to detect illegal grow houses and what to do when one is found.

158 Pond Hollow Drive  
Sudbury, ON P3E 6L2

Tel/Fax (705) 522-0501 Cell (705) 669-7859  
stephen@costelloassociates.ca