NLH 2013 Amended General Rate Application
Undertaking - 95
Filed: Dec 8, 2015 Board Secretary: 4.

## **Undertaking 95**

Re: Information #34

Hard scrub and review of ProEnergy's submitted variance regarding the 100 megawatt CT addition at Holyrood.

Undertake to provide the detail in executive format for all of the units that were involved in the building and all of the incremental claims that add up to make the variance.

The total cost of the building was \$20,038,114, which is a variance of \$12,038,114 above the \$8,000,000 allowance that had been carried in the budget. The main contributors to the higher than budgeted cost for the building are generally as follows:

- 1. Building construction progress was impacted for safety considerations associated with constructing the building in parallel with and around other work fronts. In addition, there were many interruptions of heavy lifts and other aerial work due to high winds and inclement weather.
- 2. As the priority was to get the CT into operation, a phased approach to building construction was implemented to accommodate priority work fronts. This significantly extended the construction phase of the building.
- 3. Increased building complexity due to interface with the turbine generator. In particular, the HVAC system is complex due to the nature of the equipment that is being housed in the building. In addition, the fire protection system is complex due to the nature of the equipment that is being protected and integrated with the HVAC system. Fire protection system design is in full compliance with FM Global standards.

The following is summary breakdown of the costs for the various building elements (or units), showing the make up for the total cost of the building construction.

Summary.of Building Elements/Lühits	Čost - P
Engineering (Detailed Design)	\$ <b>471,</b> 894
Building Envelope (Superstructure, Insulation, Cladding, Roofing, Doors, etc.)	\$ 2,206,199
Mechanical (HVAC, Fire Protection/Detection, Plumbing, etc)	\$ 7,701,904
Electricial (Electrical services, lighting, electric heating, etc.)	\$ 1,474,268
Building Erection (building envelope construction)	\$ 4,726,068
Foundation (Concrete foundations, slabs, embedments, etc.)	\$ 3,457,780
Total	\$ 20,038,114