Q. **Reference: 2015 Capital Expenditure Overview, Volume I, Section I, Page I-16** The total actual expenditure and forecast for the purchase and installation of the *100 MW (Nominal) Combustion Turbine Addition – Holyrood* project is estimated to be $129,426,200. Provide a detailed breakdown for this estimated expenditure and an explanation for the $10,500,400 variance.

A. The following table provides a detailed breakdown for the estimated total expenditure for the purchase and installation of the 123.5 MW (Nominal) Combustion Turbine.

Description	Total Original Budget	Total Forecast	Variance
Labour	3,665,300	2,599,999	(1,065,301)
Materials	2,059,500	2,014,849	(44,651)
Consultants	2,284,200	2,330,220	46,020
Equipment Rental	142,900	5,200	(137,700)
Travel	242,400	235,100	(7,300)
Contract	102,701,400	118,540,795	15,839,395
IDC	2,316,100	3,700,000	1,383,900
Contingency	5,514,000	-	(5,514,000)
Total	118,925,800	129,426,163	10,500,363

The variance is mainly attributed to a higher than budgeted cost for the turbine building enclosure. The following are the main contributors to the cost:

1. Building construction progress was impacted for safety considerations associated with constructing the building in parallel with and around other work fronts. Also, 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. Also, 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.

Each of the above items contributed to an extension of the building construction period, which significantly added to the labour and material costs for the building.