Q. Re: Account S16: Please provide a detailed description of the various studies and corresponding cost of each set forth in Account S16 – Studies, including all information and documentation the Company believes is significant or meaningful to the determination of life characteristics. The description should include the specific purpose of the system, who performed the study, and the resulting benefits of the study. Further, provide all reasons and justification, including all documents that support any position that an average service life greater than 5 years (e.g., 7 or 10 years) is not appropriate.

A. Please see CA-NLH-131 Attachment 1. This account was analyzed in total, rather than on an asset by asset basis, and the asset specific data was therefore not a consideration.

Below is a list of all assets in account S16 - Studies that were included in the data list used for Gannett's depreciation study

See Below

Asset Number	Description	Asset Cost Object	Start Depr	Cost Net of CIAC	Final UOP	Final UOP Desc
299207	Security Assessment Study	1095	12/31/2005	**82,495**	S16	Studies
303249	Regen Waste Treatment Study	1095	2/26/2007	**155,980**	S16	Studies
303475	ERP Study - JDE Review - Information Services	1095	12/28/2006	**47,493**	S16	Studies
307135	Island Pond Development Study	1095	5/9/2007	**975,159**	S16	Studies
307717	Portland Creek Feasibility Study	1095	3/8/2007	**516,507**	S16	Studies
307828	West Coast Communication Study	1095	9/30/2007	**140,889**	S16	Studies
308990	Gas Turbine 2007 Assessment - HWD	1095	12/17/2007	**112,084**	S16	Studies
308991	Gas Turbine 2007 Assessment - SVL	1095	12/17/2007	**112,084**	S16	Studies
322464	Holyrood Plant Precipitator & Scrubber Installation Study	1095	12/31/2008	**247,040**	S16	Studies
322465	Holyrood Plant Intelligent Sootblowing Controls Study	1095	12/31/2008	**106,919**	S16	Studies
323894	Hydraulic Structure Life Expectancy Study	1095	12/31/2008	**122,721**	S16	Studies
324692	Arc Flash Study Various Sites	1095	12/31/2008	**258,892**	S16	Studies
324693	Holyrood Stack Breeching Study	1095	12/31/2008	**42,457**	S16	Studies
324706	Motor Control Center Study	1095	12/31/2008	**23,295**	S16	Studies
324707	Gas Turbine Assessment Study	1095	12/31/2008	**28,759**	S16	Studies
324708	Voice Communications Study	1095	12/31/2008	**118,299**	S16	Studies
325106	Study, Stator Winding Design BDE Unit 1-4	1095	11/28/2008	**37,904**	S16	Studies
325148	Replacement Study Programmable Logic Controllers - HRD	1095	12/31/2008	**40,623**	S16	Studies
334302	Marine Environmental Effects Monitoring Study - HRD	1095	12/31/2009	**102,282**	S16	Studies
334440	Condition Assessment Distribution Recloser - HVY	1095	12/31/2009	**26,906**	S16	Studies
99041378	Flue Gas Treatment Study	1095	12/31/2003	**59,397**	S16	Studies
			Total	**3,358,184**		

1) Forensic Investigations Canada
2) Neill and Gunter Limited
3) Hydro's Information Services
4) SNC-Lavalin Inc. (Mt. Pearl)
5) SNC-Lavalin Inc. (Mt. Pearl)
6) Kema Consulting
7) Stantec Consulting Ltd.
8) Stantec Consulting Ltd.
9) Stantec Consulting Ltd.
10) Clyde Bergemann Canada Ltd. -
11) Hatch Ltd.
12) Stantec Consulting Ltd.
13) Alstom Power
14) Stantec Consulting Ltd.
15) Stantec Consulting Ltd.
16) Kema Consulting
17) GE Canada Ltd
18) Hydro's Engineering Services
19) Dr. Robert Hooper of Memorial University of Newfoundland
20) Hinz a Rockwell Automation Company Ltd
21) SGE Acres Limited

rpose & Benefit

1) Purpose: To assess our exposure in the area of security and safety.

   Benefit: external party completed the work and prepared a report which identified areas of concern and gave Hydro direction on how to best allocate funds in the areas of safety and security.

2) Purpose: To assess methods for removing ammonia from waste water at Holyrood Thermal Generating Station.
   Benefit: To assist with future capital planning to ensure compliance with environmental regulations and promote environmental stewardship.

3) Purpose: To select an ERP Strategy that will align and evolve with the needs of the business over the next 5 years
   Benefit: Engage the business and make them an integral part of this decision making process for the future of JDE

4) Purpose: To develop the physical parameters and layout of the project along with developing a construction schedule. This allows cost estimates and energy benefits to be formulated along with cost and cash flows to determine all-up costs for the project to determine the feasibility of the project.

   Benefits: are that the project details are developed sufficiently to determine the overall feasibility of the project and the project design parameters are developed sufficiently to move on to construction of the project when required and feasible.

5) Purpose: To develop the physical parameters and layout of the project along with developing a construction schedule. This allows cost estimates and energy benefits to be formulated along with cost and cash flows to determine all-up costs for the project to determine the feasibility of the project.

   Benefit: are that the project details are developed sufficiently to determine the overall feasibility of the project and the project design parameters are developed sufficiently to move on to construction of the project when required and feasible.

6) Purpose: To determine the most cost effective means of providing for the future communications requirements of Hydro's facilities on the West Coast of Newfoundland.
Benefit: to determine the current and anticipated future requirements for telecommunications services.

7) Purpose: Perform a condition assessment study of the Gas Turbine plant with recommendations and cost estimate for life extension of 15 years.
Benefit: To assist with capital planning to ensure the long term reliability of the aging gas turbine plant.

8) Purpose: Perform a condition assessment study of the Gas Turbine plant with recommendations and cost estimate for life extension of 15 years.
Benefit: To assist with capital planning to ensure the long term reliability of the aging gas turbine plant.

9) Purpose: Prepare conceptual design with cost estimate to install precipitators and a scrubber at Holyrood.
Benefit: To assist with future capital planning to ensure compliance with environmental regulations and promote environmental stewardship.

10) Purpose: Review intelligent soot blowing technologies for boilers and make recommendations applicable to Holyrood.
Benefit: To assist with future capital planning to reduce the concentrated adverse effect associated with particulate fall-out related to soot blowing operations.

11) Purpose: Perform condition assessment of hydraulic structures at Bay d'Espoir, Burnt Dam, Victoria, Ebbegunbaeg & Salmon River and make recommendations with cost estimates to extend the service life by 25 years.
Benefit: To assist with capital planning to ensure the long term reliability of aging hydraulic structures.

12) Purpose: To complete arc flash calculations for various sites throughout the hydro system.

Benefit: provided Hydro with the arc flash levels for equipment throughout the system. The equipment was labeled which provided workers with the information they needed to ensure that they could select the appropriate personal protective equipment (PPE) for situations where they were required to work or maintain live electrical equipment.

13) Purpose: Study alternatives for various types of boiler breeching construction and cost.
Benefit: To assist with capital planning to determine the optimum solution for replacement of deteriorated boiler breechings.

14) Purpose: The Motor Control Center Study was required for the Holyrood plant to determine the arc-flash hazard analysis at the plant.
Benefit: The study showed the equipment ratings of the motor control centers and identified where there were arc flash concerns.

15) Purpose: The Gas Turbine Assessment study was required to provide an assessment of the electrical equipment associated with the Gas Turbine Generator at the Holyrood Station.
Benefit: The study showed the equipment ratings of the motor control centers and identified where there were arc flash concerns.

16) Purpose: To perform a NPV analysis of upgrading Hydro's voice communications network equipment, which was reaching the end of its useful life.
Benefit: To determine whether to maintain existing infrastructure or migrate to the (then) new IP telephony systems.

17) Purpose: The study of the Stator Winding Design BDE Unit 1-4 was to provide information on the condition and suitability for service of the stator windings of the four units 1 to 4.
Benefit: This study provided a summary of the condition of the windings and guidance as the future operating life of the windings.

18) Purpose: To evaluate the technical feasibility of replacing each of the existing individual PLC control systems within the plant with a modernized and integrated control system. Mainly, it analyzed the overall risk of continuing to operate with the existing systems and it evaluated the alternatives available when replacing each of the individual systems.
It also included the development of budgetary estimates and the development of a prioritized asset replacement schedule.

Benefit: It allowed NL Hydro to perform a high level analysis of their existing PLC control systems in order to evaluate the overall project feasibility and the impact to operations after a failure of any of the existing systems. This information allowed NL Hydro to prioritize this work in their long term
capital plan and more importantly allowed them to select the most economical alternative that met the current and future needs of the plant.

19) Purpose: To determine if the discharge of cooling water, continuous basin water and wastewater treatment plant water is having a measurable effect on the surrounding marine environment. The study was required by government as a condition of the Certificate of Approval for the plant.

Benefit: It provided Nalcor with an up-to-date report on our effect on the marine environment in the Holyrood Thermal Generating Station area and the study kept us in compliance with the Certificate of Approval for the plant.

20) Purpose: of this study was to conduct an assessment of the circuit reclosers serving the distribution feeders in the Happy Valley system.

Benefit: The study confirmed that the existing reclosers were adequate for the foreseeable future. Issues were identified with regards to the configuration of the distribution system during maintenance and emergency work.

21) Purpose: Assess air emissions control technologies available and applicable to Holyrood TGS.
Benefit: To assist with future capital planning to ensure compliance with environmental regulations and promote environmental stewardship.