Q. Consumer Question: Hydro is proposing a new transmission line (TL) from Bay d'Espoir to the Avalon at a cost of $209 Million which would increase the firm capacity by 275 MW (see p. 24 - Hydro report - Upgrade Transmission Line Corridor - Bay d'Espoir to Western Avalon). If 275 MW is available for the cost of a new $209 Million TL, is major new power generation urgently required or can the decision be delayed?

A. The justification for the new transmission line is provided in Nalcor's response to PUB-Nalcor-153. The new line is required in both the Isolated Island and Interconnected Island alternatives.

While the new transmission line only provides capability to transmit power from generation resources, new generation capacity is required in the 2015 timeframe and an energy deficit is forecasted in the 2020 timeframe. As a result, investments in generation projects and facilities must be made to meet these needs, and Nalcor's analysis indicates the Interconnected Island alternative, including the construction of Muskrat Falls and the Labrador Island Transmission Link, is the least cost generation expansion plan for the island.

Q. Consumer Question: A new $209 Million TL from Bay d'Espoir has been proposed in Hydro 2012 Capital Budget (see 2012 NLH Capital Budget request to the PUB). In a July 12, 2011 press release, NLH reports water spills at Bay d'Espoir, Jacksons Arm and White Bay, Victoria Lake and Victoria River and Upper Salmon, Hinds Lake, Burnt Pond and White Bear River and Granite Lake. This is water wasted for the purpose of generating cheap hydro power that could possibly have been used to replace the expensive oil that was burned at Holyrood. This was not possible because of the current inadequate TL capacity from Bay d'Espoir to the Avalon. Could Nalcor provide an analysis showing the potential cost savings and other positive environmental impacts from burning less fuel at Holyrood as if the new proposed $209 Million TL had been built for the in service for 2010- 2011 years?

A. The requested analysis does not assist consideration of the Reference Question, as planning for the new transmission line would have had to be initiated a number of years before 2010 in-service, at which time the new line was not needed. Furthermore, Nalcor's analyses in both the Interconnected and Isolated Island alternatives assume the new 230 kV line is in place.

Transmission capacity constraints that restrict deliveries to the Avalon Peninsula are not the only reason why water could be spilled at hydroelectric facilities. If inflows into the reservoir exceed the storage capacity of the reservoir and the production capability of the plant, then water will be spilled.

The new transmission line is required for the following reasons:

a) In the Isolated Island alternative, it is required to provide capacity to integrate new renewable sources of generation, such as Island Pond, Portland Creek, and Round Pond.
b) In the Interconnected Island alternative, it is required to maintain system stability.

These are discussed further in Nalcor's response to PUB-Nalcor-153.

Q. Consumer Question: Nalcor has advised that power rates will go up by 37% by 2016 without Muskrat caused partially by increased fuel costs at Holyrood. If the new $209 Million TL (which will increase firm capacity by 275W) from Bay d'Espoir to the Avalon had been placed in service in 2010 (to reduce the expensive fuel costs at Holyrood). What would have been the impact on the projected power rates from 2010 to 2017? Could Nalcor provide a detailed analysis?

A. Analysis of this question does not assist consideration of the Reference Question. In order for the new 230 kV transmission line to be placed in service in 2010, approval for construction would have been required a number of years in advance. Since the line was not needed at that time, no basis for approval existed.

Q. Consumer Question: The Vale project is scheduled to start production in late 2011 with full production reached in 2016. Fuel consumption will increase by 1.1 million barrels per year by 2016 to serve the Vale Smelter when it reaches full production. Vale will pay a blended power rate for this power (an average system cost). The existing retail customers will have to pay a higher rate to help subsidize a blended average system rate for Vale. Has Nalcor considered charging Vale directly the full incremental cost (the stand alone cost of providing power to the Vale smelter) to reduce the impact on the existing retail power customers of having to pay more because of the power demand from the Vale Smelter?

A. Pursuant to section 6.2 of the Development Agreement[1] with Vale, electrical power for the Vale processing facility shall be provided at the island industrial electrical rate.

[1] http://www.nr.gov.nl.ca/nr/royalties/amendment_4_redacted.pdf

Q. Consumer Question: Can Nalcor provide an analysis of the impact on the retail power customer - as if the Vale Smelter was charged the incremental cost, the cost of providing power for the Vale Smelter from 2011 to 2017 rather than the blended cost?

A. As indicated in Nalcor's response to CA/KPL-Nalcor-104, pricing of electrical power for the Vale smelter has been established pursuant to section 6.2 of the Development Agreement with Vale. Further evaluation of this approach does not assist consideration of the Reference Question.

Q. Consumer Question: Can Nalcor provide the total number of additional barrels of oil burned at Holyrood due to the additional demand from the Vale project by year from 2012 to 2017?

A. Nalcor interprets this question in the context of the Interconnected Island alternative where the Holyrood plant is the marginal energy source on the Island Interconnected system. Based on the 2010 Planning Load Forecast and assuming an average net efficiency at Holyrood of 630 kWh per barrel, the number of additional barrels of #6 fuel burned at Holyrood is as follows:

	Vale Forecasted Energy Consumption (GWh)	Additional Fuel Consumed at Holyrood (thousands of barrels)
2012	31	50
2013	82	130
2014	299	475
2015	585	928
2016	727	1,154
2017	733	1,163

Q. Consumer Question: Can Nalcor provide a graph showing the present Nalcor predicted retail customer power rates for 2010 to 2017 compared to the power rates from 2010 to 2017 as if:

a. $209 Million TL (a 275 MW firm capacity increase for the Avalon) had been in place in 2010, and

b. also, if Vale was charged for the full incremental cost of power from 2011 to 2017?

A. a. Please refer to Nalcor's responses to CA/KPL-Nalcor-102 and CA/KPL-Nalcor-103.

b. Please refer to Nalcor's responses to CA/KPL-Nalcor-104 and CA/KPL-Nalcor-105.

Q. Consumer Question: A moratorium on small hydro has been in place since 1998. The power from these sites could be used to reduce fuel burned at Holyrood. When will the moratorium on small scale hydro developments be lifted? How much MW of power does Nalcor estimate that these small scale hydro projects could provide - using small hydro sites (less than 25 MW) those which have the storage capacity to enable hydro projection from January to march period - to reduce the peak load requirements to reduce oil consumption at Holyrood?

A. The Government of Newfoundland and Labrador has indicated its intent to maintain the moratorium on small hydro developments, subject to a review concurrent with a decision on proceeding with the Lower Churchill Project.[1]

Nalcor has included projects with storage, or projects capable of using existing large-scale storage within the Island system in its Isolated Island generation expansion plan. These include Portland Creek, Island Pond, and Round Pond, with capacities of 23, 36, and 18 MW respectively, for a total capacity of 77 MW.

Other feasible small hydro projects with storage have not been identified.

[1] *Energy Plan*, page 34

Q. Consumer Question: In the report, Summary of Newfoundland and Labrador Hydro (NLH) 2010 Long Term Planning Load forecast for the MF Project, Exhibit 27, section 5.1.3, p. 16 of 22, Hydro Industrial Load, the energy requirements of the pulp and paper industry are 50% of what they once were because of closures at Stephenville and Grand Falls and the reduction in paper demand at Corner Brook (CB). The ongoing demand forecast for CB is "26 MW in addition to their own significant generation capacity at Deer Lake" (126 MW at Deer Lake). Can Nalcor provide the actual total island system load from CB (include Deer Lake) by year from 2007 to 2011?

A. Please see table below of actual electricity consumption for the Corner Brook paper mill as supplied by Deer Lake Power and supplemented by NL Hydro to Corner Brook Pulp and Paper Limited.

Corner Brook Pulp & Paper Energy Requirements	
	(GWh)
2007	1268
2008	1084
2009	920
2010	981
2011	950

Q. Consumer Question: Can Nalcor provide the projected total system load (include Deer Lake) from CB used in their forecast from 2012 to 2017?

A. Please see table below of Nalcor's 2010 PLF forecast of total load requirements for Corner Brook Pulp and Paper Limited.

Corner Brook Pulp & Paper Energy Requirements	
	(GWh)
2012	966
2013	965
2014	965
2015	965
2016	965
2017	965