Q. Mr. Budgell indicates on page 11, lines 18 to 27, that any number of alternatives may be brought forward under a general request for generation proposals. Explain the process to be followed to procure new generation. Address, specifically, the following:

(a) The least cost planning process including the assessment of options such as demand management, energy efficiency, and innovative rate alternatives.

(b) The competitive procurement process.

(c) The role of Newfoundland Power and Newfoundland and Labrador Hydro; i.e., will these entities be allowed to bid, and if so, as regulated or unregulated entities? Can Hydro or Newfoundland Power participate in generation projects that have not been specifically identified in a competitive procurement process? Address, specifically, the Fortis Inc. arrangement with Abitibi-Consolidated to develop additional capacity at Abitibi Consolidated's hydroelectric plant at Grand Falls-Windsor and to redevelop the forestry company's hydroelectric plant at Bishop's Falls.

(d) The role of the Board and the public in the competitive procurement process.

A. (a) & (b) The following is a description of Hydro's Least Cost Resource Planning Process as it applies to the Island Interconnected System.

General Methodology Considerations

The planning process is an orderly development and comparison of all relevant system costs for all technically acceptable alternatives to determine which is least cost. These principles are applied to both transmission and generation planning. Least cost resource and transmission planning utilize current engineering and economic concepts and procedures, advanced computer software and the expertise and experience of utility system planners and consultants. Inputs to these planning processes include comprehensive data, definitions for the existing systems load and generating capability, planning criteria and future resource options.

Using a combination of deterministic and probabilistic techniques, the load forecast for the overall system is compared against system data to identify conditions in which capacity and/or energy deficits are expected to occur. Alternative resource scenarios are developed based upon technically acceptable and achievable options in order to satisfactorily address these conditions. These alternative scenarios are then compared in order to identify which combination of resources produce the least cost plan for addressing the identified need. Three key elements of this process are: 1) the identification and timing of additions; 2) the identification of resource options; and 3) the process by which plans are compared.

Identification and Timing of Additions

The timing and need for additional supply is based on an analysis comparing the total Island load forecast with the capability of all existing generation utilizing established planning reserve criteria. Included in this comparison are considerations for the lead time required to bring each new resource into service and the size of the resource relative to the increment of additional load to be served.

For resource planning on the Island Interconnected System, Hydro utilizes a forecast which includes demand and energy for the Island system expected to be met by Hydro and all its customers' generation facilities. The system's capability used for this purpose reflects Hydro's and its customers' existing and committed resources (see Schedule IX, H.G. Budgell).

Since electrical load consists of two components, capacity and energy, it is necessary to plan so that the production of both components provide a given level of reliability. Hydro's planning criteria, which have been filed with the Board on a number of occasions, are established for the purpose of setting the minimum level of reserve capacity and energy installed on the system and is stated as follows:

Energy – The Island Interconnected System should have sufficient generating capability to supply all customer firm load requirements with firm system capability.

Capacity – The Island Interconnected System should have sufficient generating capacity to satisfy a loss of load expectation (LOLE) target not more than 2.8 hours per year based on a probabilistic assessment.

Comparing the Island generation capability with the load forecast provides the means of identifying the timing and need for additional supply. Negative energy balances or LOLE indices greater than 2.8 hours per year indicate deficits in supply and establish the time frame in which additional supply is required (see Schedule X, H.G. Budgell).

The above process and criteria identify the timing for resource additions, and establish the constraints within which various resource scenarios must operate. Once these alternative plans are developed, they must be compared in order to identify the least cost resource option.

Identification of Options

Once the timing and magnitude of resource requirements have been identified, plans are assembled composed of different combinations of resource options in order to address the requirements. Resource options can be either utility or non-utility in origin, with a wide variety of technical and cost characteristics. These variations permit development of plans suited to the unique requirements of the system.

There are a variety of means by which the various options available for inclusion in plan development may be identified. In recent years Hydro has relied upon Requests for Proposals (RFPs) for identifying

the field of options available for inclusion with its own options for the development of resource plans. In certain instances, however, other means of identifying options may be used, including: use of Hydro's own options only, use of competitive bidding versus Hydro's best option, use of utility options only, or use of selective bidding (bidding from a select group of possible developers). Irrespective of the method chosen however, the options identified are to be compared on a fair and consistent basis in order to ensure that consumers are provided least cost power.

Plan Comparison

The method used to evaluate the cost effectiveness of a particular expansion plan is to compare on a present worth basis its incremental investment and system operating costs with alternative system expansion plans over a planning horizon (normally 30 to 60 years). This permits an examination of the effect a proposed project has on the plant currently in service and the plant that will likely follow. Sensitivity studies are included in the comparison of plans to test the effects of the variations of such factors as load growth, fuel prices, discount rates, investment costs, etc.

The main economic criterion used to compare various expansion plans is the discounted value of all costs at a chosen discount rate. In practical application, Hydro represents this criterion as the minimization of annual revenue requirements.

It is important to note that the transmission planning often proceeds in parallel with resource planning in order to address the requirements to

transmit energy from new generation facilities through the Island grid. Initial analysis may only include the interconnection cost to the grid, but later expands into determining whether other modifications are required to other portions of the grid for each resource scenario. Thus, the optimum plan is one that considers both generation and transmission.

The above description covered supply side options on the basis of minimization of annual reserve requirements. The resulting plan can be used to calculate system avoided costs, which then can be used to screen demand side management (DSM) options. These are screened for technical, economic and market potential. (eg. As per SRC Report of July 1991. Please refer to response to CA-106.)

(c) Under the *Public Utilities Act,* any person that sells power and energy to a public utility, but not to the public, does so outside of the jurisdiction of the Public Utilities Board. In the event that a regulated public utility sells power to any person, the sale of that energy is subject to the jurisdiction of the Public Utilities Board. While any process that seeks to determine and select least cost power projects may include a solicitation of bids from non-utilities, there would be no reason to exclude public utilities from that process. The compensation to be received by those utilities would, however, be subject to the jurisdiction of the Public Utilities Board.

The participation of a company affiliated with Fortis Inc. in the enhancement of the hydro-electric generation facilities at Bishop's Falls and Grand Falls is specifically exempt from the jurisdiction of the Public Utilities Board under the *Public Utilities Act* pursuant to a

regulation promulgated under section 4.1 of that Act and from the jurisdiction of the Public Utilities Board under the *Electrical Power Control Act, 1994* pursuant to a regulation promulgated under section 5.2 of that Act.

(d) The role for the Public Utilities Board in power project planning arises under the *Electrical Power Control Act, 1994.* There is also, ultimately, a role for the Board under the *Public Utilities Act* in so far as the rates to be paid by the public are set by the Board. The competitive procurement would be open to the public. The public's role in the regulatory process is a matter to be determined by the Public Utilities Board.