

BC Hydro's LTAP and the Long-Term Electricity Transmission Inquiry

Presentation to the BCUC Preliminary Workshop

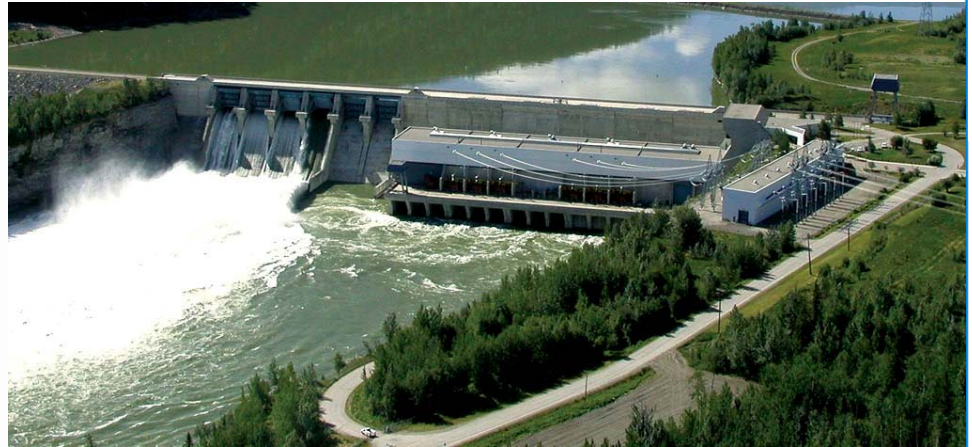
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BC Hydro

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April 17, 2009

- BC Hydro:
 - Who We Are
 - What We Do



- Energy Planning Today: A 20 year plan
- The Long-term Transmission Inquiry: Looking forward 30 years

- A Crown Corporation
- Established in 1961
- Over 5,000 employees
- Receive guidance from the provincial government through several policy instruments, including a Shareholder's Letter of Expectations and BC Energy Plan.
- BC Hydro is regulated by the British Columbia Utilities Commission (BCUC) under the *Utilities Commission Act*.



- BC Hydro's primary business activities are the generation and distribution of electricity.
- Transmission of that electricity is facilitated by the BC Transmission Corporation on behalf of BC Hydro and other power providers in B.C.
- BC Hydro serves customers in an area containing about 94% of British Columbia's population

- BC Hydro operates 30 hydroelectric facilities and three natural gas-fired thermal power plants.
- About 90% of the province's electricity is produced by major hydroelectric generating stations on the Columbia and Peace river systems and in the Coastal Region.
- BC Hydro's thermal power plants and Independent Power Producers contribute the remaining 10 per cent of generation.
- BC Hydro also serves 17 communities – known as non-integrated areas – that are not linked to our transmission network.

BC Hydro's Major Generating Facilities



- BC Hydro is planning now to meet future energy needs in B.C.



Conserving more

Power Smart; energy efficiency standards for buildings; smart metering, rate incentives; public campaigns



Buying more

IPPs/renewable resources; clean power call; standing offer program; bioenergy call

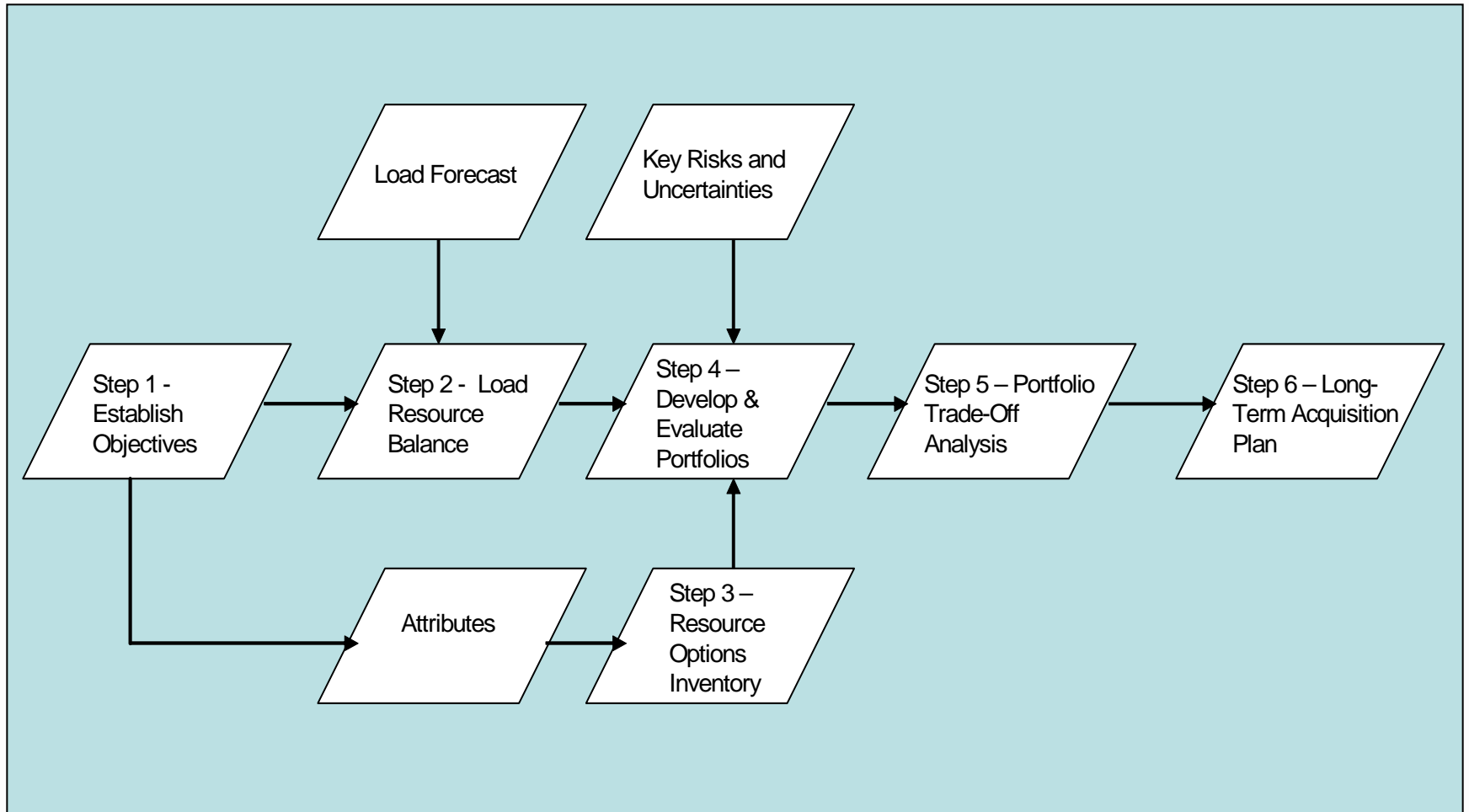


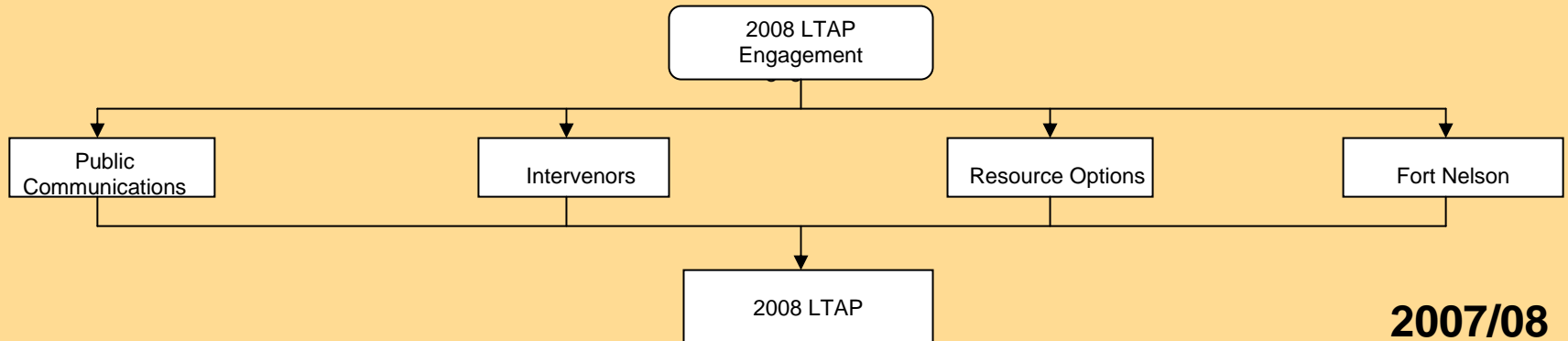
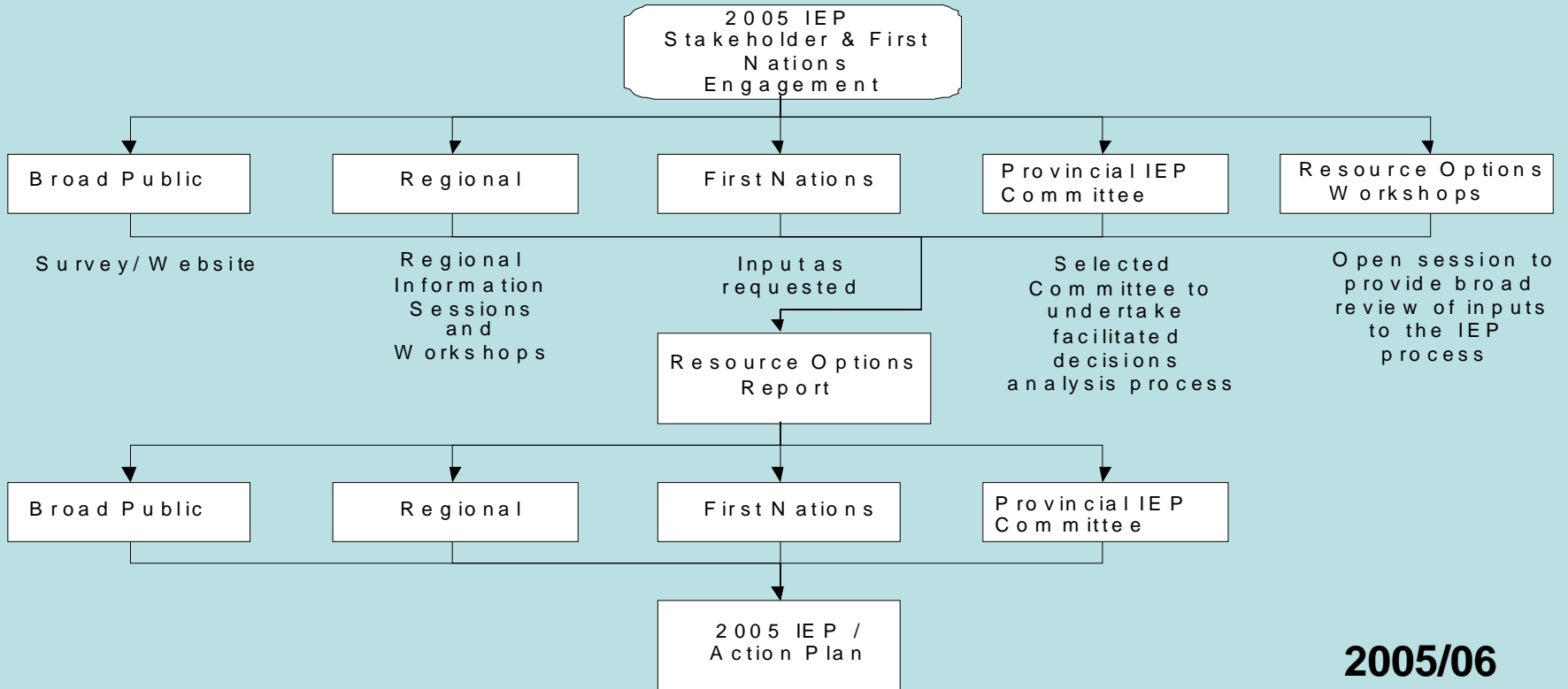
Building more

Reinvesting in existing assets, \$3.4 billion in next two years; considering new options for firm energy

- BCTC plans, operates and manages BC Hydro's transmission system
- BC Hydro requests transmission service from BCTC through the Network Integration Transmission Service (NITS) process
- BC Hydro's transmission service requests are based on a base resource plan and contingency resource plans (CRPs) that result from its Long-Term Acquisition Plan (LTAP)

- BC Hydro required to file long-term resource plans with BC Utilities Commission (BCUC) under *Utilities Commission Act (UCA)*
- 2008 LTAP Considerations
 - Update of 2006 Integrated Electricity Plan (IEP)/LTAP
 - BCUC 2006 IEP/LTAP Decision
 - Need for new resources accepted (further work on Burrard needed)
 - More work required on assessing risk
 - 2007 Energy Plan
 - Target to acquire 50 per cent of BC Hydro's incremental resource needs through conservation by 2020
 - Thermal generation greenhouse gas (GHG) emissions to be fully offset or sequestered
 - 90% clean or renewable generation
 - Province to be electricity self-sufficient by 2016
 - Special Direction 10
 - UCA Amendments

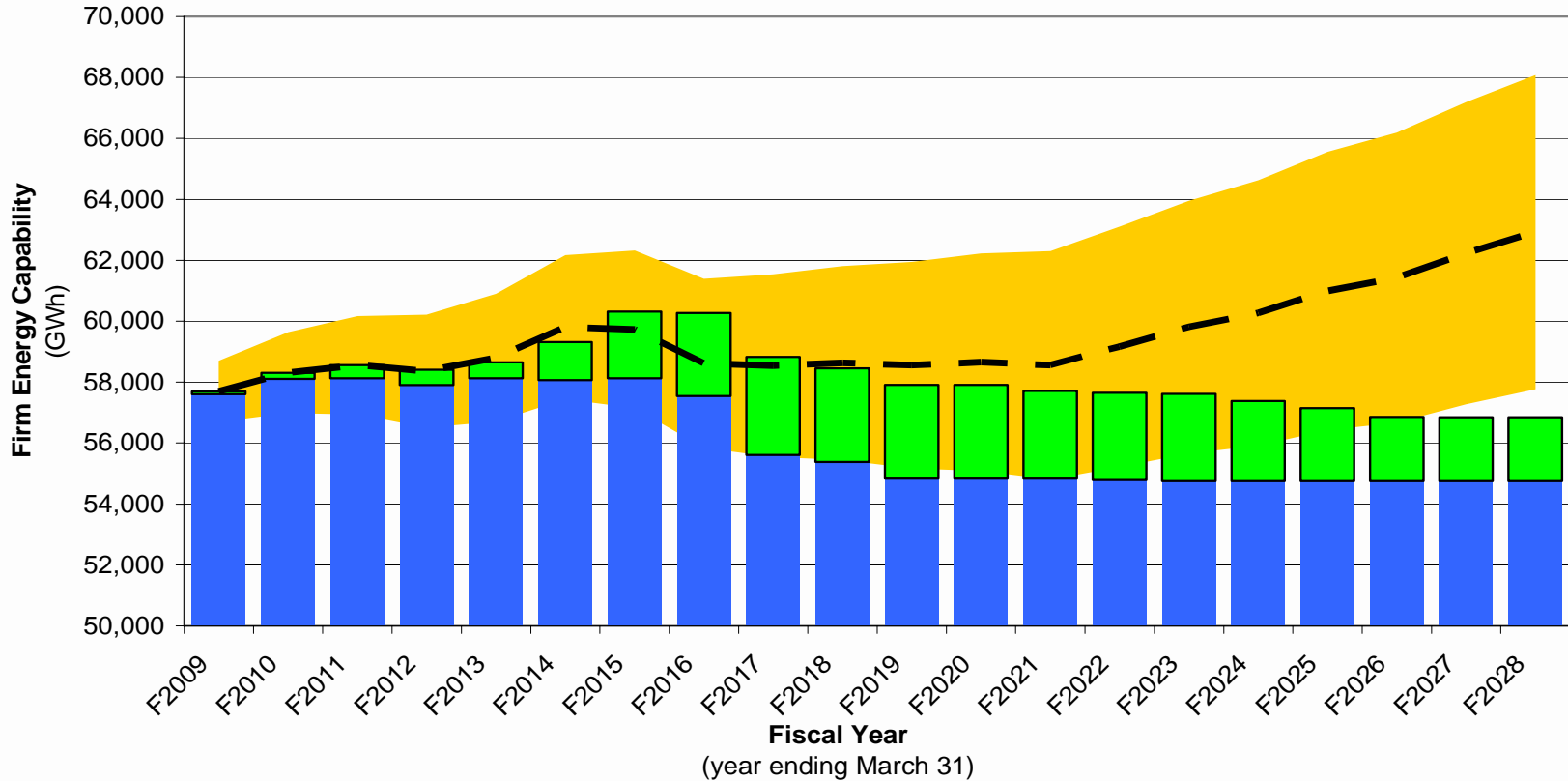






- Expenditure Determination Requests
 - Burrard
 - Demand-Side Management (DSM) Plan
 - Clean Power Call Definition
 - Fort Nelson
 - Mica Units
 - Site C


- Justification for Expenditures
 - Load Resource Gap
 - Risk Framework
 - 2007 Electricity and Gas Price Forecasts
 - GHG and Renewable Energy Credit (REC) Price Forecast
 - Resource Options Update
 - Portfolio Analysis
 - Contingency Resource Plans

2008 LTAP Load-Resource Balance BC Hydro



 2008 Load Forecast Range after DSM

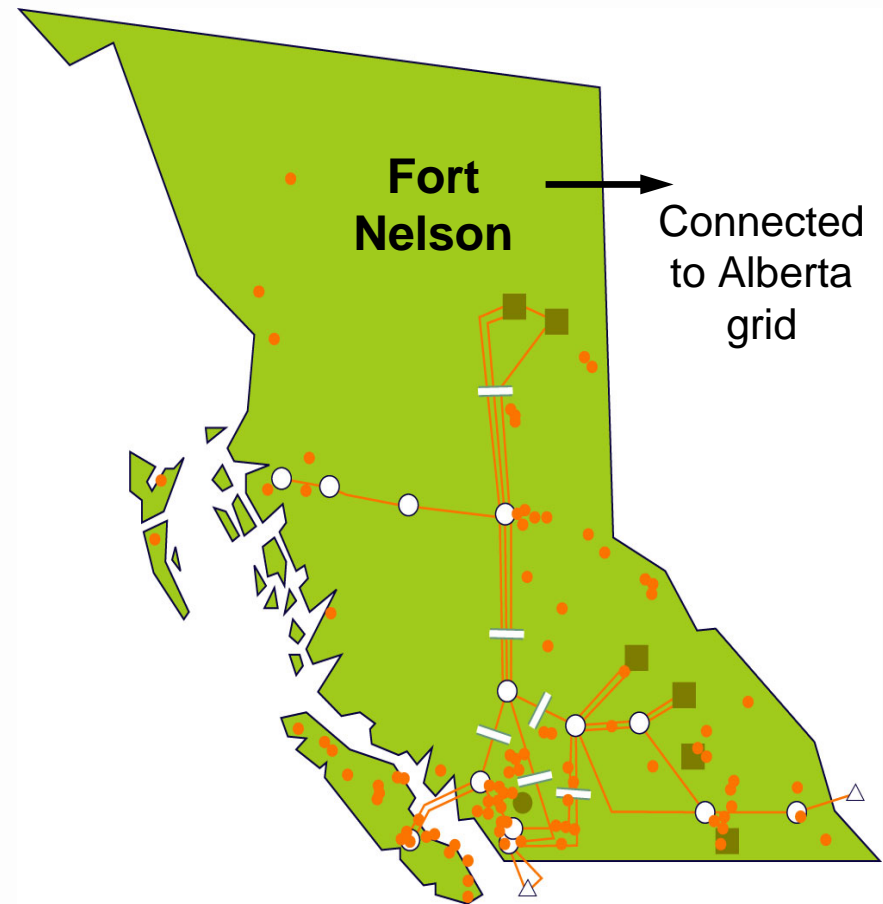
 Existing and Committed Supply

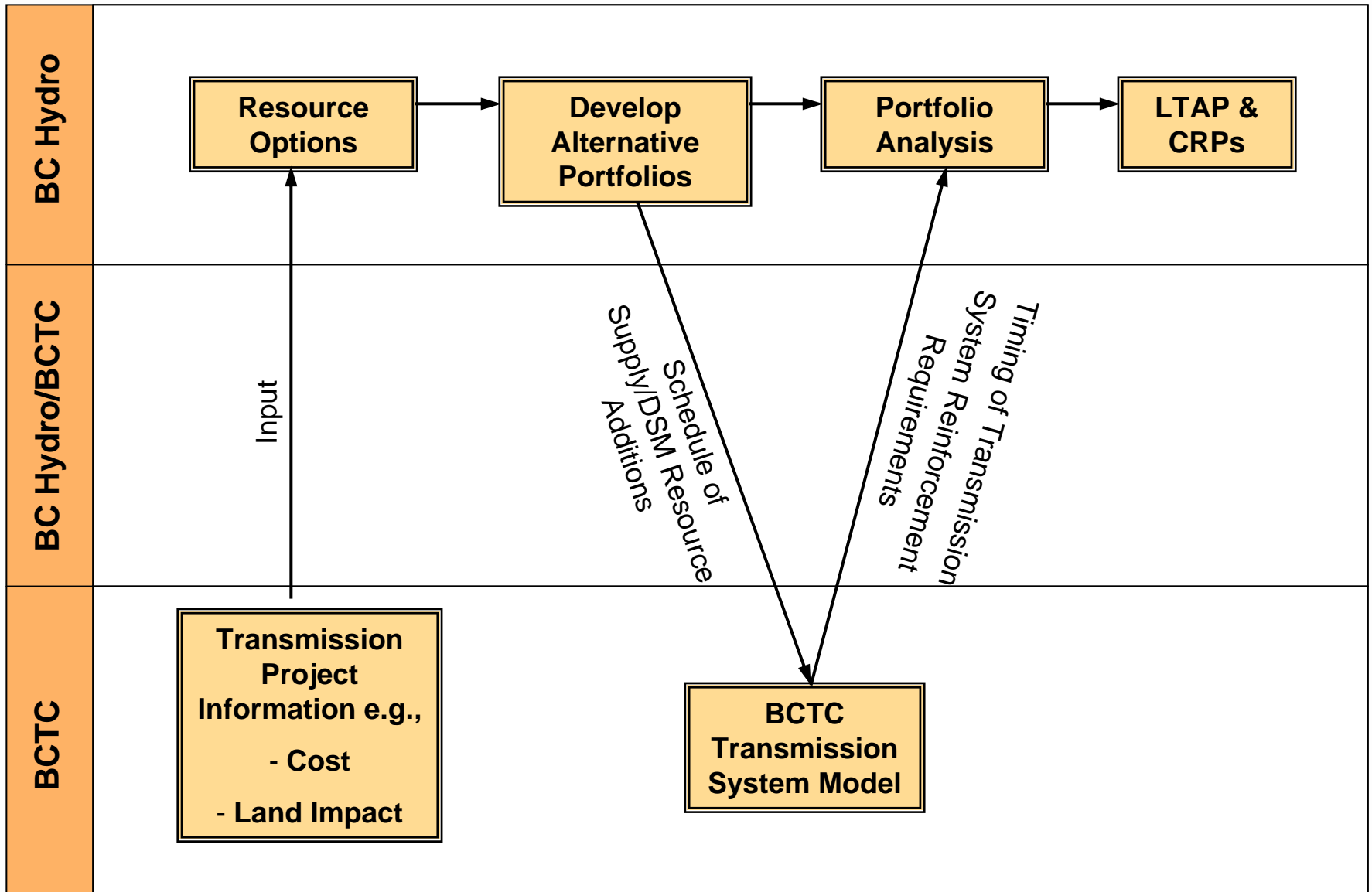
 Planned IPP Purchases

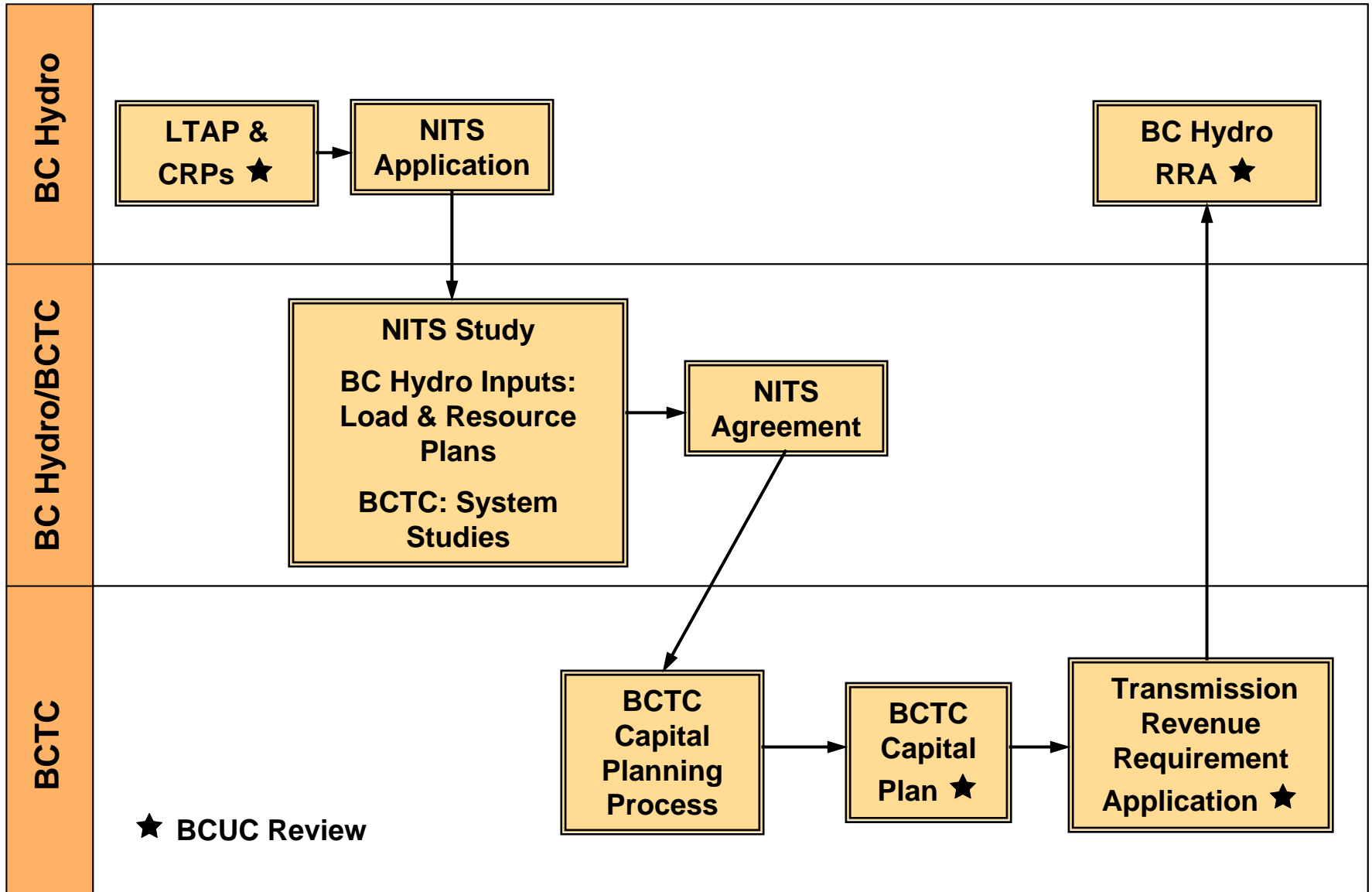
 2008 Mid Load Forecast after DSM

Risk	Capacity Reduction for CRP Purposes (MW)	
	F2017	F2028
Load Forecast Uncertainty	530	930
DSM Deliverability Risk	270	450
Burrard Unit Catastrophic Failure	150	150
Calls Capacity Reduction	50	n/a
Total Reduction:	1,000	1,530

- BC Hydro supplies Ft. Nelson customers with Ft. Nelson Generating Station (FNG) and AESO
- BC Hydro is working with project proponents to assess and update the regional load forecast
- 2008 LTAP requests BCUC approval of expenditures to implement upgrades to the FNG
- Because of the possibility of additional load growth, BC Hydro is advancing investigation of additional supply







- 2008 LTAP submitted to BCUC on June 12, 2008
- Evidentiary Update with revised load, DSM and call attrition information submitted December 22, 2008
- Oral hearing phases completed March 2009
- BC Hydro Written Argument submitted April 9, 2009
- Decision expected summer 2009

	2008 LTAP	Transmission Inquiry
Load Forecast	<ul style="list-style-type: none"> •Domestic need •20 years •High, Mid, Low forecasts 	<ul style="list-style-type: none"> •Provincial focus •30 years •Scenarios
Load-Resource Balance	<ul style="list-style-type: none"> •20 years 	<ul style="list-style-type: none"> •30 years
Electricity Resource Potential	<ul style="list-style-type: none"> •Update of 2006 IEP/LTAP •Resource blocks ranked on unit energy cost (UEC) 	<ul style="list-style-type: none"> •Grouped by geographic location •Cost-effective and probable sequence of development
Market Assessment	<ul style="list-style-type: none"> •Self-sufficiency •Renewable Energy Credits (RECs) 	<ul style="list-style-type: none"> •Access to market