

Hydro Québec Distribution Generation Cost Allocation

R-3579-2005

Direct Evidence of:

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Conseil de l'industrie forestières du Québec (CIFQ)

December 2005

Régie de l'énergie
DOSSIER: R-3579-2005
PIÈCE NO: C-3.24
Date: 13 décembre 2005

Overview

- Allocation of Post-Patrimonial Generation Costs
 - Load Allocation
 - Cost Allocation
- Cross-Subsidization Target Ratios
 - “Rolling” or “Fixed”
 - Rate L Customer Transfer

Post-Patrimonial Cost Allocation: The Constraints

- Patrimonial “load duration curve” is defined in Decree 1277-2001, but not for each specific hour of the year.
- Allocation of patrimonial *load* between rate classes for 2006 is specified in Decree 759-2005.
 - “Rolled-in” or “proportional” methodology
 - Implicitly allocates overall post-patrimonial load by rate class, but not by time of use.
- Allocation methodology for patrimonial *costs* is based on HQD “Load Factor” method:
 - Loi sur la Régie de l'énergie
 - R-3477-2001 proceedings
 - Decree 759-2005

Post-Patrimonial Cost Allocation: Load and Cost Allocation Options Studied

		<i>Post-Patrimonial Cost Allocation</i>	
		<i>HQD LF Method</i>	<i>New Methods</i>
<i>Load Allocation</i>	<i>Rolled-In</i>	Global	2006 Alternative A 2014 Technical Committee Alternative C
	<i>Incremental</i>	2014 Technical Committee Alternative B	2014 Technical Committee Alternatives A, D

Post-Patrimonial Load Allocation: Rolled-In versus Incremental Load

- Rolled-in method more consistent with cost causation and standard regulatory practice
 - All loads contribute to need for post-heritage costs
 - Equals treated equally; no discrimination against new customers
 - Simpler and more stable
 - Canadian regulatory precedent
- Broad agreement among parties for rolled-in method
 - HQD
 - OC -- Harper
 - AQCIE/CIFQ -- Knecht
 - Decree 759-2005

Post-Patrimonial Cost Allocation: Standards for Comparing Methods

- Underlying Cost Causation
- Consistency with Market Prices
- Legal Constraints
- Simplicity and Stability

Post-Patrimonial Cost Allocation: Generation Cost Causation

- No generally accepted method.
- Simplest approach is “fixed-variable;” in which fixed capital costs are deemed to be demand-related, variable costs are energy-related.
- “Capital for fuel” and “fuel for capital” tradeoffs suggest need for more sophisticated allocation methods.
- Subjective demand-energy classification methods
- Peaker/MC Approach
 - Set demand costs based on cost of “peaker” unit.
 - Allocate all other costs based on marginal system running cost.
 - More consistent with market prices in competitive markets.

Post-Patrimonial Cost Allocation: HQD Load Factor Method

- Advantages
 - Recognizes both demand and energy costs in causation framework.
 - Consistent with traditional practices in some jurisdictions.
 - Consistent with legislation.
 - Simple and relatively stable.
- Disadvantages
 - Fails to recognize time-of-use variation in generation costs
 - Defines peak period too broadly (300 hours)
 - Likely over-allocates costs to high load factor classes relative to cost-causation methods

Post-Patrimonial Cost Allocation: Alternative A

- Advantages
 - None
- Disadvantages
 - Reliance on confidential data
 - Reliance on contract specifications; not underlying cost information
 - Complex and unstable: reliance on illogical post-patrimonial load shapes (total and by class) in 2006
 - Inconsistent with method for patrimonial cost allocation, failing to recognize HQD ability to shift timing of patrimonial purchases
 - No recognition of peak demand impact on causation
 - Insufficient recognition of time-of-use variations in *marginal* cost
 - Over-allocates costs to high load factor classes, by more than HQD load factor method

Post-Patrimonial Cost Allocation: Recommendations

- For 2006, use “Global” method
 - Rolled-in load allocation
 - HQD “load factor” cost allocation methodology
- For the future (if continued research is deemed necessary):
 - Wait until post-patrimonial load shape is large enough to be a reasonable basis for cost allocation.
 - Evaluate methods that reflect peaking demand costs, marginal energy costs and market prices.
 - Evaluate long-term “interactive” effects with cross-subsidization policies.

Cross-Subsidization Target Ratios

- Process
 - Set “base year” cost allocation methodology and targets.
 - Set base year for target revenue-cost ratios.
 - Apply base methodology to test year cost/load parameters.
 - Evaluate resulting revenue-cost ratios relative to targets.
- Issue: Use “fixed” base year or “rolling” base year?
- Both methods split changes in cost allocation studies into “methodological changes” and “price/cost/volume” changes.

Cross-Subsidization Target Ratios: Fixed versus Rolling

- Rolling Method:
 - Base is prior year methodology and R/C targets
 - Key advantage is simplicity
 - Assumes impact of method change all occurs in one year
 - Reasonably accurate for *stable* cost items; not accurate where costs shift significantly
- Fixed Method:
 - Base is 2002 for methodology and R/C targets
 - Reflects multi-year impact of methodology changes
 - Only accurate method for major changes in large cost items that shift (generation, transmission) over time
- Recommendation: Use Fixed Method, at least for generation and transmission costs

Cross-Subsidization Target Ratios: Customer Transfer

- Impact of transfer
 - Rate L revenue/cost ratios rise
 - Implies these customers were below average cross-subsidizers for Rate L
- Methodological change or price/cost/volume change?
 - Impact on cross-subsidization ratios same as customer shutdown.
 - Precipitated by government decree.
 - Reasonable goal of HQD is to hold customers harmless.
- Other Rate L changes are also in “gray area.”
 - If an above-average subsidizer shuts down, will other Rate L customers be required to pick up the slack?
 - Treat all major shifts for Rate L as special cases: retain “hold harmless” goal for all customers.