



**Addressing ramp rate limitations:
the basic business case for 3X**

Presentation to IESO Stakeholder Advisory Committee
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Legislative framework

- Adequacy, safety, sustainability and reliability of electricity supply
- Efficient use of electricity
- Protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service
- Promote economic efficiency and sustainability in the generation, transmission, distribution and sale of electricity
- Facilitate the maintenance of a financially viable electricity industry

Problem definition

- Consumer interests
 - Excessively high and volatile peak prices
 - Affordability and competitiveness
- Generator concerns
 - Excessive, frequent and variable dispatch instructions
 - Higher maintenance costs are inadequately compensated
 - The value of ramping (the ability of some generators to ramp more rapidly and across a broader range of their production capacity) is not recognized in the current pricing regime

Factors to consider

- Efficiency
 - Efficient use and efficiency in generation of electricity
 - Incentives
 - Higher prices \neq greater efficiency
- Consumer interests
 - Benefits
 - Higher productivity, capacity utilization
 - Reduced O&M costs
 - Reduced congestion
 - Adequacy, reliability and quality of electricity service
 - Costs
 - Electricity prices and/or uplifts = total cost of power
 - Affordability and competitiveness
- Financial viability
 - Cost recovery and return to capital

A basic 'business case'

- That evidence which presented to a reasonable person would allow him or her to justly conclude that a proposal will:
 - Achieve the desired objectives
 - Achieve desired objectives at the lowest possible cost
 - Produce benefits in excess of costs
- Benefits and costs should be quantified as far as possible
 - Non-tangible benefits/costs should be qualified and ranked
 - Best estimates should be presented with discussion of uncertainties
 - Distributional consequences should be identified
- Transparency is necessary if benefit-cost analysis is to inform decision-making and be supported by stakeholders
 - Analysis should be defensible and replicable
 - Core assumptions should be clearly identified

Costs and benefits of 3X

	\$ millions	\$/MWh	%
Electricity costs	225	1.50	2.7%
Potential benefits			
CMSC decrease	12	0.08	0.1%
IOG decrease	4	0.03	0.0%
Net cost increase	209	1.39	2.5%
Reduced net exports	14	0.09	0.2%
Net increase incl. net exports	195	1.30	2.3%

Financial impacts of 3X

	\$ millions	\$/MWh	%
3X impact on electricity price		1.50	
3X impact on costs per year	225		
OPG gross revenue	162.2	1.08	2.0%
OPG net revenue	9.6	0.06	0.1%
OPG rebate	152.5	1.02	1.8%
Non-OPG generator revenue	62.9	0.42	0.8%
Impact net of global adjustment	72.5	0.48	0.9%

Generator viability

	OPG net income	Bruce Power earnings before taxes	Brookfield operating cash flow	Total
	\$ millions			
2005 Q3	181	307	20	508
2005 Q4	160	85	13	258
2006 Q1	199	140	41	380
2006 Q2	143	118	31	292
Total	683	650	105	1,438



Generator compensation from 3X

	OPG	Bruce Power	Brookfield	Total
	\$ millions			
2005 Q3	2.4	9.4	.4	12.3
2005 Q4	2.5	12.5	.7	15.6
2006 Q1	2.5	13.8	1.1	17.4
2006 Q2	2.2	13.1	1	16.3
Total	9.6	48.8	3.1	61.6



Summary

- Legislative framework
- Benefits and costs
- Financial impacts
- Process
- Next steps