

REFERENCE:

PUB/MH I-131c; Coalition/MH I-132i

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the updated Generation and combined marginal values when they have been updated. Please identify which Energy Price Forecast underpins the updated marginal values and whether the changes to the export revenue forecast (elimination of the value of surplus uncontracted firm capacity and dependable energy premium) have been included.

RATIONALE FOR QUESTION:

RESPONSE:

The updated marginal values using the 2017 Resource Planning assumptions are provided in the table below. The calculations are based on the 2017 Load Forecast and the 2017 Energy Price Forecast for the marginal value of energy on the export market. Surplus energy is valued as an opportunity product with no premium.

The 2017 update includes a change in the methodology for the valuation of the generation capacity marginal value. Due to the uncertainty in the value of generation capacity in the export market, Manitoba Hydro has concluded that it is more appropriate at this time to base the value of generation capacity on the deferral of a new generation resource in Manitoba. The generation capacity marginal value is based on deferral of a peaking type natural gas combustion turbine built in 2030/31. Manitoba Hydro's current base development sequence includes significant projected DSM savings and indicates a need date for new resources in the 2039/40 timeframe. The 2030/31 timeframe corresponds with a need date for new resources in Manitoba when projected savings from new DSM beyond 2017 are removed from the base planning sequence.

30 Year Levelized Marginal Values
 [cents/kWh]

Components	Used in 2016 DSM Plan		2017/18 Marginal Value in 2017 \$	Change From 2015/16 to 2017/18
	2015/16 Marginal Value in 2016 \$	2015/16 Marginal Value in 2017 \$		
Generation	6.34	6.34	4.39	- 32%
Transmission	0.56	0.57	0.57	0.0%
Distribution	0.87	0.89	0.78	-12%
Total	7.77	7.94	5.75	-28%

The 2017/18 levelized Marginal Value is approximately 28% lower than the 2015/16 Marginal Value. The majority of the decline in marginal value of the generation component is a result of approximately 30% lower energy value in 2017 price forecast, with a change in methodology contributing to the remainder.

Basic Marginal Costs Applicable to Distribution Level Programs
Marginal Costs Given at Distribution
(Constant Year 2017 Canadian Dollars)

Notes: Marginal costs based on a uniform supply with a 100% capacity factor
Marginal costs referred to distribution level (loss factor of 14% to translate back to generation)
US/Cdn Exchange Rates and Escalation Factors (P911 June 20, 2017)
Updated transmission (2015) & distribution (2016) marginal costs

Fiscal Year	SUMMER		WINTER					TOTAL		
	Generation Energy	Generation Capacity	Generation Energy	Generation Capacity	Transmission Capacity	Distribution Capacity	Total Capacity	SUMMER	WINTER	ANNUAL
	\$/MWh	\$/kW.Yr	\$/MWh	\$/kW.Yr	\$/kW.Yr	\$/kW.Yr	\$/kW.Yr	\$/MWh	\$/MWh	\$/MWh
2018/19					50.01	68.66				
2019/20					50.01	68.66				
2020/21					50.01	68.66				
2021/22					50.01	68.66				
2022/23					50.01	68.66				
2023/24					50.01	68.66				
2024/25					50.01	68.66				
2025/26					50.01	68.66				
2026/27					50.01	68.66				
2027/28					50.01	68.66				
2028/29					50.01	68.66				
2029/30					50.01	68.66				
2030/31					50.01	68.66				
2031/32					50.01	68.66				
2032/33					50.01	68.66				
2033/34					50.01	68.66				
2034/35					50.01	68.66				
2035/36					50.01	68.66				
2036/37					50.01	68.66				
2037/38					50.01	68.66				
2038/39					50.01	68.66				
2039/40					50.01	68.66				
2040/41					50.01	68.66				
2041/42					50.01	68.66				
2042/43					50.01	68.66				
2043/44					50.01	68.66				
2044/45					50.01	68.66				
2045/46					50.01	68.66				
2046/47					50.01	68.66				
2047/48					50.01	68.66				
Levelized Cost at 4.15% Discount Rate					50.01	68.66				57.49
30-year levelized value (cents/kWh)										5.7

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