

MANITOBA HYDRO
2023/24 & 2024/25 GENERAL RATE APPLICATION
DAYMARK EVIDENCE INFORMATION REQUEST

MH/Daymark I-1

REFERENCE:

Daymark Report

PREAMBLE:

Daymark Report p. 9

4. MH is projecting lower export volumes due to higher domestic demand, and lower export energy prices due in part to increase renewable development in the MISO market. In addition, the possible transition of MISO to a winter-peaking system lowers potential seasonal diversity exchanges. In combination, these suggest that maximizing net extraprovincial revenue may be more challenging than in the past.

*5. Despite those challenges, there is significant change occurring in MISO and significant need for clean firm energy **(for capacity and for balancing) projected over time, potentially driving an increase in the market value of MH's products.** This suggests that MH should remain active with MISO and other US stakeholders to seek opportunities and to help shape future market changes to allow MH to maximize the value of its hydro energy.*

Daymark Report p. 35.

*The **MH forecast for export sales is limited to sales of non-firm energy, firm energy, and capacity.** In other words, the estimates are limited to Manitoba Hydro's ability to continue providing MISO participants with these same products.*

Daymark Report p. 38.

*Outside of MISO, other regions have made market changes in recent years to improve the integration of additional renewable resources, **including the addition of flexible ramping products and other ancillary services to manage volatility in load and output from solar or wind resources.** The challenge facing existing and new market participants is to develop the capability to provide products that respond to the new market rules profitably.*

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MIPUG/MH I-16 CONFIDENTIAL. p.6

In MISO’s Real Time market Manitoba Hydro utilizes an External Asynchronous Resource (EAR) to provide the MISO Market with energy and ancillary services. (Background: External Asynchronous Resources (EARs) represent an asynchronous DC tie between the synchronous Eastern Interconnection grid and an asynchronous grid that is represented within the MISO Region through a Fixed Dynamic Interchange Schedule. EARs are located where the asynchronous tie terminates in the synchronous Eastern Interconnection grid. Qualified EARs are eligible to provide Regulating Reserve, Spinning Reserve, Supplemental Reserve, and Short-Term Reserve in addition to Energy. EAR parameters are described in MISO Energy and Operating Reserve Markets Business Practices Manual BPM-002-r23, Section 4.2.5 External Asynchronous Resources (“EAR”) Offer Requirements; <https://www.misoenergy.org/legal/business-practice-manuals/>)

COALITION/MH I-21a.

Manitoba Hydro includes ancillary service and energy attribute revenue (also called Renewables Energy Certificates or RECs) revenue in MFR 42 (Amended) as Other Non-Energy Related Revenues.

PUB/MH I-46d

*Manitoba Hydro has in fact assigned value to, and accounts for, other attributes, although these items are not a significant source of revenue. **Manitoba Hydro continues to include an estimate for unbundled environmental attributes and ancillary services revenue in its financial projections as Other Non-Energy Related Revenues.** For more information on revenue from the sale of environmental attributes, please see Manitoba Hydro’s response to PUB/MH I-47 a) and b). Ancillary services revenue is not a major source of revenue for Manitoba Hydro.*

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Figure 6 Extraprovincial Revenue Breakdown Appendix 3.3 (Amended):

Figure 6 Extraprovincial Revenue Breakdown

MANITOBA HYDRO
 EXTRAPROVINCIAL REVENUE
 (000's)

	2017/18 Actual	2018/19 Actual	2019/20 Actual	2020/21 Actual	2021/22 Actual	2022/23 Forecast	2023/24 Preliminary Budget	2024/25 Preliminary Budget
US sales	\$387 359	\$370 944	\$425 874	\$515 095	\$468 299	\$1 112 269	\$969 132	\$770 407
Other sales	4 011	3 903	2 522	2 527	5 760	4 666	3 817	3 870
Transmission credits	3 203	4 107	4 146	3 915	5 084	4 410	4 583	4 643
Renewable energy certificates	1 082	1 696	1 053	1 723	6 120	5 644	1 897	2 052
US	395 655	380 650	433 595	523 260	485 263	1 126 989	979 429	780 971
Canadian sales	38 204	46 790	31 904	83 668	89 433	156 423	173 795	182 833
Other sales	-	-	-	-	-	(1 000)	(1 000)	(1 000)
Renewable energy certificates	532	485	291	575	494	600	700	800
Canadian	38 736	47 275	32 195	84 243	89 927	156 023	173 495	182 633
Arbitrage opportunities (IESO & MISO)*	2 494	2 289	2 483	3 437	9 566	-	-	-
Total extraprovincial revenue	\$436 885	\$430 214	\$468 273	\$610 940	\$584 756	\$1 283 012	\$1 152 925	\$963 605
Year over year \$ change		(\$6 671)	\$38 059	\$142 667	(\$26 184)	\$698 256	(\$130 087)	(\$189 320)
Year over year % change		-1.5%	8.8%	30.5%	-4.3%	119.4%	-10.1%	-16.4%

* IESO = Independent Electricity Systems Operator and MISO = Midcontinent Independent System Operator

Other sales include miscellaneous revenues derived from market activities such as the sale of ancillary services into the MISO market.

QUESTION:

- a) Is it DEA's understanding that Manitoba Hydro has included other export revenue beyond capacity and energy revenue in its forecasts, including ancillary services revenue and renewable energy credits ("RECs")? Are Other Sales and RECs revenues that are projected to exceed \$5 million in each of 2023/24 and 2024/25, as shown in Figure 6 Extraprovincial Revenue Breakdown Appendix 3.3 examples of other export revenue?
- b) Given the explanation and background in the preamble that Manitoba Hydro participates in the MISO market through offering its flexible bi-directional External Asynchronous Resource capable of dynamically responding to changing supply and demand conditions in MISO and can assist in managing volatility in load and output from solar or wind

resources in that market, would DEA agree that MH is already taking steps to maximize the value of the flexibility its system can provide to the MISO market?

- c) Please reconcile the understandings in a) and b) with DEA's statement, "***MH forecast for export sales is limited to sales of non-firm energy, firm energy, and capacity.***"

RESPONSE:

- a) Confirmed. It is Daymark's understanding that MH's revenue forecast includes some revenue from sales of ancillary services and RECs.
- b) Daymark agrees that MH is currently participating in the MISO market as an External Asynchronous Resource, which allows it to provide ancillary services enabled by the flexibility of MH's system.
- c) As discussed in parts a) and b), Daymark acknowledges that MH is currently providing ancillary services in the MISO market and that a very small portion of MH's export revenue forecast is made up of ancillary services and RECs. Daymark's statement referenced in this question was not intended to exclude RECs and existing ancillary service products. Rather, we were trying to draw a contrast between the products that Manitoba Hydro is currently selling into the MISO market with potential future products that may have significant incremental value.

As the MISO market continues to evolve to accommodate increased renewable penetrations, we believe it is likely that new market products could be developed to help ensure a reliable grid with more variable energy resources.

While MH's participation in the MISO allows it to optimize export revenues under current market rules, remaining active in MISO stakeholder processes to influence future product development will allow MH to ensure that it can continue to maximize the value of its resources as the system needs change and market rules develop.