

1 **REFERENCE: Appendix 9.2 Description of SPLASH Model; Section: Description of**
2 **SPLASH Model; Page No.: 1-6**

3
4 **QUESTION:**

5 Please provide a copy of the SPLASH user manual.

6
7 **RESPONSE:**

8 Please see the attached internal working copy of the *SPLASH Users Manual* which is used as a
9 general reference for the SPLASH model.

REFERENCE: Executive Summary; Section: Economic Uncertainty Analysis, Probabilistic Analysis and Sensitivities; 2013 Update to Forecasts and DSM Sensitivities; Page No.: 20; 31-33

PREAMBLE: Refer to the NFAT Executive Summary, page 20 of 42 at 8 -15, in which Manitoba Hydro states that its uncertainty analysis involving the testing of multiple variables demonstrated that one of the three variables that had the most significant impact on the economic evaluation of alternative development plans was natural gas price. Subsequently on page 31-33, Manitoba Hydro describes the “2013 Update to Forecasts and DSM Sensitivities”:

QUESTION:

Please identify the source for the natural gas price forecast used for the economic evaluation of alternative development plans, including reference, high and low price forecasts and any other price forecasts used by Manitoba Hydro but not included in the NFAT.

RESPONSE:

As described in section 1.5.2 of Appendix 9.3, Manitoba Hydro uses a consensus based approach for natural gas price forecasting in order to provide an independent perspective on future natural gas prices. Please see the response to LCA/MH I-158 for a description of how the low and high forecasts were derived. The individual natural gas price forecasts are provided below.

2013 Natural Gas - Henry Hub

* Global Redesign Scenario

Reference Case

	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD
					Brattle		NYMEX	Forecast-Henry Hub
2013/14					\$3.79		\$3.95	
2014/15					\$4.21		\$4.24	
2015/16					\$4.36		\$4.32	
2016/17					\$4.46		\$4.42	
2017/18					\$4.57		\$4.56	
2018/19					\$4.71			
2019/20					\$4.90			
2020/21					\$5.09			
2021/22					\$5.27			
2022/23					\$5.44			
2023/24					\$5.60			
2024/25					\$5.75			
2025/26					\$5.88			
2026/27					\$5.99			
2027/28					\$6.11			
2028/29					\$6.22			
2029/30					\$6.34			
2030/31					\$6.46			
2031/32					\$6.59			
2032/33					\$6.72			
2033/34					\$6.85			
2034/35					\$6.98			

Low Case

	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD
					Brattle		NYMEX	Forecast-Henry Hub
2013/14					\$2.74		\$3.95	
2014/15					\$2.93		\$4.24	
2015/16					\$2.94		\$4.32	
2016/17					\$2.94		\$4.42	
2017/18					\$2.95		\$4.56	
2018/19					\$3.00			
2019/20					\$3.07			
2020/21					\$3.16			
2021/22					\$3.24			
2022/23					\$3.33			
2023/24					\$3.41			
2024/25					\$3.50			
2025/26					\$3.57			
2026/27					\$3.64			
2027/28					\$3.71			
2028/29					\$3.78			
2029/30					\$3.85			
2030/31					\$3.92			
2031/32					\$4.00			
2032/33					\$4.07			
2033/34					\$4.15			
2034/35					\$4.23			

High Case

	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD	2013USD
					Brattle		NYMEX	Forecast-Henry Hub
2013/14					\$4.97		\$3.95	
2014/15					\$5.67		\$4.24	
2015/16					\$5.99		\$4.32	
2016/17					\$6.23		\$4.42	
2017/18					\$6.46		\$4.56	
2018/19					\$6.73			
2019/20					\$7.04			
2020/21					\$7.37			
2021/22					\$7.67			
2022/23					\$7.96			
2023/24					\$8.20			
2024/25					\$8.42			
2025/26					\$8.61			
2026/27					\$8.78			
2027/28					\$8.95			
2028/29					\$9.13			
2029/30					\$9.30			
2030/31					\$9.49			
2031/32					\$9.67			
2032/33					\$9.86			
2033/34					\$10.05			
2034/35					\$10.25			

2

2012 Natural Gas - Henry Hub

Reference Case								Medium-Low Case	Low Case	Medium-High Case	High Case
	2011USD	2011USD	2011USD	2011USD	2011USD	2011USD	2011USD	2011USD	2011USD	2011USD	2011USD
				EIA		NYMEX	Forecast-Henry Hub	Forecast-Henry Hub	Forecast-Henry Hub	Forecast-Henry Hub	Forecast-Henry Hub
2012/13				\$3.67		\$2.65					
2013/14				\$4.20		\$3.53					
2014/15				\$4.25		\$3.96					
2015/16				\$4.36		\$4.24					
2016/17				\$4.39		\$4.49					
2017/18				\$4.51							
2018/19				\$4.68							
2019/20				\$4.82							
2020/21				\$4.90							
2021/22				\$5.11							
2022/23				\$5.40							
2023/24				\$5.60							
2024/25				\$5.76							
2025/26				\$5.87							
2026/27				\$6.11							
2027/28				\$6.30							
2028/29				\$6.31							
2029/30				\$6.25							
2030/31				\$6.32							
2031/32				\$6.55							
2032/33				\$6.81							
2033/34				\$6.97							

3

REFERENCE: Business Case; Section: Power Resource Plan; Page No.: Commercially Sensitive Information: 2012/13 Power Resource Plan, Section 3.1, pp. 13-14

PREAMBLE: Regarding Manitoba Hydro's 2012/13 Power Resource Plan:

QUESTION:

Provide a table summarizing the pricing terms of each of the Firm Import Contracts listed in Table 3 including cost of energy and capacity by year by contract

RESPONSE:

The following table summarizes the pricing terms for each of the Firm Import Contracts listed in Table 3:

<u>Contract</u>	<u>Energy Price</u>	<u>Capacity Price</u>
NSP 150 SD	[REDACTED]	[REDACTED]
NSP 200 SD	[REDACTED]	[REDACTED]
NSP 500 ESA	[REDACTED]	N/A – contract does not include any capacity.

	<div></div> <div></div> <div></div>	
MP Energy Exchange	<div></div> <div></div>	N/A – contract does not include any capacity.
WPS	Not available as contract details are presently under negotiation by the Parties	

1

REFERENCE: Business Case; Section: Power Resource Plan; Commercially Sensitive Information: 2012/13 Power Resource Plan, Section 3.1, page. 13-14

PREAMBLE: Regarding Manitoba Hydro's 2012/13 Power Resource Plan:

QUESTION:

Has Manitoba Hydro engaged in any negotiations to extend the firm import contracts listed in Table 3? If so, please provide a summary of the status of those negotiations. If not, why not?

RESPONSE:

Manitoba Hydro is not presently engaged in any negotiations with NSP with respect to extending the 350MW seasonal diversity agreement or the 500MW Energy Services Agreement as these contracts were negotiated/executed in the last few years and they do not mature until April 2025.

Manitoba Hydro has executed with GRE a 200MW seasonal diversity agreement that commences November 1, 2014 and continues to April 30, 2030. This agreement required an amendment to the maturity date of the existing GRE 150 seasonal diversity agreement from April 30, 2015 to October 31, 2014. A copy of the contract has been filed by Manitoba Hydro.

Manitoba Hydro is not presently engaged in any negotiations with MP with respect to extending the Energy Exchange Agreement as the contract was negotiated/executed in the last few years and does not mature until May 2035.

Manitoba Hydro continues to negotiate an energy purchase agreement with WPS as part of products being pursued with respect to the Term Sheet.

1 **REFERENCE: Business Case; Section: Power Resource Plan; Page No.: Commercially**
2 **Sensitive Information: 2012/13 Power Resource Plan, Section 3.1, pp. 13-14**

3
4 **PREAMBLE:** Regarding Manitoba Hydro's 2012/13 Power Resource Plan:
5

6 **QUESTION:**

7 Provide any evidence indicating that Manitoba Hydro would not be able to extend the firm
8 import contracts listed in Table 3 upon expiration.
9

10 **RESPONSE:**

11 Manitoba Hydro has not received any indication that the firm import contracts listed in Table 3
12 will not be able to be renewed upon expiration.

REFERENCE: Volume: Business Case; Section: export contract; Page No.: Commercially Sensitive Information: Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2

PREAMBLE: Please refer to the Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2 Trade Secret & Confidential

QUESTION:

For each power contract, please indicate whether the agreements are final.

RESPONSE:

The contracts listed in Manitoba Hydro Export Contracts and Term Sheets Volumes 1 & 2 have been executed by Manitoba Hydro and the counterparty. Contracts are final. Term sheets are still subject to negotiation and so the terms contained therein are not final.

REFERENCE: Business Case; Section: export contract; Page No.: Commercially Sensitive Information: Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2

PREAMBLE: Please refer to the Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2 Trade Secret & Confidential

QUESTION:

For each final power contract, please indicate whether there could be any amendments or side-deals associated with these agreement, and if so, provide a copy of any such document.

RESPONSE:

Manitoba Hydro has not entered any amendments with respect to the contracts listed in Manitoba Hydro Export Contracts and Term Sheets Volumes 1 & 2 with the exception of the NSP 500MW Energy Services Agreement for which all amendments have been filed with the contract by Manitoba Hydro.

REFERENCE: Business Case; Section: export contract; Page No.: Commercially Sensitive Information: Manitoba Hydro Export Contracts and Term Sheets Volumes 1 & 2

PREAMBLE: Please refer to the Manitoba Hydro Export Contracts and Term Sheets Volumes 1 & 2 Trade Secret & Confidential

QUESTION:

For each term sheet, please discuss whether these agreements are considered final or whether negotiations are ongoing, and if so, what terms are still subject to negotiations associated with these agreement, and if so, provide a copy of any such document.

RESPONSE:

Manitoba Hydro continues to negotiate the terms for a definitive agreement with respect to all of the Term Sheets listed in Manitoba Hydro Export Contracts and Terms Sheets Volumes 1 & 2 except for the Term Sheet between Manitoba Hydro and Great River Energy dated December 19, 2012. For this Term Sheet, Manitoba Hydro and Great River Energy executed a 200MW Diversity Exchange Agreement and a copy of this agreement has been filed by Manitoba Hydro.

Manitoba Hydro is unable to disclose the terms that are still subject to negotiations between the parties since these discussions are ongoing, confidential and subject to non-disclosure agreements.

REFERENCE: Business Case; Section: export contract; Page No.: Commercially Sensitive Information: Manitoba Hydro Export Contracts and Term Sheets Volumes 1 & 2

PREAMBLE: Please refer to the Manitoba Hydro Export Contracts and Term Sheets Volumes 1 & 2 Trade Secret & Confidential

QUESTION:

If the Company has prepared any synopsis or outline of the contracts or terms sheets, please provide copies.

RESPONSE:

Please refer to the following synopsis of the contracts and terms sheets.

NORTHERN STATES POWER (NSP) 150 MW DIVERSITY EXCHANGE AGREEMENT

A 150 MW diversity exchange arrangement with NSP was signed on March 5, 1991. The commitment is for a twenty-year period beginning May 1, 1995 and ending April 30, 2015. The obligation involves Manitoba Hydro making available 150 MW of capacity to NSP during the summer months (May through to October) in return for NSP making available 150 MW of capacity to Manitoba Hydro during the winter months (November through to April).

[REDACTED]

[REDACTED]

On May 27, 2010, a Termination Agreement was signed by both parties to terminate the 150 MW Diversity Exchange Agreement effective April 30, 2015. The early termination date was required to accommodate the new 350 MW Seasonal Diversity Agreement with NSP.

[REDACTED]

NORTHERN STATES POWER (NSP) 200 MW DIVERSITY EXCHANGE AGREEMENT

A 200 MW diversity exchange arrangement with NSP was signed on November 16, 1987. The sale commitment is for twenty years starting November 1, 1996 and ending October 31, 2016. The obligation involves Manitoba Hydro making available 200 MW of capacity to NSP during the summer months (May through October) in return for NSP making available 200 MW of capacity to Manitoba Hydro during the winter months (November through April). [REDACTED]

[REDACTED]

[REDACTED]

On May 27, 2010, a Termination Agreement was signed by both parties to terminate the 200 MW Diversity Exchange Agreement effective April 30, 2015. The early termination date was required to accommodate the new 350 MW Seasonal Diversity Agreement with NSP.

[REDACTED]

MANITOBA-ONTARIO ROOT RIVER DIVERSION (LAKE ST. JOSEPH) AGREEMENT

This agreement was signed on September 24, 1958 with Ontario Power Generation Inc. ("OPG") but can be terminated by either party with four years notice. Manitoba Hydro returns to OPG one-half of all incremental energy generated in the Province of Manitoba on the Winnipeg River due to the diversion of Lake St. Joseph water. OPG pays to Manitoba Hydro \$1.40/MWh for the associated energy.

NORTHERN STATES POWER (NSP) 375/325 MW SYSTEM POWER SALE

A 375/325 MW System Power Sale was signed with NSP on May 27, 2010. The contract is for a ten year term starting May 1, 2015 continuing through April 30, 2025. Manitoba Hydro's capacity obligation is to provide 375 MW during the summer season (May to October) and 325 MW during the winter season (November to April) of each contract year. Manitoba Hydro's

energy obligation is to provide 375 MWh's per hour of 5x16 energy (hour ending 7:00 through hour ending 22:00) during each weekday in the summer season and 325 MWh's per hour of 5x12 energy (hour ending 9:00 through hour ending 20:00) during each weekday in the winter season. In addition, Manitoba Hydro must offer energy during the four hour expected peak load in MISO on all non-weekdays. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] In addition to fixed priced energy, Manitoba Hydro has the right to offer additional energy on a day-ahead basis. NSP must pay for any additional energy that is accepted by MISO into the day-ahead market.

Manitoba Hydro has the right, under adverse water conditions, to reduce the financial obligation during the winter season in increments of 50 MW's by paying NSP the positive difference (if any) between the contract price and the result of multiplying a [REDACTED] heat rate by the forward price of natural gas.

Manitoba Hydro is to transfer the environmental attributes for supplied energy (all energy that was supplied and sold by Manitoba Hydro, excludes energy that was supplied from the market or was curtailed) to NSP based on a pro-rata allocation from [REDACTED]

[REDACTED]

NORTHERN STATES POWER (NSP) 125 MW SYSTEM POWER SALE

A 125 MW System Power Sale was signed with NSP on May 27, 2010. The contract is for a four year term starting May 1, 2021 continuing through April 30, 2025. Manitoba Hydro has a condition precedent based on the in-service date of Conawapa. Manitoba Hydro's capacity obligation is to provide 125 MW for each contract year. Manitoba Hydro's energy obligation is

1 to provide 125 MW per hour of 5x16 energy (hour ending 7:00 through hour ending 22:00)
2 during each weekday in the summer season and 125 MWh's per hour of 5x12 energy (hour
3 ending 9:00 through hour ending 20:00) during each weekday in the winter season. In addition,
4 Manitoba Hydro must offer energy during the four hour expected peak load in MISO on all non-
5 weekdays. [REDACTED]

6 [REDACTED]
7 [REDACTED] In
8 addition to fixed priced energy, Manitoba Hydro has the right to offer additional energy on a
9 day-ahead basis at a price as determined by Manitoba Hydro. NSP must pay for any additional
10 energy that is accepted by MISO into the day-ahead market.

11
12 Manitoba Hydro has the right, under adverse water conditions, to reduce the financial
13 obligation during the winter season in increments of 50 MW's by paying NSP the positive
14 difference (if any) between the contract price and the result of multiplying a [REDACTED] heat rate by
15 the forward price of natural gas.

16
17 Manitoba Hydro is to transfer the environmental attributes for supplied energy (all energy that
18 was supplied and sold by Manitoba Hydro, excludes energy that was supplied from the market
19 or was curtailed) to NSP based on a pro-rata allocation from [REDACTED]

20 [REDACTED]
21
22 NORTHERN STATES POWER (NSP) 350 MW SEASONAL DIVERSITY EXCHANGE

23 A 350 MW Seasonal Diversity Exchange Sale was signed with NSP on May 27, 2010. The
24 contract is for a ten year term starting May 1, 2015 continuing through April 30, 2025.
25 Manitoba Hydro's capacity obligation is to provide 350 MW for each summer season (May
26 through October) during the contract term. NSP's capacity obligation is to provide 350 MW for
27 each winter season (November through April) during the contract term. Manitoba Hydro's

energy obligation is to offer 350 MWh of energy on a day-ahead basis during the four hour expected peak load in MISO at a price as determined by Manitoba Hydro. In addition, Manitoba Hydro has the right to offer additional energy on a day-ahead basis. NSP must pay for any additional energy that is accepted by MISO into the day-ahead energy market. The price at which energy is offered is at the sole discretion of Manitoba Hydro. NSP's energy obligation is to supply Manitoba Hydro with energy during all hours in which Manitoba Hydro's bid clears the day-ahead market. The price at which Manitoba Hydro bids for energy in the day-ahead market is at the sole discretion of Manitoba Hydro.

Manitoba Hydro has the right, under adverse water conditions, to fix the price of on-peak energy during the winter season in increments of 50 MW's during adverse water conditions. The price of this energy is based on [REDACTED] heat rate multiplied by the forward price of natural gas.

Manitoba Hydro is to transfer the environmental attributes for supplied energy (all energy that was supplied and sold by Manitoba Hydro, excludes energy that was supplied from the market or was curtailed) to NSP based on a pro-rata allocation from [REDACTED]

MINNESOTA POWER (MP) 250 MW SYSTEM PARTICIPATION POWER SALE

A 250 MW System Power Sale was signed with MP on May 19, 2011. The contract is for a fifteen year term starting June 1, 2020 continuing through to May 31, 2035. The sale can be deferred by Manitoba Hydro for up to two years due to delays in the commencement of construction of the Keeyask Generating Station or associated transmission facilities. Manitoba Hydro's capacity obligation is to provide 250 MW throughout each contract year. Manitoba Hydro's energy obligation is to provide 250 MWh for sixteen continuous hours of each weekday (Weekday Energy) and 250 MWh for sixteen continuous hours of each weekend day (Weekend

Energy) subject to Manitoba Hydro having the right to eliminate the Weekend Energy obligation during adverse water conditions. However, Manitoba Hydro must continue to offer energy during the four hour expected peak load in MISO on all weekend days during adverse water conditions.

[REDACTED]

[REDACTED] In addition to Weekday and Weekend Energy, Manitoba Hydro has the right to offer additional energy on a day-ahead basis. Additional energy that clears the day-ahead market must be paid for by MP [REDACTED]

[REDACTED]

Manitoba Hydro is to transfer the environmental attributes [REDACTED] [REDACTED] for supplied energy (all energy that was supplied and sold by Manitoba Hydro, excludes energy that was supplied from the market or was curtailed) determined by Manitoba Hydro to be [REDACTED]

[REDACTED]

The MP 250 MW System Power Sale is conditional upon the construction of the Keeyask Generating Station and new transmission facilities in Manitoba and the US.

WISCONSIN PUBLIC SERVICE CORPORATION (WPS) 100 MW SYSTEM PARTICIPATION POWER SALE

A 100 MW System Power Sale was signed with WPS on May 19, 2011. The contract covers the period June 1, 2021 to May 31, 2029. [REDACTED]

Manitoba Hydro's capacity and energy sale obligations under the contract are separated into Product A and Product B. Product A covers sales during the time period from June 1, 2021 to May 31, 2025 with Manitoba Hydro having the right to extend the Product A time period to May 31, 2027. During the Product A time period, Manitoba Hydro's obligations are to (i) provide 100 MW of capacity, (ii) 100 MWh of Weekday Energy for hour ending 7:00 to hour ending 22:00 of each weekday and 100 MWh of Weekend Energy for hour ending 7:00 to hour ending 22:00 of each weekend day [REDACTED]

Product B covers sales during the time period from the end of Product A time period to May 31, 2029. Manitoba Hydro has no capacity obligation during this period but is obligated to offer [REDACTED] of energy on an annual basis through the MISO day-ahead market process.

Capacity and energy prices during the Product A time period are [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]

8
9 The price of energy during the Product B time period is [REDACTED]
10 [REDACTED]

11
12 In addition to Weekday and Weekend Energy, Manitoba Hydro has the right to offer additional
13 energy on a day-ahead basis. Additional energy that clears the day-ahead market must be paid
14 for by WPS [REDACTED]

15
16 Manitoba Hydro is to transfer the environmental attributes [REDACTED]
17 [REDACTED] for supplied energy (all energy that was supplied and sold by Manitoba Hydro, excludes
18 energy that was supplied from the market or was curtailed) determined by Manitoba Hydro to
19 be [REDACTED]
20 [REDACTED]

21
22 The WPS 100 MW System Power Sale is conditional upon [REDACTED]
23 [REDACTED]

GREAT RIVER ENERGY (GRE) 200 MW DIVERSITY EXCHANGE AGREEMENT

A 200 MW Diversity Exchange Agreement was signed with Great River Energy on July 26, 2013 to commence November 1, 2014 and continue until April 30, 2030.

Manitoba Hydro's capacity obligation is to provide 200 MW of Use Limited Capacity for each summer season (May through October) during the contract term. GRE's capacity obligation is to provide 200 MW of capacity for each winter season (November through April) during the contract term. [REDACTED]

Manitoba Hydro's energy obligation is to offer 200 MWh of energy on a day-ahead basis during the four hour expected peak load in MISO ("Must Offer Energy"). In addition, Manitoba Hydro has the right to offer additional energy on a day-ahead or real-time basis. GRE's energy obligation is to offer energy associated with the capacity of a day-ahead basis; however Manitoba Hydro is only obligated to purchase energy whenever Manitoba Hydro's bid clears the day-ahead market. The price at which Manitoba Hydro offers and bids for energy in the day-ahead market is at the sole discretion of Manitoba Hydro. The price for energy sold and purchased by Manitoba Hydro is [REDACTED]

The agreement includes the sale of environmental attributes [REDACTED] [REDACTED] Manitoba Hydro is required to transfer [REDACTED] environmental attributes for supplied energy (all energy that was supplied and sold by Manitoba Hydro, excludes energy that was supplied from the market or was curtailed) to GRE [REDACTED]

MINNESOTA POWER (MP) ENERGY EXCHANGE AGREEMENT

In conjunction with the MP 250 MW System Power Sale, an Energy Exchange Agreement was signed with MP on May 19, 2011. The Energy Exchange Agreement is structured to commence and be in effect for the same time period as the MP 250 MW System Power Sale Agreement and provide Manitoba Hydro with firm transmission service to import up to 250 MW's in any given hour throughout the contract term.

Manitoba Hydro is obligated under the Agreement to request a minimum of 3,750,000 MWh's during the contract term (MP's Energy) through day-ahead energy bids in the MISO day-ahead market. However, the actual quantity of MP's Energy purchased and paid for by Manitoba Hydro will be determined based on Manitoba Hydro's energy bids that clear the MISO day-ahead market. Manitoba Hydro has the sole discretion to set the bid price for MP's Energy and the settlement price will be [REDACTED]

The Energy Exchange Agreement contains a "wind storage" feature whereby MP can elect to financially store 250,000 MWh of wind energy in Manitoba each contract year. The wind storage results in a [REDACTED]

TERM SHEET COMMITMENTS

Manitoba Hydro has signed term sheets with Wisconsin Public Service Corporation and Minnesota Power to negotiate definitive power sale agreements. A description of the details contained in the term sheets is provided below.

1 WISCONSIN PUBLIC SERVICE CORPORATION (WPS)

2 A term sheet was signed with Wisconsin Public Service Corporation on March 31, 2008 for a
3 long-term sale of up to 500 MW of system power to coincide with the construction of the
4 Keeyask and Conawapa Generating Stations and the construction of new transmission and
5 interconnection facilities. Based on the current resource plan and discussions, the following
6 sales are anticipated by Manitoba Hydro:

7
8 A. WPS 200/300 MW SYSTEM POWER SALE

9 A System Power Sale for a ten year period (June 1, 2026 to May 31, 2036) to coincide with the
10 construction of the Conawapa Generating Station and will require Manitoba Hydro to provide
11 WPS with the following capacity quantities:

12 200 MW June 1, 2026 to May 31, 2027

13 300 MW June 1, 2027 to May 31, 2036

14 Manitoba Hydro's energy obligation during the June 1, 2026 to May 31, 2036 period is equal to
15 the applicable capacity quantity multiplied by 16 hours scheduled equally over 16 consecutive
16 hours from HE 7:00 to HE 22:00 CPT for each day Monday to Sunday. Manitoba Hydro has the
17 right to curtail delivery of weekend energy (Saturday, Sunday and NERC holidays) during
18 periods of adverse water conditions.

19
20 In addition to Weekday and Weekend Energy, Manitoba Hydro has the right to offer additional
21 energy on a day-ahead basis.

22
23 The 200/300 MW System Power Sale is contingent upon construction of the Conawapa
24 Generating Station and a new transmission interconnection with additional transfer capability
25 of 650 MW south and 750 MW north.

1 B. WPS 108 MW SYSTEM POWER SALE

2 Manitoba Hydro and Wisconsin Public Services Corporation are negotiating a long-term sale for
3 108 MW of system power. The sale will be for approximately 7 years commencing June 1, 2014
4 to May 31, 2021. The sale will require the current WPS 108 MW Energy Sale Agreement to be
5 terminated on the date that this sale commences.

6
7 Manitoba Hydro's capacity obligation is to provide 108 MW of Use Limited Capacity that
8 requires Manitoba Hydro to offer 108 MW of energy during the four hour expected peak load in
9 MISO on all days during the contract term ("Must Offer Energy"). Manitoba Hydro's energy
10 obligation is to provide 108 MW of 5x16 energy and Must Offer Energy on the weekend days.
11 In addition to the 5x16 energy and Must Offer Energy, Manitoba Hydro has the right to offer
12 additional energy on a day-ahead or real-time basis.

13
14 MINNESOTA POWER (MP) 50 MW SYSTEM POWER SALE AGREEMENT

15 A term sheet was signed with Minnesota Power on May 29, 2013 for a long-term 50 MW
16 system power sale. The sale will be for approximately 5-years commencing May 1, 2015 to May
17 31, 2020.

18
19 Manitoba Hydro's capacity obligation is to provide 50 MW of Use Limited Capacity that requires
20 Manitoba Hydro to offer 50 MW of energy during the four hour expected peak load in MISO on
21 all days during the contract term ("Must Offer Energy"). Manitoba Hydro's energy obligation is
22 to provide 50 MW of 7x16 energy with the ability to reduce the energy obligation during
23 adverse water conditions. However Manitoba Hydro would continue to be obligated to offer
24 50 MW of Must Offer Energy during the weekend days to support the Use Limited Capacity. In
25 addition to the 7x16 energy, Manitoba Hydro has the right to offer additional energy on a day-
26 ahead or real-time basis.

1 [REDACTED]
2 [REDACTED]
3 [REDACTED] The price
4 for Additional Energy is [REDACTED]
5 [REDACTED]
6
7 Manitoba Hydro is required to transfer the environmental attributes [REDACTED]
8 [REDACTED] for supplied energy (all energy that was supplied and sold by
9 Manitoba Hydro, excludes energy that was supplied from the market or was curtailed) as
10 determined by Manitoba Hydro to be from [REDACTED]
11 [REDACTED]
12 [REDACTED]

REFERENCE: Business Case; Section: export contract; Page No.: Commercially Sensitive Information: Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2

PREAMBLE: NOTE QUESTION REFERS TO CONFIDENTIAL LANGUAGE - Please refer to the Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2 Trade Secret & Confidential

QUESTION:

For each contract and term sheet, please discuss the Company's pricing strategy for firm power and provide any analysis that supports the selection of this strategy.

RESPONSE:

Manitoba Hydro's pricing strategy for the contracts specified in Manitoba Hydro Export Contracts and Term Sheets Volumes 1 & 2 varies depending on the nature of the transaction that is contemplated by the parties.

Firm Power Sales

Manitoba Hydro's firm power sales (dependable energy and capacity) can typically be characterized as involving the sale of a specified volume of energy (i.e. on-peak energy (5x16)) and capacity for a term that is typically 10 years or longer and are frequently negotiated and executed years in advance of the start of the contract. This product is viewed by the customer as one of its alternatives in their resource planning process. The NSP 375/325MW System Power Sale, NSP 125MW System Power Sale, WPS 100MW System Power Sale, MP 250MW System Power Sale, and the MP 50MW System Power Sale Term Sheet listed in Volumes 1 & 2 are examples of these firm power sales.

The pricing strategy that Manitoba Hydro utilizes for firm power sales is to specify a fixed energy and capacity price that considers [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED] The energy and capacity
4 prices along with a number of other product terms and conditions are then negotiated by the
5 parties in order to reach a definitive agreement that is acceptable to each of the parties.
6

7 Diversity Sale Agreements

8 Manitoba Hydro's pricing strategy for diversity sale agreements (NSP 350 SD, GRE 200 SD) is [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]

17 Surplus Energy Sales

18 Manitoba Hydro's pricing strategy for surplus energy sale agreements [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]

REFERENCE: Business Case; Section: export contract; Page No.: Commercially Sensitive Information: Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2

PREAMBLE: NOTE QUESTION REFERS TO CONFIDENTIAL LANGUAGE - Please refer to the Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2 Trade Secret & Confidential

QUESTION:

For each contract and term sheet, please discuss the Company's rationale for pricing environmental attributes, and provide any analysis that supports the selection of this strategy.

RESPONSE:

[Redacted response text]

**REFERENCE: Business Case; Export Contract; Commercially Sensitive Information:
Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2**

PREAMBLE: NOTE QUESTION REFERS TO CONFIDENTIAL LANGUAGE - Please refer to
the Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2 Trade Secret &
Confidential

QUESTION:

With respect to Performance Assurance provisions, has the Company performed any analysis of
the risks it faces with leaving the "Second Party" with the option of deciding which form of
assurance it will provide the "Requesting Party?"

RESPONSE:

Manitoba Hydro considers the risks inherent with Performance Assurance during the
negotiation of the provisions and assesses the form of assurance based on internal and external
requirements. To effectively reduce risks, the forms of Performance Assurance acceptable to
both parties are specified in the contract. To address possible future risks, the provisions state
that the Requesting Party can refuse one of the acceptable forms listed in the contract if, at the
time of the request, circumstances have made that form unsuitable.

**REFERENCE: Business Case; Export Contract; Commercially Sensitive Information:
Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2**

**PREAMBLE: NOTE QUESTION REFERS TO CONFIDENTIAL LANGUAGE - Please refer to
the Manitoba Hydro Export Contracts and Term Sheets Volumes 1 &2 Trade Secret &
Confidential**

QUESTION:

With respect to Performance Assurance provisions, if the pricing under the export contracts gets substantially out of market relative to other power supply options available in the wholesale markets, that is the contract price is substantially "above market" or "below market" (howsoever measured), does that condition alone allow the exposed party to request Performance Assurance of the Second Party? If not, what is the Company's rationale for excluding such exposures from the Performance Assurance provisions?

RESPONSE:

Performance Assurance in the form of acceptable collateral or security can be requested under contract provisions if the Second Party's creditworthiness, financial strength or performance viability becomes unsatisfactory to the Requesting Party or if net exposure exceeds a negotiated Threshold or Exposure amount. If the contract price differs substantially from the market price for an extended period of time, the exposure may trigger a request for acceptable collateral or security under the provisions.