

# Revenue Requirement Panel Presentation Summary

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- II. Economic Outlook (L. Carriere)
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- X. Summary (L. Carriere)

1 Since MH15, the Canadian dollar has weakened  
2 considerably from around a dollar ten Canadian dollar  
3 to US dollar to about a dollar twenty-seven on average  
4 in the first seven (7) years.

5 While a weaker Canadian dollar is  
6 beneficial to revenue, it also has the inverse affect  
7 on our US dollar denominated costs.

8 On slide 9, this is taken from the  
9 table in PUB-MH-1-45 and it shows the sensitivity of  
10 the Man -- MH16 Update with interim to changes in  
11 forecast use -- US exchange rates, or changes to  
12 interest rates. It demonstrates that a \$0.10  
13 weakening or strengthening of the Canadian dollar has  
14 a relatively immaterial impact to the -- to the  
15 forecast at about \$200 million either up or down over  
16 the eight (8) year period to 2026/'27.

17 Manitoba Hydro's net income is  
18 relatively unaffected by changes in interest rates.  
19 And this is because the offset of Manitoba Hydro's US  
20 denominated revenues by US denominated interest  
21 payments and costs, so, they roughly balance each  
22 other out. The sensitivity to a 1 percent interest  
23 rate change, however, is the significant -- has -- has  
24 a significant result of about of 750 million impact on  
25 retained earnings on -- on the downside, and a 690

1 million on the upside.

2                   Ms. Stephen is going to discuss  
3 interest rate risk further with you later in this  
4 presentation.

5                   At this point, I'll turn the  
6 presentation over to Ms. Morrison to cover the load  
7 forecast and DSM plan with the panel. Thank you.

8                   MS. LOIS MORRISON: All right, Good  
9 morning, Mr. Chairman and members of the Board,  
10 Intervenors, and others present. My name is Lois  
11 Morrison and I hold the position of Director of  
12 Marketing and Sales in the marketing and customer  
13 service operating group.

14                   I'm a graduate of the University of  
15 Manitoba Faculty of Commerce. I have been with  
16 Manitoba Hydro for twenty-eight (28) years working in  
17 various customer service and marketing areas, with the  
18 majority of that time supporting our smart  
19 initiatives.

20                   I have been involved in several  
21 proceedings related to Manitoba Hydro and Centra Gas  
22 applications before this Board. As part of the  
23 revenue requirement panel, as Ms. Carriere mentioned,  
24 I will be speaking to Manitoba Hydro's electric load  
25 forecast and demand-side management impact.

1                   Turning to slide 11. Manitoba Hydro's  
2 forecast is prepared by sector with three (3) primary  
3 sectors being residential, basic general service mass-  
4 market and general service top consumers. The  
5 residential basic represents the majority of our  
6 residential customers, which include single detached  
7 multi-attached dwellings and individually metered  
8 apartment blocks -- sorry, individually metered  
9 apartment suites.

10                   General service mass-market represents  
11 all customer and industrial customers, excluding our  
12 top consumers. The top consumers are ten (10)  
13 companies or 20 -- representing twenty-six (26)  
14 accounts representing Manitoba Hydro's largest  
15 customers. These sectors represent the majority of  
16 Manitoba Hydro's system load and their forecast  
17 methodologies and inputs differ by sector.

18                   Slide 12. Our sector forecasts are  
19 informed largely by economic projections incorporated  
20 through econometric forecasts. Our forecasts are  
21 updated annually to reflect the most current available  
22 market data. The forecast models and methods continue  
23 to be adjusted whenever appropriate to make  
24 improvements

25                   THE CHAIRPERSON:     Sorry, Ms. Morrison,

1 Assembly of Manitoba Chiefs intends to propose a  
2 reduced rate for First Nation ratepayers.

3 We also heard today that the Boston  
4 Consulting Group report recommended differentiated  
5 rates as one (1) option for dealing with the different  
6 impacts which rate increases would have on different  
7 groups.

8 Do you recall both of those things?

9 MR. KELVIN SHEPHERD: Yes.

10 MR. COREY SHEFMAN: Put aside for a  
11 moment, if you will, whether you view such a pro -- a  
12 proposal as the most efficient way of proceeding or  
13 even whether it's technically possible, we'll address  
14 that later on.

15 Do you agree that such a proposal would  
16 be one (1) effective way of compensating First Nations  
17 for the impacts of Hydro's infrastructure on their  
18 territory and their ability to exercise their treaty  
19 rights?

20 MR. KELVIN SHEPHERD: I'm not sure it  
21 would be an effective way. I understand -- and -- and  
22 the reason I say that, and let me expand a little bit.  
23 In -- in many cases, some but not all, of electricity  
24 costs and First Nations are compensated for through  
25 agreements with the federal government.

1                   And so in some cases, and I think we  
2 heard maybe an example yesterday, a lower rate is not  
3 necessarily going to improve the benefit of the  
4 community directly. It may simply lower the  
5 obligation of the federal government to pay for -- for  
6 costs.

7                   However, I would -- I recognize there's  
8 a particular burden on First Nations because in many  
9 communities, I won't say all, but I would say the  
10 majority of First Nations communities I've got -- been  
11 on, the infrastructure is abysmal. People are living  
12 in overcrowded homes, inadequate homes, heating of  
13 electricity costs maybe -- and probably are higher  
14 than normal because of that.

15                   So I recognize that as a serious  
16 concern. I hear it in the community meetings. I've  
17 heard the request for, you know, free hydro or reduced  
18 Hydro rates from community members and Elders. So I'm  
19 not -- I empathize with that. I just am not sure  
20 exactly when you look at the complexity of the  
21 situation, what the best solution to solve the problem  
22 is.

23                   I have seen situations where, you know,  
24 the lower the bill it still does not actually help the  
25 person being affected because of -- of these other

1 structural issues and the way things work. So I'm not  
2 adverse to the idea of exploring those -- those  
3 options. I just would caution you that it may not,  
4 you know, be a silver bullet or address all of these  
5 issues.

6 I think there's a bigger complex issue  
7 at play and I hear -- I hear the concern. I -- I feel  
8 the concern. I -- I -- but I don't know if that's the  
9 total solution; maybe it's part of a solution.

10 MR. COREY SHEFMAN: I appreciate your  
11 candour. We spoke a moment ago about how Hydro -- how  
12 Manitoba Hydro addresses impacts of its project on  
13 First Nations through accommodation -- accommodation  
14 agreements. In other provinces these sorts of  
15 agreements are often referred to as Impact Benefit  
16 Agreements.

17 Are you familiar with that term?

18 MR. KELVIN SHEPHERD: I am.

19 MR. COREY SHEFMAN: When it's  
20 impossible to mitigate all of the impact of a project  
21 directly, Impact Benefit Agreements will often address  
22 those unaccommodated impacts by providing compensation  
23 directly to the impacted First Nation.

24 Would you agree with me on the broad  
25 strokes of that definition?

1 was to restrict participation or target more precisely, a different measure could be  
2 adopted.

3  
4 In terms of discussing the rate increases and the impact on consumers, Dr. Simpson  
5 calculates Manitoba Hydro's revised forecast for required rate increases at page 2 of his  
6 Evidence as follows, "*Under the new proposal, rates would increase by 6% through 2023-*  
7 *24 followed by an increase of 4.54% in 2024-25, a 48.3% increase over the seven year*  
8 *period.*" It appears as though Dr. Simpson has mixed nominal and real increases in this  
9 statement. If the intent is to present the increases in real terms under the new indicative  
10 rate increases, Manitoba Hydro notes that rates would increase by 6% through 2023-24  
11 followed by an increase of 2.64% in 2024-25, a 45.6% compound increase over the seven  
12 year period.

### 13 14 **7.1.2. DSM and Bill Affordability programs currently offered by Manitoba Hydro**

#### 15 16 **Indigenous Power Smart**

17 While Mr. Raphals commends the effort of Manitoba Hydro regarding the participation in  
18 the Indigenous Power Smart Program, on page 27 of his evidence he indicates that  
19 "*...these results testify to a serious effort on the part of Manitoba Hydro to reach First*  
20 *Nations communities*", he goes on to state "*...there is clearly a long way to go...*". Mr.  
21 Raphals statement appears to be based on limited knowledge of the Indigenous Power  
22 Smart Program and the achievements to date.

23  
24 Through the Indigenous Power Smart Program, Manitoba Hydro works with each  
25 community to assess the energy efficiency of the housing in that community and to offer  
26 free basic energy saving items and free insulation upgrades, with funding provided for  
27 local labour to install all upgrades. The number of estimated on-reserve homes which  
28 qualify for insulation upgrades is approximately 3,900 as not all 16,344 on-reserve homes  
29 meet the qualifying insulation values (Manitoba Hydro has provided the qualifying  
30 insulation values in response to PUB/MH I-126). As of June 30, 2017, 3,051 of those 3,900  
31 homes have received insulation upgrades representing 78% of the available market and  
32 not 18.7% as Mr. Raphals indicates on page 27 of his evidence. Manitoba Hydro's serious  
33 effort continues to reach on-reserve homes with 3,254 homes having received insulation  
34 as of October 31, 2017, thus achieving 83% of the qualifying market.

35  
36 Launched in December 2014, Manitoba Hydro began the Direct Install of basic energy  
37 efficiency measures for on-reserve homes and as of June 30, 2017, 3,298 homes have  
38 received upgrades representing 20% market penetration in less than 3 years.



1  
2 On page 27 of Mr. Raphals' Evidence, he notes his surprise that Manitoba Hydro has one  
3 dedicated Indigenous Energy Advisor, however the serious effort he notes on the part of  
4 Manitoba Hydro is the result of having only one Indigenous Energy Advisor who is  
5 completely dedicated and focused on solely administering the Program to First Nations.  
6 The Indigenous Energy Advisor has successfully worked with all 63 First Nations  
7 Communities since program launch in the summer of 2008.  
8

9 In section 4.3 of his Evidence, Mr. Raphals asserts that there is some confusion about  
10 programs offered in First Nations Communities. Mr. Raphals correctly notes the  
11 Indigenous Power Smart Program is separate from and superior to the Home Insulation  
12 Program, however he incorrectly states on page 27 that the Home Insulation Program is  
13 part of the Affordable Energy Program. The Home Insulation Program is in fact separate  
14 from the Affordable Energy Program and Indigenous Power Smart Program. The Home  
15 Insulation Program is a mass market program where a rebate is provided once insulation  
16 work is complete and generally the rebate covers the cost of insulation material, not  
17 labour. While Mr. Raphals further notes on page 28 of his evidence that under the Home  
18 Insulation Program, 49 on-reserve homes have been retrofitted with insulation, he fails to  
19 recognize the majority, 38 homes to be exact, were completed prior to the launch of the  
20 Indigenous Power Smart Program. Mr. Raphals is also unclear as to how many geothermal  
21 systems have been installed in Indigenous communities; however, Manitoba Hydro,  
22 working with Aki Energy and the local Indigenous community, has installed geothermal  
23 systems in 322 community homes under the Community Geothermal program as of June  
24 30, 2017.  
25

26 Mr. Raphals states on page 34 of his evidence, *"...Manitoba Hydro has made a real effort*  
27 *to promote energy efficiency in First Nations communities..."* however he alleges that only  
28 a small minority of households have benefitted. As of October 31, 2017, Manitoba Hydro  
29 has achieved over 30% market participation. With insulation upgrades alone the  
30 participation is 83%. Since its inception, the Indigenous Power Smart Program has  
31 achieved 1% to 16% participation annually. In its review of the Affordable Energy  
32 Program, Dunsy Energy Consulting considers the best in class programs to be those who  
33 achieve participation rates of 1% to 4% annually (AMC/MH I-37).  
34

### 35 **Neighbours Helping Neighbours**

36 Dr. Simpson states on page 8 of his evidence that although Manitoba Hydro provides  
37 programs that assist households in budgeting, these are not directed at those who are the

1 energy poor. Dr. Simpson goes on to comment that *“The Neighbours Helping Neighbours*  
2 *program... does provide emergency rate relief through community agencies and private*  
3 *donations...”* Manitoba Hydro is in fact involved in the Neighbours Helping Neighbours  
4 program which provides assistance to the energy poor. Through the Neighbours Helping  
5 Neighbours program, Manitoba Hydro matches all donations, provides funding for the  
6 administration of the program and covers the difference required to meet needs of the  
7 program (this was discussed at the 2015/16 & 2016/17 General Rate Application, see  
8 GAC/MH I-34f) . As private donations typically average \$35,000, Manitoba Hydro is  
9 funding the majority of the Neighbours Helping Neighbours (NHN) program.

### 10 **Affordable Energy Program**

11 Dr. Simpson’s comments on page 11 of his evidence, *“Manitoba Hydro’s Affordable*  
12 *Energy Program (AEP) seems to be a modest starting point...”* understates the  
13 achievements of the program to date and the continued efforts on the part of Manitoba  
14 Hydro. In addition, Dr. Simpson mischaracterizes the Report when he states that *“... the*  
15 *Report identifies concerns that program uptake remains modest and that significant*  
16 *barriers to participation may exist...”*. While the report states that a variety of factors may  
17 be limiting uptake, (such as awareness could be improved, customers not perceiving an  
18 immediate need or believing they are eligible or that the benefits are as advertised),  
19 Manitoba Hydro aggressively markets its Affordable Energy Program to educate  
20 customers on the benefits of the program with mass media efforts as noted further  
21 below. Manitoba Hydro’s continued efforts have attributed to the success of providing  
22 over 20 000 lower income customers with energy efficiency upgrades as of June 30, 2017.  
23 Manitoba Hydro is also currently in the midst of creating a video which includes several  
24 segments that will provide customers a better visual explanation to minimize language  
25 barriers of the benefits and process for a potential or participating Affordable Energy  
26 Program customer. This video is expected to be available to customers in early December  
27 2017.  
28

29  
30 Dr. Simpson has also failed to recognize that the Working Group identified key strengths  
31 of the Affordable Energy Program including, participation and savings, accessibility,  
32 eligibility, savings and outreach which can be found on page 23 of the Bill Affordability  
33 Working Report. Dr. Simpson also appears to ignore the conclusions of the Bill  
34 Affordability Working Group Report, at page 24, *“Recent evaluations and studies*  
35 *conducted by other researchers generally reflect positively on the design of the AEP and*  
36 *the results it has achieved to date.”*

37

**REFERENCE:**

Tab 10 Page 7 of 18; Appendix 10.8

**PREAMBLE TO IR (IF ANY):****QUESTION:**

- b) Please identify the characteristics that qualify (or disqualify) a home for participation in i) the overall AEP and ii) the Indigenous Power Smart Program.
- c) Please tabulate participation in the AEP over the past five years according to urban all-electric, rural all-electric, indigenous, and non-electric heat customers. Please also tabulate participation in the insulation program for these customer groups.
- d) For each First Nation community, please tabulate the number of homes, the number of homes that have participated in DSM measures, and the number of homes that have had insulation upgrades.
- e) Please identify the challenges with increasing participation in Power Smart Programs for the customer groups identified in (c).

**RATIONALE FOR QUESTION:**

To supplement Appendix 10.8 with the latest Manitoba Hydro AEP Annual Report and to provide additional information on the customer groups that the Board, in its NFAT report, recommended be the target of additional DSM measures.

**RESPONSE:**

- b) The AEP is designed to assist lower income homeowners and renters across the Province in implementing energy efficiency upgrades. The program offers a free in-home review during which basic energy efficiency measures (e.g. LED light bulbs, low-flow showerheads, faucet aerators, pipe wrap insulation, window weatherization kits, draft stoppers, safety caps and fridge/freezer thermometers) are installed and the home's insulation levels and heating system are assessed. Based on the results of the review, free insulation upgrades (both material and installation costs are covered), and the

installation of a high efficiency natural gas furnace at a cost of \$9.50/month over 5 years or a rebate of \$3,000 for the installation of a high efficiency natural gas boiler are available for qualifying upgrades. These upgrades can provide significant energy savings and decrease the customer's monthly energy bills while increasing the comfort of their home.

- i) The criteria for determining program eligibility are 125% of the Low Income Cut-Off (LICO) thresholds for Winnipeg (e.g. city with a population of 500,000 or greater) set by Statistics Canada, referred to as LICO 125. Customers are asked to provide copies of their Income Tax Return and Notice of Assessment as proof of income. If they are unable to provide tax documentation there are other forms of documents accepted to verify their eligibility. This includes proof of participation in programs such as Manitoba Employment and Income Assistance, Homeowner Renovation Assistance Program, Manitoba Emergency Repair Program, Legal Aid, and other programs that have similar income qualifying thresholds to the AEP.

Homeowners and renters who qualify based on income must also live in single detached homes or semi-detached homes (includes houses, townhouses, row houses, multiple houses), or mobile homes on permanent foundations on a year round basis. Apartment style building suites are eligible to receive the basic energy efficiency measures through the multi-unit residential building stream of the program.

To qualify for insulation upgrades the home must have the following starting R-values:

- Basement wall/crawlspace wall/dugout basement – R-0 (un-insulated)
- Attic –R-30 or less
- Kneewalls – R-8 or less
- Cathedrals/Flat/Sloped roof – R-0 (un-insulated)
- Wall cavity (above grade) – R-0 (un-insulated)

To qualify for the high efficiency natural gas furnace or boiler upgrade the dwelling must have an existing standard efficient natural gas furnace or boiler. Customers who heat with alternative fuel sources (propane/fuel oil/coal) are eligible to convert

to a high-efficient natural gas furnace (or electric furnace if located outside of a gas service area).

- ii) All homes located on First Nation reserves are eligible to participate in the Indigenous Power Smart Program regardless of income level. A dedicated Indigenous Energy Advisor works with each Indigenous community's Band Housing Manager to identify qualifying homes and recommends energy efficient measures. Through the insulation channel, dwellings can receive basement, wall, and attic insulation upgrades if they meet the same starting R-value criteria listed above. The direct install channel, launched in December 1, 2014, provides the basic energy efficiency measures to all homes in the community to increase energy efficiency and save water. The Indigenous Power Smart Program also provides the funding for the labour to complete the installations of both the insulation and basic measures which creates employment for members of the community. With over 5,000 homes having received retrofits through the program, the equivalent of 22 full time jobs of Indigenous employment has been generated.

Energy saving seminars are also available to provide community members with information and tips on what they can do to make their communities more energy efficient. In addition, a customized Heat Recovery Ventilation (HRV) video explaining how to operate and maintain the unit was created to assist the Band Housing Managers. The video is currently available in three languages: English, Ojibway and Cree, and is currently being translated to Dene. It was distributed to all applicable First Nation Band Housing Managers and is also posted on the Manitoba Hydro's website. A customized Indigenous Energy Savings Tips publication was also created for use at events and it is distributed to each home as they participate through the direct install channel.

- c) The charts below tabulate participation in the AEP over the past five years with the following category definitions:
- Urban = Winnipeg only, all other towns considered rural.
  - All-Electric = homes with both electric fuel heat and electric hot water systems.

AEP Completed Homes	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18 – to June 30
Urban All-Electric	36	100	111	33	77	154
Rural All-Electric	74	112	185	156	172	86
Indigenous	314	373	467	1517	1845	436
Non-Electric	1296	1261	1690	1053	1013	368
<b>Total</b>	<b>1720</b>	<b>1846</b>	<b>2453</b>	<b>2759</b>	<b>3107</b>	<b>1044</b>

AEP Insulation Installs	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18 – to June 30
Urban All-Electric	N/A*	12	19	12	13	3
Rural All-Electric	N/A*	42	102	97	79	22
Indigenous	314	373	415	569	609	262
Non-Electric	N/A*	787	981	588	521	146
<b>Total</b>	<b>1123</b>	<b>1214</b>	<b>1517</b>	<b>1266</b>	<b>1222</b>	<b>433</b>

\*2012/13 Individual and Community data unavailable to be broken down; 809 homes insulated across the three categories.

- d) Please see the attachment to this response which tabulates for each First Nation community the number of homes, the number of homes that have participated in DSM measures, and the number of homes that have had insulation upgrades.
- e) Manitoba Hydro has and continues to address barriers to participation for all lower income customers. A 2015 focus group found the primary barrier to enrollment in the program is simple inertia; customers do not tend to experience a sense of urgency to acquire a new furnace or insulation unless in the case of malfunction. Manitoba Hydro addresses this by forming strategic relationships with community groups (e.g. North End Community Renewal Corporation, Brandon Neighbourhood Renewal Corporation,

Selkirk Community Renewal Corporation, Dakota Ojibway Tribal Council, Manitoba Metis Federation) whereby Energy Advocates from these organizations attend community events and canvass neighborhoods to directly explain the benefits and bill savings associated with the eligible energy efficiency upgrades. Continuous mass media and targeted marketing throughout the year and internal promotion by Manitoba Hydro staff (Contact Center and Credit & Recovery Services departments) is also utilized to ensure that AEP is top of mind whenever customers are looking to lower their energy bills, or upgrade their furnace and insulation. Targeted marketing efforts include autodialer calls to customers in arrears and direct mail letters and brochures to areas in Winnipeg and rural towns with higher incidences of low income populations. Promotional materials (brochures, magnets, bookmarks) are also distributed to local community centers and libraries across the province. Manitoba Hydro also specifically targets customers with higher than average energy consumption offering a free Home Energy Assessment (same offer as the in-home review provided under AEP) via mail and direct call campaigns. Customers are subsequently encouraged to apply to the AEP or any other Power Smart programs. Dedicated customer service portals (direct phone line, toll free and email inbox) also provide customers easy access to knowledgeable staff in order to complete the required eligibility and subsequent upgrade forms required to participate in the program.

The submission of tax documents to income qualify can also be a barrier to participation in the program. As of December 2015 the program now accepts proof of participation in other income qualifying programs in lieu of the required tax documents.

Other challenges to increasing participation are perceived concerns around disruption in the household while the upgrades are being completed, the amount of paperwork required and the degree of choice with regards to the selection of a contractor. A video that explains the steps to participation is currently being developed and customer testimonials depicting first-hand positive experiences with the program are being incorporated into the program's marketing materials to help mitigate these concerns. An online application form was also created in July 2015 to provide a more efficient option for application submission. Approximately 40% of the applications the AEP receives are through the online application form. Further, the program maintains contracts with an extensive list of insulation and furnace contractors and actively

recruits in less populated areas to provide customers with choices for contractors whenever possible.

Manitoba Hydro is also aware of the following barriers in delivering programming specifically to First Nations and has customized the Indigenous Power Smart Program to specifically address these barriers.

- Lack of funds can be a barrier for First Nation Communities to complete energy efficiency upgrades. The Indigenous Power Smart Program recognizes this and provides all energy efficiency measures at no cost to First Nations. For other opportunities such as geothermal heating, a combination of incentives and the use of the PAYS financing program is used to mitigate the initial up-front cost barrier.
- The completion of participant applications for individual homes can be cumbersome when completing multiple energy efficiency upgrades at one time. To address this, Manitoba Hydro works directly with the First Nation Community by obtaining a Band Council Resolution and agreement on homes to be provided energy efficiency upgrades. This removes the requirement for individual applications.
- Having a dedicated Indigenous Energy Advisor mitigates many barriers associated with the administrative process of retrofits. This provides First Nation Communities with a direct point of contact to address any upfront questions, assist with acquiring supplier quotes, arrange transportation logistics, train community members on proper installation, inspect the work once complete, and assist with invoicing along with general follow ups through the process.
- As with any energy efficiency opportunities, awareness and education are key to ensure market acceptance. Through the dedicated Indigenous Energy Advisor, community presentations on energy efficiency are provided on request to educate community members on general Power Smart tips and programs that will assist with lowering energy bills.
- Geothermal systems are complex and expensive systems to install. To address this barrier, Manitoba Hydro provides funding to AKI Energy, a social enterprise, to work closely with First Nation communities in providing the necessary training and coordination of the community based program.
- Please refer to AMC/MH I-30 for information with respect to challenges associated with implementing PAYS financing for Indigenous communities.



**REFERENCE:**

PUB/MH I-126b, Page 2 of 6

**PREAMBLE TO IR (IF ANY):**

The reponse specifies R- values for basement, attic, kneewalls, roofs and wall cavities (above grade) to qualify for insulation upgrades.

**QUESTION:**

Does a First Nations home need to meet all of these criteria in order to be eligible for insulation upgrades, or only one of them? In other words, if a home has adequate wall insulation but inadequate roof insulation, is it eligible for upgrade of its roof insulation?

**RATIONALE FOR QUESTION:****RESPONSE:**

A First Nations home only needs to meet the criteria for one section to be eligible for an insulation upgrade in the corresponding section. For example, if the basement has adequate insulation but the attic has inadequate insulation, the attic is still eligible for an insulation upgrade.

**REFERENCE:**

PUB/MH I-126a, Page 3 of 21 to Page 21 of 21

**PREAMBLE TO IR (IF ANY):**

The attachment discusses the Affordable Energy Program (“AEP”) and its availability to ratepayers in the province. Under the heading “Residential”, the AEP is stated to be available through four approaches: Individual, Community, Indigenous, and Multi-Unit Residential Building (“MURB”) (Page 4 of 21).

Under “Residential”, the following programs are listed: Financing Programs, Home Insulation Program, Community Energy Plan Initiative, HRV Control Program, LED Lighting Program, Refrigerator Retirement Program, New Homes Program, Smart Thermostats, Appliance Rebate Program, Solar Energy Program, Water & Energy Saver Program (pp. 7-10 of 21).

Under the heading “Commercial”, two programs are listed: the Power Smart Shops Program, and the Commercial Geothermal Program. The description of the Power Smart Shops Program refers to several activities which have taken place within First Nations reserves (Page 12 of 21).

There are then a number of activities listed under “Indigenous” (Page 13 of 21), including the Indigenous Power Smart Program, as well as a number of programs under the heading “Power Smart for Business”.

Under the heading “Indigenous”, the following programs are listed: Indigenous Power Smart Program, Solar Energy Program, Power Smart Shops Program, New Homes Program, Refrigerator Retirement Program, and Power Smart for Business.

**QUESTION:**

- a) Please confirm that AEP programming is available to Indigenous ratepayers under each of the Residential, Commercial, and Indigenous streams. If not, please explain why not.

- b) These programs are listed under “Residential” but not under “Indigenous”: Financing Programs, Home Insulation Program, Community Energy Plan Initiative, HRV Control Program, LED Lighting Program, Smart Thermostats, Appliance Rebate Program, and the Water & Energy Saver Program. Please confirm whether these programs are indeed not available to on-reserve households, and, for each program that is not available to on-reserve households, please explain why.
- c) For any of the programs listed in (b), for which there is an alternative program provided to on-reserve households, please detail any differences in how a household qualifies for the program, and any differences in the assistance that the program offers.
- d) For the following programs listed under “Indigenous”: Indigenous Power Smart Program, Solar Energy Program, Power Smart Shops Program, New Homes Program, Refrigerator Retirement Program – please detail any differences in the conditions for eligibility for the program from the program of the same name under “Residential”, and please also detail any differences in the incentive or service from the program of the same name under “Residential”.
- e) Please detail which of the programs listed under “Residential” are available to General Service customers on reserve.
- f) Please detail which of the programs listed under “Commercial” are available to General Service customers on reserve.
- g) Please detail which of the programs listed under “Indigenous” are available to General Service customers on reserve.
- h) At Page 16 of 20, the document states that the New In Homes program “often works with Indigenous Communities to encourage the construction of energy efficient homes.” How many homes have received incentives under this program for the years 2010/11, 2011/12, 2012/13, 2013/14, 2014/15, and 2015/16? What is the dollar amount of incentives given through this program?
- i) Please detail the minimum requirements of the New Homes program as applied to on-reserve housing, and the assistance that is available through this program.
- j) At Page 19 of 21, under “Other Initiatives”, the report outlines an initiative which “focuses on a more in-depth building envelope retrofit than currently covered under existing Power Smart programs.” Please detail the ways in which the new initiative would be more in-depth than existing Power Smart programs.

**RATIONALE FOR QUESTION:**

**RESPONSE:**

- a) AEP programming is available to Indigenous ratepayers under the residential and the Indigenous streams. The AEP program is not available under the commercial stream as it is a residential program intended for lower income homeowners and tenants rather than commercial businesses.
- b) All of the initiatives listed under Residential are available to on-reserve households with the exception of the Community Energy Plan Initiative (“CEP”). The CEP is a pilot initiative with two communities in Manitoba whereby a local Energy Advocate helps to promote a culture of conservation among the residential and commercial customers and encourages increased participation in existing Power Smart Programs. No new energy savings programs exist under the initiative. Manitoba Hydro has been in discussions with two Tribal Councils with the objective to offer a similar type of initiative to support the Indigenous communities they represent.
- c) Of the Residential programs discussed in part b), three have alternative options that are eligible for Indigenous Communities only; the Home Insulation Program, the LED Lighting Program and the Water & Energy Saver Program. The table below highlights the differences.

<b>Program</b>	<b>Residential Offering</b>	<b>Indigenous Power Smart Program</b>
Home Insulation	Only homes that were built prior to 1999 are eligible.	Community based, focusing on homes with opportunities for insulation improvements as identified by the community’s Housing Manager.
	Attic: 3.0 cents per R added per square footage of space insulated. Wall cavity: 4.0 cents per R added per square footage of	Qualifying insulation upgrades are offered free of charge utilizing local labour from the Indigenous Community.

Program	Residential Offering	Indigenous Power Smart Program
	space insulated. Crawl space: 6.0 cents per R added per square footage of space insulated.	
LED Lighting	No difference in qualifying households.	No difference in qualifying households.
	From 30% - 50% off ENERGY STAR LED light bulbs at participating retailers for one month in each of the spring and fall.	Four free LED light bulbs are installed directly in homes utilizing local labour from the Indigenous Community.
Water & Energy Saver	No difference in qualifying households.	No difference in qualifying households.
	A free kit is mailed to the customer upon request or installed directly in the home through a targeted campaign using Manitoba Hydro's third party contractor.	Free kit is installed directly in homes utilizing local labour from the Indigenous Community.

- d) The Solar Energy Program, Power Smart Shops Program, New Homes Program, and Refrigerator Retirement Program do not have any differences in terms of eligibility nor incentive levels when compared to the residential overall offering. Note that the Indigenous Power Smart Program is only available in Indigenous Communities.
- e) None of the programs listed under "Residential", with the exception of the Solar Energy Program Pilot, are available to General Service customers on reserve.
- f) All of the programs listed under "Commercial" are available to General Service customers on reserve.

- g) Of the programs listed under “Indigenous”, the Power Smart Shops and Solar Energy Programs are available to General Service customers on reserve. As described on pages 17-19 of 21 of the attachment to PUB/MH I-126a, Power Smart for Business offers a suite of programs, which provide incentives to General Service customers on reserve for numerous energy efficiency upgrades such as lighting, insulation, refrigeration, kitchen appliances and geothermal heating systems.
- h) Please see the attachment to AMC/MH II-9f for participation in the New Homes Program. The total incentives paid to the Indigenous participants in 2010/11 and 2011/12 are \$9,077 and \$17,738, respectively.
- i) Power Smart for New Homes offers a choice in the approach to meet program minimum requirements. The Prescriptive Path offers a uniform set of 10 building and technology upgrades consistent with an overall energy performance at least 20 per cent better than minimum building code requirements. Each home built with these 10 upgrades will be eligible for a \$1,200 rebate. These upgrades include:
- Increased attic insulation: R58 effective
  - Increased exterior above grade wall insulation: R17 effective
  - Increased basement insulation and floor header (rim joist) insulation: R18 effective
  - Basement slab edge thermal break: R5 effective
  - Tested air tightness of less than 1.5 air changes per hour
  - Triple glazed, low-e, argon fill windows, with low conductivity frame and spacer
  - High efficiency heat recovery ventilation (“HRV”) with SRE 65 per cent or better
  - Advanced HRV controls
  - LED lighting throughout (minimum of 25 sockets)
  - Reduced Thermal Bridging

The Performance Path is for customized, energy efficient homes designed with technical expertise and energy modeling. This path allows the builder to select their own approach to design and construction and incorporate any energy-saving technologies as desired. The Performance Path provides a scaled base incentive plus a rebate for the costs of energy modeling. Homes must achieve a rating of at least 20 per cent more efficient than the minimum local building code requirements, as measured by Natural

Resources Canada's EnerGuide Rating System. Incentives between \$1,500 and \$12,000 are available.

- j) Existing Power Smart building envelope programming has focused on adding insulation to under-insulated areas of a home. For the overall residential market, a homeowner can complete the work or a contractor may be hired to complete the work. The Indigenous Program works with the community's Band Housing Coordinator by hiring local community members to install the insulation.

With the comprehensive insulation retrofit proposal that was highlighted in the AEP Annual Report, in partnership with OPCN and assistance from MKO, Manitoba Hydro is seeking to investigate whether a more detailed approach to an insulation retrofit that utilized building science awareness and attention to specific envelope system components (thermal bridging, airtightness and overall quality installation) would have an even greater impact on energy reduction. Due to the increased technical requirements of a comprehensive insulation retrofit, a higher level of training would be required.

**REFERENCE:**

Appendix 10.5, 4.1, Page 96 of 242

**PREAMBLE TO IR (IF ANY):****CITATION:**

The AEP is delivered to specific client groups through five distinct channels, including individual; First Nations; private landlords and tenants; social housing providers and tenants; and neighbourhoods (Dunsky Energy Consulting & Summerhill Group, 2015):

...

- ▶ First Nations. Working with each First Nations community, a dedicated energy advisor works directly with First Nations communities to provide free basic energy savings measures, free insulation, and funding for local labour to install all of the materials. No application process is required to participate in the AEP through this delivery channel (Dunsky Energy Consulting & Summerhill Group, 2015). In total, 4,553 households had participated in this program stream as of November 30, 2016, accounting for slightly more than one-quarter (25.3%) of AEP participants to date. The bulk of the outstanding work to be undertaken through this delivery channel involves the direct installation of low/no-cost energy efficiency measures (Dunsky Energy Consulting & Summerhill Group, 2015), since at least two-thirds of the estimated market for insulation upgrades has been so far addressed (Galbraith, 2016).

**QUESTION:**

Please provide copies of the two report referenced in the citation:

- Dunsky Energy Consulting, & Summerhill Group. (2015). External Review of the Affordable Energy Program. Montreal, QC: Manitoba Hydro, and
- Galbraith, C. (2016, May). Affordable Energy Program & Neighbours Helping Neighbours. Presented at the Collaborative Process -- Manitoba Hydro Bill Affordability Program, Manitoba Hydro Building, Winnipeg, Manitoba.

**RATIONALE FOR QUESTION:**



**RESPONSE:**

Please find attached a copy of the response to MKO/COALITION/MH I-9 from the 2015/16 & 2016/17 Electric General Rate Application for the External Review of the Affordable Energy Program report prepared by Dunsky Energy Consulting, & Summerhill Group.

Please also find attached the presentation delivered in May 2016 on the Affordable Energy Program & Neighbours Helping Neighbours.



<b>Section:</b>		<b>Page No.:</b>	
<b>Topic:</b>	Power Smart Programs		
<b>Subtopic:</b>	Evaluation reports		
<b>Issue:</b>	Access to evaluation reports		

**PREAMBLE TO IR (IF ANY):**

As program administrators seek to improve program performance they may conduct both internal evaluations of programs and/or contract with independent evaluators to conduct formal process and impact evaluations. These reports may provide useful information in determining the extent to which programs are maximizing their benefits to ratepayers.

**QUESTION:**

Provide all internal or third-party evaluation reports that have been conducted of any of the Power Smart Programs over the past five years, especially where those reports focus on the Affordable Energy Program.

**RATIONALE FOR QUESTION:**

Evaluation reports can provide important data regarding the success of programs and of the opportunities for improvement. These reports can help determine the appropriateness of Manitoba Hydro's proposed Power Smart programs. The question has a broader focus than GAC 1-35 in that it includes more than AEF question and seeks external as well as internal evaluations.

**RESPONSE:**

Internal program evaluations are performed on an annual basis at the end of each fiscal year with the results aggregated and reported in the Power Smart Annual Review. The latest evaluated results are provided in Appendix 8.2.

An internal Affordable Energy Program (AEP) Process Review was completed in 2014. See the response to GAC/MH-I-55d.



**Manitoba Hydro 2014/15 & 2015/16 General Rate Application  
MKO-COALITION/MH-I-9**

A third-party review of the Affordable Energy Program was completed in 2015. A copy of the report is attached.

Manitoba Hydro has engaged external firms to conduct impact evaluations of three additional DSM programs covering each customer sector as follows:

- Residential - Home Insulation Program;
- Commercial - Building Envelope Program; and
- Industrial – Performance Optimization Program.

Work on the three evaluations is underway with final reports expected to be received over the next few months.

# External Review of the Affordable Energy Program

PREPARED BY:  
**DUNSKY ENERGY CONSULTING**  
**SUMMERHILL GROUP**

**Submitted to:**  
**Cheryl Pilek**, Manager, Power Smart Planning, Evaluation & Research  
**Colleen Galbraith**, Program Manager, Affordable Energy Unit



March 3<sup>rd</sup>, 2015 – FINAL REPORT



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effective energy savings and also make sure the equipment is working properly, procuring increased safety benefits and reduced future repair costs.

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#### 4.4.2 BUILDING ENVELOPE

Insulation upgrades are available for homes with low attic insulation (R30 or less) or no wall/basement insulation. AEP is achieving a high rate of 75% of homes that receive some kind of insulation upgrade<sup>29</sup>. Attics are insulated to R50, walls to R12 and basements to R24. Other insulation upgrades can be accepted on a case by case basis, for example if the existing wall or basement insulation is poor and there is some opportunity to upgrade it. The average insulation upgrade costs \$3,700 and the largest project so far cost \$16,000. There is no program limitation on the size or cost of insulation jobs.

Professional draftproofing is currently limited to upgraded components. For example, if attic insulation is added, draftproofing will be conducted on the attic floor, but not on other components such as windows and basement headers. There would be an opportunity to expand draftproofing for houses with very high leakage. According to low income ecoENERGY air leakage reduction targets, the 35% leakiest homes could reduce heat losses by 12 GJ on average (Figure 4.8). Air leakage reduction obtained with professional blower-door assisted draftproofing can actually be much higher than these targets.

There are currently no blower door tests in the AEP programs. This can be an issue because leaky houses may be harder to identify. Draftproofing is also more efficient when conducted using a blower door unit to clearly identify the main sources of air leakage (which can fluctuate as draftproofing is performed). Finally, air leakage has to be monitored to ensure that draftproofing does not create new problems (excessive moisture, air quality, backdrafting). Adding blower door testing during the audit, retrofit and quality control phases would increase the program costs. This has to be balanced with the additional savings that professional blower-door assisted draftproofing would procure.

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<sup>29</sup> Unfortunately, no breakdown by insulation component is available.

**REFERENCE:**

PUB/MH I-126a, Page 21 of 21

**PREAMBLE TO IR (IF ANY):**

The table presented on the last page of the AEP Annual Report requires a number of clarifications.

**QUESTION:**

- a) The introductory paragraph to the table states that it outlines participation by all-electric customers in residential and commercial Power Smart Programs, but the “Indigenous” column refers only to “homes”. Are General Service customers in Indigenous communities included in these statistics? If not, are they covered by the Indigenous or First Nations Power Smart Program? Please explain.
- b) The first line of the table shows that more than 90% of Affordable Energy Program participation is in Indigenous Homes. Is it correct to infer that less than 10% of AEP activities take place outside of First Nations, despite the fact that “The AEP is designed to assist lower income homeowners and renters across the Province” (p. 3 of 21)?
- c) Please explain why the line for Home Insulation Program shows 0 participation from Indigenous Homes, when the report indicates (at page 14 of 21) that “In 2016/17 a total of 1,845 homes in Indigenous communities were completed of which 609 received insulation upgrades.”
- d) Please explain why HRV Control, New Homes Program, Smart Thermostat Pilot, Smart Thermostat Rebate, Solar Energy Program and Commercial Geothermal shows 0 participation from Indigenous Homes.
- e) Please explain why Water and Energy Saver Program indicates “not applicable” for Indigenous Homes.
- f) For the chart at page 21 of 21 labelled “Participation in Power Smart Programs (all electric) – FY 2016/17”, please provide the same data for FY 2010/11, FY 2011/12, FY 2012/13, FY 2013/14, FY 2014/15, and FY 2015/16.

**RATIONALE FOR QUESTION:**

**RESPONSE:**

- a) General Service customers in Indigenous communities are included in the programs listed under the “Commercial” row heading.
- b) It is not correct to infer that less than 10% of AEP activities take place outside of First Nations. The table only shows participation for homes that are all-electric heat. The Affordable Energy Program is also offered to customers who heat their home with other fuel sources such as natural gas, fuel-oil, propane or coal. Participation numbers for homes with fuel sources other than electric were not included in this table as the focus of the AEP Annual Report is programming for all-electric customers as directed in Order 73/15.
- c) The Home Insulation Program is a separate program from the Indigenous Power Smart Program and thus the values for the two will not be the same. Please see the response to AMC-MH II-5d as to why it is more beneficial for First Nations communities to receive insulation upgrades through the Affordable Energy Program under the Indigenous stream.
- d) The HRV Control, New Homes Program, Smart Thermostat Rebate, Solar Energy programs are all relatively new offerings (please see the attached for launch dates) and therefore have not yet realized participation across all segments of the market including the Indigenous segment.

The Commercial Geothermal Program has had relatively low participation across the entire general service market due to the fact that retrofitting the heating system of an existing commercial building is a complex and costly project that also requires specific soil conditions and available space to install the ground loop.

The Smart Thermostat Pilot was not a program but a research pilot for the purposes of verifying the actual savings that could be achieved by homeowners with electric space heat with the installation of a smart thermostat. In order to obtain a valid data set of



homes that would typically benefit from a smart thermostat, only homes that met the following criteria were selected for the pilot:

1. Single detached family dwelling
  2. Average electrical consumption
  3. Respondent to the Residential End-Use 2014 Survey – required to verify specific technical requirements such as forced air furnace (versus baseboard), manual thermostat (versus smart thermostat), and home based internet access with WIFI capability.
  4. No recent change in account ownership
  5. House vintage between 1920-2005
- e) The status of “not applicable” was incorrect for this chart. It should have read “not available” as the database for the Water & Energy Saver Program (“WESP”) did not have an identifier for Indigenous Communities. A report has since been developed utilizing information from Manitoba Hydro’s billing system. This data was then cross-referenced against the WESP participants to identify customers in Indigenous communities. The number of Indigenous Homes that were participants in WESP in the 2016/17 fiscal year was 207. Please see the attached for Indigenous participants in previous years. Note that the components of the WESP kit are also available to Indigenous homes through direct installs under the Affordable Energy Program.
- f) Please see the attachment for an update to the chart provided in the Affordable Energy Program’s Annual Report that includes participation in previous years.

**Participation in Power Smart Programs (all electric)**

Program	Program Launch Date	FY 2010/11				FY 2011/12				FY 2012/13				FY 2013/14				FY 2014/15				FY 2015/16							
		Urban All Electric	Rural All Electric	Indigenous	Total	Urban All Electric	Rural All Electric	Indigenous	Total	Urban All Electric	Rural All Electric	Indigenous	Total	Urban All Electric	Rural All Electric	Indigenous	Total	Urban All Electric	Rural All Electric	Indigenous	Total	Urban All Electric	Rural All Electric	Indigenous	Total				
<b>RESIDENTIAL (Homes)</b>																													
Affordable Energy Program	Dec-07	24	212	133	369	79	143	244	466	36	74	314	424	100	113	373	586	78	185	467	730	33	156	1517	1706				
Financing Programs (PSRL + PAYS)	Mar-01, Nov-12	175	595	5	775	172	518	0	690	165	605	2	772	132	504	85*	721	162	483	93*	738	151	391	75*	617				
Home Insulation Program	May-04	72	1182	11	1265	74	1109	0	1183	67	873	0	940	45	809	0	854	81	967	0	1048	47	872	0	919				
HRV Control Program	Oct-16																												
Community Geothermal	Apr-13													not eligible		82	82	not eligible		93	93	not eligible		67	67				
Refrigerator Retirement Program	Jun-11					145	1628	4	1777	167	1587	0	1754	218	1953	7	2178	203	2066	12	2281	225	2334	5	2564				
New Homes Program (Version 1, Version 2)	Feb-04, Oct-15	32	50	16	98	64	37	27	115													0	0	0	0				
Smart Thermostat Pilot	Jan-16																					70	17	0	87				
Smart Thermostat Rebate	Sep-16																												
Appliance Rebate	Sep-16																												
Solar Energy Program	Apr-16																												
Water & Energy Saver Program (data based on electric water heat)	Sep-10	9598	8091	39	17728	6455	4616	42	11113	4140	4401	55	8596	4103	3973	46	8122	4545	5341	110	9996	8564	6414	86	15064				
<b>COMMERCIAL (Buildings)</b>																													
Power Smart Shops	Oct-15																									47 <sup>1</sup>	2 <sup>1</sup>	0	49
Commercial Geothermal	Jun-07	1	17	0	18	0	11	0	11	0	9	1	10	0	9	0	9	0	7	0	7	0	5	0	5				

Denotes a period of time where there was no program offering in market.  
 \*Include participation in the Community Geothermal program.

<sup>1</sup> Denotes number of participating businesses with electric water heaters that received water saving measures through the Power Smart Shops Program. "Urban" is Winnipeg and "Rural" is all other communities, except Indigenous communities.

Table 3 - Components of Manitoba Electricity Use

<b>COMPONENTS OF MANITOBA ELECTRICITY USE</b>				
<b>2015/16</b>				
<b>(Customers, Actual Consumption and Average Use)</b>				
<b>Forecast Group</b>	<b>Cust/Serv</b>	<b>GWh</b>	<b>% of Sales</b>	<b>kWh/cust</b>
Residential Basic	474,153	7,074	32.7%	14,920
Residential Diesel	583	8	0.0%	13,945
Residential Seasonal	20,176	81	0.4%	3,991
Residential Flat Rate Water Heating	3,454	18	0.1%	5,083
<b>Total Residential</b>	<b>494,912</b>	<b>7,181</b>	<b>33.2%</b>	
GS Mass Market	67,395	8,442	39.0%	125,260
GS Top Consumers	32	5,886	27.2%	186,357,969
GS Diesel	184	6	0.0%	30,496
GS Seasonal	882	5	0.0%	6,115
GS Flat Rate Water Heat	359	6	0.0%	16,286
GS Surplus Energy Program	30	25	0.1%	821,015
<b>Total General Service</b>	<b>68,522</b>	<b>14,369</b>	<b>66.4%</b>	
Sentinal Flat Rate	20,643	12	0.1%	567
Sentinal Rental	25,960	-	0.0%	-
Street Lighting	1,208	92	0.4%	76,517
<b>Total Lighting</b>	<b>1,208</b>	<b>104</b>	<b>0.5%</b>	
<b>Total General Consumer Sales</b>	<b>564,643</b>	<b>21,654</b>	<b>100.0%</b>	
Less Diesel Sales		(14)	-0.1%	
Distribution Losses		791	3.7%	
Construction Power		28	0.1%	
<b>Manitoba Load at Common Bus</b>		<b>22,460</b>	<b>103.7%</b>	
Transmission Losses		2,116	9.8%	
Less Non-Firm Energy		(25)	-0.1%	
Station Service		123	0.6%	
<b>Gross Firm Energy</b>		<b>24,673</b>	<b>113.9%</b>	
* flat rate and rental services are shown in yellow, which do not count as customers				

1 economic development on reserve, would it surprise you  
2 to learn that according to the data that Manitoba  
3 Hydro has put on the record in this Information  
4 Request, the average percentage of general service  
5 accounts on reserve is actually higher than Manitoba  
6 Hydro's customers, generally?

7 MR. KELVIN SHEPHERD: No, it generally  
8 wouldn't surprise me and the reason for that is that  
9 you can see the number of customers overall is  
10 smaller. So you're seeing the effect of the smaller  
11 scale here and a community that, you know, the general  
12 service customers would generally be administrative  
13 offices, police, hospital, and those types of  
14 organizations.

15 So as a percentage of customers it  
16 appears higher, but that's because you have a  
17 relatively small number of other customers to compare  
18 it to. So I think what you're seeing there is the  
19 effect of scale.

20 MR. COREY SHEFMAN: It -- it doesn't  
21 concern you, for example, that -- and I pick at random  
22 Fox Lake First Nation 30 percent of the customers on  
23 that reserve are listed as general service. That  
24 doesn't surprise you?

25 MR. KELVIN SHEPHERD: No, it doesn't

1 MR. COREY SHEFMAN: Thank you. We're  
2 going to move on. You said yesterday in your direct  
3 evidence, page 253 and 254 of the transcript I'm  
4 quoting:

5 "All of us should be embarrassed and  
6 perhaps even ashamed at the living  
7 conditions that some Manitobans were  
8 in." end quote.

9 And then you also said, quote:

10 "Fundamentally, I believe the root  
11 cause of this problem is social  
12 policy and inadequate income."

13 Is that correct?

14 MR. KELVIN SHEPHERD: Yes, that's  
15 personally what I believe, but I believe the facts  
16 align with that.

17 MR. COREY SHEFMAN: I agree as well.  
18 I take it that you would agree that the level of  
19 economic development in reserves isn't what it is  
20 compare -- in the rest of the province? It isn't at  
21 the same level as it is in the rest of the province.

22 MR. KELVIN SHEPHERD: No, it is not.  
23 As I think you can tell from unemployment and other  
24 issues in the communities.

25 MR. COREY SHEFMAN: And you gave your

1 evidence yesterday that you have had the personal  
2 opportunity since becoming CEO to visit some reserves;  
3 is that correct?

4 MR. KELVIN SHEPHERD: Dr. Williams  
5 earlier referenced my first meeting with him and as a  
6 result of that meeting, I spent several weeks meeting  
7 -- visiting and meeting the community members and  
8 community leaders and Elders in a number of northern  
9 First Nations communities.

10 And since joining Hydro I've - I've  
11 done many more. So, yes, I've -- I won't say that  
12 I've been to every community in my tenure in Manitoba,  
13 but I've been to the majority of them I would say and  
14 in the north in particular.

15 MR. COREY SHEFMAN: And you'd agree in  
16 your visits to those communities, you haven't observed  
17 much commercial activity, particularly when compared  
18 to the neighbouring settler communities?

19 MR. KELVIN SHEPHERD: There really  
20 aren't neighbouring communities, per se. Most of the  
21 northern communities I've been to are pretty remote  
22 and pretty isolated, but there is a very low -- if --  
23 I would say almost negligible level of commercial  
24 activity.

25 MR. COREY SHEFMAN: If we can pull up,

1 please, appendix 7.1 of the application at page 3.  
2 I'm going to put to you that this chart shows, among  
3 many other things, that for Manitoba Hydro's  
4 customers, generally -- general service accounts make  
5 up about 12.1 percent of your total accounts, 68,522  
6 of 564,643. Does that sound correct to you?

7 MR. KELVIN SHEPHERD: You're talking  
8 general service accounts?

9 MR. COREY SHEFMAN: Yes.

10 MR. KELVIN SHEPHERD: So it looks like  
11 total general services is --

12 MR. COREY SHEFMAN: 68,000.

13 MR. KELVIN SHEPHERD: Oh, yes, you're  
14 about as a percentage of customers, yes.

15 MR. COREY SHEFMAN: Yes, yes, as a  
16 percentage of customers --

17 MR. KELVIN SHEPHERD: I hadn't done --  
18 done the math in my head but it's -- it's in that  
19 range.

20 MR. COREY SHEFMAN: About 12 percent.  
21 Now if we can turn to AMC IR Round 2, Number 2(b).  
22 We're going to go to page -- just the answer. If we  
23 can just keep scrolling down a little bit there.  
24 There we go, that's -- that'll be fine.

25 Given what you know about the level of

**REFERENCE:**

AMC/MH I-2, Page 2 of 3

**PREAMBLE TO IR (IF ANY):**

The number and average consumption of active general service customers on First Nation Reserves is provided.

The data provided demonstrates that the average number of general service customers in First Nations reserves is about 37, but the number goes as high as 126. More than a dozen communities have 50 or more general service customers.

**QUESTION:**

- a) Please confirm that the second column (“2016/17 Avg Usage”) is presented on an annual basis, and the third column (“2016/17 Avg Monthly Bill”) on a monthly basis.
- b) Please complete the following table, for each First Nation in the province, for 2016 (or the most recent data available):

Name of First Nation	Number of residential electric customers	Number of general service customers	% of total customers that are general service customers	Number of general service customers that are:						
				Industrial	Commercial	Health Facilities	Offices	Band Owned Housing	Recreational	Other



**RATIONALE FOR QUESTION:**

To better understand the composition of the general service customers in First Nations communities.

**RESPONSE:**

- a) Confirmed.
  
- b) The following is the table by First Nation Communities broken down by sector. Band owned housing would be considered a residential account and therefore do not classify under General Service customers.

Name Of First Nation	Number of residential electric customers	Number of general service customers	% General Service	Number of general service customers that are:				
				Industrial	Commercial	Health Facilities	Offices	Recreational
Barren Lands First Nation	138	43	23.8%	1	36	3	2	1
Berens River First Nation	313	59	15.9%	2	47	0	8	2
Birdtail Sioux Nation	119	18	13.1%	2	13	1	2	0
Bloodvein First Nation	196	37	15.9%	3	28	0	4	2
Brokenhead Ojibway First Nation	184	38	17.1%	2	29	1	4	2
Buffalo Point First Nation	182	28	13.3%	1	24	0	0	3
Bunibonibee (Oxford House) First Nation	418	55	11.6%	1	47	4	1	2
Canupawpka Dakota First Nation	109	18	14.2%	0	12	0	4	2
Chemanwawin Cree Nation	320	32	9.1%	1	24	1	5	1
Dakota Plains First Nation	34	9	20.9%	0	7	0	2	0
Dakota Tipi First Nation	52	8	13.3%	0	5	0	2	1
Dauphin River First Nation	71	16	18.4%	3	12	0	1	0
Ebb And Flow First Nation	405	27	6.3%	2	17	0	6	2
Fisher River First Nation	478	50	9.5%	0	40	1	5	4
Fox Lake First Nation	71	31	30.4%	1	26	1	1	2
Gamblers First Nation	34	5	12.8%	1	2	0	1	1
Garden Hill First Nation	532	48	8.3%	3	37	2	4	2
Gods Lake First Nation	300	58	16.2%	3	50	1	3	1
Hollow Water First Nation	185	28	13.1%	1	20	0	4	3
Keeseekoowenin First Nation	160	20	11.1%	1	13	1	3	2
Kinonjeoshtegon First Nation	87	13	13.0%	0	10	0	3	0
Lake Manitoba First Nation	249	22	8.1%	0	16	0	3	3
Lake St Martin First Nation	3	7	70.0%	0	6	0	1	0
Little Black River First Nation	199	26	11.6%	4	20	0	1	1
Little Grand Rapids First Nation	267	57	17.6%	1	45	1	10	0
Little Saskatchewan First Nation	72	12	14.3%	0	10	0	1	1
Long Plains First Nation	356	32	8.2%	2	17	0	8	5
Manto Sipi Cree Nation	127	37	22.6%	1	29	1	5	1

Name Of First Nation	Number of residential electric customers	Number of general service customers	% General Service	Number of general service customers that are:				
				Industrial	Commercial	Health Facilities	Offices	Recreational
Marcel Colomb First Nation	15	6	28.6%	0	6	0	0	0
Mathias Colomb First Nation	394	45	10.3%	2	35	1	6	1
Misipawistik (Grand Rapids) First Nation	245	32	11.6%	1	29	0	2	0
Mosakahiken Cree Nation	261	24	8.4%	1	18	0	5	0
Nischawayaksihk Cree Nation	509	85	14.3%	2	61	4	12	6
Northlands Dene First Nation	150	54	26.5%	2	41	3	5	3
Norway House Cree Nation	1206	126	9.5%	6	98	1	20	1
O-Chi-Chak-Ko-Sipi First Nation	126	18	12.5%	0	13	0	4	1
O-PIPON-NA-PIWIN	218	38	14.8%	3	26	2	5	2
Opaskwayak (OCN) Cree Nation	736	89	10.8%	5	71	1	7	5
Paungassi First Nation	124	32	20.5%	0	28	0	3	1
Peguis First Nation	836	98	10.5%	2	76	2	8	10
Pimicikamak Cree Nation	938	84	8.2%	5	68	2	9	0
Pinaymootang (Fairford) First Nation	349	33	8.6%	1	25	0	5	2
Pine Creek First Nation	215	17	7.3%	0	14	0	2	1
Poplar River First Nation	221	38	14.7%	0	29	1	6	2
Red Sucker Lake First Nation	203	33	14.0%	1	28	1	3	0
Rolling River First Nation	139	22	13.7%	2	13	1	4	2
Roseau River First Nation	202	28	12.2%	0	19	1	5	3
Sagkeeng First Nation	651	64	9.0%	0	48	3	10	3
Sandy Bay First Nation	552	35	6.0%	1	23	0	9	2
Sapotaweyak Cree Nation	251	25	9.1%	1	16	3	3	2
Sayisi Dene First Nation	119	38	24.2%	1	31	2	3	1
Shamattawa First Nation	183	39	17.6%	0	32	2	5	0
Sioux Valley First Nation	361	36	9.1%	3	25	3	3	2
Skownan First Nation	128	17	11.7%	1	13	0	2	1
St Theresa Point First Nation	604	84	12.2%	2	78	2	1	1
Swan Lake First Nation	148	38	20.4%	7	20	1	5	5
Tataskweyak (Split Lake) First Nation	401	64	13.8%	2	47	7	5	3

Name Of First Nation	Number of residential electric customers	Number of general service customers	% General Service	Number of general service customers that are:				
				Industrial	Commercial	Health Facilities	Offices	Recreational
Tootinaowaziibeeng (Valley River) First Nation	108	15	12.2%	2	10	0	2	1
War Lake First Nation	36	9	20.0%	0	5	0	4	0
Wasagamack First Nation	272	43	13.7%	0	39	1	2	1
Waywayseecappo First Nation	436	26	5.6%	3	19	0	3	1
Wuskwi Sipihk First Nation	30	10	25.0%	0	6	1	2	1
York Factory First Nation	130	24	15.6%	0	19	3	1	1

**REFERENCE:**

Appendix 10.5, 3.3.1, Page 84 of 242

**PREAMBLE TO IR (IF ANY):**

Table 11 provides average natural gas consumption by household income (and by LICO-125 status), overall and per square foot. Note 41 points out that there is an inverse relationship between income and gas consumption per square foot, “which may suggest that lower-income households occupy less energy-efficient residences than their higher-income counterparts.” No such table is provided regarding electricity consumption.

**QUESTION:**

Please provide a table similar to Table 11 for electricity consumption, both for all residential customers and for First Nations residential customers.

**RATIONALE FOR QUESTION:****RESPONSE:**

Based on the results of 2014 Residential Energy Use Survey, the following table shows the average electricity consumption by household income and by LICO-125 status, for all residential customers in a table similar to Table 11 of Appendix 10.5.

**2014 Residential Energy Use Survey**  
**Average Weather Adjusted Electric Consumption**

<b>All Residential Basic Customers</b>			
<b>By Household Income</b>			
Household Income	Sample Size	Annual kWh	kWh/sqft
< \$25,000	510	12,045	13.4
\$25,000-\$49,999	1,271	13,827	12.7
\$50,000-\$74,000	1,195	16,080	13.0
\$75,000-\$99,999	802	17,478	13.3
\$100,000+	998	18,916	12.6
<b>By LICO-125 Status</b>			
LICO-125	1,323	14,487	13.8
Non-LICO-125	3,453	16,425	12.6

The following table provides average electricity consumption by household income and by LICO-125 status in a table similar to Table 11 of Appendix 10.5 for First Nation residential customers only, based on the results of 2014 Residential Energy Use Survey. It should be noted that the sample size within the subsectors requested is insufficient to draw conclusions representative of the First Nations residential customer base.

**2014 Residential Energy Use Survey**  
**Average Weather Adjusted Electric Consumption**

<b>First Nations Residential Basic Customers</b>			
<b>By Household Income</b>			
Household Income	Sample Size*	Annual kWh	kWh/sqft
< \$25,000	14	26,456	28.3
\$25,000-\$49,999	5	27,676	29.1
\$50,000-\$74,000	12	32,336	27.1
\$75,000-\$99,999	3	36,356	39.1
\$100,000+	1	30,947	25.8
<b>By LICO-125 Status</b>			
LICO-125	23	27,833	27.8
Non-LICO-125	12	32,969	31.0

**REFERENCE:**

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**PREAMBLE TO IR (IF ANY):****CITATION:**

“Each community works with one dedicated Indigenous Energy Advisor who along with each Band Housing Manager identifies qualifying homes and recommends energy efficient measures.”

The term “dedicated Indigenous Energy Advisor” suggests that there is one such advisor per First Nations community.

**QUESTION:**

Please confirm that there is one Indigenous Energy Advisors for each First Nations community. If this is not the case, please specify how many Indigenous Energy Advisors are employed by the program, and how many First Nations each one is responsible for.

**RATIONALE FOR QUESTION:****RESPONSE:**

There is one dedicated Indigenous Energy Advisor responsible for serving all 63 First Nations communities.