| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | Page 3 |
|-------------------|--------------------------------------|--|--------|
| Topic: | Marginal Costs | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

The Testimony references Order 117/06 and the PUB statement that:

"The Board seeks to assure itself that MH's rate design and rates are consistent with the pursuit of the environmental objectives of The Sustainable Development Act (SDA). Energy efficiency presents the potential for a virtuous circle, wherein lower domestic consumption results in reduced customer bills, higher MH aggregate net export revenue and net income, and lower carbon emissions by MH's American export customers." (PUB Order 117/06, p. 3)

Question:

In today's circumstances, does lowering domestic sales and correspondingly increasing net export revenue lead to higher net income for Manitoba Hydro. Please provide the basis for your conclusion.

RESPONSE:

The cited order refers only to "higher MH aggregate net export ... net income." Lowering domestic sales would increase MH net income from export and reduce total Manitoba electricity bills.

| Tab and Appendix: | Direct Testimony of Paul Chernick GAC/MH I-20 e) | Page No. (and line no. if applicable): | Page 25 |
|----------------------|--|--|---------|
| Topic: | Marginal Costs | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

The Testimony states:

"Hydro increases DSM benefits by 10% to reflect environmental, societal and other non-energy benefits (GAC/MH I-20e)."

GAC/MH I-20 e) states:

"Additional indirect benefits such as avoided environmental and societal externalities and "non-priced" participant benefits are accounted for in the Societal Cost Test. This test applies a 10% adder to the Total Resource Cost Test for each DSM program as a proxy for non-measurable non-energy benefits."

Question:

Does Manitoba Hydro use the Societal Cost Test or the Total Resource Cost Test for purposes of determining which DSM opportunities it will pursue.

RESPONSE:

Mr. Chernick has no non-public insight into how Manitoba Hydro screens DSM opportunities. He understands that Manitoba Hydro has no single cost-effectiveness test, but is guided by both the TRC and the Societal Test. See Filing Appendix 7.2 (especially Appendix E.3).

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

This question is beyond the scope of Mr. Chernick's testimony.

| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | Page 29 |
|-------------------|--------------------------------------|--|---------|
| Topic: | Marginal Costs | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

Question:

Please provide the class load factors used in Table 3 computations and explain how they were derived.

RESPONSE:

The load factors are taken directly from Appendix 8.1, PCOSS18 Schedule 5.3, column labeled "CP Load Factor."

| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | Page 32 |
|-------------------|--------------------------------------|--|---------|
| Topic: | Low Income Rate | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

Question:

Please explain the derivation of the \$341 annual savings for a customer using more than 500 kWh per month.

RESPONSE:

The \$341 is calculated as follows: 12 months * (customer charge of \$8.44 + (500 kWh *4 cents per kWh)).

| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | Page 31 |
|-------------------|--------------------------------------|--|---------|
| Topic: | Low Income Rates | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

The Testimony proposes a discount rate structure for all LICO-125 residential customers.

Question:

Does Mr. Chernick have any suggestions as to how Manitoba Hydro could identify its LICO-125 residential customers for purpose of applying the proposed discount rate structure and any estimates as to what the associated administrative costs would be?

RESPONSE:

Mr. Chernick understands that Manitoba Hydro has DSM programs limited to low-income customers, so it has apparently developed a method for checking income eligibility. Mr. Chernick has no other suggestions.

| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | Page 37 |
|-------------------|--------------------------------------|--|---------|
| Topic: | Inclining Rates | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

Question:

Please clarify which customers the inclining rate structure (i.e., with the 8.909 cents/kWh end rate) would apply to. Would it just be those residential customers that are not LICO-125 and do not have electric space heating?

RESPONSE:

The inclining block structure could be added to the electric heating rate design, or limited to non-heating customers. Mr. Chernick assumed that the inclining block would apply to all non-LICO customers (since he proposes a separate inclining-block rate for LICO customers).

| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | Page 31 |
|-------------------|--------------------------------------|--|----------|
| | Evidence of Dr. Wayne Simpson | | Page 4-5 |
| Topic: | LICO-125 | | |
| Sub Topic: | | | |
| Issue: | Definition of low-income customers | | |

Preamble to IR (If Any):

In the report by Mr. Paul Chernick, the rate proposal for low-income customers is designed based on estimates of the energy consumption of customers with incomes below 125% of the Statistics Canada's Low Income Cut-Off (LICO-125).

In Dr. Wayne Simpson's report entitled "Energy Poverty in Manitoba and the Impact of the Proposed Hydro Rate Increase: An Assessment of the Bill Affordability Study in the Manitoba Hydro GRA" dated October 31, 2017, it is stated:

The Report identifies 142,000 or 30% of Manitoba Hydro customers who have incomes less that 125% of the LICO for large communities. This is a significant proportion of the customer base, but it is somewhat of an overstatement of the low-income customer base because it is based on a LICO that would overstate the cutoff income for both large and small communities. For communities with fewer than 500,000 (everyone outside Winnipeg) the actual LICO would be smaller than the LICO for large communities over 500,000 as shown in Table 1 from Statistics Canada at the end of this document. For Winnipeg itself, the LICO reflects an average cost of living for large Canadian cities that includes Vancouver and Toronto and is much higher (especially when it comes to

housing cost) than Winnipeg. In other words, a "made in Manitoba" estimate of low-income households that reflected community size and cost of living, such as the Market Basket Measure developed by the Government of Canada, would produce a smaller low-income customer base.

Question:

- a) Please comment on any other definition of low-income customers that you are aware are being used for the purposes of determining eligibility for bill affordability programs and whether these definitions were examined in the preparation of Mr. Chernick's prefiled direct testimony.
- **b)** Please comment on the considerations that should be employed in selecting the definition of low-income customers.

RESPONSE:

- a) Mr. Chernick used the only low-income definition for which Manitoba Hydro provided data on number of customers and usage levels. Mr. Chernick is not advocating for any particular definition of low income. Over time, the PUB may choose to implement a sliding scale for the low-income discount, as Mr. Chernick suggests that "it would be preferable to vary the discounts to reflect the customer's income level, perhaps measured as a percentage of the Low Income Cut Off for the household size." (Chernick Testimony at 34).
- b) See (a).

| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | |
|-------------------|--------------------------------------|--|--|
| Topic: | Peer-reviewed literature | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

Question:

Please outline the peer-reviewed and other literature reviewed in the preparation of Mr. Chernick's pre-filed direct testimony.

RESPONSE:

Mr. Chernick does not understand this request, which is not linked to any specific portion of his testimony. Mr. Chernick has reviewed "peer-reviewed and other literature" on rate design and cost allocation for over 40 years.

| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | |
|-------------------|--------------------------------------|--|--|
| Topic: | Consumer Engagement | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

Question:

Please outline any consumer engagement conducted in the preparation of Mr. Chernick's prefiled direct testimony.

RESPONSE:

Mr. Chernick is not in a position to directly and systematically engage with Manitoba consumers.

| Tab and Appendix: | Direct Testimony of Paul Chernick | Page No. (and line no. if applicable): | Page 38 |
|-------------------|--------------------------------------|--|---------|
| Topic: | Rate proposals | | |
| Sub Topic: | | | |
| Issue: | | | |

Preamble to IR (If Any):

Mr. Chernick's pre-filed direct testimony includes the following rate proposals:

Table 6: Summary of Rate Proposals

| | MH proposed | LICO-125 All | Non-LICO ESH | LICO-125 ESH | Non-LICO Residential |
|----------------|----------------|-----------------|-----------------|-----------------|-------------------------|
| Basic Charge | \$8.44 | \$0 | \$8.44 | \$0 | \$7.82 |
| First Block | 8.556¢ | 4.556¢ | 4.556¢ | 4.556¢ | 7.93¢ |
| Remainder | 8.556¢ | 8.556¢ | 8.556¢ | 8.556¢ | 8.909¢ |
| First Block kW | h | | | | |
| Summer | _ | 500 | _ | 500 | 500 |
| Spring | _ | 500 | 150 | 650 | 500 |
| Fall | _ | 500 | 250 | 750 | 500 |
| Winter | _ | 500 | 500 | 1,000 | 500 |
| Recovery rate | | 0.22¢ | 0.12¢ | | |

Question:

Please explain how the rate proposals in Mr. Chernick's evidence meet the regulatory principles of simplicity and understandability.

RESPONSE:

Discounts for a limited amount of a product are common and easily understood. Offers to "get 50% off your first month's subscription" and the like are familiar to customers.

The secondary-voltage GS rates have a declining energy block structures. The Diesel rate has a very steep inclining-block structure. GAC is not aware of any problem with these customers understanding their rates.