

COALITION/IEC (YATCHEW) - 1

Tab and Appendix:	Yatchew Expert Testimony	Page No. (and line no. if applicable):	Page 27
Topic:	Price Elasticity		
Sub Topic:			
Issue:			

Preamble to IR (If Any):**Question:**

- a) Does Dr. Yatchew consider the electricity price elasticities provided by Manitoba Hydro to be long-term or short-term price elasticities? Please provide the basis for your response.
- b) What does Dr. Yatchew consider would be reasonable estimates of the short-term electricity price elasticity for the residential, commercial and industrial sectors?

Rationale for Question:

To clarify Dr. Yatchew's views on electricity price elasticities.

RESPONSE:

- a) The elasticities provided by Manitoba Hydro in Electric Load Forecast 2016, Manitoba Hydro 2017/18 & 2018/19 General Rate Application Appendix 7.1, page 57 and Electric Load Forecast 2017, Manitoba Hydro, page 57, are, strictly speaking, neither short-term nor long-term elasticities. The price variables used in the models (pages 60-67 of the Load Forecast 2017) are lagged up to 2.5 years. Thus, the effects are not short-term (i.e., one year or less). They are capturing some of the near-term effects, but not

the long-term effects as adjustments to energy price changes can take much longer than 2.5 years.

- b) I suggest a short-term elasticity of -0.1 for all three sectors (paragraph 74 of the report).

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA

COALITION/IEC (YATCHEW) - 2

Tab and Appendix:	Yatchew Expert Testimony	Page No. (and line no. if applicable):	Pages 35-37
Topic:	Energy Poverty		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

Question:

- a) At page 35 (lines 20-23) Dr. Yatchew implies there is more than one way of measuring energy poverty. Please indicate the different measures that Dr. Yatchew is aware of for measuring “energy poverty” and indicate which is his preferred approach.

Rationale for Question:

To clarify Dr. Yatchew’s views on measuring energy poverty.

RESPONSE: A reasonable departure point is an income share threshold (10% is commonly used, and 6% is also used). This is a first approximation. A more precise identification of energy-poor households involves at least the following components: household income, household composition, (local) energy prices, and dwelling characteristics. The latter are important because poor households often reside in dwellings that are less energy efficient; with little spare income and poor access to capital, improvements are less likely to be made. Furthermore, poor households may be forced to underspend on electricity/energy because of more pressing needs. Thus, some researchers and policy-setters advocate estimation of a reasonable level of energy expenditures and comparison of these to income levels.

I do not have a particular preferred measurement methodology. However, relatively simple approaches, that take into account, at a minimum, income levels, and reasonably required energy expenditures would seem to be a provide an appropriate overall direction. Please also see, Information Request PUB/Yatchew – 7 and the attachments thereto.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA

COALITION/IEC (YATCHEW) - 3

Tab and Appendix:	Yatchew Expert Testimony	Page No. (and line no. if applicable):	Page 39
Topic:	Energy Poverty		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

At lines 10-13, Dr. Yatchew states: “Transfers come from the public purse, rather than from other ratepayers. Increases in electricity prices would be reflected in the escalation factors embedded in income supports, if these factors are properly calibrated” (emphasis added).

At lines 15-18, Dr. Yatchew states: “A counter-argument can be put forth that in complex societies, multiple mechanisms are needed to protect the poor and disadvantaged. A social safety net which has multiple intersecting and reinforcing strands, is required to ensure that individuals and families do not ‘fall through’”.

Question:

- a) Please clarify what is meant by “if these factors are properly calibrated”.
- b) Please discuss what other “mechanisms” Dr. Yatchew was referring to at lines 15-18 and whether Dr. Yatchew has any preferences as to which “mechanisms” (over and above direct government transfers) are more appropriate.

Rationale for Question:

To clarify Dr. Yatchew’s views on mechanisms for assisting low income households

RESPONSE:

- a) Income supports, intended to permit a sufficient level of income, arguably need to take into account variability in cost of living across locations, as well as unexpected or large price increases in commodities which comprise a basic basket of consumption goods. Escalation rates are usually slow to respond to price changes, which may lead to distress. It is this calibration challenge that is often not successfully met, for budgetary or other reasons: there is a recalibration time-lag. Nevertheless, there is a defensible argument for the position that individuals and families should be provided with a certain level of income support, and beyond that they should be free to make their decisions on how to spend it.
- b) Alternatively, one could argue that society needs to ensure that there is adequate access to certain goods deemed to be essential. Education and healthcare are widely accepted to be in this category. Other goods have also had specific programs developed to promote adequate access. These include food (food stamp programs), housing (rent controls and public support for mixed housing developments) and energy (energy poverty initiatives). Some of these have had mixed success, and in certain instances, have led to unintended consequences.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA

COALITION/IEC (YATCHEW) - 4

Tab and Appendix:	Yatchew Expert Testimony PUB MFR 53, Attachment 1	Page No. (and line no. if applicable):	Page 32 Page 17
Topic:	Economic Outlook - GDP		
Sub Topic:			
Issue:			

Preamble to IR (If Any):**Question:**

- a) Please comment on the reasonableness of assuming 2%/annum growth in Manitoba GDP for the next decade for purposes of forecasting Manitoba Hydro's load growth.

Rationale for Question:

To obtain Dr. Yatchew's views on the reasonableness of Manitoba Hydro's outlook for Manitoba GDP.

RESPONSE:

- a) A value of 1.8% to 2.0% average rate of growth, would appear to be reasonable. The main risk to this forecast is the possibility of a recession in the upcoming years. We are in the ninth year of an expansion so that a recession may not be far off.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA

COALITION/IEC (YATCHEW) - 5

Tab and Appendix:	Yatchew Expert Testimony PUB MFR 53, Attachment 1	Page No. (and line no. if applicable):	Page 47 Page 18
Topic:	Economic Outlook – Exchange Rates		
Sub Topic:			
Issue:			

Preamble to IR (If Any):**Question:**

- a) Please comment on the reasonableness of Manitoba Hydro's most recent US/Canada exchange rate forecast as provided in PUB MFR 51, Attachment 1.

Rationale for Question:

To obtain Dr. Yatchew's views on the reasonableness of Manitoba Hydro's outlook for US/Canada exchange rates.

RESPONSE:

- a) Manitoba Hydro is projecting that the Canadian dollar will rise to 0.87 cents U.S. by 2021. Given the close linkage between oil prices and the Canadian exchange rate (see Figure 12, page 46 of the report) and the erosion of OPEC market power as a result of the shale revolution (see Section B.3, pages 8-11 of the report) this projection may be high. A lower Canadian dollar increases export revenues to Manitoba Hydro.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA

COALITION/IEC (YATCHEW) - 6

Tab and Appendix:	Yatchew Expert Testimony	Page No. (and line no. if applicable):	Page 52
Topic:	Impact of Rate Increases		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

At page 52 Dr. Yatchew concludes:

“The projected rate increases are likely to have a modest net effect on aggregate Manitoba output in the long-run, though there could very well be job losses and reduced output in the short-run. The immediate main effects will be distributional, impacting low income households and remote and First Nations communities more strongly. Such increases may also lead to structural changes in industry with the largest impacts on electricity intensive enterprises. Neither of these consequences constitute a basis for keeping rates inappropriately low for all purchasers, as there are superior mechanisms for handling distributional impacts in residential, commercial and industrial sectors”. (emphasis added)

Question:

- a) Please clarify what is meant by “a modest net effect on aggregate Manitoba output in the long-run”.
- b) For each of the three sectors (residential, commercial and industrial) please outline what Dr. Yatchew considers to be the “more superior mechanisms” for handling the distributional impacts of Manitoba Hydro’s future rate increases.

Rationale for Question: To clarify Dr. Yatchew's concluding observations.

RESPONSE:

- a) The intent of this statement is that, market economies respond to price shifts, by redeploying resources, substituting other inputs, and in time, returning to full employment. To estimate the longer-term growth impact on Manitoba would require a general equilibrium analysis. However, to provide some perspective, the doubling of oil prices in the late 1970s is estimated to have cumulatively lowered U.S. GDP by 3% (paragraph 114, page 42 of the report).

In the short term, large increases in electricity prices, if they lead to closure of one or another electricity intensive enterprise, could result in significant increases in unemployment in affected communities.

- b) Distributional impacts are better handled by targeted programs rather than keeping prices artificially low for all customers. Residential customer impacts can be mitigated either through income support programs which take into account cost of living changes; or through programs which identify households that are in energy poverty, and provide assistance with their electricity bills. Industrial customers that are at risk of leaving and have high electricity usage, can be incentivized to remain through selective governmental initiatives such as tax breaks and other concessions. Such approaches do not impair price signals, and target affected parties. Given the broader community and societal benefits (through job retention and GDP effects) there is an argument that such costs fall in the governmental realm. If entities in the commercial sector can demonstrate that they are severely affected and are likely to depart Manitoba, there may be justification for providing some form of relief as well.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA

COALITION/IEC (YATCHEW) - 7

Tab and Appendix:	Yatchew Expert Testimony	Page No. (and line no. if applicable):	Page 35 Paragraph 93(c)
Topic:			
Sub Topic:			
Issue:			

Preamble to IR (If Any):

Question:

- a) Could Dr. Yatchew explain how his recommendation for "rate smoothing" differs from Manitoba Hydro's proposed increases of 7.9% for six years followed by 4.54% for one year, i.e. would he recommend lower rate increases than 7.9% over the next two or more years? If so, how much lower?

Rationale for Question:

RESPONSE:

- a) The projected rate increase in each of the next six years is more than twice the increases in the recent past. Cumulatively this will result in a about a 50% increase in real electricity prices over the next decade. I have not arrived at a specific recommendation on rate increases. However, in general terms, I would prefer a ramped sequence, which if possible, is linked to demonstrated productivity improvements.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA

COALITION/IEC (YATCHEW) - 8

Tab and Appendix:	Yatchew Expert Testimony	Page No. (and line no. if applicable):	Page v, Footnote 1
Topic:			
Sub Topic:			
Issue:			

Preamble to IR (If Any):

Dr. Yatchew states that: "Ontario has experienced electricity price increases in excess of 50% since 2009. Notwithstanding these increases, and the fluctuations in exchange rates, the Ontario economy continued to grow and the manufacturing share remained steady at about 13% of Provincial GDP."

Question:

- a) Please provide any analysis undertaken on whether the electricity price increases in Ontario affected the rate of growth relative to potential.

Rationale for Question:

RESPONSE:

- a) No analysis was conducted which would attempt to project Ontario GDP growth rates in the absence of the high electricity price increases.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA

COALITION/IEC (YATCHEW) - 9

Tab and Appendix:	Yatchew Expert Testimony Daymark Load Forecast Review	Page No. (and line no. if applicable):	Page 33-36
Topic:			
Sub Topic:			
Issue:			

Preamble to IR (If Any):

At page 33 of its Load Forecast Review, Daymark found that “some of the elasticities reported by MH may be incorrectly estimated for different reasons.”

Question:

- a) Does Dr. Yatchew concur with Daymark’s findings (pages 33-36) that Manitoba Hydro incorrectly estimated some of the price elasticities?
- b) Please comment on how, if at all, Daymark's finding that some of the elasticities reported by Manitoba Hydro may be incorrectly estimated for different reasons would affect Dr. Yatchew's conclusions.

Rationale for Question:

RESPONSE:

- a) The Daymark report which reviews the load forecasting methodology raises valid points. Testing the robustness of results to alternative specifications is a useful and informative exercise. Rather than thinking of ‘correct’ and ‘incorrect’ models, it is preferable to ask which specification(s) are the best in informing the questions at hand, in this case elasticities of response. Based on my review of the literature, I

would be inclined to use more negative price elasticities than those proposed by Manitoba Hydro.

- b) I have not relied to any significant degree on Manitoba Hydro estimates to arrive at my proposed benchmark elasticities. Therefore, a critique of their methodologies does not alter my conclusions.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: NA