

CAC Manitoba: Exhibit CAC# 58
NFAT Review

Document

Harvey Stevens and Wayne Simpson, Powerpoint Presentation: *Impact of Electricity Rate Increases on Low Income Households in Manitoba*, April 23, 2014

IMPACT OF ELECTRICITY RATE INCREASES ON LOW INCOME HOUSEHOLDS IN MANITOBA

- **THE PRIMARY PURPOSE OF THIS PRESENTATION:**
 - SHOW THE IMPACT OF THE PROPOSED ELECTRICITY RATE INCREASES(1) ON THE LOW-INCOME HOUSEHOLDS OF MANITOBA.

- BY WAY OF PRESENTING THOSE IMPACTS, THIS PRESENTATION WILL FIRST SHOW,
 - HOW THE SPENDING PATTERNS OF LOW INCOME HOUSEHOLDS COMPARE TO NON-LOW INCOME HOUSEHOLDS;
 - HOW THE REAL, INFLATION-ADJUSTED ELECTRICITY RATES HAVE VARIED BETWEEN 2000 AND 2013 IN MANITOBA;
 - THE EFFECT OF THOSE VARIATIONS IN ELECTRICITY RATES ON THE CONSUMPTION PATTERNS OF MANITOBAN HOUSEHOLDS BETWEEN 2000 AND 2009; AND,
 - IN LIGHT OF THOSE EFFECTS, WHAT IMPACT THE PROPOSED 4 PER CENT ANNUAL INCREASES IN ELECTRICITY RATES BETWEEN 2015 AND 2032 WILL HAVE ON LOW-INCOME HOUSEHOLDS IN MANITOBA.

DATA SOURCES FOR THE STUDY

▪ DATA SOURCES:

1. STATISTICS CANADA'S ANNUAL SURVEYS OF HOUSEHOLD SPENDING FOR 2000 TO 2009.
 - CONTAIN DATA ON THE SPENDING PATTERNS OF OVER 13,000 MANITOBA HOUSEHOLDS ALONG WITH INFORMATION ON HOUSEHOLD INCOME, DEMOGRAPHIC COMPOSITION, LOCATION (WPG./NON-WPG.), TYPE OF HOUSING.
2. STATISTICS CANADA LOW-INCOME MEASURE THRESHOLDS FOR HOUSEHOLDS (2000 to 2009)
3. MB. HYDRO'S HISTORICAL RESIDENTIAL ELECTRICITY RATES SCHEDULE.
 - FROM APRIL 1, 1997 TO MAY 1, 2013.
4. SUPPLEMENTARY INFORMATION PROVIDED BY MB. HYDRO ON:
 - DISTRIBUTION OF RESIDENTIAL CUSTOMERS BY MONTHLY BASIC CHARGE & ENERGY USE. (Sources: CAC/MH I – 190, CAC/MH II – 124, CAC/MH II – 125)
 - AVERAGE ANNUAL ELECTRICAL USAGE FOR ELECTRIC-HEAT AND NON-ELECTRIC HEAT BILLED CUSTOMERS IN WINNIPEG AND OUTSIDE WINNIPEG.
(Sources: CAC/MH I – 191b, CAC/MH I – 192b)

METHODOLOGY OF THE STUDY

■ KEY VARIABLES:

- HOUSEHOLD CONSUMPTION ITEMS AS A PER CENT OF TOTAL HOUSEHOLD CONSUMPTION; E.G. ELECTRICITY/FOOD/CLOTHING/SHELTER/TRANSPORTATION AS A PER CENT OF TOTAL CONSUMPTION.
- HOUSEHOLD BALANCE = $\frac{(\text{HOUSEHOLD AFTER-TAX INCOME} - \text{TOTAL CONSUMPTION})}{\text{TOTAL CONSUMPTION}} \times 100$.

IT CAN BE POSITIVE OR NEGATIVE, DEPENDING ON WHETHER THE HOUSEHOLD SPENT MORE OR LESS THAN IT RECEIVED.

■ HOUSEHOLD LOW-INCOME STATUS:

- (1) HOUSEHOLD INCOME IS BELOW THE LOW INCOME LINE;
- (2) HOUSEHOLD INCOME IS BETWEEN 1.0 AND 1.5 X THE LOW-INCOME LINE;
- (3) HOUSEHOLD INCOME IS MORE THAN 1.5 X LOW-INCOME LINE.
- AVERAGE ANNUAL PRICE OF ELECTRICITY (\$ PER 100 kWh), EXPRESSED IN 2009\$
- ANNUAL CONSUMER PRICE INDEX OF EACH CONSUMPTION ITEM, EXPRESSED IN 2009\$

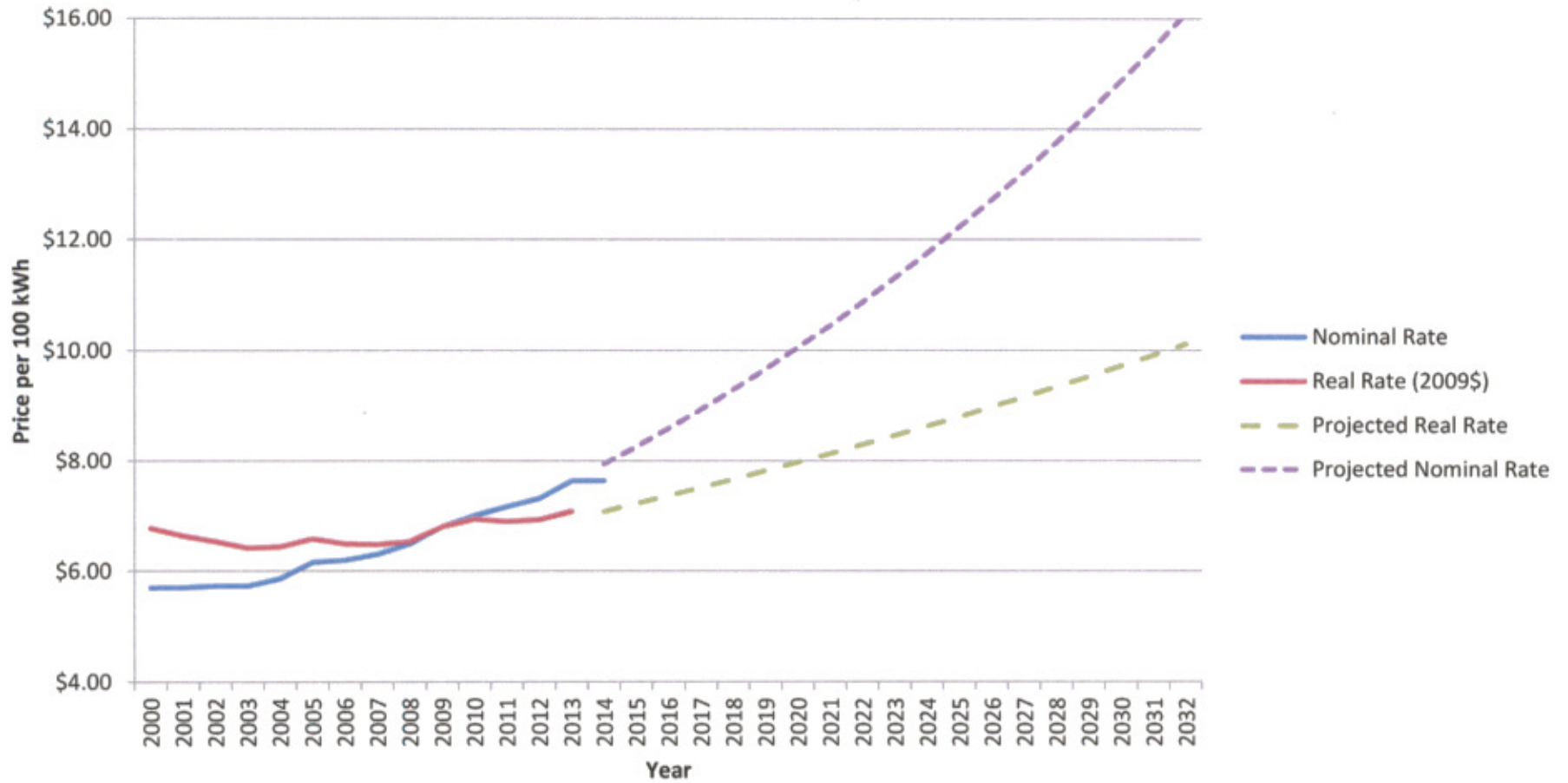
■ METHODOLOGY:

- REGRESSION ANALYSIS – ANALYZES THE OBSERVED CORRELATION BETWEEN AN OUTCOME VARIABLE OF INTEREST (e.g. Household Balance) AND ONE OR MORE PREDICTOR VARIABLES (e.g. price of electricity or household income) AND DETERMINES THE IMPORTANCE OF EACH PREDICTOR VARIABLE IN BEST EXPLAINING THE VALUES OF THE OUTCOME VARIABLE.

CONSUMPTION PATTERNS OF LOW- AND NON LOW-INCOME HOUSEHOLDS PER CENT SPENT ON ITEM.

Consumption Item	Low-Income	Near Low-Income	Higher Income	Elasticity
Food Purchased from Stores	15.7%	13.5%	10.4%	0.54
Electricity	3.1%	2.7%	2.1%	0.59
Health Care	4.3%	4.3%	3.6%	0.66
Shelter –Principal Residence (Excludes Electricity, Includes heat)	24.3%	21.8%	19.4%	0.70
Household Operations	7.4%	7.0%	6.5%	0.82
Reading	0.6%	0.6%	0.7%	0.87
Tobacco & Alcohol	4.1%	3.7%	3.1%	0.88
Personal Care	2.3%	2.3%	2.2%	0.93
Clothing	4.8%	5.3%	5.8%	1.17
Hhld. Equipment & Furnishings	3.3%	3.6%	4.4%	1.31
Recreation	6.2%	7.2%	9.3%	1.34
Transportation	15.1%	18.8%	21.4%	1.50
Education	2.2%	1.7%	2.1%	3.83
Household Balance	-13%	+3%	+26%	Not applicable

ACTUAL AND PROJECTED ELECTRICITY RATES



IMPACT OF A 2 PER CENT REAL INCREASE IN ELECTRICITY RATES ON HOUSEHOLD CONSUMPTION PATTERNS AND OVERALL BALANCE - MODEL A
(Percentage Change in Share of Total Consumption)

Consumption Item	Low-Income	Near Low-Income	Higher Income
Food Purchased from Stores	-0.03	-0.29	-0.01
Electricity	+0.05	+0.01	+0.07
Health Care	+0.11	+0.04	+0.01
Shelter - Principal Residence (Excludes Electricity)	-0.64	+0.41	+0.29
Household Operations	+0.23	+0.00	-0.07
Reading	0.00	+0.01	-0.02
Tobacco & Alcohol	+0.46	-0.27	-0.22
Personal Care	+0.10	+0.04	+0.02
Clothing	-0.06	+0.02	+0.03
Hhld. Equipment & Furnishings	+0.16	-0.03	0.00
Recreation	+0.17	-0.06	-0.03
Transportation	-0.30	-0.20	-0.06
Education	-0.51	-0.19	-0.09
Household Balance	-0.11	-0.49	+0.33

IMPACT OF A 2 PER CENT REAL INCREASE IN ELECTRICITY RATES ON HOUSEHOLD CONSUMPTION PATTERNS AND OVERALL BALANCE - MODEL B
(Percentage Change in Share of Total Consumption)

Consumption Item	Low-Income	Near Low-Income	Higher Income
Food Purchased from Stores	+0.16	-0.34	-0.07
Electricity	+0.05	+0.01	+0.07
Health Care	+0.06	+0.12	0.00
Shelter - Principal Residence (Excludes Electricity)	-0.63	-0.06	-0.04
Household Operations	+0.17	+0.01	-0.07
Reading	-0.04	0.00	-0.02
Tobacco & Alcohol	+0.48	+0.12	-0.15
Personal Care	+0.11	+0.06	+0.04
Clothing	-0.05	+0.01	+0.02
Hhld. Equipment & Furnishings	+0.23	-0.07	+0.01
Recreation	+0.16	-0.07	-0.03
Transportation	-0.42	-0.10	-0.04
Education	-0.11	+0.07	-0.05
Household Balance	-2.88	-2.27	+1.75

SUMMARY AND CONCLUSIONS

1. Electricity is a basic necessity for low income households in Manitoba, comprising a larger share of their total consumption than for higher-income households.
2. Real electricity rates have varied in Manitoba between 2000 and 2013, first falling between 2000 (\$6.78 per 100 kWh) and 2004, then remaining fairly flat between 2004 and 2007 and then rising to above their 2000 level by 2013 (\$7.08 per 100 kWh). The proposed annual 2 per cent real increases in rates will see the price of electricity rise to \$10.12 by 2032.
3. The impacts of increases in the real price of electricity on low-income households in Manitoba between 2000 and 2009 were several:
 1. First, electricity's share of the household's total consumption increased;
 2. Second, households shifted their consumption away from shelter, transportation, education, clothing and reading and more to the remaining consumption items.
 3. The household's overall balance became more negative.
4. The proposed 2 percent real increase in electricity rates over the 2015 to 2032 period will result in low-income households spending more on electricity and facing even larger operating deficits than they currently do.