OPTIONS TO ELIMINATE SEASONAL RATES

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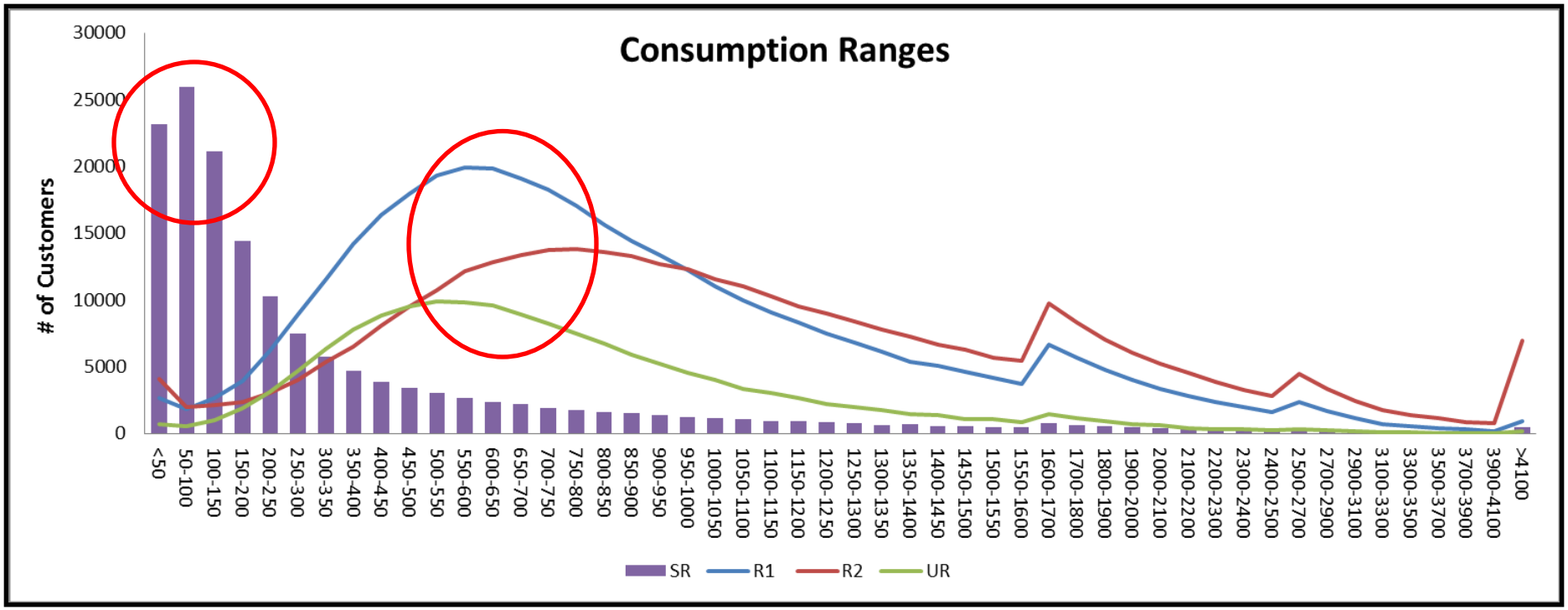
OEB Direction

- In EB-2013-0416 Decision OEB determined the Seasonal customer classification is no longer justified.
- Hydro One to bring forward a plan for the elimination of the seasonal class by August 4, 2015.
- Plan should propose a phase-in period for those customers expected to experience a total bill impact of greater than 10% as a result of migrating to another class.
- OEB will conduct a hearing to examine the rate mitigation issues in the plan with the intent to implement the initial rate changes January 1, 2016.

Seasonal Class



Monthly Consumption	# of Customers
<50	23,140
50-100	25,954
100-150	21,117
150-200	14,382

Consumption Range	# of Customers
200-400	28,120
400-800	21,205
800-1200	9,762
>1200	10,810

Breaking up the Seasonal Class

- Seasonal customers included as part of Density Review and included in defining density zones
- 2016 forecast Seasonal customers by density class

  R2: 83,900 R1: 70,300 UR: 270 TOT: 154,490

Consumption Range

	0-50	50-100	100-150	150-200	200-400	400-800	800-1200	1200-1600	>1600
S R1%	13	16	14	9	19	15	7	3	3
S R1#	9300	11300	9600	6600	13400	10600	4800	2300	1900
S R2%	16	17	14	9	17	13	6	3	4
S R2#	13800	14600	11500	7800	14700	10600	5000	2800	3700

Cost Allocation

- 2016 model updated to reflect Board Decisions
  - Includes all changes approved for 2015 model
  - Updated for 2016 revenue requirement
  - “Seasonal Status Quo”
- 2016 model updated to reflect elimination of the Seasonal class
  - Updated # of customers and kWh for UR, R1 and R2 to include Seasonal customer values
  - Updated load profiles for “new” residential rate classes
  - “Seasonal Eliminated”

Cost Allocation Model (CAM) Results

Seasonal Status Quo

	UR	R1	R2	S	GSe	GSd	UGe	UGd	StLg	SnLg	USL	DG	ST
Rev *	101.5	338.7	514.9	115.1	162.5	127.7	20.2	27.0	11.7	7.0	3.6	2.8	47.5
Cost	80.5	285.0	557.2	110.8	160.1	148.4	22.6	31.1	13.2	7.7	2.9	6.6	54.3
R/C	1.26	1.19	**0.92**	1.04	1.02	**0.86**	0.89	**0.87**	0.88	0.90	1.23	0.43	0.88

* 7.3% uniform increase to rates required to match 2016 costs

Seasonal Eliminated

	UR	R1	R2	S	GSe	GSd	UGe	UGd	StLg	SnLg	USL	DG	ST
Rev *	100.9	370.8	601.4	-	161.3	126.8	20.0	26.8	11.6	7.0	3.6	2.8	47.2
Cost	79.5	313.9	631.0	-	161.8	154.3	22.9	32.2	13.1	7.7	2.9	6.5	54.2
R/C	1.27	1.18	**0.95**	-	1.00	**0.82**	0.87	**0.83**	0.88	0.90	1.23	0.43	0.87

* 6.5% uniform increase to rates required to match 2016 costs

Impacts of Eliminating Seasonal Class

Rate Class	Typical Monthly Consumption (kWh/kW)	Seasonal Status Quo Change in Total Bill 2015-2016		Seasonal Eliminated Change in Total Bill 2015-2016	
		$	%	$	%
UR	800	($0.37)	-0.3%	($0.95)	-0.7%
R1	800	$1.04	0.6%	$0.88	0.5%
R2	800	$5.85	3.2%	$5.20	2.8%
S to UR	400	$4.23	3.6%	($34.76)	-29.4%
S to R1	400	$4.23	3.6%	($20.91)	-17.7%
S to R2	400	$4.23	3.6%	$26.96	22.8%
GSe	2,000	$9.36	2.3%	$8.14	2.0%
UGe	2,000	$7.45	2.2%	$7.11	2.1%
GSd	35000/120	$288.99	4.3%	$326.66	4.9%
UGd	35000/120	$155.28	2.6%	$171.88	2.9%

Seasonal to R2 Impacts

Breakout of impacts on Seasonal customers moving to R2 rate class

kWh	# of Cust	2015 Monthly Bill	2016 Monthly Bill	Change $	Change %
50	13,800	42.22	78.44	36.22	85.8
100	14,600	53.09	87.99	34.90	65.7
150	11,500	63.97	97.54	33.58	52.5
200	7,800	74.84	107.10	32.25	43.1
400	14,700	118.34	145.30	26.96	22.8
800	10,600	205.34	221.71	16.37	8.0
1,200	5,000	292.33	298.12	5.79	2.0
2,000	4,300	466.32	450.94	-15.39	-3.3

Bill Impact Mitigation

- No impact mitigation required for Seasonal moving to UR and R1 residential rate classes
- Mitigation required for Seasonal moving to R2
- Mitigation options considered:
    1. “Phase-in Via Credits”: move to full R2 rates in 2016 and apply credits to limit impacts to 10%
    2. “Phase-in Rates Over 8 Years”: move to R2 fixed rates over 8 years

Phase-in Via Credits

2015 Rates	
S	F=$28.62 V=$0.0764/kWh
R2	F=$65.52 V=$0.0424/kWh

2016 Rates	
S	F=$65.52 V=$0.0493/kWh
R2	F=$65.52 V=$0.0493/kWh

Seasonal to R2 Bill Impacts

kWh	2015 Total Bill	2016 Total Bill	Change 15 to 16	% Change	2016 Mitigated Bill (2015 + 10%)	Bill Credit to Limit Impact to 10%
50	42.22	78.44	36.22	85.8	46.44	32.00
100	53.09	87.99	34.90	65.7	58.40	29.59
150	63.97	97.54	33.58	52.5	70.36	27.18
200	74.84	107.10	32.25	43.1	82.34	24.77
400	118.34	145.30	26.96	22.8	130.17	15.13
600	161.84	183.50	21.67	13.4	178.02	5.48
800	205.34	221.71	16.37	8.0	224.87	0
2000	466.32	450.94	-15.39	-3.3	512.95	0

Option 1: Phase-in Via Credits

- Credits required until 2021 for lowest consumption, shorter period for higher consumption
- Use of average consumption for customers in 0-150 kWh range (i.e. 75 kWh) would result in a 2016 credit of $30.80
  - This is within +/- $3 of credits for all customers within range and would shorten mitigation period to 2020

Consumption Range	2016 Credit	2017 Credit	2018 Credit	2019 Credit	2020 Credit	2021 Credit
50	$32.00	$27.36	$22.25	$16.63	$10.45	$3.65
100	$29.59	$23.75	$17.33	$10.26	$2.49	
150	$27.18	$20.14	$12.40	$3.89		
200	$24.77	$16.54	$7.48			
400	$15.13	$2.11				
600	$5.48					
Monthly Credit	$1.8M	$1.3M	$0.9M	$0.6M	$0.3M	$0.1M

Option 1: Phase-in Via Credits

How to fund the credits paid to Seasonal R2 customers?

- Fund monthly credits via *monthly debits* to formerly Seasonal in all residential rate classes that would otherwise see bill impacts of less than 10%

E.g. Formerly Seasonal moving to R1

kWh	2015 Total Bill	2016 Total Bill	Bill Debit to Bring S R2 Impacts to 10%	2016 Mitigated Bill
50	42.22	36.92	7.14	44.06
400	118.34	97.43	24.56	121.99
800	205.34	166.58	44.47	211.05

Option 1: Phase-in Via Credits

PROS:

- Easy to communicate to customers
- Impacts of eliminating Seasonal class clearly visible to customers
- Credits targeted to *only* those Seasonal R2 customers that need them
- Shortest possible phase-in period by maintaining 10% impacts until Seasonal rates fully integrated
- Phase-in costs shared among all formerly Seasonal customers

CONS:

- Some complexities with administering credits / debits
- Delays full benefits for Seasonal customers moving to medium and high density year-round residential rate classes

Option 2: 8-Year Phase-in of Rates

2015 Rates	
S	F=$28.62 V=$0.0764/kWh
R2	F=$65.52 V=$0.0424/kWh

2016 Rates	
S	F=$33.23 V=$0.0556/kWh
R2	F=$65.52 V=$0.0556/kWh

Seasonal to R2

kWh	2015 Total Bill	2016 Total Bill	Change 15 to 16	% Change
50	42.22	45.92	3.71	8.8
100	53.09	55.80	2.70	5.1
150	63.97	65.67	1.70	2.7
200	74.84	75.54	0.70	0.9
400	118.34	115.02	-3.32	-2.8
800	205.34	194.00	-11.34	-5.5
1200	292.33	272.97	-19.36	-6.6
2000	466.32	430.91	-35.41	-7.6

Option 2: 8-Year Phase-in of Rates

PROS:

- Easy to communicate to customers
- Easy to implement

CONS:

- Disproportionate impacts across Seasonal R2 customers, with bill reductions for high volume Seasonal R2 customers while other seasonal within class see bill increases
- Year-round R2 residential customers “funding” the reduced fixed charges applicable to Seasonal R2 customers via higher variable charges may not be perceived as fair
- Seasonal customers in medium and high density residential rate classes see largest benefits as a result of eliminating Seasonal class but do not contribute to mitigation of bill impacts
- Impacts of eliminating Seasonal class not clearly visible to customers

Option 2b: 8-Year Phase-in (modified)

	2016	2017	2018	2019	2020	2021	2022	2023
R2 Fixed ($/mnth)	65.52	65.52	65.52	65.52	65.52	65.52	65.52	65.52
S-R2 Fixed ($/mnth)	33.23	37.84	42.45	47.06	51.67	56.28	60.89	65.52
Fixed charge lost revenue	$2.7M	$2.3M	$1.9M	$1.5M	$1.1M	$0.7M	$0.3M	$0
Variable (c/kWh)	5.555	5.466	5.376	5.287	5.198	5.108	5.019	4.929

- Instead of increasing variable charge for all R2 class customers, recover fixed charge lost revenue from all formerly Seasonal customers
- Same “net” effect as credit approach to mitigation but more complex to communicate and impacts of eliminating Seasonal class not as clearly visible to customers

Mitigation Summary & Recommendation

Guiding Principles

- OEB Direction
- Prior experience with mitigating large bill impacts
- Fairness (cost causality, simplicity, lack of controversy)
- Provides for full recovery of utility's costs
- Can be efficiently administered

Recommend

Option	Key Features
1. Phase-in via credits	• Impacts phased in over 4 years for majority of customers and 6 years for lowest consumption • Credits only applied where required to reduce bill impacts to 10% • Phase-in costs funded by all formerly seasonal customers • Full impacts of moving to year-round residential and required mitigation fully visible to customers
2. Phase-in fixed rates	• Impacts phased in over 8 years • Reduced fixed charge provides phase-in benefits to all S R2 even if impacts are below 10% • Reduced fixed charges during phase-in funded via higher variable charges that impact all R2 customers
2a. Modified option 2.	• Same as option 2 except phase-in costs recovered via debits from all formerly seasonal customers

RRRP

OEB decision is that RRRP cannot be applied to customers that do no meet year-round residency status (e.g. formerly Seasonal)

- RRRP was formerly known as RRA, which began in 1982. From the outset RRA did not apply to Seasonal customers
- O.Reg.442/01 came into effect in 2001 and RRA became RRRP
- O.Reg.442/01 provides a credit only to customers using properties as a year-round residence, reflecting the practice established under RRA
- Hydro One's criteria for being classified as year-round residential (and therefore eligible for RRRP) is tied to confirming principle residence status
- This same "principle residence" approach is used by Algoma, Veridian and Nova Scotia Power for their Seasonal rate classes
- Hydro One has no plans to change its residency criteria

Feedback on Presentation

- Any questions of clarification?
- Are there other options?
- Are there other pros and cons associated with the options identified?
- What option do stakeholders prefer?
- Any other advice or considerations for August 4th report?

OPTIONS TO ELIMINATE SEASONAL RATES

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Guiding Principles

- OEB direction
- Fairness
- Minimize costs of the reclassification
- Minimize overall billing and meter reading costs while meeting customer needs

Billing and Meter Reading

Hydro One depends on both manual (36K) and automatically read (115K) meters to collect information for seasonal billing (151K customers*)

Manual Meter Reading Challenges:

- Accessibility: distance, terrain, island access, impassible roads in winter, inside meters, customer refusal, historical meter placement, locked gates

Cost: average of $31 per scheduled read (more for unscheduled)

Automated Meter Reading Challenges:

- Foliage: tree density, tree type and terrain can interrupt communication signals and prevent reads from being transferred on time
- Network Coverage: cost prohibitive to cover entire Hydro One service area
- Equipment Malfunction: assets that make up the smart meter network (e.g. pole top regional collectors, repeaters and smart meters) are electronic devices and are susceptible to failure

Cost: minimal incremental cost per read

Customer Billing Information:

- Paper Bills: Costs for paper stock, envelopes, postage and handling
- e-Billing: "paperless" billing with electronic bill images and bill inserts made available to store and/or print at customer preference

Cost: $2/paper bill issued
$0.30/e-bill issued

* Data as of May 2015

Scenarios Considered

Hydro One investigated three different scenarios for elimination of the Seasonal Rate class and movement of the customers into appropriate residential classes.

Scenario **A**	Retain Seasonal Billing and Meter Read Frequencies
Scenario **B**	Adopt Residential Billing and Meter Read Frequencies
Scenario **C**	Usage-Based Billing and Meter Read Frequencies as Levers to Manage Overall Billing and Meter Reading Costs

Scenarios Considered - A

SCENARIO A – RETAIN SEASONAL BILL/READ FREQUENCIES

- Move each seasonal class customer into the appropriate residential class – urban (UR), medium (R1) or low density (R2) – based on their specific density characteristics
- Retain the current default billing and meter reading frequencies associated with the existing seasonal class
  - Bill quarterly/read annually for manually read meters
  - Bill quarterly/read quarterly for automatically read meters

Change in Current Billing and Meter Reading Costs ($0M)

Pros	Cons
Maintains current seasonal bill and meter read frequencies which have not been identified as significant dis-satisfiers by seasonal customers	Seasonal customers with similar usage characteristics are treated differently than year round residential customers with respect to bill/read frequencies
Maintains billing and meter reading costs at current levels	Difficult to rationalize discrepancy in bill/read frequencies between seasonal and year round residential customers paying the same delivery rates

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Scenarios Considered - B

SCENARIO B – ADOPT RESIDENTIAL BILL/READ FREQUENCIES

- Move each seasonal class customer into the appropriate residential class – urban (UR), medium (R1) or low density (R2) – based on their specific density characteristics
- Adopt the current default billing and meter reading frequencies associated with the existing year round residential class
  - Bill monthly/read quarterly for manually read meters
  - Bill monthly/read monthly for automatically read meters

Billing and Meter Reading Costs Increase by ~$3.7M

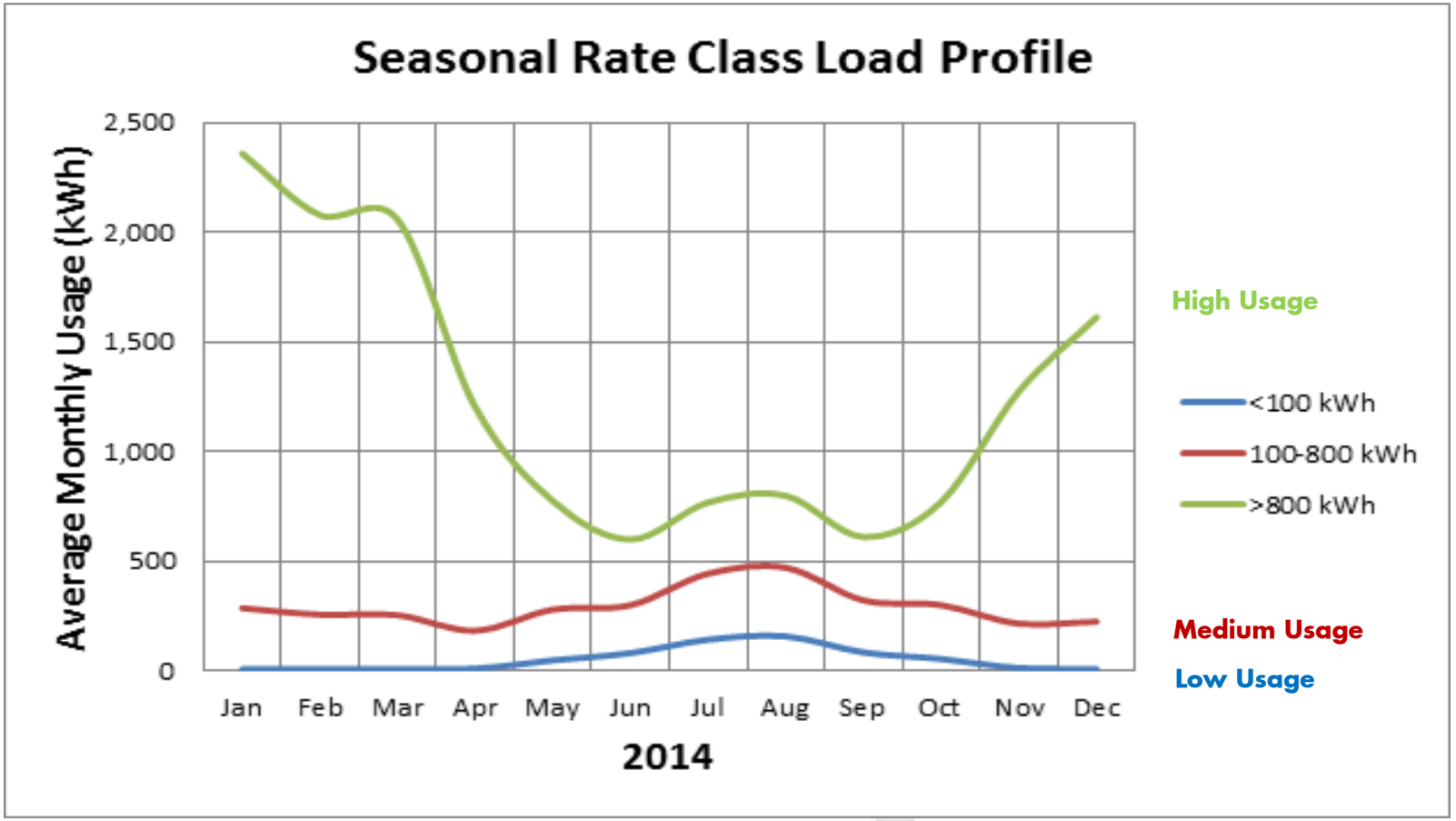
Pros	Cons
- High consumption seasonal customers likely to view increased bill/read frequencies positively	- Low consumption seasonal customers and those whose consumption is confined to a few consecutive months likely to view increased bill/read frequencies negatively
- All customers within the class who are paying the same delivery rate (seasonal and year round) have same bill/read frequencies	- Billing and meter reading costs increase significantly - Billing costs ≅ 150% - Meter reading costs ≅ 300%
	- Significant increase in call handling and exception handling costs since volume of bills is a driver of these activities
	- Significant increase in unplanned estimated bills due to accessibility of many seasonal meters during winter/spring

Scenarios Considered - C - Hybrid

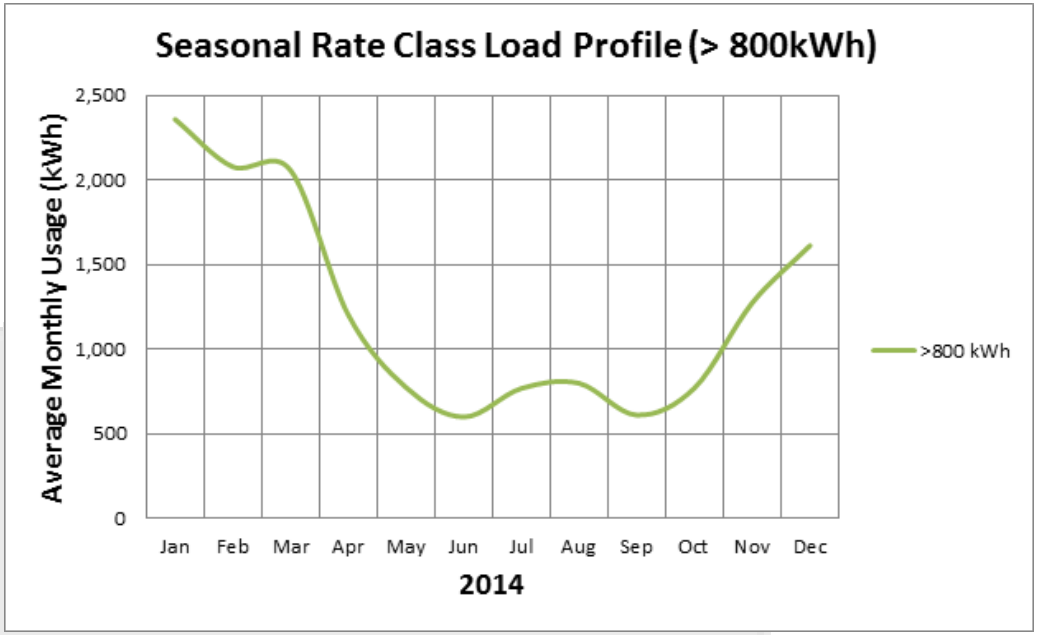
SCENARIO C – HYBRID

- Move each seasonal class customer into the appropriate residential class – urban (UR), medium (R1) or low density (R2) – based on their specific density characteristics
- Consider average monthly consumption and annual usage patterns, meter read method and availability/reliability in comparison to year round residential
- Use bill and meter read frequencies as levers to manage overall billing and meter reading costs
- Seasonal billing costs change from an increase of approximately $100K to a savings of up to approximately $400K depending on e-billing uptake

Scenarios Considered - C - Hybrid

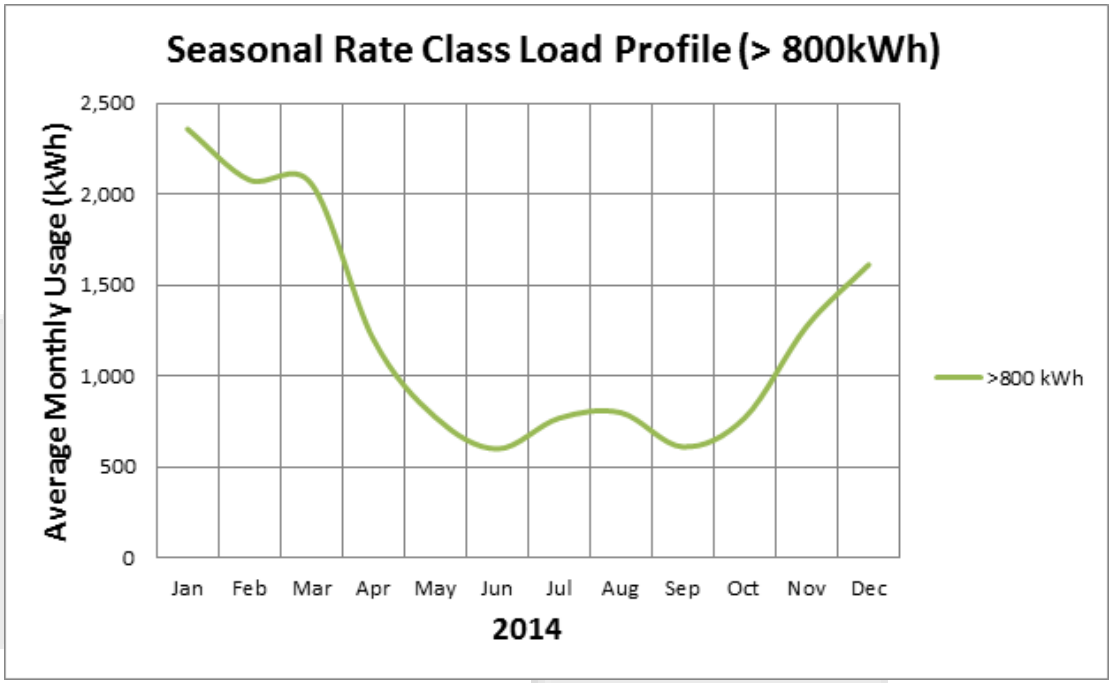


Seasonal Load Profiles – High Usage



- Represents 12% of all seasonal class customers (18K)
- 2K (11%) of these are read manually or have unreliable automated reads
- Annual electricity consumption is similar to average year round residential customers (800 kWhs/month)
- Load profile over the year is similar to year round residential customer without air conditioning load (higher usage in colder months – lower in warmer months)
- Load present throughout the entire year without any prolonged periods of zero usage

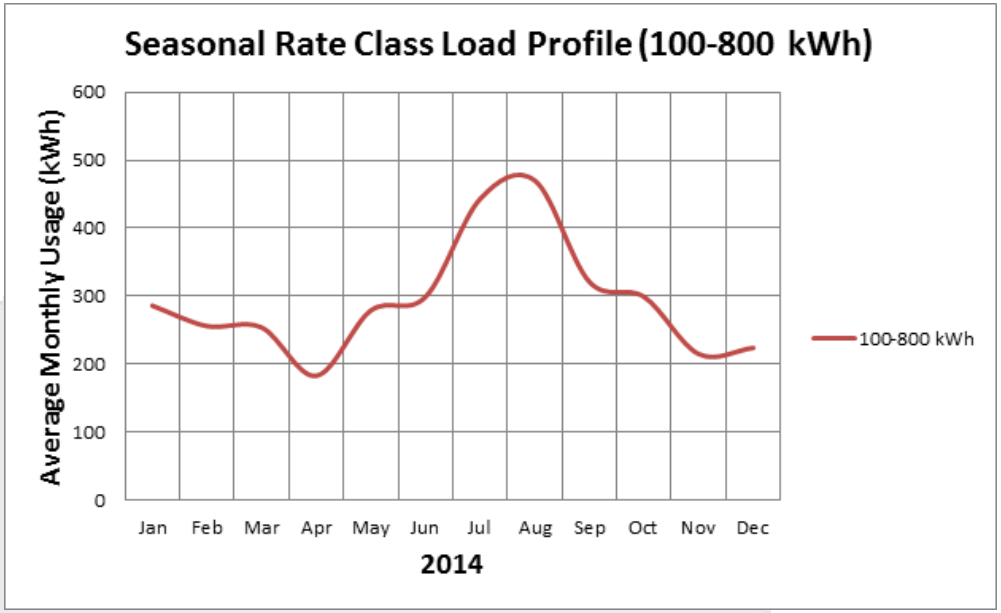
Seasonal Load Profiles – High Usage



Recommendation

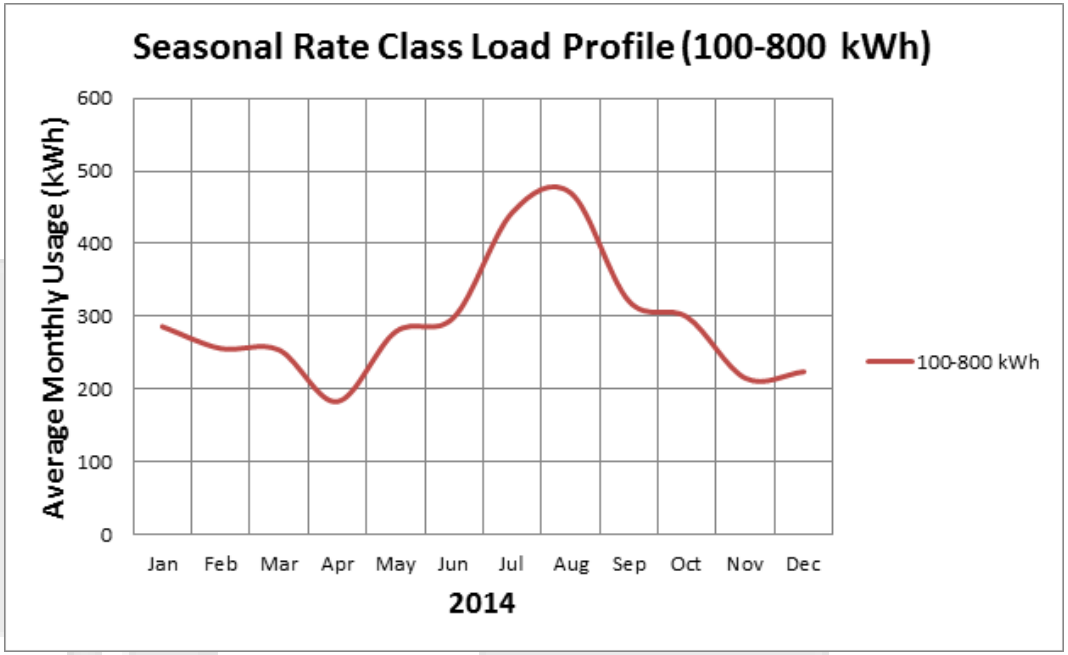
- Leave customers on existing seasonal billing frequency if paper based but move to residential billing frequency if on e-billing
- Increase manual meter read frequency to 4 times per year for TOU exempt customers
- Review eligibility for billing/meter read frequency on same frequency as Dx rate application

Seasonal Load Profiles – Medium Usage



- Represents 45% of all seasonal class customers (68K)
- 6K (9%) of these are read manually or have unreliable automated reads
- Annual electricity consumption is lower than average year round residential customers
- Load profile over the year is different than typical year round residential customer with usage climbing during May/June, peaking in July/August and dropping September/October to base winter level
- Load present throughout the entire year without any prolonged periods of zero usage

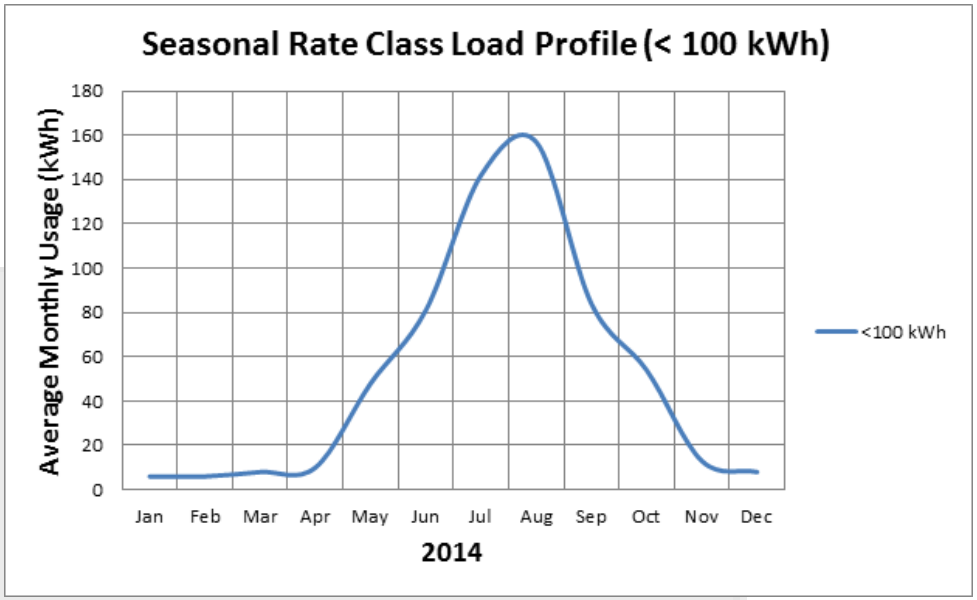
Seasonal Load Profiles – Medium Usage



Recommendation

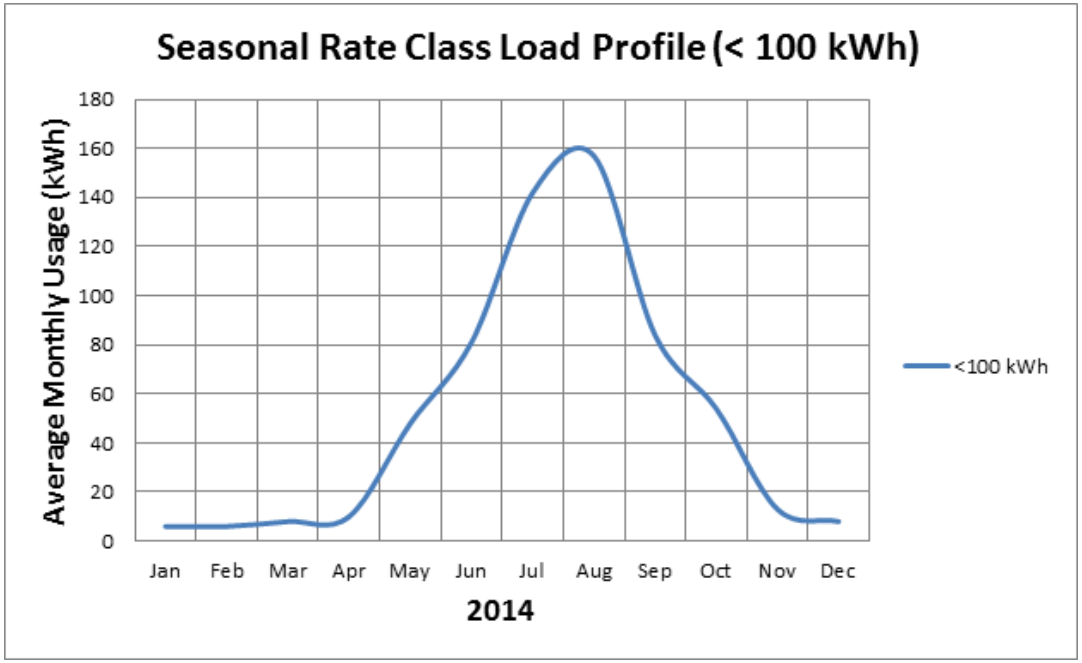
- Leave customers on existing seasonal billing and meter read frequency if paper based but move to residential billing frequency if on e-billing
- Review eligibility for billing/meter read frequency on same frequency as Dx rate application

Seasonal Load Profiles – Low Usage



- Represents 43% of all seasonal class customers (65K)
- 28K (43%) of these are read manually or have unreliable automated reads
- Electricity consumption is much lower than average year round residential customers
- Load profile over the year is the same pattern as medium usage seasonal, however the peak usage in July/August time period is less at 160 kWh/month (versus nearly 500 kWh) and the usage in the shoulder months drops dramatically to almost zero consumption at the base winter level (medium usage about 250 kWh/month in the same time period)
- Prolonged periods of zero or near zero usage during winter months

Seasonal Load Profiles – Low Usage



Recommendation

- Move customers to 2 bills and 1 read per year frequency if paper based but move to residential billing frequency if on e-billing
- Review eligibility for billing/meter read frequency on same frequency as Dx rate application

Proposed Bill and Meter Read Frequencies and Potential Savings Scenario C "Hybrid"

Average Monthly Usage	# of Seasonal Customers	# TOU & Non-TOU/Read Reliability Accounts	Bill / Read Frequency	Incremental Cost of Meter Reads	Incremental (Savings) of Paper Bills @ $2/bill	Incremental (Savings) of e-Bills @ $0.30/bill (based on 12 e-Bills/year)
> 800 kWh	18K	16K	12/12	Negligible	N/A	~($70,000)
			4/4	Status Quo	Status Quo	N/A
		2K	4/4	~$200,000	Status Quo	N/A
100 – 800 kWh	68K	62K	12/12	Negligible	N/A	~($273,000)
			4/4	Status Quo	Status Quo	N/A
		6K	4/1	Status Quo	Status Quo	N/A
< 100 kWh	65K	37K	12/12	Negligible	N/A	~($163,000)
			4/4	Status Quo	Status Quo	N/A
		28K	2/1	Status Quo	~($112,000)	N/A
TOTALS	**151K**	**151K**	**N/A**	**~$200,000**	**~($112,000)**	**~($506,000)**

Recommendation

Scenario C with the proposed bill and meter read frequencies is the recommended option for the following reasons:

1. Satisfies the guiding principles of: meeting OEB direction, fairness, minimizing costs of the reclassification and minimizing overall billing and meter reading costs while meeting customer needs
2. While billing and meter reading frequencies will differ within the rate class, they are driven by the following characteristics and may therefore be viewed as reasonable/supportable:
    - Customer usage level and pattern (year round or seasonal/summer loaded)
    - Billing method (paper bills vs e-bills)
    - Meter read method/reliability

Recommendation (cont'd)

Scenario C with the proposed bill and meter read frequencies is the recommended option for the following reasons:

3. Maximizes billing and meter reading frequencies within reasonable cost parameters . Billing and meter reading frequencies reviewed in conjunction with Dx rate applications

4. Reduces bill frequency to twice per year (notionally June and December) for low use seasonal customers – same frequency as pre-1998 and maintains annual meter read frequency

5. Although bill frequency is reduced for low use seasonal customers to twice per year, they can opt for e-billing to increase frequency

Feedback on Presentation

- Any questions of clarification?
- Are there other options?
- Are there other pros and cons associated with the options identified?
- What option do stakeholders prefer?
- Any other advice or considerations for August 4th report?

Conditions of Service

As part of the implementation of the OEB direction on the seasonal customers Hydro One will be updating our Conditions of Service.

Some examples:

Section 1.6: Customer Rights and Obligations:

No Charge Outage for Upgrade or Maintenance of Customer Equipment for Safety Reasons

> *Hydro One will, upon at least ten (10) days' prior notice from the Customer, once each calendar year during normal business hours, disconnect and reconnect the Customer's service without charge, for the Customer to upgrade or maintain Customer Equipment for safety reasons, including, but not limited to, the safe clearance of trees and vegetation from Customer lines.*

Hydro One will be amending the current Conditions of Service to ensure that the intent of this section (i.e. disconnect and reconnect for the purposes of safely upgrading or maintaining customer equipment) is reinforced

- Section 2.2.J: Disconnection and Load Control

Impact of OEB Move to "All-Fixed"

- Comparison of impacts from moving to all-fixed
- Seasonal customers moving to R1 with Seasonal eliminate only marginally better off than maintaining Seasonal Status Quo
- Seasonal customers moving to R2 with Seasonal eliminated are much better off with maintaining Seasonal Status Quo

kWh	2015 Total Bill	2016 Seasonal Status Quo Move to All-Fixed		2016 Seasonal Eliminated Move to R1 All-Fixed		2016 Seasonal Eliminated Move to R2 All-Fixed	
		Total Bill	% Change	Total Bill	% Change	Total Bill	% Change
50	42.22	70.12	66%	65.89	56%	128.11	203%
400	118.34	119.05	1%	114.01	-4%	177.42	50%
1000	248.83	202.94	-18%	196.5	-21%	261.95	5%