

1 **Q. With regard to the response to CA-NP-155:**

- 2
- 3 (a) **Is it accurate to state that customers on the Curtailable Service Option have**
- 4 **been interrupted on 12 occasions since January 1, 2008, and on only one**
- 5 **occasion the interruption was beneficial to the Island Interconnected System**
- 6 **in terms of improved reliability for other customers on the system? If not,**
- 7 **please explain how the customers on the Island Interconnected System**
- 8 **benefited from these interruptions.**
- 9
- 10 (b) **What is the purpose of the Curtailable Service Option? Is the treatment of**
- 11 **these customers consistent with treatment of interruptible customers in other**
- 12 **jurisdictions? Please provide examples.**
- 13
- 14 (c) **Please provide a list of the industries served by the customers on the**
- 15 **Curtailable Service Option.**
- 16

17 A. (a) Customers on the Curtailable Service Option (“CSO”) were requested to curtail

18 on 12 occasions since January 1, 2008. All of these requests with the exception of

19 one were initiated to minimize demand supply costs from Hydro. The exception

20 was a request from Hydro on December 17, 2008 to curtail load due to voltage

21 concerns on the Newfoundland east coast 230 kV system.

22

23 When curtailment requests are initiated solely in order to minimize demand

24 supply costs, there is no benefit in terms of improved reliability to customers on

25 the Island Interconnected System. Newfoundland Power’s customers may benefit

26 from lower demand supply costs through the operation of the Demand

27 Management Incentive (“DMI”) Account.

28

- 29 (b) The purpose of the CSO is to provide to customers that can reduce load during winter
- 30 peak demand periods a reduced rate that reflects the system benefits resulting from
- 31 the reduced winter peak demand.
- 32

33 Newfoundland Power’s CSO is similar in nature to the interruptible/curtailable

34 rates of other utilities. A comparison of interruptible/curtailable rates of electric

35 utilities in Canada and the United States is provided in the Rate Design Report,

36 Appendix D, *Utility Rates Survey* (beginning on page 21). The *Utility Rates*

37 *Survey* from the Rate Design Report is provided as Attachment A.

38

- 39 (c) The CSO participants include health care facilities, manufacturing/mining
- 40 facilities, municipal facilities, office facilities and facilities in the hospitality
- 41 industry.

Excerpt from Rate Design Report
Utility Rates Survey

Utility Rates Survey

Brockman Consulting

December 2008

PREPARED FOR STAKEHOLDER CONSULTATION

1.0 Introduction

As part of its comprehensive review of its rates, Newfoundland Power asked Brockman Consulting to survey electric utilities in Canada and the United States with regard to specific items of rate design.

As originally conceived, the project was to address investor-owned utilities that were winter peaking and obtained most of their energy from hydraulic generation (i.e., similar to the Island Interconnected System in Newfoundland and Labrador). As the project evolved, it was decided that the project scope was too narrow to obtain a sufficient sample of the rate design attributes of other electric utilities. The survey was expanded to include representation from each province in Canada and the larger of the investor owned utilities in most states. In some cases, relevant information from recent studies or public literature was also incorporated.

Information was collected on the rate structures of 15 electric utilities in Canada and 77 electric utilities in the United States. In total, these utilities serve approximately 106 million customers.¹

2.0 Data Collected

The information gathered focused on:

- General characteristics of the utilities (i.e., location, customers served, whether the utility is vertically integrated, had supplier options, self-generated, source of generation, was a winter peaking utility and whether fairness in rate design was based on marginal costs).
- Characteristics of Domestic rates (i.e., the amount of the monthly customer charge, whether customer charges apply the same to all customers in the class, the type of default Domestic energy structure, the block sizes where applicable, whether seasonal, time of day, or demand rates apply).

¹ The utilities in Canada serve almost 12 million customers, with the utilities in the United States serve approximately 94 million customers.

- Characteristics of Small General Service rates (i.e., whether different customer charges apply the same for single phase and three phase customers, the type of default structure, and the threshold at which demand charges apply).
- Characteristics of Medium and Large General Service rates (i.e., the type of rate design and whether the blocking structure is inclining, declining or flat).
- The use of time of day rates (i.e., the classes for which the rates are available, whether an additional charge applies to recovering increased metering costs, the energy price differential between costing periods, whether pilot projects are underway and whether time of day demand charge differentials exist).
- The availability of interruptible/curtailable, real-time-pricing and critical peak pricing. For interruptible/curtailable, information was also gathered on notice provisions, the use of failure penalties, the use of long-term contracts and the frequency of interruptions.

3.0 Results

The results of the information collected for each utility are included in this Appendix.² Where the utility has the rate attribute investigated a “y” for yes was provided in the corresponding field.

For jurisdictions where rates are unbundled, the customer charges provided for Canadian utilities include all fixed charges that apply to the Domestic customers’ bill (i.e., administrative charge, distribution access fee, etc.). The customer charges for the U.S. utilities with unbundled rates may not fully reflect all fixed charges that apply in determining a customers’ bill.

² The reader should note that in some cases it was difficult to reduce the results to simple yes or no answers anticipated by the survey, or even to capture all the characteristics of every rate a particular utility has, since there are so many variations that exist. Notes are provided in the survey results to provide clarification of the information provided.

General Characteristics										
Province/ State	Country	Customers (000s)	Vertically Integrated	Supplier Choice	Rates Unbundled	Primarily Hydraulic Generation	Primarily Generate Own Energy	Winter Peaking	Inter-Class Fairness on Marginal	Comments
AB	CA	197		y	y			y		
AB	CA	614		y	y			y		
AB	CA	600		y	y			y		
AB	CA	453		y	y			y		
BC	CA	1,700	y			y	y	y		1
BC	CA	155	y					y		
NB	CA	370					y	y		
NS	CA	460	y				y	y		
ON	CA	1,350		y	y					2
ON	CA	676		y	y					2
QC	CA	3,900	y			y	y	y		
MB	CA	522	y			y	y	y		
PE	CA	66	y					y		
NF	CA	232				y		y		
SK	CA	451	y				y	y		
	15	11,746	7	6	6	4	6	13	0	
			47	40	40	27	40	87	0	

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General Characteristics										
Province/ State	Country	Customers (000s)	Vertically Integrated	Supplier Choice	Rates Unbundled	Primarily Hydraulic Generation	Primarily Generate Own Energy	Winter Peaking	Inter-Class Fairness on Marginal	Comments
Alabama Power Company	AL	US	1,400	y			y			
Entergy Arkansas	AR	US	2,700	y			y			
Arizona Public Service (APS)	AZ	US	1,100	y	y		y			
Tucson Electric Power Co.	AZ	US	400	y			y			
Pacific Gas & Electric	CA	US	15,000						y	3,4
Pacific Power & Light (RMPC)	CA	US	44						y	3,4
SDG&E	CA	US	1,400						y	3,4
Southern California Edison	CA	US	13,000						y	3,4
Aquila	CO	US	94					y		
Public Service Company CO (Xcel)	CO	US	1,300					y		
Connecticut Light & Power	CT	US	1,200		y			y		
United Illuminating	CT	US	350		y			y		
Delmarva	DE	US	500		y			y		
Florida Power & Light	FL	US	4,400	y			y			
Gulf Power Company	FL	US	430	y			y			
Progress Energy Florida	FL	US	1,700	y			y			
Tampa Electric Company	FL	US	667	y			y			
Georgia Power Company	GA	US	2,330	y			y			
Interstate Power & Light Aliant)	IA	US	530					y		
MidAmerican (Iowa)	IA	US	631					y		
Idaho Power Company	ID	US	481					y		
Rocky Mountain Power	ID	US	64					y		
Commonwealth Edison	IL	US	5,200		y			y		5
MidAmerican (Illionois)	IL	US	85		y			y		
Duke Energy Indiana	IN	US	800					y		

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General Characteristics

	Province/ State	Country	Customers (000s)	Vertically Integrated	Supplier Choice	Rates Unbundled	Primarily Hydraulic Generation	Primarily Generate Own Energy	Winter Peaking	Inter-Class Fairness on Marginal	Comments
Indiana-Michigan Power	IN	US	454						y		
Indianapolis Power & Light	IN	US	465						y		
Kansas City Power & Light	KS	US	800								
Westar Energy (Kansas)	KS	US	674								
AEP (Kentucky Power)	KY	US	175								
Duke (Kentucky)	KY	US	134								
Kentucky Utilities	KY	US	485								
Louisville Gas & Electric	KY	US	401								
Entergy Louisiana	LA	US	640	y				y			
SWEPCO	LA	US	459								
Fitchburg Gas & Electric	MA	US	28		y	y			y		
National Grid	MA	US	1,200		y	y			y		
Nstar	MA	US	1,100		y	y			y		
Western Mass Electric	MA	US	200		y	y			y		
Baltimore Gas & Electric	MD	US	1,200		y	y			y		
PEPCO	MD	US	750		y	y			y		
Potomac Edison (Allegheny)	MD	US	225		y	y			y		
Bangor Hydro	ME	US	150		y	y			y		
Central Maine Power	ME	US	590		y	y			y		
Consumers Energy	MI	US	1,800		y	y			y		
Detroit Edison	MI	US	2,100		y	y			y		
Indiana-Michigan Power	MI	US	126		y	y			y		
Wisconsin Electric	MI	US	1,100		y	y			y		
Minnesota Power	MN	US	137						y		
Otter Tail Power	MN	US	128						y		
Ameren	MO	US	1,200						y		
Kansas City Power & Light	MO	US	800						y		
Entergy Mississippi	MS	US	427	y				y			
Mississippi Power	MS	US	184	y				y			
Dominion North Carolina	NC	US		y				y			

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General Characteristics										
Province/ State	Country	Customers (000s)	Vertically Integrated	Supplier Choice	Rates Unbundled	Primarily Hydraulic Generation	Primarily Generate Own Energy	Winter Peaking	Inter-Class Fairness on Marginal	Comments
NC	US	2,400	y				y			
NC	US	1,400	y				y			
ND	US	120						y		
NH	US	40		y	y			y		
NM	US	487		y	y		y			
NV	US	826		y			y			
OH	US	315		y	y			y		
OH	US	640		y	y			y		
OK	US	690		y	y			y		
OK	US	514		y	y			y		
OR	US	527								
PA	US	520		y	y			y		
PA	US	1,500		y	y			y		
SC	US	636		y	y			y		
SD	US	700								
TX	US	2,000		y	y					
TX	US	3,000		y	y					
VA	US	2,000		y	y			y		
VT	US	159						y		
WA	US	1,200								
WI	US	250						y		
WV	US	434						y		
	77	94,296	15	32	31	0	17	44	4	
			19	42	40	0	22	57	5	

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Default Domestic Rates

	Monthly Customer Charge ¹	Different Large Customer Charge	Flat Rate	Declining Block Rate	Seasonal Rate	Inclining Rate	First Block if inclining (kWh)	Time of Day Option	Seasonal Option	Demand Charges	Comments
ATCO	\$28.44		y								
ENMAX	\$15.45		y								
EPCOR	\$17.91		y								
FortisAlberta	\$19.99		y								
BC Hydro	\$3.71					y	675	y			
FortisBC	\$23.74		y					y			
NB Power	\$19.73			y					y		6
Nova Scotia Power	\$10.83		y					y			7
Hydro One	\$14.57		y			y	600 / 1000				8
Toronto Hydro	\$16.55					y	600 / 1000				
Hydro Quebec	\$12.19					y	30 kWh/d			y	9,10
Manitoba Hydro	\$6.60	y				y	900		y		
Maritime Electric	\$22.67			y					y		
Newfoundland Power	\$15.56		y								
SaskPower	\$15.31		y	y		y	650				11
Canada Total		1	9	3	0	6		3	3		
Percent Yes		7	60	20	0	40		20	20		

PREPARED FOR STAKEHOLDER CONSULTATION

Default Domestic Rates

	Monthly Customer Charge ¹	Different Large Customer Charge	Flat Rate	Declining Block Rate	Seasonal Rate	Inclining Rate	First Block if inclining (kWh)	Time of Day Option	Seasonal Option	Demand Charges	Comments
Alabama Power Company	\$8.91			y	y	y	750	y			12
Entergy Arkansas	\$6.86			y	y	y	1000	y			13
Arizona Public Service (APS)	\$7.59	y			y	y	400	y		29	14,15
Tucson Electric Power Co.	\$7.00	y			y	y	500	y			
Pacific Gas & Electric	\$11.95					y		y			
Pacific Power & Light (RMPC)	\$5.58					y	baseline				16
SDG&E	\$0.00							y			16
Southern California Edison	\$8.70		y				baseline	y	y		16
Aquila	\$14.21			y	y		1000	y			
Public Service Company CO (Xcel)	\$6.25		y		y					y	
Connecticut Light & Power	\$15.00		y					y			
United Illuminating	\$12.12				y	y	500	y			
Delmarva	\$7.36					y	500	y			
Florida Power & Light	\$5.34					y	1000	y			
Gulf Power Company	\$10.00		y								17
Progress Energy Florida	\$8.03					y	1000	y			
Tampa Electric Company	\$8.50		y					y			
Georgia Power Company	\$7.50			y		y	650	y			18
Interstate Power & Light Aliant)	\$10.77			y	y		500	y			
MidAmerican (Iowa)	\$6.00		y	y			800	y			19
Idaho Power Company	\$4.00				y	y	300	y			
Rocky Mountain Power	\$0.00		y		y			y			
Commonwealth Edison	\$7.13		y	y				y			20,21
MidAmerican (Illionois)	\$5.12			y	y			y			
Duke Energy Indiana	\$9.40	y		y				y			22

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Default Domestic Rates

	Monthly Customer Charge ¹	Different Large Customer Charge	Flat Rate	Declining Block Rate	Seasonal Rate	Inclining Rate	First Block if inclining (kWh)	Time of Day Option	Seasonal Option	Demand Charges	Comments
Indiana-Michigan Power	\$6.65			y							
Indianapolis Power & Light	\$6.70	y		y				y			23
Kansas City Power & Light	\$7.93		y	y				y			24
Westar Energy (Kansas)	\$7.50			y		y	500				
AEP (Kentucky Power)	\$5.86		y					y			25
Duke (Kentucky)	\$4.50		y					y			
Kentucky Utilities	\$5.00	y	y								
Louisville Gas & Electric	\$5.00		y								
Entergy Louisiana	\$7.04	y		y	y						
SWEPCO	\$0.00										
Fitchburg Gas & Electric	\$5.29		y					y			26
National Grid	\$6.21		y					y			26,27
Nstar	\$0.00										
Western Mass Electric	\$0.00										
Baltimore Gas & Electric	\$7.50	y	y		y			y			
PEPCO	\$6.65			y	y			y			
Potomac Edison (Allegheny)	\$5.00		y								
Bangor Hydro	\$5.51		y					y			28,29
Central Maine Power	\$7.92		y					y			30
Consumers Energy	\$6.60							y			
Detroit Edison	\$0.00					y	17 kWh/d	y			31
Indiana-Michigan Power	\$5.55					y	500	y			32
Wisconsin Electric	\$7.50	y	y					y			33
Minnesota Power	\$5.00					y	300				34
Otter Tail Power	\$6.15	y				y	450				35
Ameren	\$5.79		y		y						
Kansas City Power & Light	\$7.93		y	y				y			
Entergy Mississippi	\$4.57			y							
Mississippi Power	\$22.50				y	y	650				
Dominion North Carolina	\$9.50		y		y			y			

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Default Domestic Rates

	Monthly Customer Charge ¹	Different Large Customer Charge	Flat Rate	Declining Block Rate	Seasonal Rate	Inclining Rate	First Block if inclining (kWh)	Time of Day Option	Seasonal Option	Demand Charges	Comments
Duke Power Company	\$7.87					y	350	y			
Progress Energy Carolinas	\$6.75	y	y		y			y			
Montana- Dakota Power (MDU)	\$0.00										
Granite State	\$4.28					y	250				
Public Service New Mexico	\$3.10				y	y	500	y			
Nevada Power Company	\$8.00	y	y					y			
Cleveland Illuminating	\$4.75			y	y		500				37
Duke Energy Ohio	\$4.50			y	y	y	1000	y			38
Oklahoma Gas & Electric	\$6.50			y		y	1400	y			
Public Service Oklahoma	\$8.00				y	y	600	y			39, 40
Pacific Power	\$7.50	y	y							y	41
Metropolitan Edison (First Energy)	\$8.11		y								
PECO	\$5.18			y	y	y	500	y		y	
SCE&G	\$8.00			y	y	y					42
MidAmerican	\$7.00			y	y			y			43
Center Point Energy	\$3.88		y								44
Oncor (TXU)	\$4.95		y								44
Dominion	\$7.00			y	y	y					
Central Vermont Public Service	\$11.64			y				y			45
Puget Sound Energy	\$7.00					y	600				
Madison Gas & Electric	\$8.67		y		y			y			
Appalachian Power Company	\$4.00			y				y			
US Total		12	30	26	27	28		50	1	3	
Percent Yes		16	39	34	35	36		65	1	4	

Note 1. Customer charge computed based on 30 days.

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Default Small General Service Rates

	Different Customer Charge 3 Phase	If Different How Much	Energy Rate (flat, decline, incline)	Demand Rate(flat,decline, incline)	Rate Type	Demand Rate Threshold	Comments
ATCO					Wright-Hopkinson	500	46
ENMAX			flat		Energy-only	5000 kWh/m	
EPCOR			flat		Energy-only	50 kW	
FortisAlberta					Wright-Hopkinson	75 kW	
BC Hydro			flat/inclining		Energy-only	35 kW	47
FortisBC			declining		Energy-only	40 kW	
NB Power				declining	Hopkinson		48
Nova Scotia Power			declining		Energy-only	32,000 kWh/yr	
Hydro One			inclining		Energy-only	50 kW	8
Toronto Hydro			inclining		Energy-only	50 kW	
Hydro Quebec				declining	Hopkinson	100 kW	49
Manitoba Hydro	y	\$6.15		declining	Hopkinson	200 kVA	
Maritime Electric				flat	Hopkinson		
Newfoundland Power	y	\$17.85	flat		Energy-only	10 kW	
SaskPower				declining	Hopkinson	75 kVA	
Canada Total	2						
Percent Yes	13						

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Default Small General Service Rates

	Different Customer Charge 3 Phase	If Different How Much	Energy Rate (flat, decline, incline)	Demand Rate(flat,decline, incline)	Rate Type	Demand Rate Threshold	Comments
Alabama Power Company					Seasonal/Wright	50 kW	
Entergy Arkansas			declining	flat	Wright-Hopkinson		50
Arizona Public Service (APS)			declining		Hopkinson		
Tucson Electric Power Co.							
Pacific Gas & Electric			flat	none	Seasonal	200 kW	
Pacific Power & Light (RMPC)	y	3.83	flat	none		20 kW	
SDG&E			flat	none	Seasonal	20 kW	
Southern California Edison	y		flat	none	Energy-only	20 kW	
Aquila			flat	none	Energy-only	10 kW	
Public Service Company CO (Xcel)			flat	none	Seasonal	25 kW	
Connecticut Light & Power			flat	flat	Hopkinson	350 kW	51
United Illuminating			flat	flat		500 kW	
Delmarva			flat	none	Seasonal/Hopkinson		
Florida Power & Light			flat	none	Energy-only	20 kW	52
Gulf Power Company			flat	none	Energy-only	200 kVA	
Progress Energy Florida			flat	none	Energy-only		
Tampa Electric Company			flat	none	Energy-only	49kw	
Georgia Power Company			flat	none	Energy-only	30 kW	
Interstate Power & Light Aliant)			declining	none	Seasonal	20,000 kwh/yr	
MidAmerican (Iowa)			declining	declining	Seasonal		52
Idaho Power Company			inclining		Seasonal	2,000 kw/mo	
Rocky Mountain Power			flat	none	Seasonal		
Commonwealth Edison			TOD	flat/seasonal	Seasonal/Hopkinson	10 kW	52
MidAmerican (Illionois)			declining/flat	none	Energy-only	none	53
Duke Energy Indiana			declining	none	Energy-only	75 kW	

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Default Small General Service Rates

Different Customer Charge 3 Phase	If Different How Much	Energy Rate (flat, decline, incline)	Demand Rate(flat,decline, incline)	Rate Type	Demand Rate Threshold	Comments
Indiana-Michigan Power		flat	none	Energy-only	10 kW	
Indianapolis Power & Light						
Kansas City Power & Light		declining	flat	Seasonal/Hopkinson	200 kW	
Westar Energy (Kansas)		declining	none		10 kW	
AEP (Kentucky Power)		declining	none		10 kW	
Duke (Kentucky)		declining	flat	Hopkinson	voltage level	52,54
Kentucky Utilities		flat	none	Energy-only	500 kW	
Louisville Gas & Electric		flat/season	none	Seasonal	500 kW	
Entergy Louisiana		declining		Wright-Hopkinson		
SWEPCO						
Fitchburg Gas & Electric		flat	none			26
National Grid		flat	none		10,000 kWh/mo	
Nstar						
Western Mass Electric						
Baltimore Gas & Electric		flat	none	Seasonal/TOD		
PEPCO		flat	none	Seasonal/Energy-only		
Potomac Edison (Allegheny)		declining	flat	Hopkinson	voltage level	55
Bangor Hydro		flat	none	Energy-only		
Central Maine Power		flat	none	Energy-only	20 kW	
Consumers Energy		flat	none	Energy-only	25 kW	
Detroit Edison		flat	none	Energy-only	1000 kWh/mo	
Indiana-Michigan Power		inclining	none	Energy-only	10 kw	
Wisconsin Electric		flat	none	Energy-only	10,000 kwh/mo	
Minnesota Power		declining	none	Hours-use		
Otter Tail Power		inclining	flat	Hopkinson		
Ameren		flat	none	Seasonal/Energy-only	150 kw	
Kansas City Power & Light		Hours-use	flat	Wright-Hopkinson		56
Entergy Mississippi		declining	none	Energy-only		
Mississippi Power		Hours-use	none	Seasonal/Wright		
Dominion North Carolina		declining	flat	Hopkinson		

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Default Small General Service Rates

	Different Customer Charge 3 Phase	If Different How Much	Energy Rate (flat, decline, incline)	Demand Rate(flat,decline, incline)	Rate Type	Demand Rate Threshold	Comments
Duke Power Company			declining	flat	Hopkinson		
Progress Energy Carolinas			declining		Energy-only		
Montana- Dakota Power (MDU)							
Granite State			TOD	flat	TOD	180 kw	36
Public Service New Mexico			flat	none	Energy-only		52
Nevada Power Company			flat	none	Energy-only		
Cleveland Illuminating			declining	declining	Seasonal/Hopkinson		
Duke Energy Ohio			declining		Seasonal/Hopkinson	15 kW	57
Oklahoma Gas & Electric			flat/declining	none	Seasonal	10 kW	52
Public Service Oklahoma			seas/decline	none	Seasonal/Energy-only		52
Pacific Power	y	\$8/m	flat	flat	Hopkinson		
Metropolitan Edison (First Energy)			flat	none	Energy-only	1500 kWh/m	
PECO	y	\$15/m	Hours-use	none	Wright		
SCE&G			decline/flat	flat	Seasonal/Hopkinson		52
MidAmerican			declining	none	Seasonal/Energy-only		
Center Point Energy			flat	none	Energy-only	10 kW	44
Oncor (TXU)			flat	none	Energy-only	10 kW	44
Dominion			declining	flat	Hopkinson		
Central Vermont Public Service			flat	flat	Hopkinson	1800 kWh/m	
Puget Sound Energy			flat	none	Seasonal/Energy-only	50 kW	
Madison Gas & Electric			flat	none	Seasonal/Energy-only	20 kW	52
Appalachian Power Company			flat	none	Energy-only	10 kW	
US Total	4						
Percent Yes	5						

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	Default Medium General Service				Default Large General Service			
	Energy Rate (flat, decline, incline)	Demand Rate (flat, decline, incline)	Rate Type	Comments	Energy Rate (flat, decline, incline)	Demand Rate (flat, decline, incline)	Rate Type	Comments
ATCO						declining	Hopkinson	58
ENMAX		flat	Hopkinson			flat	Hopkinson	59
EPCOR		flat	Hopkinson			flat	Hopkinson	
FortisAlberta			Wright-Hopkinson			flat	Wright	
BC Hydro		inclining	Wright					
FortisBC		declining	Hopkinson			flat	Hopkinson	
NB Power								
Nova Scotia Power		declining	Hopkinson			flat	Hopkinson	
Hydro One		inclining	Hopkinson					
Toronto Hydro								
Hydro Quebec		declining	Hopkinson	Rate M		flat	Hopkinson	Rate L
Manitoba Hydro		flat	Hopkinson			flat	Hopkinson	
Maritime Electric		declining	Energy-only					
Newfoundland Power		declining	Wright- Hopkinson			declining	Hopkinson	
SaskPower								

Canada Total

Percent Yes

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Default Medium General Service

Default Large General Service

	Energy Rate (flat, decline, incline)	Demand Rate (flat, decline, incline)	Rate Type	Comments	Energy Rate (flat, decline, incline)	Demand Rate (flat, decline, incline)	Rate Type	Comments
Alabama Power Company	declining		Seasonal/Wright	60	declining		Hopkinson	60
Entergy Arkansas								
Arizona Public Service (APS)								
Tucson Electric Power Co.								
Pacific Gas & Electric								
Pacific Power & Light (RMPC)	flat	flat	Hopkinson		flat	flat	Hopkinson	
SDG&E	flat	flat	Hopkinson					52
Southern California Edison	flat	flat	Hopkinson					52
Aquila	flat	flat	Hopkinson		declining	flat	Hopkinson	
Public Service Company CO (Xcel)	flat	flat	Seasonal/Hopkinson		flat	flat	Seasonal/Hopkinson	
Connecticut Light & Power	flat	flat	Hopkinson					
United Illuminating								
Delmarva	flat	flat	Seasonal/Hopkinson		TOD	flat	Seasonal/TOD	
Florida Power & Light	flat	flat	Hopkinson		flat	flat	Hopkinson	52
Gulf Power Company	flat	flat	Hopkinson		flat	flat	Hopkinson	
Progress Energy Florida	flat	flat	Hopkinson					
Tampa Electric Company	flat	flat	Hopkinson		flat	flat	Hopkinson	
Georgia Power Company	declining		Wright		declining		Wright	52
Interstate Power & Light Aliant)						declining	Seasonal	
MidAmerican (Iowa)								
Idaho Power Company	flat	flat	Seasonal/Hopkinson		flat	flat	Seasonal/Hopkinson	
Rocky Mountain Power					flat	flat	Seasonal/Hopkinson	
Commonwealth Edison	TOD	declining	Hopkinson/TOD		TOD	declining	Hopkinson/TOD	
MidAmerican (Illionois)	declining	declining	Hopkinson		declining	declining	Hopkinson	53
Duke Energy Indiana								

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Default Medium General Service

Default Large General Service

	Energy Rate (flat, decline, incline)	Demand Rate (flat, decline, incline)	Rate Type	Comments	Energy Rate (flat, decline, incline)	Demand Rate (flat, decline, incline)	Rate Type	Comments
Indiana-Michigan Power	flat	flat	Hopkinson		flat	flat	Hopkinson	52
Indianapolis Power & Light								
Kansas City Power & Light								
Westar Energy (Kansas)	flat	flat	Seasonal/Hopkinson		flat	flat	Seasonal/Hopkinson	61
AEP (Kentucky Power)	declining	flat	Wright		flat	flat	Hopkinson	52
Duke (Kentucky)					flat	flat	Hopkinson	52
Kentucky Utilities								
Louisville Gas & Electric					flat	flat	Hopkinson	52
Entergy Louisiana					declining	flat	Hopkinson	62
SWEPCO								
Fitchburg Gas & Electric								
National Grid	flat	flat	Hopkinson		flat	flat	Hopkinson	
Nstar	n/a							
Western Mass Electric								
Baltimore Gas & Electric	TOD/flat							
PEPCO								
Potomac Edison (Allegheny)								
Bangor Hydro								
Central Maine Power	flat	flat	Seasonal/Hopkinson		flat	TOD		
Consumers Energy	TOD	flat	TOD					63
Detroit Edison	n/a				Hours-use	flat	Wright-Hopkinson	64
Indiana-Michigan Power	flat	flat	Hopkinson	52	tod	flat	tod	52
Wisconsin Electric	flat	flat	Hopkinson	52				
Minnesota Power					flat	declining	Hopkinson	
Otter Tail Power					declining	declining	Wright	
Ameren	flat	flat	Hopkinson		none	flat	Demand-only	33
Kansas City Power & Light								
Entergy Mississippi	declining	declining	Hopkinson		declining	declining	Hopkinson	
Mississippi Power	declining	declining	Hopkinson		declining	declining	Hopkinson	
Dominion North Carolina					Hours-use	flat	Wright-Hopkinson	

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Default Medium General Service

Default Large General Service

	Energy Rate (flat, decline, incline)	Demand Rate (flat, decline, incline)	Rate Type	Comments	Energy Rate (flat, decline, incline)	Demand Rate (flat, decline, incline)	Rate Type	Comments
Duke Power Company								
Progress Energy Carolinas	flat	flat	Hopkinson		flat	declining	Hopkinson	52
Montana- Dakota Power (MDU)								
Granite State								
Public Service New Mexico	TOD	seasonal	TOD		TOD			
Nevada Power Company								
Cleveland Illuminating	declining	declining	Seasonal/Hopkinson		declining	declining	Seasonal/Hopkinson	
Duke Energy Ohio	declining	declining	Seasonal/Hopkinson		declining	declining	Seasonal/Hopkinson	
Oklahoma Gas & Electric	declining	flat/seas	Seasonal/Hopkinson		declining	TOD	TOD	
Public Service Oklahoma					flat	flat	Hopkinson	
Pacific Power			no medium		flat	declining	Hopkinson	
Metropolitan Edison (First Energy)	flat	flat/seas	Hopkinson		flat	flat	Seasonal/Hopkinson	
PECO								
SCE&G								65
MidAmerican			no medium		declining	flat/seas	Seasonal/Hopkinson	
Center Point Energy			see note				see note	44
Oncor (TXU)			see note				see note	44
Dominion					declining	flat	Hopkinson	52
Central Vermont Public Service								
Puget Sound Energy	flat	flat	Seasonal/Hopkinson		flat	flat	Seasonal/Hopkinson	
Madison Gas & Electric	flat	flat	Seasonal/Hopkinson					
Appalachian Power Company	flat	flat	Hopkinson	52				

US Total

Percent Yes

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Voluntary Time of Day Rates

	Classes	Additional Meter Charge	On/Off Peak Difference (¢/kWh)	Pilots	Demand Charges vary by TOD	Comments
ATCO						
ENMAX						
EPCOR						
FortisAlberta						
BC Hydro	rs		12.45			66
FortisBC	rs,gs		8.03			67
NB Power						
Nova Scotia Power	rs	y	10			7
Hydro One						
Toronto Hydro						
Hydro Quebec				y		
Manitoba Hydro						
Maritime Electric						
Newfoundland Power						
SaskPower						
Canada Total		1		1		
Percent Yes		7		7		

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Voluntary Time of Day Rates

	Classes	Additional Meter Charge	On/Off Peak Difference (¢/kWh)	Pilots	Demand Charges vary by TOD	Comments
Alabama Power Company	rs,gs	y	15s/3w			68
Entergy Arkansas	rs,gs	y	9.2		y	
Arizona Public Service (APS)					y	69
Tucson Electric Power Co.	rs,gs	y	13s/8w			
Pacific Gas & Electric	rs,gs		21s/2w			
Pacific Power & Light (RMPC)						
SDG&E	rs,gs					70
Southern California Edison	rs,gs	y	varies			16,70
Aquila						
Public Service Company CO (Xcel)						
Connecticut Light & Power	rs,gs					
United Illuminating	rs,gs		2.4			52
Delmarva						
Florida Power & Light	rs,gs	y	5			
Gulf Power Company	rs,gs					52
Progress Energy Florida						
Tampa Electric Company	rs,gs	y	1.5			52
Georgia Power Company	rs,gs	n	13.5s			
Interstate Power & Light Aliant)	rs,gs		0.5			71
MidAmerican (Iowa)	rs,gs					
Idaho Power Company	rs					
Rocky Mountain Power	rs,gs					
Commonwealth Edison	rs,gs					72
MidAmerican (Illionois)	rs	y	2.4			
Duke Energy Indiana						

Voluntary Time of Day Rates

	Classes	Additional Meter Charge	On/Off Peak Difference (¢/kWh)	Pilots	Demand Charges vary by TOD	Comments
Indiana-Michigan Power	rs	y	9.4			
Indianapolis Power & Light						
Kansas City Power & Light	rs	y	8			
Westar Energy (Kansas)						
AEP (Kentucky Power)	rs,gs		7			
Duke (Kentucky)	rs,gs	y				
Kentucky Utilities	rs,gs					62
Louisville Gas & Electric	rs,gs					
Entergy Louisiana						
SWEPCO						
Fitchburg Gas & Electric						
National Grid	rs,gs					
Nstar						
Western Mass Electric						
Baltimore Gas & Electric	rs,gs		6s/4w			
PEPCO	rs,gs		2			
Potomac Edison (Allegheny)						
Bangor Hydro	rs,gs	y	5			29
Central Maine Power	rs,gs		5			
Consumers Energy	rs,gs	y	9			
Detroit Edison	rs,gs		6.6s/5w			
Indiana-Michigan Power	rs,gs		6			
Wisconsin Electric	rs,gs		16			
Minnesota Power						
Otter Tail Power	gs					
Ameren						
Kansas City Power & Light	rs	y	6.3s			
Entergy Mississippi						
Mississippi Power						
Dominion North Carolina	rs		13s			

Voluntary Time of Day Rates

	Classes	Additional Meter Charge	On/Off Peak Difference (¢/kWh)	Pilots	Demand Charges vary by TOD	Comments
Duke Power Company	rs,gs	y	1s			73
Progress Energy Carolinas	rs	y	1s			73
Montana- Dakota Power (MDU)						
Granite State						
Public Service New Mexico	rs		11			
Nevada Power Company	rs		16			
Cleveland Illuminating						
Duke Energy Ohio						
Oklahoma Gas & Electric	rs,gs	y	18			
Public Service Oklahoma						
Pacific Power						
Metropolitan Edison (First Energy)	rs,gs	y	4.8			
PECO	rs		5.8			
SCE&G	rs	y	14.5			
MidAmerican	rs		14			
Center Point Energy						
Oncor (TXU)						
Dominion						
Central Vermont Public Service	rs	y	15			
Puget Sound Energy						
Madison Gas & Electric			17			
Appalachian Power Company	rs	y	7			
US Total		20		0		
Percent Yes		26		0		

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	Interruptible/Curtailable						Other		Comments
	Interruptible Rates	Curtailable Rates	Notice Provision Interruption	Payment Units	Penalties for Failure to Interrupt	Long Term Contracts	Real Time Pricing (RTP)	Critical Peak Pricing (CPP)	
ATCO	y	y			y				
ENMAX									
EPCOR									
FortisAlberta									
BC Hydro	y		y			y		y	
FortisBC									
NB Power	y		10 min		y	y			
Nova Scotia Power	y		10 min	\$/kVA	y	y	y		
Hydro One									
Toronto Hydro									
Hydro Quebec	y		24 hrs	\$/kW	y				74
Manitoba Hydro		y		varies	y				
Maritime Electric									
Newfoundland Power		y	1 hour	\$/kVA					
SaskPower	y								
Canada Total	6	3			5	3	1	1	
Percent Yes	40	20			33	20	7	7	

	Interruptible/Curtailable						Other		Comments
	Interruptible Rates	Curtailable Rates	Notice Provision Interruption	Payment Units	Penalties for Failure to Interrupt	Long Term Contracts	Real Time Pricing (RTP)	Critical Peak Pricing (CPP)	
Alabama Power Company	y			\$/kW	y		y		
Entergy Arkansas	y		30 mins	\$/kW	y				
Arizona Public Service (APS)									
Tucson Electric Power Co.									
Pacific Gas & Electric								y	75
Pacific Power & Light (RMPC)								y	
SDG&E								y	
Southern California Edison	y		15 mins	\$/kW			y	y	
Aquila		y							
Public Service Company CO (Xcel)	y		10min - 8 hrs						
Connecticut Light & Power	y		1 hour						
United Illuminating	y		1 hour	\$/kW					
Delmarva									
Florida Power & Light	y	y	1 hour				y		76
Gulf Power Company	y		6 hours					y	
Progress Energy Florida	y		discretionary					y	
Tampa Electric Company	y								
Georgia Power Company	y		30 mins						
Interstate Power & Light Aliant)	y						y		77
MidAmerican (Iowa)									
Idaho Power Company									78
Rocky Mountain Power									
Commonwealth Edison	y						y		
MidAmerican (Illinois)		y		\$/kW		y	y		
Duke Energy Indiana									

	Interruptible/Curtailable						Other		Comments
	Interruptible Rates	Curtailable Rates	Notice Provision Interruption	Payment Units	Penalties for Failure to Interrupt	Long Term Contracts	Real Time Pricing (RTP)	Critical Peak Pricing (CPP)	
Indiana-Michigan Power	y	y			y				
Indianapolis Power & Light									
Kansas City Power & Light		y					y		79
Westar Energy (Kansas)									
AEP (Kentucky Power)		y							
Duke (Kentucky)									
Kentucky Utilities		y					y		80
Louisville Gas & Electric		y							
Entergy Louisiana		y		\$/kW					
SWEPCO									
Fitchburg Gas & Electric									
National Grid									
Nstar									
Western Mass Electric									
Baltimore Gas & Electric									
PEPCO									
Potomac Edison (Allegheny)		y		\$/kW			y		
Bangor Hydro									
Central Maine Power									
Consumers Energy		y		\$/kW					
Detroit Edison	y					y			
Indiana-Michigan Power		y	30	¢/kwh	y				
Wisconsin Electric	y		discretionary				y		
Minnesota Power	y			\$/kW			y		
Otter Tail Power									
Ameren									
Kansas City Power & Light		y					y		34
Entergy Mississippi									
Mississippi Power									
Dominion North Carolina		y							

	Interruptible/Curtailable						Other		Comments
	Interruptible Rates	Curtailable Rates	Notice Provision Interruption	Payment Units	Penalties for Failure to Interrupt	Long Term Contracts	Real Time Pricing (RTP)	Critical Peak Pricing (CPP)	
Duke Power Company	y						y		
Progress Energy Carolinas		y					y		
Montana- Dakota Power (MDU)									
Granite State									
Public Service New Mexico	y		30 mins						
Nevada Power Company									
Cleveland Illuminating									
Duke Energy Ohio									
Oklahoma Gas & Electric									
Public Service Oklahoma									
Pacific Power		y							
Metropolitan Edison (First Energy)									
PECO	y	y							
SCE&G	y		4 hrs		y				
MidAmerican	y								
Center Point Energy									
Oncor (TXU)									
Dominion	y	y						y	
Central Vermont Public Service									
Puget Sound Energy	y								
Madison Gas & Electric	y								
Appalachian Power Company		y							
US Total	25	19			5	2	14	7	
Percent Yes	32	25			6	3	18	9	

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Utility Survey
Comments

- 1 Filed an Inverted Rate Application in 2008, whose primary purpose is listed as conservation. BC Hydro has conducted research into the default residential rate designs offered by 88 different utilities throughout North America, Europe and Asia. The research results, which are summarized in Appendix C, indicate that the majority of these utilities offer relatively simple rate structures that are easy to understand. Of the 24 utilities that use an inclining block rate structure, 13 (54 per cent) offer a simple two-step inclining block structure. Thus, the designs chosen by other utilities and regulators show the importance of simplicity in rate design as a contributing factor in building understanding and acceptance of a rate structure. Based estimates of results on published elasticity studies.
- 2 Ontario is served by numerous local distributors. We only examined two of the larger ones. The customer is generally free to take either a standard offer or choose his own supplier.
- 3 California suspended direct access retail (supplier choice)
- 4 California considers marginal cost pricing fair
- 5 ComEd divested most generation in the early 2000s
- 6 NB's regulator has approved a phase-out of declining block rates
- 7 TOD rate limited to customers with thermal storage
- 8 Inverted Rate effective May 1, 2008. Inversion starts lower in Summer (summer peaking)
- 9 HQ inverted rate breaks at 30 kWh/day, rather than a monthly value.
- 10 HQ has a dual energy rate
- 11 Rural Diesel Rate is inverted
- 12 Alabama RS rate inclining summer, declining winter
- 13 Large number of special use rates
- 14 APS domestic rate is inclining in summer only
- 15 APS RS rate flat winter, inclining summer
- 16 A baseline usage is set up based on average usage per day. This is used to establish the first block
- 17 CPP offered to RS on limited basis
- 18 Declines winter, inclines summer
- 19 Flat summer, declines winter
- 20 customer charge is \$2.94/mo if 3 or more customers on same service
- 21 rate is flat summer, declining winter
- 22 optional high efficiency rate
- 23 customer charge varies with usage
- 24 declines winter only, also space heat rate, energy efficiency rates

Utility Survey
Comments

- 25 RS has a load management rate
- 26 standard offer service
- 27 interruptible water heater rate
- 28 Bangor Hydro BCC includes 100 kWh
- 29 Thermal storage TOD rate
- 30 \$7.92 includes 100 kWh for CMP
- 31 Interruptible space conditioning rate available, plus electric vehicle rate
- 32 storage water heater option
- 33 residential load management rate available
- 34 \$5 service charge includes 50 kWh. Dual fuel rate available.
- 35 \$6.15 service charge includes 50 kWh. Controlled demand rate available.
- 36 facilities charge includes 25 kW
- 37 optional load management and water heater rate
- 38 Time of day rates available
- 39 rate inclines summer, declines winter. Limited use rate available
- 40 residential only inclines summer
- 41 Demand charge on 3-phase online
- 42 residential rate inclines summer, declines winter
- 43 water heater and other special rates available
- 44 Delivery service, varies by voltage level
- 45 Vermont water heater and off-peak rate available.
- 46 An energy-only rate is also offered for less than 50 kW customers
- 47 BC Hydro has flat rates in Zone I and inverted rates in Zone II
- 48 NB Power has only one open GS rate
- 49 HQ demand charge zero up to 50 kW. There is also a simple Hopkinson Rate offered.
- 50 First 6 kW has no demand charge
- 51 First 2 kW Free
- 52 TOD Option also offered in GS classes
- 53 flat summer, declining winter
- 54 First 15 kw free
- 55 high load factor rate available
- 56 First 26 kW free

Utility Survey
Comments

- 57 Special rate for three phase service
- 58 For Large General Service is >500 kW, the demand charge is declining for distribution charges, and inclining for the transmission component.
- 59 Hopkinson rate with lower demand charge off-peak
- 60 Alabama Power Company has many alternative rates available
- 61 has a high-load-factor rate
- 62 First 60 kW @ \$275
- 63 Consumers Energy has a high load factor rate
- 64 Interruptible GS & TOD rate available
- 65 First 75 kVA for \$1,260 per month for Medium G.S.
- 66 TOD rate varies by location. The differential was calculated for Lower Manitoba.
- 67 TOD differential calculated for Residential Summer
- 68 TOD Rate is seasonal with 15¢ differential summer, 3¢ winter for RS
- 69 Optional TOD rate has demand charge (seasonal)
- 70 Experimental TOD
- 71 Seasonal demand charge
- 72 TOD rates on some GS customers in lieu of demand
- 73 Residential TOD has on-peak demand charge.
- 74 Hydro Quebec indicated they used to have an RTP rate, but no longer offer it.
- 75 Statewide CPP project in California
- 76 RS has optional load management rate
- 77 Day Ahead RTP
- 78 Pilot program
- 79 RTP pilot
- 80 RTP experimental