

## **MIPUG Undertaking #2 (Undertaking No. 96)**

Transcript page 5635: Mr. Bowman to provide details of the Entergy program of special rates.

### **Response:**

Please see the attached electricity prices comparison tables as well as the sources used to calculate electricity prices prepared by Canexus. The comparison is for the production of 60,000 MT of sodium chlorate per year. The comparison attached uses rates in place in 2013. The rates included in Canexus' January 15th presentation were from 2012. As a result, the numbers presented in the attached are slightly updated from the numbers that were included in the Canexus presentation.

Mr. Bowman notes that the attached material was prepared by the MIPUG presenters, and not as part of Mr. Bowman's testimony, and was not prepared under his direction.

Electricity Price Comparison for Manitoba PUB (January 21, 2013)

Inputs:

Sodium Chlorate Production (MT)	60,000
Usage (kWh/MT)	5,300
US\$ / C\$	1.00

Manitoba Hydro - General Service Large (30 to 100kV)	Hydro Quebec - Rate L	British Columbia Hydro - RS 1823 Stepped Rates	Grant County PUD (Washington) - Rate Schedule 15	Entergy (Louisiana) - Electrochemical Energy Intensive Industries
Production (MT)	60,000	60,000	60,000	60,000
Usage (kWh/MT)	5,300	5,300	5,300	5,300
Energy Usage (kWh/month)	26,500,000	26,500,000	26,500,000	26,500,000
Estimated Demand Load (kWh)	36,301	36,301	36,301	36,301
Demand (C\$/kWh/month)	6.210	12.180	6.263	5.448
Energy (C\$/kWh)	0.02920	0.02950	0.03261	0.00998
Taxes (%)	1.4%	0.0%	0.0%	0.0%
Interruptable Discount (%)	0.0%	0.0%	0.0%	0.0%
Delivered (C\$/kWh)	0.03823	0.04276	0.04548	0.03134
Delivered (C\$/MWh)	38.23	42.76	45.48	31.34
Does not reflect April 2013 increase projected at 3.5 to 4%	Does not reflect April, 2013 price increase, currently projected at 2% or less.	Does not reflect April, 2013 price increase, currently projected at 2 to 3%.	Price reflects 6% increase effective Jan 1, 2013	No projected increase but rising NG price will drive fuel cost adjustment up.

Note: The data provided in the Canexus presentation on January 15, 2013 was from late 2012 and reflected the different loads of the regional producers. The costs shown above reflect the latest rate schedules and standardized calculations reflecting the same usage in each jurisdiction.

**RATE SCHEDULES**  
**TO BE EFFECTIVE**  
**SEPTEMBER 1, 2012**

August 31, 2012



## **GENERAL SERVICE**

(Customer-Owned Transformation)

### **LARGE 750 V TO NOT EXCEEDING 30 KV - *TARIFF NO. 2012-60 (1)***

Energy Charge: @ 3.14 ¢ / kWh  
PLUS  
\* Demand Charge: @ \$ 7.26 / kVA

Minimum Bill: Demand Charge

### **LARGE 30 KV TO NOT EXCEEDING 100 KV - *TARIFF NO. 2012-61 (1)***

Energy Charge: @ 2.92 ¢ / kWh  
PLUS  
\* Demand Charge: @ \$ 6.21 / kVA

Minimum Bill: Demand Charge

### **LARGE EXCEEDING 100 KV - *TARIFF NO. 2012-62 (1)***

Energy Charge: @ 2.83 ¢ / kWh  
PLUS  
\* Demand Charge: @ \$ 5.53 / kVA

Minimum Bill: Demand Charge

### **Monthly Billing Demand \***

The greatest of the following (expressed in kVA):

- a) measured demand; or
- b) 25 % of contract demand; or
- c) 25% of the highest measured demand in the previous 12 months.

### **Applicability:**

The General Service Large rate is applicable to services where the transformation is provided by the customer and connected directly to the Corporation's distribution, subtransmission or transmission lines.

Customers who, by nature of their business, do not require service during the months of December, January and February may qualify for the General Service Short-Term Power rate.



Hydro-Québec's Home Page > Business Customers > Large power

## Understanding your Consumption RATES AND BILLS

<b>DOMESTIC RATES</b> Residential and Agricultural	<b>GENERAL RATES</b> Business	<b>PUBLIC LIGHTING</b> [In French only]	<a href="#">Electricity concepts</a>
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	Small and medium power	Large power
<b>Base rates</b>	<a href="#">Rate G</a> <a href="#">Rate M</a>	<b>Rate L</b>
<b>Other rates and options</b>	<a href="#">Rate G-9</a> <a href="#">Rate GD</a> <a href="#">Running-in of new equipment – Rate M</a> <a href="#">Net metering option (Self-generation) – Rate G</a> <a href="#">Interruptible electricity – Medium power</a>	<a href="#">Running-in of new equipment – Rate L</a> <a href="#">Equipment testing – Rate L</a> <a href="#">Interruptible electricity – Large power</a> <a href="#">Additional electricity – Rate L</a>

### Rate L – Rate for large power

#### Application

Rate L applies to contracts with a minimum billing demand of 5,000 kW and over.

#### Profile

Hydro-Québec has nearly 250 Rate L electrical service contracts (or accounts) with large companies in the industrial, business and institutional sectors.

#### Structure of Rate L

##### Demand charge

Billing demand	\$12.18/kW
Billing demand in excess of 110% of <u>contract power</u>	
- for each day during which an overrun occurs	\$7.11/kW
- monthly maximum	\$21.33/kW

##### Energy charge

2.95¢/kWh

Rates effective April 1, 2012. Under no circumstances may this table be used to replace the *Distribution Tariff*.

#### Understanding rates

Rates have three main components that represent the cost categories of electrical service. In this way, rates reflect the cost of meeting customer electricity demand.

**Fixed charge**

**Energy**

**Demand**

**Calculation of billing demand**

**Additional factors affecting electricity rates**

**Optimization charge**

**Credit for supply at medium or high voltage**

Hydro-Québec's general usage rates assume that electricity will be supplied at low voltage. Customers who have equipment to step down the voltage of the electricity they are supplied or wish to use medium- or high-voltage electricity represent reduced costs for Hydro-Québec. In return, they are granted a monthly credit on their demand charge. The credit is determined according to the supply voltage.

<i>Nominal voltage between phases equal to or greater than:</i>	<i>Monthly credit \$/kW</i>
5 kV, but less than 15 kV	\$0.573/kW
15 kV, but less than 50 kV	\$0.915/kW
50 kV, but less than 80 kV	\$2.037/kW
80 kV, but less than 170 kV	\$2.499/kW
170 kV	\$3.318/kW

Rates effective April 1, 2011. Under no circumstances may this table be used to replace the *Distribution Tariff*.

**Adjustment for transformation losses**

**For more information**

Are you already a Rate L customer? Get in touch with your Commercial Delegate.

You can also consult the [Distribution Tariff](#) to find out more about Hydro-Québec's rates and rate options.

## Transmission Service Rates

	F2007	F2008	F2009	F2010	F2011	F2012	F2013	F2014
Annual Rate Increase	1.64%	0.0%	2.34%	8.74%	*6.11%	8.00%	3.91%	1.44%
RS 1823 – TIER 1 (\$/MWh)	\$24.77	\$24.77	\$23.32	\$26.08	\$28.17	\$31.07	\$ 32.61	\$ 33.20
RS 1823 – TIER 2 (\$/MWh)	\$54.00	\$54.00	\$73.60	\$73.60	\$73.60	\$73.60	\$73.60	\$73.60
RS 1823A (\$/MWh)	\$27.70	\$27.70	\$28.35	\$30.83	\$32.71	\$35.33	\$36.71	\$37.24
Demand Charge (\$kVA)	4.726	4.726	4.837	5.259	5.581	6.027	6.263	6.353
Rate Rider	0.0%	2.0%	0.5%	1%	*4%	2.5%	5.0%	5.0%

**\*F2011 Revenue Requirement Application – Negotiated Settlement Agreement**

- Interim rate increase of 6.11% confirmed as “final” for the period April 1, 2010 – March 31, 2011.
- 4.71% ‘credit rider’ will be applied to bills from January 1, 2011 - March 31, 2011.
- The final rate rider shall be 4.0% from April 1, 2010 to December 31, 2010.
- Rate rider will decrease to 2.5% for the period of January 1, 2011 to March 31, 2011.



Resolution 8652

**RATE SCHEDULE No. 15**  
**LARGE INDUSTRIAL SERVICE**

**AVAILABLE:** To industrial customers whose maximum demand is greater than 15,000 kW, provided however, service to any Customer load or portion thereof which is or becomes a New Large Load as defined by the District's Customer Service Policies shall be served at the rates specified in Rate Schedule No. 94.

**EFFECTIVE:** With meter readings on and after *January 1, 2013*, usage will be prorated to the new rates based on number of days after December 31, 2012.

**MONTHLY BILLING RATES:** Customer's monthly billing will consist of the following charges:

Basic Charge:	\$ 1,000.00 per month
Energy Charge:	\$ 0.02533 per kWh for the first 10,950,000 kWh \$ 0.02888 per kWh for 10,950,001 to 21,900,000 kWh \$ 0.03021 per kWh for 21,900,001 to 32,850,000 kWh \$ 0.03127 per kWh for 32,850,001 to 43,800,000 kWh All additional kWh at the greater of \$0.03478 or Market Rate as defined below
Demand Charge:	\$ 5.04 per kW of Billing Demand
Minimum:	The Minimum shall be computed as Demand Charge times 75% of the Customer's Maximum Billing Demand during the most recent 12 month period.

**MARKET RATE:**

The Market Rate shall mean the Intercontinental Exchange (ICE) Daily Power Indices for the Mid-C prices for power traded for peak hours 0600 through 2200 Pacific Prevailing Time (PPT) for Monday through Saturday multiplied by the number of peak hours during the applicable month plus the average price of power traded for off-peak hours 2200 through 0600 PPT for Monday through Saturday multiplied by the number of off-peak hours for the applicable month plus the average price of power traded for the 24 off-peak hours for Sundays and Holidays (as observed by the North American Electric Reliability Corporation) during each month multiplied by the number of Sunday and Holiday hours for the applicable month all divided by the total number of hours in the applicable month.

**ADDITIONAL CHARGES:** Customers on this schedule are subject to charges related to the Estimated Unmet District Load Cost Recovery Adjustment Clause (EUDL CRAC) as determined in accordance with Exhibit 1 attached hereto and by this reference herein incorporated **and** are also subject to Rate Schedule No. 99 – Load Forecast Adjustment.

**BILLING DEMAND:** The Billing Demand under this schedule shall be the larger of the following demand factors:

- a. The contract demand, if any, or;
- b. The highest 15-minute demand during the month as determined by demand meter, adjusted up to 95 percent power factor.



**TAX ADJUSTMENT:** The amounts of any tax levied by any city or town, in accordance with RCW 54.28.070 of the Laws of the State of Washington, will be added to the above charges.

**SERVICE:** Service under this Schedule is subject to the terms and conditions in the District's Customer Service Policies, as the same may be amended from time to time.

## **EXHIBIT 1 – Estimated Unmet District Load Cost Recovery Adjustment Clause (EUDL CRAC)**

### **DEFINITIONS:**

**“Reasonable Portion (RP)”** shall mean that 30% portion of the Priest Rapids Project Output required by the Federal Energy Regulatory Commission (FERC) pursuant to Public Law 83-544 to be offered for sale by the District.

**“Reasonable Portion Proceeds (RPP)”** shall mean the proceeds derived from the sale of the Reasonable Portion pursuant to the District’s Marketing Plan filed with FERC in August, 2003.

**“Estimated Unmet District Load (EUDL)”** shall mean all projected electric energy loads for the District as defined in Section 4 (c) (1) and determined in Section 4 (c) (3) of the District’s Power Sales Contract.

**“Estimated District Power Cost (EDPC)”** shall equal the estimated cost of acquiring the monthly amount of capacity and energy for the EUDL as defined in Section 4 (c) (4) of the District’s Power Sales Contract.

### **APPLICATION**

Each year the District will determine both the EDPC and RPP and will apply the following formula to determine the Total EUDL CRAC for the following calendar year:

$$RPP - EDPC = Total\ EUDL\ CRAC$$

If the Total EUDL CRAC is greater than or equal to zero (0), then there will be no EUDL CRAC applied for the following year. If Total EUDL CRAC is less than zero (0), then a EUDL CRAC will be applied for the following calendar year as defined below.

If it is determined that a EUDL CRAC is to be applied (see above), in January of the following year, the Total EUDL CRAC will be allocated to the Schedule 15 load for the year. This will be done by dividing the Total EUDL CRAC by the actual kWh used by all Schedule 15 loads for the previous year to get a dollar amount per kWh and then taking the dollar amount per kWh and allocating to each customer based on their share of the usage for the year, including any usage of previous Schedule 15 loads they have acquired:

$$Total\ EUDL\ CRAC\ for\ the\ year / Actual\ Schedule\ 15\ kWh\ load\ for\ the\ year = \$/kWh\ for\ EUDL\ CRAC$$

$$Customer's\ billable\ kWh\ x\ \$/kWh\ for\ EUDL\ CRAC = annual\ Customer\ EUDL\ CRAC\ Amount$$

There are two options for the payment of this EUDL CRAC Amount:

- 1) Payment in full on the first billing cycle of the year
- 2) Equal monthly payments during the next calendar year (If a customer chooses this option and subsequently discontinues receiving service from the District, the balance owing is due and payable with the final bill)

**EXHIBIT 1– Estimated Unmet District Load Cost Recovery Adjustment Clause (EUDL CRAC)**  
**(Continued)**

**EXAMPLE:**

Assumptions (numbers used do NOT represent actual amounts and are for example purposes only):

$$RPP = \$ 1,000,000$$

$$EDPC = \$ 2,000,000$$

$$Schedule\ 15\ Total\ kWh = 20,000,000\ kWh$$

$$Schedule\ 15\ Customer\ A's\ billable\ kWh = 5,000,000\ kWh$$

**Step 1 - Determine the Total EUDL CRAC:**

$$\$ 1,000,000 - \$ 2,000,000 = \$ (1,000,000)$$

**Step 2 – Determine \$ / kWh for EUDL CRAC:**

$$\$1,000,000 / 20,000,000\ kWh = \$0.0500 / kWh$$

**Step 3 – Determine Customer A's annual EUDL CRAC:**

$$5,000,000\ kWh \times \$ 0.0500 / kWh = \$ 250,000$$

**ENERGY GULF STATES, INC.**  
**ELECTRIC SERVICE**  
Louisiana

SCHEDULE EEIS

Section No.: III  
Section Title: Rate Schedules  
Revision: 2 effective 7-23-08  
Supersedes: EEIS Revision 1 effective 9-28-05  
Schedule Consists of: Three Pages

**EXPERIMENTAL SCHEDULE FOR ELECTRIC SERVICE TO  
ELECTROCHEMICAL ENERGY INTENSIVE INDUSTRIES**  
(Closed to New Business and Limited to Amounts in Contracts as of March 1, 2008)

**I. APPLICABILITY**

This rate is applicable under the regular terms and conditions of the Company to electrochemical energy intensive Industrial Customers who contract for not less than 30,000 kW of electric service. An electrochemical energy intensive Industrial Customer, for purposes of this rate, is defined as one whose cost of electrical energy is at least 50% of non-capital invested cost of production including raw materials. The availability of this rate for new or additional business is subject to the required capacity in generating and transmission facilities to supply the load. Considerations of availability will take into account location on Company's system, time required to make service available, and other controlling factors. Customers taking service under this schedule may not take such service in conjunction with any other Company rate schedule or rider.

**II. AVAILABILITY**

Additional request for service under this rate may not be accepted in any year in which the Company's projected capacity margin is less than 13%.

**III. MONTHLY BILL**

**A. Customer Charge**

\$5,447.67 per month

**B. Energy Charge**

\$0.00998 per kWh for the first 500 kWh per kW of Billing Load or less  
\$0.00127 per kWh for all additional kWh

CR  
CR

**C. Fuel Adjustment**

The fuel adjustment will be calculated based upon the total kWh included in the monthly bill times the adjustment per kWh for the current month calculated in accordance with Rate Schedule FA.

**D. Tax Adjustment**

To the rates specified above will be added the proportionate part of any new tax, or increased rate of tax, or governmental imposition or charge, (except state, county, city, and specific district ad valorem taxes and any taxes on net income) levied or assessed against Company's electric business as a result of any new or amended laws or ordinances after January 1, 1979 except as the power and energy sold under this schedule may be exempt from the effects of any such tax or taxes.

**E. Minimum Charge**

The Minimum Charge will be the Customer Charge plus the Energy Charge for 500 kWh per kW of Billing Load, as defined in § V below.

**IV. POWER FACTOR**

Where Customer's power factor of total service supplied by Company is such that 90% of measured monthly maximum kVA used during any 30-minute interval exceeds corresponding measured kW, Company will use 90% of such measured maximum kVA as the number of kW for all purposes that measured maximum kW demand is specified herein. However, where Customer's power factor is regularly 0.9 or higher Company may at its option omit kVA metering equipment or remove same if previously installed.

**V. DETERMINATION OF BILLING LOAD**

The kW of Billing Load will be the greatest of the following:

- (A) The Customer's maximum measured 30-minute demand during any 30-minute interval of the current billing month, subject to power factor provision in § IV above; or
- (B) 75% of Contract Power as defined in § VI below; or
- (C) 30,000 kW

**VI. DETERMINATION OF CONTRACT POWER**

Unless Company gives Customer written notice to the contrary, Contract Power will be the maximum load (kW) established under § V.(A) above during the 12 months ended with the current month. For the initial twelve (12) months of Customer's service under the currently effective contract, the Contract Power shall be the kW specified in the currently effective contract unless exceeded in any month during the initial 12-month period.

**VII. PHASE AND VOLTAGE OF SERVICE**

At the option of the Company, service will be delivered at the Customer's utilization voltage or at available transmission line voltage (69 KV or higher). Service will be metered at or corrected to the transmission line voltage at the point of delivery, or at Company's option, at the nearest transmission station supplying Customer's load.

**VIII. METERING**

All service will be served through the total service meter. Where service is of fluctuating or intermittent type, Company may specify shorter intervals of load measurement.

**IX. CONDITIONS OF SERVICE**

- A. Customer may not resell or share any energy purchased under this rate.
- B. Where the installation of excessive new facilities is required or where there are special conditions affecting the service, Company may require a facilities charge in accordance with Schedule AFC to compensate for the additional cost.

- C. Prior to service being rendered under this schedule, Customer will furnish Company sufficient information to determine the Customer's electrical energy cost as a percent of cost of production including raw materials. Such information will be signed by the appropriate officer of the Customer.

**X. GROSS MONTHLY BILL AND PAYMENT**

The gross monthly bill for service furnished for which payment is not made within twenty days of the billing date shall be the Net Monthly Bill, including all adjustments under the rate schedule and applicable riders, plus 5% of the first \$50.00 and 2% of any additional amount of such gross monthly bill above \$50.00. If the monthly bill is paid prior to such dates, the Net Monthly Bill, including all adjustments under the rate schedule and applicable riders, shall apply.

**Entergy Gulf States, Inc.**  
**Monthly Fuel Clause Adjustment in Louisiana**  
**Retail Electric Rates**

<u>Billing Month</u>	All Retail Rate Schedule (\$/KWH)				
	Average	Secondary	Primary	Transmission	
				69/138kV	230 kV
<b><u>2011</u></b>					
January	0.02761	0.02841	0.02764	0.02642	0.02600
February	0.02959	0.03044	0.02962	0.02832	0.02788
March	0.03665	0.03768	0.03669	0.03513	0.03459
April	0.03646	0.03747	0.03651	0.03496	0.03443
May	0.03047	0.03132	0.03050	0.02920	0.02875
June	0.03361	0.03455	0.03365	0.03221	0.03172
July	0.03370	0.03464	0.03374	0.03232	0.03183
August	0.04232	0.04346	0.04237	0.04062	0.04002
September	0.03857	0.03960	0.03861	0.03704	0.03650
October	0.03627	0.03725	0.03631	0.03482	0.03430
November (See Note)	0.02166	0.02229	0.02169	0.02073	0.02041
December	0.02981	0.03068	0.02985	0.02852	0.02807
<b><u>2012</u></b>					
January	0.02725	0.02804	0.02728	0.02608	0.02567
February	0.02754	0.02833	0.02757	0.02636	0.02594
March	0.02465	0.02536	0.02468	0.02358	0.02320
April	0.02220	0.02287	0.02223	0.02122	0.02087
May	0.02153	0.02217	0.02156	0.02057	0.02024
June	0.01841	0.01897	0.01843	0.01757	0.01728
July	0.02480	0.02552	0.02487	0.02389	0.02352
August	0.02662	0.02737	0.02669	0.02567	0.02528
September	0.02865	0.02944	0.02873	0.02764	0.02724
October	0.02714	0.02789	0.02721	0.02619	0.02581
November	0.02668	0.02743	0.02676	0.02574	0.02536
December	0.02778	0.02856	0.02786	0.02680	0.02640
<b><u>2013</u></b>					
January	0.02918	0.03000	0.02927	0.02815	0.02774

Note: The November 2011 filing and factors include an \$18 million credit to fuel costs as a result of a stipulated settlement agreement pertaining to the LPSC's audit of EGSL's fuel costs from 1995-2004 (Docket # U-27103).