



The Yukon Electrical Company Limited  
An *ATCO* Company

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April 30, 2009

Ms. Deana Lemke  
Secretariat  
Yukon Utilities Board  
P.O. Box 31728  
Whitehorse, Yukon Y1A 6L3

Dear Ms. Lemke:


Re: Key Performance Indicators

Yukon Electrical is pleased to submit its 2008 Key Performance Indicators Report.

Please contact me at 633-7003, if you require any additional information or clarification.

Yours Sincerely,

THE YUKON ELECTRICAL COMPANY LIMITED  
An *ATCO* Company

  
Jerome Babyn,  
General Manager

JB:cm  
Encl.



**THE YUKON ELECTRICAL COMPANY LIMITED**  
An *ATCO* Company

Report to the Yukon Utilities Board

2008

Key Performance Indicators

April 30, 2009

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**The Yukon Electrical Company Limited  
Generation Performance**

Plant	2008		Unit Size (kW)	Engine Hours	Actual Generation (kWh)	Total Available Generation (kWh)		Unit Availability	Capacity Factor	Operating Factor
	CUL Number	Number				Available	Generation			
Beaver Creek	Unit # 1	CUL303	250	5,697	1,082,572	1,424,250	98.97%	49.95%	65.03%	
	Unit # 2	CUL378	300	3,763	778,363	1,128,900	99.52%	29.76%	42.96%	
	Unit # 3	CUL354	400	177	29,861	70,800	99.83%	0.90%	2.00%	
Carmacks	Unit # 1	CUL310	1,600	109	30,620	174,400	99.75%	0.22%	1.24%	
	Unit # 2	CUL230	220	3,198	597,099	703,560	89.87%	34.47%	36.51%	
	Unit # 3	CUL372	300	5,409	1,159,600	1,622,700	98.52%	44.79%	61.75%	
Dest. Bay	Unit # 1	CUL397	170	849	87,266	144,330	99.89%	5.90%	9.69%	
	Unit # 2	CUL397	170	76	49,070	133,000	99.18%	0.32%	0.87%	
	Unit # 3	CUL416	1,750	1,021	304,800	612,600	99.99%	0.58%	11.66%	
Old Crow	Unit # 1	CUL371	330	6,461	1,377,200	2,132,130	99.26%	48.00%	73.76%	
	Unit # 2	CUL371	330	1,209	160,500	205,530	99.93%	10.78%	13.80%	
	Unit # 3	CUL384	170	1,015	106,990	279,125	99.86%	4.40%	11.59%	
Pelly	Unit # 1	CUL375	275	5,170	1,060,550	2,068,000	97.18%	31.15%	59.02%	
	Unit # 2	CUL355	400	6,274	1,019,440	1,882,200	93.69%	41.40%	71.62%	
	Unit # 3	CUL405	300	204	39,421	204,000	99.93%	0.45%	2.33%	
Ross River	Unit # 1	CUL348	150	0	0	0	0.00%	0.00%	0.00%	
	Unit # 2	CUL357	100	0	0	0	0.00%	0.00%	0.00%	
	Unit # 3	CUL186	150	152	8,460	22,800	99.95%	0.64%	1.74%	
Teslin	Unit # 1	CUL378	1,500	92	52,303	138,000	99.91%	0.40%	1.05%	
	Unit # 2	CUL422	800	2836.0	1,764,000	2,270,400	97.45%	25.83%	32.40%	
	Unit # 3	CUL257	800	1422.0	830,400	1,137,600	99.20%	11.94%	16.23%	
Watson Lake	Unit # 1	CUL352	1,000	2376.0	1,860,000	2,376,000	95.62%	22.21%	27.12%	
	Unit # 2	CUL258	1,500	5474.0	6,667,200	8,211,000	65.00%	78.06%	62.49%	
	Unit # 3	CUL415	300	3091.0	660,000	927,300	93.21%	26.94%	35.29%	
Swift River	Unit # 1	CUL423	800	4384.0	2,707,200	3,507,200	91.40%	42.26%	50.05%	
	Unit # 2	CUL412	85	5,507	189,485	468,095	99.93%	25.60%	62.87%	
	Unit # 3	CUL413	85	3,335	99,408	283,475	67.97%	19.64%	38.07%	
Fish Lake	Unit # 1	CUL109	700			3,327,120			0.00%	
	Unit # 2	CUL108	600			3,224,040			0.00%	

**The following factors were measured**

- Unit Size:** This is the generator capacity in kW.
- Engine Hours:** This is the number of hours the generator was on-line.
- Actual Generation:** This is the amount of real power (energy) that the generating unit produced for the year in kW.h
- Total Available Generation:** This is the amount of real power (energy) that the generating unit could have produced based on the hours the generator was on-line during the year.
- Unit Availability:** This is defined as the number of hours the generator is available for production divided by the hours in the period. This factor is displayed in percentile and is useful in monitoring the overall reliability of the machine without regard to whether it was available when it was most needed.
- Capacity Factor:** This is defined as the actual energy produced divided by the amount of energy the unit had the potential to produce for the year. Displayed as a percentage, it is useful as an indication of the utilization of the generator especially in terms of providing energy (kW/h).
- Operating Factor:** This is defined as the hours the generator was on-line divided by the total hours in the year. Displayed as a percentage, this factor is useful in monitoring how much the machine was used without regard to its defined benefit such as energy production (kW/h) or capacity factor.

The Yukon Electrical Company Limited  
Summary of Customers, Energy Sales and Revenue

Description	Actual 2006	Actual 2007	Actual 2008
<b>Residential</b>			
Customers	12,225	12,452	12,715
Sales in MWh	122,151	122,334	128,302
MWh sales per customer	10.0	9.8	10.1
Revenue (\$000s)	14,001	14,088	16,671
Cents per KWh	11.46	11.52	12.99
<b>Commercial</b>			
Customers	2,516	2,570	2,600
Sales in MWh	137,080	141,351	141,704
MWh sales per customer	54.5	55.0	54.5
Revenue (\$000s)	17,999	18,729	20,818
Cents per KWh	13.13	13.25	14.69
<b>Street lights</b>			
Sales in MWh	3,263	3,374	3,545
Revenue (\$000s)	679	703	776
Cents per KWh	20.81	20.84	21.89
<b>Space lights</b>			
Sales in MWh	644	639	631
Revenue (\$000s)	135	134	139
Cents per KWh	20.96	20.97	22.03
<b>Total Company - Primary Retail</b>			
Customers	14,741	15,022	15,315
Sales in MWh	263,138	267,698	274,182
Revenue (\$000s)	32,814	33,654	38,404
Cents/KWh	12.47	12.57	14.01
<b>Secondary sales</b>			
Customers	22	22	23
Sales in MWh	21,555	23,566	18,053
Revenue (\$000s)	1,367	1,453	1,389
Cents per KWh	6.34	6.17	7.69
<b>Wholesale sales</b>			
Customers	1	1	1
Sales in MWh	513	488	412
Revenue (\$000s)	52	53	41
Cents per KWh	10.14	10.86	9.95
<b>Total Company</b>			
Customers	14,764	15,045	15,339
Sales in MWh	285,206	291,752	292,647
Revenue (\$000s)	34,233	35,160	39,834
Cents per KWh	12.00	12.05	13.61
YEC Short fall Revenue (Rider J)	4,882	5,017	4,990
Total Revenue	<u>39,115</u>	<u>40,177</u>	<u>44,824</u>

The Yukon Electrical Company Limited  
Schedule of Energy Balance and Losses

Description	Actual 2006	Actual 2007	Actual 2008
<b>Sales and Losses</b>			
Total energy sales - MWh	285,206	291,752	292,647
Losses - MWh	<u>18,619</u>	<u>18,087</u>	<u>18,001</u>
Losses - %	<u>6.5%</u>	<u>6.2%</u>	<u>6.2%</u>
Total generation and purchases	<u>303,825</u>	<u>309,839</u>	<u>310,648</u>
<b>Source - MWh</b>			
Hydro generation	8,216	9,025	6,551
WAF diesel	68	131	159
Other diesel	22,125	22,203	22,065
Purchases - Primary	251,861	254,914	263,820
Purchases - Secondary	<u>21,555</u>	<u>23,566</u>	<u>18,053</u>
Total sent out	<u>303,825</u>	<u>309,839</u>	<u>310,648</u>
<b>Source - %</b>			
Hydro generation	2.7%	2.9%	2.1%
Diesel generation	7.3%	7.2%	7.2%
Purchases	<u>90.0%</u>	<u>89.9%</u>	<u>90.7%</u>
Total	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

## Reliability Performance

Yukon Electrical tracks the following reliability indices as defined below:

**SAIFI** refers to the System Average Interruption Frequency Index. This index is defined as the average number of interruptions per customer served per year. SAIFI is calculated by taking the total number of customers affected by interruptions divided by the total number of customers served.

**SAIDI** refers to the System Average Interruption Duration Index. This index is defined as the system average interruption duration for customers served per year. SAIDI is calculated by taking the total customer hours of interruptions divided by total customers served.

**CAIDI** refers to the Customer Average Interruption Duration Index. This index is defined as the customer average interruption duration for customers interrupted during the year. CAIDI is calculated by taking the total customer hours of interruptions divided by total customer interruptions.

**IOR** refers to the Index of Reliability which defines the annual customer-hours that service is available measured as a percentage.

Yukon Electrical's 2008 results (including and excluding loss of supply from Yukon Energy) are as follows:

	Including Loss of Supply From Yukon Energy	Excluding Loss of Supply From Yukon Energy
SAIFI	8.83	3.00
SAIDI	10.01	.12
CAIDI	1.13	.04
IOR	99.8857%	99.8129%

## Health, Safety and Environment Performance

Yukon Electrical's 2008 Health, Safety, and Environment Performance Measures are as follows:

Worker lost time frequency	0.00
Worker lost time severity	0.00
Contractor lost time incidents	0
Preventable vehicle incident frequency	6
Number of reportable releases	0



## Financial Performance

The table below notes a number of highlights from our 2008 Annual Filing as well as a number of other 2008 Financial Performance indicators.

Regulated Return on Equity (ROE)	7.03%
Net Rate Base (\$000's)	\$46,127
Average Inventory (\$000's)	\$1,754
Capital Additions (\$000's)	\$9,170
Customers per Employee	284
Sales (MW.h) per Employee	5,419
Total labour dollars per Customer	\$349
Ave. Consumption per Res. Customer (MW.h)	10.09
Ave. Consumption per Comm. Customer (MW.h)	54.50