



**The Yukon Electrical Company Limited**  
An **ATCO** Company

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March 31, 2010

Ms. Sheena Smart  
Executive Assistant  
Yukon Utilities Board  
P.O. Box 31728  
Whitehorse, Yukon Y1A 6L3

Dear Ms. Smart:

Re: Key Performance Indicators

Yukon Electrical is pleased to submit its 2009 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

*ORIGINAL SIGNED BY*

Jerome Babyn,  
General Manager

JB:cm  
Encl.

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

Report to the Yukon Utilities Board

2009

Key Performance Indicators

March 31, 2010

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**The Yukon Electrical Company Limited  
Generation Performance**

Plant	2009	CUL Number	Unit Size (kW)	Engine Hours	Actual Generation (kWh)	Total Available Generation (kWh)	Unit Availability	Capacity Factor	Operating Factor
Beaver Creek	Unit # 1	CUL303	250	6,146	1,153,193	1,536,500	97.24%	54.20%	70.16%
	Unit # 2	CUL378	300	3,288	717,163	986,400	99.60%	27.40%	37.53%
	Unit # 3	CUL354	400	173	34,470	69,200	99.89%	98.00%	2.00%
Carmacks	Unit # 1	CUL310	1,600	202	57,145	323,200	99.73%	2.31%	2.31%
Dest. Bay	Unit # 1	CUL230	220	4,709	790,497	1,035,980	96.59%	42.47%	53.76%
	Unit # 2	CUL372	300	4,155	905,396	1,246,500	99.38%	34.67%	47.43%
	Unit # 3	CUL397	170	767	82,258	130,390	99.52%	5.56%	8.76%
Haines Jtn.	Unit # 1	CUL416	1,750	18	14,952	31,500	81.83%	0.12%	0.21%
Old Crow	Unit # 1	CUL414	600	1,722	483,200	1,033,200	99.92%	9.20%	19.66%
	Unit # 2	CUL371	330	6,195	1,300,000	2,044,350	96.03%	46.83%	70.72%
	Unit # 3	CUL384	170	982	128,670	166,940	96.32%	8.97%	11.21%
Pelly	Unit # 1	CUL375	275	52	6,190	14,300	98.31%	0.26%	0.59%
	Unit # 2	CUL355	400	240	47,870	96,000	99.95%	1.37%	2.74%
	Unit # 3	CUL405	300	266	40,510	79,800	99.95%	1.54%	3.04%
Ross River	Unit # 1	CUL265	1,000	109	36,363	109,000	99.91%	0.42%	1.24%
Stewart	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	6	240	900	99.36%	0.02%	0.07%
Teslin	Unit # 1	CUL378	1,500	35	19,345	52,500	99.91%	0.15%	0.40%
Watson Lake	Unit # 1	CUL422	800	2889.0	1,763,600	2,311,200	85.00%	29.60%	32.98%
	Unit # 2	CUL257	800	364.0	262,152	291,200	99.70%	4.00%	4.16%
	Unit # 3	CUL352	1,000	1599.0	1,113,600	1,599,000	99.60%	12.76%	18.25%
	Unit # 4	CUL258	1,500	6371.0	7,716,000	9,556,500	85.50%	68.60%	72.73%
	Unit # 5	CUL415	300	2750.0	632,600	687,500	99.90%	29.00%	31.39%
	Unit # 6	CUL423	800	2979.0	2,707,200	1,923,600	99.50%	38.80%	34.01%
Swift River	Unit #1	CUL412	80	8,720	276,294	697,600	99.50%	39.60%	99.54%
	Unit #2	CUL413	80	40	2,000	3,200	100.00%	0.00%	0.46%
Fish Lake	Unit #1	CUL109	700			4,433,280			0.00%
	Unit #2	CUL108	600			3,660,360			0.00%

**The following factors were measured**

<b>Unit Size:</b>	This is the generator capacity in kW.
<b>Engine Hours:</b>	This is the number of hours the generator was on-line.
<b>Actual Generation:</b>	This is the amount of real power (energy) that the generating unit produced for the year in kW.h
<b>Total Available Generation:</b>	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.
<b>Unit Availability:</b>	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.
<b>Capacity Factor:</b>	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 percentile, it is useful as an indication of the utilization of the generator especially in terms of providing energy (kW.h).
<b>Operating Factor:</b>	This is defined as the hours the generator was on-line divided by the total hours in the year. Displayed as a percentile, 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	Actual 2009
<b>Residential</b>				
Customers	12,225	12,452	12,715	12925
Sales in MWh	122,151	122,334	128,302	131620
MWh sales per customer	10.0	9.8	10.1	10.2
Revenue (\$000s)	14,001	14,088	16,671	16350
Cents per KWh	11.46	11.52	12.99	12.42
<b>Commercial</b>				
Customers	2,516	2,570	2,600	2,627
Sales in MWh	137,080	141,351	141,704	141,025
MWh sales per customer	54.5	55.0	54.5	53.7
Revenue (\$000s)	17,999	18,729	20,818	20,278
Cents per KWh	13.13	13.25	14.69	14.38
<b>Street lights</b>				
Sales in MWh	3,263	3,374	3,545	3,477
Revenue (\$000s)	679	703	776	763
Cents per KWh	20.81	20.84	21.89	21.94
<b>Space lights</b>				
Sales in MWh	644	639	631	592
Revenue (\$000s)	135	134	139	131
Cents per KWh	20.96	20.97	22.03	22.13
<b>Total Company - Primary Retail</b>				
Customers	14,741	15,022	15,315	15,552
Sales in MWh	263,138	267,698	274,182	276,714
Revenue (\$000s)	32,814	33,654	38,404	37,522
Cents/KWh	12.47	12.57	14.01	13.56
<b>Secondary sales</b>				
Customers	22	22	23	21
Sales in MWh	21,555	23,566	18,053	16,843
Revenue (\$000s)	1,367	1,453	1,389	1,092
Cents per KWh	6.34	6.17	7.69	6.48
<b>Wholesale sales</b>				
Customers	1	1	1	1
Sales in MWh	513	488	412	360
Revenue (\$000s)	52	53	41	37
Cents per KWh	10.14	10.86	9.95	10.28
<b>Total Company</b>				
Customers	14,764	15,045	15,339	15,574
Sales in MWh	285,206	291,752	292,647	293,917
Revenue (\$000s)	34,233	35,160	39,834	38,651
Cents per KWh	12.00	12.05	13.61	13.15
YEC Short fall Revenue (Rider J)	4,882	5,017	4,990	4,026
Total Revenue	39,115	40,177	44,824	42,677

The Yukon Electrical Company Limited  
Schedule of Energy Balance and Losses

Description	Actual 2006	Actual 2007	Actual 2008	Actual 2009
<b>Sales and Losses</b>				
Total energy sales - MWh	285,206	291,752	292,647	293,917
Losses - MWh	<u>18,619</u>	<u>18,087</u>	<u>18,001</u>	<u>18,215</u>
Losses - %	<u>6.5%</u>	<u>6.2%</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>	<u>312,133</u>
<b>Source - MWh</b>				
Hydro generation	8,216	9,025	6,551	8,094
WAF diesel	68	131	159	213
Other diesel	22,125	22,203	22,065	19,753
Purchases - Primary	251,861	254,914	263,820	267,230
Purchases - Secondary	<u>21,555</u>	<u>23,566</u>	<u>18,053</u>	<u>16,843</u>
Total sent out	<u>303,825</u>	<u>309,839</u>	<u>310,648</u>	<u>312,133</u>
<b>Source - %</b>				
Hydro generation	2.7%	2.9%	2.1%	2.6%
Diesel generation	7.3%	7.2%	7.2%	6.4%
Purchases	<u>90.0%</u>	<u>89.9%</u>	<u>90.7%</u>	<u>91.0%</u>
Total	<u>100.0%</u>	<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 2009 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	8.00	2.43
SAIDI	5.52	2.52
CAIDI	.69	1.04
IOR	99.9366%	99.9712%

## Health, Safety and Environment Performance

Yukon Electrical's 2009 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	7
Number of reportable releases	4

## Financial Performance

The table below notes a number of highlights from our 2009 Annual Filing as well as a number of other 2009 Financial Performance indicators.

Regulated Return on Equity (ROE)	11.50%
Net Rate Base (\$000's)	\$49,083
Average Inventory (\$000's)	\$1,756
Capital Additions (\$000's)	\$7,520
Customers per Employee	288
Sales (MW.h) per Employee	5,442
Total labour dollars per Customer	\$372
Ave. Consumption per Res. Customer (MW.h)	10.18
Ave. Consumption per Comm. Customer (MW.h)	53.68