



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

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April 30, 2012

Ms. Deana Lemke  
Executive Assistant  
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 2011 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*

Dwight Redden,  
General Manager

DR:cm  
Encl.

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

Report to the Yukon Utilities Board

2011  
Key Performance Indicators

April 30, 2012

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**The Yukon Electrical Company Limited  
Generation Performance**

Plant	2010	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	3,972	758,201	993,000	80.39%	43.07%	45.34%
	Unit # 2	CUL378	300	5,357	1,241,288	1,607,100	99.38%	47.53%	61.15%
	Unit # 3	CUL354	400	341	81,215	136,400	99.93%	2.32%	3.89%
Carmacks	Unit # 1	CUL310	1,600	25	16,566	40,000	98.08%	0.12%	0.29%
Dest. Bay	Unit # 1	CUL 467	400	1,932	352,453	772,800	99.86%	10.07%	22.05%
	Unit # 2	CUL372	300	4,870	1,039,308	1,461,000	68.77%	57.51%	55.59%
	Unit # 3	CUL230	220	2,097	354,379	461,340	61.42%	29.94%	23.94%
Haines Jtn.	Unit # 1	CUL416	1,750	50	35,189	87,500	100.00%	0.23%	0.57%
Old Crow	Unit # 1	CUL414	600	2,667	813,600	1,600,200	99.77%	15.51%	30.45%
	Unit # 2	CUL371	330	5,590	1,177,600	1,844,700	99.12%	41.10%	63.81%
	Unit # 3	CUL384	170	681	58,800	115,770	99.89%	3.95%	7.77%
Pelly	Unit # 1	CUL375	275	390	47,320	107,250	99.63%	1.97%	4.45%
	Unit # 2	CUL470	400	711	179,500	284,400	92.28%	5.55%	8.12%
	Unit # 3	CUL405	300	1,019	173,360	305,700	99.61%	6.62%	11.63%
Ross River	Unit # 1	CUL265	1,000	21	8,300	21,000	100.00%	0.09%	0.24%
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	95	4,140	14,250	100.00%	32.00%	1.08%
Teslin	Unit # 1	CUL378	1,500	20	7,279	30,000	99.45%	0.06%	0.23%
Watson Lake	Unit # 1	CUL422	800	1792.0	1,155,600	1,433,600	99.40%	16.40%	20.46%
	Unit # 2	CUL257	800	2815.0	1,672,800	2,252,000	78.90%	23.80%	32.13%
	Unit # 3	CUL352	1,000	2830.0	2,282,400	2,830,000	96.80%	26.00%	32.31%
	Unit # 4	CUL258	1,500	3758.0	4,408,800	5,637,000	69.80%	33.50%	42.90%
	Unit # 5	CUL 466	600	4520.0	1,904,400	2,712,000	94.00%	36.20%	51.60%
	Unit # 6	CUL423	800	4683.0	3,126,000	4,398,600	94.60%	44.60%	53.46%
Swift River	Unit #1	CUL460	80	6,836	180,463	546,880	98.90%	25.70%	78.04%
	Unit #2	CUL413	80	1,941	62,000	155,280	99.90%	8.80%	22.16%
Fish Lake	Unit #1	CUL109	700			1,020,480			0.00%
	Unit #2	CUL108	600			2,367,240			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.

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

Line No.	Description	Actual 2006	Actual 2007	Actual 2008	Actual 2009	Actual 2010	Actual 2011
1	<b>Residential</b>						
2	Customers (average during year)	12,196	12,452	12,715	12,925	13,169	13,482
3	Sales in MWh	122,151	122,334	128,302	131,620	131,265	141,696
4	MWh sales per customer	10.0	9.8	10.1	10.2	10.0	10.5
5	Revenue (\$000s)	14,001	14,088	16,671	16,350	16,802	18,928
6	Cents per KWh	11.46	11.52	12.99	12.42	12.80	13.36
7	<b>Commercial</b>						
8	Customers (average during year)	2,515	2,570	2,600	2,627	2,692	2,774
9	Sales in MWh	137,080	141,351	141,704	141,025	145,769	150,591
10	MWh sales per customer	54.5	55.0	54.5	53.7	54.1	54.3
11	Revenue (\$000s)	17,999	18,729	20,818	20,278	21,653	23,374
12	Cents per KWh	13.13	13.25	14.69	14.38	14.85	15.52
13	<b>Street lights</b>						
14	Sales in MWh	3,263	3,374	3,545	3,477	3,647	3,598
15	Revenue (\$000s)	679	703	776	763	849	881
16	Cents per KWh	20.81	20.83	21.89	21.94	23.28	24.47
17	<b>Sentinel lights</b>						
18	Sales in MWh	644	639	631	592	594	581
19	Revenue (\$000s)	135	134	139	131	139	144
20	Cents per KWh	20.95	20.96	22.03	22.13	23.40	24.73
21	<b>Total Company - Retail - Primary</b>						
22	Customers	14,711	15,022	15,315	15,552	15,861	16,256
23	Sales in MWh	263,137	267,698	274,182	276,714	281,275	296,466
24	Revenue (\$000s)	32,814	33,654	38,404	37,522	39,443	43,327
25	Cents/KWh	12.47	12.57	14.01	13.56	14.02	14.62
26	<b>Secondary Sales</b>						
27	Customers (average during year)	22	22	23	21	21	15
28	Sales in MWh	21,555	23,566	18,053	16,843	10,153	552
29	MWh sales per customer	979.8	1,071.2	784.9	802.0	483.5	36.8
30	Revenue (\$000s)	1,367.0	1,453.0	1,389.0	1,092.0	665.0	41.0
31	Cents per KWh	6.34	6.17	7.69	6.48	6.55	7.43
32	<b>Wholesale Sales</b>						
33	Customers (average during year)	2	2	1	1	1	2
34	Sales in MWh	513	488	412	360	364	427
35	MWh sales per customer	256.5	244.0	412.0	360.0	364.0	213.5
36	Revenue (\$000s)	52	53	41	37	37	38
37	Cents per KWh	10.14	10.86	9.95	10.28	10.16	8.80
38	<b>Total Company</b>						
39	Customers	14,735	15,046	15,339	15,574	15,883	16,273
40	Sales in MWh	285,205	291,752	292,647	293,917	291,792	297,445
41	Revenue (\$000s)	34,233	35,160	39,834	38,651	40,145	43,406
42	Cents/KWh	12.00	12.05	13.61	13.15	13.76	14.59
43	Retail Revenues	34,233	35,160	39,834	38,651	40,145	43,406
44	<b>YEC Revenue Shortfall (Rider J)</b>	4,882	5,017	4,990	4,026	4,353	2,479
45	<b>TOTAL REVENUES</b>	39,115	40,177	44,824	42,677	44,498	45,885

**Yukon Electrical Company Limited**  
**Schedule of Energy Balances and Losses**

(MW.h)

Line No.	Description	Actual 2006	Actual 2007	Actual 2008	Actual 2009	Actual 2010
1	<b>Sales and Losses</b>					
2	Total energy sales - MWh	285,205	291,752	292,647	293,917	291,792
3	Losses and company used - MWh	18,591	18,087	18,001	18,215	17,932
4	Losses -%	6.5%	6.2%	6.2%	6.2%	6.1%
5	Total generation and purchases (MWh)	<u>303,796</u>	<u>309,839</u>	<u>310,648</u>	<u>312,133</u>	<u>309,725</u>
6	<b>Sources - MWh</b>					
7	Hydro generation	8,216	9,025	6,551	8,094	3,388
8	Hydro grid standby diesel generation	39	131	159	213	72
9	Diesel generation	22,125	22,203	22,065	19,753	19,767
10	Purchases	<u>273,416</u>	<u>278,480</u>	<u>281,873</u>	<u>284,073</u>	<u>286,498</u>
11		<u>303,796</u>	<u>309,839</u>	<u>310,648</u>	<u>312,133</u>	<u>309,725</u>
12	<b>Sources - %</b>					
13	Hydro generation	2.7%	2.9%	2.1%	2.6%	1.1%
14	Diesel generation	7.3%	7.2%	7.4%	6.4%	6.4%
15	Purchases	<u>90.0%</u>	<u>89.9%</u>	<u>90.5%</u>	<u>91.0%</u>	<u>92.5%</u>
		100.0%	100.0%	100.0%	100.0%	100.0%

## 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	6.15	2.11
SAIDI	7.16	2.65
CAIDI	1.16	1.26
IOR	99.91828%	99.96978%

## Health, Safety and Environment Performance

Yukon Electrical's 2011 Health, Safety, and Environment Performance Measures are as follows:

Worker lost time frequency	1.74
Worker lost time severity	19.16
Contractor lost time incidents	0
Preventable vehicle incident frequency	8
Number of reportable releases	2



## Financial Performance

The table below notes a number of highlights from our 2011 Annual Filing as well as a number of other 2011 Financial Performance indicators.

Regulated Return on Equity (ROE)	9.25%
Net Rate Base (\$000's)	\$57,203
Average Inventory (\$000's)	\$1,939
Capital Additions (\$000's)	\$12,266
Customers per Employee	276
Sales (MW.h) per Employee	5,041
Total labour dollars per Customer	\$390
Ave. Consumption per Res. Customer (MW.h)	10.51
Ave. Consumption per Comm. Customer (MW.h)	54.29