

YUKON UTILITIES BOARD		
EXHIBIT		C3-12
DAY	ENTERED BY	DATE
	UGG	NOV. 5 2013



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

## Report to the Yukon Utilities Board

2010

## Key Performance Indicators

March 31, 2011

# TABLE OF CONTENTS

	Page
1. Operational Performance	
Generation Performance	1
Summary of Customers, Energy Sales & Revenue	2
Summary of Energy Balance and Losses	3
Reliability Performance	4
2. Health, Safety and Environment Performance	5
3. Financial Performance	6

30

30

The Yukon Electrical Company Limited  
Generation Performance

2010 KP

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	5,186	974,301	1,296,500	99.54%	44.69%	59.20%
	Unit # 2	CUL378	300	3,341	744,277	1,002,300	96.87%	29.24%	38.14%
	Unit # 3	CUL354	400	1,056	233,781	422,400	99.91%	6.68%	12.05%
Carmacks	Unit # 1	CUL310	1,600	15	4,408	24,000	98.90%	0.03%	0.17%
	Unit # 1	CUL230	220	4,601	811,206	1,012,220	92.86%	45.33%	52.52%
	Unit # 2	CUL372	300	4,259	917,199	1,277,700	98.97%	35.26%	48.62%
Haines Jln.	Unit # 3	CUL397	170	381	39,122	64,770	99.95%	2.63%	4.35%
	Unit # 1	CUL416	1,750	62	44,014	108,500	100.00%	0.29%	0.71%
	Unit # 1	CUL414	600	2,274	636,000	1,364,400	97.98%	12.35%	25.96%
Old Crow	Unit # 2	CUL371	330	5,611	1,150,800	1,851,630	95.66%	41.61%	64.05%
	Unit # 3	CUL384	170	1,015	128,100	172,550	99.91%	8.61%	11.59%
	Unit # 1	CUL375	275	14	1,190	3,850	99.72%	0.05%	0.16%
Pelly	Unit # 2	CUL355	400	72	17,580	28,800	100.00%	0.50%	0.82%
	Unit # 3	CUL405	300	30	3,740	9,000	100.00%	0.14%	0.34%
	Unit # 1	CUL265	1,000	17	7,629	17,000	97.26%	0.09%	0.19%
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	36	1,830	5,400	98.90%	0.14%	0.41%
Teslin	Unit # 1	CUL378	1,500	20	6,885	30,000	99.18%	0.05%	0.23%
	Unit # 1	CUL422	800	4599.0	2,902,800	3,671,200	99.00%	29.60%	52.39%
	Unit # 2	CUL257	800	4191.0	2,418,000	3,352,800	98.00%	4.00%	47.84%
Watson Lake	Unit # 3	CUL352	1,000	3098.0	2,368,900	3,098,000	86.00%	12.76%	35.37%
	Unit # 4	CUL258	1,500	2768.0	3,223,200	4,152,000	43.00%	68.60%	31.60%
	Unit # 5	CUL 466	600	124.0	51,600	74,400	3.60%	29.00%	1.42%
Swift River	Unit # 6	CUL423	800	5487.0	3,398,400	4,398,600	99.00%	38.80%	62.64%
	Unit # 1	CUL412	80	8,102	187,005	648,160	99.50%	39.60%	92.49%
	Unit # 2	CUL413	80	530	19,000	42,400	100.00%	0.00%	6.05%
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

- 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 percentile, 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 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.

32

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

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

32

**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	3.98	1.49
SAIDI	2.95	1.57
CAIDI	.74	1.06
IOR	99.9664%	99.9821%

34

## Health, Safety and Environment Performance

Yukon Electrical's 2010 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	9
Number of reportable releases	2

## Financial Performance

The table below notes a number of highlights from our 2010 Annual Filing as well as a number of other 2010 Financial Performance indicators.

Regulated Return on Equity (ROE)	10.71%
Net Rate Base (\$000's)	\$49,993
Average Inventory (\$000's)	\$1,769
Capital Additions (\$000's)	\$6,849
Customers per Employee	294
Sales (MW.h) per Employee	5,404
Total labour dollars per Customer	\$375
Ave. Consumption per Res. Customer (MW.h)	9.97
Ave. Consumption per Comm. Customer (MW.h)	54.15

36





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

Report to the Yukon Utilities Board

2011

Key Performance Indicators

April 30, 2012

37

# TABLE OF CONTENTS

	Page
1. Operational Performance	
Generation Performance	1
Summary of Customers, Energy Sales & Revenue	2
Summary of Energy Balance and Losses	3
Reliability Performance	4
2. Health, Safety and Environment Performance	5
3. Financial Performance	6

The Yukon Electrical Company Limited  
Generation Performance

2011 KPI

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%
	Unit # 2	CUL467	400	1,932	352,453	772,800	99.86%	10.07%	22.05%
	Unit # 3	CUL372	300	4,870	1,039,308	1,461,000	68.77%	57.51%	55.59%
Dest. Bay	Unit # 1	CUL230	220	2,097	354,379	461,340	61.42%	29.94%	23.94%
	Unit # 2	CUL416	1,750	50	35,189	87,500	100.00%	0.23%	0.57%
	Unit # 3	CUL414	600	2,667	813,800	1,600,200	99.77%	15.51%	30.45%
Old Crow	Unit # 1	CUL371	330	5,590	1,177,600	1,844,700	99.12%	41.10%	63.81%
	Unit # 2	CUL384	170	681	58,800	115,770	99.89%	3.95%	7.77%
	Unit # 3	CUL375	275	390	47,320	107,250	99.63%	1.97%	4.45%
Pelly	Unit # 1	CUL470	400	711	179,500	284,400	92.28%	5.55%	8.12%
	Unit # 2	CUL405	300	1,019	173,360	305,700	99.61%	6.62%	11.63%
	Unit # 3	CUL265	1,000	21	8,300	21,000	100.00%	0.09%	0.24%
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	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%
	Unit # 2	CUL422	800	1792.0	1,155,600	1,433,600	99.40%	16.40%	20.46%
	Unit # 3	CUL257	800	2815.0	1,672,800	2,252,000	78.90%	23.80%	32.13%
Watson Lake	Unit # 1	CUL352	1,000	2830.0	2,282,400	2,830,000	96.80%	26.00%	32.31%
	Unit # 2	CUL258	1,500	3758.0	4,408,800	5,637,000	69.80%	33.50%	42.90%
	Unit # 3	CUL466	600	4520.0	1,904,400	2,712,000	94.00%	36.20%	51.60%
Swift River	Unit # 1	CUL423	800	4683.0	3,126,000	4,398,600	94.60%	44.60%	53.46%
	Unit # 2	CUL460	80	6,836	180,463	546,880	98.90%	25.70%	78.04%
	Unit # 3	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

Unit Size:

Engine Hours: This is the number of hours the generator was on-line.

Actual Generation:

Total Available Generation: This is the amount of real power (energy) that the generating unit produced for the year in kW.h

Unit Availability: 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.

Capacity Factor: 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.

Operating 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 percentile, 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 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.

39

**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	YEC Revenue Shortfall (Rider J)	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

40

**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%

4/2

## 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

43

## 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

44





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

Report to the Yukon Utilities Board

2012

Key Performance Indicators

April 30, 2013

# TABLE OF CONTENTS

	Page
1. Operational Performance	
Generation Performance	1
Summary of Customers, Energy Sales & Revenue	2
Summary of Energy Balance and Losses	3
Reliability Performance	4
2. Health, Safety and Environment Performance	5
3. Financial Performance	6

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	4,239	795,540	1,059,750	78.39%	46.20%	48.39%
	Unit # 2	CUL378	300	4,923	1,040,392	1,476,900	89.52%	44.22%	56.20%
	Unit # 3	CUL354	400	630	134,063	252,000	99.68%	0.04%	0.07%
Carmacks Dest. Bay	Unit # 1	CUL310	1,600	17	18,683	27,200	98.73%	0.01%	0.19%
	Unit # 2	CUL467	400	2,372	597,859	948,800	99.79%	17.10%	27.08%
	Unit # 3	CUL372	300	3,288	539,912	986,400	87.88%	23.38%	37.53%
Haines Jtn. Old Crow	Unit # 1	CUL230	220	3,285	586,528	722,700	98.61%	30.55%	37.50%
	Unit # 2	CUL416	1,750	18	13,181	31,500	100.00%	0.01%	0.01%
	Unit # 3	CUL414	600	2,737	789,600	1,642,200	99.79%	15.05%	31.24%
Pelly	Unit # 1	CUL355	400	6,026	1,252,000	2,410,400	96.85%	36.89%	68.79%
	Unit # 2	CUL384	170	848	132,150	144,160	99.93%	0.09%	9.68%
	Unit # 3	CUL375	275	28	2,110	7,700	99.82%	0.09%	0.32%
Ross River Stewart	Unit # 1	CUL470	600	54	9,260	32,400	99.85%	0.18%	0.62%
	Unit # 2	CUL405	300	54	5,780	16,200	99.83%	0.22%	0.62%
	Unit # 3	CUL265	1,000	23	8,391	23,000	99.57%	0.10%	0.26%
Teslin Watson Lake (See Note)	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	57	2,220	8,550	98.54%	0.17%	0.65%
Swift River (See Note)	Unit # 1	CUL378	1,500	16	6,448	24,000	99.87%	0.05%	0.18%
	Unit # 2	CUL422	800	6133.0	3,868,800	4,906,400	97.08%	56.71%	69.82%
	Unit # 3	CUL257	800	4287.0	2,584,800	3,429,600	94.60%	38.88%	48.80%
	Unit # 4	CUL352	1,000	4023.0	3,280,800	4,023,000	71.92%	51.93%	45.79%
	Unit # 5	CUL258	1,500	73.3	84,000	109,950	100.00%	0.64%	0.83%
	Unit # 6	CUL466	600	3695.0	1,627,200	2,217,000	97.73%	31.59%	42.06%
Fish Lake	Unit # 1	CUL423	800	6114.0	3,968,400	4,891,200	99.07%	57.00%	69.03%
	Unit # 2	CUL460	80	65	1,699	5,200	100.00%	0.24%	0.72%
	Unit # 1	CUL413	80	8,902	247,000	712,160	99.28%	34.74%	59.44%
	Unit # 2	CUL109	700		1,020,480				0.00%
		CUL108	600		2,367,240				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 percentile, 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 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.

47

The Yukon Electrical Company Limited  
2013 - 2015 General Rate Application  
Summary of Customers, Energy Sales and Revenue

Line No.	Description	Actual 2008	Actual 2009	Actual 2010	Actual 2011	Actual 2012
1	<b>Residential</b>					
2	Customers (average during year)	12,715	12,925	13,169	13,482	13,857
3	Sales in MWh	128,302	130,569	131,273	141,696	150,350
4	MWh sales per customer	10.1	10.1	10.0	10.5	10.9
5	Revenue (\$000s)	16,671	16,307	16,892	18,928	21,127
6	Cents per KWh	12.99	12.49	12.87	13.36	14.05
7	<b>Commercial</b>					
8	Customers (average during year)	2,600	2,627	2,692	2,774	2,841
9	Sales in MWh	141,704	142,076	145,776	150,591	159,562
10	MWh sales per customer	54.5	54.1	54.2	54.3	56.2
11	Revenue (\$000s)	20,818	20,368	21,621	23,374	\$26,057
12	Cents per KWh	14.69	14.34	14.83	15.52	16.33
13	<b>Street lights</b>					
14	Sales in MWh	3,545	3,477	3,647	3,598	3,771
15	Revenue (\$000s)	776	764	848	880	963
16	Cents per KWh	21.89	21.97	23.25	24.46	25.53
17	<b>Private lights</b>					
18	Sales in MWh	631	592	594	581	560
19	Revenue (\$000s)	139	131	138	144	147
20	Cents per KWh	22.03	22.13	23.23	24.71	26.20
21	<b>Total Company - Retail - Primary</b>					
22	Customers	15,315	15,552	13,169	13,482	13,857
23	Sales in MWh	274,182	276,714	281,290	296,466	314,244
24	Revenue (\$000s)	38,404	37,570	39,499	43,326	48,293
25	Cents/KWh	14.01	13.58	14.04	14.61	15.37
26	<b>Secondary Sales</b>					
27	Customers (average during year)	22	21	21	14	2
28	Sales in MWh	18,053	16,843	10,153	552	1,993
29	MWh sales per customer	820.6	802	483	39	997
30	Revenue (\$000s)	1,389	1,092	665	41	164.1
31	Cents per KWh	7.69	6.48	6.55	7.43	8.23
32	<b>Wholesale Sales</b>					
33	Customers (average during year)	2	2	2	2	2
34	Sales in MWh	412	360	365	427	338
35	MWh sales per customer	206	180	183	214	169
36	Revenue (\$000s)	41	37	38	38	28
37	Cents per KWh	9.95	10.28	10.41	8.90	8.30
38	<b>Total Company</b>					
39	Customers	15,339	15,575	15,884	16,272	16,702
40	Sales in MWh	292,647	293,917	291,808	297,445	316,575
41	Revenue (\$000s)	39,834	38,699	40,202	43,405	48,486
42	Cents/KWh	13.61	13.17	13.78	14.59	15.32
43	Retail Revenues	39,834	38,699	40,202	43,405	48,486
44	YEC Revenue Shortfall (Rider J)	4,990	4,026	4,353	2,479	1,437
45	<b>TOTAL REVENUES</b>	<u>44,824</u>	<u>42,725</u>	<u>44,555</u>	<u>45,884</u>	<u>49,923</u>

418

**The Yukon Electrical Company Limited**  
**2013 - 2015 General Rate Application**  
**Schedule of Energy Losses**  
**(MW.h)**

Line No.	Description	Actual 2008	Actual 2009	Actual 2010	Actual 2011	Actual 2012
1	<b>Sales and Losses</b>					
2	Total energy sales - MW.h	292,647	293,917	291,808	297,445	316,575
3	Losses and company used - MW.h	18,001	18,216	17,917	18,219	20,380
4	Losses -%	6.2%	6.2%	6.1%	6.1%	6.4%
5	Total generation and purchases (MW.h)	<u>310,648</u>	<u>312,133</u>	<u>309,725</u>	<u>315,664</u>	<u>336,955</u>
6	<b>Sources - MW.h</b>					
7	Hydro generation	6,551	8,094	3,388	3,638	3,388
8	Hydro grid standby diesel generation	159	213	72	446	25
9	Diesel generation	22,065	19,753	19,767	20,487	21,285
10	Purchases	281,873	284,073	286,498	291,093	312,257
11		<u>310,648</u>	<u>312,133</u>	<u>309,725</u>	<u>315,664</u>	<u>336,955</u>
12	<b>Sources - %</b>					
13	Hydro generation	2.1%	2.6%	1.1%	1.2%	1.0%
14	Diesel generation	7.4%	6.4%	6.4%	6.6%	6.3%
15	Purchases	90.5%	91.0%	92.5%	92.2%	92.7%
		<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

49

## 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 2012 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	2.60	2.15
SAIDI	3.15	2.97
CAIDI	1.21	1.38
IOR	99.963%	99.966%

## Health, Safety and Environment Performance

Yukon Electrical's 2012 Health, Safety, and Environment Performance Measures are as follows:

Worker lost time frequency	1.61
Worker lost time severity	3.21
Contractor lost time incidents	4
Preventable vehicle incident frequency	10
Number of reportable releases	3

51

## Financial Performance

The table below notes a number of highlights from our 2012 Annual Filing as well as a number of other 2012 Financial Performance indicators.

Regulated Return on Equity (ROE)	10.35%
Net Rate Base (\$000's)	\$60,003
Average Inventory (\$000's)	\$2,018
Capital Additions (\$000's)	\$17,116
Customers per Employee	283
Sales (MW.h) per Employee	5,366
Total labour dollars per Customer	\$374
Ave. Consumption per Res. Customer (MW.h)	10.85
Ave. Consumption per Comm. Customer (MW.h)	56.16

52