

ATCO *Electric*

YUKON

April 30, 2018

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

Dear Ms. Lemke:

Re: ATCO Electric Yukon Key Performance Indicators

Please find attached the 2017 Key Performance Indicators for ATCO Electric Yukon.

If you have any questions, please contact the undersigned at (867) 633-7080.

Yours sincerely,



Jay Massie
Manager

Encl.



Report to the Yukon Utilities Board

2017

Key Performance Indicators

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**ATCO Electric Yukon
2017 Generation Performance**

Plant	2017	CUL Number	Unit Size (kW)	Engine Hours	Actual Generation (kWh)	Total Available Generation (kWh)	Unit Availability	Capacity Factor	Operating Factor
Beaver Creek	Unit #1	CUL585	285	2,902	549,701	827,099	99.04%	66.46%	33.04%
	Unit #2	CUL547	365	5,293	1,199,411	1,931,945	98.06%	62.08%	60.26%
	Unit #3	CUL354	400	1,373	182,361	549,200	99.95%	33.20%	15.63%
Carmacks	Unit #1	CUL310	1,600	79	42,724	125,760	99.45%	33.97%	0.89%
Destruction Bay	Unit #1	CUL467	600	1,532	374,721	919,200	74.87%	40.77%	17.44%
	Unit #2	CUL592	400	4,239	911,248	1,695,640	98.26%	53.74%	48.26%
	Unit #3	CUL584	315	2,880	471,819	907,169	93.65%	52.01%	32.79%
Haines Junction	Unit #1	CUL416	1,750	16	9,226	28,700	99.41%	32.15%	0.19%
Old Crow	Unit #1	CUL414	600	2,772	936,828	1,663,200	94.04%	56.33%	31.56%
	Unit #2	CUL355	400	2,757	519,940	1,102,800	97.26%	47.15%	31.39%
	Unit #3	CUL591	680	95	26,480	64,600	99.12%	40.99%	1.08%
	Unit #4	CUL586	450	3,696	1,042,001	1,663,200	97.48%	62.65%	42.08%
Pelly Crossing	Unit #1	CUL375	275	8	660	2,090	96.16%	31.58%	0.09%
	Unit #2	CUL470	600	9	1,910	5,640	96.78%	33.87%	0.11%
	Unit #3	CUL405	300	65	5,360	19,410	100.00%	27.61%	0.74%
Ross River	Unit #1	CUL265	1,000	55	18,620	54,500	96.11%	34.17%	0.62%
Stewart Crossing	Unit #3	CUL186	150	35	505	5,220	100.00%	9.67%	0.40%
Teslin	Unit #1	CUL376	1,500	51	17,533	76,200	99.58%	23.01%	0.58%
Watson Lake	Unit #1	CUL422	800	5,563	3,511,200	4,450,400	94.31%	78.90%	63.33%
	Unit #2	CUL595	895	4,115	2,488,800	3,682,925	96.76%	67.58%	46.85%
	Unit #3	CUL352	1,000	1,460	1,176,000	1,460,000	95.90%	80.55%	16.62%
	Unit #4	CUL545	1,450	4,684	4,651,200	6,791,800	98.53%	68.48%	53.32%
	Unit #5	CUL466	650	4,318	2,020,800	2,806,700	91.62%	72.00%	49.16%
	Unit #6	CUL423	800	2,153	1,401,600	1,722,400	59.26%	81.37%	24.51%
Swift River	Unit #1 (Old)	CUL460	90	4,686	164,595	421,740	52.32%	39.03%	53.35%
	Unit #1 (New)	CUL596	100	1,168	53,739	116,800	43.01%	46.01%	13.30%
	Unit #2	CUL544	88	2,727	76,774	239,976	100.00%	31.99%	31.05%
Fish Lake	Unit #1	CUL542	815	7,678	5,930,480	6,257,163	88.20%	94.78%	87.40%
	Unit #2	CUL108	600	2,796	1,172,640	1,677,600	33.26%	69.90%	31.83%

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.

ATCO Electric Yukon
Summary of Customers, Energy Sales and Revenue

Line No.	Description	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017
1	Residential							
2	Customers (average during year)	13,482	13,857	14,194	14,409	14,631	14,858	15,114
3	Sales in MWh	141,696	150,350	148,780	147,133	148,605	151,351	165,654
4	MWh sales per customer	10.5	10.9	10.5	10.2	10.2	10.2	11.0
5	Revenue (\$000s)	18,928	21,611	21,070	20,629	20,839	21,452	23,262
6	Cents per KWh	13.36	14.37	14.16	14.01	14.02	14.17	14.04
7	Commercial							
8	Customers (average during year)	2,774	2,841	2,918	2,938	2,988	3,000	3,036
9	Sales in MWh	150,591	159,562	159,322	154,709	155,346	157,662	165,924
10	MWh sales per customer	54.3	56.2	54.6	52.7	52.0	52.6	54.6
11	Revenue (\$000s)	23,374	26,583	27,305	25,509	25,534	25,798	27,102
12	Cents per KWh	15.52	16.66	16.51	16.49	16.44	16.36	16.33
13	Street lights							
14	Sales in MWh	3,598	3,771	3,719	3,765	3,886	3,923	3,942
15	Revenue (\$000s)	881	976	961	962	992	997	1,009
16	Cents per KWh	24.47	25.87	25.84	25.54	25.52	25.42	25.59
17	Sentinel lights							
18	Sales in MWh	581	560	551	544	519	496	495
19	Revenue (\$000s)	144	149	145	142	138	133	132
20	Cents per KWh	24.73	26.54	26.33	26.05	26.58	26.71	26.66
21	Total Company - Retail - Primary							
22	Customers	16,256	16,698	17,112	17,347	17,619	17,858	18,150
23	Sales in MWh	296,466	314,243	312,372	306,272	308,356	313,432	336,016
24	Revenue (\$000s)	43,327	49,319	48,481	47,241	47,503	48,380	51,504
25	Cents/KWh	14.62	15.52	15.52	15.42	15.41	15.44	15.33
26	Secondary Sales							
27	Customers (average during year)	15	15	1	2	3	3	5
28	Sales in MWh	552	1,993	3,959	5,415	7,030	4,835	8,385
29	MWh sales per customer	36.8	132.9	1,979.5	2,707.5	2,812.0	1,511.0	1,705.4
30	Revenue (\$000s)	41	164	336	474	532	296	553
31	Cents per KWh	7.43	8.23	8.49	8.75	7.57	6.13	6.59
32	Wholesale Sales							
33	Customers (average during year)	2	2	2	2	2	2	2
34	Sales in MWh	427	338	361	494	430	548	584
35	MWh sales per customer	213.5	169.0	180.7	247.0	215.0	273.8	292.1
36	Revenue (\$000s)	38	28	30	41	36	45	48
37	Cents per KWh	8.80	8.30	8.30	8.30	8.30	8.30	8.30
38	Total Company							
39	Customers	16,273	16,715	17,116	17,351	17,624	17,863	18,157
40	Sales in MWh	297,445	316,574	316,692	312,181	315,816	318,815	344,985
41	Revenue (\$000s)	43,406	49,511	48,847	47,756	48,071	48,722	52,106
42	Cents/KWh	14.59	15.47	15.42	15.30	15.22	15.28	15.10
43	Retail Revenues	43,406	49,511	48,847	47,756	48,071	48,722	52,106
44	YEC Revenue Shortfall (Rider J + Rider R1)	2,479	1,437	5,829	6,259	5,266	5,273	6,487
	Rider R			1,634	3,672	4,139	3,792	5,349
45	TOTAL REVENUES	45,885	50,948	56,310	57,687	57,476	57,787	63,942

Reliability Performance

ATCO Electric Yukon 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.

ATCO Electric Yukon's 2017 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	5.48	1.465
SAIDI	10.1	4.456
CAIDI	1.84	3.042
IOR	99.885%	99.949%

Health, Safety and Environment Performance

ATCO Electric Yukon's 2017 Health, Safety and the Environment Performance measures as follows:

Worker Lost Time Frequency	4.17
Worker Lost Time Severity	18.78
Contractor Lost Time Incidents	1
Preventable Vehicle Incident Frequency	8.35
Number of Reportable Releases	1

Financial Performance

The table below notes a number of highlights from ATCO Electric Yukon's 2017 Approved 2016-2017 Compliance Filing as well as a number of other 2017 Financial Performance indicators.

Regulated Return on Equity (ROE)	12.73%
Net Rate Base (\$000's)	\$102,734
Average Inventory (\$000's)	\$2,215
Capital Additions (\$000's)	\$8,393
Customers per Employee	284
Sales (MW.h) per Employee	5,394
Total labour expense per Customer	\$322
Ave. Consumption per Res. Customer (MW.h)	10.96
Ave. Consumption per Comm. Customer (MW.h)	54.65