



YUKON

August 26, 2024

Yukon Utilities Board
P.O. Box 31728
Whitehorse, Yukon Y1A 6L3

Attention: Ms. Colleen Henry
Executive Assistant

**Re: ATCO Electric Yukon (AEY)
2023 Key Performance Indicators**

Please find attached the 2023 Key performance Indicators for ATCO Electric Yukon.

If you have any questions, please contact me at tony.martino@atco.com.

Yours truly,

Tony Martino, CPA, CMA
Senior Manager, Regulatory



Report to the Yukon Utilities Board

2023

Key Performance Indicators

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**ATCO Electric Yukon
2023 Generation Performance**

Plant	2023	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	3,124	520,354	890,226	81.3%	58.5%	35.7%
	Unit #2	CUL547	365	4,153	828,518	1,515,809	88.2%	54.7%	47.4%
	Unit #3	CUL354	400	1,815	488,571	726,120	98.3%	67.3%	20.7%
Carmacks	Unit #1	CUL310	1,600	19	10,402	30,720	98.9%	33.9%	0.2%
Destruction Bay	Unit #1	CUL467	600	890	241,503	533,940	99.1%	45.2%	10.2%
	Unit #2	CUL592	400	3,010	801,443	1,203,960	91.5%	66.6%	34.4%
	Unit #3	CUL584	312	5,524	963,814	1,723,488	90.9%	55.9%	63.1%
Haines Junction	Unit #1	CUL416	1,750	49	35,053	85,750	98.9%	40.9%	0.6%
Old Crow	Unit #1	CUL414	600	1,774	671,167	1,064,400	69.8%	63.1%	20.3%
	Unit #2	CUL355	400	2,867	635,462	1,146,640	90.5%	55.4%	32.7%
	Unit #3	CUL591	680	3,010	1,271,246	2,046,800	90.0%	62.1%	34.4%
	Unit #4	CUL586	450	1,794	499,137	807,300	91.0%	61.8%	20.5%
Pelly Crossing	Unit #1	CUL375	275	25	10	6,765	98.9%	0.1%	0.3%
	Unit #2	CUL470	600	32	70	19,020	98.9%	0.4%	0.4%
	Unit #3	CUL405	300	27	20	8,160	98.9%	0.2%	0.3%
Ross River	Unit #1	CUL265	1,000	124	44,728	123,800	98.9%	36.1%	1.4%
Stewart Crossing	Unit #3	CUL186	150	20	1,792	3,015	98.9%	59.4%	0.2%
Teslin	Unit #1	CUL376	1,500	46	19,199	68,700	98.9%	27.9%	0.5%
Watson Lake	Unit #1	CUL609	1,050	2,694	1,820,400	2,828,700	97.9%	64.4%	30.8%
	Unit #2	CUL595	895	1,009	664,800	903,055	44.3%	73.6%	11.5%
	Unit #3	CUL601	1,245	2,570	2,249,600	3,199,650	88.7%	70.3%	29.3%
	Unit #4	CUL545	1,450	5,357	4,934,400	7,767,650	88.7%	63.5%	61.2%
	Unit #5	CUL466	750	3,287	1,620,000	2,465,250	75.8%	65.7%	37.5%
	Unit #6	CUL612	1,050	4,746	3,357,600	4,983,300	92.3%	67.4%	54.2%
Swift River	Unit #1	CUL596	100	2,958	80,512	295,800	95.0%	27.2%	33.8%
	Unit #2	CUL611	105	4,638	97,783	486,990	75.0%	20.1%	52.9%
Fish Lake	Unit #1	CUL542	815	8,363	6,374,196	6,815,845	98.4%	93.5%	95.5%
	Unit #2	CUL108	597	4,990	2,312,280	2,979,030	78.6%	77.6%	57.0%

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 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Actual 2022	Actual 2023
1	Residential							
2	Customers (average during year)	15,114	15,430	15,775	16,155	16,567	17,025	17,511
3	Sales in MWh	165,654	167,596	166,455	185,235	188,526	187,135	187,865
4	MWh sales per customer	11.0	10.9	10.6	11.5	11.38	10.99	11.00
5	Revenue (\$000s)	23,262	23,491	23,506	25,960	26,443	26,316	26,417
6	Cents per KWh	14.04	14.02	14.12	14.01	14.03	14.06	14.00
7	Commercial							
8	Customers (average during year)	3,036	3,095	3,145	3,178	3,219	3,272	3,354
9	Sales in MWh	165,924	168,285	168,680	163,933	166,022	167,662	169,231
10	MWh sales per customer	54.6	54.4	53.6	51.6	51.57	51.24	51.00
11	Revenue (\$000s)	27,102	27,353	27,589	27,110	27,170	27,500	27,855
12	Cents per KWh	16.33	16.25	16.36	16.54	16.37	16.40	16.00
13	Street lights							
14	Sales in MWh	3,942	3,951	3,876	3,889	3,937	3,884	3,229
15	Revenue (\$000s)	1,009	1,021	1,014	1,037	1,079	1,079	942
16	Cents per KWh	25.59	25.85	26.17	26.66	27.41	27.78	29.00
17	Sentinel lights							
18	Sales in MWh	495	486	480	452	452	456	419
19	Revenue (\$000s)	132	130	128	121	122	126	120
20	Cents per KWh	26.66	26.76	26.59	26.84	27.10	28	28.90
21	Total Company - Retail - Primary							
22	Customers	18,150	18,525	18,919	19,334	19,786	20,298	20,865
23	Sales in MWh	336,016	340,318	339,491	353,508	358,937	359,138	360,744
24	Revenue (\$000s)	51,504	51,995	52,237	54,228	54,814	55,020	55,334
25	Cents/KWh	15.33	15.28	15.39	15.34	15.27	15.32	15.34
26	Secondary Sales							
27	Customers (average during year)	5	5	5	5	10	9	5
28	Sales in MWh	8,385	258	1	479	4,430	3,439	2,206
29	MWh sales per customer	1,705.4	51.6	0.1	97.5	458	382	202
30	Revenue (\$000s)	553	21	0	34	361	401	257
31	Cents per KWh	6.59	7.99	8.37	7.07	8.15	12	12
32	Wholesale Sales							
33	Customers (average during year)	2	2	2	2	2	2	2
34	Sales in MWh	584	636	693	704	487	420	524
35	MWh sales per customer	292.1	317.9	346.3	351.9	243.41	210.03	218.00
36	Revenue (\$000s)	48	53	57	58	40	35	43
37	Cents per KWh	8.30	8.30	8.30	8.30	8.30	8.30	8
38	Total Company							
39	Customers	18,157	18,532	18,926	19,341	19,798	20,309	20,872
40	Sales in MWh	344,985	341,212	340,184	354,691	363,853	362,997	363,474
41	Revenue (\$000s)	52,106	52,068	52,295	54,320	55,216	55,455	55,634
42	Cents/KWh	15.10	15.26	15.37	15.31	15.18	15.28	15.31
43	Retail Revenues	52,106	52,068	52,295	54,320	55,216	55,455	55,634
44	YEC Revenue Shortfall (Rider J + Rider R1)	6,487	8,680	8,920	17,028	19,529	21,921	20,753
	Rider R	5,349	5,363	5,259	5,759	6,115	6,269	6,057
45	TOTAL REVENUES	63,942	66,111	66,474	77,107	80,860	83,645	82,444

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 2023 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	4.697	2.309
SAIDI	6.308	4.041
CAIDI	1.343	1.750
IOR	99.93%	99.95%

Health, Safety and Environment Performance

ATCO Electric Yukon's 2023 Health, Safety and the Environment Performance measures as follows:

Worker Lost Time Frequency	0
Worker Lost Time Severity	0
Contractor Lost Time Incidents	0
Preventable Vehicle Incident Frequency	3
Number of Reportable Releases	1

Financial Performance

The table below notes a number of highlights from ATCO Electric Yukon's 2023 Financial Performance indicators.

Regulated Return on Equity (ROE)	8.22%
Net Rate Base (\$000's)	\$127,185
Average Inventory (\$000's)	\$2,975
Capital Additions (\$000's)	\$23,007
Customers per Employee	311
Sales (MW.h) per Employee	5,425
Total labour expense per Customer	\$344
Ave. Consumption per Res. Customer (MW.h)	11.00
Ave. Consumption per Comm. Customer (MW.h)	51.00