



YUKON

May 1, 2023

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

Attention: Ms. Lemke
Executive Assistant

**Re: ATCO Electric Yukon (AEY)
2022 Key Performance Indicators**

Please find attached the 2022 Key performance Indicators for ATCO Electric Yukon.

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

Yours truly,

Tony Martino
Senior Manager, Regulatory



Report to the Yukon Utilities Board

2022

Key Performance Indicators

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**ATCO Electric Yukon
2022 Generation Performance**

Updated by Accounting Updated by Accounting

Plant	2022	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	4,311	674,152	1,228,721	89.7%	54.9%	49.2%
	Unit #2	CUL547	365	2,807	619,438	1,024,592	62.2%	60.5%	32.0%
	Unit #3	CUL354	400	1,898	455,810	759,280	73.3%	60.0%	21.7%
Carmacks	Unit #1	CUL310	1,600	34	20,390	53,600	98.9%	38.0%	0.4%
Destruction Bay	Unit #1	CUL467	600	689	207,671	413,460	80.5%	50.2%	7.9%
	Unit #2	CUL592	400	4,004	932,041	1,601,440	92.6%	58.2%	45.7%
	Unit #3	CUL584	312	3,793	763,170	1,183,416	75.5%	64.5%	43.3%
Haines Junction	Unit #1	CUL416	1,750	66	70,419	115,325	98.9%	61.1%	0.8%
Old Crow	Unit #1	CUL414	600	3,093	1,005,446	1,855,800	86.4%	54.2%	35.3%
	Unit #2	CUL355	400	1,843	454,624	737,240	95.2%	61.7%	21.0%
	Unit #3	CUL591	680	1,542	635,255	1,048,492	90.2%	60.6%	17.6%
	Unit #4	CUL586	450	1,510	422,196	679,275	61.3%	62.2%	17.2%
Pelly Crossing	Unit #1	CUL375	275	8	10	2,310	98.9%	0.4%	0.1%
	Unit #2	CUL470	600	168	480	100,860	98.9%	0.5%	1.9%
	Unit #3	CUL405	300	70	60	20,970	98.9%	0.3%	0.8%
Ross River	Unit #1	CUL265	1,000	183	95,061	182,600	98.9%	52.1%	2.1%
Stewart Crossing	Unit #3	CUL186	150	21	1,347	3,135	98.9%	43.0%	0.2%
Teslin	Unit #1	CUL376	1,500	102	62,223	152,700	98.9%	40.7%	1.2%
Watson Lake	Unit #1	CUL609	1,050	564	346,800	592,200	82.9%	58.6%	6.4%
	Unit #2	CUL595	895	4,876	3,244,800	4,364,020	98.3%	74.4%	55.7%
	Unit #3	CUL601	1,245	2,910	2,558,400	3,622,950	94.6%	70.6%	33.2%
	Unit #4	CUL545	1,450	5,357	376,890	7,767,650	67.7%	4.9%	61.2%
	Unit #5	CUL466	750	958	496,800	718,500	36.2%	69.1%	10.9%
	Unit #6	CUL612	1,050	4,284	2,937,600	4,498,200	78.0%	65.3%	48.9%
Swift River	Unit #1	CUL596	100	7,762	203,836	776,200	91.9%	26.3%	88.6%
	Unit #2	CUL611	105	475	14,894	49,875	60.5%	29.9%	5.4%
Fish Lake	Unit #1	CUL542	815	8,539	6,665,616	6,959,081	98.4%	95.8%	97.5%
	Unit #2	CUL108	597	6,623	2,931,720	3,953,633	78.6%	74.2%	75.6%

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 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Actual 2022
1	Residential										
2	Customers (average during year)	14,194	14,409	14,631	14,858	15,114	15,430	15,775	16,155	16,567	17,025
3	Sales in MWh	148,780	147,133	148,605	151,351	165,654	167,596	166,455	185,235	188,526	187,135
4	MWh sales per customer	10.5	10.2	10.2	10.2	11.0	10.9	10.6	11.5	11.38	10.99
5	Revenue (\$000s)	21,070	20,629	20,839	21,452	23,262	23,491	23,506	25,960	26,443	26,316
6	Cents per KWh	14.16	14.01	14.02	14.17	14.04	14.02	14.12	14.01	14.03	14.06
7	Commercial										
8	Customers (average during year)	2,918	2,938	2,988	3,000	3,036	3,095	3,145	3,178	3,219	3,272
9	Sales in MWh	159,322	154,709	155,346	157,662	165,924	168,285	168,680	163,933	166,022	167,662
10	MWh sales per customer	54.6	52.7	52.0	52.6	54.6	54.4	53.6	51.6	51.57	51.24
11	Revenue (\$000s)	27,305	25,509	25,534	25,798	27,102	27,353	27,589	27,110	27,170	27,500
12	Cents per KWh	16.51	16.49	16.44	16.36	16.33	16.25	16.36	16.54	16.37	16.40
13	Street lights										
14	Sales in MWh	3,719	3,765	3,886	3,923	3,942	3,951	3,876	3,889	3,937	3,884
15	Revenue (\$000s)	961	962	992	997	1,009	1,021	1,014	1,037	1,079	1,079
16	Cents per KWh	25.84	25.54	25.52	25.42	25.59	25.85	26.17	26.66	27.41	27.78
17	Sentinel lights										
18	Sales in MWh	551	544	519	496	495	486	480	452	452	456
19	Revenue (\$000s)	145	142	138	133	132	130	128	121	122	126
20	Cents per KWh	26.33	26.05	26.58	26.71	26.66	26.76	26.59	26.84	27.10	27.51
21	Total Company - Retail - Primary										
22	Customers	17,112	17,347	17,619	17,858	18,150	18,525	18,919	19,334	19,786	20,298
23	Sales in MWh	312,372	306,272	308,356	313,432	336,016	340,318	339,491	353,508	358,937	359,138
24	Revenue (\$000s)	48,481	47,241	47,503	48,380	51,504	51,995	52,237	54,228	54,814	55,020
25	Cents/KWh	15.52	15.42	15.41	15.44	15.33	15.28	15.39	15.34	15.27	15.32
26	Secondary Sales										
27	Customers (average during year)	1	2	3	3	5	5	5	5	10	9
28	Sales in MWh	3,959	5,415	7,030	4,835	8,385	258	1	479	4,430	3,439
29	MWh sales per customer	1,979.5	2,707.5	2,812.0	1,511.0	1,705.4	51.6	0.1	97.5	458	382
30	Revenue (\$000s)	336	474	532	296	553	21	0	34	361	401
31	Cents per KWh	8.49	8.75	7.57	6.13	6.59	7.99	8.37	7.07	8.15	11.65
32	Wholesale Sales										
33	Customers (average during year)	2	2	2	2	2	2	2	2	2	2
34	Sales in MWh	361	494	430	548	584	636	693	704	487	420
35	MWh sales per customer	180.7	247.0	215.0	273.8	292.1	317.9	346.3	351.9	243.41	210.03
36	Revenue (\$000s)	30	41	36	45	48	53	57	58	40	35
37	Cents per KWh	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30
38	Total Company										
39	Customers	17,116	17,351	17,624	17,863	18,157	18,532	18,926	19,341	19,798	20,309
40	Sales in MWh	316,692	312,181	315,816	318,815	344,985	341,212	340,184	354,691	363,853	362,997
41	Revenue (\$000s)	48,847	47,756	48,071	48,722	52,106	52,068	52,295	54,320	55,216	55,455
42	Cents/KWh	15.42	15.30	15.22	15.28	15.10	15.26	15.37	15.31	15.18	15.28
43	Retail Revenues	48,847	47,756	48,071	48,722	52,106	52,068	52,295	54,320	55,216	55,455
44	YEC Revenue Shortfall (Rider J + Rider R1)	5,829	6,259	5,266	5,273	6,487	8,680	8,920	17,028	19,529	21,921
	Rider R	1,634	3,672	4,139	3,792	5,349	5,363	5,259	5,759	6,115	6,269
45	TOTAL REVENUES	56,310	57,687	57,476	57,787	63,942	66,111	66,474	77,107	80,860	83,645

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 2022 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	5.420	2.460
SAIDI	6.170	3.580
CAIDI	1.140	1.450
IOR	99.93%	99.96%

Health, Safety and Environment Performance

ATCO Electric Yukon's 2022 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	1
Number of Reportable Releases	0

Financial Performance

The table below notes a number of highlights from ATCO Electric Yukon's 2022 Approved 2016-2017 Compliance Filing as well as a number of other 2022 Financial Performance indicators.

Regulated Return on Equity (ROE)	11.95%
Net Rate Base (\$000's)	\$114,453
Average Inventory (\$000's)	\$3,102
Capital Additions (\$000's)	\$15,857
Customers per Employee	308
Sales (MW.h) per Employee	5,500
Total labour expense per Customer	\$362
Ave. Consumption per Res. Customer (MW.h)	10.99
Ave. Consumption per Comm. Customer (MW.h)	51.24