ATCO Electric
YUKON

Report to the Yukon Utilities Board

2024

Key Performance Indicators

ATCO Electric Yukon (AEY)
2024 Key Performance Indicators (KPI)

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2024 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	4,707	785,332	1,341,609	82.0%	58.5%	53.7%
	Unit #2	CUL547	365	1,854	411,049	676,564	88.1%	60.8%	21.2%
	Unit #3	CUL354	400	2,573	606,314	1,029,200	87.7%	58.9%	29.4%
Carmacks	Unit #1	CUL310	1,600	177	126,131	282,720	98.9%	44.6%	2.0%
Destruction Bay	Unit #1	CUL467	600	1,418	461,575	851,040	94.8%	54.2%	16.2%
	Unit #2	CUL592	400	3,208	850,256	1,283,320	85.2%	66.3%	36.6%
	Unit #3	CUL584	312	3,651	740,294	1,139,112	89.6%	65.0%	41.7%
Haines Junction	Unit #1	CUL416	1,750	109	71,869	190,575	98.9%	37.7%	1.2%
Old Crow	Unit #1	CUL414	600	3,144	1,288,802	1,886,640	96.2%	68.3%	35.9%
	Unit #2	CUL355	400	1,974	436,780	789,400	86.9%	55.3%	22.5%
	Unit #3	CUL591	680	2,090	901,884	1,421,472	83.0%	63.4%	23.9%
	Unit #4	CUL586	450	1,341	368,153	603,360	73.0%	61.0%	15.3%
Pelly Crossing	Unit #1	CUL375	275	49	109	13,420	98.9%	0.8%	0.6%
	Unit #2	CUL470	600	338	953	202,620	98.9%	0.5%	3.9%
	Unit #3	CUL405	300	177	320	53,160	98.9%	0.6%	2.0%
Ross River	Unit #1	CUL265	1,000	83	37,425	83,000	98.9%	45.1%	0.9%
Stewart Crossing	Unit #3	CUL186	150	66	435	9,825	98.9%	4.4%	0.7%
Teslin	Unit #1	CUL376	1,500	48	20,586	72,150	98.9%	28.5%	0.5%
Watson Lake	Unit #1	CUL609	1,050	4,790	3,315,600	5,029,500	94.7%	65.9%	54.7%
	Unit #2	CUL595	895	3,847	2,619,600	3,443,065	61.8%	76.1%	43.9%
	Unit #3	CUL601	1,245	3,771	3,233,600	4,694,895	95.4%	68.9%	43.0%
	Unit #4	CUL545	1,450	2,820	3,110,400	4,089,000	49.8%	76.1%	32.2%
	Unit #5	CUL466	750	2,391	1,248,000	1,793,250	97.9%	69.6%	27.3%
	Unit #6	CUL612	1,050	3,153	2,194,800	3,310,650	97.8%	66.3%	36.0%
Swift River	Unit #1	CUL596	100	2,502	61,772	250,200	99.2%	24.7%	28.6%
	Unit #2	CUL611	105	6,248	169,235	656,040	93.4%	25.8%	71.3%
Fish Lake	Unit #1	CUL542	815	8,552	5,684,644	6,969,880	97.6%	81.6%	97.6%
	Unit #2	CUL108	597	7,960	2,341,570	4,752,120	90.9%	49.3%	90.9%

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 is 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.

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Summary of Customers, Energy Sales and Revenue

Line No.	Description	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Actual 2022	Actual 2023	Actual 2024
1	**Residential**							
2	Customers (average during year)	15,430	15,775	16,155	16,567	17,025	17,511	17,843
3	Sales in MWh	167,596	166,455	185,235	188,526	187,135	187,865	201,608
4	MWh sales per customer	10.9	10.6	11.5	11.38	10.99	11.00	11.30
5	Revenue ($000s)	23,491	23,506	25,960	26,443	26,316	26,417	28,327
6	Cents per KWh	14.02	14.12	14.01	14.03	14.06	14.00	14.05
7	**Commercial**							
8	Customers (average during year)	3,095	3,145	3,178	3,219	3,272	3,354	3,396
9	Sales in MWh	168,285	168,680	163,933	166,022	167,662	169,231	176,825
10	MWh sales per customer	54.4	53.6	51.6	51.57	51.24	51.00	52.07
11	Revenue ($000s)	27,353	27,589	27,110	27,170	27,500	27,855	29,355
12	Cents per KWh	16.25	16.36	16.54	16.37	16.40	16.00	16.60
13	**Street lights**							
14	Sales in MWh	3,951	3,876	3,889	3,937	3,884	3,229	4,921
15	Revenue ($000s)	1,021	1,014	1,037	1,079	1,079	942	1,439
16	Cents per KWh	25.85	26.17	26.66	27.41	27.78	29.00	29.24
17	**Sentinel lights**							
18	Sales in MWh	486	480	452	452	456	419	450
19	Revenue ($000s)	130	128	121	122	126	120	120
20	Cents per KWh	26.76	26.59	26.84	27.10	28	28.90	26.66
21	**Total Company - Retail - Primary**							
22	Customers	18,525	18,919	19,334	19,786	20,298	20,865	21,239
23	Sales in MWh	340,318	339,491	353,508	358,937	359,138	360,744	383,804
24	Revenue ($000s)	51,995	52,237	54,228	54,814	55,020	55,334	59,240
25	Cents/KWh	15.28	15.39	15.34	15.27	15.32	15.34	15.44
26	**Secondary Sales**							
27	Customers (average during year)	5	5	5	10	9	5	7
28	Sales in MWh	258	1	479	4,430	3,439	2,206	3,119
29	MWh sales per customer	51.6	0.1	97.5	458	382	202	446
30	Revenue ($000s)	21	0	34	361	401	257	357
31	Cents per KWh	7.99	8.37	7.07	8.15	12	12	11
32	**Wholesale Sales**							
33	Customers (average during year)	2	2	2	2	2	2	2
34	Sales in MWh	636	693	704	487	420	524	450
35	MWh sales per customer	317.9	346.3	351.9	243.41	210.03	218.00	224.75
36	Revenue ($000s)	53	57	58	40	35	43	37
37	Cents per KWh	8.30	8.30	8.30	8.30	8.30	8	8
38	**Total Company**							
39	Customers	18,532	18,926	19,341	19,798	20,309	20,872	21,248
40	Sales in MWh	341,212	340,184	354,691	363,853	362,997	363,474	387,373
41	Revenue ($000s)	52,068	52,295	54,320	55,216	55,455	55,634	59,634
42	Cents/KWh	15.26	15.37	15.31	15.18	15.28	15.31	15.39
43	Retail Revenues	52,068	52,295	54,320	55,216	55,455	55,634	59,634
44	**YEC Revenue Shortfall (Rider J + Rider R1)**	8,680	8,920	17,028	19,529	21,921	20,753	29,930
	Rider R	5,363	5,259	5,759	6,115	6,269	6,057	11,038
45	**TOTAL REVENUES**	66,111	66,474	77,107	80,860	83,645	82,444	100,603

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Schedule of Energy Balances and Losses
(MW.h)

Line No.	Description	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Actual 2022	Actual 2023	Actual 2024
1	**Sales and Losses**							
2	Total energy sales - MWh	341,212	340,184	354,691	363,853	362,997	363,474	387,373
3	Losses and company used - MWh	19,919	18,265	19,854	21,724	19,323	18,994	19,360
4	Losses -%	5.8%	5.4%	5.6%	6.0%	5.3%	5.2%	5.0%
5	Total generation and purchases (MWh)	361,131	358,450	374,545	385,578	382,320	382,468	406,733
6	**Sources - MWh**							
7	Hydro generation	5,458	4,964	5,059	9,843	9,597	8,686	8,026
8	Hydro grid standby diesel generation	111	185	346	103	284	79	256
9	Diesel generation	22,024	21,810	21,715	21,698	21,516	21,630	22,739
10	Wholesale Purchases	333,538	331,491	347,426	353,722	350,448	351,693	375,296
11	Independent Power Purchases				212	475	380	415
12		361,131	358,450	374,545	385,578	382,320	382,468	406,733
13	**Sources - %**							
14	Hydro generation	1.5%	1.4%	1.4%	2.6%	2.6%	2.3%	2.0%
15	Diesel generation	6.1%	6.1%	5.8%	5.6%	5.6%	5.7%	5.6%
16	Wholesale Purchases	92.4%	92.5%	92.8%	91.7%	91.7%	92.0%	92.3%
17	Independent Power Purchases				0.1%	0.1%	0.1%	0.1%
18		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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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 tota number of customers affected by interruptions divided by the total number of customers servied.

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 2024 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	4.528	2.541
SAIDI	5.872	4.384
CAIDI	1.297	1.725
IOR	99.93%	99.95%

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Health, Safety and Environment Performance

ATCO Electric Yukon's 2024 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	0
Number of Reportable Releases	1

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Financial Performance

The table below notes a number of highlights from ATCO Electric Yukon's 2024 Financial Performance Indicators.

Regulated Return on Equity (ROE)	10.84%
Net Rate Base ($000's)	$138,398
Average Inventory ($000's)	3,008
Capital Additions ($000's)	$38,031
Customers per Employee	308
Sales (MW.h) per Employee	5,614
Total labour expense per Customer	$335
Ave. Consumption per Res. Customer (MW.h)	11.30
Ave. Consumption per Comm. Customer (MW.h)	52.07