

ATCO Electric

YUKON

November 3, 2017

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

Attention: Deana Lemke, Yukon Utilities Board Executive Secretary

Dear Deana:

Re: Service Interruptions

In accordance with Board Decision 1989-5, attached is the summary of major unplanned outages for the months of July, August and September 2017. A major outage has, for the purposes of these reports, been defined as an interruption of any length involving either a significant number of customers or a small community.

Please contact me at 633-7080 if you require any additional information or clarification.

Your Sincerely,

ATCO Electric Yukon



for Jay Massie
Manager

JM:cm
Encl.

Outages

Service Area	571 Whitehorse	Location	Wh-North Klondike Hwy	Customer-Hrs of Interruption	2541:00
Date Reported	2017-07-10	City/Town	Whitehorse	Number of Customers Affected	916
Outage Number	BAC00291	Time Reported	21:30	Avg. Customer Outage Duration	2:46
Planned	Unplanned	First Interruption	21:20	<div style="border: 1px solid black; padding: 5px;"> <p>Explanations and Comments</p> <p>Failure of center pin insulator on 5L645 on Mayo Rd by Sharon's Way. Fault opened breaker S8686, dropping 558 customers. S3904 was opened and S8686 was closed, restoring ~200 customers. Line was further sectionalized until fault was found, resulting in a further 30m outage to the ~200 customers who had been restored. Those customers were brought back on and then repairs began on the failed insulator. Work was complete about 1:35 and the remaining ~350 customers were back on by 1:50.</p> </div>	
Sub Number	21 LaBerge	Last Restoration	23:00		
Line Number	5L645	Primary Cause	8 Equipment Failure		
		CEA Coding	Defective Equipment		

Service Area	571 Whitehorse	Location	Wh-Multiple Areas	Customer-Hrs of Interruption	1412:50
Date Reported	2017-08-08	City/Town	Whitehorse	Number of Customers Affected	2422
Outage Number	BAC00295	Time Reported	5:55	Avg. Customer Outage Duration	:35
Planned	Unplanned	First Interruption	5:55	<div style="border: 1px solid black; padding: 5px;"> <p>Explanations and Comments</p> <p>Stage 1 opened on U/F due to loss of generation. ~2500 customers off in Porter Creek, Takhini, Ravens Ridge and Kopper King for 20-35 mins.</p> </div>	
Sub Number	17 McInlyne	Last Restoration	6:30		
Line Number	6L16	Primary Cause	13 YEC U/F Load Shed		
		CEA Coding	Loss of Supply - Yukon Ener		

Service Area	571 Whitehorse	Location	Wh-Multiple Areas	Customer-Hrs of Interruption	1050:00
Date Reported	2017-08-08	City/Town	Whitehorse	Number of Customers Affected	6650
Outage Number	BAC00296	Time Reported	7:25	Avg. Customer Outage Duration	1:35
Planned	Unplanned	First Interruption	7:25	<div style="border: 1px solid black; padding: 5px;"> <p>Explanations and Comments</p> <p>Stage 1, 2, and 3 opened on U/F due to loss of generation. ~6500 customers off in Porter Creek, Takhini, Ravens Ridge, Kopper King, Marwell, Downtown and Mcrae south (including Golden Triangle) for 1-2hrs.</p> </div>	
Sub Number	S150, S17	Last Restoration	9:25		
Line Number	6L16, 6L11, 6L15	Primary Cause	13 YEC U/F Load Shed		
		CEA Coding	Loss of Supply - Yukon Ener		

Outages

Service Area	571 Whitehorse	Location	Wh-Multiple Areas	Customer-Hrs of Interruption	13135:50
Date Reported	2017-08-09	City/Town	Whitehorse	Number of Customers Affected	6650
Outage Number	BAC00297	Time Reported	4:30	Avg. Customer Outage Duration	1:58
Planned	Unplanned	First Interruption	4:15	Explanations and Comments Stage 1, 2, and 3 opened on U/F due to loss of generation. ~6500 customers off in Porter Creek, Takhini, Ravens Ridge, Kopper King, Marwell, Downtown and Mcrae south (Marsh Lake, Cacross, Tagish, Alaska Hwy South) for 1-2.5hrs	
Sub Number	S150, S17	Last Restoration	7:10		
Line Number	6L16, 6L11, 6L15	Primary Cause	13 YEC U/F Load Shed		
		CEA Coding	Loss of Supply - Yukon Ener		
Service Area	573 Watson Lake	Location	Watson Lake	Customer-Hrs of Interruption	12:30
Date Reported	2017-07-11	City/Town	Watson Lake	Number of Customers Affected	50
Outage Number	CGK00065	Time Reported	6:30	Avg. Customer Outage Duration	:15
Planned	Unplanned	First Interruption	6:30	Explanations and Comments No explanation found as to why the fuse tripped.	
Sub Number	31 Watson Lake	Last Restoration	6:45		
Line Number	:1621	Primary Cause	14 Unknown		
		CEA Coding	Unknown/Other		
Service Area	573 Watson Lake	Location	Watson Lake	Customer-Hrs of Interruption	829:48
Date Reported	2017-07-12	City/Town	watson lake	Number of Customers Affected	970
Outage Number	CGK00066	Time Reported	10:55	Avg. Customer Outage Duration	:51
Planned	Unplanned	First Interruption	10:55	Explanations and Comments Unit 4 shutdown on low crankcase pressure alarm causing the S7230/S7242/S7237 to open and then unit 2 went into overspeed protection and shut down. S7230 back on at 11:30, S7242 back on at 11:27, S7237 back on at 12:40.	
Sub Number	31 Watson Lake	Last Restoration	12:40		
Line Number	5L619/620/621	Primary Cause	21 YECL Plant Outage		
		CEA Coding	Loss of Supply - Yukon Elec		
Service Area	592 Marsh Lake	Location	Marsh Lake	Customer-Hrs of Interruption	233:20
Date Reported	2017-08-20	City/Town	Marsh Lake	Number of Customers Affected	560
Outage Number	MP100236	Time Reported	17:50	Avg. Customer Outage Duration	:25
Planned	Unplanned	First Interruption	17:45	Explanations and Comments phase to phase fault, breaker on single shot due to extreme fire raiing. Recenergized and held. No fault found. Affected customers in Marsh Lake, Teslin, and Alaska Hwy South.	
Sub Number	S150 Whitehorse	Last Restoration	18:10		
Line Number	6L19	Primary Cause	14 Unknown		
		CEA Coding	Unknown/Other		

Outages

Service Area 571 Whitehorse
 Date Reported 2017-08-21
 Outage Number MPJ00237
 Planned Unplanned
 Sub Number 21 LaBerge
 Line Number 5L625

Location Wh-Alaska Hwy North
 City/Town Whitehorse
 Time Reported 3:20
 First Interruption 3:20
 Last Restoration 4:12
 Primary Cause 14 Unknown
 CEA Coding Unknown/Other

Customer-Hrs of Interruption 190:40
 Number of Customers Affected 220
 Avg. Customer Outage Duration :52

Explanations and Comments
 phase to phase fault, went through S8686 and opened S3600 also. Affected customers on Alaska Hwy North and North Klondike Hwy.

Service Area 571 Whitehorse
 Date Reported 2017-08-21
 Outage Number MPJ00238
 Planned Unplanned
 Sub Number 21 LaBerge
 Line Number 5L625

Location Wh-North Klondike Hwy
 City/Town Whitehorse
 Time Reported 3:20
 First Interruption 3:20
 Last Restoration 4:14
 Primary Cause 14 Unknown
 CEA Coding Unknown/Other

Customer-Hrs of Interruption 535:30
 Number of Customers Affected 595
 Avg. Customer Outage Duration :54

Explanations and Comments
 phase to phase fault, no cause found. Affected customers on Alaska Hwy North and North Klondike Hwy.

Service Area 571 Whitehorse
 Date Reported 2017-09-07
 Outage Number MPJ00241
 Planned Unplanned
 Sub Number S150 Whitehorse
 Line Number 6L11

Location Wh-Multiple Areas
 City/Town Whitehorse south
 Time Reported 14:00
 First Interruption 14:00
 Last Restoration 14:38
 Primary Cause 13 YEC U/F Load Shed
 CEA Coding Loss of Supply - Yukon Ener

Customer-Hrs of Interruption 829:08
 Number of Customers Affected 1804
 Avg. Customer Outage Duration :27

Explanations and Comments
 Underfrequency protection operated due to loss of generation.

Service Area 571 Whitehorse
 Date Reported 2017-09-07
 Outage Number MPJ00242
 Planned Unplanned
 Sub Number 11 McCrae
 Line Number 6L11

Location Wh-McIntyre
 City/Town Whitehorse south
 Time Reported 14:00
 First Interruption 14:00
 Last Restoration 14:32
 Primary Cause 13 YEC U/F Load Shed
 CEA Coding Loss of Supply - Yukon Ener

Customer-Hrs of Interruption 616:05
 Number of Customers Affected 1221
 Avg. Customer Outage Duration :30

Explanations and Comments
 Underfrequency protection operated due to loss of generation.

Outages

Service Area 571 Whitehorse
 Date Reported 2017-09-07
 Outage Number MPJ00243
 Planned Unplanned
 Sub Number 17 McIntyre
 Line Number 6L16

Location Wh-Porter Creek
 City/Town
 Time Reported 14:00
 First Interruption 14:00
 Last Restoration 14:21
 Primary Cause 13 YEC U/F Load Shed
 CEA Coding Loss of Supply - Yukon Ener

Customer-Hrs of Interruption 786:56
 Number of Customers Affected 2422
 Avg. Customer Outage Duration :19

Explanations and Comments
 Underfrequency protection operated due to loss of generation.

Service Area 571 Whitehorse
 Date Reported 2017-09-09
 Outage Number MPJ00247
 Planned Unplanned
 Sub Number S150 Whitehorse
 Line Number 6L11

Location Wh-Multiple Areas
 City/Town Whitehorse
 Time Reported 3:45
 First Interruption 3:45
 Last Restoration 6:58
 Primary Cause 8 Equipment Failure
 CEA Coding Defective Equipment

Customer-Hrs of Interruption 5263:11
 Number of Customers Affected 1947
 Avg. Customer Outage Duration 2:42

Explanations and Comments
 Heavy rain caused dead end insulator to flashover which caused S150 52 22 to open on over current. Replaced insulators on structure and reenergized

Service Area 571 Whitehorse
 Date Reported 2017-09-10
 Outage Number MPJ00248
 Planned Unplanned
 Sub Number 11 McCrae
 Line Number 5L631

Location Wh-McCrae
 City/Town Whitehorse south
 Time Reported 13:30
 First Interruption 13:30
 Last Restoration 14:51
 Primary Cause 2 Trees
 CEA Coding Trees

Customer-Hrs of Interruption 1172:30
 Number of Customers Affected 875
 Avg. Customer Outage Duration 1:20

Explanations and Comments
 phase to grd fault caused S9833 to open. Split and patrolled. attempted close, didnt hold. Patrolled more and found tap with trees. Isolated tap, reenergized customers. Removed all trees and ran new wire and reenergized the two remaining customers at 16:45.

Service Area 572 Haines Junction
 Date Reported 2017-09-17
 Outage Number MPJ00251
 Planned Unplanned
 Sub Number 20 Haines Junction
 Line Number 5L607

Location Haines Junction
 City/Town Haines Junction
 Time Reported
 First Interruption 19:53
 Last Restoration 20:55
 Primary Cause 15 Other
 CEA Coding Unknown/Other

Customer-Hrs of Interruption 117:30
 Number of Customers Affected 270
 Avg. Customer Outage Duration :26

Explanations and Comments
 YEC had issues on line and OSS wouldnt close. Had to take brief town outage to close manually, then pick town back up. When I dumped S8343 it opened S2975 and I wasn't aware, so I had to return to the Junction and close it manually.

Outages

Service Area	576 Teslin	Location	Teslin	Customer-Hrs of Interruption	62:04
Date Reported	2017-09-19	City/Town	Teslin	Number of Customers Affected	98
Outage Number	MPJ00252	Time Reported	20:20	Avg. Customer Outage Duration	:38
Planned	Unplanned	First Interruption	20:20	Explanations and Comments Raven went phase to ground on single phase transformer causin half a town outage. Located problem then reenergized.	
Sub Number	27 Teslin	Last Restoration	20:58		
Line Number	5L614	Primary Cause	9 Bird/Animal		
		CEA Coding	Foreign Interference		
Service Area	578 Beaver Creek	Location	Beaver Creek	Customer-Hrs of Interruption	9:55
Date Reported	2017-07-23	City/Town	Plant	Number of Customers Affected	119
Outage Number	RAF00105	Time Reported	0:18	Avg. Customer Outage Duration	:05
Planned	Unplanned	First Interruption	0:18	Explanations and Comments Beaver Creek Unit #1 was running and had an engine lockout which caused the outage. The battery connector failed, which causes the ECU to shutdown.	
Sub Number		Last Restoration	0:23		
Line Number		Primary Cause	8 Equipment Failure		
		CEA Coding	Defective Equipment		
Service Area	579 Old Crow	Location	Old Crow	Customer-Hrs of Interruption	23:13
Date Reported	2017-09-25	City/Town	plant	Number of Customers Affected	199
Outage Number	RAF00106	Time Reported	9:51	Avg. Customer Outage Duration	:07
Planned	Unplanned	First Interruption	9:51	Explanations and Comments Old Crow Unit #4 was online and had an engine shutdown causing an outage to the town. High CAC and exhaust temp controller failed. Controller has slow response time to operate cooling fan.	
Sub Number		Last Restoration	9:58		
Line Number		Primary Cause	8 Equipment Failure		
		CEA Coding	Defective Equipment		
Service Area	578 Beaver Creek	Location	Beaver Creek	Customer-Hrs of Interruption	9:55
Date Reported	2017-09-10	City/Town	Plant	Number of Customers Affected	119
Outage Number	RAF00107	Time Reported	14:07	Avg. Customer Outage Duration	:05
Planned	Unplanned	First Interruption	14:07	Explanations and Comments Beaver Creek Unit #1 generator was running and had an engine lockout which caused the outage. Battery connector failed which causes ECU to shutdown.	
Sub Number		Last Restoration	14:12		
Line Number		Primary Cause	8 Equipment Failure		
		CEA Coding	Defective Equipment		

Outages

Service Area	576 Teslin	Location	Teslin	Customer-Hrs of Interruption	238:28
Date Reported	2017-07-30	City/Town	Teslin	Number of Customers Affected	98
Outage Number	RJZ00516	Time Reported	9:36	Avg. Customer Outage Duration	2:26
Planned	Unplanned	First Interruption	9:30	Explanations and Comments A squirrel blew a 2.5 amp fuse that caused S7352 to open. Causing outage to the north end of Teslin. PLT from Whitehorse was dispatched to repair problem.	
Sub Number	27 Teslin	Last Restoration	11:56		
Line Number	5L614	Primary Cause	9 Bird/Animal		
		CEA Coding	Foreign Interference		
Service Area	576 Teslin	Location	Teslin	Customer-Hrs of Interruption	563:08
Date Reported	2017-08-26	City/Town	Teslin and Alaska Hwy Sout	Number of Customers Affected	363
Outage Number	RJZ00519	Time Reported	14:30	Avg. Customer Outage Duration	1:33
Planned	Unplanned	First Interruption	14:17	Explanations and Comments A tree fell onto the 34Kv line at the YTG Grader pull out after Johnsons crossing, causing the center phase to break. The standby generator failed to auto start and had to be brought online manually. The line was sectionalized and energized in sections, and the section of wire was replaced.	
Sub Number	27 Teslin	Last Restoration	18:25		
Line Number	6L19	Primary Cause	2 Trees		
		CEA Coding	Trees		
Service Area	582 Ross River	Location	Ross River	Customer-Hrs of Interruption	7:30
Date Reported	2017-07-17	City/Town	Ross River	Number of Customers Affected	225
Outage Number	RSM00488	Time Reported	11:20	Avg. Customer Outage Duration	0:02
Planned	Unplanned	First Interruption	11:17	Explanations and Comments YEC had an issue with the line feeding our customers in Ross River that caused a community outage, outage lasted 2 minutes, diesel backup restored power. No cause found by YEC.	
Sub Number	19 Ross River	Last Restoration	11:19		
Line Number	5L618	Primary Cause	13 YEC U/F Load Shed		
		CEA Coding	Loss of Supply - Yukon Ener		
Service Area	571 Whitehorse	Location	Wh - Downtown	Customer-Hrs of Interruption	1320:12
Date Reported	2017-08-03	City/Town	Whitehorse	Number of Customers Affected	1148
Outage Number	RSM00490	Time Reported	7:40	Avg. Customer Outage Duration	1:09
Planned	Unplanned	First Interruption	7:40	Explanations and Comments Stage 3 opened up due to loss of supply. Affecting customers in downtown Whitehorse.	
Sub Number	5 Services	Last Restoration	8:49		
Line Number	6L15	Primary Cause	13 YEC U/F Load Shed		
		CEA Coding	Loss of Supply - Yukon Ener		

Outages

Service Area	571 Whitehorse	Location	Wh-Porter Creek	Customer-Hrs of Interruption	2785:18
Date Reported	2017-08-03	City/Town	Whitehorse	Number of Customers Affected	2422
Outage Number	RSM00491	Time Reported	7:40	Avg. Customer Outage Duration	1:09
Planned	Unplanned	First Interruption	7:40	Explanations and Comments Breaker S6838 opened due to loss of supply. Affecting customers in Porter Creek, Takhini and the Airport area.	
Sub Number	28 Mountainview	Last Restoration	8:49		
Line Number	6L16	Primary Cause	13 YEC U/F Load Shed		
		CEA Coding	Loss of Supply - Yukon Ener		
Service Area	571 Whitehorse	Location	Wh -McCrae	Customer-Hrs of Interruption	3401:42
Date Reported	2017-08-03	City/Town	Whitehorse	Number of Customers Affected	2958
Outage Number	RSM00492	Time Reported	7:40	Avg. Customer Outage Duration	1:09
Planned	Unplanned	First Interruption	7:40	Explanations and Comments S150-52-22 opened up due to loss of supply. Affecting all customers from Whitehorse to Teslin, Carcross, Marsh Lake and Tagish.	
Sub Number	11 McCrae	Last Restoration	8:49		
Line Number	6L11	Primary Cause	13 YEC U/F Load Shed		
		CEA Coding	Loss of Supply - Yukon Ener		
Service Area	576 Teslin	Location	Teslin	Customer-Hrs of Interruption	13:06
Date Reported	2017-08-03	City/Town	Teslin	Number of Customers Affected	262
Outage Number	RSM00493	Time Reported	7:40	Avg. Customer Outage Duration	:03
Planned	Unplanned	First Interruption	7:40	Explanations and Comments OSS S7347 open and started Teslin back up generator. 3 min outage. Outage caused by loss of supply by YEC.	
Sub Number	27 Teslin	Last Restoration	7:43		
Line Number	6L19	Primary Cause	13 YEC U/F Load Shed		
		CEA Coding	Loss of Supply - Yukon Ener		
Service Area	571 Whitehorse	Location	Wh -Downtown	Customer-Hrs of Interruption	1422:56
Date Reported	2017-09-15	City/Town	Whitehorse	Number of Customers Affected	1472
Outage Number	RSM00498	Time Reported	10:45	Avg. Customer Outage Duration	0:58
Planned	Unplanned	First Interruption	10:45	Explanations and Comments Energized cables were accidentally grounded out at new Selkirk Substation. This caused S150-52-21 to open. Line was cleared & re-energized.	
Sub Number	S150 Whitehorse	Last Restoration	11:43		
Line Number	6L10	Primary Cause	12 Personnel Error		
		CEA Coding	Human Element		

Outages

Service Area 572 Haines Junction

Date Reported 2017-07-22

Outage Number RTW00335

Planned Unplanned

Sub Number 20 Haines Junction

Line Number 5L610

Location Haines Junction

City/Town Haines Junction

Time Reported 13:00

First Interruption 13:00

Last Restoration 13:55

Primary Cause 8 Equipment Failure

CEA Coding Defective Equipment

Customer-Hrs of Interruption 265:50

Number of Customers Affected 290

Avg. Customer Outage Duration :55

Explanations and Comments

Breaker S8343 opened due to broken porcelain switch @ S7443. Replaced broken switch and re-energized.

Service Area 576 Teslin

Date Reported 2017-08-03

Outage Number TCL00008

Planned Unplanned

Sub Number 27 Teslin

Line Number 5L614

Location Teslin

City/Town teslin

Time Reported 14:00

First Interruption 14:00

Last Restoration 16:00

Primary Cause 9 Bird/Animal

CEA Coding Foreign Interference

Customer-Hrs of Interruption 200:00

Number of Customers Affected 100

Avg. Customer Outage Duration 2:00

Explanations and Comments

Fuse blew on a 25kV transformer which caused the breaker to open. Closed breaker and then refused transformer.