



**YUKON ENERGY
CORPORATION**
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Our File: 2/ 2703-05-04

March 16, 2016

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

Attention: Mr. Bruce McLennan, Chair

Re: YEC Outage Report – 2015 (Q1-Q4)

Please find attached the YEC outage report for the period of January through December 2015. This information is provided pursuant to the filing requirements of the 1996/7 settlement agreement and corresponding Board Order.

If you have any questions regarding the content within this report please do not hesitate to contact the undersigned.

Yours truly,

A handwritten signature in blue ink, appearing to read 'Tom Debolt', with a flourish at the end.

Tom Debolt
Revenue and Financial Analyst
tom.debolt@yec.yk.ca
393-5348

Enclosure

CC via email : Jay Massie, ATCO Electric Yukon



Outage / Disturbance Report - 2015

Outage/Disturbance Report - January 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
Jan 01, 2015	603 (Wet Snow)	S9567 Tripped. Heavy wet snow falling at the time of the outage. A-B Fault reported.	9L (S150-52-22)	12	4.20
Jan 03, 2015	604 (Ice/Icing)	Heavy frost build up on power lines. Suspect phases slapped together as the power line where the fault was reported was clear of frost.	Elsa Line (L250)	21	0.03
Jan 11, 2015	604 (Ice/Icing)	Frost falling from the power lines due to the warmer temps reported.	Elsa Line (L250)	17	0.02
Jan 11, 2015	604 (Ice/Icing)	Frost falling from the power lines due to the warmer temps reported.	Elsa Line (L250)	17	0.02
Jan 11, 2015	604 (Ice/Icing)	Frost falling from the power lines due to the warmer temps reported.	Elsa Line (L250)	17	0.02
Jan 15, 2015	603 (Wet Snow)	Weather in Keno is -4, 6-12cm of snowfall, winds 22km/hr. Reports of snow on the line as well. AEY Informed.	Elsa Line (L250)	21	0.08
Jan 16, 2015	603 (Wet Snow)	SCC tried to energize L250. Breaker tripped twice. Called out Mayo Serviceman. Had to sectionalize line to find the fault. Lengthy outage as the Mayo PLTs had to patrol the line but discovered nothing. Heavy wet snow with 22k winds were reported at the time of this outage. After approximately 7 hours of sectionalizing YEC reenergized all of L250 without finding a cause. Outage most likely caused by the heavy wet snow.	Elsa Line (L250)	17	7.62
Jan 16, 2015	603 (Wet Snow)	Heavy snow and strong winds reported at the time of outage. No other cause discovered/reported.	Dawson (Feeder 3)	437	0.14
Jan 16, 2015	603 (Wet Snow)	12cm of heavy wet snow with 22k winds at the time of the outage.	Elsa Line (L250)	17	0.02
Jan 16, 2015	603 (Wet Snow)	12cm of heavy wet snow with 22k winds at the time of the outage.	Dawson (Feeder 1)	447	0.63
Jan 20, 2015	603 (Wet Snow)	Heavy wet snow in the area -5 with winds at 15k.	Dawson (Feeder 2)	459	0.64
Jan 20, 2015	603 (Wet Snow)	Heavy wet snow in the area -5 with winds at 15k.	Dawson (Feeder 3)	437	0.65
Jan 20, 2015	603 (Wet Snow)	Heavy wet snow in the area at time of outage -5. Winds at 15k.	Elsa Line (L250)	17	0.03
Jan 20, 2015	603 (Wet Snow)	Wet Snow and 15K winds in the area. Temp -3. AEY notified	Elsa Line (L250)	17	0.02
Jan 23, 2015	603 (Wet Snow)	Snow/Ice/Frost coming off power lines caused lines to contact each other resulting in a power outage.	Ross River Feeder	12	0.01
Jan 23, 2015	603 (Wet Snow)	Mayo Powerline Techs patrolled L250 and discovered section of heavy ice/frost/snow built up on power lines. PLTs knocked ice from power lines then re-energized.	Elsa Line (L250)	17	1.58
Jan 23, 2015	603 (Wet Snow)		Elsa Line (L250)	17	5.71



Outage / Disturbance Report - 2015

Outage/Disturbance Report - February 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
		No Outages to report for February 2015			

Outage/Disturbance Report - March 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
		No Outages to report for March 2015			

Outage/Disturbance Report - April 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
Apr 08, 2015	603 (Wet Snow)	Heavy rain and snow at the time of the outage. Dawson PLT patrolled line and could not find anything.	Dawson (Feeder 3)	437	0.05
Apr 24, 2015	303 (Tree Growth/Untrimmed Tree)	Phase to ground fault was reported. Most likely a tree contact as no other cause reported or found.	L-355 (Haines Junction Line)	5	8.75



Outage / Disturbance Report - 2015

Outage/Disturbance Report - May 2015		Comments	Location	# of Customers Affected	Duration Hrs
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
May 11, 2015	400 (Lightning)	A broken dead end glass (insulator) caused an outage to the Timina area. Suspected lightning strike. After reclose Feeder 3 (Ross River) breaker tripped. The broken insulator was then discovered. Repairs were completed and power was restored.	Ross River Feeder	12	0.12
May 14, 2015	503 (Defective Equipment/Material)	Split cross arm on structure along L177. Insulator pulled free and contacted guywire.	L177 (Stewart North to Dawson)	8	169.60
			Dawson (Feeder 1)	447	0.20
			Dawson (Feeder 2)	459	0.42
			Dawson (Feeder 3)	437	2.93
			Moose Creek	1	4.07
May 21, 2015	506 (Other Equipment Failure)	DD5 tripped on Low Coolant level. P158 52-F2 and S250 52-2 tripped on Under Frequency.	Dawson (Feeder 2)	459	0.13
			Dawson (Feeder 3)	437	0.15
May 22, 2015	400 (Lightning)	Lightning strike at structure 722 at KM 336 of the Klondike HWY left a wire hanging from the pole. A small fire started and was put out by Fire Land Management.	Ross River Feeder	12	0.48
			Faro (Feeder 2)	135	0.48
			Faro (Feeder 1)	135	0.48
			S164-52-1 and S164-52-2 (L170)	36	1.78
May 24, 2015	108 (Other Scheduled)	Planned outage to tie system back together at L170-89-754A and L170-89-481. (Original outage caused by lightning strike.)	S164-52-1 and S164-52-2 (L170)	36	0.10
			S255-52-1 (L178)	19	0.22
May 29, 2015	400 (Lightning)	Lightning storm at time of outage. Dawson power restored using Dawson diesel generation.	Dawson (Feeder 1)	447	0.69
			Dawson (Feeder 2)	459	0.88
			Dawson (Feeder 3)	437	1.34
May 29, 2015	400 (Lightning)	Cause of outage due to lightning strike on L250. Outage duration lengthened due to YEC personnel needing to fly the line as Fire Danger Rating was extreme. Also, YEC was requested by Wildfire Management not to energize L250 as a forest fire was a couple kilometers away from the line.	S249-52-4 (L250)	17	23.99
			S249-52-5 (L250)	17	24.00
May 30, 2015	400 (Lightning)	Lightning storm reported at the time of the outage. Minto Mine was placed on diesel generation for the night. Could not reclose as Fire Danger Rating was High at the time. Had to wait until daylight so that YEC Personal could fly the line.	S254-52-TR	1	14.04



Outage / Disturbance Report - 2015

Outage/Disturbance Report - June 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
Jun 05, 2015	503 (Defective Equipment/Material)	Broken insulator was discovered on PP 180 along L250. Rain and lightning were reported at the time of the outage.	Elsa Line (L250)	17	4.16
Jun 05, 2015	503 (Defective Equipment/Material)	Broken insulator was discovered on PP 180 along L250. Rain and lightning were reported at the time of the outage.	Elsa Line (L250)	17	5.57
Jun 05, 2015	503 (Defective Equipment/Material)	Cause of outage was found to be a broken insulator at PP 107.	Elsa Line (L250)	17	22.49
Jun 08, 2015	400 (Lightning)	Reports of lightning between Dawson and Stewart North. Comms for P158 and S250 went down immediately. Dawson PLT called in to reset RTU. Once COMMS restored, SCC was able to restore Dawson back to grid power.	Dawson (Feeder 1) Dawson (Feeder 2) Dawson (Feeder 3)	447 459 437	0.20 0.21 0.48
Jun 09, 2015	103 (Maintenance)	Line Crews changing out Test and Treat poles.	L177 Stewart North to Dawson Dawson City Customer(s)	8 62	0.34 2.00
Jun 13, 2015	301 (Falling Tree)	Confirmed tree down on Carmacks to Faro line (L178). It took 2 hrs to clear the tree.	S6838 9L (S150-52-22)	1 1	1.04 1.09
Jun 15, 2015	400 (Lightning)	Whitehorse PLT's sent out to assess the condition of the line and patrol L355. The damaged portion of the line was isolated. ATCO back fed L355 from HJ up to our GOI point of L355-89-181. The damage appears to be caused by a lightning strike.	Ross River Feeder Faro (Feeder 2) Faro (Feeder 1) Dawson (Feeder 3) S164-52-1 and S164-52-2 (L170)	12 135 135 437 36	0.12 0.14 0.16 0.42 2.01
Jun 21, 2015	901 (Wildlife (Bird/Animal))	S164-52-7 opened on Overcurrent. A large raven was found to be the cause of the outage. ATCO sectionalized their equipment as necessary to restore power.	L355 (Haines Junction Line) S164-52-7 (Whistlebend Feeder)	5 1	18.18 0.54
Jun 22, 2015	400 (Lightning)	Two open cut outs were found as well as broken arresters. Lightning was determined the cause. T355 89-3 was left open until line crews are able to fix the repairs in the morning.	L355 (Haines Junction Line)	5	3.30
Jun 22, 2015	501	S7523 fuse blew out of the Timina Subdivision which tripped Ross River Feeder. Structure	Ross River Feeder	12	0.02



Outage / Disturbance Report - 2015

Jun 23, 2015	(Electrical Failure) 103 (Maintenance)	S7523 had a fire and wire lay across the road. PLT contained the scene and crews repaired the damage the next day. Planned power outage to isolate L170 affected customers at Braeburn, Little Fox and South Fox.	T153 (Little Fox) T170SF (South Fox) T170B (Braeburn)	3 18 15	0.08 0.07 0.05
Jun 24, 2015	103 (Maintenance)	Planned power outage for YEC Electrician and Contractor to change the PLC program and test run the Dawson diesels.	Dawson (Feeder 1) Dawson (Feeder 2)	447 459	0.55 0.55
Jun 24, 2015	901 (Wildlife (Bird/Animal))	Northern grid outage caused by a raven in Faro substation (870S).	Dawson (Feeder 2) Dawson (Feeder 1) Dawson (Feeder 3) S254-52-TR Ross River Feeder Faro (Feeder 2) Faro (Feeder 1) S252-52-2	459 447 437 1 12 135 135 1	0.30 0.29 0.47 2.36 0.32 0.30 0.31 0.69
Jun 24, 2015	203 (Generation Inadvertent)	Grids were separated for L170 test and treat repairs. Faro diesel (FD1) was on line to allow for changes to Dawson PLC which had all Dawson Diesels off line. FD1 tripped off causing a Dawson power outage. Cause was a valve cage cooling hi temp alarm.	Dawson (Feeder 2) Dawson (Feeder 1) Dawson (Feeder 3)	459 447 437	0.27 0.18 0.43
Jun 25, 2015	203 (Generation Inadvertent)	Mayo B hydro unit #1 tripped off due to multiple alarms causing north grid outage.	Dawson (Feeder 1) Dawson (Feeder 2) Dawson (Feeder 3) S254-52-TR S252-52-2 Ross River Feeder Faro (Feeder 2) Faro (Feeder 1)	447 459 437 1 1 12 135 135	0.18 0.19 0.61 2.80 2.57 0.11 0.10 0.12



Outage / Disturbance Report - 2015

Outage/Disturbance Report - July 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
Jul 04, 2015	901 (Wildlife (Bird/Animal))	Faro Feeder 1 (507) tripped. SCC attempted one reclose and it held. Dead raven found at the bottom of rec center pole.	Faro (Feeder 1)	135	0.01
Jul 10, 2015	901 (Wildlife (Bird/Animal))	Raven tripped T1 transformer in S170 opening 52-1 and 52-2. WH4 reacted and as it shed load a shear pin broke which then tripped the unit. Minto then tripped as a result. Full restoration to Whitehorse was achieved through ATCO re-routing their switching out of S170.	S9815 S6837 S6838	1 1 1	0.76 0.79 0.84
Jul 13, 2015	400 (Lightning)	Lightning Strike was the cause. Rain and Thunderclouds reported in the area. S250 57-1 grounding switch closed and had to be opened.	Dawson (Feeder 1) Dawson (Feeder 2) Dawson (Feeder 3)	447 459 437	0.24 0.25 0.54
Jul 17, 2015	808 (Other Human Element)	MH2 Tripped due to hi bearing temperature at 07:12:11. At 07:11:15 there was an MH2 MW Hi Alarm @ 2.70MW as well as 5 Mayo Penstock Hi level alarms between 07:04 and 07:05 that gave the SCC Operator indication that there was an over load issue with MH2.	Dawson (Feeder 1) Dawson (Feeder 2) Dawson (Feeder 3)	447 459 437	0.12 0.16 0.19
Jul 17, 2015	400 (Lightning)	Lightning storms in the area at the time of the outage.	Dawson (Feeder 1) Dawson (Feeder 2) Dawson (Feeder 3)	447 459 437	0.17 0.18 0.73
Jul 25, 2015	901 (Wildlife (Bird/Animal))	The Breaker opened - Dead bird discovered in the substation.	Faro (Feeder 2)	135	0.01
Jul 26, 2015	400 (Lightning)	Lightning storms in the area at the time of the outage	Dawson (Feeder 1) Dawson (Feeder 2) Dawson (Feeder 3)	447 459 437	0.17 0.18 0.46



Outage / Disturbance Report - 2015

Outage/Disturbance Report - August 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
Aug 05, 2015	105 (Forced Switching)	Brushing contractor broke a crossbar at Structure 395 at L170. YEC Lead Lineman decided to de-energize the line to do repairs. Customers at Little Fox, South Fox and Braeburn were affected.	T153 (Little Fox) T170B (Braeburn)	3 15	1.09 1.09
Aug 10, 2015	400 (Lightning)	Lightning storm reported in the area at the time of the outage. DD2 and DD3 stayed on line (Grids Separated) Feeder 1 stayed closed.	T170SF (South Fox) Dawson (Feeder 3) Dawson (Feeder 2)	18 437 459	1.09 0.10 0.14
Aug 15, 2015	503 (Defective Equipment/Material)	WH3 tripped off because of failed power supply for PLC.	S6838 Dawson (Feeder 3)	1 437	0.46 0.18
Aug 20, 2015	304 (Off-ROW Tree)	Suspect tree on the line approx. 170km east of Carmacks. PLT flew the line from Carmacks and discovered an off-ROW tree on the line. After the tree was removed SCC was able to tie the grids back together at S164. L178 isolated and Faro mine site being fed from FD7.	Dawson (Feeder 3) Dawson (Feeder 1) Dawson (Feeder 2)	437 447 459	1.10 0.30 0.30
Aug 21, 2015	0 (Unknown)	No cause reported or discovered. Weather was fine.	S9815 S6837 S6838 Faro (Feeder 2)	1 1 1 135	1.46 1.57 1.21 0.01
Aug 31, 2015	506 (Other Equipment Failure)	Fuse blew on single phase feeding north end of town. Patrolled line but no trouble found. Re-fused at 100 amp.	Dawson City Customer(s)	75	0.67



Outage / Disturbance Report - 2015

Outage/Disturbance Report - September 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
Sep 06, 2015	503 (Defective Equipment/Material)	There was a false fire alarm in P158. This false fire alarm resulted in all Dawson diesel units locking out and tripped Feeder 1 and Feeder 2.	Dawson (Feeder 1)	447	0.22
Sep 14, 2015	506 (Other Equipment Failure)	WH1 tripped offline due to failed power supply for WH1 PLC.	Dawson (Feeder 2)	459	0.30
Sep 15, 2015	806 (Commissioning Error)	WH1 tripped offline due to an error in the PLC programming which caused the gate to shut when it should not have.	Dawson (Feeder 3)	437	0.17
Sep 29, 2015	304 (Off-ROW Tree)	Wind gusts up to 70k knocked tree onto power line along L178.	S6837	1	0.56
			S6838	1	0.55
			Ross River Feeder	12	0.29
			Faro (Feeder 2)	135	0.28
			S254-52-TR (Minto)	1	1.48
			Mayo Town Feeder (S249-52-10)	332	0.20
			Elsa Line (L250)	17	0.20
			Dawson (Feeder 1)	447	0.12
			Dawson (Feeder 2)	459	0.13
			Dawson (Feeder 3)	437	0.28
			L178 (Cmcks-Faro)	288	0.79
			L170 (S164-Cmks)	33	0.93
			L178 (Cmcks- Faro)	42	0.79
Sep 29, 2015	301 (Falling Tree)	L178 (Carmacks to Faro) de-energized to remove tree making contact with powerline. Faro on diesel for the duration of work. Drury Creek and NWTel customers affected.	S255-52-1 (L178)	19	1.48



Outage / Disturbance Report - 2015

Outage/Disturbance Report - October 2015					
Date	Code	Comments	Location	# of Customers Affected	Duration Hrs
Oct 01, 2015	901 (Wildlife (Bird/Animal))	Faro Feeder 1 Opened. SCC Closed. Dead raven found on Seniors complex transformer.	Faro (Feeder 1)	135	0.01
Oct 02, 2015	503 (Defective Equipment/Material)	AH3 tripped due to faulty solenoid for the TV.	Dawson (Feeder 1) Dawson (Feeder 2) Dawson (Feeder 3)	447 459 437	0.28 0.29 0.31
Oct 08, 2015	506 (Other Equipment Failure)	Glass Failure on Structure 1248 caused part of structure to burn. Faro isolated for duration of line isolation. Faro mine was fed from Faro and had a brief outage during the return to normal on October 14th.	South Fox Lake T170B (Braeburn) Ross River Feeder Faro (Feeder 2) Faro (Feeder 1) Faro Mine	18 15 12 135 135 1	0.55 0.55 0.24 0.22 0.22 1.33

Outage/Disturbance Report - November 2015					
Date	Code	Comments	Location	Customers Affected	Duration Hrs
Nov 13, 2015	603 (Wet Snow)	Heavy snow was reported in the area at the time of this outage. Lineman suspects line slap from snow falling off the power lines.	Dawson (Feeder 2) Dawson (Feeder 3) L170 (S164-CMKS) L178 (CMKS-Faro)	459 437 33 288	0.15 0.21 0.13 0.16

Outage/Disturbance Report - December 2015					
Date	Code	Comments	Location	Customers Affected	Duration Hrs
		No Outages to report for December 2015			