



General Manager
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TRANSMITTAL MEMORANDUM

TO: The Honorable Mayor and City Council

FROM: Karl R. Amylon, General Manager

DATE: November 10, 2020

RE: **Reports of October 3, 4, 16 and 25, 2020 Power Outages**

Attached for City Council review are memoranda from Electric System Engineering Manager Jeremy Bynum regarding the power outages of October 3, 4, 16 and 25, 2020. Mr. Bynum and Electric Division Manager Andy Donato will attend the City Council meeting of November 19, 2020, in order to address any questions and/or concerns that Councilmembers may have.

KPU



Electric Division
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Ketchikan, AK 99901

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TRANSMITTAL MEMORANDUM

TO: Karl Amylon, KPU General Manager
Lacey Simpson, Assistant KPU General Manager

FROM: Jeremy Bynum PE, Electric System Engineering Manager

DATE: November 6, 2020

SUBJECT: **Electrical Outage of October 3, 2020**

On Saturday October 3, 2020, at 7:52 AM, an outage affected electric services in Ketchikan caused by a loss of generation from Southeastern Alaska Power Agency (SEAPA).

A SEAPA generator at Swan Lake tripped offline due to a synchronizing issue; this cause a loss of generation in the SEAPA system. The sudden loss of approximately 6.0 MW of generation and frequency control caused system instability, resulting in load shedding in Ketchikan. Eight KPU system feeders opened during the event causing power outages.

KPU and SEAPA operators quickly identified the issue and KPU immediately began power restoration. The power restoration process took additional time due to the nature of the outage. Initially 3,665 customers were affected by the outage. Within fifty-one minutes, all power was restored.

Operation Schedule

Location	Open	Close	Duration (hr:min)	Customers
Point Higgins F1S	7:52	8:25	0:33	521
Point Higgins F2N	7:52	8:42	0:50	559
KTN F3	7:52	8:38	0:46	784
Mountain Point F1N	7:52	8:43	0:51	303
Mountain Point F2S	7:52	8:29	0:37	520
Ward Cove F1S	7:52	8:32	0:40	294
Ward Cove F1S	7:52	8:39	0:47	437
Bethe Sectionalizer on F4T	7:52	8:41	0:49	247

Cc: Andy Donato, Electric Division Manager
Mark Adams, Electric Division Operations Manager
Diane Walker, Administrative Assistant

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FROM: Jeremy Bynum PE, Electric System Engineering Manager

DATE: November 6, 2020

SUBJECT: **Electrical Outage of October 4, 2020**

On Sunday, October 4, 2020, at 6:24 PM, an outage affected electric services fed from Ward Cove Feeder No. 1.

A failed 12.47kV insulator on a power pole located near 3400 Tongass Highway caused the outage; the failed insulator caused a phase-to-ground fault and pole fire that the Ward Cove Feeder cleared.

KPU operators and crews quickly identified the issue and immediately began power restoration and repairs. Initially 294 Customers were affected by the outage. Within forty-one minutes, power was restored to all Customers.

Operation Schedule

Location	Open	Close	Duration (hr:min)	Customers
Ward Cove FIS	18:24	19:05	0:41	294

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TO: Karl Amylon, KPU General Manager
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FROM: Jeremy Bynum PE, Electric System Engineering Manager

DATE: November 10, 2020

SUBJECT: **Electrical Outage of October 16, 2020**

On Friday October 16, 2020, at 8:32 PM, an outage affected electric services in Ketchikan caused by a fault event in Petersburg AK.

A major electrical fault caused an electrical equipment failure in a Petersburg facility; this caused a loss of frequency stability in the KPU/SEAPA system. The instantaneous fault of approximately 2.0 MW caused system instability, resulting in load shedding in Ketchikan. Four KPU system feeders opened during the event causing power outages.

KPU and SEAPA operators identified the issue and KPU immediately began power restoration. Initially 2,128 customers were affected by the outage. Within twenty-six minutes, power was restored to all customers.

Operation Schedule

Location	Open	Close	Duration (hr:min)	Customers
Point Higgins F1S	20:32	20:53	0:21	521
KTN F3	20:32	20:52	0:20	784
Mountain Point F1N	20:32	20:54	0:22	303
Mountain Point F2S	20:32	20:58	0:26	520

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TRANSMITTAL MEMORANDUM

TO: Karl Amylon, KPU General Manager
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FROM: Jeremy Bynum PE, Electric System Engineering Manager

DATE: November 10, 2020

SUBJECT: **Electrical Outage of October 25, 2020**

On Sunday October 25, 2020, at 6:15 PM, an outage affected all electric services north of Ketchikan and parts of Gravina Island. This outage was caused by an avian contact with the 34.5kV system at near Lewis Reef Substation.

The avian contact caused protective relaying at Baily Powerplant to open the 34.5kV North Tie Breaker disconnecting power from three substations: Lewis Reef, North Point Higgins, and Ward Cove. No equipment was damaged during the event.

KPU operators and crews identified the issue and immediately began power restoration. The power restoration process took additional time due to the nature of the outage. Initially 1,811 customers were affected by the outage. Within one hour and thirty-one minutes, power was restored to all customers.

Operation Schedule

Location	Open	Close	Duration (hr:min)	Customers
North Point Higgins F1S	18:15	19:44	1:29	521
North Point Higgins F2N	18:15	19:46	1:31	559
Ward Cove F1S	18:15	19:40	1:25	294
Ward Cove F2N	18:15	19:41	1:26	437

Cc: Andy Donato, Electric Division Manager
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