AEL&P had asked to provide an energy update to the CBJ Assembly last spring. The COVID-19 pandemic precluded that, but we are happy to be here today to provide information about Juneau's energy system and to answer questions.

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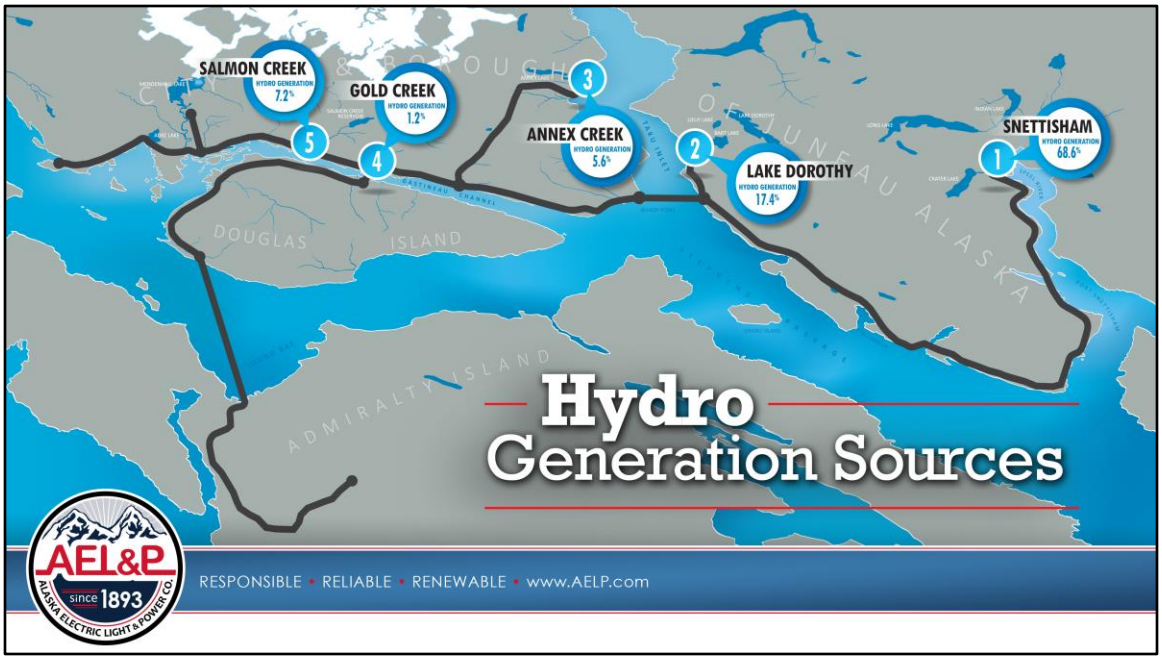
CURRENT OPERATIONS AND UPDATES

- AEL&P Management
  - Connie Hulbert – President and General Manager
  - Christy Yearous – VP of Generation
  - Darrell Wetherall – VP of Transmission and Distribution
  - Debbie Driscoll – Director of Consumer Affairs
  - Rod Ahlbrandt – Director of Information Technology
  - Brandon Cullum – Chief Financial Officer
  - Alec Mesdag – Director of Energy Services

AEL&P's goals:

- To provide reliable and safe service from electric energy generated from renewable resources.
- To provide among the lowest average electric rates of major regulated utilities within Alaska over the long run while maintaining financial integrity.
- To utilize electric resources efficiently.



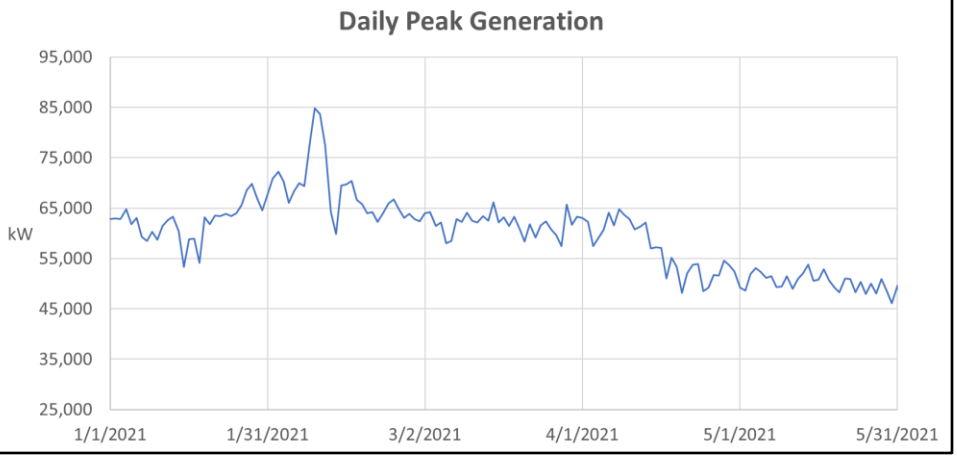
This graphic indicates where we get our hydropower in Juneau. About two-thirds of Juneau's hydropower energy comes from the Snettisham project. That low-cost energy is a significant contributor to the fact that AEL&P's rates have been lower than the national average since 2014.

Bill Corbus and AEL&P staff devoted a lot of time and expense to helping secure the output of Snettisham for Juneau via the acquisition of the project by the Alaska Industrial Development and Export Authority (AIDEA). AEL&P started operating the Snettisham project in 1996, and in 1998 AIDEA purchased the project from the federal government. AEL&P continues to operate the project under agreements with AIDEA.

The other one-third of Juneau's hydropower energy comes from projects owned by AEL&P: Gold Creek (1893), Salmon Creek (1914), Annex Creek (1915), and Lake Dorothy (2009).

CURRENT OPERATIONS AND UPDATES

- Generation – Juneau's Electrical Usage



Seasonally, loads are heavily influenced by temperatures. Peaks are often seen during long cold periods.

CURRENT OPERATIONS AND UPDATES

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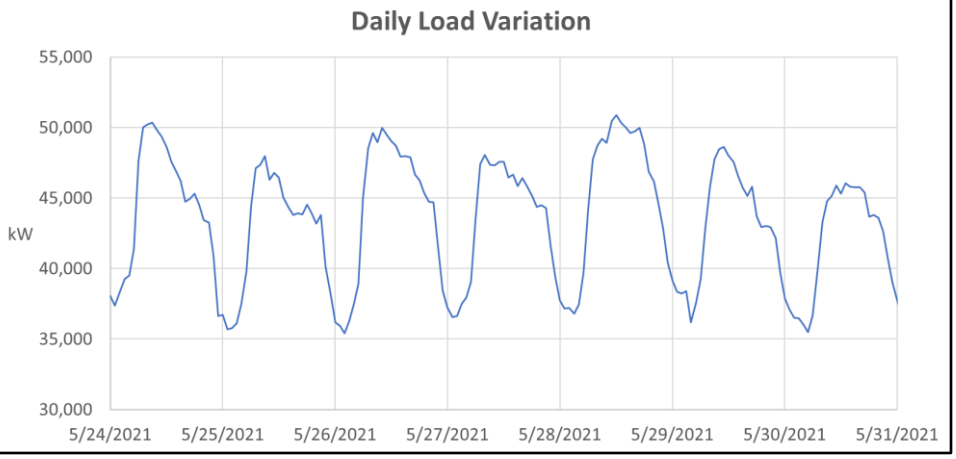
- Generation – Juneau's Electrical Usage



Loads vary daily by time of day and day of the week. This graph show the daily variation in Juneau's loads last week - as you can see there is a significant variation between the daytime peak and the overnight low. The hydro units scale back overnight to accommodate this variation.

CURRENT OPERATIONS AND UPDATES

- Generation – Salmon Creek Penstock Repairs



The Salmon Creek penstock was damaged by one of three landslides that occurred in the Salmon Creek project area on 12/2/2020. There was no damage to the Salmon Creek dam from any of the landslides and the dam remains safe to operate.

When it occurred, the plant tripped offline, and the system operator saw a drop in penstock pressure. The operator closed the valve at the base of the dam to shut off the flow of water out of the broken penstock. This shut off the water supply to DIPAC and the CBJ secondary water supply. To ensure the water level behind the dam would not rise above the control point, and to provide water to DIPAC lower in the stream, the low-level outlet valve was opened at the base of the dam.

AEL&P engineers worked quickly to locate pipe that could be used to make repairs, and they submitted a repair plan and design documents with FERC, who understood the urgency and completed their review and approvals in a timely fashion. A heavy-lift helicopter was brought to the site to lift the sections of pipe into place, unfortunately during some of the coldest temperatures of the year. The temperatures made work difficult, but with the help of a number of local contractors, AEL&P was able to complete the repairs and get the penstock back into service only 83 days after the landslide on 2/23/2021.

CURRENT OPERATIONS AND UPDATES

- Generation – Unit 2 Rewind

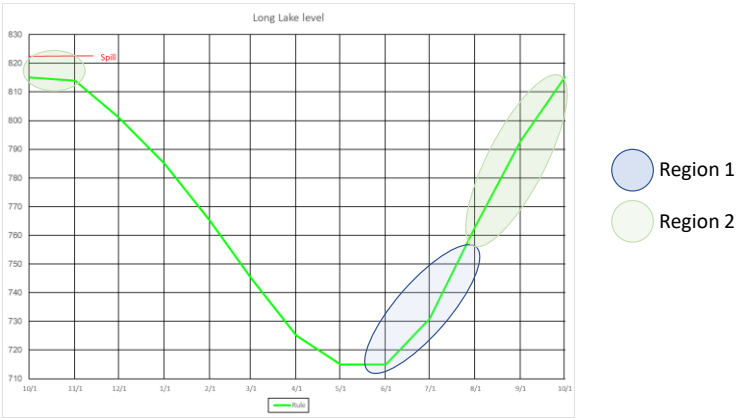


A generator rewind for Unit 2 at Snettisham was originally planned for last year but postponed due to COVID. This is the first time the rotor, which weighs 120,000 lbs – 60 tons, has been removed since shortly after its original construction nearly 50 years ago.

A project of this magnitude requires years of planning, including reservoir management leading up to the project and after project completion.

CURRENT OPERATIONS AND UPDATES

- Generation – Storage Lake Levels



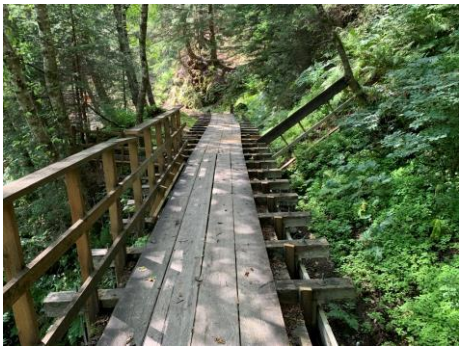
This graph shows the rule curve for Long Lake, the larger of two lakes serving Snettisham. The rule curve shows the operating guidelines for maximum firm flow – how to get the most energy out of the reservoir. In the zone marked "Region 1" in blue, lakes are filling due to snow melt in the early spring and summer – that's the zone we are in right now. In the zone marked "Region 2" in green, lakes are filling due to rain in the late summer and fall. AELP manages reservoirs using tools like the rule curves to maximize energy production.

Some years, planned plant outages may cause us to deviate from the rule curve. For example, to prepare for the Unit 2 rewind at Snettisham, Long Lake, the lake that supplies water for Units 1 and 2 at Snett, was drawn down, knowing that we wouldn't be able to pull as much water off the lake through this summer. At the same time, we drew less water than normal out of Crater Lake, the lake that supplies water for Unit 3 at Snett.

Above average precipitation since the end of the drought has allowed our reservoir levels to recover, and we do not anticipate any issues with serving our interruptible customers.

CURRENT OPERATIONS AND UPDATES

- Significant Additions and Retirements
  - Gold Creek Flume Replacement



One of the largest projects completed recently is the Gold Creek Flume replacement, which was finished in 2020. There were many improvements made to the flume during this project that should enhance the durability of the flume and make it safer to traverse.

AELP owns the flume, and CBJ owns the deck boards and railings and carries liability for public use of the flume as a trail.

CURRENT OPERATIONS AND UPDATES

- Transmission – Snettisham Line

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The photos on this slide show various sections of the Snettisham transmission line and the Daisy Bell, the avalanche mitigation tool used as part of AEL&P's avalanche control efforts along the transmission line. AEL&P was the first in North America to use the Daisy Bell, and we continue to perform avalanche monitoring and control work along the Snettisham transmission line.

CURRENT OPERATIONS AND UPDATES

- Transmission – Thane Avalanche Repairs

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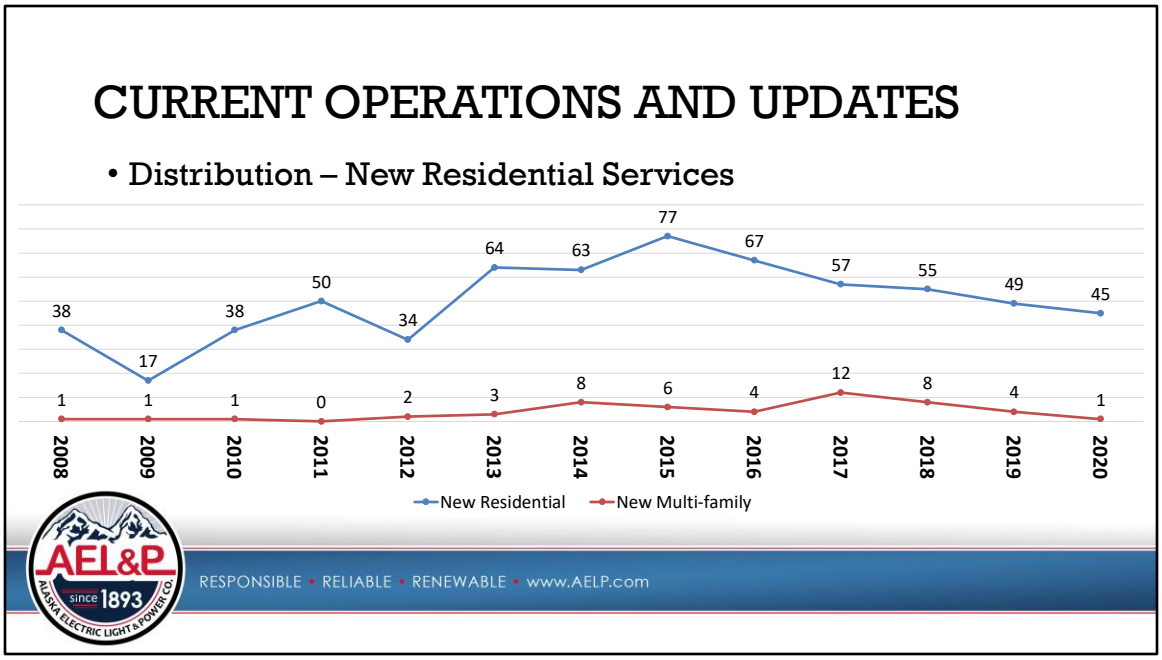
One of the two redundant transmission lines that travel along Thane Road was damaged during DOT avalanche control work on March 4th. The other line was undergrounded by AEL&P a number of years ago in order to avoid avalanche damage.

AEL&P switches the section of overhead transmission line that is exposed to Snowslide Gulch avalanches out of service during DOT control work in case a slide crosses the road. That's exactly what happened this year, but because the overhead line was not energized, no outage resulted from the damage.

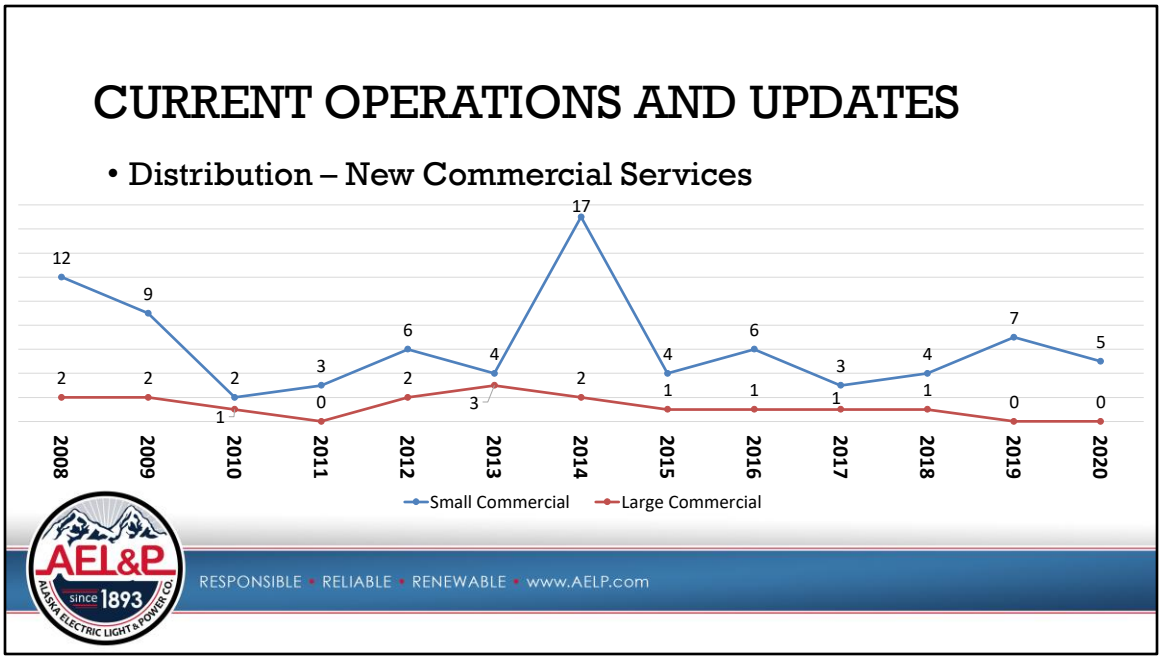
Weather conditions that posed a safety risk to our line crews, combined with unfortunate timing by a parasailer, delayed repair to the line for a few weeks.

We fortunately did not see damage to the remaining transmission line from one of the other slide paths in this area. If we had, we could have needed to serve customers with our standby diesel generators until repairs could be completed, which could take a significant amount of time because of the risk of working in an active slide area.



AEL&P tracks the number of new services installed each year. Since 2017, we've seen a slow decline in the number of new homes built each year. 2021 looks like it will be roughly equal to 2020, maybe a little higher.

We saw a jump in the amount of new multifamily housing being built, and that has also slowed down in recent years. At least one new multifamily housing project is being constructed in 2021.



Commercial services are those operated for business, and Small Commercial services are those less than 50 kilowatts – the vast majority of commercial services classify as Small Commercial.

Aside from the large increase in 2014, we've had relatively steady numbers of new services for Small Commercial services, and you can see that we have not had any new Large Commercial services in the last two years, with none scheduled for 2021 yet, either.

CURRENT OPERATIONS AND UPDATES

- Distribution – Voltage Surges

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

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Voltage surges are not a common event in Juneau – these types of events tend to occur more commonly in areas with frequent lightning storms. Two events occurred in Juneau recently, and the impacts were concentrated in the Vanderbilt Hill and Salmon Creek areas.

One event was caused by the premature failure of a transmission insulator, which allowed an energized transmission conductor to contact a distribution conductor, resulting in a short-lived but large increase in voltage before protective devices shut off power to the affected area.

A second event was caused by a tree falling into the power lines and simultaneously contacting the transmission and distribution lines before protective devices shut off power to both the transmission and distribution circuits.

Many homeowners have installed surge protection in the wake of the incident. A few who had protection installed avoided significant damage as a result. AEL&P updated and expanded its consumer education efforts related to power protection in the wake of these events, and those communication efforts will be discussed later in the presentation.

CURRENT OPERATIONS AND UPDATES

- Streetlights

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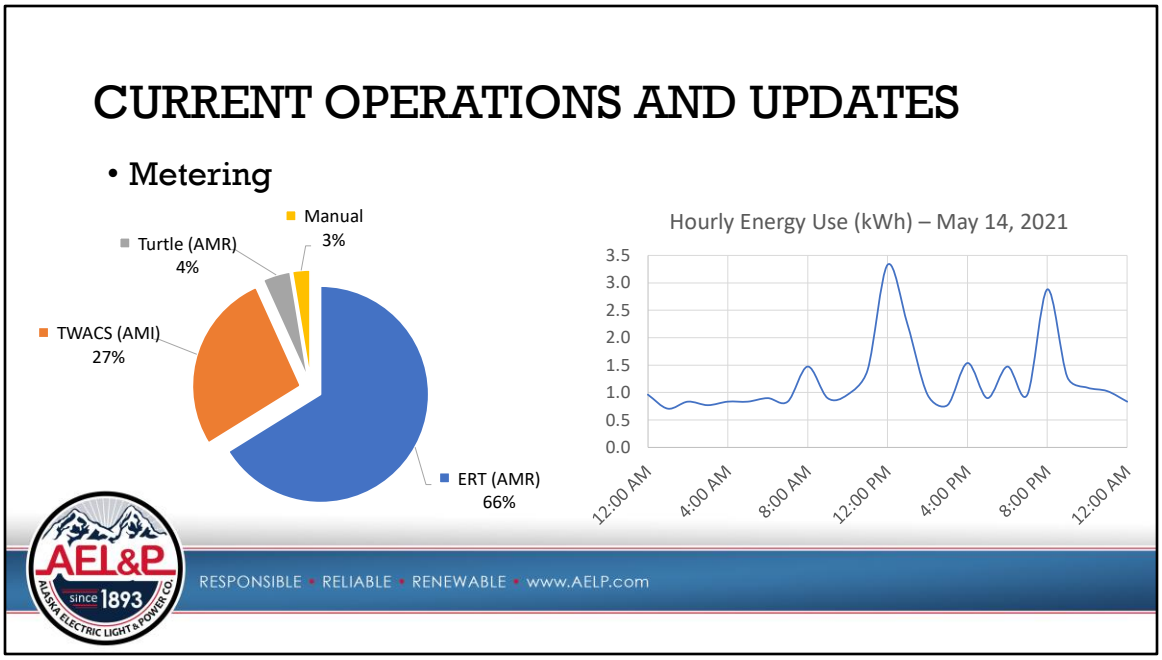
In 2020, AEL&P requested modifications to our Dusk to Dawn Lighting schedule, and the Regulatory Commission of Alaska approved the request. The changes include adding a fee schedule for LED streetlights, which will allow AELP to begin replacement of existing High Pressure Sodium and Mercury Vapor streetlights currently in use.

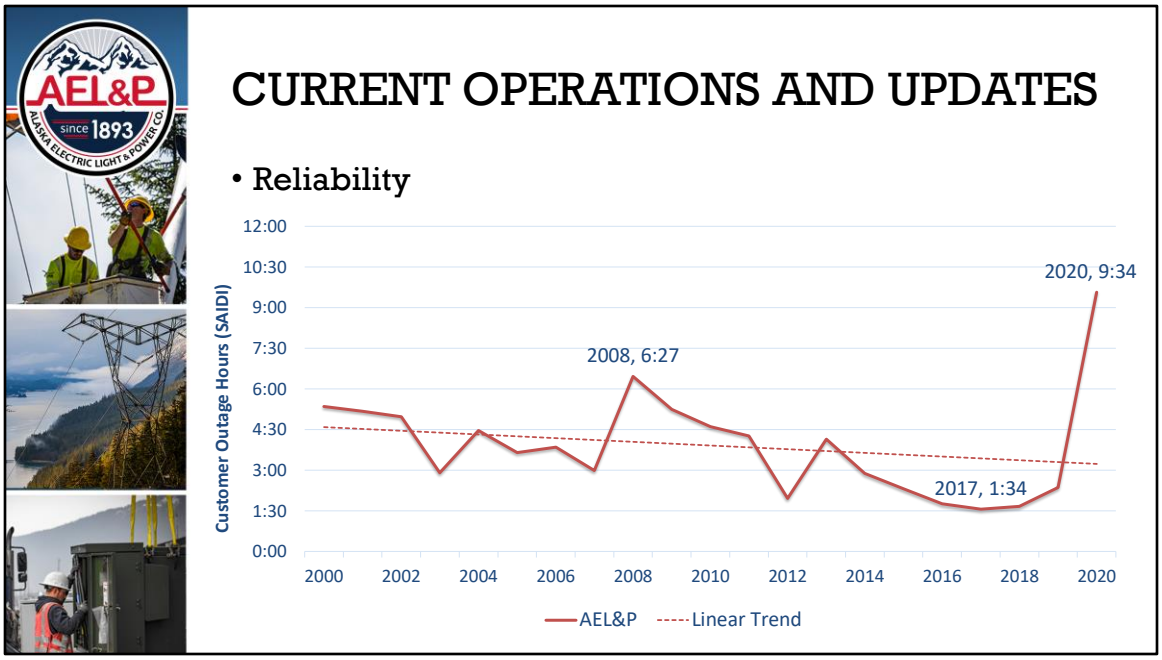
AEL&P intends to work through its existing inventory of traditional fixtures, and then begin to replace them with LED fixtures as maintenance is required. This approach allows us to manage our manpower and the cost of the program.



For the past few years, AEL&P has been working on converting all existing meters to new TWACS "AMI" meters. AMI stands for Advanced Metering Infrastructure, and these meters will replace metering technology which is becoming obsolete.

ERT and Turtle meters are "AMR" meters, which stands for Automated Meter Reading. Encoder Receiver Transmitter ("ERT") meters use a weak radio signal to communicate reads from a handheld device that a meterman takes on a route. Turtle meters use powerline communication to transfer reads very slowly, hence the "Turtle" description. Due to obsolescence, all Turtle meters are expected to be replaced by the end of 2021.

TWACS meters use powerline communication, which is a high-frequency signal that travels on existing powerlines, instead of radio signals, and these meters transfer data much more quickly. TWACS meters are also able to provide interval data, which can be useful to homeowners who want to diagnose issues with their electricity use.



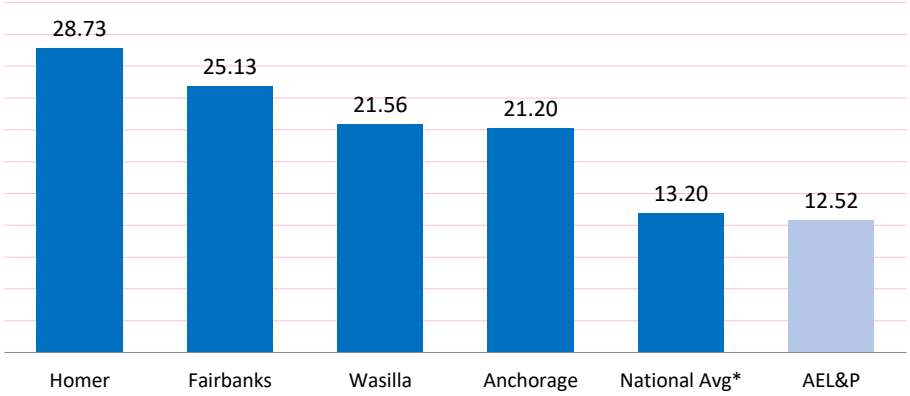
Utilities keep reliability statistics, including the System Average Interruption Duration Index (SAIDI), shown here, which uses the number of customers and duration of every individual outage to calculate how long a single areawide outage would have been to create an equivalent impact. Here's how our 5-year average compares to the most recent data available for the US and Alaska.

- AEL&P 5-year average – 3:23 hours/customer/year
- EIA Survey 2019 – US average – 4:44 hours/customer/year
- EIA Survey 2019 – AK average – 4:57 hours/customer/year

Tree clearing activities as well as other improvements to the system have reduced the duration of outages in recent years, with 2017 being the year with the lowest outage hours in the last two decades, but outages caused by storm damage toward the end of 2020 were the most significant in years. Certain things will always be outside of our control when it comes to power outages, but if we continue our extensive tree clearing activities, investments to improve system protection, and quick response times when outages occur, we hope to continue the downward trend in outage hours.

CURRENT OPERATIONS AND UPDATES

- Residential Electricity Cost in ¢/kWh for Alaska Utilities

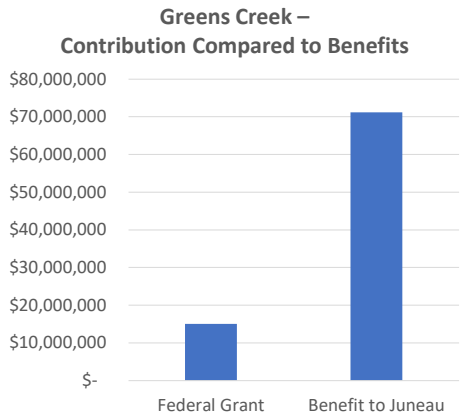


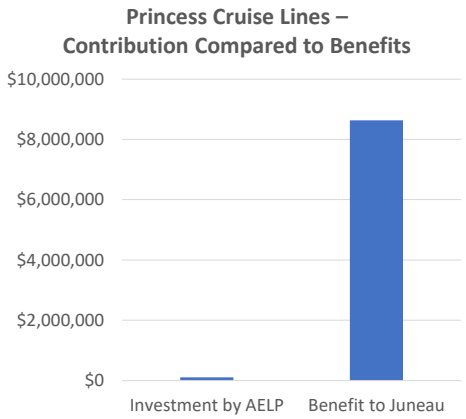
AEL&P's rates remain the lowest among the large, regulated utilities in Alaska. Our rates are also comparable to the national average, which is due in large part to our ability to sell surplus energy to interruptible customers.

*Source: Table 5.3 of Electric Power Monthly with Data for December 2020 published by the U.S. Energy Information Administration in February 2021

CURRENT OPERATIONS AND UPDATES

- The Value of Interruptible Energy Sales





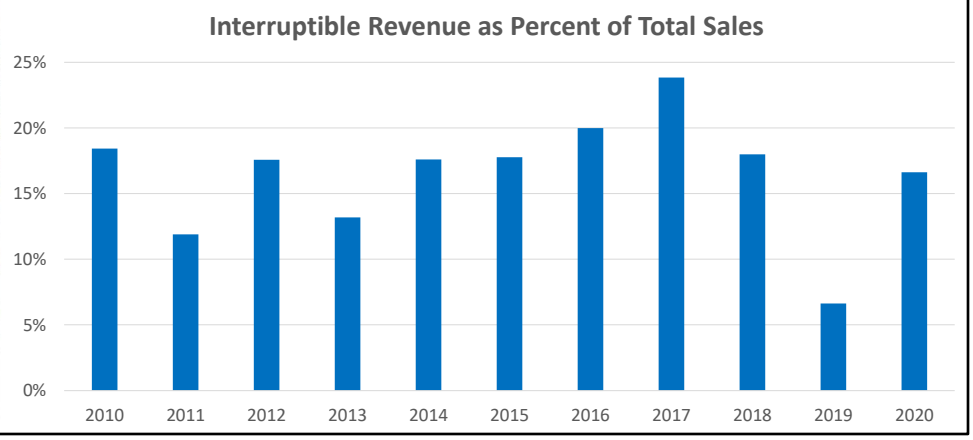
A $15 million federal grant, which provided the electrical connection to the Greens Creek Mine, has enabled nearly five times that amount in benefits to flow to Juneau's electric customers – and that benefit will continue to increase every year. Every cent of the benefit created by the federal grant goes to electric customers – none is retained by AEL&P.

Electric rates would be 25% higher in Juneau without sales to Greens Creek and Princess Cruise Lines. From the fall of 2009, when Lake Dorothy came online, through the end of 2020, AEL&P has supplied 77% of Greens Creek's electricity. Over 70 million gallons of fuel have been avoided by Greens Creek as a result of interruptible energy sales to the mine.

Juneau was also the first port in the world to connect a cruise ship to shore power in 2001, something that is now done in multiple ports around the world. We are thrilled to be coming up on our 20th anniversary of providing renewable power to Princess Cruise Lines. During the past 20 years, Princess Cruise Lines has purchased over $8.6 million for interruptible hydroelectricity, and every cent goes to the benefit of Juneau's electric customers by lowering bills. We look forward to serving Princess ships again this summer.

CURRENT OPERATIONS AND UPDATES

- The Value of Interruptible Energy Sales



This graph shows how much interruptible customers contribute as a percent of AEL&P's total revenue.

A major distinction between interruptible and firm customers is that AEL&P is not obligated to invest in infrastructure to serve interruptible customers. The additional infrastructure costs that would be required to make Greens Creek or Princess firm would increase rates for all customers - it is not prudent to build infrastructure for interruptible loads.

The implementation of interruptible rates was specifically designed to sell, for the benefit of firm customers, surplus energy when available, and to reserve, for the benefit of firm customers, the hydro resources when surplus energy is not available. This system allows AEL&P to maximize the value of hydro energy by matching our loads to the available hydro resources, which benefits all customers and results in the lowest cost of energy.

When interruptible customers are curtailed, rates increase temporarily, but this is preferable to adding hydro generation that would increase rates all the time because it would mostly go unused.

CURRENT OPERATIONS AND UPDATES

- Customer Outreach and Education

AEL&P works hard to communicate important topics to customers, and we go about that in many ways. You have likely heard or seen our radio and print ads, and we also have billing messages, like this recent one reminding folks to call before you dig – it's definitely a busy time of year for underground locates.

Our outage reporting continues to provide value, with more and more people looking to our Facebook and Twitter accounts to get information about outages. Just as a reminder, you don't have to have a Facebook or Twitter account to see those updates, you can just click on the "Outage Updates" link on our homepage (or directly on the Facebook or Twitter icons located on the homepage) to access the public pages for those accounts through your web browser.

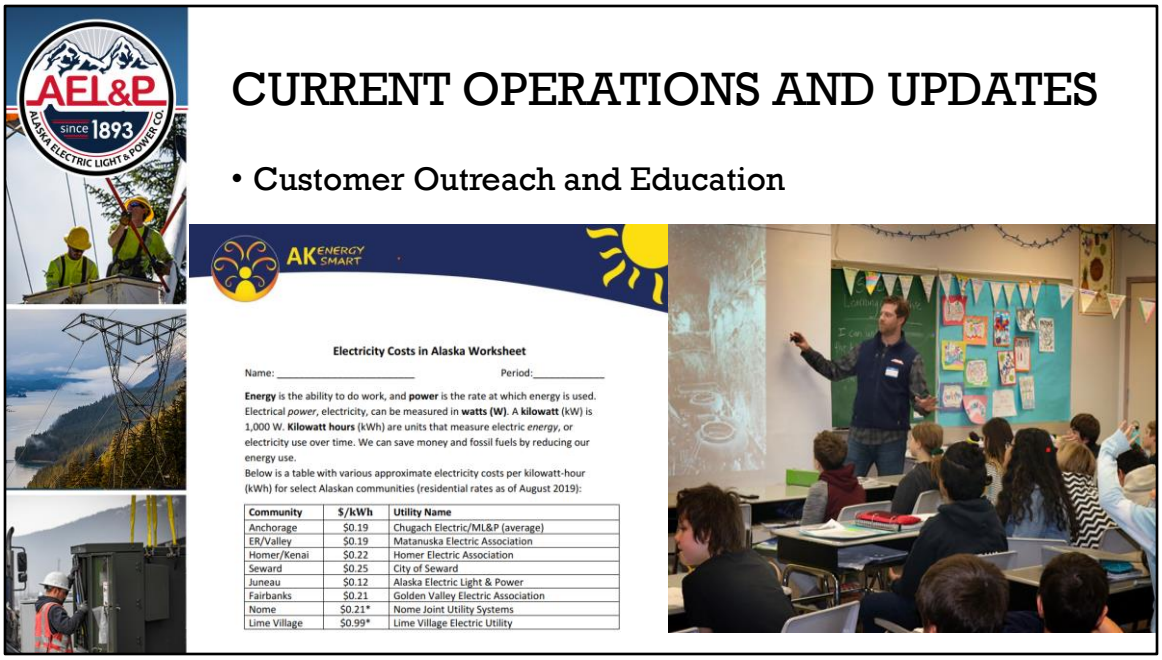
CURRENT OPERATIONS AND UPDATES

- Customer Outreach and Education

With many customers calling to learn about power protection in the wake of the voltage surges that occurred last year, AELP updated the power protection page on our website (https://www.aelp.com/Energy-Conservation/Power-Protection), created graphics like this for social media and billing messages, and created new radio and print ads to help customers understand how they can keep their equipment and appliances safe.

We also have a YouTube channel, with helpful, easy to understand videos about topics such as power protection, what to do when your power goes out, and a great, easy to understand video that explains in simple terms exactly how hydro works here in Juneau. You can also find videos of our avalanche control work which folks seem to really enjoy watching.

There is a link to AEL&P's YouTube channel on our webpage: www.aelp.com



Since 2016, AEL&P has provided energy lessons to middle school classrooms in Juneau as part of the Power Pledge Challenge, a statewide effort led by the Renewable Energy Alaska Project and utilities around the state. The lessons teach students the difference between energy efficiency and conservation and how to calculate the cost of using different appliances. Students participate in a challenge to take action to reduce their energy use. There are local and statewide winners, and AEL&P provides a power plant tour for the classroom that wins the local prize.

CURRENT OPERATIONS AND UPDATES

- Heat Pumps

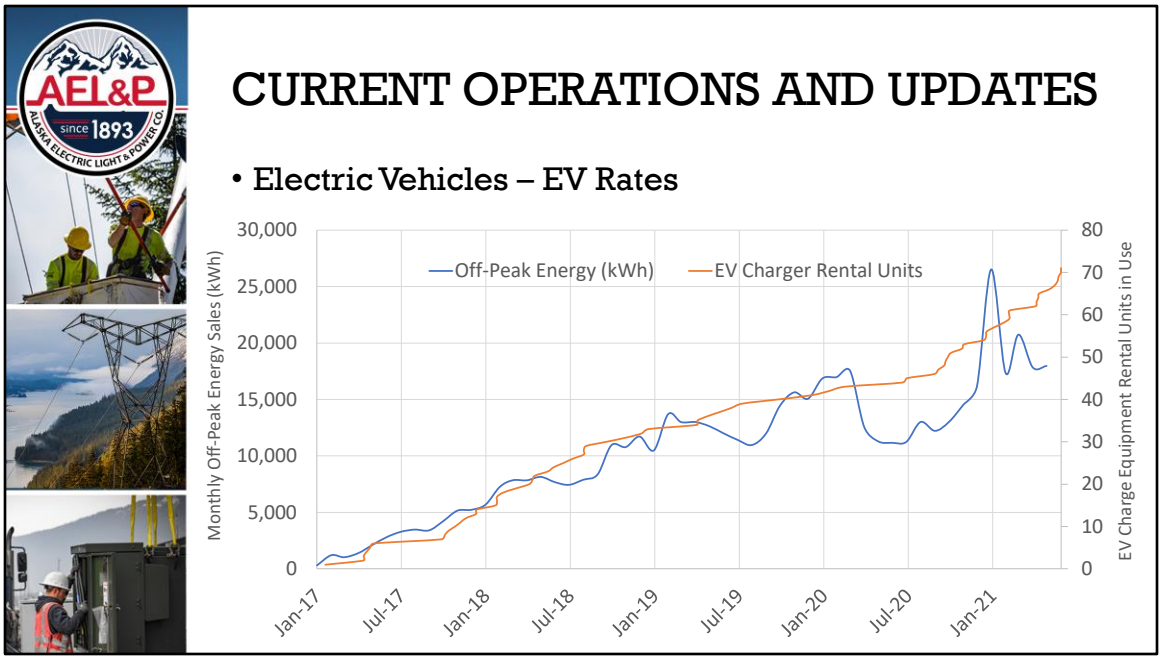
Alaska HEAT SMART

THERMALIZE JUNEAU

AEL&P engages extensively with the efforts to support the goals of the Juneau Renewable Energy Strategy. AEL&P's Director of Energy Services is one of the founding board members for Alaska Heat Smart, the local organization working to support homeowners who want to install heat pumps, and AEL&P is a partner on the Thermalize Juneau campaign.

AEL&P is also conducting a study on how heat pump use impacts electric loads and energy consumption when they are installed in multifamily housing to replace electric baseboards. This intent of this study is to better understand the role that offsetting electric resistance heat may play in allowing Juneau to increase the number of heat pumps that offset oil heat.

AEL&P staff also chairs the Southeast Conference Energy Committee and played a key role in identifying beneficial electrification as a priority objective in the Southeast Alaska 2025 Economic Plan. Southeast Conference currently hosts an employee from the Alaska Center for Energy and Power (ACEP), and AEL&P participates in weekly calls to coordinate efforts between Southeast Conference and ACEP on regional energy issues.

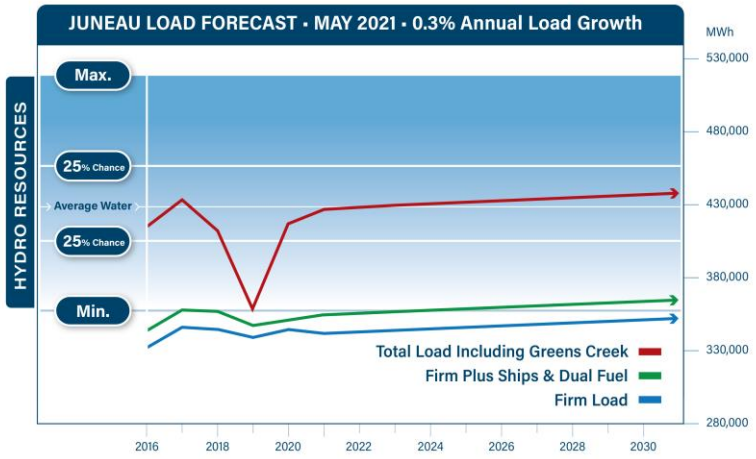


AEL&P was the first utility in the state to develop a rate specifically for electric vehicles (EVs). The rate is designed to encourage night-time charging, which provides increased utilization of existing infrastructure.

AEL&P's Off-Peak Electric Vehicle Rate Schedule received permanent approval in January 2017. Since then, AEL&P has seen growth in participation in the rate schedule that corresponds to the growth in EVs in Juneau overall. Along with the off-peak rate schedule, AEL&P has charging equipment available for rent for a monthly fee of $10.13. This continues to be a popular choice for customers, especially those who are looking for a simple solution to participating in the off-peak charging rate. The energy sales shown here are the monthly totals for charging done by participating EVs from 10PM-5AM only. This does not include the charging done during other times of day. Sales to EVs are less than ½ of 1% of AEL&P's firm energy sales.

AEL&P is also following an RCA docket exploring rate solutions for DC fast charging (DCFC). We anticipate a solution to high costs for DCFC stations will emerge in the near future.

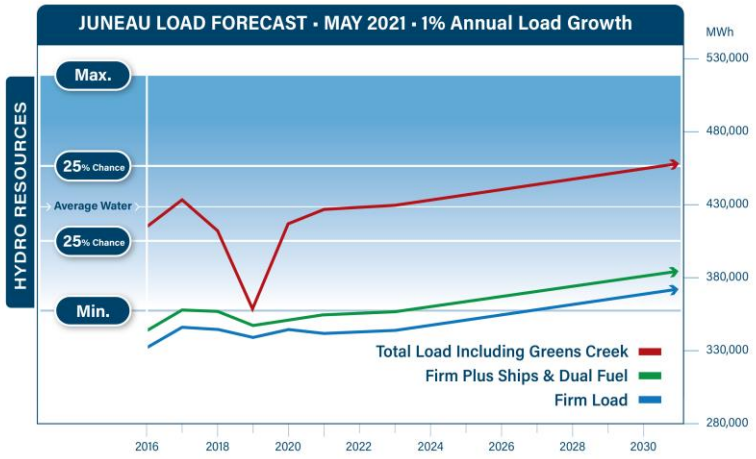
LOOKING FORWARD



The compound annual growth rate of firm loads in Juneau is 0.3% over the past 10 years.

This graph shows actuals through 2020, with 0.3% load growth going forward from 2021.

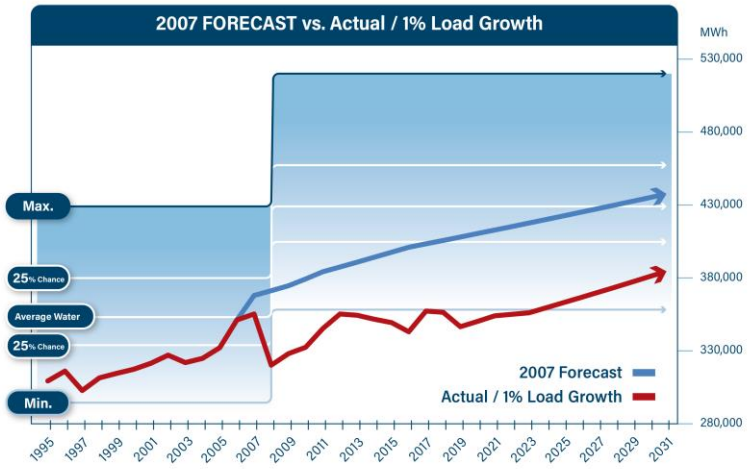
LOOKING FORWARD



Although we don't know what a post-pandemic Juneau looks like, we don't think that load growth going forward will be as low as it has been in the past 10 years.

This graph shows what loads will look like with 1% load growth going forward.

LOOKING FORWARD



The actual electric load growth rate in the future is unknown. What we do know is that loads have not grown at the rate that we projected back in 2007 (blue line).

This graph shows actual loads through 2020, with projected loads at 1% annual growth going forward.

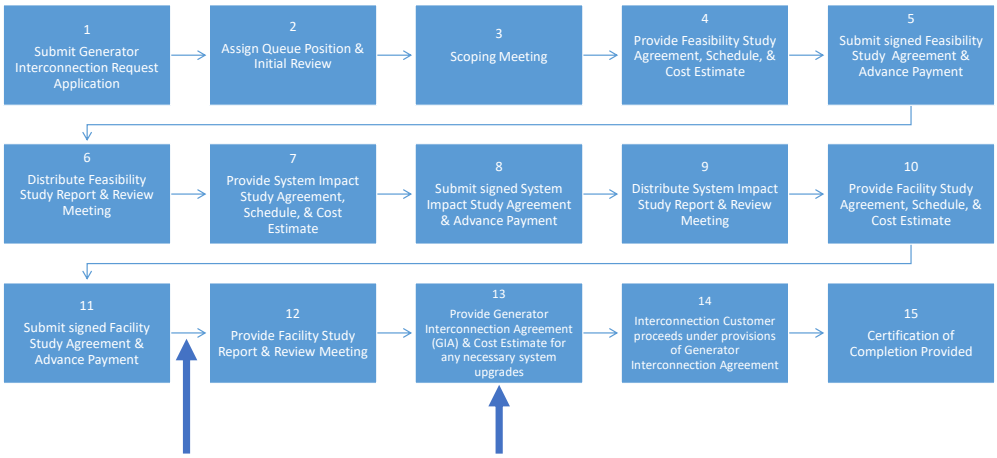
Although we can't predict the actual growth rate, we have already identified the next two AEL&P hydro projects: Chas'héeni (Sheep) Creek and Lake Dorothy Phase II.

Every two years, the RCA requires AEL&P to report its significant planned additions and retirements in the coming 10 years. AEL&P does not currently list any new generation projects on this report because we do not yet see growth in electric consumption that would warrant that need.

While we don't currently foresee the need to build additional hydro resources to meet firm loads in the next 10 years, we will continue to monitor load growth and modify our plans as needed.

LOOKING FORWARD

- Interconnection with Juneau Hydropower, Inc.



AEL&P continues to work with JHI toward an agreement that will enable their interconnection with the Snettisham transmission line near Mist Island and with the northern end of AEL&P's system near Lena Point. JHI's project, at just under 20MW, is larger than any of they hydro projects owned by AEL&P. The interconnection impacts of a project this size are significant and must be understood so that AEL&P's delivery of safe and reliable energy is not impaired due to the interconnection.

This chart shows the industry-standard interconnection process developed by the Federal Energy Regulatory Commission. There are three studies that must be completed prior to interconnection:

1. Feasibility Study: this was completed by AEL&P in 2017.
2. System Impact Study: this was completed by AEL&P in 2018.
3. JHI has undertaken the Facility Study with their consultant. AEL&P is awaiting completion of the study. (Between steps 11 and 12).

AEL&P and JHI have also worked on draft versions of the generator interconnection agreement (step 13).

AEL&P knows that as more and more sources of energy become commercially viable, there is a point where one may become a suitable option for Juneau, so we spend time to investigate various forms of energy supply. You can learn more about our investigation of these energy sources on our website: https://www.aelp.com/Energy-Conservation/Alternative-Energy.

As AEL&P looks ahead at the need for new generation sources in the future, we will consider alternative energy sources, looking for the most reliable, cost-effective and environmentally sustainable solutions.

Some of these energy alternatives have been constructed in multiple locations around the state in recent years. It's important to note that these installations are offsetting consumption of diesel or natural gas. These options are not economically viable in Juneau because Juneau is already served with 100% renewable energy.

To date, none of the alternative energy options explored for Juneau has been more economic than traditional hydropower.

LOOKING FORWARD

- Significant Planned Additions and Retirements

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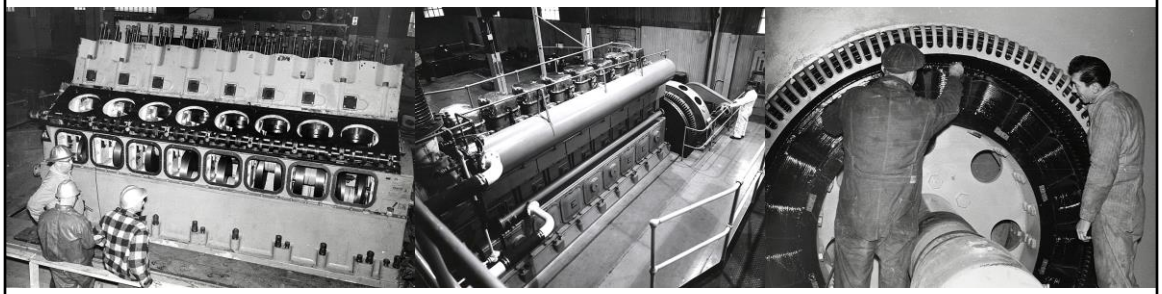
Over the next two years we plan to replace the aging Annex Creek penstock. The Salmon Creek penstock will be replaced after that. You can see the two penstocks in the photos on this slide. The two on the left are of the Salmon Creek penstock in 1913. The one on the right is from Annex Creek in 1916.

These are large investments in two plants that together provide a little over 10% of our annual energy.

LOOKING FORWARD

- Significant Planned Additions and Retirements



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AEL&P also plans to retire the 5 diesel units located in the Gold Creek Power Plant. These units are beyond their useful life and are not included as part of our firm standby capacity.

LOOKING FORWARD

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Like many other businesses, we are starting to move back to more normal operations. Our lobby is open to the public again, but most transactions can still be handled electronically.

If you have general account questions, you can call our main line at 780-2222.

If you are experiencing financial difficulty, please know that we want to work with you, and we ask that you call Lionel at 463-6305.

Call Alec at 463-6303 if you have questions related to your energy use, electric vehicles, or heat pumps.

Most importantly, please remember that our employees are part of our community. We understand, and take seriously, the obligation of providing power to Juneau – and we know that what we do affects everyone in Juneau.

We are proud to be part of a company that has served Juneau for 128 years, and proud to do that reliably, with renewable energy, and at affordable rates.