

COPPER VALLEY ELECTRIC



2022 Project Updates

CVEA's mission is to provide exceptional service through safe, reliable, cost-effective electric service and programs. With this mission in mind, the Cooperative completes important projects each year aimed at improving reliability, efficiency, or cost effectiveness.

The summer season, with long hours and increased daylight, is key to getting important projects completed for the benefit of Co-op members.

Each fall, CVEA updates membership on what the team has been up to.

The following highlights some of the more significant projects that have been worked on or completed so far this year:

Relocation of Solomon Gulch Substation

The Solomon Gulch Substation is located on top of the Solomon Gulch Powerhouse control room where it was constructed in 1981-1982. It turns out, this location was a bad choice as it no longer meets building codes and is at risk for becoming uninsurable by CVEA's insurance carrier.

While it may seem obvious, the specific code and insurance concerns are the two, large oil-filled transformers (1,166 gallons of mineral oil each) that are not separated from each other or from the building by a two-hour fire barrier, and they share a common oil containment system.

This means that should a fire occur in one of the

transformers (due to an electrical fault within the transformer), it could potentially destroy the second transformer, severely damage the building, and make the control room uninhabitable. It could also result in mineral oil spilling into the bay.

CVEA minimizes the risk of this occurring by continuously monitoring the pressure in both transformers and by performing the annual preventive maintenance and inspections.

An evaluation was performed, weighing the option to modify the substation to meet the building codes against constructing a new substation in a suitable location. Because much of the substation equipment is over

40 years old and due to be replaced, the best long-term solution was to construct a new substation. The new substation will be located adjacent to the warehouse (see image above) and will include upgrades to increase the serviceability and reliability of the plant.

Installation of New Stop Logs at Solomon Gulch

Stop logs are used to stop the flow of water through the dam so that work can be performed on the Main Valves downstream. The old stop logs, crossbeam and hoists were removed in 2020. The components were too badly corroded to be refurbished.

The new stoplogs and cross-beam were fabricated and painted by HD Marine. They

were installed in early May when the lake was at its lowest level. (see image at right)

Solomon Gulch Seismic Study

As new earthquake data and seismic modeling became available, the Federal Energy Regulatory Commission (FERC) required CVEA to conduct an updated seismic analysis of the Solomon Gulch Hydroelectric Project. Phase one of the study, the analyses of the dam and dike, was completed in 2021 with no remediation needed.

Phase two of the study, the analyses of the spillway and onsite data collection for the penstocks and penstock supports, began this year and will be completed by year end. Phase three of the study, the analyses of the penstocks and penstock supports, will take place in 2023.

The onsite data collection for the penstocks and penstock supports became necessary when consultants noted that actual construction of these project features in some cases did not match the design drawings. Additionally, a significant number of design documents were missing critical information such as size and spacing of reinforcement steel in the concrete anchors, dimensions of the concrete anchors, and the type of steel used in the penstock supports.

An extensive search was conducted to locate the documents that included researching the previous owner's (the Four Dam Pool) archives in Ketchikan.

Solomon Gulch Relicensing

The current 50-year operating license for the Solomon Gulch Hydroelectric Project was issued by FERC in June 1978. It expires in May 2028. The relicensing process for a hydroelectric plant typically takes seven years. The process began in 2021 on schedule. The Preliminary Application Document (PAD) is on track to be submitted to FERC late 2022, putting the relicensing project slightly ahead of schedule.

During the relicensing process the consultant noted the current license includes the transmission line from Valdez to Glennallen (T-Line) which is no longer required by FERC. Removing it requires an amendment to the current license, which will actually make relicensing easier in the long run and reduce annual operating costs for the project.

Solomon Gulch Part 12D Inspection

The Part 12D Inspection of Solomon Gulch is an in-depth safety inspection required by FERC every five years. It requires CVEA hire an independent engineering consultant(s), approved by FERC, that has expertise on Solomon's specific dam type. The consultant conducts a detailed review of the project design documents, potential failure modes, maintenance practices, and performs an onsite inspection of the project.

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2022 Projects

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The on-site inspection was completed in August 2022 and went extremely well. The official report will be submitted to FERC later this year.

Valdez Diesel Plant Roof and Siding

The roof and siding on the Valdez Diesel Plant (VDP) was replaced this year. The siding was originally installed in the mid-1960s and 1970s and had reached the end of its service life. With many holes and leaks it became apparent replacement was necessary for the protection of this asset.

VDP is a critical piece of infrastructure housing five of our nine diesel generating engines with their associated switchgear, the controls for the Valdez distribution feeders, and the Fleet Maintenance Shop. The engines provide a substantial amount of power through the winter months and are also used to power the city following a major system outage and during maintenance on the T-line and substations.

Airport Road Voltage Conversion

CVEA is working on a voltage conversion project to improve reliability for members in the Airport Road area of Valdez. In order to utilize the equipment currently on the system, the area is currently fed by three 'stepdown' transformers that step the voltage down to 7,200 volts. If any one of the stepdown transformers were lost, power could not be distributed to all members in the area, making this conversion a priority.

The conversion requires



that all equipment not rated for the 14,400 required volts (25KV) gets replaced. This includes overhead and underground wires, insulators, and transformers. The Valdez Line Crew has done most of the work on this project so far, beginning with upgrading the lines in Aleutian Village and Valdez Mobile Home Trailer Courts, installing new pipe under driveways and preparing it to have wires pulled through, and rerouting some old primary wires that had previously caused a fault.

This ongoing project has not been without challenges; contractor issues, material delays, cost increases, and permitting have been the biggest concerns.

Once everything has been upgraded to 25KV, the voltage will change and the stepdown transformers will be removed. This project will be a great benefit to the CVEA members in this area.

If you have questions about these projects email Sharon Scheidt at sscheidt@cvea.org. ■



Pg. 4 Construction begins on the new Solomon Gulch Substation
Pg. 5 Top, Crews at the Solomon Gulch Dam preparing for the installation of the stop logs.

Pg. 5 Middle, Cutting a section of penstock for the seismic study.
Pg. 5 Bottom, FERC Inspector and Part12D engineering consultants inspecting the dike on a typical summer day in Valdez.
Top, Old and new siding at the Valdez Diesel Plant.
Above, Upgraded equipment as part of the Airport Road Voltage Conversion.



CVEA Member Tours



On Wednesday, August 24, CVEA hosted a small group of members for the fall Member Tour in Valdez. The Member Tour Program was developed to be a tool in the members' communication toolkit and an opportunity for CVEA members to gather information, learn how the system works, and ask any questions they have in a small, informal setting.

According to Travis Million, CVEA CEO, "This program is important to us as we believe everyone who is interested in the facilities, as member-owners, should be able to see them and learn about them."

Participants from Valdez and the Copper Basin spent the better part of the day with CVEA's CEO and Director of Communications visiting the Valdez Diesel Plant, the local office, the Cogeneration Plant, and the Solomon Gulch and Allison Creek Hydroelectric Projects. Members were treated to a quick lunch and enjoyed two award winning videos from the *People Behind the Switch* video series. This year's group had

the added benefit of touring CVEA hydro plants on National Hydro Day and were asked to join in the celebration.

According to post-event comments, the tours were very enjoyable, educational and fun. CEO Million believes the member tours are a very successful member engagement opportunity for the Cooperative. He weighed in saying, "members leave with an incredible amount of knowledge and appreciation. We believe we are building Co-op ambassadors one member, or one small group, at a time."

This year's group was small. Feedback was received that a weekend day might make it more accessible. This will be considered when selecting dates for 2023. Stay tuned. Registration is required and begins 30 days prior to each tour date. Space is limited to 20 members. If you have questions regarding this program, contact Sharon Scheidt, Director of Communications, at 907-255-1425 or sscheidt@cvea.org. ■

Four Ways to Boost Your Cyber Hygiene

October is Cybersecurity Awareness Month

By Abby Berry

In today's digital world, cyberattacks are unfortunately nothing new. Cyber criminals can attack on a multitude of levels, from large-scale attacks targeting corporations to smaller phishing attacks aimed to gain an individual's personal information.

October is Cybersecurity Awareness Month, but good cyber hygiene should be practiced year-round. This year's theme is "See Yourself in Cyber" – because we all have a part to play in cybersecurity. When we hear about massive data breaches, it can feel overwhelming and lead us to think we're powerless as individuals to stop cyber criminals.

The truth is, there are several practical steps we can take to safeguard our devices and data. Here are four easy ways to boost your cyber hygiene:

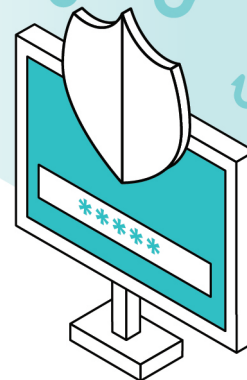
1. Enable multi-factor authentication. Also known as two-step verification, multi-factor authentication adds a second step when logging into an account (to prove you're really you), which greatly increases the security of the account. This second step could include an extra PIN, answering an extra security question, a code received via email or a secure token. Regardless of the type of authentication, this additional step makes it twice as hard for cyber criminals to access your account. Not every account offers multi-factor authentication, but it's becoming increasingly popular and should be utilized

See Yourself in Cyber.

October is Cybersecurity Awareness Month

Improve your cyber hygiene by doing these four things:

1. Enable multi-factor authentication
2. Use strong passwords and a password manager
3. Update software regularly
4. Recognize and report phishing attacks



when available.

2. Use strong passwords and a password manager. Remember, passwords are the "keys" to your personal home online. Your passwords should always be long, unique and complex. Create passwords using at least 12 characters, never reuse passwords for multiple accounts and use a combination of upper- and lower-case letters, numbers and special characters. If you have a lot of accounts, consider using a password manager to store them easily and securely in one place.
3. Update software. It may seem obvious, but regularly updating software is one of the easiest ways to keep your personal information secure. Most companies provide automatic updates and will send reminders so you can easily install the update. If you're not receiving automatic software updates, set a reminder to do so quarterly. Be aware that some cyber criminals will send fake updates; these typically appear as a pop-up window when visiting a website. Use good judgement and always think before you click.
4. Recognize and report phishing attacks. Don't take the bait when cyber criminals go phishing. The signs of a phishing attack can be subtle, so take the extra time to thoroughly inspect emails. Most phishing emails include offers that are too good to be true, an urgent or alarming tone, misspellings



PASSWORD DOS AND DON'TS

A strong password can make all the difference in protecting your personal information. Follow these tips for stronger passwords.

DO:

- Change the manufacturer's Wi-Fi password on your router.
- Use two-factor authentication.
- Use unique phrases (like lyrics to your favorite song) to remember passwords.

DON'T:

- Don't use common words or numbers like "password" or "1234."
- Don't use personal details like your date of birth in a password.
- Don't use the same password for multiple accounts.

Do Your Part. #BeCyberSmart

and poorly-crafted language, ambiguous greetings, strange requests or an email address that doesn't match the company it's coming from. Most platforms like Outlook, Gmail and Mac Mail allow users to report phishing emails. If you suspect a phishing attempt, take an extra minute to report it. Cyber criminals are here to stay, but when we all take a risk-based approach to our cyber behavior, we're creating a safer internet for all. Want more tips to improve your cyber hygiene? Visit staysafeonline.org.

Source: Abby Berry writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56% of the nation's landscape.

We all share responsibility for our organization's online safety and security, and YOU are our first line of defense.

Think Before You Click

- Always hover over a link first to be sure it is safe.
- Report suspicious emails or emails from an unknown sender to your spam filter and delete them from your inbox.

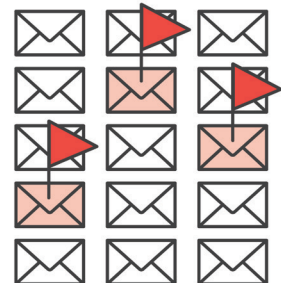


Watch for Red Flags to Identify Potential Phish Attacks

- Phishing attempts seek to steal or compromise data and will often mimic a known sender.

Look for red flags:

1. the email is unexpected;
2. there is a sense of urgency conveyed;
3. there is an offer that seems too good to be true; and/or
4. there are typos and misspellings.





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Important Dates

October

Ruralite Cover Photo Contest: Submit photos October 3 - October 31, 2022

Co-op Month Pick-Your-Own

Pumpkin Patch: This family event will be held in each district on Saturday, October 8. The fun will start at 10 a.m. *Please be prepared for weather conditions

CVEA Board Meeting: The October meeting of the Board of Directors is 8 a.m. Thursday, October 20, 2022, in Glennallen

November

CVEA Board Meeting: The November meeting of the Board of Directors is 9 a.m. Thursday, November 17, 2022, in Valdez

CVEA Offices Closed: CVEA will be closed Thursday, November 24, for the Thanksgiving holiday

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OCTOBER IS CO-OP MONTH

Help CVEA Celebrate Co-op Month!

Ruralite Cover Photo Contest, October 3-31

- Winners will receive \$100 per winning photo, be announced to the local media, and be featured on the cover of Ruralite for one month in 2023
- Submit your photos by October 31 @ 6 p.m.
- Visit cvea.org/ruralitecoverphotocontest for details, rules, and application instructions

Co-op Month Pick-Your-Own Pumpkin Patch, October 8

- Join CVEA and CVT for the NEW Co-op Month community event on Saturday, October 8
- The fun starts at 10 a.m. in each district
- Stop by and pick your own pumpkin from the pumpkin patch
- Stay and decorate your pumpkin, participate in pumpkin games, and pose for a picture at the fun, fall-themed photo booth
- Enjoy drinks, snacks, and sweet and savory foods at local food vendors
- Support local nonprofit organizations through a Jazzy Gourmet popcorn fundraiser, a hot chocolate bar, and a quilt raffle
- Watch for details on Facebook, cvea.org, and other local news sources

Co-op Month Cooperative Food Drive, October 8

- Bring nonperishable food items to the Co-op Month Pick-Your-Own Pumpkin Patch community event on Saturday, October 8 (see above)
- One food item per person or a cash donation for the local food bank in your district allows you to pick-your-own pumpkin
- BONUS - bring extra food or cash donations and be entered to win a \$150 CVEA energy credit (extra donations = extra drawing tickets)
- Sorry, we cannot accept expired food
- Watch for details on Facebook, cvea.org, and other local news sources