Veterans and Emergency Management Committee Meeting

May 11, 2021

Tony Schacher, General Manager

Salem Electric

RE: Ice Storm Electrical Grid Lessons Learned: Baseline Requirements for Resiliency

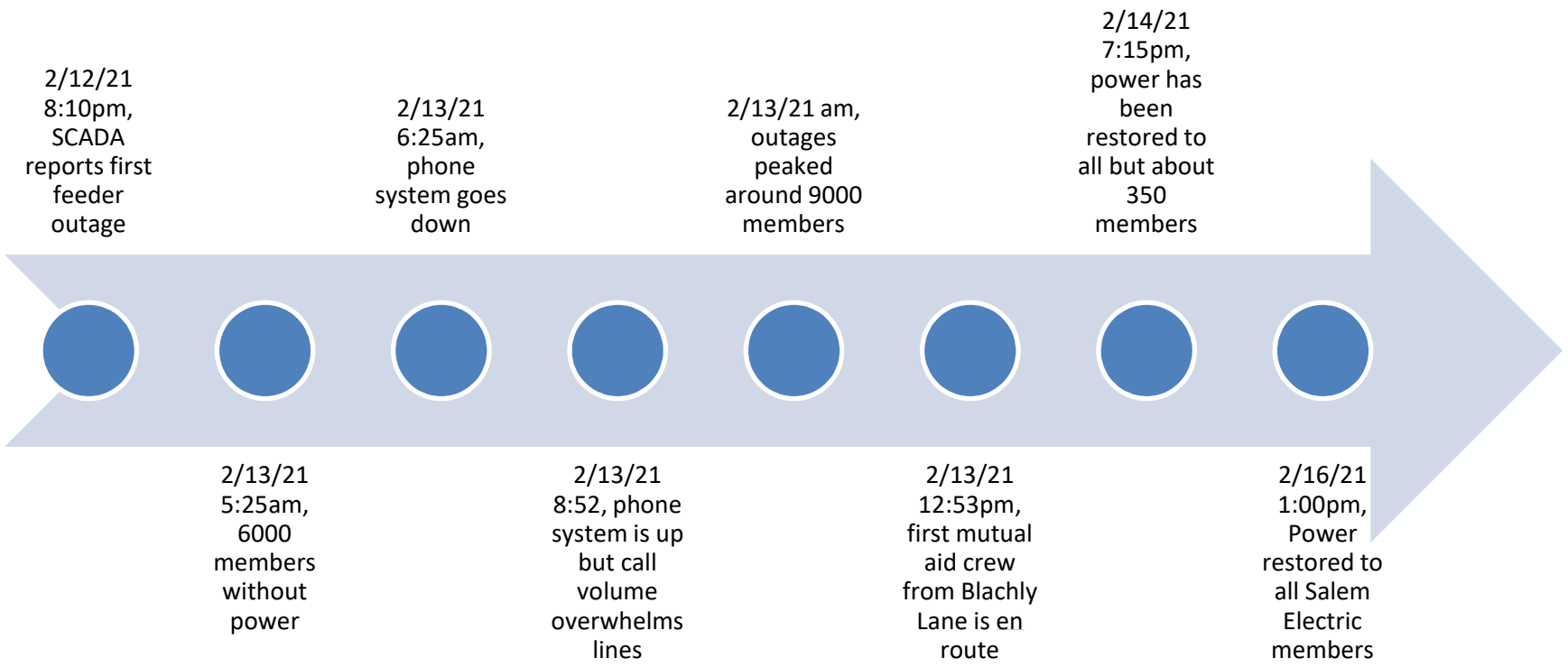
Good afternoon, Chair Evans, Vice-Chair Meek, Vice-Chair Lewis and Members of the Committee:

For the record, my name is Tony Schacher, General Manager of Salem Electric Cooperative in Salem, Oregon. Thank you for the opportunity to speak with you today about Salem Electric's actions to restore service to its members following the ice storm event in February and to answer questions previously asked by Chairman Evans.

As you can see in the included graph:

- The first feeder breaker tripped at 8:10 PM on Friday, February 12.
    - We had received a few calls earlier in the evening but up to this point they had been cable lines down and trees starting to bend toward the power lines.
- From that point on, we saw a dramatic and swift increase in outages.
- The peak of outages left nearly 9,000 members without power in the early morning hours of Saturday, February 13.
- Within 48 hours, crews had restored service to all but 350 members.
- By 1:00 PM on Tuesday, February 16, power had been restored to all members who were able to have service reconnected.
    - A handful of members had damaged weather heads or meter bases and needed an electrician to complete repairs prior to us re-energizing the service.

Salem Electric – Storm Restoration Timeline:



1. **Your legal requirements are for resiliency/preparedness response:**

   As with all electric utilities in Oregon, Salem Electric builds all of its facilities according to the National Electric Safety Code, NESC.

   We must meet the requirements within the code as prescribed and enforced by the Public Utility Commission.

   This requires ongoing maintenance and repair of the system as a whole, including vegetation management.

   Two factors played into the devastation of the February 2021 ice storm event.

   1) The sheer overwhelming amount of ice that accumulated on our entire infrastructure.
      a. The weight and amount of ice accumulated was well beyond the building standards required from the NESC.
   2) The amount and weight of the ice on the surrounding vegetation
      a. The additional weight of limbs and trees on power lines and heavily loaded poles was too much for a good portion of the infrastructure.

   Salem Electric has an aggressive vegetation management program, and we strive to cover our entire service territory each year with inspections and trimming where it is due.

   The intent of the program is to maintain all necessary clearances for a three-year cycle. In other words, in three years from the date of the last trimming, we will still have a minimum of 10' of clearance to our phase wires. We have brought in additional resources throughout the year to accomplish this goal.

2. **Your internal organizational requirements (through policy or rule) for resiliency/preparedness response:**

   Internally we have developed both a disaster plan and a business continuity plan for use when faced with this type of crisis. However, it must also be noted "the best way to make GOD laugh is to say you have a plan."

   The plans offered a good starting point, but much of our response was based on our training, familiarity with our system, and the relationships that we have with our members and our mutual aid partners.

   In its 80 years, the cooperative had not experienced such a catastrophic event, and we have made significant improvements to both plans based on lessons learned from this real-world experience.

3. **Lessons learned during the most recent chaotic Ice Storm**

   There is a huge benefit to understanding the limits of our capabilities. Our staff realized very early that this was a much broader storm than we would be able to handle on our own, and quickly made the call for help. Within a matter of hours, our first of four mutual aid crews was on site and working on restoration. Staff worked throughout the service area to relay

information about work needs before crews were dispatched to the locations, while others worked to secure additional supplies necessary for the repairs and restoration.

4. **Intended actions in the near-term, medium-term, and far-term regarding resiliency investments: strategic, operational, and tactical:**

   In addition to maintaining and improving already developed mutual aid agreements with most of the consumer-owned utilities (COUs) in the state, we are consistently developing relationships with vendors. This was invaluable when we started to run short on materials and, for example, had to locate a fuel distributor to provide diesel for our crews.

   One of the biggest internal lessons learned regarded communications with our members about the status of the outages. We had some systems that did not perform as we had hoped and others that performed better than anticipated. Looking at what worked and what did not has already changed some of our strategy moving forward.

   We have already purchase additional property on the east side of the Willamette River to act as a staging and storage location for materials and equipment. This will allow us quicker access to what we need to make repairs as timely as possible.

In closing, we learned a lot about our capabilities and our staff. We are a small Electric Cooperative. Out of the 17,000 members that lost power throughout the storm we were able to restore all but 350 within 48 hours.

In that time we were able to mobilize our line crews and associated staff, as well as manage and dispatch four mutual aid crews from around the state; Blachly Lane Electric Cooperative, Lane Electric Cooperative, Central Lincoln PUD, and Central Electric Cooperative all came when assistance was requested, without hesitation.

Planning, preparation, and a working knowledge of our capabilities and strong partnerships proved to be invaluable.

It is a great success story in a time of great adversity and its one I am very proud to tell.

Respectfully submitted,

Tony Schacher, General Manager

Salem Electric

PO Box 5588 | Salem OR 97304

503-362-3601 | se@salemelectric.com