

To: Oregon Public Utility Commission
From: Douglas Toomey, Director Oregon Hazards Lab
Date: January 8, 2021
RE: Public comments Docket No. AR 638

What are your objectives/expectations for wildfire mitigation?

To see that Oregon employs the latest remote sensing technologies and predictive numerical models for combating wildfires. These objectives include:

- Wildfire cameras that:
 - Provide the ability for all utilities, responders, and fire managers to have direct internet access to live-feed video so that they can use near-infrared, pan-tilt-zoom video data for making decisions to scale resources up and down appropriately;
 - Provide the public with real-time, time-lapse video feeds so that they have situational awareness and are ready to evacuate if necessary;
 - Share data openly with the public and private sectors so that Oregon can benefit from the ongoing international effort to predict, and understand fire behavior and so that actionable information can be provided in real-time to utilities, municipalities, and the public;
 - Support machine-learning at the edge for advanced fire detection.
- Integration of live-feed video data with the latest tools for fire behavior modeling, real-time fire perimeter situational awareness, and other services; this includes predictive numerical models, for examples those developed by [Technosylva](#) and [Simitable](#) (and others).
- Real-time measurements of meteorological conditions (e.g., windspeed, temperature) so that these can be used as input to numerical models of fire behavior.

What are the components of a comprehensive electric utility WMP e.g., what does the table of contents look like?

One component should address:

- The use of remote sensing technologies, e.g., [ALERTWildfire](#);
- The use of the latest fire science, e.g. [WiFIRE](#).
- How predictive models can be used to guide more surgical shutdown procedures for electrical lines. See the work by [Technosylva](#) and [WiFire](#).

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What are your priorities and/or what are the most urgent issues to tackle before next fire season?

Start installing 500 wildfire cameras in Oregon and a distributed real-time network of meteorological sensors. This will address the following issues:

- Early fire detection and rapid air-response attack will be a primary strategy for reducing spread of wildfires
- Real-time, publicly accessible wildfire cameras are proven technology for early detection of wildfires. [ALERTWildfire](#) has installed many hundreds of cameras — primarily in CA and NV, but also OR, ID, and WA — and they have successfully responded to over 1000 fire incidents.

What questions do you have about the rulemaking process and/or WMPs?

- How will this body engage university consortiums that are working on wildfire detection and science? These partners bring federal funding that diversifies support for wildfire mitigation in our state.
- How will this body leverage state and federal funds provided for other alerting mechanisms (e.g., ShakeAlert)? Both systems can share the same infrastructure backbone, thereby saving the state money by leveraging other funding sources.

What are your other comments or concerns?

- The State of Oregon has the opportunity to embrace the latest technology and the latest science, but has not yet done so and should use this moment to make that correction. Arguably, had state agencies had access to the latest technology and science before this fire season we would have more options to combat wildfires. We should look to what has happened in the San Diego region since the devastating 2003 and 2007 fires seasons. How San Diego Gas and Electric has responded to these events sets the standard for modern fire response; other utilities are following suit. We need to learn from their lessons and efforts as quickly as possible.

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