LAKI POWER

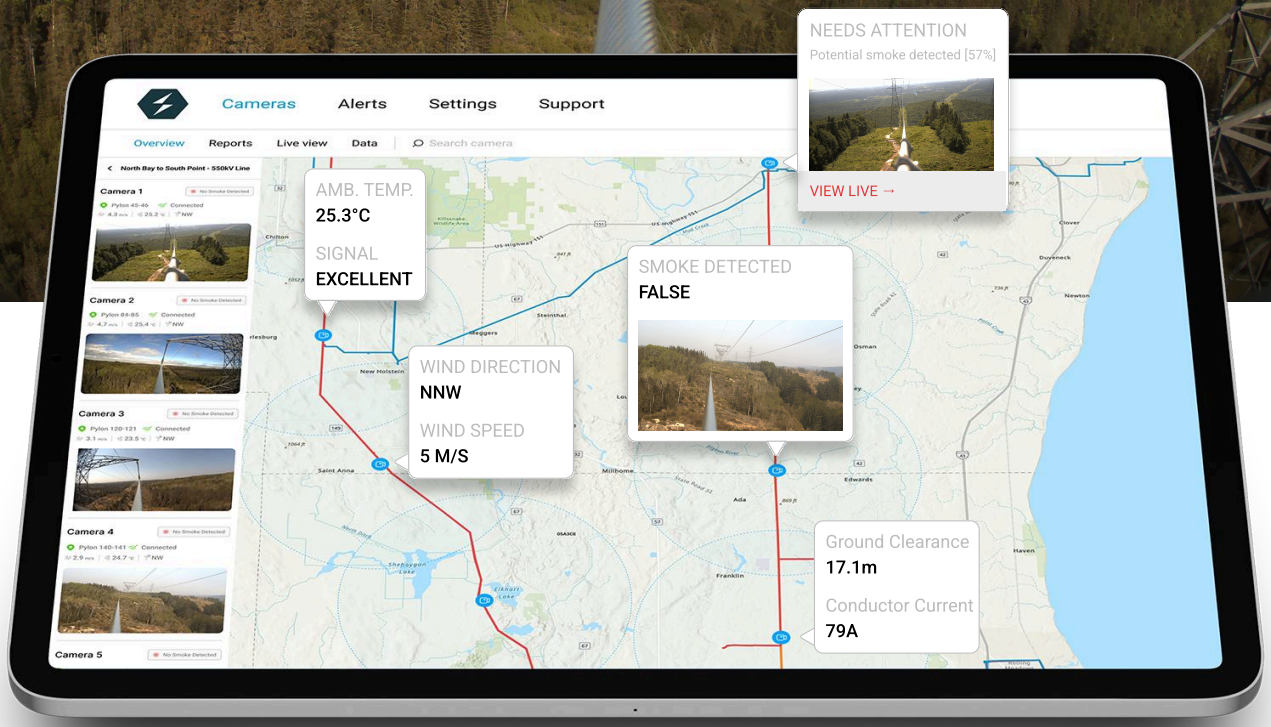
Wildfire Monitoring for Grid Operators

A PRACTICAL GUIDE FOR UTILITIES

New Generation of Wildfire Monitoring

REAL-TIME | AUTONOMOUS | FULLY INTERGRATED

Laki Power's wildfire solution equips grid operators with line-level, always-on visibility to detect, manage, and mitigate wildfire risks in real time—without external power or ground-based infrastructure.



Zero maintenance, powered by patented power harvesting technology.

360° camera system brings complete situational awareness

Integrated with existing grid management platforms

Request a demo at lakipower.com/wildfire

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A Background: Why Utilities are Rethinking Wildfire Risk

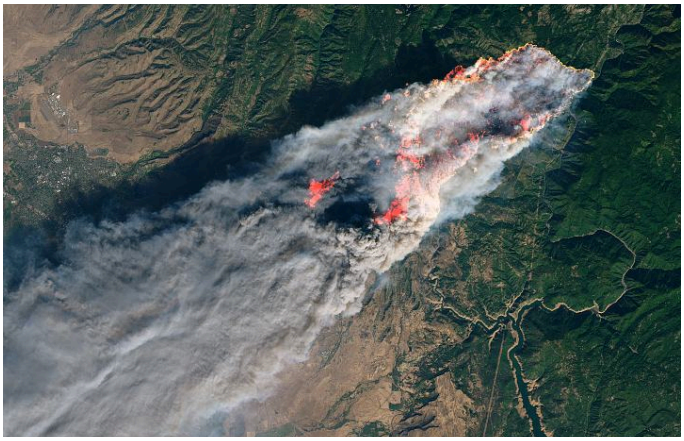
Why localized, real-time data is becoming mission-critical for grid operators

Wildfires sparked by electrical infrastructure are rare—but devastating.
In California, less than 10% of wildfires are started by utilities, yet these fires account for a disproportionate share of damage and fatalities [1]. In some peak years, powerline fires made up the majority of burned acreage due to the extreme size of the fires they ignited [2]. For example, the Dixie Fire (2021) – California's second-largest wildfire at 963,000 acres – was started by a tree contacting a live utility line [3]. Major utility-sparked fires like Camp Fire (2018) and Tubbs Fire (2017) rank among the most destructive and deadly wildfires in U.S. history [4]. In short, while the number of utility-caused fires is relatively small, their consequences are outsized.

Australia's experience echoes this: just 1–2% of bushfires originate from powerlines, but they've caused over 80% of all bushfire-related deaths in the last 50 years [5]. The risk is expanding beyond traditional hotspots like California and Victoria, with events in Texas, Oregon, and Canada showing this is now a world-wide concern [6].

What causes these fires? The most common culprits are vegetation contact, conductor slap in high winds, and equipment failures—often exacerbated by low humidity, high temperatures, and strong winds [7]. During these "red flag" conditions, a single spark from a downed line can ignite thousands of acres in minutes [8].

That's why the most effective mitigation approach is multi-layered. Vegetation management, power shutoffs, grid hardening, and undergrounding all play a role—but none are foolproof on their own.



Satellite image of Camp Fire: Sparked by transmission line, $16B in damage. Credit: NASA.

Combining these traditional strategies with real-time, line-level monitoring dramatically improves detection, response times, and overall system resilience [9]. The earlier a utility detects abnormal conditions, the more targeted and timely its intervention can be—before a minor fault becomes a major fire.

Utilities are under pressure. Regulatory bodies and courts are holding operators accountable. Pacific Gas & Electric faced over $30 billion in claims from the Camp Fire alone and pled guilty to 84 counts of manslaughter [10]. Australia's SP AusNet paid nearly $500 million in class-action settlements [11]. Meanwhile, utilities are spending billions on vegetation management, undergrounding, and PSPS (power shutoffs) to reduce risk—yet many still lack visibility over the exact conditions on the line [12].

The importance of real-time, local monitoring is clear. Leaders like San Diego Gas & Electric have deployed hundreds of weather stations and HD cameras to enhance early detection. But remote coverage still leaves blind spots—especially on rural spans, where wildfires often begin [13].

SOURCES:

[1] Energy Safety & BCG – Reducing Utility-Related Wildfire Risk (Report for CPUC, 2020);
[2] Union of Concerned Scientists – Wildfires and Power Grid Failures (Arbaje, 2024);
[3] CAL FIRE – Top 20 Largest California Wildfires (Dixie Fire);
[4] Wikipedia – Utility-Caused Wildfires, Camp and Tubbs Fire entries;
[5] Ian Flatley – 60 Years of Powerline Bushfires, LinkedIn (2020);
[6] The Narwhal – What Causes Wildfires in Canada? (2025);
[7] Energy Safety & BCG – ignition source analysis (vegetation contact, conductor slap, equipment failures);
[8] DHS Science & Technology – Wildfire Sensors Program (2023);
[9] TriplePundit – Wildfire Detection System Smells Fires Minutes After They Ignite (2025);
[10] LA Times – PG&E hit with $1.9-billion penalty over wildfires (2020);
[11] National Museum of Australia – Black Saturday Bushfires;
[12] CPUC filings and industry responses to wildfire mitigation requirements;
[13] CBS8 and SDG&E – SDG&E's Weather Network and Wildfire Preparedness Programs.

A New Platform For Wildfire Utility Management

Laki Power is a deep tech company that offers line-mounted camera systems and sensors in one unit. Laki Power enables grid operators to achieve complete visibility from cameras, line sensors, weather sensors and more - all in one intergrated, easy-to-deploy, affordable system.

A Solution For Risk Management, Community Safety And Reliability

Customers trust Laki Power's technology to manage wildfire risk effectively. With Laki Power, grid operators can help local authorities detect fires quickly, minimize liability and deliver higher level of service to their customers by limiting downtime.

Trusted By Utilities Worldwide

"Being able to utilize the conductor to power camera systems is a huge benefit."

- Miroslaw Radojcic, Statnett

"Finally we have a mechanism to measure the difference in weather that the wide open fields exposes our infrastructure to."

- Maria Neufield, Manitoba Hydro

"The Laki Power monitoring systems gave us reliable monitoring capabilities in critical locations without the need for huge investment in external power sources."

- Þórarinn Bjarnason, Landsnet

NEXTera ENERGY

Statnett

Hydro Québec

LANDSNET

ipto INDEPENDENT POWER TRANSMISSION OPERATOR

EPEC

NESIC SAUDI ARABIA

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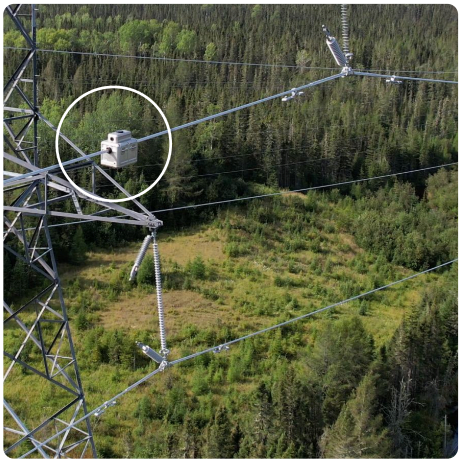
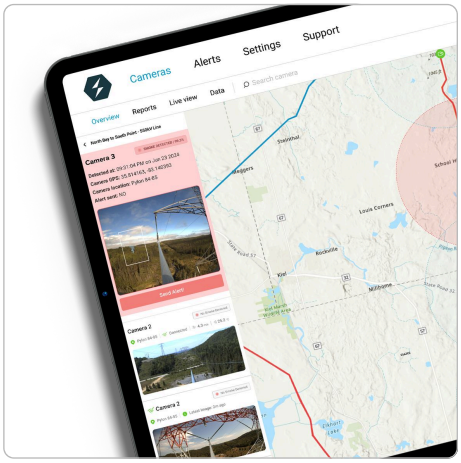
A complete solution from sensor to software



1. Sensor Installed

2. Wildfire smoke deteced with image recognition, enabled by on board edge computing



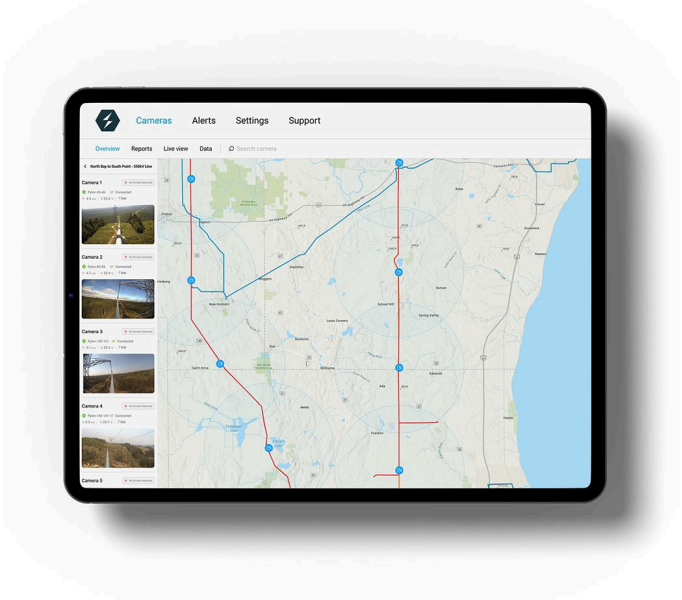
3. Warning is sent to the Laki's software UI

All-in-one Camera system + Sensors

- Real-time feed from a 360° camera system
- High bandwidth satellite live streaming in even the most remote locations (LTE available)
- Automated on-board detection of wildfire smoke
- Complete weather station on-board for localized weather measurements
- Real-time streaming of images and data every 10 seconds

Real-Time Tracking Of Your Grid

- Live map view of all line-mounted camera and sensor feeds
- Historical weather and event data for post-incident analysis
- User-defined alerts for wind, humidity, temperature, and risk thresholds
- Seamless integration with SCADA, EMS, and wildfire mitigation plans
- View line data; temperature, current, ground clearance and more.



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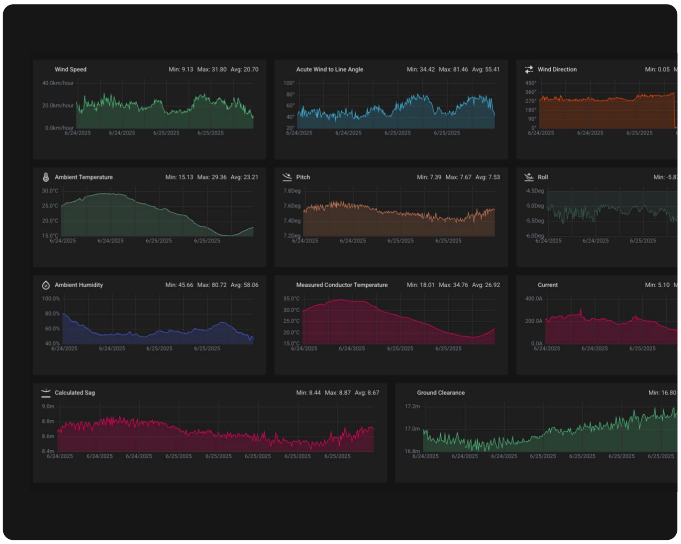
Satellite-Connected Cameras

- Stream ultra high-definition images directly from remote transmission lines
- 24/7 live visibility, even in zones with no mobile connectivity
- Seamlessly transmit footage to control centers via satellite or LTE
- Enable faster response and post-event verification with image archives

Powered by the Line

- No towers, batteries, or solar panels—completely self-sufficient
- Patented inductive power harvesting draws 100–400W from the conductor
- Zero maintenance operation, even in extreme weather
- Rapid deployment without costly infrastructure upgrades



Complete Weather Data

- The sensor measure wind speed, direction, humidity, and temperature every 10 seconds
- Capture hyper-local fire risk data unavailable from remote stations
- Enable better decisions with accurate, real-time weather intelligence
- Support forecasting and post-event analysis with historical environmental trends

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CASE STUDY

IPTO

Independent Power Transmission Operator in Greece

Greece’s Grid Operator Enhances Fire Resilience with Laki Power:

- LKX-MULTI units provide real-time, visibility across transmission corridors in high-risk areas
- Onboard AI detection identifies smoke and heat anomalies before they escalate into major fires
- Integrated weather sensing delivers live wind, humidity, and temperature data for risk forecasting
- Continuous surveillance helps IPTO safeguard grid reliability and public safety—even in remote terrain

RECOGNIZED FOR INNOVATION

"With the rugged remote line monitoring system installed, spans, load data, and local weather conditions are now monitored in real time, enabling visual assessment along the conductor."

— T&D World, 2025

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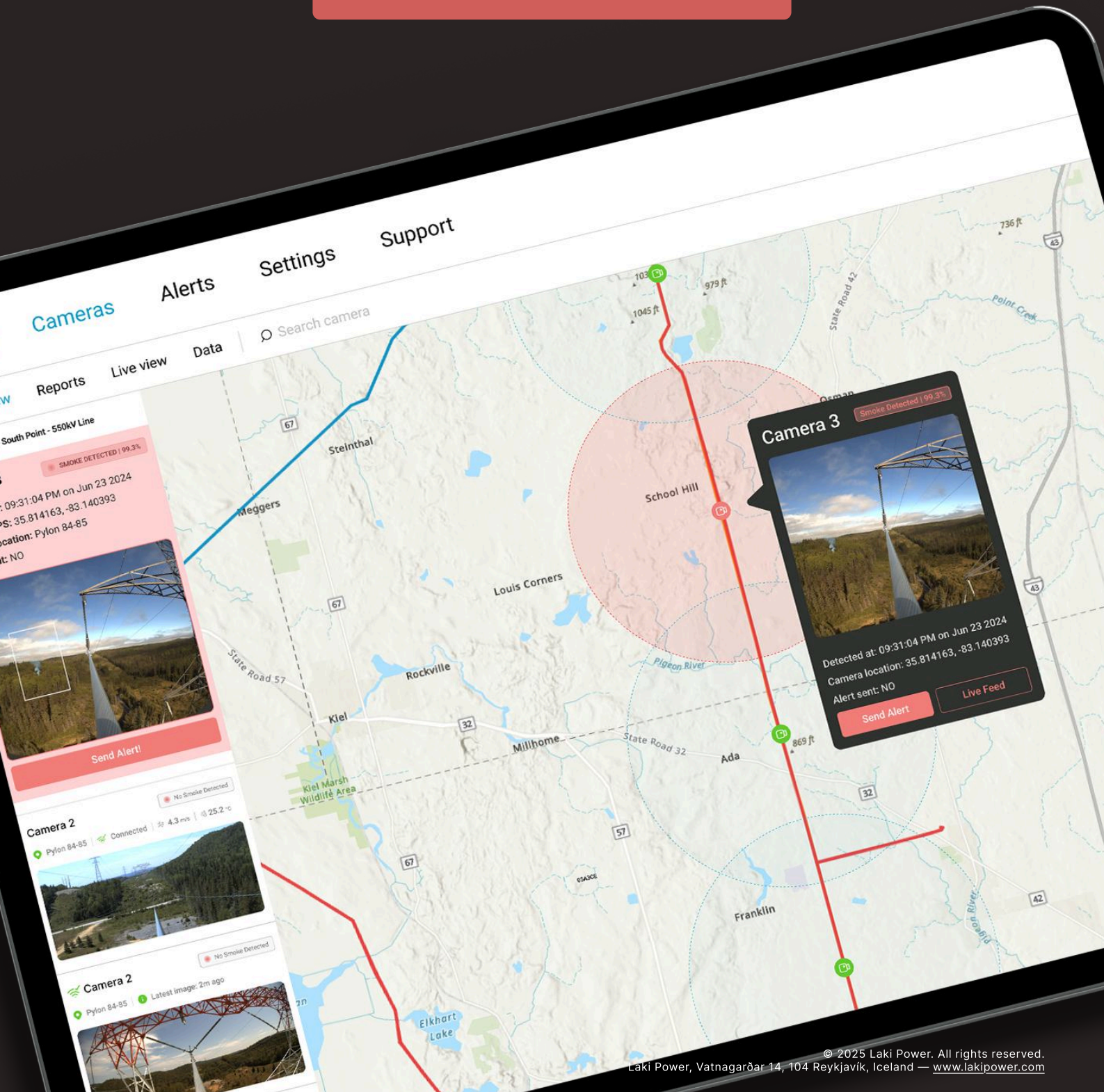
Ready to level up your wildfire strategy?

Let’s talk info@lakipower.com



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