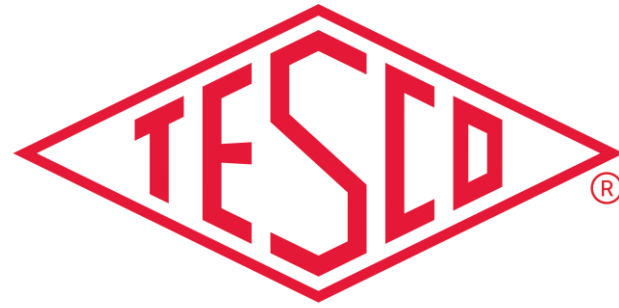




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Wildfires and Back-Up Power

A case study in connecting and switching easily, safely, and automatically between back-up power and the grid

New York State Electric Meter Engineers Committee

Presented by: Tom Lawton, President and CEO

April 3, 2025

- Industry Context & Need Gap
- The BPTM Solution
- PG&E Results
- Target Use Cases
- Additional Considerations
- Conclusion
- Questions?





Industry Context & Need Gap

The Challenge of Power Outages:

- Wildfires and emergencies force utilities like PG&E to shut down power preemptively.
- Homes need a safe, reliable way to switch between grid and backup power.

PG&E's Dilemma:

- Customers and the CPUC demand better backup power access.
- Existing solutions—extension cords and manual switches—are unsafe or too costly.



Existing Back Up Power Problems

Existing Backup Power Solutions Are Inefficient or Risky:

- **Manual transfer switches** are **expensive**, often costing thousands of dollars for installation.
- **Extension cords** are **dangerous** and not ideal for connecting generators.
- Many utilities **reject third-party solutions** that interfere with the connection between the meter and the socket box due to **legal concerns**.

Safety and Performance Issues:

- Risk of **back feeding**, which can be hazardous to utility workers.
- **Voltage surges and lost phases** can damage appliances.
- **Arcing in extension cords cause fires!**

AWESOME!



Easy to Install

Simple to hook up

Inexpensive

Safe



The BPTM Solution

How Does BPTM Solve These Problems?

- **Safely isolates generator** power from the utility grid, preventing backfeeding.
- **Eliminates the need for extension cords** by delivering power directly to the home's electrical panel.
- **Includes built-in circuit protection** to prevent overloads and surges.
- **Detects missing or unstable phases** and prevents the transfer from grid if power conditions are unsafe.
- **Automatically switches** between grid and generator power, reducing manual effort.
- **Fully compliant** with utility safety regulations, reducing liability risks.



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PG&E And Their BPTM Program: TESCO Powered

First-of-its-Kind Technology Allows PG&E Customers to Safely and Easily Connect Backup Power to Their Homes

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Backup Power Transfer Meter

Safely connect a portable generator to your SmartMeter.

1 First, turn off **ALL** breaker switches in your house fuse box.



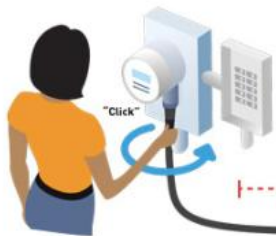
2 If you have solar panels, be sure to turn those off.



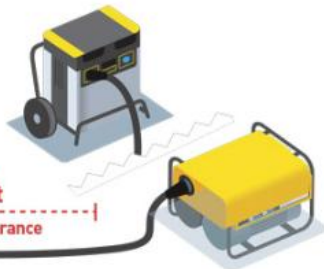
3 Find SmartMeter connector and align thumb with guide.



4 Plug the cord into the bottom of the SmartMeter, twist and click.



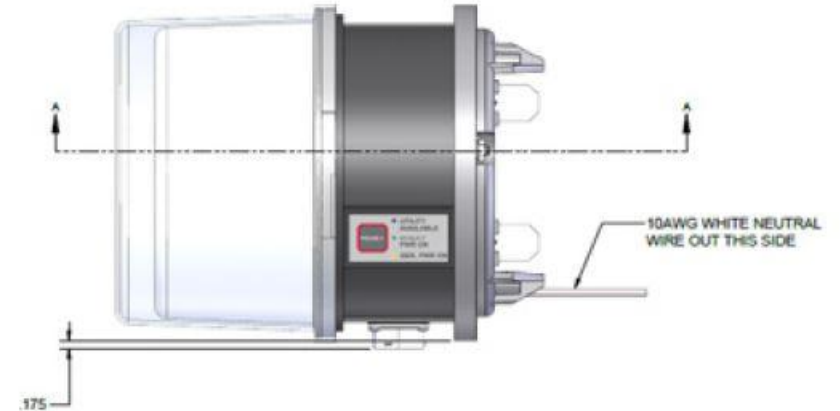
5 Plug cord into gas or battery generator—20' minimum distance



6 Start up generator and turn on limited essential switches.



Contact PG&E at 1-877-660-6789 or visit pge.com/transfermeter



<https://goldrushcam.com/sierrasuntimes/index.php/news/local-news/36768-first-of-its-kind-technology-allows-pg-e-customers-to-safely-and-easily-connect-backup-power-to-their-homes>

<https://www.pge.com/en/outages-and-safety/outage-preparedness-and-support/general-outage-resources/backup-power-transfer-meter-program.html>

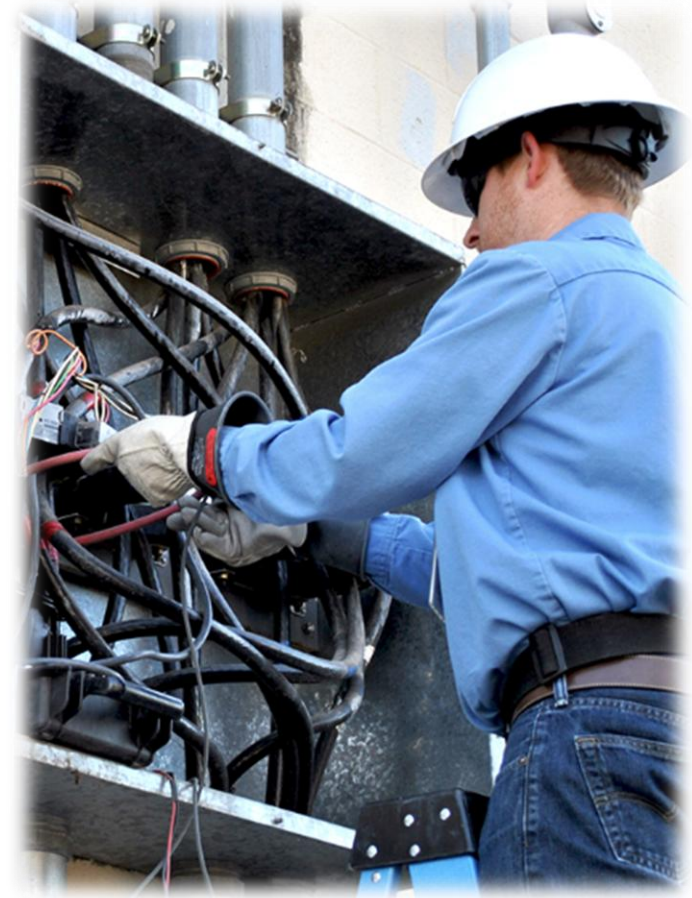


PG&E BPTM Results

- PG&E has installed ~11,000 BPTMs since 2021.
- Expansion planned for more customers in 2025.
- Provides safer, utility-managed backup power.
- Reduces reliance on risky DIY setups.



- Reduces backfeeding incidents.
- Enhances safety for utility workers.
- Eliminates unsafe extension cords.
- Prevents makeshift wiring hazards.



Increased Customer Adoption & Satisfaction

- Customers benefit from a seamless, automatic backup power transition.
- Eliminated the need for costly electrician-installed transfer switches.
- One customer noted: *“Explaining how to start my generator took longer than installing the BPTM.”*



Stronger Utility-Consumer Partnership

- PG&E oversees backup power installation and operation.
- Supports California's grid modernization efforts.
- Scales for future DER integrations like battery storage and solar.
- Improves backup power safety, reliability, and customer satisfaction.



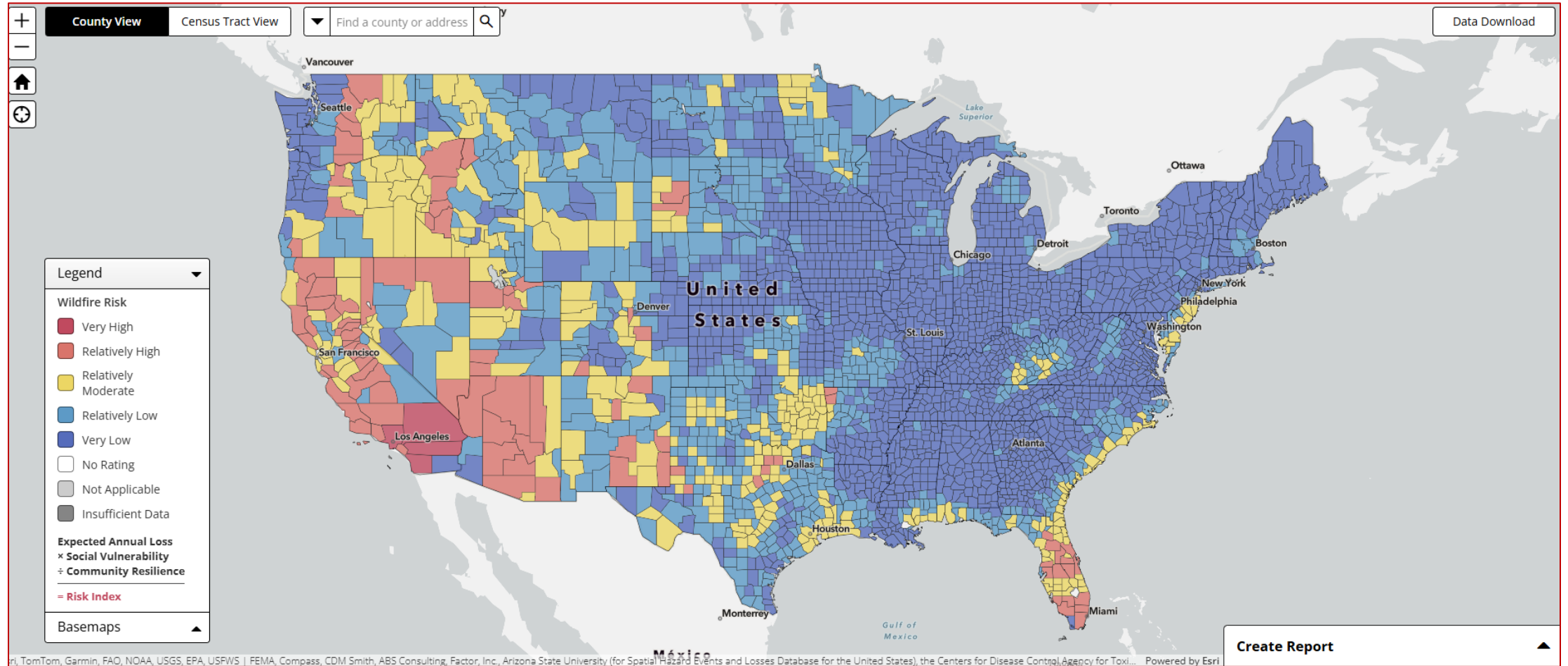


Target Use Cases

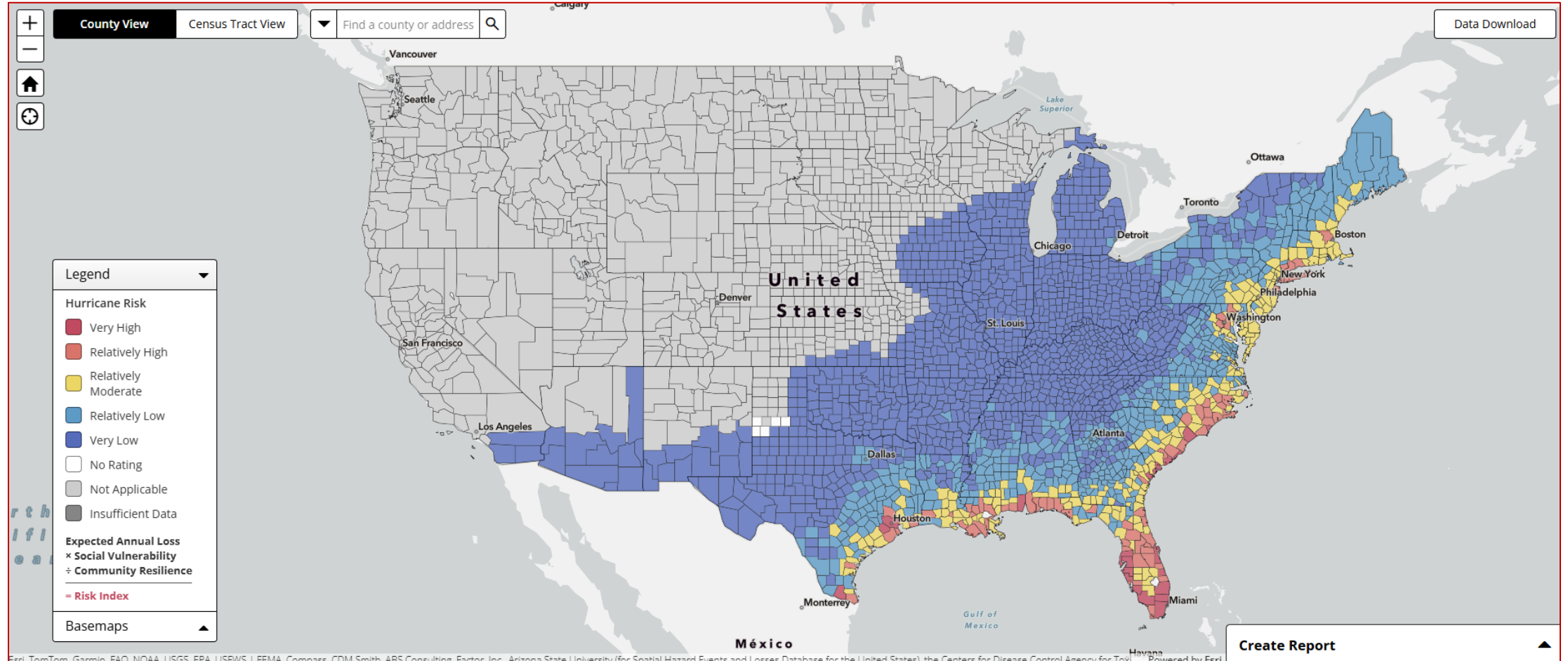


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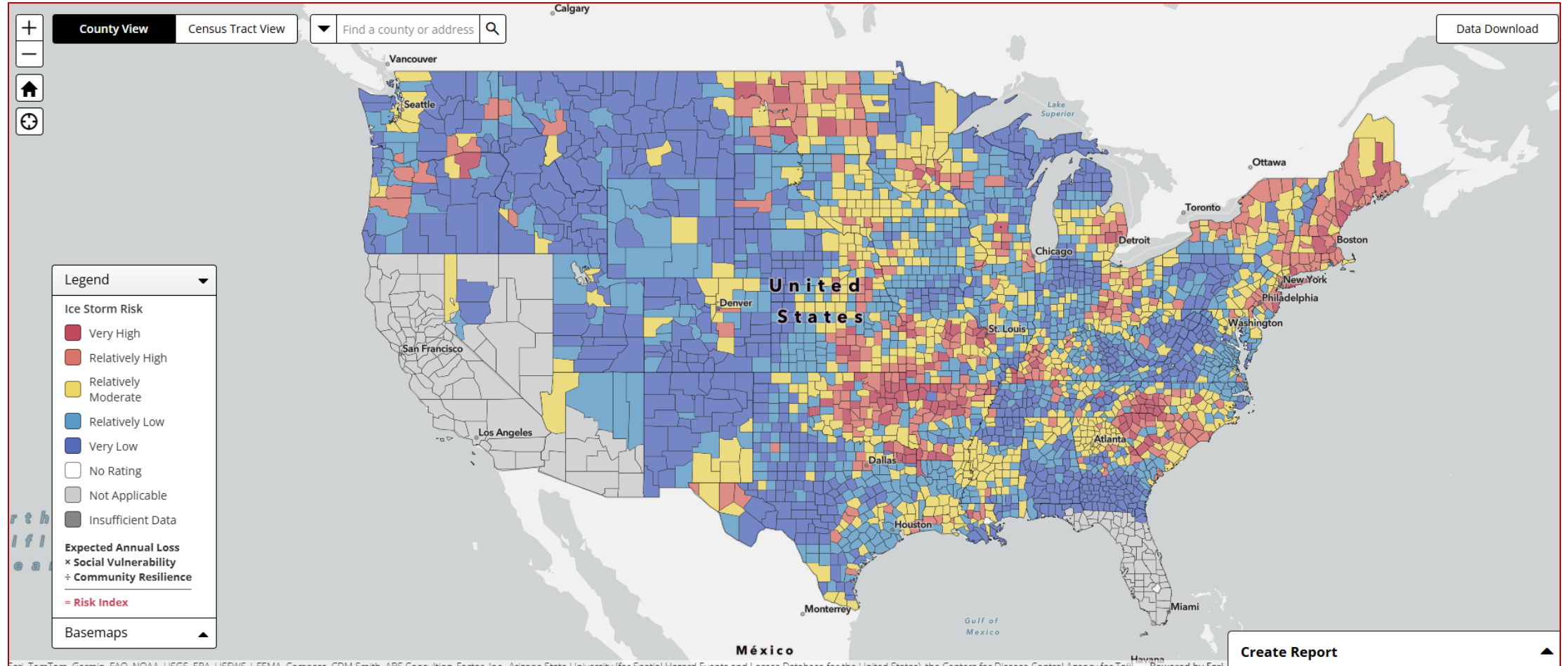
Opportunity Areas: Wildfire Risk Map



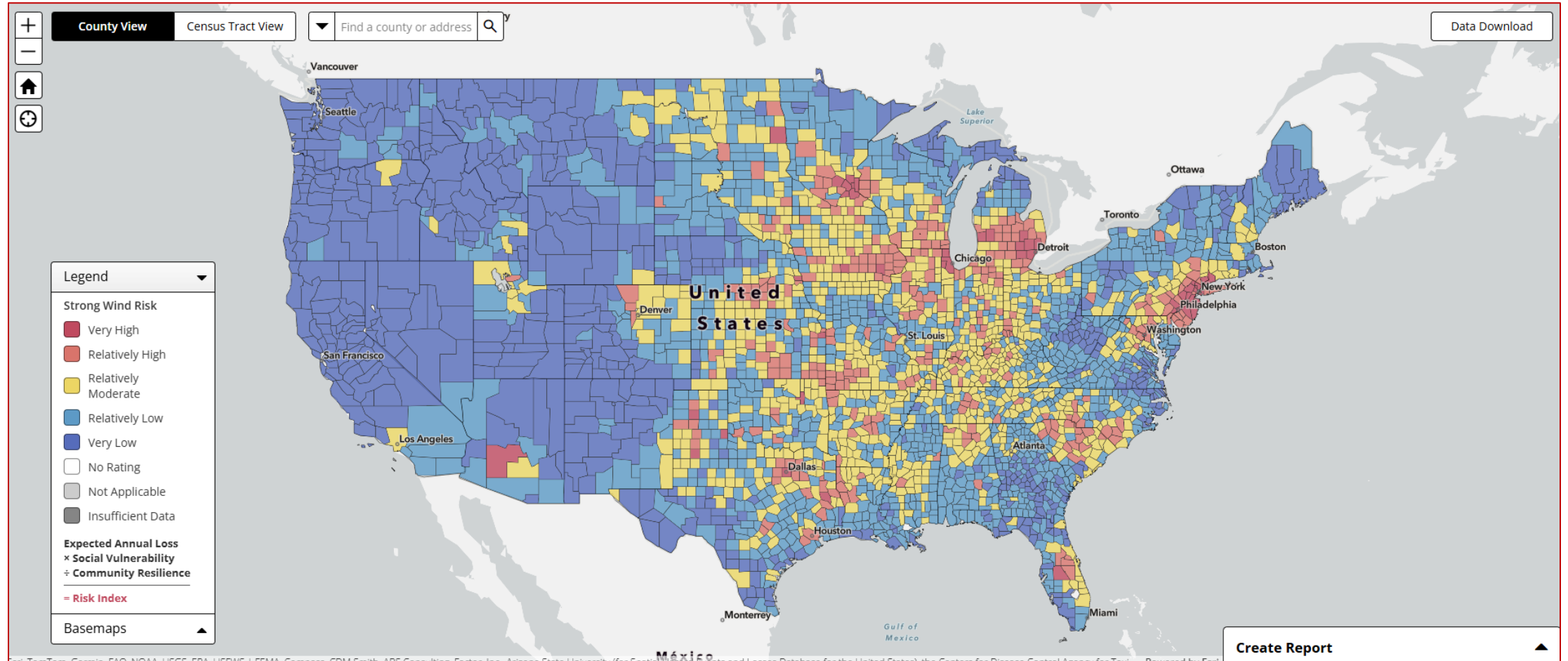
Opportunity Areas: Hurricane Risk Map



Opportunity Areas: Ice Storm Risk Map



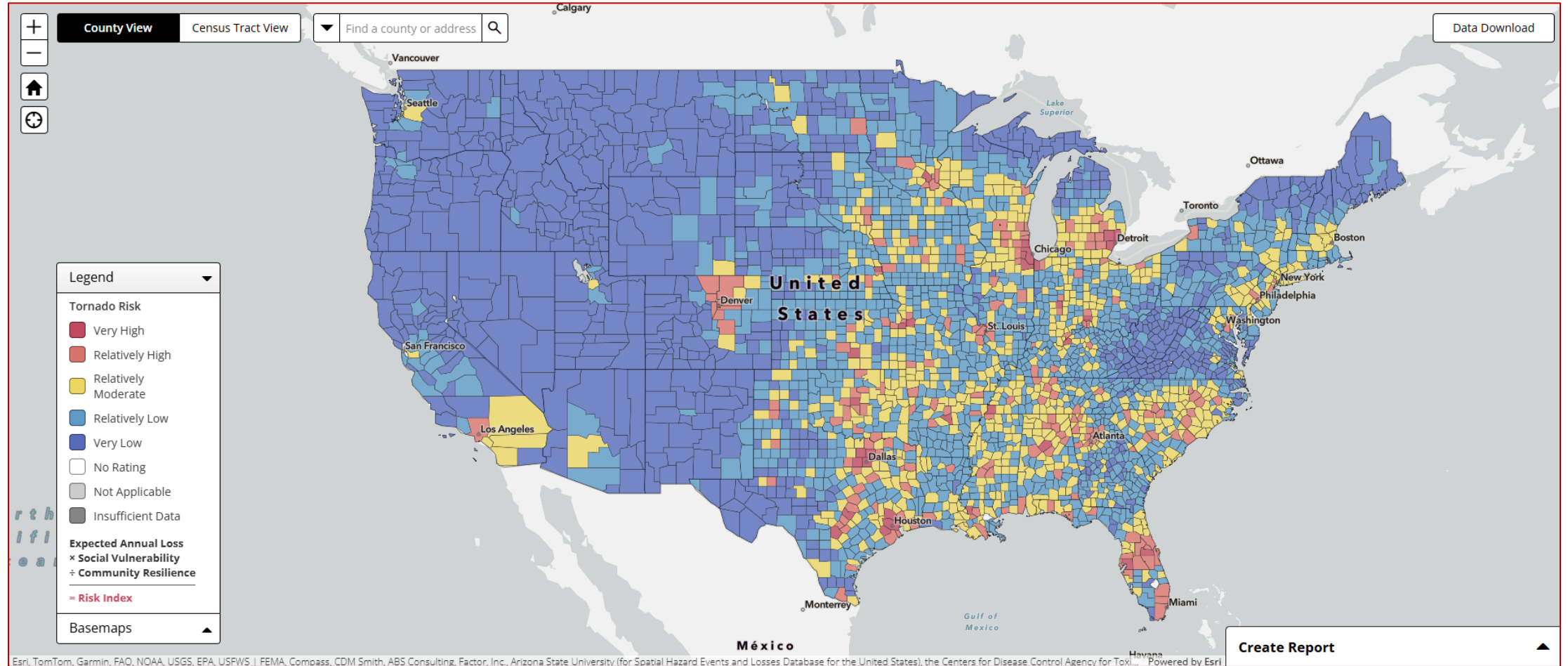
Opportunity Areas: Strong Wind Risk Map





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Opportunity Areas: Tornado Risk Map





Additional Considerations

Regulatory Compliance & Wildfire Mitigation

- Aligns with CPUC wildfire prevention mandates.
- Helps utilities reduce ignition risks.
- Supports SB 99 & AB 327 energy resilience goals.
- Ensures compliance with California's DER integration.



Energy Equity & Vulnerable Customer Support

- Supports low-income and medically vulnerable customers.
- Reduces public health risks during outages.
- Integrates with California's SGIP program.
- Expands backup power access for disadvantaged communities.



Grid Load Balancing & Demand Response

- Prevents demand spikes by staggering power restoration.
- Reduces strain on substations during grid recovery.
- Supports future smart grid strategies.
- Enables remote monitoring and power optimization.



Scalability for EV & Battery Integration

- Supports EV-based backup power (e.g., bidirectional charging).
- Aligns with utility-backed emerging EV solutions.
- Future-ready for home battery storage integration.
- Enables renewable microgrids for resilience planning.





Conclusion

Conclusion: A Scalable Model for Other Utilities

- PG&E and TESCO's BPTM enhances backup power safety and reliability.
- Utility-managed solutions make it safer, more convenient, and cost-effective.
- Proven success demonstrates its effectiveness.
- Scalable for utilities nationwide.





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