

# Energy Resilience – What Is It and How Do You Get There?

Energy Resilience Technical Assistance  
Program

---

Kate Pedersen

ENERGY RESILIENCE SPECIALIST

[KATE.PEDERSEN@COMMERCE.WA.GOV](mailto:kate.pedersen@commerce.wa.gov)

Deb Witmer

SENIOR PROGRAM MANAGER,  
ENERGY RESILIENCE & MITIGATION

[DEBORAH.WITMER@COMMERCE.WA.GOV](mailto:deborah.witmer@commerce.wa.gov)



Washington State  
Department of  
**Commerce**

# We strengthen communities



HOUSING AND  
HOMELESSNESS



INFRASTRUCTURE AND  
BROADBAND



SMALL BUSINESS  
ASSISTANCE



ENERGY



PLANNING AND TECH  
ASSISTANCE



COMMUNITY  
SERVICES AND FACILITIES



CRIME VICTIMS AND  
PUBLIC SAFETY



ECONOMIC  
DEVELOPMENT

# Our Goals Today

---

- Discuss Whole Community Energy Resilience
- Explore resilient energy systems and their value and use in emergencies
- Share examples of energy resilience strategies
- Send participants off with resources and ideas for developing energy resilience

# What is Energy Resilience?



# Difference between resilience and reliability

---

- **Resilience**

- “The capacity to recover quickly from difficulties”
  - Infrequent, unpredictable, and more severe events
  - Short and long-term outages
  - Less frequently used to full capacity
  - Community resilience

- **Reliability**

- “The quality of being trustworthy or of performing consistently well”
  - Day-to-day performance and operations
  - Short-term seasonal outages
  - Possibly for economic reasons



# Community Defined Energy Resilience

---

- Each community is unique
- System needs to fit the goal
  - Energy system agnostic

# What Does Energy Resilience Mean to You?

---

- **Resilience or Reliability?**
  - Resilience requires larger backup systems and potentially a secondary energy source (typically a diesel/propane generator)
- **What facilities in your community should be prioritized for resilience?**
  - Some critical infrastructure is mandated to have emergency backup, like hospitals
- **What loads are most important?**
- **How long should you prepare for?**
- **Who will benefit from the space?**

# Resilient Energy Systems





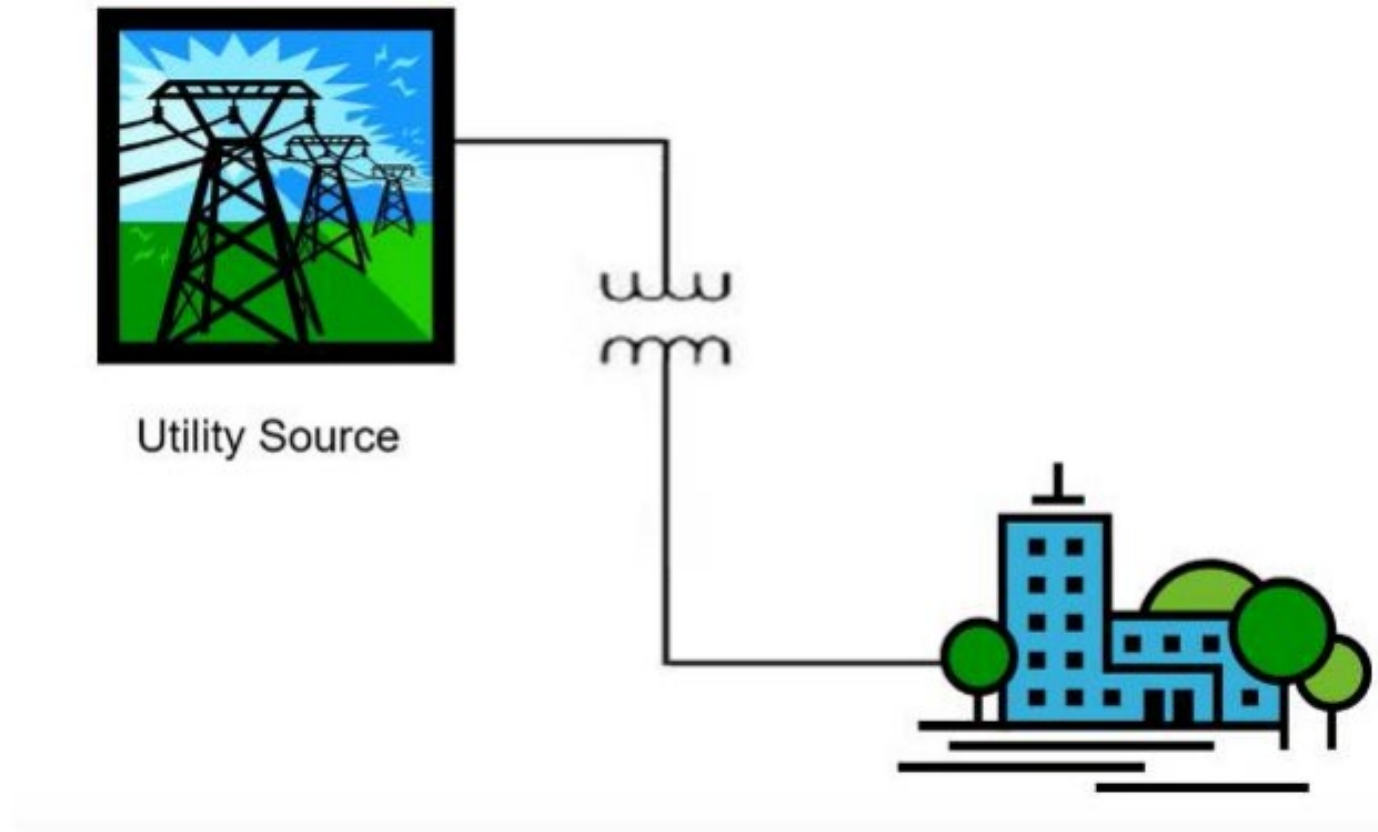
# What is a Microgrid?

---

- Incorporates a variety of different energy sources within a pre-defined electrical boundary.
  - Smaller version of our normal grid
- Can connect and disconnect from the normal grid
- Sensitive to time
  - How quickly it can switch over
  - How long it can run independently from the normal grid

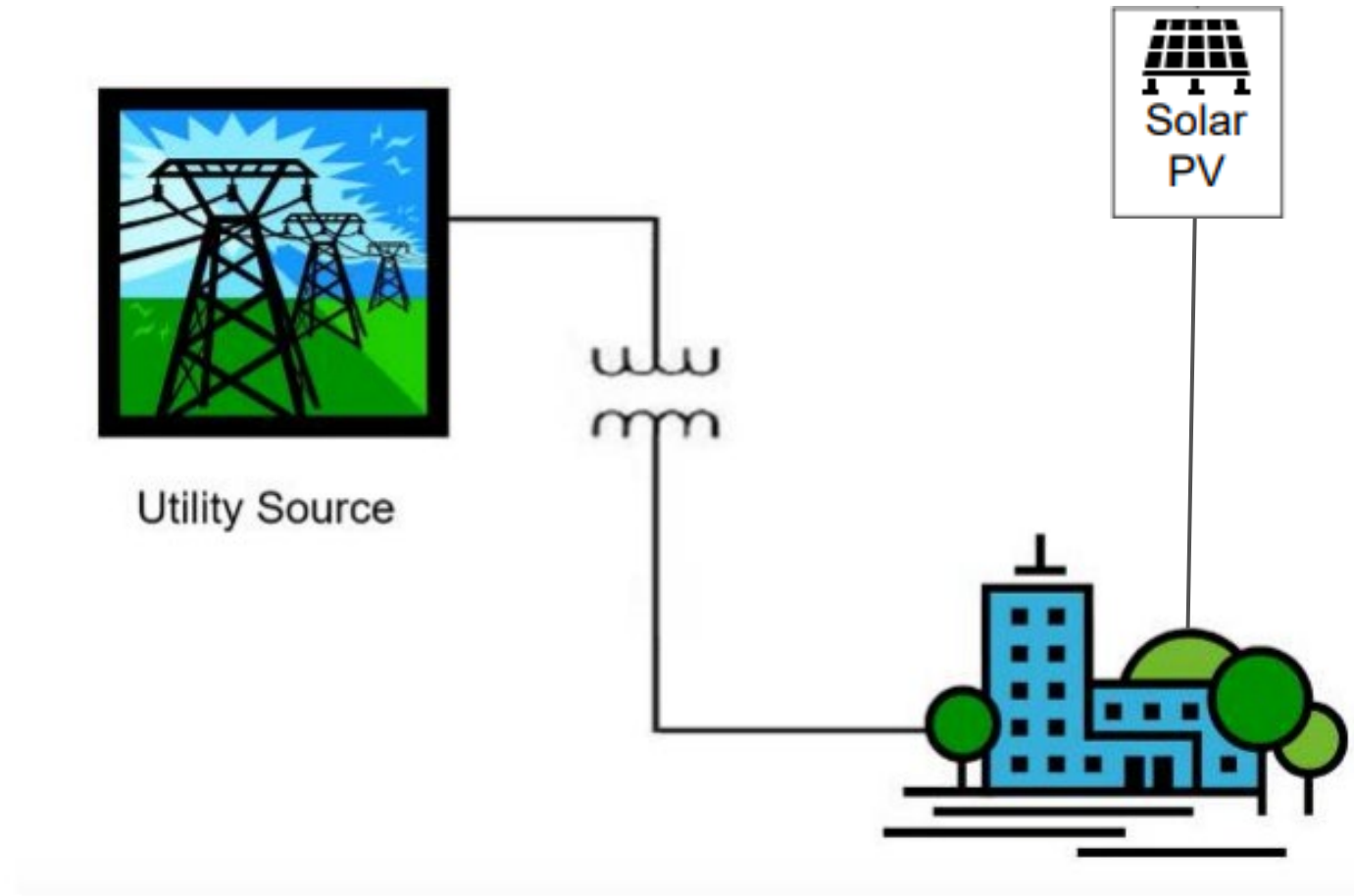
# Normal Connection

---

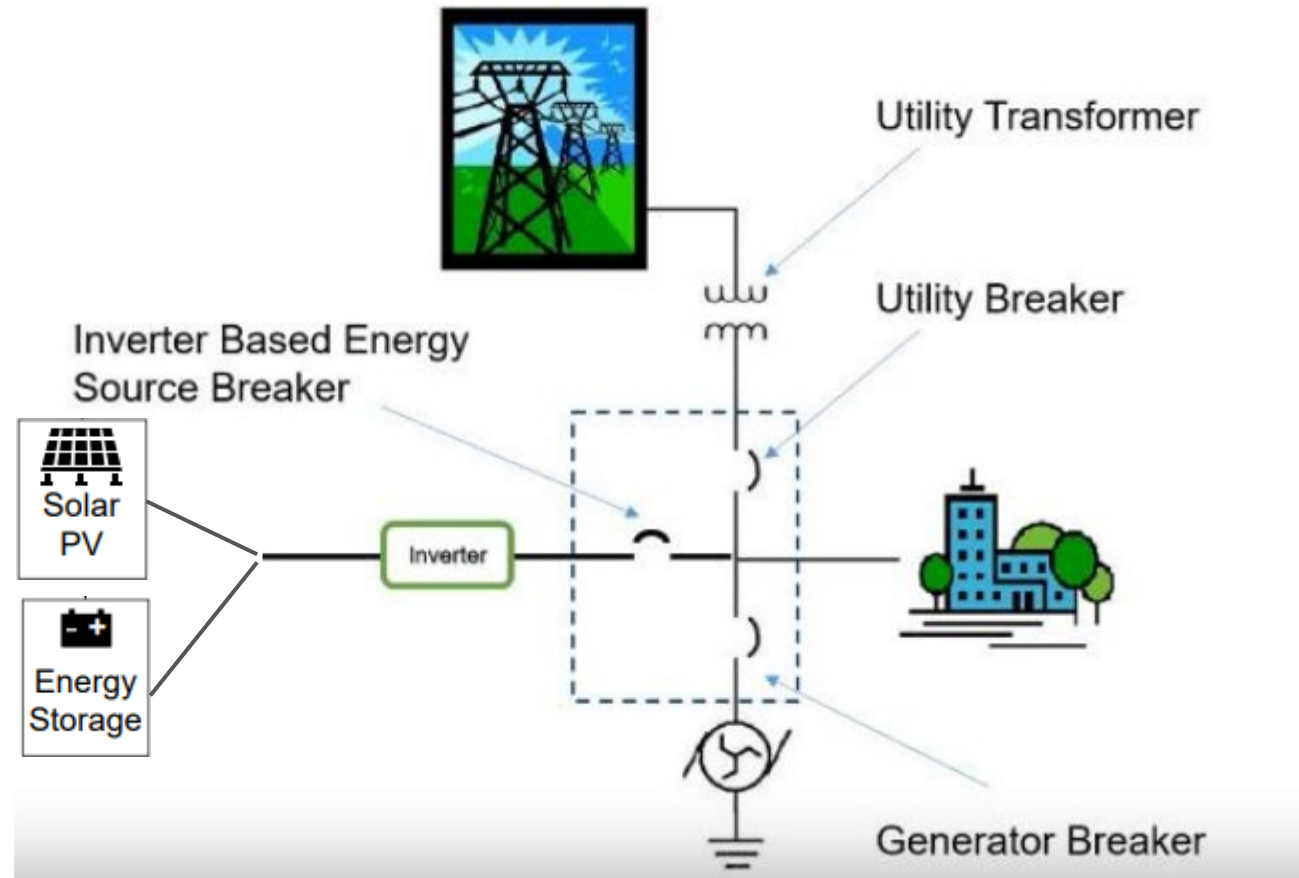


# Normal Connection with Solar: Not a Microgrid

---



# Microgrid: Solar and Storage



**How do we value it?**



# What is the Value of Energy Resilience?

---

- 52,908 Medicare recipients rely on power dependent durable medical equipment in Washington as of 4/16/2025
- Most refrigerated/frozen food must be discarded after 2 hours above 40 degrees
  - 3.1 billion people cannot afford a healthy diet
  - Food poisoning cases increase during/after power outages
- CO2 poisoning hospital visits increase during/after power outages
- Populations most at risk:
  - Children
  - English as a second language speakers
  - Racial and ethnic minorities
  - Older adults
  - Rural populations – end of line users

How do you value peace of mind?

# How do we get it where it is needed most?

Washington Energy Resilience Framework





# Our Work at a Glance

---

- Program began February 2023
- Serving 78 Communities
  - 10 Tribes
  - 14 local governments
  - 84% rural communities
  - 62% communities within or serving vulnerable populations
- Supporting over 80 individual projects
- ~\$88 million in viable projects
  - Supported communities in receiving ~\$24 million in grant funding

# Washington Energy Resilience Framework

---

Meet Communities Where They Are

We Don't Have to Agree on the "Why"

We Do Government Differently

# Washington Energy Resilience Framework

---

- **Meet Communities Where They Are**
  - Pay attention to their logistical needs first
    - All work is ADA compliant, in language, and culturally contextual
  - Communities are always in charge
  - We don't take credit for their projects

# Washington Energy Resilience Framework

---

- **We Don't Have to Agree on the “Why”**
  - We don't have to talk about “climate change”
  - Focus on what we are experiencing now – What is your current reality?

# Washington Energy Resilience Framework

---

- **We Do Government Differently**
  - Pragmatic
  - Solution-based
  - Reliable
  - Authentic

# What is Whole Community Energy Resilience?

Energy Resilience Strategies



# Whole Community Resilience: Everyone Has a Role

---

- Individuals
- Families
- Communities
- Local Governments



# Whole Community Resilience: Everyone Has a Role

---

## Individuals

- Make an emergency power plan (communications, medical devices, etc.)
  - Get in the habit of keeping cell phones charged as much as possible.
  - Consider a home generator or portable power station.
  - Contact your power company if you rely on power for health needs.

# Whole Community Resilience: Everyone Has a Role

---

## Individuals, *cont.*

- If you own an electric vehicle, do some research to explore what options you might have for getting stored battery power out of your vehicle for powering things like cell phones.
  - This is often referred to as Vehicle – to – Load (V2L).
  - It can allow you to plug in devices and even small appliances directly into the EV's charging point.

# Whole Community Resilience: Everyone Has a Role

---

## Families

- Have a Communications Plan for when there is no cell service or internet available. Consider a scenario where you are all in separate locations when the disaster occurs (workplace, home, school, grocery store).

# Whole Community Resilience: Everyone Has a Role

---

## Communities

- CERT, Communication Hubs, Ham Radio groups, schools, etc.
- Community Resilience Hubs

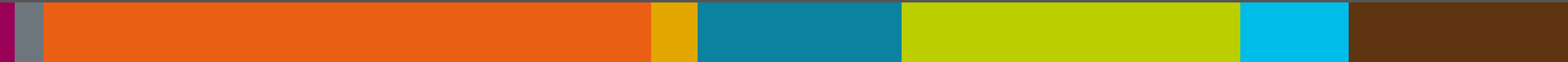
# Whole Community Resilience: Everyone Has a Role

---

## Local Governments

- Revisit your response plans – and add the variable of “no power”.
  - Mass Care
  - Alerts and Warnings
  - Public Communications
  - First Responder Coordination/Communications (Fire, Police, EMS)
- Consider energy resiliency for your critical infrastructure

# Resources



# Resources

---

- **Vehicle-2-Load info:** [Vehicle to Load \(V2L\): What is it and how does it work? - AG Electrical Technology Co., Ltd](#)
- **Clean Energy Group:** [Clean Energy Group - Advancing Equitable Climate Solutions](#)
- [Resilience Hubs - USDN: Urban Sustainability Directors Network](#)





Washington State  
Department of  
**Commerce**

# Thank you!

[www.commerce.wa.gov](http://www.commerce.wa.gov)



## Questions?

Kate Pedersen

ENERGY RESILIENCE SPECIALIST

[KATE.PEDERSEN@COMMERCE.WA.GOV](mailto:KATE.PEDERSEN@COMMERCE.WA.GOV)

Deb Witmer

SENIOR PROGRAM MANAGER,

ENERGY RESILIENCE & MITIGATION

[DEBORAH.WITMER@COMMERCE.WA.GOV](mailto:DEBORAH.WITMER@COMMERCE.WA.GOV)