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# Enabling resilience and equity-building in Building Performance Standards

CEC SB48 Workshop

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# Perspective

**Research**  
Policy-scale

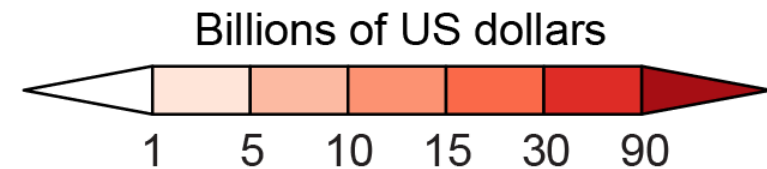
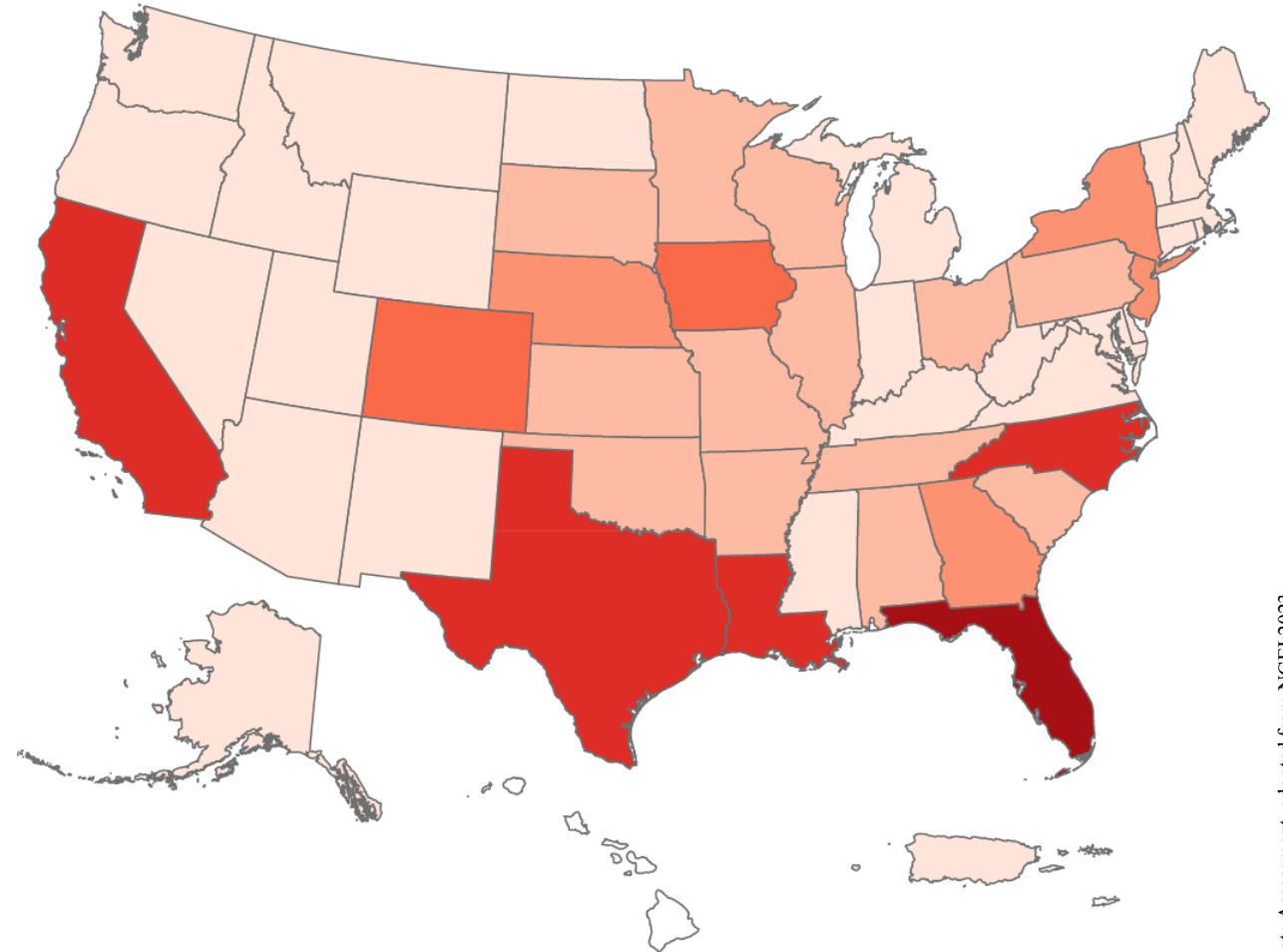
**Strategy**  
Portfolio-scale

**Retrofit**  
Building-scale

## Damages by State from Billion-Dollar Disasters (2018–2022)

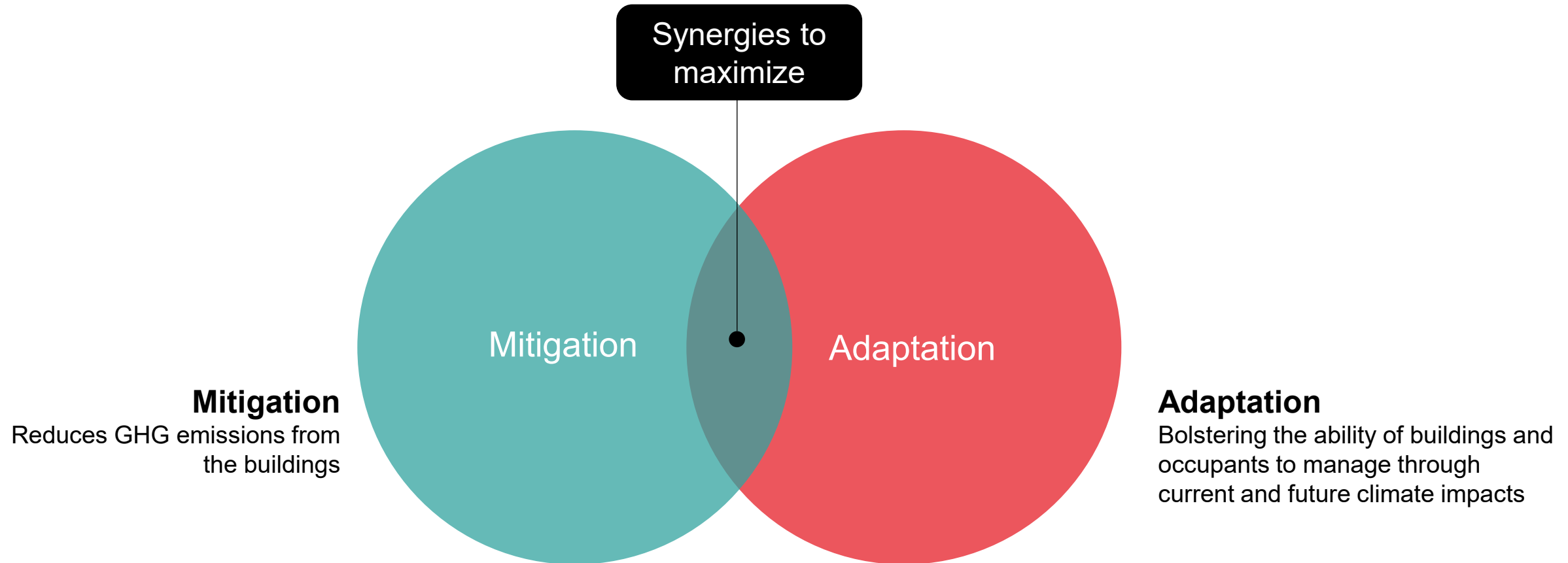
# Context

- In the 1980s, the country experienced, on average, one billion-dollar disaster every four months.
- Now, there is one every three weeks.
- Impacts are **unprecedented** and **unequal**



Source: 5<sup>th</sup> National Climate Assessment, adapted from NCEI 2023

# Key point



# Overview

- Recommended approach – conceiving of BPS in support of:
  - Heat resilience
  - Air quality improvement
  - Safeguarding electricity access
- Other equity considerations – to ensure on the radar:
  - Rural communities
  - Workforce development

# Heat Resilience

What do synergies look like?



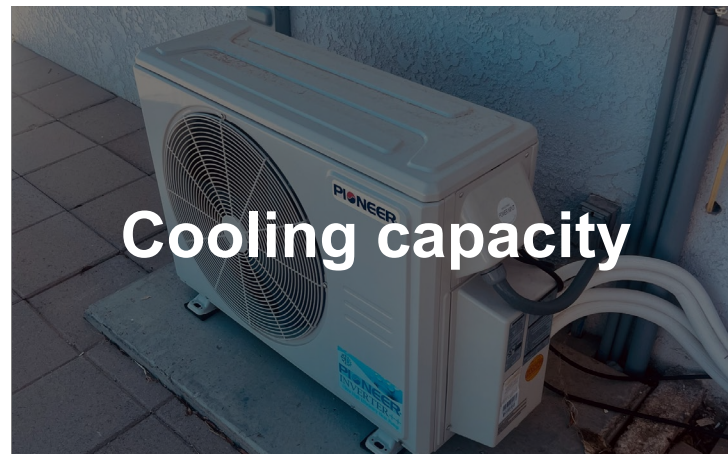
# Heat Resilience

What do synergies look like?



## Through weatherization

- Improved envelope performance through weatherization helps maintain safe indoor temperatures longer during power outages



## Through heat pumps

- New cooling capability through heat pump replace of gas heating systems



## Through demand flexibility

- Demand flexibility (demand response, DERs, etc.) to help grid manage spikes in demand



# Heat Resilience

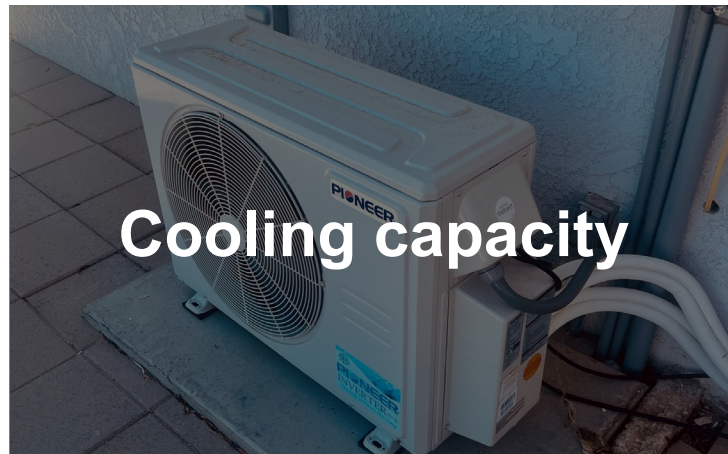
What could policy look like?

e.g., Montgomery County, Maryland State

Include resilience and public health SMEs in process



Passive survivability



Cooling capacity



Grid support

POLICY

Consider compliance pathways that explicitly include weatherization

Related: accompanying programs

e.g., Chula Vista, Reno, New York City

Consider requiring EUL space heating replacement with heat/cooling equipment

Consider impact of ADDING cooling capacity on demand – ensure not penalized

Related: coordination with appliance standards

Consider requiring protocols

Support current and new demand response programs (e.g., direction to create or defined funding for)

e.g., Denver

e.g., Washington DC, Maryland State

# Air Quality Improvements

What do synergies look like?



# Air Quality Improvements

What do synergies look like?



## Equipment upgrades

- Reducing on-site air pollution by electrifying

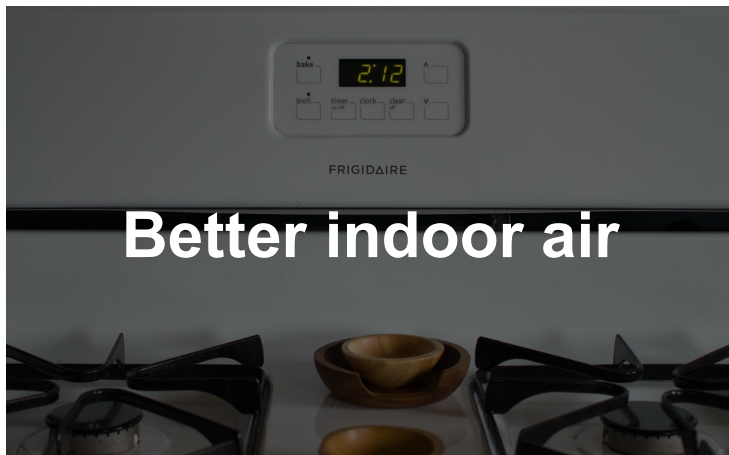


## Equipment upgrades

- Reducing indoor pollution that flows outdoors AND at electricity generation sites

# Air Quality Improvements

What could policy look like?



## Equipment upgrades

- Reducing on-site air pollution



## Equipment upgrades

- Reducing indoor pollution that flows outdoors AND at electricity generation sites

## POLICY

Weigh in the selection of metrics (e.g., GHG versus EUI)

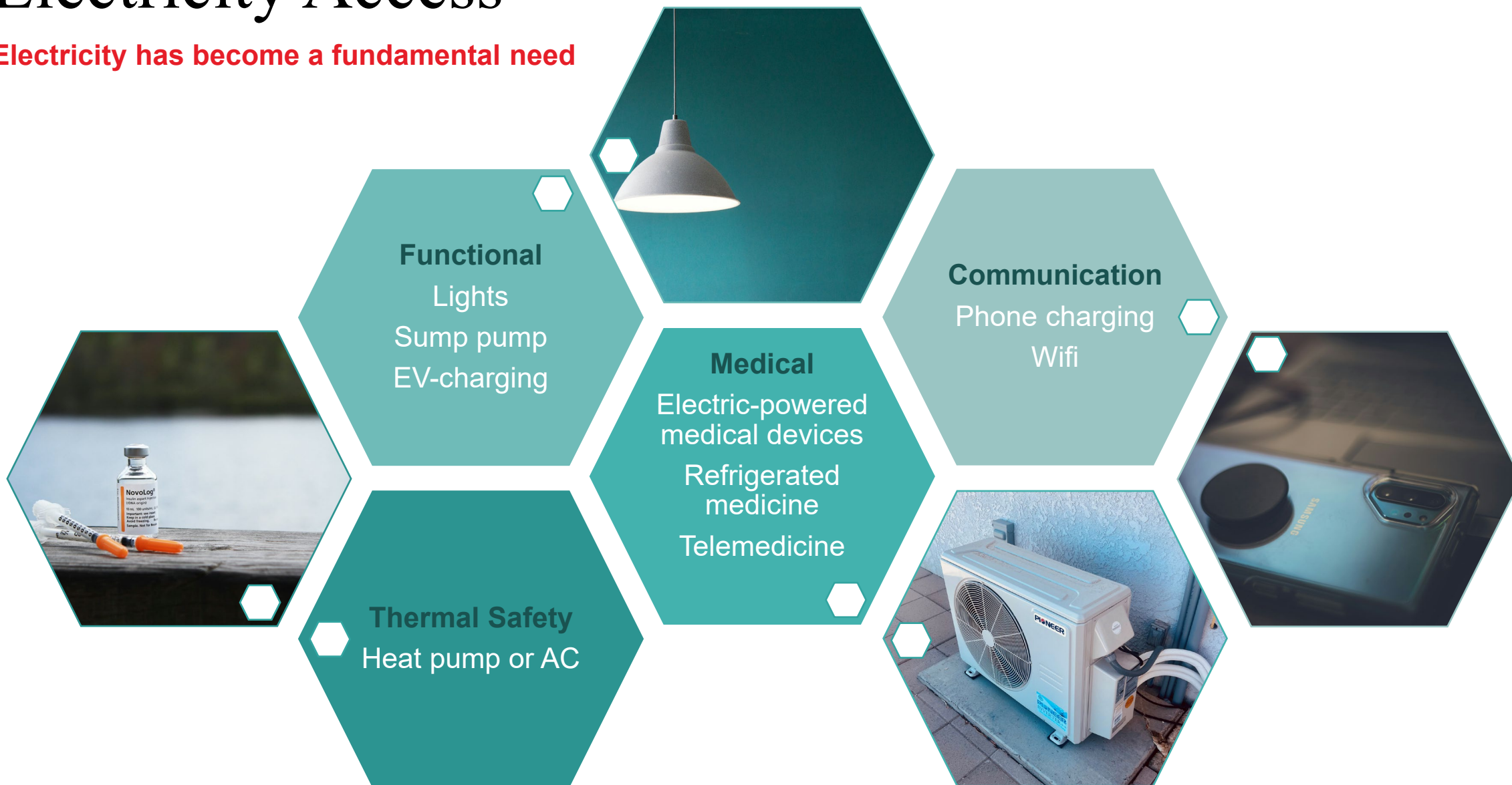
Consider EUL replacement requirements (again)

Related: coordination with appliance standards (again)



# Electricity Access

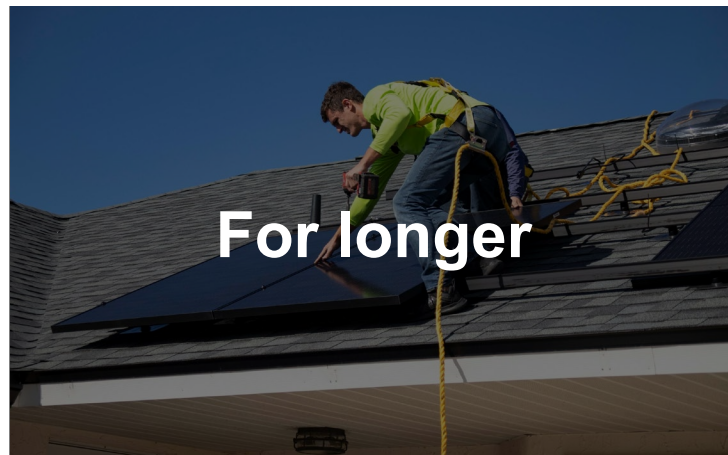
Electricity has become a fundamental need



# Electricity Access



Through battery back-up



Through combined solar

## POLICY

Consider as a core goal

Incentivize in program design

# Other Considerations

# Rural and remote

## Considerations *include*:

- Labor availability
- Hazard context
- Distance from support services
- Delivered fuels
- Local grid capacity





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- Hazard context
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## **POLICY RECS**

**Surface impacts on and support needed for rural communities through engagement**

**Consider exception or accommodation (e.g., how does this interact with “financial hardship” clause?)**

**Related:** targeted programs



# Workforce Development Opportunities

Bake workforce development into the ecosystem

Engage labor to help drive

Learn and grow

Pilot processes through early compliance of municipal buildings

e.g., Montgomery County

Build internal jurisdictional capacity to de-burden especially DAC owners

e.g., Montgomery County, Washington DC

Consider: how can the State deploy large scale contracts?

# Takeaways

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## Recommended lines of inquiry

- How can policy language and supportive programs **encourage resilience co-benefits**? Especially for low-income, frontline communities? (re: embedding resilience)
- How can **dollars** spent towards compliance also serve individual and community resilience? (re: embedding resilience)
- Mapping current and emergent **incentives** and programs – where are there gaps? For whom? (re: cost)
- How can **learning and improvement** be built in to reduce burden on building owners, especially those from or serving disadvantaged communities? (re: capacity)
- How should **rural communities** be included in policy and supportive programs? (re: hearing from rural communities)
- How can a **workforce pipeline** be baked into the ecosystem? How can the State deploy large scale contracts?