Affordability Considerations from Blue Lake Rancheria

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2020-2021 – highest rate of billion-dollar disasters from climate and weather in U.S. ever

Much of that damage was to infrastructure, including utilities

Impacts first and most to disadvantaged, marginalized people

This map denotes the approximate location for each of the 20 separate billion-dollar weather and climate disasters that impacted the United States in 2021

Risks and Impacts

- Increased wildfires and air pollution
- Amplified by climate emergency
- Public Safety Power Shutoffs (PSPSs)
  - Planned outages to prevent wildfires from electrical grid; projected to last 2-10 days; Predicted for the next decade
- Seeing drought, wildfire, wildfire smoke – persistent and in new areas
Tenuous Natural Gas Grid

- Region served by 1 x 10-inch natural gas pipeline
  - Runs through seismically unstable landscape
  - Risk of rupture and lengthy service restoration (~weeks)

- Serves region’s anchor electric power plant
  - Provides most of our actual electrons used here
  - Located directly across from the mouth of Humboldt Bay, vulnerable to tsunami
  - Plant site will be inundated by sea level rise and groundwater intrusion from sea level rise by ~2050-2070

- Studies to prune natural gas infrastructure
  - CA SB 100 - Renewable and zero-carbon energy resources supply 100% of electric retail sales by 2045
Tenuous Electrical Grid

- Region is served by a single transmission line
  - With one redundant line
- Runs through wildfire country
- Import restricted to 70 megawatts, less than half the local use
  - Humboldt’s typical use is 140-180 megawatts
  - Anchor natural gas plant provides most actual electrons
- Need cleaner and more resilient local grid
  - Humboldt grid “island” created in 2020
    - A temporary fix
    - Uses fossil fuels from elsewhere
- Inequities outside the island – Tribal Nations
Affordability Considerations

- Costs are rising, make it count: for climate-smart transitions (lowest GHG profiles + highest reliability)
- Factor in non-energy cost considerations, e.g., human health
- De-silo resource adequacy, blue sky, emergency power
  - Valuation for continuity of operations, grid services, emergency service delivery
  - Emergency power must not increase air pollution
- Tribal governments may want to exercise jurisdictional authority and utility development
  - Distribution systems, grid segmentation
  - Microgrids
- Energy efficiency
- “Connected communities”
- Technical assistance partnerships and O&M costs
- Continued R&D
Thank you.