DOCKETED

Docket Number:	17-IEPR-09
Project Title:	Climate Adaptation and Resiliency
TN #:	220881-6
Document Title:	Consideration of Disadvantaged Communities in Climate Adaptation Projects on Energy Issues
Description:	8.29.2017: Presentation by Sonya Ziaja of CEC
Filer:	Raquel Kravitz
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	8/25/2017 10:23:20 AM
Docketed Date:	8/25/2017

CALIFORNIA ENERGY COMMISSION

Consideration of Disadvantaged Communities in Climate Adaptation Projects on Energy Issues

Sonya Ziaja

Energy Generation Research Office

Energy Research and Development Division

IEPR Workshop on Adaptation and Resilience for the Energy System

Sacramento, California

August 29, 2017

Outline

- Policy Drivers
- Problem Definition
- Lessons from Prior Workshops
- Climate Impacts, Energy Sector, and Equity Connections
- How Can Energy Research Address Adaptation and Equity?
- Examples of Research Underway
- Testing New Approaches for Research

Policy Drivers

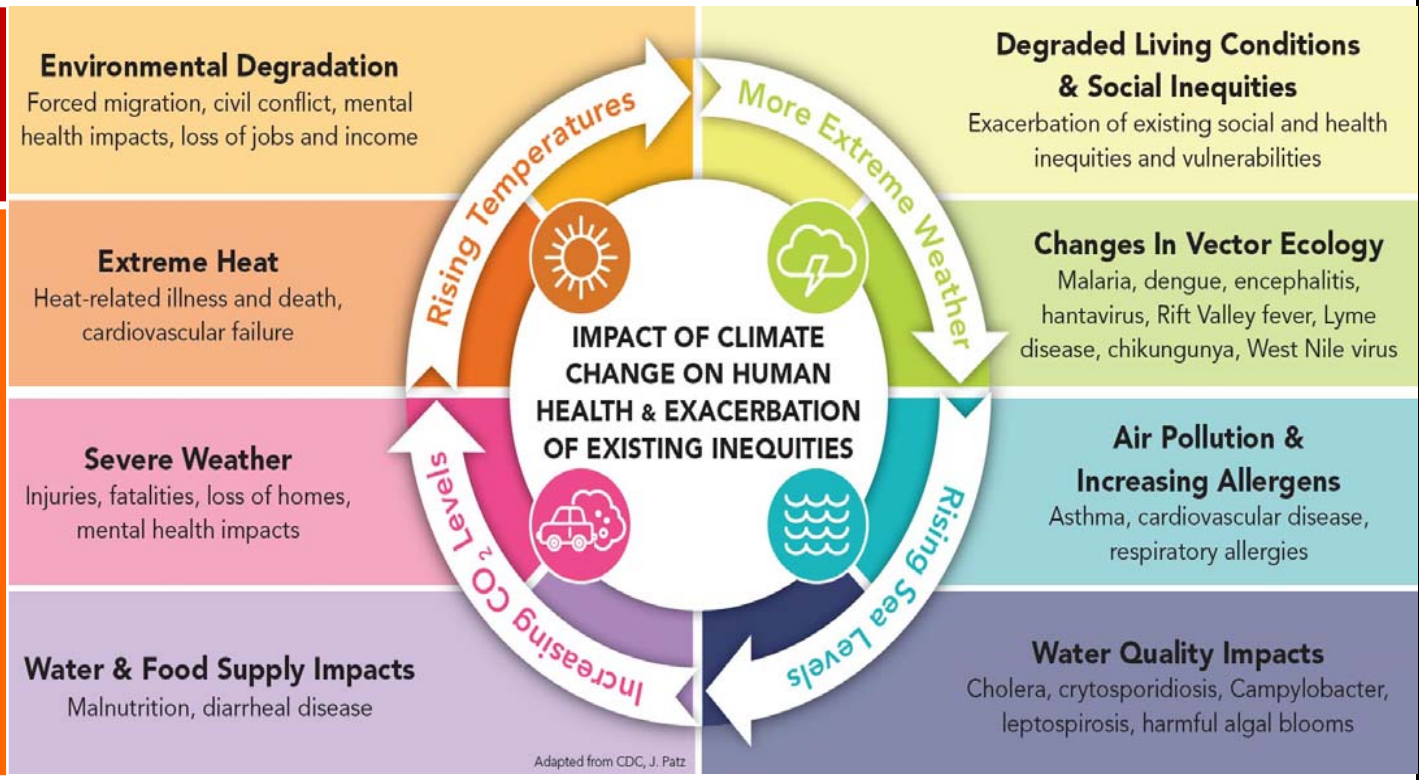
- EO B-30-15: Guidance for Climate-Related Planning & Investment
  - "climate change will disproportionately affect the state's most vulnerable citizens", thus "State agencies' planning and investment shall…**protect the state's most vulnerable populations**."
- SB 350
  - Barriers Report & Implementation Plan
  - Increase distributed renewable generation in Disadvantaged Communities (defined by CalEnviroscreen)
  - Directs Energy Commission to prioritize Research and Development projects that benefit Disadvantaged Communities

Background: Climate Adaptation & Equity

Uneven distribution of climate impacts can be amplified by preexisting inequities.

Examples of Energy Related Amplifications

- **Longer blackout durations in DACs**
- **Pre-existing Air Pollution**
- **Access to Air Conditioning & Cost**



Source: Modified from CDPH Climate Change & Health Equity, 2017

Lessons from Prior Adaptation/Equity/Energy Workshops

- Climate Adaptation processes need to allow disadvantaged communities to withstand the impacts of climate change while **simultaneously addressing existing inequality** (co-benefits).*
- Communities need to be involved early in energy decision-making and research. Processes need to be structured to support **meaningful partnerships,** in which community members are reimbursed for time and expertise.**
- **Research needed** on sensitivity of DACs to power outages and surges, advanced energy storage in DACs, identification of key infrastructure in need of reliable electricity (e.g., food banks, shelters) and of aging energy infrastructure that may pose health and safety hazards, as well as more case studies.*
- **Adaptation metrics and cost benefit analyses** for adaptation should include equity components.*

Sources: *April 11, 2017, Lead Commissioner Workshop on Customers of Climate Science Research; **Los Angeles & Fresno Workshops on Energy Research & Equity

Climate Impacts, Energy Sector, and Equity Connections

High heat → Need for cooling center reliability; reliable energy service for critical community infrastructure; reduce black out duration

Indoor Air quality → Building efficiency and filtration (LEED paradox)

How can energy research better consider adaptation and equity?

Equity Tenets*	Evaluative	Normative	Tools for Research	What Can Research Do?
Distributional	Where are the inequities?	How should we solve them?	**25% EPIC Demonstrations in DACs**	**Convene** **Collaborate & Coproduce** **Build Capacity** **Develop Salient Solutions**
Recognition	Who is impacted? Do they have access?	How should we recognize?	**CalEnviroScreen**	
Procedural	Is there effective process?	Which new processes?	**Project include inclusive budgets; Scoring for Community Participation; Encouraging Partnering Agreements**	

*Adapted from Jenkins et al. 2017

Examples of Research Underway

Microgrids for Critical Facilities in Disadvantaged Communities

Advanced Energy Communities* demonstrations

Smart Ventilation (EPC 15-037) technologies to efficiently improve indoor air quality

* Aug. 1, IEPR Workshop

Testing New Approaches for Research

- Example: Local Urban Energy Scenarios*
  (GFO 16-311, Group 2)
  - Community participation required
  - Community helps define benefits
  - Inclusive budget
  - Partnering agreements encouraged
  - Results intended to inform future demonstrations in the communities studied

*Air Quality and Climate Benefits of Targeted Retrofit Buildings and Renewable Distributed Generation (DG) in Dense Urban Areas Including Disadvantaged Communities
http://www.energy.ca.gov/contracts/GFO-16-311/

Thank you!