Utility Business Practices Panel

This panel will explore practical considerations of planning and implementing a more equitable grid, discuss best practices, and present novel approaches

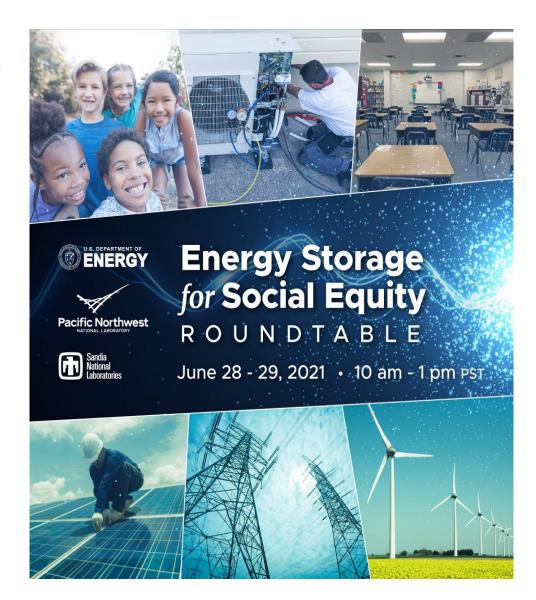
Discussion outcomes:

- Defining equity opportunities within the utility business model and operations
- Practical trends in utility direction

Moderator: Bobby Jeffers, Sandia

Participants:

- Heather Moline, NWEC
- Tina Jayaweera, NW Power and Conservation Council
- Uzma Siddiqi, Seattle City Light
- Jessica Lin, O-Power

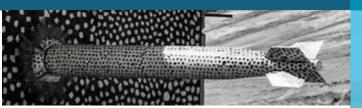




Utility Business Practices for Equity







Bobby Jeffers, Moderator

Sandia National Laboratories







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Panel Session Overview

- 1. Welcome (5m)
- 2. Speaker presentations (35m)
- 3. Moderated Q&A (20m)

Panelists:



Heather Moline NW Energy Coalition



Tina Jayaweera Northwest Power and Conservation Council

Moderator:



Bobby Jeffers Sandia National Laboratories



Uzma Siddiqi Seattle City Light

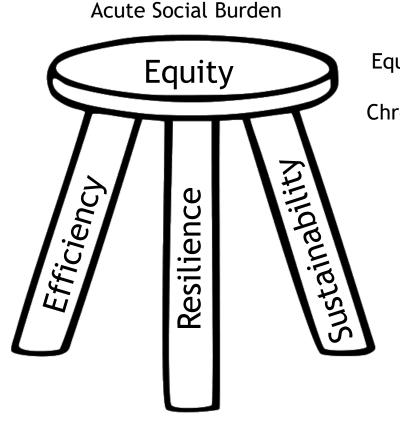


Jessica Lin Oracle Utilities Opower

Energy Burden, Chronic Social Burden,

•••

Cost of Service, Customer Bills



Equitable access to clean energy solutions,
Chronic environmental injustices,

•••

GHG Emissions, Land Use

•••

Loss of Load Expectation MWh not served

•••

NW Energy Coalition

- Membership-based alliance for clean, reliable, affordable and equitable energy system that sustains our communities and preserves the region's natural resources.
- Justice, equity, diversity, equity & inclusion (JEDI) in the PacNW utility sector
 - Internal/HR JEDI
 - Training and partnership-building between environmental justice organizations and utility/regulatory staff
 - NWPCC System Integration Forum on Equity in the 2021 Power Plan: please take a look at this amazing online content!
 - Rep. Simpson's LSRD Proposal
 - WA and OR state legislation



Advancing Equity in Utility Business Practices

- Without Legislative Direction
 - Procedural equity in utility and regulatory processes
 - Extreme events of 2020-2021
 - Greater participation from diverse voices
 - Hiring and retaining staff with needed skill sets and lived experience
 - Barrier: what is the "public interest"? Affordability vs. equity?
- With Legislative Direction
 - WA state Clean Energy Transformation Act (CETA)
 - OR state HB 2475/Energy Affordability Act



Northwest Power and Conservation Council – Energy Equity

Tina Jayaweera Energy Storage for Social Equity Roundtable



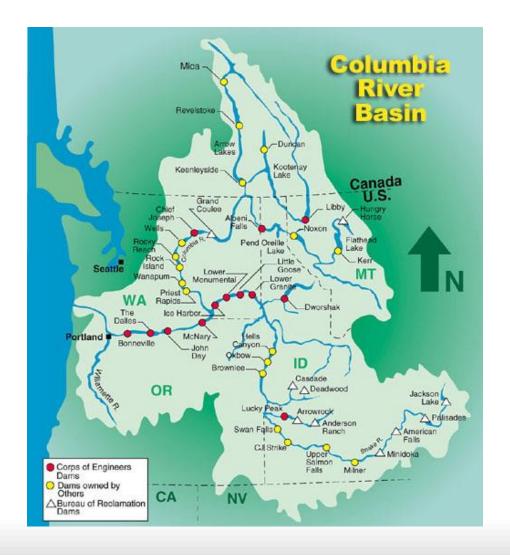
The Northwest Power and Conservation Council

The 1980 Northwest Power

Act authorized Idaho, Montana, Oregon, and Washington to develop a regional power plan and fish and wildlife program to balance the Northwest's environment and energy needs.

Three main tenets:

- Adequate, efficient, economical, reliable power system
- Protect, mitigate, & enhance fish and wildlife
- Open **public** process





Council's Role Regarding Energy Equity

- Council as a "convenor"
 - Regional organization that works with broad range of stakeholders
- Council as "independent authority"
 - Power plan is used by many regional entities as independent reference on energy system priorities
- Council held a "System Integration Forum" in February to explore how to consider DEI in power planning
- 2021 Power Plan (draft anticipated Aug 2021) likely to include language about identifying and resolving equity data gaps through regional workshops



Energy Storage for Social Equity

Utility Business Practices
Uzma Siddiqi, Sr. Manager Grid Modernization



Seattle City Light, Municipal Electric Utility

- +City has aggressive decarbonization goals, including transportation electrification
 - Seattle Climate Action Plan
 - SCL Transportation Electrification Strategic Investment Plan
 - Seattle's Green New Deal
 - Not just cars, but buses, trains, port equipment, and ferries
- + Seattle has been working to eliminate radical disparities and achieve racial equality for over a decade
 - Seattle's Equity Task Force
 - Seattle City Light Race and Social Justice Program
 - Racial Equity Toolkit



Adapting SCL Engineering and Business Practices

Duwamish Valley, Environmental Justice Communities

- + Best Practices, NWS
 - Ferry Electrification

 Decarbonization

 +Air Quality: Utility-scale Battery to reduce impact on the Grid

+ Equitable Grid

 Test Bed for offering new technologies that improve both grid reliability and operations by reducing outage durations.
 Dispatchers have better situational awareness and automated switching control

+ Novel Approaches

 Submitted proposal for WA CEF grant to install a DC microgrid powered by second use electric bus batteries and solar phone charging near EJC bus stops



Defining and addressing energy equity

Presentation to PNNL

Jessica Lin Oracle Utilities Opower June, 2021

Exploring New Metrics

Statistical analysis (Pearson's r and ANOVA tests) found that top metrics include:

- Education level
- Mortality
- Renter tenure
- Vintage of home

Income Data Housing Costs Extreme Weather **Events** Non-Energy **Benefits** Energy Data Socio-**Economic Shapefiles**

NCES

Ventyx

Census American Community Survey (ACS) **UNEP** Global Risk Data Platform **EPA** Co-Benefits Risk Assessment **NREL** ResStock, Solar Energy Evolution and Diffusion Studies (Solar for All) EIA **Heating Rates** Cities Leap County Level Energy Burden

Education Demographic Geographic

Estimates (EDGE) locale boundaries

Utility Service Territory Shape Files

Opower will design & build a new limited income solution in 2021

Here's why:



Clear problems, getting industry scrutiny, that Opower can solve



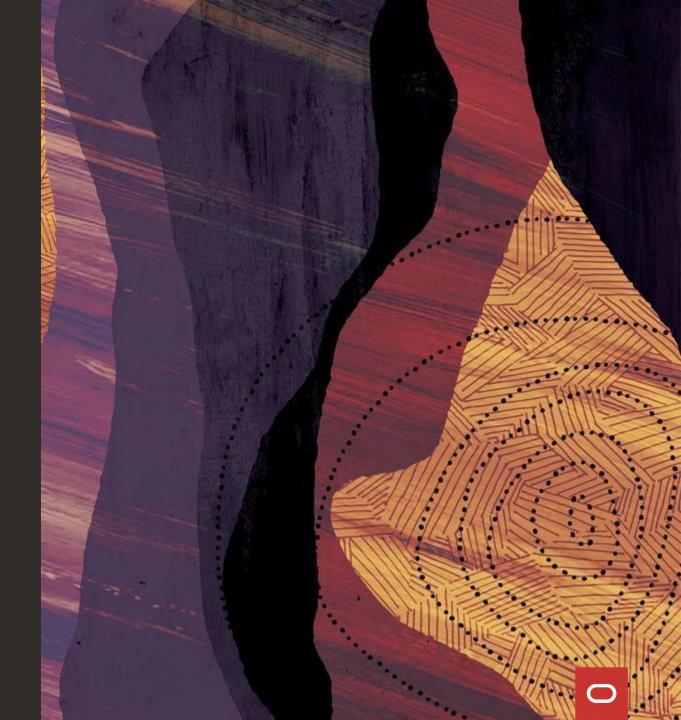
Limited income efficiency is a large, growing practice we can service right now



Decarbonizing with speed & equity means accelerating structural program adoption & improving affordability



Thank you



Moderated Q&A

Q1: How are you working towards developing and using metrics within planning that measure the impact of our energy system in some of these other equity dimensions?

Q2: How could grid investment planning processes themselves be more equitable? For instance, are you working toward best practices to ensure your engagement is truly meaningful?

Q3: How – quantifiably – can we include equity within grid resilience planning?



Questions?

Bobby Jeffers
Renewable and Distributed Systems Integration
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