All-In: States, Localities, Utilities, and Nonprofits
Creating Solutions for Underserved Communities

May 16th
2:00-3:15 PM
Panelists

- Brittany Sellers and Ian Lahiff, City of Orlando
- Keith Kueny, Community Action Partnership of Oregon
- Bryan Early, California Energy Commission
- Daniel White, District of Columbia
- Neil Matouka, Local Government Commission
- Arah Schuur, Commonwealth of Massachusetts
CELICA Program Highlight: SELF

BRITTANY SELLERS & IAN LAHIFF
CITY OF ORLANDO
Community Development Financial Institution (CDFI)

International Crowdsourcing
Jody Polland

Loan Impacts:
Safety and Security, Quality of life

Amount of Loan:
$6,152.35

Type of Loan: Wind Hazard Mitigation (Veteran Program)
Credit Score

- Excellent
- Good
- Fair
- Uncertain
- Poor

The credit score is marked as Poor.
Lesha Westberry
Loan Impacts: Quality of life, Asset Building, Savings, Reduced Carbon Footprint, Quality of Life
Amount of Loan: $10,000.
Type of Loan: Energy Efficiency
Loan Type Distribution

- Energy Efficiency Retrofits: 69%
- Wind Hazard Mitigation: 22%
- Other: 9%
- Solar PV: 2%
- Solar Water Heaters: 7%
Everyone has a story

Pamela Turner
Loan Impacts: Safety, Health, Quality of life, Credit Rebuilding
Amount of Loan: $7,231.21
Type of loan: Wind Hazard Mitigation (Roof Repair)
1,774 Retrofits
18,234 Job Hours
67% L.M.I. Families
42% Female Clients

602 Residential Loans
$4.93 Million
99% Repayment Rate

25% Energy Savings

CO₂ 1,034 Metric Ton Reduction
We asked our clients “Why did you select SELF for your home improvement project?”
213 clients responded with the top 4 reasons:
53% came to SELF because “It was Highly Recommended
36.3% were “unable to obtain other sources of financing”
35.8% because of “lower rates than other available offers”
24.9% because SELF is a non-profit

Which Aspects of your life do you feel would improve if given access to SELF financing? *Top 4 answers excluding*

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Cost of energy and/or water bills</td>
<td></td>
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<tr>
<td>Cost of Home Insurance</td>
<td></td>
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<tr>
<td>Security (Impact windows, doors)</td>
<td></td>
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<tr>
<td>Safety (Home structure safety such as roof was caving in or leaking)</td>
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</tbody>
</table>
Solar and Energy Loan Fund (SELF)
Lending Activity through May 2016

SELF
SOLAR AND ENERGY LOAN FUND
Keith Kueny

Community Action Partnership of Oregon
Community Solar & Affordable Housing

CAPO: Oregon’s Poverty Fighting Network
What is CAPO?

- Community Action Partnership of Oregon (CAPO) is the State Association for Oregon’s Community Action network of 17 Community Action Agencies and Oregon Human Development Corporation, a statewide agency serving farmworkers. CAPO handles broad policy matters for the state association.

- Provides advocacy services at the Oregon Public Utilities Commission, the Oregon Legislature, and additionally statewide forums.

- Is the legislatively mandated policy advisor to Oregon Housing and Community Services.

- Delivers certain statewide grants through the CAA’s: SSVF, Gas utility programs, and employee trainings.
Solar energy has now become an established part of Oregon’s energy supply mix. As of 2015, more than 10,000 solar PV systems have been installed with a combined capacity of 120 megawatts (MW).
This growth is due to declining installation costs and incentive programs. From 2009 to 2015, the average cost of all types of solar PV installations fell from about $7.50 per watt to about $2.50 per watt.
Is Rooftop solar best for low-income ratepayers?

- Pace is not appropriate for low-income clients; If the homeowner fails to make the payments, homeowners risks losing home to foreclosure
- It should resemble, closely, a grant or subsidy program
- Avoid projects that rely on uncertain state commission policies, if possible (a change in policy, like net metering, could increase costs for residential ratepayer, causing harm)
- Potentially, rooftop solar could pose financial issues with repair and service
Why Community Solar?

• Allows all residential ratepayers access
• Customer/Client does not have to own the home
• Avoid issues with a transient population
  – Low-income populations move at a higher frequency than moderate or high-income earners
• Better value per dollar
  – In Oregon, Community solar can be sited East of the Cascades – highest solar penetration – and credits can be applied in Portland or Salem
Why Affordable Housing?

• Lowers acquisition costs – customers/clients are certainly low-income – no need for income verification
• Large rooftops in urban areas
• Potential for additional housing tax credits to lower project costs
• Benefits going to very low-income residents – Below 150% of FPL in most cases – to stabilize the home
Oregon-specific Issues

• Cheap Power Rates – In some cases as low as .05kw/hr
  – Bonneville Power Administration delivers cheap hydroelectric power to the region

• Unregulated Public Utilities that don’t need, or want, to take on solar

• Low solar penetration east of the Cascades

• Uncertainty around final rules from Community Solar and Value of Solar dockets
Elkhorn Valley Apartments – Baker City, Oregon
# Project Overview

<table>
<thead>
<tr>
<th>USDA MULTIFAMILY SOLAR PROJECT SUMMARY</th>
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<tr>
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<tr>
<td>Project: Elkhorn, Baker City</td>
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<tr>
<td>State:</td>
</tr>
<tr>
<td>Annual Usage per Unit</td>
</tr>
<tr>
<td>Total Kw Usage Project</td>
</tr>
<tr>
<td>Project Size</td>
</tr>
<tr>
<td>Estimated Annual Rate Increase</td>
</tr>
<tr>
<td>Starting Energy Rate</td>
</tr>
<tr>
<td>Project Price Per Watt</td>
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<tr>
<td>Estimated Annual Production</td>
</tr>
<tr>
<td></td>
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<tr>
<td>UA - Reduction</td>
</tr>
<tr>
<td>Net Solar Revenue</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Estimated Project Cost</td>
</tr>
<tr>
<td>Project Oversite</td>
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<tr>
<td>Total Estimated Project Costs</td>
</tr>
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</table>
## Project Savings

### Solar Generation - Project Savings

<table>
<thead>
<tr>
<th>Energy Savings Breakdown:</th>
<th>KWH Rate</th>
<th>KWH Generated</th>
<th>SAVINGS Solar Generation</th>
<th>Projected UA Reduction</th>
<th>COST Jr. Lein Pmt</th>
<th>Savings</th>
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</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>0.071</td>
<td>119,000</td>
<td>8,391.88</td>
<td>(8,965.23)</td>
<td>(8,965.23)</td>
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<tr>
<td>Year 2</td>
<td>0.073</td>
<td>118,405</td>
<td>8,643.64</td>
<td>8,208.00</td>
<td>(8,965.23)</td>
<td>757.23</td>
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<tr>
<td>Year 3</td>
<td>0.075</td>
<td>117,813</td>
<td>8,902.95</td>
<td>8,500.00</td>
<td>(8,965.23)</td>
<td>465.23</td>
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<tr>
<td>Year 4</td>
<td>0.077</td>
<td>117,224</td>
<td>9,170.03</td>
<td>8,800.00</td>
<td>(8,965.23)</td>
<td>(165.23)</td>
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<tr>
<td>Year 5</td>
<td>0.079</td>
<td>116,638</td>
<td>9,445.13</td>
<td>9,100.00</td>
<td>(8,965.23)</td>
<td>134.77</td>
</tr>
<tr>
<td>Year 6</td>
<td>0.082</td>
<td>116,055</td>
<td>9,728.49</td>
<td>9,400.00</td>
<td>(8,965.23)</td>
<td>434.77</td>
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<tr>
<td>Year 7</td>
<td>0.084</td>
<td>115,474</td>
<td>10,020.34</td>
<td>9,700.00</td>
<td>(8,965.23)</td>
<td>734.77</td>
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<tr>
<td>Year 8</td>
<td>0.087</td>
<td>114,897</td>
<td>10,320.95</td>
<td>10,000.00</td>
<td>(8,965.23)</td>
<td>1,034.77</td>
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<tr>
<td>Year 9</td>
<td>0.089</td>
<td>114,322</td>
<td>10,630.58</td>
<td>10,300.00</td>
<td>(8,965.23)</td>
<td>1,334.77</td>
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<tr>
<td>Year 10</td>
<td>0.092</td>
<td>113,751</td>
<td>10,949.50</td>
<td>10,600.00</td>
<td>(8,965.23)</td>
<td>1,634.77</td>
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<tr>
<td>Year 11</td>
<td>0.095</td>
<td>113,182</td>
<td>11,277.98</td>
<td>10,900.00</td>
<td>(8,965.23)</td>
<td>1,934.77</td>
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<td>Year 12</td>
<td>0.098</td>
<td>112,616</td>
<td>11,616.32</td>
<td>11,200.00</td>
<td>(8,965.23)</td>
<td>2,234.77</td>
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<td>Year 13</td>
<td>0.101</td>
<td>112,053</td>
<td>11,964.81</td>
<td>11,500.00</td>
<td>(8,965.23)</td>
<td>2,534.77</td>
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<td>Year 14</td>
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<td>111,493</td>
<td>12,323.76</td>
<td>11,800.00</td>
<td>(8,965.23)</td>
<td>2,834.77</td>
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<tr>
<td>Year 15</td>
<td>0.107</td>
<td>110,935</td>
<td>12,693.47</td>
<td>12,200.00</td>
<td>(8,965.23)</td>
<td>3,234.77</td>
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<tr>
<td>Year 16</td>
<td>0.110</td>
<td>110,381</td>
<td>13,074.28</td>
<td>12,600.00</td>
<td>12,600.00</td>
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<td>Year 17</td>
<td>0.113</td>
<td>109,829</td>
<td>13,466.50</td>
<td>13,000.00</td>
<td>13,000.00</td>
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<td>Year 18</td>
<td>0.117</td>
<td>109,280</td>
<td>13,870.50</td>
<td>13,400.00</td>
<td>13,400.00</td>
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<td>Year 19</td>
<td>0.120</td>
<td>108,733</td>
<td>14,286.61</td>
<td>13,800.00</td>
<td>13,800.00</td>
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<td>Year 20</td>
<td>0.124</td>
<td>108,190</td>
<td>14,715.21</td>
<td>14,200.00</td>
<td>14,200.00</td>
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</table>
Biggest Hurdles

• Finding a private developer with tax credit appetite
• Working around the utility allowance adjustment
• Securing gap funding
  – LIHEAP or Energy Conservation Helping Oregonians (ECHO)
• Locating an affordable housing project in a utility territory open to solar development
• Overcoming cheap utility rates
Hurdle: Utility Allowance Adjustment

• Under statute, residents of project-based Section 8 properties must not pay more than 30% of their adjusted income for housing. The regulations include utility costs as a component of housing cost.

• Therefore, when residents pay their own utilities, the owner must establish, with state or federal approval, a utility allowance amount that is deducted from the residents’ rent payment to the owner. If the utility bill decreases, rent is increased, keeping the amount the resident pays for both at 30%.

• A waiver would allow for the utility bill credit to be applied to the housing unit without a future adjustment or the waiver could allow for a portion of the credit be applied to the property’s primary loan.
## Utility Allowance Overview

<table>
<thead>
<tr>
<th>Tenant</th>
<th>Basic Rent</th>
<th>30% of Income</th>
<th>UA</th>
<th>Tenant Rent</th>
<th>Rental Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio</td>
<td>545.00</td>
<td>163.50</td>
<td>52.00</td>
<td>111.50</td>
<td>4,768.50</td>
</tr>
<tr>
<td>1-Bedroom</td>
<td>610.00</td>
<td>183.00</td>
<td>53.00</td>
<td>130.00</td>
<td>11,040.00</td>
</tr>
<tr>
<td>2-Bedroom</td>
<td>680.00</td>
<td>204.00</td>
<td>60.00</td>
<td>144.00</td>
<td>1,072.00</td>
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<tr>
<td><strong>Total Rental Assistance</strong></td>
<td><strong>385.50</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>16,880.50</strong></td>
</tr>
</tbody>
</table>
Utility Allowance – with solar

<table>
<thead>
<tr>
<th>Tenant</th>
<th>Basic Rent</th>
<th>30% of Income</th>
<th>UA</th>
<th>Tenant Rent</th>
<th>Rental Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio</td>
<td>545.00</td>
<td>163.50</td>
<td>33.00</td>
<td>130.50</td>
<td>4,559.50</td>
</tr>
<tr>
<td>1-Bedroom</td>
<td>610.00</td>
<td>183.00</td>
<td>34.00</td>
<td>149.00</td>
<td>10,603.00</td>
</tr>
<tr>
<td>2-Bedroom</td>
<td>680.00</td>
<td>204.00</td>
<td>41.00</td>
<td>163.00</td>
<td>1,034.00</td>
</tr>
<tr>
<td><strong>Total Rental Assistance</strong></td>
<td></td>
<td></td>
<td></td>
<td>442.50</td>
<td>16,196.50</td>
</tr>
</tbody>
</table>

| Net Rental Assistance Cost - Studio | 11 | (19.00) | (209.00) | (2,508.00) |
| Net Rental Assistance Cost - 1 Bedroom | 23 | (19.00) | (437.00) | (5,244.00) |
| Net Rental Assistance Cost - 2 Bedroom | 2  | (19.00) | (38.00)  | (456.00)   |

*Projected UA Savings Year 1 - Rounded to $1 (8,208.00)*
Hurdle: Utility Collaboration

• Consumer Owned Utility
  - 36 COUs in Oregon
  - Have first right to purchase BPA power
  - Ability to negotiate policies like virtual net meter
  - Avoids lengthy process because not under the authority of OPUC
  - Utility Benefits
    ➢ Reducing low-income utility bills increases likelihood of payment, decreasing utility debt
    ➢ Diversifies generation portfolio as projected environmental changes will decrease the Pacific Northwest snowpack and BPA’s ability to deliver cheap power
Hurdle: Utility Collaboration

- Investor Owned Utilities: Pacific Power and Portland General Electric
  - New Renewable Portfolio Standard
    - 50% renewable by 2050
    - Low-income projects that allow the utility to use RECs for compliance
    - Existing low-income funding streams, like energy assistance and weatherization funding programs, that could be used for expanding solar access
On the horizon

• New Community Solar rules for investor owned utilities

• Community Solar will use a value of solar tariff

• Has a distinct low-income element – 10% of the benefit must be “made available” to low-income ratepayers

• Specific Low-income third-party administrator

• Can connect to grid in any part of utility territory
Low Income Administrator (For Investor-owned Utilities)

A) Every project must make 10 percent of its total nameplate capacity available to qualifying residential low-income customers. Project managers must submit comprehensive plans in project certification applications that:

1) Describe a project manager’s plan to satisfy the 10 percent requirement; and
2) Work with the Low-Income Community manager on outreach and education efforts.
3) Project managers may propose alternative schemes in which 10 percent is allocated.

B) These will be reviewed on a case-by-case basis by the Commission. Project benefits and risks must ultimately be linked with discrete low-income residential accounts.

C) Every two years, the advisory group, Low-Income Community Manager, third-party administrator and Staff must participate in a public workshop to produce recommendations regarding the percentage of low-income allocation.
Keith Kueny
Energy Policy Coordinator
The Community Action Partnership of Oregon
350 Mission SE
Salem, Oregon 97302
(503) 991-9327
LEGLISATIVE BACKGROUND

• California SB 350 by Senate Pro Tem De Leon in 2015

Gov. Brown signs climate change bill to spur renewable energy, efficiency standards
CA Public Resources Code §25327.

(a) The Legislature finds and declares all of the following:
(1) There is insufficient information available to fully realize the potential of solar photovoltaic energy generation to serve low-income customers, including those in disadvantaged communities.
(2) There is insufficient understanding of the barriers to access for low-income customers to all forms of renewable energy being generated in the state.
(3) There is insufficient understanding of the barriers to access for low-income customers to energy efficiency investments.
(4) There is insufficient understanding of the barriers to access for low-income customers to zero-emission and near-zero-emission transportation options.

(b) On or before January 1, 2017, the commission, with input from relevant state agencies and the public, shall conduct and complete a study on both of the following:
(1) Barriers to, and opportunities for, solar photovoltaic energy generation as well as barriers to, and opportunities for, access to other renewable energy by low-income customers.
(2) Barriers to contracting opportunities for local small businesses in disadvantaged communities.

(c) On or before January 1, 2017, the commission, with input from relevant state agencies and the public, shall develop and publish a study on barriers for low-income customers to energy efficiency and weatherization investments, including those in disadvantaged communities, as well as recommendations on how to increase access to energy efficiency and weatherization investments to low-income customers.
PROCESS

Literature review

↓

Internal draft

- Internal review
- Community outreach
- Workshops

↓

Public Draft

- Internal and external review
- Workshops

↓

Final report with recommendations
La Comisión de Energía desarrolló el estudio sobre barreras mediante la realización de una exhaustiva revisión de la literatura, reuniones con comunidades de bajos ingresos y comunidades menos favorecidas al acceso de las energías renovables y eficiencia energética en general pueden clasificarse como estructurales o políticas/relacionados con el programa.

Las barreras estructurales, que a menudo son inherentes a las condiciones de pobreza como los grandes mercados de alquiler resultando en dividir los incentivos y estructurales o cuestiones de diseño a menudo asociados con casas antiguas. Estos tipos de barreras pueden ser mitigados, pero son a menudo difíciles de erradicar. Barreras políticas y programas incluyen: mercado de entrega en la que los programas pueden excluir de manera desproporcionada a los clientes de bajos ingresos, la necesidad de una mejor coordinación entre los programas, y la necesidad de una mejor utilización de la información para mejorar el diseño de los programas. Estas barreras pueden abordarse a través de cambios en el diseño del programa o la legislación.

Ahora que el estudio de las primeras barreras está completo, la Comisión de Energía trabajará con otras agencias estatales, grupos de la comunidad, partes interesadas, y la legislatura para acelerar el acceso a inversiones en energía limpia en comunidades de bajos ingresos.

Como próximos pasos, la comisión de energía tiene planes de:

- Celebrar talleres de ejecución a comienzos de 2017.
- Considerar los detalles específicos de implementación de las recomendaciones.
- Desarrollar los plazos para llevar a cabo las
Explore barriers to low-income participation, and opportunities for improvement in delivery of services to low-income communities, in state, utility and local energy efficiency and renewable programs. Panelists will be given the opportunity to make a short statement, then the moderator will lead a discussion.

**Moderator:** Jeanne Clinton, California Public Utilities Commission
Chuck Belk, California Community Services Development
Robert Castaneda, Low Income Oversight Board
Hazlyn Fortune, California Public Utilities Commission
David Jacot, Los Angeles Department of Water and Power
Sara Kamins, California Public Utilities Commission
Elizabeth Kelly, Marin Clean Energy
Maria Stamas, Natural Resources Defense Council

**Public Comment**

**Lunch Break**

**Panel: Providing Clean Energy in Low-income Housing**
Explore the unique challenges, financing and otherwise, to serving low-income multifamily housing and explore possibilities for better serving low-income housing with clean energy services. Panelists will be given the opportunity to make a short statement, then the moderator will lead a discussion.

**Moderator:** Allison Joe, Strategic Growth Council
Lisa Baker, Yolo Housing
Nick Dirr, Association for Energy Affordability
Sophia Hartkopf, TRC
Heather Larson, StopWaste
Shana Lazerow, Communities for a Better Environment
Phoebe Seaton, Leadership Counsel for Justice and Accountability
Wayne Waite, California Housing Partnership Corporation
STRUCTURAL BARRIERS

- Low home ownership rates

- Complex needs, ownership, and financial arrangements for low-income multifamily housing

- Insufficient access to capital

- Building age

- Remote or underserved communities
PROGRAMMATIC BARRIERS

• Market delivery

• Program integration

• Data limitations

• Unrecognized non-energy benefits
LOCAL SMALL BIZS IN DACS

- Lack of access to information
- Technical assistance and workforce development needs
- Lack of access to financial resources
- Lack of access to support, opportunity
RECOMMENDATIONS

• Don’t be afraid to be bold
RECO #1: TASK FORCE
RECO #2: COMMUNITY SOLAR
RECO #3: WORKFORCE
RECO #4: PILOTS

Change is the only constant
RECO #5: DATA
OTHER RECOMMENDATIONS

- Expand opportunities for renewable energy
- Enhance affordable housing tax credits/credit enhancements supporting clean energy upgrades
- Establish a pilot program for multiple regional one-stop shops
- Heightened consumer protection
- Collaboration with qualified CBOs
- Research, development, demonstration, and market facilitation programs include targeted benefits
- In-depth study to increase contracting opportunities
HOW IT WAS RECEIVED
Anuncio de Taller Conjunto de la Agencia sobre la Ley Senatorial 350
Implementación del Estudio de Barreras de Ingreso Bajo


Presidente Robert B. Weisenmiller es el Comisario principal para el IEPR de 2017, y estará acompañado por el Comisario Janea Scott, quien ha sido asignado como Comisario Principal de la Implementación del Estudio de las Barreras. Este taller será realizado conjuntamente con la CPUC, con el Comisario Cliff Rechtschaffen sirviendo como el Comisario Principal de CPUC. Un representante de la Junta de Recursos del Aire de California también puede estar presente. Otros Comisarios en la Comisión de Energía y la CPUC también pueden asistir y participar en el taller. Un quórum de Comisarios de la CPUC y/o la Comisión de Energía pueden estar presentes, pero no votos serán tomados.

Martes, 16 de Mayo de 2017
9:30 A.M.
Comisión de Energía de California
1516 Ninth Street
Primera planta, Sala de Audiencia Art Rosenfeld
Sacramento, California
(Accesible en Silla de Ruedas)
Bryan Early
Advisor to Commissioner Andrew McAllister
California Energy Commission

bryan.early@energy.ca.gov

(916) 508-7893
Daniel White

District of Columbia
All-IN: STATES, LOCALITIES, UTILITIES, AND NONPROFITS CREATING SOLUTIONS FOR UNDERSERVED COMMUNITIES:

AFFORDABLE SOLAR PROGRAM
2017 BETTER BUILDINGS SUMMIT

DEPARTMENT OF ENERGY & ENVIRONMENT
FEBRUARY APRIL AUGUST SEPTEMBER

• ANCs
• Environmental Stakeholders
• Age Friendly DC
• 2 Community Mtgs
• AOBA

Approximately ONE HUNDRED recommended actions

Briefings with 11 Agencies

SLIDE TITLE "TIMELINE OF EVENTS"

Change style of timeline thru:
SMART ART > PROCESS
This legislation would make the District of Columbia the first city in the United States to establish a Green Bank.
Daniel White
Energy Program Specialist
Energy Administration
Department of Energy & Environment
daniel.white2@dc.gov
Neil Matouka

Organization: Local Government Commission
Energize Fresno

$1.5 million California Energy Commission-funded Advanced Energy Community project under the Electric Program Investment Charge.

Energize Fresno is working to bring advanced energy technologies and clean energy to Fresno – a disadvantaged community disproportionately affected by poverty and pollution.
Objectives

1. Build a System
   - Project pipeline
   - Funding library
   - Resource verification and tracking toolkit

2. Apply the System in Fresno
   - Master Community Design and Community Recommendation Report

3. Share Tools with Communities Across California
Partners
Local Government Commission
Leaders for Livable Communities
The LGC Approach

Connecting Leaders.  Advancing Policies.  Implementing Solutions
Current Funding Paradigm

Community Vision (CAP, SCS, GP)

- Housing Agency
  - AHSC $400M
- Developers
  - Caltrans Planning Grants $10M
- Public Works
  - DWR Water/Energy Grant $60M
- Water Agencies
  - CARB Electric Vehicle $350M
- Fleet Managers
  - CPUC LGP Funds $154M (*13-14)
- Building Managers
  - CEC Public Buildings $40M

Comprehensive Community Visions are Siloed to Meet State Funding Parameters
Goal: Integrated Climate Funding Market

- AHSC $400M
- Caltrans Planning Grants $10M
- DWR Water/ Energy Grant $60M
- CARB Electric Vehicle $350M
- CPUC LGP Funds $154M ('13-14)
- CEC Public Buildings $40M

California Integrated Climate Fund

Integrated Community Resource Market

- Public Works
- Water Agencies
- Housing Agency
- Developers
- Building Managers
- Fleet Managers
Goal: Integrated Climate Funding Market

- AHSC $400M
- Caltrans Planning Grants $10M
- DWR Water/Energy Grant $60M
- CARB Electric Vehicle $350M
- CPUC LGP Funds $154M (’13-14)
- CEC Public Buildings $40M

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Fresno Energy Opportunity Zone

Fresno is among the most disadvantaged areas in California, suffering from high unemployment and disproportionate pollution burden.

We are developing a comprehensive plan for an Advanced Energy Community focused on the Blackstone Corridor and downtown Fresno.
What is an Advanced Energy Community?

- Minimize new infrastructure
- Zero Net Energy Community status
- Support grid reliability and resiliency
- Easier integration and alignment with CPUC procurement
- Replicable and scalable
- Financially attractive
- Affordable access to renewable energy and energy efficiency
- Incorporate smart-grid technologies
- Align with other state energy and environmental policies
Example: The Diamanti

- **Potential AEC Measures:**
  - Energy Efficiency
  - Renewable Energy
  - Battery Storage

- **Benefits:**
  - Higher rent
  - More comfortable
  - Lower energy bills

Source: http://www.thediamanti.com/
Example: Fresno City College

- Potential AEC Measures:
  - ZNE Transportation Design
  - Renewable Energy
  - Microgrid
  - Battery Storage

- Benefits:
  - Reduced traffic congestion
  - Ability to generate, store, and use own energy
  - Insulated from blackouts/brownouts
  - Lower energy bills
Example: Neighborhood

• Potential AEC Measures:
  – Renewable Energy
  – Energy Efficiency
  – Demand Response

• Benefits:
  – Lower energy bills
  – Less pollution
  – Higher home value
  – More comfortable houses
  – Improve grid reliability
Overview of Energize Fresno

INTEGRATED COMMUNITY RESOURCE MARKET ACTIVITIES

COMMUNITY VISION
PROJECT PIPELINE
FUNDING PLATFORM
VERIFICATION TOOLKIT
MASTER COMMUNITY DESIGN
DISSEMINATION
Funding

- Caltrans
- CARB
- IOU
- PACE
- HUD
- Private
- CPUC
- Bond
- CARB

Local Government Commission
Leaders for Livable Communities

www.lgc.org
Verification

Integrated Community Resource Market

Caltrans
GHG, VMT

DATA

GHG, PM
CARB
Energize Fresno

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www.lgc.org/energize-fresno
Arah Schuur

Commonwealth of Massachusetts
Energy Efficiency and Renewable Energy: Whole Building Approach

Arah Schuur
MA Department of Energy Resources
Energy Efficiency

Protected funding

Robust delivery network

High achievement
Energy Efficiency

Protected funding

Robust delivery network

High achievement
Renewable Energy

Significant funding

Multiple sources of grants

Multiple technologies
Energy Efficiency

Wx + other measures

On CAP agency schedule

Ruled by cost effectiveness test
Renewable Energy
Grant funded
Timing based on grants
Single-measure projects
“Add on” measures
Address all energy opportunities at one time

$$ / \text{various units}$$

Upfront cost

$$ / \text{mmbtu}$$

Lifetime cost
With one team
Align Energy Upgrade and Recapitalization Cycles

1. Approach Financier
2. Capital Needs Assessment
3. Underwriting
4. Loan Commitment
5. Construction
6. Monitor Performance

- Energy Audit / Scope of Work
- Incentives determined
- Construction
- Monitor performance, credit savings
1. EE + RE audits

Approach Financier

Capital Needs Assessment

Energy Audit / Scope of Work

Underwriting

Incentives determined

Loan Commitment

Construction

Monitor Performance

Construction

Monitor performance, credit savings
2. Whole building, performance based incentives
Thank You

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