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Report on June 20, 2016 Stakeholder Solutions Meeting

Additional submitted attachment is included below.

REPORT ON THE JUNE 20, 2016, MEETING DISCUSSING POTENTIAL SOLUTIONS TO OVERCOME BARRIERS TO ENERGY EFFICIENCY, RENEWABLES AND INTEGRATED SOLUTIONS

I. INTRODUCTION AND BACKGROUND

On June 20, 2016, the Center for Sustainable Energy and the Greenlining Institute co-hosted a meeting at the office of the Greenlining Institute to inform the California Energy Commission's report required by Senate Bill 350 on overcoming barriers to adoption of energy efficiency and renewable energy among low-income consumers and disadvantaged communities. Energy experts from a wide array of organizations attended the meeting, some in person and some remotely.

Breaking off into smaller groups, experts discussed potential solutions for overcoming these barriers. Below is a summary of each of the groups' key takeaways. The notes and list of attendees from each break-out group have been attached to this report, along with a summary of responses to the pre-meeting survey.

II. BREAKOUT SESSION COMMENT SUMMARIES

A. ENERGY EFFICIENCY SOLUTIONS

Greater stakeholder involvement is needed, as well as greater coordination of programs, a clear line of authority, and transparency in decision-making. The lack of consistency throughout utility programs makes it difficult for outside organizations to keep track of program progress. Greater coordination of programs and increased clarity in the chain of command would result in less unused funding and less confusion. Program timelines and funding should also be extended to increase participation.

Non-energy benefits to these communities, such as health, safety, and comfort, must also be taken into account and assigned values. A broader definition of "benefits" will result in more inclusive programs, and greater savings to low-income communities. Community members must be included in the energy efficiency and renewables workforce, and apprenticeships should be a part of any successful program.

B. RENEWABLES SOLUTIONS

It is of the utmost importance that program participants see actual bill savings. It is also important that community members have a stake in solar projects. This can be achieved by allowing community groups like churches to purchase solar, with each member having a stake in the project. These solar efforts should be visible within the community to increase participation. Additionally, solar job development within the communities being served is crucial for maximum community involvement and benefits.

C. SOLUTIONS FOR OVERCOMING COMMON BARRIERS TO RENEWABLES, ENERGY EFFICIENCY, AND INTEGRATED DISTRIBUTED RESOURCES

Goals and metrics must be set that both measures deployment levels and reflects people's priorities. A new tool could be developed to track progress toward action plan goals. While bill savings are crucial to a successful program, metrics should also include non-energy benefits such as health benefits.

Funding should be reserved for local governments and community-based organizations to perform community-driven planning. This involves the community in the planning process, giving community members a greater voice in what happens within their communities. It also allows for more successful program design with higher participation. Community feedback events should be designed differently than expert stakeholder events so that there is ample opportunity to attend and contribute.

This group was excited about combining the standardization benefits of statewide program administration with the flexibility benefits of implementation through a local or regional network. More local involvement is needed in program outreach and implementation. It's important to work with local nonprofits and environmental justice organizations who are working in the communities.

ATTACHMENT A - ENERGY EFFICIENCY SOLUTIONS

Energy Efficiency Solutions
Break-out Group - 6/20/16

Facilitator: Carmelita Miller, Greenlining Institute

Group 1 participants:
1. Maria Stamas, National Resources Defense Council
2. Andy Brooks, Association of Energy Affordability
3. Amy Dryden, Build It Green

Group 2 participants:
1. Dilini Lankachandra, Brightline Defense Project
2. Tovah Trimming, Golden Gate University (GGU) Environmental Law & Justice Clinic representing California Environmental Justice Alliance (CEJA)
3. Wayne Waite, California Housing Partnership Corporation
4. Ben Bartlett, California Clean Energy Fund
5. Erin Malcolm-Brandt, Center for Sustainable Energy

KEY TAKEAWAYS

- Longer timelines, coordination, and clarity: Programs timelines and funding should be extended to increase participation. Greater stakeholder involvement is needed. Greater coordination of programs, clear line of authority, and transparency in decisionmaking is needed.

- Community involvement and research: We must do a better job understanding LI market characteristics. Bias towards solar decreases EE effectiveness; focus should be on beneficiary interest, not industry preference. Community members must be included in workforce, apprenticeships must be included in programs. Reconsider whether unions should take contracts if they do not involve LI community members. Customers in program gaps must be addressed.

- Excited about LIWP: Low Income Weatherization Program is using innovative methods to provide a comprehensive statewide program that integrates EE and solar.

Discuss existing approaches, gaps, and solutions:

1. What structural or process changes are needed to enable significant improvements to low-income energy efficiency programs in California? (e.g. responsibilities for program design, process for developing portfolio, etc)

Program longevity

Andy: for LIWP program timelines; extending them, making funding secure for longer periods of time; RN: projects come about out of desperation (meeting funding deadlines) - this is a weakness

Did you find out who was supposed to be using the money? We see a lot of "they didn't do it, so we don't have to do it". In LIWP: there's a human resource constraint

Amy: Less invested in shorter-term projects; greater participation in longer-term projects. Here is your larger goal, and here are these three projects you can space out over time.

Silos leading to a lack of coordination

ESAP: coordination with building programs is a challenge

All utilities say they want it to work, but they have siloes in ESAP and Home Building--makes it inefficient to coordinate

If you take the ESAP measure off, it makes it harder to attain.

Within utilities: programs compete with each other for "savings"

Creation of a fork in the road--making people choose between ESAP and Energy Upgrade CA, Home Upgrade ("whole buildings program")

"How are we gonna sell this because our programs compete with one another."

They each have their own goals, but the mixed objectives make it harder to find deeper efficiencies.

Lack of CPUC resources and staffing

Maria: ESAP: 3 years of funding typically, then bridge funding. The program not being regularly updated is a structural barrier

ESAP challenges: not updating program on ongoing oversight--3-5 year review is inadequate

Lack of staffing @ CPUC

Consistency of "ESAP" programs across municipal utilities is also an issue

Lack of transparency on authority and decision making process

Maria: ESAP challenge: Utility programs lack of clear decision making structure. They each refer you to each other.

They will direct you to one another.

No clear line of authority.

Carmelita: lack of transparency in authority and decision-making process

Maria: Can there be an entity/ies that can come together and do the coordination of all low income EE?

ESAP program is driven heavily by Energy division and ALJ

Low Income Oversight Board - Created as an advisory board. Provide guidance on how CPUC low income programs should be designed. Nowadays: LIOB has an advisory role (less power). Not much oversight-type activities (= more power)

Maybe a separate agency?

I don't know if the Low income oversight board (LIOB) is the right group.

Over the years the oversight powers have been reduced. They are serving more of an advisory role.

Board members are community experts, from the community. If they truly had that oversight capability, then more oversight would happen.

Wayne: Multi-family low income market is hard to serve. They are developing these programs without consulting with stakeholder organizations. That is a real structural barrier.

Program consistency across service areas and program administrators

Carmelita: In ESAP there are proposals to getter better and deeper retrofits for multi-family units.

> Lack of consistency throughout utility programs--it makes it hard for outside organizations to keep track

PG&E went from one program to three, not sure if it went through. Only one contractor historically. There is just no consistency, and it translates into… it is hard for us to keep track of workforce issues. If there are specific workers who identified issues we have no way of consistently tracking whether the issue is statewide.

> **Carmelita**: Example in SWME&O--there's confusion in Decision as to who was supposed to request funding--CSE as administrator in the SWME&O proceeding, or IOUs in ESAP proceeding. There's unspent money (approved money); frustrating for GLI to see. We want IOUs to use the money, so it's frustrating to see unspent funds

To resolve this confusion: In SWME&O proceeding, we're developing different structure. There was approved money for ME&O for ESAP, but no one was using that money. For Greenlining it is frustrating to see the IOU's not using the money.

As **Maria** said, we need transparency regarding authority.

Lack of understanding of market and customer characteristics

Do we have an understanding of the needs of low income participants? **(Carmelita)**

> LINA report (ESA program) - is this assessment doing a good enough job?
> CHPC commented on LINA report--we had some problems with the methodology **(Wayne)**

Low-income EE difficulty: program designs limited to single-fam platform up until now

> There's a misunderstanding of the market characteristics (until now)
> As you design a study to assess something, you should really understand the characteristics of all segments you're trying to serve--e.g., affordable housing, multifamily housing, etc.
> In the LINA report, there's a significant omission re: affordable housing providers--nonprofit or for-profit

How do you understand how to deliver a program if you're not speaking to the people responsible for the decision of whether to go into a program?

Political and institutional bias

Wayne: EE suffers because there's institutional bias for solar. For example: Within MASH, there was a requirement in legislation re: efficiency

> IOU tried to implement that by requiring property and tenants to participate in these programs. What ends up happening is this resistance--from solar industry, housing industry, pointing out that you can't REQUIRE tenant to participate in this program. So what happens is… MASH program does a very minimal requirement--inspection, not even audit. You have a part of an industry that's taken up this minimalist habit

Then here comes AB 693: within the 693 platform, there's language to get to EE requirement

> The programs are over-siloed

The problem with 693 is that we look at it only as a solar program--we need to see it as more, as an EE program

Look at the problem from the beneficiary's POV, or utilities POV, and try to develop something for expediency

Political bias

Solar industry really wants to continue previous program (MASH)--because it serves interests of solar industry. For solar contractors, you just want to install panels on a roof--anything that delays that would cut into your profits. Thus, we should look at interests of beneficiaries, as opposed to interests of utilities and contractors

Workforce

Access to high-road EE jobs = structural barrier (small business issue)

Ben: unions must be addressed. Decades-long problem of unions not being inclusive of our communities

If local people are going to be reentry people, then the apprenticeship programs must be real. Otherwise, reevaluate whether to give these K's to union people at all

Carmelita: need to examine RFP process--is it fair and equitable?

We're trying to convince more people (including unions) to be more inclusive

Workforce inclusion is a very real factor in getting to our goals

In mainstream EE proceeding, there's more traction on this front

SB 350 has language: CPUC must look at workforce inclusion in disadvantaged communities in <u>mainstream EE proceeding</u>

Wayne: There are similar tensions in solar where unions struggle against policies that require inclusion in order for the unions to win a bid/project

Assign value to health, safety, and comfort

Carmelita:

ESA statute: CPUC must take into account health, safety and comfort of low income residents; there's a discussion on how to measure that

EE mainstream proceeding: there's no discussion on health, safety, comfort of non-low income segment

Wayne: The way we define benefits really determines how we look at the issues. If there was a broader definition, that would be one way to develop more inclusive programs.

We were talking about the role of local governments in program design, issues like water savings, etc.

2. How can multifamily EE programs be redesigned to enhance the value proposition (financial, health, etc) **to tenants and property owners?**

Groups 1 & 2 felt that the problems and solutions we discussed are applicable to both single and multi-fam buildings

Groups 1 & 2 found that Questions 3 and 4 are similar in that, like the answers to question #3, the solutions/answers to question #4 also require further research, demonstration, and expansion.

3. What innovative approaches to low-income energy efficiency programs or access should we research, demonstrate or expand? What solution are you most excited about?

Adding water (and health). All the programs are trying to leverage the water utilities. If there's some way to add water into the mix (combining water and energy to derive greater savings)

- LEAN Program in Massachusetts
- New York: Combining federal weatherization $$ with utility programs in New York

Carmelita: Current LIWP structure as implemented by AEA seems like a good program to integrate EE and solar

GHG is the direction we should all be going

- Giving incentives on dollar per metric ton CO2 saved
- Fuel-switching
- Paradigm shift: moving towards GHG

Maria: One-stop-shop for building owners

- Having some type of support services for owners or tenants
- Major metropolitan areas should have some sort of resource for owners that they can go to to access incentives resources

What's not working: going to utilities, asking about programs separately

- Good pilot city for this: Los Angeles
- Incentives structures for account reps need to be adjusted
- Utilities have account reps--they get bonuses for projects brought in
- They're incentivized to "sell" their own programs; however, this is harmful to creating a diversified programmatic solution

Competition between utilities incentivizes secrecy of successful programs. Thus, hard to leverage successes of individual utilities

- Admitting failure risks future IOU funding. Thus, perhaps, more effective to meet one on one with utilities

Reliable long-term funding for programs

Plea to the CEC (message on how to use this barrier study)

Andy: Who is the ultimate audience of the report? The answer to this question feeds back into the purpose of this report

Maria: legislature is the audience

- Highlighting fragmentation across state; coming up with solutions that legislature and other agencies could adopt

Carm: everyone (beyond just legislature) is the audience

Wayne: innovative approaches by AEA in Low Income Weatherization Program

- This program is the first comprehensive state-wide program that integrates EE with solar.
- The first holistic approach at state level that provides technical assistance (integrates a lot of services that are typically left to the stakeholder on his own)
- Model programs: LIWP; Bay Area REN Program;

If there is one upgrade to what AEA is doing with LIWP, what would it be?

- Dealing with energy behaviors
- Wayne: Half the problem may be the right way to design building
- Other half: **<u>how we use it</u>**
- The more intelligent people are about their consumption behavior, the more conservation there will be

Introducing these ideas to menus of EE will be helpful

Carmelita: How can the residents really take advantage of these programs in order to be more engaged in achieving state's energy goals?

- **Erin**: not specific to low income, but… Messaging and Marketing in EE
- Community based social marketing
- It's hard to reach people...financial incentives are not enough

Carmelita

- A lot of ME&O were not designed properly to move people to action.
- Could there be a single low-income program? Single state-wide offering

Andy: we've yet to see this

- Utilities seem amenable to it, but none of them have put it into play
- Could there be certain things like, "okay, even if there are regional differences, LIWP, ESAP, could we still have, say, 10 things (rules) that stay constant"

"What are the top-10 metrics that you must report up?"

- Reporting requirements challenges: PUC
- In LIWP: no level of detail needed as IOUs currently do **(Andy)**
- It's a waste of dollars to get those details
  - ESAP: unit by unit measurement/documentation
- Whole building approach: trying to collect all metric is the wrong way to do it because it's wasteful

One structural solution that may be helpful: knowing whether EE has been conducted already **(Maria)**

- Screening period (CSD) to find out what EE has been conducted
- CSD keeps track of what's already been done

Other data that's important:

- Honing in on the most important data points that CPUC wants, so that from a LIWP perspective, we can generate a tool
- There's ~40 data points

Gap Analysis - It'd be good to know what swathe of population is missing from "low-income community" guideline

- **Carmelita**: CEC needs to be clear on what it means to be "moderate income"/"disadvantaged commty"/"low income"

Streamlining eligibility

- Not having layered eligibility requirements
- Income is such a small qualifier--it's more environmental factors that impact finding of DAC
- Having flexibility in DAC boundary (geographic)

Maria: Low-income "czar"

- Someone in the gov's office who has authority to make recommendation to "streamline all of it"
- Similar to the discussion on having one entity to coordinate low income programs in CA
- Separate agency to handle low-income
  - CPUC is paid to only oversee CPUC programs; however, there's a need to coordinate all programs affecting low-income. We're doing a poor job coordinating

ATTACHMENT B - RENEWABLES SOLUTIONS

Renewables Solutions
Break-out Group - 6/20/16

Facilitator: Sachu Constantine, Center for Sustainable Energy

Session 1 participants:
Tovah Trimming, GGU Environmental Law and Justice Clinic (representing CEJA)
Subin Varghese, Sustainable Economies Law Center
Laura Wisland, Union of Concerned Scientists
Eddie Ahn, Brightline Defense Project
Sydney Fang, Asian Pacific Environmental Network
Amee Raval - Asian Pacific Environmental Network
Amanda Rees, 11th Hour Project

Session 2 participants:
Parin Shah, Asian Pacific Environmental Network
CC Song, Marin Clean Energy
Aaron Clay, SunSwarm

KEY TAKEAWAYS

- Bill savings and Community Stakeholders: Actual bill savings are crucial. Having a stake in solar may be more important than ownership, and community groups like churches may be a good way to make community members stakeholders.

- Visibility of Projects: There should be visibility of solar efforts within the communities. Job development is important for maximum community involvement and benefits.

- Loan Loss Reserves to leverage private lenders

Discuss existing approaches, gaps, and solutions:

1. **Which direct benefits to community members must a low-income solar program include to be effective? Which benefits are optional?** (e.g. bill savings, ownership, location, etc)

Laura: Bill Savings in the past were not guaranteed or well defined. How does it work with CARE?
Tovah: CARE rates are less lucrative; How will NEM proceeding address barriers? How to make it look like market rate value proposition?
Laura: CARE addresses only a small part of the LI community, so how do we make it broader?
Subin: Bill savings. Breadth of access vs achieving EJ goals. Ownership is core to equity. Privately owned vs. collectively owned.

Laura: Is a lease ownership?
Tovah: Visual reminders within community. Financing for ownership is big for CEJA.
Subin: SIngle family is about ownership. Memberships can be used for collective ownership, such as an LLC, community group, etc.
Sach: Is resiliency a must?
Subin: It's important, but below Bill Savings, Ownership, and Visibility.
Laura: Make sure CEC asks questions of communities to rank possible benefits, after they receive some information. They must ask the right questions.
Eddie: Job standards; access, career paths
Subin: Control of assets
Amanda: Tease out idea of resiliency; storage coupled with solar?
Sach: ME&O
Laura: Must be new solar, no repurposing
Subin: RECS not stripped out and resold

GROUP 2:
Parin: There is no magic bullet; there are different solutions for different situations. Bill savings are foremost. I don't want to say there is one solution, but an ownership model should be an option. Location could be advantageous. Politically we are trying to win hearts and minds in Tulare, etc.
Aaron: Bill savings are critical. Other benefits might be valuable, such as incorporating storage, EV charging for car sharing. Must address underrepresented/exposed communities. There must be visual engagement of the community.

CC Song: Ownership is imporctant, but what is the timeline? What pathways are there?

Aaron: A stake is more important than ownership. Shared benefits, investments, and rotating "ownership." Social groups like churches can get involved as owners, with members as stakeholders. Workforce Development is important, pathways to employment must be preserved, and partnerships with big companies implementing programs.

Parin: How do we distinguish, over time, the difference between stake and ownership? What are regulatory barriers? This report can open up the discussion. Smaller distributed storage might be part of this, but big storage is not a direct benefit. Must be careful of inadvertent environmental impacts. Must define benefit of resiliency and who receives benefit, and put a marker down to avoid unintended consequence. **Avoid displacement**

Aaron: storage is important to preserve value proposal of solar

CC: Need community in the workforce.

Aaron: Small companies need help. How do we build relationships with IBEW?

2. What can we learn from existing low-income and community solar models?

Amanda: Colorado Solar Gardens experience. New York Community Solar with 20-30% low-income carve outs didn't make much progress. Why? How do you achieve economies of scale through developer ownership portfolios?
Subin: Cooperative Power is a network of community-owned solar coops.
Tovah: 5% carve out in Colorado is almost arbitrary, is there a better number? Private capital needs a balance to enter into the market.
Laura: Are there existing programs that require solar on Affordable Housing?
Eddie: Grid Alternatives; Rising Sun job training. We need strong job placement opportunities. GoSolarSF guarantees wage floor, for example. The pressure is on training facilitators.
Laura: Are there Union opportunities? Should have discussions with companies like SolarCity

GROUP 2
Parin: LAANE/IBEW: pre-apprenticeship rungs to get people on energy career paths; LADWP.

Parin/Aaron: NY REV low-income carve out was problematic because of its time limit.

CC: Chevron refinery MCE Solar 1 (10.5 MW brownfields), includes jobs piece

3. What are the gaps in our knowledge about overcoming renewables barriers, and what do we need to research or demonstrate to fill these gaps?

Laura: Fear of enforcement of Code Violations; improvements to building structure, what is available
Sydney: Training and placement: the city and county workforce development boards and resources can be involved. Public Housing infrastructure.
Amanda: Storage benefits
Laura: ME&O effectiveness

GROUP 2 General agreement on list above

CC: EVSE programs provide us some opportunities
Parin: Phase issue of deferred maintenance. We must look more broadly at the reality. TO CODE opportunities.
Aaron: Community Outreach through technology to lower costs, platform tools, model structures.

4. What solution are you most excited about?

Laura: This report should create accountability and action.
Tovah: Loan Loss Reserve to leverage private lenders, and PACE.

Laura: This article may be of interest (I'll also send it to the CEC for their lit review):

Sharon J.W. Klein, Stephanie Coffey; Building a sustainable energy future, one community at a time; Renewable and Sustainable Energy Reviews 60 (2016) 867–880; available at: http://www.sciencedirect.com/science/article/pii/S1364032116001854

Here's the abstract:

Solving energy issues requires integrated solutions at all societal and institutional levels. Community renewable energy and energy efficiency initiatives offer a complementary model for renewable energy deployment and have several advantages over the prevailing "*top down"* strategy employed in the US. In this paper, we present a review of the theoretical basis for community energy as a catalyst for energy behavior change; examine contrasting viewpoints of the definition of community energy; and review community energy literature. The first literature review compares energy behavior lessons from context independent individualistic and context dependent collective action theories. The review of community energy literature lists the energy option and geographical focus of more than 70 community energy studies from around the world and summarizes key lessons from this literature. In addition, we also present the data sources for a new US Community Energy Database that will be publicly available in the near future and introduce a new classification system for community renewable energy projects based on the results of this database. Finally, we present recommendations for future research in this rapidly growing field.

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ATTACHMENT C - SOLUTIONS FOR OVERCOMING COMMON BARRIERS TO RENEWABLES, ENERGY EFFICIENCY, AND INTEGRATED DISTRIBUTED RESOURCES

Solutions for Overcoming Common Barriers to Renewables, Energy Efficiency and Integrated Distributed Resources
In-Person Break-out Group - 6/20/16

Facilitator: Stephanie Wang, Center for Sustainable Energy

Session 1 participants:
Wayne Waite, California Housing Partnership Corporation
CC Song, Marin Clean Energy
Erin Malcolm Brandt, Center for Sustainable Energy
Parin Shah, Asian Pacific Environmental Network
Dilini Lankachandra, Brightline Defense Project
Ben Bartlett, California Clean Energy Fund

Session 2 participants:
Eddie Ahn, Brightline Defense Project
Maria Stamas, National Resources Defense Council
Andy Brooks, Association for Energy Affordability
Amy Dryden, Build it Green
Amanda Rees, 11th Hour Project
Subin Varghese, Sustainable Economies Law Center
Laura Wisland, Union of Concerned Scientists
Sydney Fang, Asian Pacific Environmental Network
Amee, Asian Pacific Environmental Network

KEY TAKEAWAYS

- Design Goals & Metrics: Set goals and metrics for this action plan that both measures deployment levels and reflects people's priorities, such as bill savings and health benefits. Track how many people were reached by ME&O efforts, and then how many people actually went through with the program. Develop a new tool for tracking progress toward action plan goals.

- Foster Community-driven Planning: Need funding for local governments and community-based organizations to perform community-driven planning. Design community feedback events differently than expert stakeholder events to attract participation.

- Support Adoption of Integrated Solutions: Group was excited about combining the standardization benefits of statewide program administration with the flexibility benefits of implementation through a local or regional network.

Discuss existing approaches, gaps, and solutions:

1. **How to design goals and measure progress**

Ben - Need data as to what's actually deployed and how many many people have jobs, not just dollars spent. How many apartment owners are participating?

Parin - It starts with quality of life. What are the factors that play into improved quality of life and breaks out of the issue of silos, like specific technology or jobs or economics, and then think about measurement. If we just look at renewable penetration, we're not getting at what makes life better for people.

Steph - What types of data will measure this?
Wayne - It's hard to tell what people are getting, like ESAP. What if there is no performance standard? We need an independent clearinghouse for data that meets privacy concerns.

Steph - Universal standards for metrics for programs, for example household environmental health

Parin - Must set goals. What are the number of households who have renewables/EE. What is the max range of households who have a share of renewables/EE. Is there a strategy around stabilization, or around maintaining instead of displacing existing residents? We must focus future growth in terms of economic/jobs growth.

Andy - Focus more on the carbon metric.

Laura & Maria - How many people were reached, and then how many people actually went through with the program.

Subin - Measure resiliency and adaptation for climate change. Economic benefits and equity, just able to access energy one point, own it then 2 points, and if you have bill savings 3 points.

Amee - Who's getting the energy jobs, and how many jobs are there? What is the level of community engagement.
Laura - Quality of the jobs as well.

Amy - Expand the value proposition of these programs. Like LISC & NY aligning EE and health. Also diversity of participation. Think about things like extreme heat. Think about longer term impacts of climate change

2. **How to foster community-driven planning of programs, projects and outreach**

Erin - Work with community groups who aren't necessarily involved in energy issues, but are the people we need as allies. See what Massachusetts is doing. When there was funding for new staff positions at those organizations, between what they are already doing and all of us, that's how you get people at the table.

CC Song - Public workshops have been really useful for program design. You get feedback from community members. MCE's worked with WE&T and community environmental action organizations
Parin - MCE did a good job and is useful as a model. MCE may have a write up, and be able to recommend case studies.
CC - Will see if we have a good case study.

Dilini - Holding meetings in evenings when people aren't at work, snacks and drinks, child care, transportation support, provide resources.
Erin - Like translation.

Wayne - In the past, IOUs have defined what's available for EE. In those types of proceedings, it's people with vested interests in programs. There is a disconnect with how markets really work, if local governments would re-engage. Use case study BayREN and SoCalREN.

Ben - Paid organizing. We need people on the ground, need to translate the value.

Steph - Need demonstration project funding for innovative community-driven planning and community value, not just technology demonstrations.
Erin - Massachusetts has good examples.
Parin - This is a metric of success.

Parin - There are different roles for agency groups, experts like here, then community groups. CEJA is going to do workshops across the state, which will lead to not just a report but also an action plan. Acknowledge those circles.

Maria - Process based metrics to track how many community meetings are held, how many public comments, and response periods for programs.
Laura - How did you get the word out, and in which languages.

Amee - Work with community based organizations.

Andy - Local government outreach events.
Laura - Ensure funding for this work.

3. How to support adoption of integrated distributed resources or suites of solutions (e.g. solar plus storage plus energy efficiency)

Erin - When a contractor is going to pitch DR, they aren't necessarily an expert in selling or installing other energy technologies. How siloed are the contractors and third party implementers. We should get them better trained and connected.

CC Song - Carbon is a central metric. We need a simplified methodology for working with combined technologies. Also develop single point of contact.

Wayne - Redefine metrics. Metric has to be broad enough. Link to transit and water conservation. For example, integrating ESA and Home Upgrade is such a battle with institutional dynamics.
Parin, Steph - Institutional dynamics is an important barrier.
Steph - Those who have run these programs for a really long time won't be driving the change.

Parin - Start with people. Programs should serve people, not the other way around.

Ben - Describe another version of CalEnviroScreen with ready reference that includes data and clearinghouse.
Parin - Mash up with one stop shop, enviroscreen doesn't include programs for people.
Steph - Inclusiveness data tool, like EnviroScreen but different data.

Andy - Incentive level is the driver for program participation.

Maria - Cut down number of administrators, separate programs, eligibility requirements by having local entities administer multiple programs.
Amee - I second that. And support community members for applying to complicated processes.

Subin - Give communities flexibility to create local programs. Neighborhood pitches some ideas, then funding is funneled to specific solutions. Solicit applications from communities.
Andy - Need one authority for combined funding.
Amy - Need balance, need some statewide consistency.
Andy - Other discussion on too many offerings, single statewide administration, could have statewide approach implemented on the local or regional network.
Maria - Excited about that. High level standardization, and then local level flexibility.
Subin - Get down to local level of participation; we need a bottom up approach as well.

Steph - Connect community and grid planning. Local governments and community organizations need resources to be part of the process.

4. What solution are you most excited about?

Wayne - Design a program around the tenant first.

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ATTACHMENT D – (REMOTE PARTICIPANTS) SOLUTIONS FOR OVERCOMING COMMON BARRIERS TO RENEWABLES, ENERGY EFFICIENCY, AND INTEGRATED DISTRIBUTED RESOURCES

Solutions for Overcoming Common Barriers to Renewables, Energy Efficiency and Integrated Distributed Resources
Remote Break-out Group - 6/20/16

Facilitator: Lauri Walker, Center for Sustainable Energy

Participants:
Nehemiah Stone, Stone Energy Associates
Marti Frank, Community Energy Project
Shayna Hirshfield-Gold, Energy Policy Analyst, City of Oakland
Melanie Santiago-Mosier, Vote Solar
Jennifer Somers, Energy Foundation
Aaron Burgess, NextGen Climate America
Alana Mathews, Public Adviser, California Energy Commission

KEY TAKEAWAYS

- Local involvement: Need more data on how LI households use energy, using existing local organizations

- Non-Energy Benefits: Savings evaluations should include non-energy benefits. Look outside of the direct service model to reach more LI customers.

- Coordinate with communities: Any program should focus on overcoming community-specific barriers and coordinate efforts with local LI organizations to reach more people.

Discuss existing approaches, gaps, and solutions:

1. **How can we increase direct benefits to community members** (e.g. bill savings, investment benefits, health, etc)?

Nehemiah - We need a better understanding of how LI households use their energy. Any effort to try to increase penetration in LI communities must start with a more data-based understanding of how they use energy and make energy-related decisions.

Marti Frank - What types of measures have LI households installed or not installed? What proportion have high-efficiency vs. low-efficiency appliances. We currently don't have a good sense of what commonly available measures have low penetration rates among LI households.

Shayna- We could easily get this kind of information. For example, Rising Sun Energy Services based in Berkeley. CA Youth Energy Services is funded mostly by PG&E and runs through East Bay Energy Watch, which educates homeowners and renters on energy use.

2. **How can we motivate industry and/or utilities to increase deployment** of distributed resources in low-income and disadvantaged/underserved communities?

Nehemiah - We must count all of the benefits, not just energy benefits, so that it appears more cost-effective to those who are deploying. If you only count energy savings, it's not a very cost effective-looking estimate. (NEBs = non-energy benefits)

Shayna - Catching NEBs is important. Must work with local nonprofits and EJ organizations who are working in the community, even for case studies to capture those NEBs

Marti - We currently give greater benefits to households with higher energy burdens. Recent demographics of participants in CA IOU EE programs showed the typical cost of a retrofit is about $10,000, though many participants are under 50K income. Do these customers really spend 20% of household income on an energy upgrade in a single year? (2010-2012). What motivated those participants to take advantage of the program?

-- ERA funds? Possible that decreased out of pocket funds, can find out if can access that data set.

3. **How can we improve program delivery and access** (e.g. standardize qualifications, create low-income packages of programs, etc)

Nehemiah - We must think outside the box a little bit more. LI households typically feel like they don't have as much control over their lives as they'd like. To the extent they can be made to feel this control, there is a higher participation rate. Program delivery & access can be increased if we can put decision-making control into the hands of LI households.

Marti - We fail in our characterization of energy users. We look at our society in a binary way (LI v. General Population) because we either have, for example, direct install of appliances (no choice), and incentive programs (choice). We see there is a gap in the middle that stretches into LI households. People go out to purchase appliances, but we tend to incentivize high-cost products. We need to look outside of the direct service model to see how we can reach more LI households. How do people make purchases, what do they buy, where are the gaps in measure adoption, who are we trying to reach? Where do they buy, how do they buy (installments?), who is buying?

4. **What solution are you most excited about?**

Shayna - Working with local providers. As we aggregate barriers and solutions, we end up with a lot of anecdotal data aggregated across a lot of very diverse communities. Oftentimes, it's attitude combined with fears of variables, need for structural improvements, etc. Lots of nonprofits working on the ground and giving resources to LI people are the groups that can really make a lot of difference.

Lauri - Each community is different in some ways. Using local providers is definitely the way we need to look at this.

Jenn - Agree with Nehemiah about asking how we help ensure that the families are getting engaged in the process in a thoughtful way. There are a lot of challenges. Hearing the stories of the impact is part of the solution. There are so many programs, how do we best streamline these programs so that it's easy for LI programs in single- and multi-family homes to access the programs?

Nehemiah - the efforts that have been most successful include benefits for a range of *people*. Split-incentive challenges, and challenges in sharing energy across numerous meters when it was being generated from one. Once these issues were solved, participation went up dramatically. How do we get the largest range of actors to benefit from the programs? Manipulate programs so as to overcome community-specific barriers.

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ATTACHMENT E – PRE-MEETING SURVEY RESPONSES

(See following page)

Contributor	(1) Recommended solutions for use in report, to increase EE, renewables, and IDR for LI consumers and DACs	(2) What barriers require new solutions, and how should we identify and validate those solutions?	(3) What current research and demonstration projects in CA and beyond may result in new solutions?	(4) Additional solutions
Tovah Trimming, Environmental Law and Justice Clinic	Financing mechanisms - Loan Loss Reserves and On-Bill Financing. For example, CA approved leverage of ratepayer EE funds for credit enhancements to provide incentives to lenders to improve credit terms.		In MA, the Mass Solar Loan program connects residents and property owners with lenders that offer low interest solar financing. Mitigates lender risk through…Loan Loss Reserves (LLR). Loan classifications are based on credit score. LLR is an amount set aside by the MA Clean Energy Center - certain amount of funds in a reserve account to cover eligible lender losses based on the system owner's qualifying FICO scores.	
Stephanie Wang, Senior Manager of California Policy & Strategy, Center for Sustainable Energy	Massachusetts has a successful Community Action Program that provides a single point of contact for the state's low-income assistance programs. This approach (save time, don't assign homework) is really important for both program design and ME&O/access design.	We need to show how distributed resources meet community priorities. We should demonstrate community-driven local planning of high levels of distributed resources in disadvantaged communities.	CSE is working on a socio-cultural research project under EPIC that will provide insights into increasing the effectiveness of ME&O efforts and program design	
Andy Manny, VP Strategic Development, Promise Energy	Align efforts with the solar and whole building energy efficiency programs in the state. Include residents outside IOU territory, as they represent a significant portion of low-income and DAC residents. Recommend Energy storage and Community solar.	Split incentive challenge to reaching tenants in multifamily low-income housing, including financial motivation, bandwidth and capacity issues, as well as technological, interconnection, and utility programmatic barriers.	Promise Energy is currently working on a number of ZNE, Energy Storage, and Deep Retrofit projects for low-income multifamily residents.	

Subin Varghese, Community Renewable Energy Director, Sustainable Economies Law Center	Community-owned: allows greater local capture of economic benefits. Shared Renewables: avoids pitfalls of other community renewable models, typically has thrid party owners or utility owners who pass on savings via bill credits. Energy Efficiency Cooperatives in conjunction with or independent from collective entitites focused on renewables, need to follow up with more info	Regulatory barriers: limits of the GTSR, NEM, and VNM programs in CA. Limits of CCA purchasing. Financial barriers: raising capital for project, either with or without tax equity partners. To identify and validate new solutions, need research to support demo projects to help communities ID funding sources & connect to municipal lessors. Develop	Currently in research & development of new solutions for community-owned renewables, specifically to recommend legal models to address regulatory and financial challenges. Energy Solidarity Cooperative explores generation projects.	Projects developed under the GTSR Enhanced Community Renewables program
Erin Malcolm-Brandt, Project Manager, Buiding Performance, CSE	Create energy related jobs to involve community in energy efforts, with apprenticeship tracts and classes to help people qualify (high school and math courses)	Promote energy services through institutions already providing low-income services (CalFresh, home repair, etc). Appropriately-targeted outreach.	Use behavior market research	
CC Song, Regulatory Analyst, MCE	Energy Efficiency: leveraging existing programs, relying on trusted messengers for enrollment and education, and addressing barriers through alternative eligibility critieria.	Energy Efficiency barriers: fear of enforcement of existing health and safety code violations, privacy infringements, and immigration enforcement action. Lack of synergy. Current CPUC program funding presents barrier for program admins to leverage low-income and multifamily EE funding, Existing EE programs do not adequately incorporate GHG-	MCE collaborates with Zero Net Energy Alliance on EPIC-funded pilot project to study deployment of advanced energy tech in Richmond. Cal Low-Income Weatherization Program for Large Multifamily has been successful due to several design details that address aoption barriers, incl. single point of contact, GHG reduction, and streamlined eligibility requirements. EPA case studies on benefits of renewable energy and energy efficiency	

SolarOne, and Amanda Rees, The 11th Hour Project	Within the context of expanding solar we believe that cost reductions and access to diverse financing options can be realized through portfolio aggregation, through which multiple, proximate rental properties owned and managed by the same entity are included in a single solicitation for solar EPC and/or finance. Increased project scale and CAPEX through aggregation (multiple properties, one	The objective of directly distributing economic benefits from solar to low-income households faces many barriers; most notable are 1. household financial constraints and histories among low income households, which severely limit investment potential; 2. low levels of home and property ownership among low-income households, which	Solar One's Here Comes Solar initiative is actively pursuing demonstration project opportunities in 2016 in partnership with one or more New York City community development corporations (CDCs). The demonstration projects will involve the deployment of small shared solar installations (50 KW) on CDC properties that a sample of 20-30 current individually metered resident households of CDC rental units could subscribe to and thus realize	
Wayne Waite, Policy Director, California Housing Partnership Corp.	Integrate and consolidate energy efficiency programs: integrate utility general EE programs with low-income EE programs. Redesign multifamily EE program to enhance value proposition to tenant and property owner: statewide utility program like LIWP and Bay Area REN. Link multifamily soalr programs with EE mandates: link AB 693 and NSHP with statewide multifamily EE programs. Offer		CHPC currently involved in On-Bill Repayment pilots, Solar PV and Energy Storage research, technical assistance/financial assessment models of Solar PV economics for affordable MF housing. NEM proceeding on DG in DACs and implementation of AB 693.	Association for Energy Affordability, Brightline Defense, CEJA, Better Building Challenge participants, Global Green, Stop Waste.