**California Energy Efficiency Coordinating Committee-Hosted Working Group on Underserved Customers**

**5th and Final Meeting of the Phase 1 WG**

**July 12, 2021 1:30-4:00pm**

*See Supporting Documents on* [*Meeting Page*](https://www.caeecc.org/7-12-2021-uwg-mtg)

Facilitators: Dr. Scott McCreary & Katie Abrams, CONCUR Inc.

On July 12, 2021, the CAEECC hosted its fifth and final meeting of the phase 1 Underserved Working Group (UWG or WG) via WebEx. 29 WG Members (including Leads, Proxies and Ex Officio) and members of the public participated. A full list of meeting registrants is provided in Appendix A.

For each sub-section below, key discussion points and agreements are summarized. The “Next Steps and Wrap Up” section below, captures next steps discussed throughout the meeting.

**Agenda Review, Goals for the Day, and Equity Metrics WG Announcement**

Scott walked through the agenda and meeting goals. He reiterated that the goal of the Working Group is to identify who is underserved (in Residential, Small-medium business (SMB), and Public sectors) and ways to address it (e.g., through definition of Underserved, reframing hard-to-reach (HTR), or other means). He reiterated that per the Prospectus, the approach involves conducting analyses to identify underserved customers in the three sectors; identify root causes; and develop recommendations for forum/process to address each type of Underserved customer.

He noted that this would be the final meeting of the Working Group – that due to data limitations a Phase II was not warranted and that the findings of the WG would inform the Equity WG launching July-September 2021.

**Small-Medium Business Sector**

Theo Love (Green Energy Economics) presented the final analysis, findings and conclusions on the SMB sector research being led by UC Irvine and Green Energy Economics. The report is available on the meeting webpage (see link above, *Small-Medium Business Underserved WG report 7.2.21 (7.12.21),* under “Documents Posted Before the Meeting”).

Following the presentation, Members posed the following clarifying questions and comments:

* L. Jacobson: Focusing in on Rurality, can you provide the source? If you have an urban-rural connected community, did you look at penetration rates in those zip codes as compared to rural communities that don’t border urban communities?
	+ T. Love: We used the 2010 IRR (Index of Relative Rurality) – see Figure 10 in the report. The greater the density, the lower the incentives – this may make sense when one large project can skew the results for a zipcode. We’re happy to talk about this offline.
* M. Garcia Paine: Can you elaborate on your observations relative to “noisy” data? We were all concerned about data quality and would love to hear more about what you learned.
	+ T. Love: We’re comparing two datasets, so already doing an abstraction, with some tricks to reduce the noise. That said, there were some outliers and other data processing that we needed to do. Fortunately the data set is large, somewhere around 4M claims that we ended up reducing to less than 1M. We removed all zip codes that had 10 or fewer unique participants, because that was really leading to a lot more noise in the data. Also hypothesize that population business density in smaller zip codes could create noisy data.
* J. Dodenhoff: Might Enviroscreen 4.0 have any effect on this analysis?
	+ T. Love: It may. Can’t recall if this would cover the same time period. It was released in the middle of our analysis, and I believe it’s still in draft form
* J. Dodenhoff: How would you sum up the SMB investigation’s bottom line with respect to reporting out to the CPUC? I did not see a lot of information that provided clear indication that we (CAEECC) came up with significant findings that would clearly show a HTR definition which is significantly different than the CPUC's, which is really at the heart of this work.
	+ T. Love: The number of employees plays a significant role, but the results are nuanced. It’s hard to say definitively that a definition is incorrect, but findings could support shifts in program design. I believe it’s part of one definition used. Also, note that we’re working with correlations; we didn’t know the actual size of the businesses.

T. Love concluded that the SMB research team is open to additional comments on the report. S. McCreary thanked the team for their hard work over many months.

**Public Sector**

University of California Santa Barbara (UCSB) Professor Ranjit Deshmukh introduced his student team: Michelle Le, Audrey Meiman, Austin Covey, Atherv Gole, Measrainsey Meng, Nathaniel Villa, and Sydney Litvin. The Public sector report (not the presentation) is available on the meeting webpage (see link above, *UCSB Report – Public Sector – draft 7.8.21 (7.8.21),* under “Documents Posted After the Meeting”).

Following the presentation, Members posed the following clarifying questions and comments:

C. Malotte: Is it true that there was significant impact of rurality for the Public sector but not in the SMB sector analysis?

R. Deshmukh: I’m curious, did the SMB team look at co-linearity with its variables? Business density with rurality may show up as significant

T. Love: We didn’t do a multi-variate analysis for this set of variables; density is not the same as geography. Did the Public sector use RUCA at the zipcode or census tract level?

M. Le: Our SMB analysis aggregated all the census tracks within a specific city boundary

T. Love: Note that we removed K-12 data from our data set but there may be overlap with other programs

* L. Rothschild: Would you say that the results were statistically significant, or that some limitations on the datasets that made it difficult to reach a definitive conclusion?
	+ M. Le: We can definitively say that rurality plays a significant role. Showing those regressions side by side is a significant result in of itself, showing us that IRR does show up in the T test results for all three different groups, as well as the regressions for counties. And I think that's an important takeaway for our research.

**Residential Sector**

Co-Chair Jenny Berg (BayREN) presented key findings and conclusions from the Residential sector report finalized in January 2021. J. Berg acknowledged she would not solicit questions or comments on the analysis since she was summarizing the findings submitted in January, and could not represent the Residential sector team (who was unable to attend the meeting due to scheduling conflicts). J. Berg did not provide a presentation; however, the Residential sector report is available on the meeting webpage (see link above, *UC Davis report – Residential sector 1.4.20 (7.2.21),* under “Documents Posted Before the Meeting”).

Highlights from J. Berg’s verbal overview of the Residential analysis are as follows:

* **Background**:
* Lead by Professor Alissa Kendall and a bright and energetic team of students at UC Davis; completed analysis in December 2020; report posted to CAEECC website January 2021
* USC’s prior analysis summarized earlier this year focused more on a simpler correlation coefficient, and the UCD team considerably expanded the statistical and analytical approach
* Will present a few key findings today; note that the report is final and the research team is not available to make revisions (in contrast to the Public and SMB sectors, where CAEECC members’ can make suggestions to inform potential revisions for the research team’s consideration). Also note that Carol Edwards, SCE, provided feedback after the report had been finalized; her comments will be referenced in the WG final transmittal to the CPUC
* **Key Findings:**
* Overall, the statistical analyses by zip code demonstrate that populations underserved by energy efficiency programs are within zip codes that have this array of characteristics: older housing stock, lower income residents, a higher proportion of renters, and a higher population of Native Americans.
* Results differ depending on the response variable and the method of analysis. A host of response variables were used in order to capture participation, energy savings, and dollar savings, and demonstrate the challenge of defining what “being served” by a program means. The multivariate regression, for example, identified a few socioeconomic categories as an indicator of populations being served (including: residents under the poverty line, older housing, a higher population with a disability, a higher population with no healthcare, a higher population of Native Americans, and a higher renting population). The t-test results were statistically significant, indicating there is not an equal distribution of benefits among energy users in relation to their socioeconomic characteristics.
* **Challenges Posed by Data Limitations – particularly salient for the new Equity Metrics Working Group**
* The CEDARS database provided the claims data and program information
* The claims data details information about program administrator spending and resulting savings, but does not capture or report any information about the program participants.
	+ In considering potential strategies to better analyze the types of participants in residential energy efficiency programs, one approach would be for program administrators capture high level sociodemographic information and home energy usage information about program participants and report to CEDARS.
* The CEDARS database could be a stronger tool to support this this analysis if it incorporated key indicators for populations the program is intended to target. For example, noting if a program is intended to target lower income participants or participants in older housing would be useful.

**Wrap Up & Adjourn**

In summarizing next steps, S. McCreary reiterated that this is the final WG meeting and noted that a key next step in closing out the Working Group is submitting a report to the CPUC.

Co-Chair J. Berg asked CPUC ex-officio representative N. Strindberg to comment on his recommendations relative to appropriate next steps. The following discussion ensued:

* N. Strindberg: There are a few options, including the WG filing a motion for the CPUC’s consideration, a Petition for Modification (PFM), or sending the reports to the service list (the latter is an informal approach that is more geared towards making the report generally available). The most likely next step is probably a motion for the CPUC’s consideration, similar to the CAEECC EE (Energy Efficiency) Portfolio Filing Process WG. The CPUC could then reject the motion, or they could put out a ruling and ask for people to comment on it; likely followed by more followup.
* C. Malotte: Unlike the EE Portfolio Filing Process WG, we don’t have that second step of policy recommendations - would it be helpful to have a motion that doesn’t include policy recommendations? I recommend we leverage the results from this research in the Equity WG; and suggest we leave it to PAs to include policy recommendations – this may be the best avenue for proposing changes to the HTR definition. SCE, for example, has been considering a proposed modification to the Public sector HTR definition.
* L. Rothschild: The Prospectus from April 2020 included a problem statement to have a proposed definition of Underserved or, and/or reframe the current definition of HTR and so I would like, as we step away from this meeting today to understand if there is a consensus agreement on how we treat this in the Equity working group launching this week.
* J. Berg: It should definitely be rolled into the Equity WG, but given data limitations, we as Co Chairs are not sure that the findings are sufficiently clear enough findings to warrant a Phase II. I agree with Chris’ recommendation is appropriate: for Program Administrators (PAs) to include policy recommendations in our filings. PAs could work together to align on policy recommendations for a potential revised definition and then put that in our Business Plan applications, though I am not sure that any PA is at a point to commit to that
* L. Medina: The analysis has provided data that reinforces what is already apparent in SoCalREN’s territory; we will look to add the Public sector in the HTR definition. We struggle with lack of resources and rurality, so this data is valuable to support our challenges.

**Next Steps**

*Facilitation team:*

* Develop meeting summary (this document) and circulate to UWG for review – by 7/21
* Determine, in consultation with Co-chairs, the most appropriate way to share the WG findings with the CPUC and close out the Working Group – [note, on 7/20, the decision was made for NRDC to submit a motion to the CPUC, including an Executive Summary memo (drafted by the Facilitation Team) linking to each of the research reports – to be submitted in mid-August]
* Transmit a WG process evaluation to members – in conjunction with submitting the final report – mid-August

*Working Group members and co-chairs:*

* Review the meeting summary by 7/28
* NRDC to submit a motion to the CPUC, including an Executive Summary memo (drafted by the Facilitation Team) linking to each of the research reports – mid-August
* WG members to complete a process evaluation, which will be circulated in conjunction with submitting the final report – mid-August

**Appendix A: Meeting Registrants**

|  |  |
| --- | --- |
| **7.12.21 Underserved Working Group Meeting**  |  |
| **Company** | **First** | **Last** |
| 3C-REN | Alejandra  | Tellez |
| BayREN | Jenny  | Berg |
| CA State Treasurers | Jonathan  | Verhoef |
| Code Cycle | Dan  | Suyeyasu |
| CPUC | Alison  | LaBonte |
| CPUC | Ely  | Jacobsohn |
| CPUC | Mia  | Hart |
| CPUC | Nils  | Strindberg |
| Gemini Solutions | Anthony  | Kinslow |
| Green Energy Economics | Theodore  | Love |
| Ground Research | Jenn  | Mitchell-Jackson |
| LGSEC | Lou | Jacobson |
| Lincus | Patrick  | Ngo |
| RCEA | Aisha  | Cissna |
| SCE | Christopher  | Malotte |
| SCE | Sonita | Tan |
| Silent Running | James  | Dodenhoff |
| SoCalREN | Lujuana  | Medina |
| The Energy Coalition | Laurel  | Rothschild |
| Tierra Resource Consultants | Nicholas  | Snyder |
| UCI | Ed  | Coulson |
| UCSB | Atherv  | Gole |
| UCSB | Audrey  | Meiman |
| UCSB | Meas  | Meng |
| UCSB | Michelle  | Le |
| UCSB | Nathaniel | Villa |
| UCSB | Ranjit  | Deshmukh |
| UCSB | Sydney | Litvin |
| Viridis | Mabell  | Paine |
|  |  |  |