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

**4th Meeting of the Phase 1 WG**

**February 24, 2021 1-4:00pm**

*See Supporting Documents on* [*Meeting Page*](https://www.caeecc.org/2-24-21-underserved-wg-mtg)

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

On February 24, 2021, the CAEECC hosted its fourth meeting of the phase 1 Underserved Working Group (UWG or WG) via WebEx. Fifty-three 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.

Meeting materials are provided on the CAEECC website at: <https://www.caeecc.org/2-24-21-underserved-wg-mtg>

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.

**Introductions, Background, Goals and Approach**

Scott walked through the agenda and meeting goals. He reiterated that the goal of the Working Group is to identify who is underserved (in Res, SMB, and Public) and ways to address it (e.g., through definition of Underserved, reframing 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

Katie provided an overview of WebEx housekeeping items. She then shared highlights of the WG Prospectus, calling out the Phase I Scope/Approach section, which identifies the main elements of the analysis and the process for determining the forum through which to share the results.

Alma Briseno from SoCal Gas introduced herself as a new CAEECC member. She is a Senior Program Manager on the Public sector partnerships program team. She mentioned she has been in touch with Michelle Le on the Public sector research team.

As noted later in the meeting, the Co-Chairs aimed to pinpoint the analysis, especially for the Residential sector, on identifying underserved customers who are experiencing high energy burden but are not eligible for low-income program assistance (such as Energy Savings Assistance Program or California Alternate Rates for Energy (CARE).

**Co-Chair Update**

Jenny Berg noted that when CAEECC leadership discussed the WG’s scope with Energy Division, the impact of the analysis was unknown. She stated that this remains the case. She expressed her gratitude for the students and faculty supporting this effort.

**Public Sector Update**

Michelle Le presented the draft workplan from the UCSB team’s analysis of who is underserved in the Public sector. The broader UCSB team includes Professor Ranjit Deshmukh, Audrey Meiman, Austin Covey, Matt Lai, Measrainsey Meng, Nathaniel Villa, and Sydney Litvin (in addition to Michelle Le). This presentation is available on the meeting webpage (see link above, *Public Sector Workplan Presentation by UCSB (2.26.21),* under “Documents Posted After the Meeting”).

Following the presentation, Members posed the following clarifying questions and suggestions to hone and refine the analysis:

C. Grace: **Why isn’t K-12 included in the analysis?**

M. Le: Chris Malotte suggested focusing on higher education since K-12 is going to receive a lot of separate funding in the coming years through AB841

C. Malotte: We can explore K-12; there were some data issues obtaining all data. AB841 funds may also play a factor in resource availability. Offered to follow up offline.

R. Deshmukh: Unless we obtain data to capture the full universe of K-12 school programs, it will be hard to do the analysis accurately (so would need a complete dataset to make it worthwhile to include K-12).

A. Briseno: K-12 was formerly under Commercial, not the Public sector. SoCal Gas can offer data for 2019.

J. Dodenhoff: If the data in 2017 includes NAICS code tags, then couldn’t the data be extracted using that tag?

R. Deshmukh: Is there likely to be just one NAICS code?

T. Love: There are technical nuances inherent in doing this data gathering. Offered to followup offline on NAICS codes and CEDARS.

L. Rothchild: **Has 2020 data been considered, especially for K12 schools?**

M. Le: If data is available it can be included

L. Ettenson: We won’t get official data until May, and 2020 was a covid-year, so the data likely won’t not enable an apples-to-apples comparison.

A. Briseno: K-12 actually out-performed expectations in 2020 because of school closures, which allowed more efficiency upgrades to take place

R. Deshmukh: Appreciate the idea of expanding the dataset. Current proposal is for years 2017-2019 (possibly 2020). Ideally, we’d have data pre-2017, but due to data limitations (see “Limitations” slide), 2017 is the first year for which we can analyze data. Our hope is that the years for which we have data is a representative dataset – and that we can use this data to analyze the research question, which focuses on gaps in certain communities and demographics.

L. Ettenson: Were K-12 schools categorized as small-medium business or commercial? For UCSB’s research efforts, we provided only Public sector data, though the UC Irvine team or I may be able to provide SMB data from the data request done for that sector

A. Briseno: For SoCal Gas, it’s categorized as small-medium business

C. Malotte: For SCE, K-12 would have been tagged as commercial. Suggest pulling data by programs rather than by pulling all commercial sector data.

L. Rothchild: **Will the research also look at non-resource programs, in light of the increased focus on non-resource programs in the public sector?**

M. Le: We are looking into this but don’t yet have a methodology defined in our workplan

A. Meiman: Does anyone have recommendations for analyzing non-resource programs, since they may not have energy savings associated?

L. Rothchild: Suggest looking at non-resource at a program level, not by zip code or County. Program dollars invested may be the best focus.

A. Briseno: **Will you look at percentage of cost covered?** Customers always want higher incentives, especially for very high-cost measures. We suspect this may be an issue for participation. **Also, will on-bill financing (OBF) participation be part of the analysis?**

M. Le: Yes, the analysis includes percentage of cost covered

L. Ettenson: The analysis for all three sectors was not going to focus on why things aren’t happening, though the WG is planning to raise questions on why that may be, so that we can inform policy changes. It would be informative to look at participation in efficiency overlaid with OBF, if the analysis can do this.

T. Love: Layering OBF participation is feasible because there is a field for whether an efficiency claim is also associated with OBF participation.

K. D'Amico: California Hub for Energy Efficiency Financing (CHEEF) has authorization from CPUC to launch OBF in commercial in summer 2021, though not operating in Public sector currently. Interested parties can follow CHEEF’s financing efforts through the CPUC proceeding.

S. McCreary asked R. Deshmukh for a timeline of when the Public sector research team anticipates incorporating their analysis. R. Deshmukh noted that it would be feasible to provide status updates approximately every four weeks and complete the analysis by the end of the Spring 2021 quarter (which ends June 11th).

**Residential Sector Update**

The UC Davis residential team presenters include Alissa Kendall, Kristen Bush, Mark Lozano, Jessica Dunn, Tobiah Steckel, Leslie Nelson, and Sadia Gul. Their presentation included the preliminary findings shared at the December 2020 Residential sub-WG meeting, as well as the final results presented in the report completed in December 2020.

This presentation is available on the meeting webpage (see link above, *Residential Analysis Presentation by UC Davis (2.26.2021)*, under “Documents Posted After the Meeting”).

Following the presentation, Members posed the following clarifying questions and suggestions to hone and refine the analysis:

* C. Edwards: **Why aren’t low-income programs such as Energy Savings Assistance (ESA) and California Alternate Rates for Energy (CARE) included in the analysis?** The CEDARS database is associated with energy efficiency not low-income programs. The low-income sector represents 1/3 of the state. So, it concerns me that we’re drawing conclusions without including low-income programs, which spends millions of dollars on this sector.
	+ L. Ettenson: Did you (C. Edwards) participate in the Residential sub-WG? This was on the research team’s radar, but it was a challenge to overlay the two datasets. If we submit this data to the Commission, we will certainly include this as context. The purpose of this phase is to analyze data.
	+ C. Edwards: Some of the income data reflected in these slides would qualify for low-income programs. The language in reports should be changed in places, for example it should not say “low-income population is underserved”
	+ A. Kendall: We were constrained by the data available to us in the 10 week timeframe. We didn’t work with the low-income data so cannot speak to that.
	+ T. Steckel: A way to address this shortcoming could be similar to what UCSB did by parsing out data at a certain level. Another solution could be to look at spatial distribution.
	+ J. Berg: ESA programs were never part of this analysis.
	+ L. Ettenson: Asked Carol Edwards to flag areas in the report that could be misleading in the context of CARE and ESA programs.
	+ C. Grace: Customers who qualify for ESA could qualify for higher efficiency benefits. So, excluding ESA was intentional and logical for this study design.
	+ T. Love: How can we obtain low income data so we can incorporate it into this analysis?
	+ L. Ettenson: The reason we advised against doing this is because the Commission authorized this WG to focus on folks not in low-income
	+ J. Berg: The terminology “low-income” can also encompass customers who do not qualify for ESA
* C. Edwards: **Suggest acknowledging that CalEnviroScreen has a broader scope than solely energy pollution**. It reflects more than just energy-related pollution, such as lead. As a source, it’s important to acknowledge the broader scope beyond energy pollution.
* A. Arquit: **On Table 2**, **are the lower and upper quintiles statistically significant?** Also, I would like to see us go one step further to look at load drivers and savings potential so that we know whether the programs are designed to address these trends. The 2019 RASP data shows a large shift of about 85% increase in plug loads.
	+ T. Steckel: The researcher who did this portion of the analysis is not on the call today, but based on what I know about the methodology, I would guess that all of these are statistically significant
* T. Howard: **Has any consideration been given to CPUC’s attention to affordability**? The CPUC hosted today a workshop on Cost and Affordability of the Grid of the Future and will soon launch the Affordability and Metrics proposal, which includes three essential metrics: affordability ratio, hours of minimum rate, and socio-economic vulnerability index.
	+ L. Ettenson: The next phase for those CPUC proceedings is how to use the metrics and apply across proceedings.

**Small-Medium Business Sector Update**

Theo Love presented an update on the SMB sector research being led by UC Irvine and Green Energy Economics (T. Love). This presentation is available on the meeting webpage (see link above, *SMB Updated Analysis Presentation by UC Irvine (2.26.21),* under “Documents Posted After the Meeting”).

At the conclusion of the presentation, T. Love extended a request for assistance obtaining data for all non-commercial programs. L. Ettenson noted that the UCSB research team had to ask the CPUC for the full data set that was originally requested, after only a partial dataset was provided. She suggested T. Love ask Amy if the partial dataset was intentional or if she can provide the full dataset.

Following the presentation, Members posed the following clarifying questions and suggestions to hone and refine the analysis:

* L. Ettenson: **Are you confident in the conclusion that some of the variables, such as provision of services to black people, weren’t statistically significant – or could that be a data limitation?**
	+ T. Love: We cannot draw any conclusions from the coarseness of the data we have. We’re looking at a zip code level data. If we were looking at actual claims data, or had access to the full non-residential dataset, we may be able to draw firmer conclusions.
* J. Berg: BayREN focuses on business size, i.e., 10 or fewer employees, and target non-English speaking SMBs. Glad to see this element of the analysis confirm the importance of our focus in this sector.
* L. Jacobson: **Does the spatial analysis evaluate penetration levels across geographic locations?** For example, one might assume that it’s easier to serve small SMBs in the Bay Area compared to Humboldt or Mono County, based on geographic location.
	+ T. Love: On the “Demographics- R2 (out of 100)” slide, you can see many target variables are statistically significant. If you look at actual coefficients, they’re generally positive – higher population sees more investments and more savings. Interestingly, SMB penetration has a slightly negative correlation. It would be interesting to do an overlay on suburban, rural, or urban penetration. We also discussed at looking at results by program administrator, which may also have an effect. But there’s nothing beyond population size on what we can see.
	+ L. Jacobson: Would love to see spatial analysis to see whether it would reveal distinctions between a level of service in urban vs. rural community. I would hypothesize that rural communities are underserved. Offered to share dataset offline.
* J. Dodenhoff: **What percent of the claims data represents direct install programs?** Theoretically this is the target SMB program. Offered to assist with CEDARS query.
	+ T. Love: Offered to followup with % measure cost offline.

**Next Steps & Wrap Up**

In taking stock of the completing progress towards the aims of the Prospectus, S. McCreary noted the encouraging progress despite challenges in data acquisition and decoding meaningful data – and the need to focus on who is underserved, root causes, and recommendations for the appropriate forum or process to address any identified gaps.

S. McCreary summarized a few themes of the analysis and progress thus far: a plea for greater completeness of datasets and granularity thereof; impetus for study design; multivariate regression, spatial and possibly cluster analysis; and suggestions for greater alignment with CPUC definitions.

S. McCreary then asked the Co-Chairs and members to provide feedback on progress to date:

* L. Ettenson: The greatest value we’ve seen thus far is the need for more data. The analysis has pointed to trends and to questions about data, but at this point, it doesn’t appear we have a sufficiently compelling case for to suggest policy changes. The CPUC hosted an Environmental and Social Justice action plan workshop a few weeks ago. Utilities may have more data than members have been able to obtain so far, and thus be better equipped to dig into demographic analysis.
* J. Berg: Agree that all of this good work is a steppingstone and speaks to the lack of data available to non-IOU stakeholders. The next step is not necessarily direction we anticipated at the onset of WG, but the research has been very informative, nonetheless.
* L. Medina: Expressed appreciation for the work that’s been done. Agree that the WG is not ready to submit proposed policy changes but believe there’s a need for that. The key issue is data. IOUs don’t collect strong demographic data, so we have a gap in our understanding of the underserved segment. We know there’s a large gap in minority segments, but we’re not really identifying who they are because we don’t have the data. I’m curious how we’ll obtain the necessary data to answer the question the WG started out addressing.
* C. Malotte: IOUs may have more granular data, but it will be a challenge to obtain and share all IOU data. Even though we may not be ready to promote policy changes, it’s encouraging that we’re not seeing huge discrepancies in participation and other measures across demographics.
* E. Novy: The UC Davis presentation referenced a series of maps showing spatial distribution of customers across different quartiles. Noticed some of the data is outside the service area of the IOUs, especially on Native American reservations. In short, there are nuances that we can assist the research teams to better distill their data while also augmenting their datasets.
* C. Edwards: Starting a needs assessment for Low Income customers; data is becoming more challenging because of Consumers Protection Act. May be able to look at most recent 2019 California Energy Commission Residential Appliance Saturation Study (RASP) as a resource to overlap with current residential dataset. Of note, it includes a breakdown by income level.
* L. Ettenson: As we summarize progress to date, suggest developing a matrix identifying where the WG is confident vs. uncertain vs. ‘no comment’ in concrete results.
* T. Love: Are there evaluations or baseline studies we can leverage, such as participant surveys?
* L. Jacobson: Reemphasized the need for more detail to exhaust this analysis.

S. McCreary and L. Ettenson reviewed the research status and approach to completing the working group charge– namely a refined analysis, the possibility of future meetings, and a summary report or presentation of analyses to the full CAEECC or CPUC. The progress of each of the sectors is as follows: Residential sector analysis completed in December 2020, SMB on track for spring 2021, and Public sector expected in summer 2021. S. McCreary thanked participants for their engagement and research teams for the diligence and hard work.

**Facilitation Team Next Steps**

*Facilitation team:*

* Develop meeting summary (this document) and circulate to UWG for review
* Email UWG members progress updates and schedule meetings, as appropriate, as additional research is completed

**Research Leads and Members Next Steps (organized by sector)**

*Cross-cutting*

* *Provide research teams with evaluations or baseline studies, such as participant surveys*

*Public sector*

* *Consider adding K-12 schools*
	+ C. Malotte to work with UCSB team on K-12 schools (is there sufficient data to include them in the analysis?)
	+ T. Love to work with UCSB team on using NAICS codes and CEDARS data to explore K-12 data for Public sector analysis

A. Briseno can provide 2019 SoCal Gas data, if needed

* *Consider analyzing non-resource programs, in light of the increased focus on non-resource programs in the public sector*
* *Consider layering OBF participation*
	+ T. Love to assist with layering OBF participation

*Residential sector*

* *Consider providing context for low-income program participation*
	+ C. Edwards to review report in detail and flag areas that could be misleading in the context of CARE and ESA programs
* *Consider acknowledging that CalEnviroScreen has a broader scope than solely energy pollution.*

*SMB sector*

* *Obtain data for all non-commercial programs*
	+ T. Love to ask Amy (CPUC) if the partial dataset was intentional or if she can provide the full dataset
* *Consider evaluating impact of rural/urban/suburban penetration using spatial analysis*
	+ L. Jacobson offered to provide T. Love with an appropriate dataset
* *Consider quantifying the % of claims represented by direct install programs*
	+ J. Dodenhoff offered to assist with CEDARS query

**Appendix A: Meeting Registrants**

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| --- | --- | --- |
| **First Name**  | **Last Name**  | **Company**  |
| Alejandra | Tellez | 3C-REN |
| Jennifer | Berg | Association of Bay Area Governments |
| J | Dadabhoy | CAPOC |
| Brian | Samuelson | CEC |
| Dan | Suyeyasu | CodeCycle |
| Katie | Abrams | CONCUR |
| Scott | McCreary | CONCUR Inc |
| Ashley | Watkins | County of Santa Barbara |
| Jordan | Christenson | CPUC |
| Mia | Hart | CPUC |
| Nils | Strindberg | CPUC |
| Don | Arambula | DAC |
| Anne | Arquit | Enervee |
| Lou | Jacobson | Eureka City Schools |
| Nancy | Barba | Frontier Energy |
| Anthony | Kinslow II, PhD | Gemini Energy Solutions |
| Theo | Love | Green Energy Economics Group |
| Alice | Sung | Greenbank Associates |
| Renee | Rainey | ICF |
| Patrick | Ngo | Lincus |
| Alice | Havenar-Daughton | MCE |
| Lara | Ettenson | NRDC |
| Ashlyn | Kong | Public Advocates Office |
| Stephen | Kullmann | Redwood Coast Energy Authority - Eureka, CA |
| Hal | Nelson | Res-Intel |
| Corey | Grace | Resource Innovations |
| Wells | Brown | Rising Sun Center for Opportunity |
| Carol | Edwards | SCE |
| Christopher | Malotte | SCE |
| Brandon | Sanders | SCE |
| James | Dodenhoff | Silent Running LLC |
| Courtney | Kalashian | SJVCEO |
| Ted | Howard | Small Business Utility Advocates |
| Alma | Briseno | SoCalGas |
| Benjamin | Piiru | SoCalGas |
| Lujuana | Medina | SoCalREN/County of Los Angeles |
| Kaylee | D'Amico | State Treasurer's Office |
| Candis | Mary-Dauphin | StopWaste |
| Laurel | Rothschild | The Energy Coalition |
| Tobiah | Steckel | UC Davis |
| Jessica | Dunn | UC Davis |
| Alissa | Kendall | UC Davis |
| Mark | Lozano | UC Davis |
| Kristen | Bush | UC Davis |
| Ranjit | Deshmukh | UC Santa Barbara |
| Ed | Coulson | UCI |
| Austin | Covey | UCSB |
| Michelle | Le | UCSB |
| Audrey | Meiman | UCSB |
| Meas | Meng | UCSB |
| Matt | Lai | UCSB CETlab |
| Edmund | Novy | USGBC-LA |
| Anthony | Segura | WRCOG |