

**Response to Recommendations (RTR) in Impact, Process, and Market Assessment Studies**

**Study Title:** Process and Load Impact Evaluation of the Disadvantaged Communities-Single-Family Affordable Solar Housing Program (DAC-SASH)  
**Program:** DAC-SASH  
**Author:** Evergreen Economics  
**Calmac ID:** CPU0354.01  
**ED WO:** N/A  
**Link to Report:** [https://www.calmac.org/publications/DAC-SASH\\_Evaluation\\_2023.pdf](https://www.calmac.org/publications/DAC-SASH_Evaluation_2023.pdf)

				IOU/PA (if applicable)	
Item #	Page #	Findings	Best Practice / Recommendations	Disposition	Disposition Notes
				Choose: Accepted, Rejected, or Other	Describe specific program change, give reason for rejection, or indicate that it's under further review.
1			Primary recommendation is to define programmatic goals and metrics conclusively.	ACCEPTED	<b>Response:</b> GRID will collaborate with CPUC's Energy Division to define goals and metrics to ensure its activities maximize program efficacy and impact.
2	106	The current incentive amount is \$3/W. The current cost for installation and materials is closer to \$5/W; changing the incentive amount requires a policy change by the Commission, and raising the incentive would need to be weighed against the benefits of stretching program dollars by leveraging TPO relationships and grant funding. Page 6: with	It may be appropriate to raise the incentive amount beyond the \$3/W cap to match the rise in construction costs and inflation (e.g., compare actual program costs over time to the incentive level).	ACCEPTED	<b>Response:</b> As stated below for item #3, we agree and look forward to next steps as soon as possible. The solar supply chain has been burdened as of March 2020 - equipment shortages, construction costs, and persistent inflation reduced the offset of total project cost that the \$3/W incentive level was modeled to cover. This means that GRID had to increase gap funding simply to achieve program goals. GRID recommends that the incentive level be increased closer to the level found in the Evaluation. When this occurs, GRID will continue to bundle gap funding to enable more households to participate, which should have the effect of meeting or even exceeding the implicit annual program goal of 2.8MW (listed in the program PIP). If increasing the \$/Watt incentive is not possible in the short-term (2023), it would still be very beneficial to the program to fund the non-PV construction barriers (noted below for item #5), such as reroofs and electric panel upgrades. <b>Timeline:</b> Q3-Q4 2023
3	105-106	rising costs of materials and labor, total project costs are likely to increase such that the gap between the incentive and the actual cost of the project may be more challenging to overcome in the future.	To substantiate the stated need for a higher incentive level, GRID should share data on what staff time is spent fundraising to fill the gap (i.e., to show the total cost of the project to be compared with the incentive level). Though this time is not funded by the program, knowing how much time is spent will strengthen the argument to increase the incentive. Ideally, the incentive level could be set so that it encourages GRID to continue to acquire external grant funding which ultimately helps to reduce program costs and extends the reach of program funding	OTHER	<b>Response:</b> Instead of going through a lengthy exercise (when the funding gap is clear after this lengthy evaluation process), GRID proposes increasing the \$/watt for DAC-SASH incentives to be closer to the average project cost identified by the evaluator. By increasing incentive support to a higher share of total project cost, this allows more of GRID's philanthropic funding to be directed toward addressing project-specific barriers outside the scope of DAC-SASH. Although GRID can derive sound estimations of staff time expended securing gap funding for projects, it is not currently practical or cost-effective to track fundraising in this way at a granular level. Many grants are used only in part as DAC-SASH gap funding, which would further complicate this exercise. We believe that through open dialogue we can come to a \$/watt level that works for the program, Energy Division, and GRID. But if necessary, GRID can provide an estimate of the costs of fundraising for single family solar projects but believes that focusing on fundraising expenses is not the most fruitful way to proceed. GRID will continue to acquire external gap funding because we recognize that layering multiple sources of funding has a multiplier effect on program goals, as the evaluator posits. GRID's mission is to scale clean energy impacts to the benefit of more income-qualified households, and this is best achieved when incentive rates are updated. GRID's philanthropic funding or grants are indeed intended to be additive and a force-multiplier. <b>Timeline:</b> Q3-Q4 2023
4	106	Note that providing systems at no cost is not a program requirement, but reflects how GRID has designed the program	Alternatively, GRID could adjust its program model to allow participants to cover part of their project costs though this would impact GRID's ability to market the program as truly no-cost and would likely identify a new cost barrier that is very likely to exist amongst this population.	OTHER	<b>Response:</b> For context, the SASH final report that Evergreen prepared states on page 4 that "Future programs should leverage GRID's model of administering SASH, utilizing local sources of grant funding to help cover full costs of installation so the program is no-cost to low-income households." Additionally, the Evaluator recognized that adjusting the program model to offer low-cost services instead of no-cost services creates a new barrier. While we do not push clients to contribute now, it is currently an option and homeowners do in some cases contribute to their PV system. In addition, clients often already pay or contribute to address construction barriers if GRID does not have sufficient gap funding. With NEM 3.0 the savings that DAC-SASH participants will receive from solar will drop from ~90% of their utility bill to an estimated savings of ~40% of their bill on average. Considering this change, GRID does not consider it appropriate to ask for contributions from most clients (who must qualify based on 250% of the FPL). Finally, while the practical considerations for taking payments from clients do not pose a great challenge, the real burden is one of clear messaging in an already complicated landscape and potential misunderstandings. For this reason, GRID believes it is best to continue using the current messaging and then informing some clients of an option to cover gap costs if the project cannot move forward otherwise. <b>Timeline:</b> N/A

5	98	The PA also fundraises outside of the program to help homeowners become solar-ready so they can be served by DAC-SASH, but the current level of growth will become harder to sustain as the program moves to serve remaining households with housing stock barriers.	The program should use a combination of dedicated program funding and/or external funding procured by GRID to complete roof repairs, electrical upgrades and required tree trimming for projects to address housing stock barriers.	ACCEPTED	<b>Response:</b> This recommendation is key to building more projects faster for eligible households, and we recommend that the added funding come from GHG auction proceeds because GHG auction proceeds have increased YoY since Q4 2020 and the amount of annual funding to each program has either remained flat (SOMAH and DAC-SASH) or stopped (CS-GT and DAC-GT). Current program funding is well under the cap per Cal. Pub. Util. Code § 748.5 and AB 1550. Next, GRID seeks to ensure that households are more fire-safe and prepared to adopt electrification technologies that will help reduce emissions and mitigate the impact of TOU on real-time rates. As the Evaluator reports on page 57, "of all projects completed under DAC-SASH, almost half (42%) recorded some professional service. Electrical service upgrades were the most common, with 153 projects, but roof-related expenses were the most expensive on average." While GRID looks forward to co-leveraging SCE's new electric panel upgrade or main service panel (MSP) program for homes pursuing EV chargers, this is only part of the solution. See Table 25 from the Evaluator report for the average costs of these services. These expenses are currently paid for by GRID or by customers that can afford to upgrade their homes, and in many cases the project does not move forward due to lack of funding. Our proposal is that for customers that have signed a DAC-SASH contract, that a simple adder be approved for projects for which dedicated funding from IOU programs is not available. GRID recognizes that adders at reasonable levels may still not cover the full cost to remedy the barrier, with MSP upgrades for example costing \$5,000 or more in some instances. Still, partial program support, supplemented by federal dollars or philanthropic dollars as discussed above, will increase program participation. Where the number of eligible properties is low, such as in SDG&E territory, increasing the number of viable homes is critical to the success of the program. <b>Timeline:</b> ASAP in collaboration with ED
6	98	Without a stated expectation about how much growth should be sustained through the course of the program, it is challenging to say if the program is successful.	GRID and ED should consider using the rate of market adoption of solar panel installations over time as a reference point for setting more specific, voluntary benchmarks for the DAC-SASH target population (E.g., CalDGStats tracks NEM interconnections, which is a proxy for solar installations going back to 1996). The program will be best served by establishing annual targets and a program goal for the total number of households to participate before the program ends.	OTHER	<b>Response:</b> GRID creates annual targets each year. For example, the 2022 goal was to install 620 projects and in 2023 the goal is to install over 800 PV systems or projects. GRID's annual targets are based in part on 1) the available funding and also in part on 2) the regional capacity and staffing in any given year or quarter. The targets are adjusted several times each year in order to be more accurate. For example, in some quarters one region will be more focused on its residential pipeline more and in the next quarter it may have a large commercial pipeline to focus on instead. For the full program, while there is no project count goal, there is a MW goal of 34.6 listed in the PIP. Currently the program has installed over 6.6MW according to CalDGStats or almost 20% of the stated capacity goal over 4 years (the program launched in Q3 2019). Finally, the rate of market adoption may not be an appropriate benchmark considering this is a program intended to serve those that are often not being served in the regular market. DAC-SASH is not a market transformation program and the homes served by the program are unlikely to go solar without the program's financial support. GRID is committed to working with CPUC and other stakeholders to further define program goals and metrics. At the household level, ensuring that participating homes receive significant utility bill/energy burden relief is an important marker of program success. <b>Timeline:</b> Ongoing
7	104	Related to customer location, the data show that eligible distribution does not align with the funding distribution across IOUs.	We recommend that GRID review Evergreen's analysis of eligible households and consider focusing efforts in areas with higher rates of eligible households. GRID can use this analysis to set up target installations at the regional level. In its response to GRID comments, Evergreen noted that "We do not recommend changing eligibility requirements for specific regions as this would change the goal of serving the same population (low-income DAC customers) across the state."	OTHER	<b>Response:</b> GRID will review Evergreen's analysis of eligible households in an effort to focus on areas with higher rates of eligible households. In SDG&E the eligible population remains very low (especially when construction barriers are accounted for) so there is only so much GRID can do using the evaluator data. Roughly 3% of current projects are in SDG&E's service territory, and 2% of the estimated eligible population is located in SDG&E (page 5 of Evaluator report). In SDG&E territory, SDG&E acknowledged that CPUC programs intended to benefit income-qualified families in CES DACs in its territory results in non-use of program funding because too few customers qualify. As such, SDG&E recommended the CPUC adopt the SDG&E service territory DAC definition. This is demonstrated with their empirical findings and recommendations in AL 4086-E. As found in AL 4086-E "SDG&E is requesting to broaden its DAC definition to the service territory definition approved within Advice Letter 2827-E" (p.3). In addition, in 2020 in response to GRID's PFM, the Public Advocate Office agreed with GRID's request to expand geographic eligibility beyond CES DACs. In order to give the program a better chance of serving income-qualified households in SDG&E service territory and beyond, GRID proposes aligning with the EPA definition of DACs (or J40 communities). to be considered for DAC-SASH. In addition, if program eligibility is expanded in this way, GRID proposes that in instances where program funds become scarce within a utility territory, that households qualifying under the original criteria be given priority over homes that qualify under an expanded criteria. This approach preserves the original intent of serving households in CES DACs first and foremost, while acknowledging objective barriers that exist in the SDG&E territory. This framework - needs-based prioritization - holds the potential to protect the fidelity of the intent of these investments in DACs while expanding program impact when dollars are available to serve more low-income Californians. <b>Timeline:</b> GRID to report back by Q4 2023 if there will be major shifts in regional volume based on Evaluator data, and work with ED on broader changes suggested.
8	100	CARE enrollments may be low because customers are required to re-enroll every two years, and GRID staff members reported that many participants did not know this.	GRID should send an annual follow-up letter and email to customers reminding them of related programs (ESA, CARE which requires reenrollment every two years). Including bi-annual reminders for CARE enrollment will help ensure customers stay on the CARE rate after involvement with GRID.	OTHER	<b>Response:</b> GRID implemented these changes in Q2 2023, with reminders about ESA and CARE added to the existing annual survey (sent by email on the 1-year anniversary of participants' DAC-SASH system installation). We do not currently have capacity to send out USPS letters on top of the emails that are sent. We also added an ESA Program reminder to the post-installation survey that is sent by email after each installation is complete. CARE is not included in this post-install survey, as participants will have just been signed up for CARE (if not enrolled already) and we do not want to overwhelm clients with redundant or unnecessary information after install and risk that they not read any of the survey. Next, while these reminders may help somewhat with low enrollment, they will not solve the low enrollment concern. We can all do more to ensure clients understand and benefit from the ESA and CARE/FERA programs. In 2024 we may create a California-specific page on our website that has more information about these important programs. We will also continue to work with the utilities to provide them with feedback about DAC-SASH clients' experiences and brainstorm ways to improve participation in ESA and CARE or FERA. <b>Timeline:</b> Q2 2023 - complete
9	99-100	"...these enrollments are low (46% for CARE and 19% for ESA of eligible participants). CARE enrollments may be low because customers are required to re-enroll every two years, and GRID staff members reported that many participants did not know this."	GRID could call the utility with the customer while doing the on-site assessment to check if they are enrolled in CARE and to help facilitate the enrollment process if they are not currently enrolled.	ACCEPTED	<b>Response:</b> With the onset of NEM 3 this is even more important and in SCE territory GRID is signing up for Capitation and helping customers get signed-up in that way, if not already on CARE or FERA. In PG&E and SDG&E we are working with the IOUs to use our referrals to ESA that are already shared each month to have the IOU proactively sign -up homeowners for CARE or FERA (since they have been income-qualified for DAC-SASH by that point); this process of proactively signing clients up through DAC-SASH referrals is easier for customers and for GRID and can be done in a bulk format. This is currently optional for IOUs but should be formalized in statute as a requirement in order to streamline CARE/FERA sign-ups for DAC-SASH participants. <b>Timeline:</b> GRID has signed up for SCE Capitation and hopes to have auto sign-ups approved with SCE by early 2024.

10	100 and 3	"...these enrollments are low (46% for CARE and 19% for ESA of eligible participants). CARE enrollments may be low because customers are required to re-enroll every two years, and GRID staff members reported that many participants did not know this."	"GRID should be coordinating more closely with ESA contractors to provide complementary solar services. ESA and DAC-SASH share the same income eligibility requirements and a growing number of ESA contractors hold the appropriate licensing and expertise to install solar and to provide home radiation services." AND "Make a recommendation to align Energy Savings Assistance (ESA) program site visits with the on-site assessments for this program though that will require additional coordination with ESA contractors."	REJECT	<b>Response:</b> GRID refers a qualified list of DAC-SASH customers to the IOUs each month (as mandated by the program) and does not have capacity to coordinate with each ESA subcontractor. This would take time and resources that we simply do not have. Furthermore, as the PA we prefer to continue providing leads to the IOUs, so that they can provide them fairly to all ESA contractors, instead of using program time and funding to favor any specific contractor. Instead, GRID can provide periodic reminders to the IOUs of the high priority that these leads should ideally be given, due to their a) going solar and b) because they are already qualified for the ESA program. To the second question, the additional burden of coordinating an ESA site assessment with the solar site visit would greatly slow down our DAC-SASH process and pipeline. It is already challenging to coordinate a site visit with a client's schedule. Adding in an added layer of scheduling and coordination is not feasible. Plus, the two site visits look at different elements of the home. In addition, on page 100 Evergreen says that "Timing the [ESA] referrals to happen after the installation...could help increase parallel enrollment if presented at a time when the homeowner is less overwhelmed." This statement is more reasonable and in line with GRID's experience. <b>Timeline:</b> N/A
11	100		Recommend that GRID track: Percent of past installations that received an annual follow up letter from GRID, until all past participants have been reached. Percent of customer on-site visits where ESA contractor was in attendance.	OTHER	<b>Response:</b> All program participants will receive an annual follow-up email (as they do now) with reminders added as of July 1 2023. GRID does not think it is reasonable to expect that the ESA contractor also be in attendance, so tracking this data will not be fruitful. Please see above for why we do not think this second piece of data tracking is feasible. <b>Timeline:</b> N/A
12	101	In our request to review monitoring data we found that Enphase-Enlighten (one of the two monitoring systems being used for DAC-SASH) was missing for 15 of 37 requested projects. Of the non-reporting systems, 14 of 15 were TPO, despite monitoring being a requirement for all TPO systems in the program. Projects that have fallen out of monitoring compliance with program should be addressed immediately.	All program installed inverters should report data to the consumer and GRID should establish program rules and protocols to enable fleet monitoring of incented systems. This will require coordination with the third parties who selected the inverters. Evaluator response to comments advised that, "The program could explore instituting random sampling to check a subset of projects quarterly, for example. TPO projects should be followed up with immediately, as they are not providing a benefit stated in their contract."	OTHER	<b>Response:</b> GRID is committed to being good stewards of program funds and ensuring that all DAC-SASH systems are functioning to the benefit of participating households. We will work with the CPUC and partners to define a protocol for an annual random sampling of projects. Alternatively, GRID can work with Sunrun to request and receive an annual update on DAC-SASH projects' fleet uptime, operational status, and total actual production versus projected production. For context, keep in mind that on page 96 of the evaluation it states that the Program's "solar system performance was slightly better than projected (103 percent of projected performance)." This demonstrates that overall, systems for the program are performing well. <b>Timeline:</b> Early 2024
13	101		GRID should do outreach to TPO providers to address monitoring systems that have gone offline.	OTHER	<b>Response:</b> If there are monitoring issues, the TPO provider contacts GRID and dispatches GRID (since GRID is the installer and provides a labor warranty) to resolve the identified issue; this keeps the customer unburdened entirely. Some issues GRID can resolve remotely, while others require a truck roll to be fully investigated and resolved. If a TPO client contacts GRID first (ahead of the TPO provider) about a monitoring issue, which is rare, GRID performs basic troubleshooting to try to resolve it quickly. If still unresolved, GRID tells the customer to contact the TPO provider and that prompts the TPO provider to log the issue and seek a resolution (as outlined in customers' TPO contracts). At that point, if a monitoring issue is confirmed, the TPO provider dispatches GRID to resolve the issue. GRID does <u>not</u> contact the TPO provider on a one-off basis for specific projects, as this is inefficient and cost prohibitive; the communication goes in the opposite direction, TPO provider to GRID. Finally, GRID provides clients with information on how to contact the TPO provider if there are issues with their PV system, as well as a breakdown of what the TPO provider is responsible for versus what GRID is responsible for. In the future, GRID commits to working with the CPUC and TPO provider to standardize processes for reviewing PV systems' monitoring status. GRID will ask its TPO provider for periodic fleetwide reports on monitoring status for all DAC-SASH systems, so that we can better track if there are any widespread communication errors. For context, "monitoring continuity" is an industry-wide pain point that companies work hard to address across the board. PV systems are often still producing even if the monitoring system is not communicating or goes "offline." <b>Timeline:</b> Aim to receive fleetwide monitoring status report in Q4 2023
14			"GRID should send an annual follow up letter and email to customers reminding them of how to check in on their system production. This can be combined with the annual follow-up letter mentioned above."	ACCEPTED	<b>Response:</b> This type of reminder is already included in the annual survey that customers receive, along with other questions and reminders. GRID currently does not have capacity to send physical letters in addition to its email surveys that go out. <b>Timeline:</b> N/A
15	102	Current data is not detailed enough to determine the location of volunteers (e.g., if they reside in DACs).	GRID should allocate a portion of program funding for residents within DACs to travel to approved training programs and to DAC-SASH solar installation volunteer opportunities (i.e., travel stipend).	OTHER	<b>Response:</b> GRID likes this idea in spirit but does not have sufficient admin funding to make this a reality. Currently our Workforce development work is not funded by the program. <b>Timeline:</b> Consider at a later date, if program funding increases.
16	102		GRID should continue to batch projects that are further away from regional offices.	ACCEPTED	<b>Response:</b> GRID continuously evaluates the efficiency of its operations and will work with construction teams to do so more often where practical. <b>Timeline:</b> Ongoing



17	101-102; and 18	"While providing training is not an explicit goal of the program, utilizing trained DAC members on installations is a program goal and trainees/volunteers reported that travel to trainings presented a barrier. Current data is not detailed enough to determine the location of volunteers (e.g., if they reside in DACs)." AND "No trainee addresses collected; missing detailed trainee information field before 2019 (this field includes whether they volunteered or were part of the training curriculum provided by GRID). Not able to compare if trainees are from DACs themselves or if they are travelling for the work. "	"GRID should track data on census tracts of trainees and volunteers to understand DAC participation levels on DAC-SASH projects." AND "GRID to collect trainee addresses for analysis on whether they are from DACs."	ACCEPTED	<b>Response:</b> GRID already tracks whether trainees reside in a DAC. However, for some trainees we only have mailing addresses or in some cases we receive no address. We will highlight this information better in future semi-annual reporting and will work to more often collect complete information from job trainees (volunteers have been discontinued since the onset of the pandemic in 2020). See page 30 of the program's semi-annual report for this information in summary format. <b>Timeline:</b> N/A
18	102		GRID should identify a goal as to how many DAC located trainees or volunteers per project represent successful leveraging.	ACCEPTED	<b>Response:</b> For each project we require at least one job trainee to participate and we prefer that it remain flexible where they come from so that this does not slow down project timelines. However, at this time, we can set a nominal goal of 50 trainees or volunteers per year coming from DACs; this should be achievable based on past years' numbers. We typically work closely with job training organizational partners who refer eligible job trainees. Therefore, GRID does not always have a direct impact on where trainees come from. <b>Timeline:</b> Ongoing - it will take time to increase the number of trainees living in DACs.
19	103		GRID should report on SPP projects in their semi-annual report and include the following metrics to facilitate future evaluation: Number of projects completed with the SPP model; Costs of the SPP projects; Anecdotal challenges or successes working with the partners.	ACCEPTED	<b>Response:</b> GRID will begin reporting these statistics in July 2023. <b>Timeline:</b> Ongoing
20	103	At the time of the research, the SPP model was used in a limited capacity by the Inland Empire regional office. At this point in time, an analysis of SPP is challenging given that only 13 SPP projects have been completed. This made it challenging to compare structural benefits and costs.	GRID should continue to grow their partner relationships for the SPP model to ensure that projects further from the GRID offices are also served by the program.	ACCEPTED	<b>Response:</b> It is not only due to distance from projects that GRID is expanding the SPP model, it is also the need for greater capacity and flexibility. GRID uses some subcontractors due to distance (e.g., in Bishop where we have installed many tribal projects) and more commonly we employ a sub due to limited capacity in a given month or quarter. Using subs is helpful when internal installation staff is temporarily busy with other things. Overall, the SPP model is beneficial as it is easier to ramp up and down installation volume, it enables GRID to work at greater distances more easily, and on installations with challenging conditions such as a steep roof. Some of the drawbacks of the SPP model are additional coordination time and subcontractor costs. At this time there are over 95 completed DAC-SASH SPP projects and 25+ pending. GRID HQ allows each regional team to decide if working with subcontractors is feasible and beneficial, as each region has its own unique circumstances related to geography, capacity, and culture. Finally, GRID is working to find mission-aligned contractors (it currently has two connected to DAC-SASH projects), further supporting the communities we work with in an intentional way. The long-term goal across GRID (including DAC-SASH) is to help scale and grow diverse contractor businesses in the communities we serve, providing wrap-around services such as procurement, preferred pricing, financial products, and/or bulk contracts. <b>Timeline:</b> Ongoing
21	104		We recommend GRID track marketing, outreach and administrative costs at the level of regional offices.	OTHER	<b>Response:</b> GRID does track ME&O and administrative <u>labor</u> costs at the regional level and this information is included in each reconciliation submitted after the close of each quarter. The evaluators reviewed a summary of costs (comparing forecasted to actual); they may not have known to ask for region-specific financials which we did not provide if it was not specified in their 2022 data and document requests. Next, regional <u>non-labor</u> expenses are not covered by the program, as there is insufficient funding. Those expenses that we do not cover with program funds, we do not report out. All non-labor expenses that the program pays for are HQ expenses and reported on in quarterly reconciliations. We pay for regional expenses out of a different budget because the program budget cannot support regional non-labor expenses. We prefer to keep it this way, tracking only Headquarters non-labor expenses. <b>Timeline:</b> N/A
22	104		GRID should connect with SDG&E ESA Program team to learn how to improve their engagement efforts.	ACCEPTED	<b>Response:</b> GRID meets with SDG&E's ESA team a few times a year and will continue to do so, but unlike the other IOUs we do not have good data on the progression of the qualified DAC-SASH leads that we share with SDG&E. In the future it may be helpful to know more about SDG&E's ESA program lead tracking process overall. <b>Timeline:</b> Ongoing

23	106 - 107	Though the systems are providing participating customers with bill and energy savings as intended, some participants have requested more panels (beyond the 5 kW cap) to lower their bill further and/or better enable them to pursue electrification. The solar systems are only covering around half of participants' energy usage (45% to 49%, on average between 2020 and 2021) and referrals to ESA are meant to help also reduce customers total energy usage.	GRID should collect number of projects that are originally scoped to be over 5 kW.	ACCEPTED	<b>Response:</b> Since the program was created with a 5kW maximum size, all of our processes have been created to conform to that rule. Thus, we did not originally scope projects to a higher size since it would be an ineffective use of time. However, we can estimate the proportion of past projects that would have been suitable for a larger system size based on the clients' usage. GRID can also begin to track what percentage of qualifying projects (e.g., projects with roof suitability and high historical usage) could host or would benefit from a 5kW or larger system size going forward if the CPUC deems this of value. As found in the Evaluator report, clients are asking to size their PV system to be able to cover planned electrification. We agree and have been receiving more client questions about larger system sizes recently as clients become more aware of and interested in electrification. That income-qualified households are proactively asking about solar and electrification is a good thing and the PUC should be pleased that households understand the multiple benefits of decarbonization. Key agencies are making historic investments in home and transportation electrification in the near term, so increasing allowable system sizes alongside paired solar with storage may have co-benefits with grid reliability. <b>Timeline:</b> Ideally by Q4 2023
24	107	Based on CalDGStats, the average system size for all residential installations interconnected between 2019 and 2021 was 6.3 kW (n = 444,622), however, DAC-SASH eligible homes have lower usage and smaller roofs than the general population. The 2019 Residential Appliance Saturation Survey data found that households with higher income had higher energy consumption and larger homes, so general market installations are not perfectly comparable to the DAC-SASH eligible population.	GRID should consider conducting research that compares # of installations, average size of installations, and average bill savings of program participants to the same rates for market-rate projects. These data will help to better understand what equity would look like in terms of system sizing and the pace of installation.	OTHER	<b>Response:</b> This could be a useful analysis in the future but our capacity to do so is very limited in 2023. Plus, research of this nature seems out of scope for the DAC-SASH PA, though it would be a worthy aim of future evaluations to dig into this question. Finally, a bill savings analysis does not seem to be apples-to-apples with general market customers, as they are not limited by a 5kW system size cap as DAC-SASH customers are; market rate customers are limited by roof space, among other factors. <b>Timeline:</b> TBD
25	106 - 107	...some participants have requested more panels (beyond the 5 kW cap) to lower their bill further and/or better enable them to pursue electrification. The solar systems are only covering around half of participants' energy usage (45% to 49%, on average between 2020 and 2021) and referrals to ESA are meant to help also reduce customers total energy usage.	GRID should clarify if the handbook cap overrules the direction of systems sizing "up to 150% of past usage" or if this language allows the program to install programs larger than 5 kW. If the 5 kW cap overrides matching the system to customer usage, this should be reconsidered.	ACCEPTED	<b>Response:</b> GRID does not size above 5kW CEC-AC for the DAC-SASH program, per D.18-06-027, Alternative Decision Adopting Alternatives to Promote Solar Distributed Generation in Disadvantaged Communities ( Appendix-A, p.113 of the PDF). So the limiting factor to accommodate future load growth is the 5kW cap. GRID agrees that the 5kW system size should be reconsidered and ideally lifted, a) due to the ever greater prevalence of EV purchases, HPWHs, electric stovetops, and other electrification measures that will be increasing residential electric loads and b) because a 5kW system cannot offset 100% of many clients' usage even now without electrification. The program could keep in place the 150% oversizing rule even when the 5kW system size cap is lifted. As found in the Evaluator report, clients are specifically asking to size their PV system to be able to cover their planned electrification goals. The fact that income-qualified households are proactively asking about solar and electrification is fantastic and encouraging positive experiences in these areas is necessary. The current 5kW cap needs to be modified as part of any future Ruling. <b>Timeline:</b> Ideally by Q4 2023
26	107	To ensure that low-income and DAC residents are able to install similar systems at a similar pace to market rate customers we make the recommendations shown below.	GRID should educate customers on the pros and cons of both the TPO or host-owned system from the customer perspective, allowing customers to make an educated choice between the two options. GRID would then be educating customers on solar ownership choices and would avoid making decisions on behalf of the homeowner as to which system type is most appropriate for their needs. This decision process would be closer to what market rate customers face.	REJECT	<b>Response:</b> With the SASH 1.0 program, the incentive level was between \$4.75 and \$7/W. This higher incentive level allowed GRID to cover the costs of PV systems without TPO funding. With the transition to SASH 2.0, the incentive level decreased to a flat \$3/W, and the addition of TPO funding was necessary to cover the gap in funding for most projects. As DAC-SASH is currently designed, it is often impossible for a project to move forward if it does not take advantage of the 30% federal investment tax credit (ITC) via the TPO model, unless the homeowner is able to cover the gap. Direct ownership is viable when there is additional financial support mitigating the need to leverage the ITC or if the client is able to cover the cost gap. In some cases when there is additional city/county/grant funding, there is a choice for the customer. But in most cases it must be a TPO system in order for GRID to recover its costs. GRID does not offer what we cannot provide and risk misleading customers if we approach them as if there is a choice of a free TPO system or a free host customer owned system. These are not market rate customers - they are typically receiving a free system - so it is not an apt comparison. However, GRID is actively monitoring ITC developments as DOE and Treasury refine their guidance and will consider what these developments mean for the existing TPO model within DAC-SASH. If viable alternatives or additional options emerge, GRID will work with the PUC and stakeholders to shape and finalize those offerings ahead of communicating and offering them to eligible households. <b>Timeline:</b> N/A
27	108		Partnered TPO companies should enable, not discriminate against, the enrollment of tribal customers.	OTHER	<b>Response:</b> GRID discussed this topic with the ED in 2022. In 2023 and beyond GRID is exploring how to work more with tribes (on top of what it is already doing nationally) to help understand new financing tools created by the Inflation Reduction Act (IRA) and other new funding for solar projects on tribal lands. Finally, GRID has been in direct contact with its primary TPO partner's policy team to ask that they determine if it is feasible to provide prepaid PPAs for tribal projects as part of the DAC-SASH program, despite barriers that have been identified such as non-standard home title and ownership structures. <b>Timeline:</b> 2023 through 2024
28	123		A public comment said that "Meter Socket Adapters (MSAs) should be considered as a lower cost alternative to electrical panel upgrades. These devices, and similar ones offered directly the investor-owned utilities (e.g., SDG&E's Renewable Meter Adapter) could reduce that barrier and improve program participation levels by reducing installation costs and enabling more homes to be eligible."	OTHER	<b>Response:</b> GRID supports efforts to reduce the cost and coordination required for adaptors and electric panel upgrades. In recent years, GRID installs more electric panel upgrades than MSAs. Before picking the best option for a project, GRID considers cost, average timeline to complete the MSAs, level of complexity, and coordination staff time invested. The lower utilization of MSAs in recent years is due to long IOU timelines (this refers to the IOU's entire adaptor installation process), limited eligibility (existing panels must be up to Electric Service Standards and meet required clearances), electrician requirements in SCE, and inconsistencies between AHJs regarding acceptance and procedures. Overall, the lower cost of adaptors often does not overcome the drawbacks listed above. MSAs may also fail to adequately prepare homes for future electrification, such as EV charger installation. <b>Timeline:</b> N/A

29	100		GRID should be sure to offer referrals for other programs to low energy users who are not interested in continuing with DAC-SASH to receive solar.	ACCEPTED	<b>Response:</b> GRID currently provides referrals to CARE and ESA for customers who are qualified for DAC-SASH but are either not interested in or unable to move forward with DAC-SASH. GRID will continue to add to this list of programs that we refer to as we become aware of other programs that clients may be eligible for. <b>Timeline:</b> Ongoing
30	106		Given the large amount of added recommended tracking, we suggest GRID prepare a summary of data gathered to support new program metrics after a year of collection (see last recommendations table regarding data tracking).	ACCEPTED	<b>Response:</b> GRID can do this reporting by July 1, 2024.
31	17	Some participants lacked enough pre- or post-solar install data to be included in the analysis (lost 15% of the participants) Savings estimate for DAC-SASH program year 2021 may be inflated due to this imbalance in months, with less generation in late fall and early winter (the missing months) due to having fewer hours of daylight.	GRID could verify utility account numbers to help with matching to IOU data.	ACCEPTED	<b>Response:</b> GRID already tracks and verifies utility account numbers based on the household's utility bill. We ensure accuracy of the data that we receive and track with in-depth Quality Control processes. As added context for the 15% that were "lost", the households may have recently opened a new account and thus no prior data was available. <b>Timeline:</b> N/A
32	108		GRID should include metrics mapped to the logic model into the handbook.	ACCEPTED	<b>Response:</b> This is Figure 2 in the appendix. GRID is happy to add it to the Handbook as an attachment (Exhibit B) on the last page. <b>Timeline:</b> To be included in the next program handbook update.