

# WE&T Deliverable 29: Career and Workforce Readiness Energize Careers Process Evaluation Evaluability Assessment Memorandum

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**From:** Ellen Steiner, Ph.D., Opinion Dynamics; Hannah Merriam; Opinion Dynamics  
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**Re:** CPUC Deliverable 29 Evaluability Assessment

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## Introduction

The California Public Utilities Commission (CPUC) has tasked Opinion Dynamics with assessing the evaluability of the new statewide third-party Energize Careers Program which falls in the WE&T portfolio of programs. The WE&T Program vision, set forth by the California Long Term Energy Efficiency Strategic Plan (CLTEESP), is to provide the human capital necessary to achieve California's economic energy efficiency and demand-side management potential.<sup>1</sup> In the California IOU's 2018 – 2025 energy efficiency business plans, IOUs continued to focus on collaborations with third-party entities as a key WE&T cross-cutting strategy for meeting the state's ambitious energy goals. The WE&T program portfolio has three program components: Career Connections, Career & Workforce Readiness (CWR), and Integrated Energy Education & Training (IEET). The Energize Careers program falls within the CWR program component.

The primary objectives of the CWR Energize Careers program include training and preparing disadvantaged workers to enter the energy efficiency workforce and to place program participants into energy efficiency jobs where they can use the knowledge and skills the training provided. The CWR Energize Careers Program will be implemented primarily through training partnerships with nine different community-based organizations (CBOs), including, pre-apprenticeship programs, apprenticeship programs, community-based training organizations and community colleges. Key activities within Energize Careers will differ depending on the training partnership. Activities may include identifying and building relationships with wraparound service providers and industry partners, developing, and enhancing training materials with training partners, offering "train the trainer" opportunities, and amplifying promotions of training opportunities and EE career awareness. It is important to note that for each of the nine CBO partnerships, the activities, outputs, and outcomes will differ, due to the custom nature of the CWR Energize Careers program.

The purpose of this PTLM development and subsequent evaluability assessment is to examine the extent to which the program theory of the CWR Energize Careers program can be evaluated reliably

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<sup>1</sup> California Long Term Energy Efficiency Strategic Plan, January 2011 Update, Engage 360, p. 7

and credibly. An evaluability assessment is a pre-evaluation process to inform the design of a planned evaluation. There are two main considerations in conducting an evaluability assessment: plausibility and feasibility. Therefore, the goal of this memorandum is to address the following two questions:

- **Is it plausible to expect the intended outcomes?** Are there logical connections between activities and intended short-, mid- and long-term outcomes?
- **Is it feasible to measure the intended outcomes?** Is it possible to measure the intended outcomes, given the collected data and resources available?

## Early Evaluation Activities

Prior to conducting this evaluability assessment, Opinion Dynamics conducted the following early evaluation activities that provided the foundation for this evaluability assessment.

- Conducted in-depth interviews with CWR Program Staff at Pacific Gas and Electric (PG&E), the CWR Program Administrator
- Conducted in-depth interviews with CWR Implementation Staff at Strategic Energy innovations (SEI)
- Reviewed available data and materials related to program theory.

## Is it plausible to expect intended outcomes?

Opinion Dynamics performed a review and update of the CWR Energize Careers Program Theory and Logic Model (PTLM). The PTLM documents how the activities, outputs and intermediate- and long-term outcomes are interconnected. The activities are what the program does—the interventions used to bring about the intended program change(s). The outputs are the direct products of program activities while the outcomes are the specific changes (e.g., participant or market) that occur (e.g., behavior, skills, level of functioning).

Opinion Dynamics started the PTLM development process by reviewing the initial draft generated by SEI and facilitating a discussion with members of the SEI team to better understand the program and the initial PTLM. Using this information from this meeting and our review of program documentation, the evaluation team presented this updated draft of the PTLM to SEI and PG&E and solicited additional feedback about the accuracy of each element. In addition, we asked for recommendations for additional activities, outputs, and outcomes that should be added to the PTLM. We used feedback from SEI and PG&E staff to refine the PTLM. Subsequently, we continued to meet to discuss changes to the PTLM and to come to a consensus regarding specific program activities, outcomes, and goals. Given the design of the program and its custom approach to meeting the different needs of the nine partnerships, the PTLM represents only the overall theory of the program. By design, it will differ for each of the nine partnerships. As shown in Figure 1, PTLM activities are listed at the top of the diagram, and the outcome categories are listed in chronological order from top to bottom. Arrows labeled with numbers are also featured in the Energize Careers PTLM and they represent the linkages between each component.

Figure 1. CWR Energize Careers PTLM

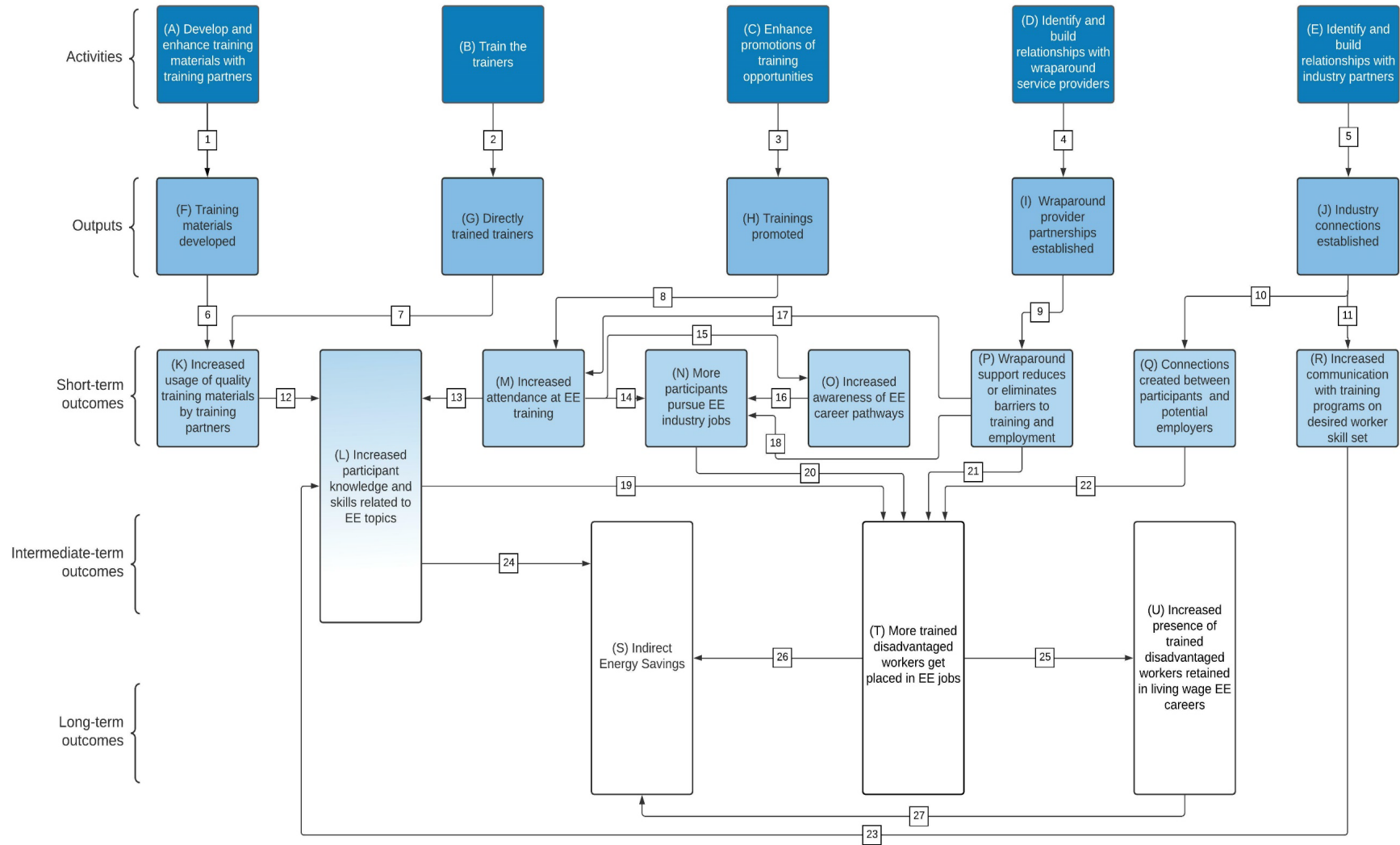


Table 1 explains the links between activities, outputs, and outcomes in more detail than can be represented in the PTLM Figure. The table is organized by the link numbers. The Key Performance indicators (KPIs) listed in Table 1 are potential metrics that could be measured during program implementation to track the process of each activity and subsequent linkage listed in the PTLM. The KPIs both help to illuminate the linkages as well as support future WE&T Program evaluations. The KPIs tied to outcomes will likely require additional studies to collect the necessary information, which will likely be part of the evaluation process. It will likely not be feasible to measure every KPI identified. As such, we recommend that at the outset of an evaluation of the CWR Energize Careers Program, the IOU(s), implementers, and the evaluator(s) discuss which links need investigation based on how the program has unfolded and operated, for each of the nine partnerships. Document reviews, surveys (aka post-course evaluations), and pre/post tests may all be appropriate methods to collect KPI-supporting data. The KPIs are color coded with black denoting metrics that are already planned to be tracked, blue represent metrics that are not planned to be tracked but may be helpful, and green represents KPI information that is not currently integrated, but we would recommend collecting when applicable to the partnership.

Table 1. Explanation of Links in Energize Careers Logic Model

Link	Segment Theory	KPIs
1	The output of the <b>developing and enhancing training materials with training partners (A)</b> activity is <b>training materials developed (F)</b> . Energize Careers will work in collaboration with their training partners to jointly develop and enhance materials and resources that best support training of program participants.	<ul style="list-style-type: none"> <li># Of agreements to jointly develop and/or share training materials and resources</li> <li># Of instructional and curriculum improvements at training partner sites (training projects) by training partner</li> </ul>
2	The output of the <b>train-the-trainers (B)</b> activity is <b>directly trained trainers (G)</b> . Training is oriented to trainers in community-based organizations that have workforce training programs, community colleges and other training programs (i.e., pre-apprenticeship programs, apprenticeship programs).	<ul style="list-style-type: none"> <li># Of direct train-the-trainer activities</li> <li># Of trainers directly trained, by training partner</li> </ul>
3	The <b>enhancing promotions of training opportunities (C)</b> activity leads to <b>trainings promoted (H)</b> . These promotions are oriented towards disadvantaged workers.	<ul style="list-style-type: none"> <li># Of training opportunities promoted by energy industry sector &amp; region</li> <li># Of individuals that receive promotion of training opportunities</li> </ul>
4	The output of the activity to <b>identify and build relationships with wraparound service providers (D)</b> is <b>established provider partnerships (I)</b> . Energize Careers will develop relationships to jointly support disadvantaged workers. <sup>2</sup>	<ul style="list-style-type: none"> <li># Of provider partnership agreements established, by the services they provide and region</li> </ul>
5	The output of the activity to <b>identify and build relationships with industry partners (E)</b> is <b>industry connections established (J)</b> with training partners.	<ul style="list-style-type: none"> <li># Of industry partnership agreements established, by industry sector and region</li> </ul>
6	The <b>training materials developed (F)</b> and supported by Energize Careers leads to a short-term outcome of <b>usage of those quality training materials by the training partners (K)</b> .	<ul style="list-style-type: none"> <li># Of training partners using materials</li> <li># Of disadvantaged workers participating in trainings where materials are utilized</li> <li># Of individuals participating in trainings where materials are utilized</li> <li>Trainer's satisfaction with training material</li> </ul>
7	In the short-term, the <b>trainers directly trained (G)</b> on EE topics leads to <b>increased usage of quality training materials (K)</b> by the training partners.	<ul style="list-style-type: none"> <li># Of directly trained trainers that are using materials</li> <li># Of disadvantaged workers participating in trainings with trained trainers</li> <li># Of individuals participating in trainings with trained trainers</li> </ul>

<sup>2</sup> Disadvantaged workers are defined by The California Public Utilities Commission as “an individual that meets at least one of the following criteria: lives in a household where total income is below 50 percent of Area Median Income; is a recipient of public assistance; lacks a high school diploma or GED; has previous history of incarceration lasting one year or more following a conviction under the criminal justice system; is a custodial single parent; is chronically unemployed; has been aged out or emancipated from the foster care system; has limited English proficiency; or lives in a high unemployment ZIP code that is in the top 25 percent of only the unemployment indicator of the CalEnviroScreen Tool.” If one census tract in the participant’s zip code is in the top 25 percent of only the unemployment indicator of the CalEnviroScreen Tool, then the participant will qualify as a disadvantaged worker.

Link	Segment Theory	KPIs
		<ul style="list-style-type: none"> <li>Trainer's satisfaction with training materials</li> </ul>
8	A short-term outcome of <b>promoting trainings (H)</b> is <b>increased attendance at technical EE trainings (M)</b> . As individuals become aware of EE trainings, they will be more likely to enroll in trainings.	<ul style="list-style-type: none"> <li># Of disadvantaged workers participating in trainings</li> <li># Of individuals participating in trainings</li> <li># Of individuals who self-report that promotion had an influence on ability to attend training attendance, both disadvantaged and non-disadvantaged</li> </ul>
9	The short-term outcome of the <b>established wrap-around provider partnerships (I)</b> is <b>increased wraparound service support, reducing or eliminating barriers to training and employment (P)</b> . Oriented towards disadvantaged workers, Energize Careers and wrap-around service providers will facilitate personalized services to assist training completion, job placement, and job persistence, such as transportation services, childcare, English language development and provision of services in a remote/hybrid format.	<ul style="list-style-type: none"> <li># Of different types of services provided, by partnership</li> <li># Of participants who receive services, by partnership</li> </ul>
10	A short-term outcome of the <b>established industry connections (J)</b> is the creation of <b>connections between participants and potential employers (Q)</b> .	<ul style="list-style-type: none"> <li># Of connections between participants and employers, by industry partner</li> </ul>
11	Another short-term outcome of <b>industry connections established (J)</b> is <b>increased communication on desired worker skillset (R)</b> between the industry and training partners.	<ul style="list-style-type: none"> <li>Measure of communication between training partner and industry</li> <li>Measure of training partner understanding of industry needs</li> </ul>
12	As <b>training partners increase usage of quality training materials (K)</b> developed through collaborations with Energize Careers, it leads to <b>increased participant knowledge and skills related to EE topics (L)</b> .	<ul style="list-style-type: none"> <li>Measures of participant knowledge and skills related to EE concepts before and after trainings</li> </ul>
13	The increase in <b>attendance at EE trainings (M)</b> , leads to a general <b>increase in participant knowledge and skills related to EE topics (L)</b> .	<ul style="list-style-type: none"> <li>Measures of participant knowledge and skills related to EE concepts before and after trainings</li> </ul>
14	The <b>individuals who attend EE trainings (M)</b> are likely to <b>pursue EE-related jobs (N)</b> to operationalize their knowledge and skills, in the intermediate- and long-term.	<ul style="list-style-type: none"> <li># Of participants that attended training who apply for jobs that have an opportunity to apply EE skills</li> </ul>
15	<b>Increased attendance at EE trainings (M)</b> leads to greater <b>awareness of EE employment opportunities (O)</b> in the short-term.	<ul style="list-style-type: none"> <li>Level of awareness of career pathways of participants who attend trainings, pre and post training</li> </ul>
16	Greater <b>awareness of EE employment opportunities (O)</b> leads more people to <b>pursue EE industry jobs (N)</b> .	<ul style="list-style-type: none"> <li>Level of participant knowledge and awareness of EE career pathways pre and post training</li> </ul>



Link	Segment Theory	KPIs
17	The <b>reduction in or elimination of barriers to training and employment due to wraparound support (P)</b> leads to an <b>increased attendance at EE trainings (M)</b> in the short-term.	<ul style="list-style-type: none"> <li># Of participants who receive support and attended a training</li> <li>Measure of influence support had on ability to attend trainings</li> </ul>
18	The <b>reduction in or elimination of barriers to training and employment due to wraparound support (P)</b> leads to <b>more participants pursuing EE industry jobs (N)</b> in the short-term	<ul style="list-style-type: none"> <li># Of participants who receive support and apply for an EE job</li> <li>Measure of impact influence had on ability to apply for job</li> </ul>
19	The more <b>knowledge and skills participants have related to EE topics (L)</b> , the more <b>trained disadvantaged workers placed in EE jobs (T)</b> , in the intermediate- and long- term. This linkage will be impacted by the economy and market conditions.	<ul style="list-style-type: none"> <li>Measures of participant knowledge and skills related to EE topics</li> <li># Of participants placed in jobs using EE skills, by industry sector</li> </ul>
20	The more participants <b>who pursue an EE industry job (N)</b> the more <b>trained disadvantaged workers placed in EE jobs (T)</b> in the intermediate- and long-term.	<ul style="list-style-type: none"> <li># Of participants who applied for jobs using EE skills</li> <li># Of participants placed in jobs using EE skills, by industry sector</li> </ul>
21	The <b>reduction in and elimination of barriers to training and employment due to wraparound support (P)</b> , will help increase employment opportunities for participants and lead to <b>more trained disadvantaged workers placed in EE jobs (T)</b> in the intermediate- and long-term.	<ul style="list-style-type: none"> <li># Of participants who receive support and are placed in an EE job, by industry sector</li> <li>Participant satisfaction with services</li> <li>Reduction in barriers to employment by service type/provider</li> </ul>
22	The creation of <b>connections between participants and potential employers (Q)</b> leads, in the intermediate- and long-term, to participants leveraging those connections and <b>more trained disadvantaged workers placed in EE jobs (T)</b> .	<ul style="list-style-type: none"> <li># Of participants who are placed in EE jobs, by industry sector</li> <li>Participant self-report on industry connection influence on job placement</li> </ul>
23	The short and intermediate-term outcome of <b>increased communication on the desired worker skillset (R)</b> between the industry and the training partners is the <b>increase in the knowledge and skills participants have related to EE topics (L)</b> that better match the needs of the industry. The industry can directly provide feedback on training programs to better prepare participants for current and future workforce demands.	<ul style="list-style-type: none"> <li># Of training projects completed that were suggested by industry partners</li> <li>Fit of participant knowledge and skills to industry needs</li> </ul>
24	An intermediate and long-term outcome of the <b>increased knowledge and skills participants have related to EE topics (L)</b> will be increased <b>indirect energy savings (S)</b> .	<ul style="list-style-type: none"> <li>Indirect energy savings generated</li> <li># Of workers that attribute energy-saving activities to training participation</li> </ul>
25	<b>More trained disadvantaged workers placed in EE jobs (T)</b> leads to an <b>increased presence of trained disadvantaged workers retained in living wage EE careers (U)</b> in the long-term.	<ul style="list-style-type: none"> <li># Of participants placed in jobs using EE skills, by industry sector</li> <li># Of participants in EE jobs for 12 months, by industry sector</li> </ul>

Link	Segment Theory	KPIs
26	<b>More trained disadvantaged workers placed in EE jobs (T) leads to disadvantaged workers having increased indirect energy savings (S).</b>	<ul style="list-style-type: none"> <li># Of participants placed in jobs using EE skills, by industry sector</li> <li>Indirect energy savings generated</li> <li># Of workers that attribute energy-saving activities to job placement</li> </ul>
27	<b>The increased presence of trained disadvantaged workers retained in living wage EE careers (U) leads to increased indirect energy savings (S).</b>	<ul style="list-style-type: none"> <li># Of participants in EE jobs for 12 months, by industry sector</li> <li>Indirect energy savings generated</li> <li># Of workers that attribute energy-saving activities to EE career</li> </ul>

### Finding: It is plausible to expect the intended outcomes.

Through the analysis of the Energize Careers Program Theory and Logic Model, Opinion Dynamics concludes that the program theory and linkages of program activities to outputs and short-, intermediate- and long-term outcomes are plausible.

### Is it feasible to assess or measure intended outcomes?

This section will discuss the key findings from our evaluability assessment. In Table 1 above, we outlined potential and existing KPIs that support the general PTLM activities and outcomes. The PTLM ultimately outlines how key program activities and outcomes will contribute to short-, mid-, and long- term goals set by the program and how it will help to achieve the goals set by the overarching WE&T program. The KPIs in green are proposed additions to be included in program design to effectively track the progress of each activity and outcome in future evaluations.

Below we outline the general KPIs that the evaluation team recommends measuring in addition to the metrics already planned to effectively track and evaluate program goals.

- KPIs relative to understanding the quality and effectiveness of the partnerships with training partners, industry partners and wrap-around service provider partnerships. Measuring the impacts of the different partnerships is an important step to achieving the mid and long-term goal, increasing the presence of disadvantaged workers in the workplace. The evaluation team recommends adding in the KPIs to sufficiently measure the effectiveness of the partnerships:
  - Training Partner
    - Number of direct train-the-trainer activities
    - # Of directly trained trainers that are using materials
    - Trainer's satisfaction with training material
  - Industry
    - Number of industry partnership agreements established, by industry sector and region
    - Measure of communication between training partner and industry
    - Number of training projects completed that were suggested by industry partners
  - Wrap-around Service Provider



- Number of provider partnership agreements established, by the services they provide and region
- Number of participants who receive services, by partnership
- Measure of influence support had on ability to attend trainings (This could be asked after the fact, but ideally would be asked in a Level 1 Reaction Survey<sup>3</sup>)
- A long-term goal of the Energized Careers Program is an increased number of disadvantaged workers in energy efficiency careers. An important step in this process is disadvantaged workers applying for positions in the EE field. The program should track the level of applications for jobs, not just job placements, to better understand the impacts of increased awareness and promotions.
  - Number of participants who applied for jobs using EE skills
- An additional aspect of the program is the promotion of the training opportunities. The program should track the number of opportunities promoted and the impact of those promotions on reaching the long-term goal of more disadvantaged workers in EE careers.
  - Number of training opportunities promoted by energy industry sector & region
  - Number of individuals who self-report that promotion influenced training attendance, both disadvantaged and non-disadvantaged (This could be asked after the fact, but ideally would be asked in a Level 1 Reaction Survey)

For these metrics to be tracked, contact information will need to be collected for all program participants as well as non-disadvantaged individuals that participate in trainings. Participants that receive wrap-around service support need to be flagged. Given the breadth of the program, industry sectors of participant job placement and retention should be tracked. Additionally, contact information for partner representatives from wraparound service providers, industry partners and training partners will need to be collected.

When the evaluation team reviewed these additional metrics with SEI, they explained that some elements could be tracked for some of the training partners, but many of these additional metrics may not be able to be tracked given the relationship with the training partner and the unique nature of each partnership. For example, we identified the metrics “# of different types of services provided, by partnership” and “# of participants who receive services, by partnership” for the linkage between the short-term outcome of the established wrap-around provider partnerships (I) and the output of increased wraparound service support, reducing or eliminating barriers to training and employment (P). However, in our discussion with SEI and PG&E, SEI indicated that for most partnerships SEI would not know which students accessed which wrap-around service through which provider. While this could be tracked via participant self-report, given the sensitive nature of some of the wrap-around services (e.g., record expungement), participants may be reticent to provide such information and if not every participant participates in evaluation activities, the evaluation team would lose valuable information about understanding the impacts of the program.

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<sup>3</sup> Kirkpatrick’s Model, the gold standard for evaluation adult learning interventions, includes four levels of evaluation. The first of these is Reaction, which measures how participants feel about the learning experience. The Level 1 Reaction Survey refers to the instrument that measures participant’s reaction to the training. This survey is often referred to as an “exit survey.”

**Finding: As designed, key outcomes are not measurable.**

Through our assessment, we believe that the program is collecting **some** of the data needed to support a future evaluation of the Energize Careers program, but there are **key aspects that at this time cannot be measured**.

**Recommendation.** The CWR Energize Careers program is a new offering for the WE&T Initiative with the goals of training and preparing disadvantaged workers to enter the energy efficiency workforce and to place program participants into energy efficiency jobs—a key need in today’s energy landscape. Given the custom nature of the program and that PTLMs and KPIs will be different for each individual training partner, we recommend that we develop individual PTLMs and KPIs for each training partnership as well as provide coaching to SEI and their nine partners about how to collect data to support the evaluation of the specific KPIs for each partnership. This will ensure that the program is launched with evaluation in mind and will enable key evaluation questions, such as *Which wraparound services are the most effective in supporting participant’s completion of training programs?* and *What type of marketing and outreach support is needed to best support existing training programs in reaching disadvantaged workers?* to be able to be answered. Ensuring appropriate metrics are tracked will enable identification of best practices that can inform future efforts that aim to support increasing underrepresented workers in clean energy careers.