



Building a Clean Energy Workforce: An Evaluation Framework for State Energy Office Workforce Programs

Background

The combination of recent federal investments and ambitious decarbonization goals has led to increased demand for an energy efficiency and clean energy workforce. State Energy Offices (SEOs) play a critical role in expanding this workforce by recruiting, educating, and training individuals via workforce initiatives. As SEOs work to advance a workforce that is diverse and representative of the communities they serve, an intentional effort to conduct program evaluations is pivotal to ensure the success of workforce programs that increase the availability of skilled workers.

This fact sheet is a summary of the workforce evaluation framework that was first proposed in the white paper,

[*An Evaluation Framework for State Energy Offices' Energy Efficiency and Clean Energy Workforce Program.*](#)¹

This evaluation framework was developed to guide SEOs in assessing and enhancing the workforce development programs they manage, fund, or partner on. By following this step-by-step framework, SEOs can evaluate program components, identify areas for improvement, and optimize program outcomes for greater impact.

Proposed Framework

This evaluation framework consists of six steps, and is designed to be iterative; SEOs can use findings from the data they collect to assess the program's progress in meeting its goals or objectives, and to determine the extent of its benefit

¹ www.nrel.gov/docs/fy24osti/88796.pdf

to marginalized communities. In addition, SEOs can filter through the list of suggested metrics in the original white paper to identify effective ways to track and collect data on their programs, based on their goals and objectives.

Using this framework can enable SEOs to tailor or fund workforce programs relevant to the evolving needs of the energy efficiency and clean energy sector, and advance a workforce that is inclusive and diverse—thereby maximizing the success of their programs.



Overview of the SEO workforce program evaluation framework. *Graphic by NREL*

Workforce Development Program Components

Prior to using the evaluation framework outlined in this fact sheet, SEOs should have a clear understanding of the workforce development program components they are implementing or funding. A summary of core program components is provided below.

- 1. Opportunities and goals:** Identifying the “big-picture” outcome(s) a program intends to achieve during its life cycle.
- 2. Objectives:** Setting specific, measurable (i.e., there should be an associated metric), achievable, relevant, and time-bound targets that support the program’s goals.
- 3. Stakeholder engagement and outreach:** Identifying and engaging relevant stakeholders to understand the types of program activities, workforce services, and delivery of programs.
- 4. Activities:** Selecting a set of tasks to help meet the program’s objectives.
- 5. Metrics and data collection:** Collecting data to track, measure, and evaluate a program’s performance, progress, and impact.
- 6. Reporting:** Disclosing and disseminating findings to ensure accountability and transparency among the public and stakeholders.

How To Use the Framework

SEOs can navigate and apply the evaluation framework using the provided instructions for each step. Each step has a series of “guiding questions” with a “yes” or “no” or write-in response, and suggestions for next steps they can take. After documenting responses for the key evaluation questions, SEOs should refer to the concluding question to determine their next steps. SEOs are also encouraged to refer to the metrics provided in the appendix of the [An Evaluation Framework for State Energy Offices’ Energy Efficiency and Clean Energy Workforce Program](#)¹ white paper for ideas on metrics to include for their program’s objectives. By adopting this evaluation framework, SEOs can effectively assess, refine, and scale their workforce development programs.



¹ www.nrel.gov/docs/fy24osti/88796.pdf

Workforce Program Evaluation Framework

Step 1: Evaluating Goals and Opportunities

In the first step of the framework, SEOs can evaluate their program goals and understand if they meet market, participant, and workforce demands and needs.

Key Evaluation Questions for Step 1

Question 1.1: Was a needs assessment or a gap analysis conducted?

- Yes, an assessment/analysis was completed.**

Action: Describe findings for program participants and stakeholders. Communicate value as well as areas for improvement. Detail next steps based on the assessment/analysis.

- No, an assessment/analysis was not completed.**

Action: Conduct a needs assessment and describe findings for program participants and stakeholders. Communicate value as well as areas for improvement.

Revisit program goals and consider revising. We strongly recommend that SEOs perform a workforce landscape assessment or skills gap analysis before moving on to Step 2.

Question 1.2: Do the program goals align with market needs identified through the needs assessment?

- Yes, our program goals reflect the market needs accurately.**

Action: Describe what market needs are being met by program and how.

- No, program goals do not reflect the market needs.**

Action: Revisit goals and consider revising. See Appendix C of the white paper for resources.

Question 1.3: Has the market changed (e.g., new policies, economy-wide changes, new training programs, new skills needed for new technologies) such that program goals may be impacted?

- Yes, there have been changes in the market and policies.**

Action: Consider updating or conducting a new needs assessment and engaging stakeholders.

- No, there are no significant changes in policy or market needs.**

Action: No action needed.

Question 1.4: Does a program goal include equity consideration to promote a diverse and inclusive workforce?

- Yes, a program goal(s) prioritizes diversity, equity, and inclusion considerations.**

Action: Describe how your goal(s) aims to increase diversity, equity, and inclusion in the energy efficiency and clean energy workforce.

- No, a program goal(s) does not include considerations for diversity, equity, or inclusion.**

Action: Revisit goals and consider revising (see Appendix A of the white paper for energy equity definition).

Evaluation Findings for Step 1

Evaluation 1.1: Did the workforce program meet program goals?

- Yes
- No

Evaluation 1.2: Describe why your goals were or were not achieved (e.g., what factors influenced performance or were ineffective in meeting the goals).

Evaluation 1.3: Based on your findings above, describe proposed changes (if any) to your goals to improve program outcomes (e.g., you may consider making changes to goals or adding new goals).

After responding to Step 1's evaluation questions, SEOs can proceed to Step 2, Evaluating Objectives.

Step 2: Evaluating Objectives

In the second step, SEOs can evaluate program objectives to examine if they were effective or ineffective in achieving a program's goals.

Key Evaluation Questions for Step 2

Question 2.1: Do the program objectives align with program's goals?

- Yes, they align with program goals.**

Action: Describe how they align. Determine how to communicate the objectives and goals to participants and stakeholders.

- No, they do not align with program goals.**

Action: Revisit objectives and revise. See Appendix C in the white paper for resources.

Question 2.2: Is each objective specific, measurable, achievable, realistic, and time-bound (SMART)?

- Yes, they are SMART objectives.**

Action: Describe how the objectives are Specific, Measurable (i.e., appropriate metrics to measure the objective), Achievable (i.e., staff capacity and funds to implement the objectives), Realistic, and Time-bound.

- No, they are not SMART.**

Action: Revisit objectives and revise (Refer to Appendix C in the white paper for resources).

Question 2.3: Does at least one objective focus on advancing diversity and inclusion practices; and does this objective have at least one associated metric to track equitable outcomes?

- Yes, an objective(s) addresses equity.**

Action: Describe how the objective(s) is advancing equitable outcomes and list metric(s).

- No, objectives do not address equity.**

Action: Revise objective (Refer to Appendix B in the white paper for metrics to track equitable outcomes).

Question 2.4: Does every objective have at least one associated metric to measure its progress and impact?

- Yes, each objective has an associated metric.**

Action: List the metrics with the relevant objectives.

- No, each objective does not have an associated metric.**

Action: Revise metrics (Refer to Appendix B in the white paper for additional examples).

Evaluation Findings for Step 2

Evaluation 2.1: Did the workforce program meet program objectives?

- Yes
- No

Evaluation 2.2: Describe why your objectives were or were not achieved (e.g., what factors performed well or were ineffective in achieving the objectives).

Evaluation 2.3: Based on your findings above, describe proposed changes (if any) to your objectives to improve program outcomes (e.g., you may consider making changes to objectives or adding new objectives).

After responding to Step 2's evaluation questions, SEOs can proceed to Step 3, Evaluating Stakeholder Engagement and Outreach Practices.

Step 3: Evaluating Stakeholder Engagement and Outreach

In this step, SEOs should review their practices for engaging with stakeholders who can help with accomplishing a program goal or objective.

Key Evaluation Questions for Step 3

Question 3.1: Have you identified the appropriate partners and stakeholders to define and achieve program goals and objectives?

- Yes, the appropriate stakeholders were engaged.**

Action: List the partners and stakeholders you work with and their role in the program.

- No, we do not have the appropriate stakeholders.**

Action: Identify new partners and stakeholders, and their roles for your program. Conduct outreach and establish relationships with relevant partners and stakeholders. Refer to Appendix C in the white paper.

Question 3.2: Have you engaged with community-based organizations or the public to inform program planning and implementation that prioritizes diversity, equity, and inclusion?

- Yes, the relevant stakeholders with experience and expertise in equity are involved with the program.**

Action: List the partners and stakeholders (and their roles) you work with to ensure the program centers diversity, equity, and inclusion practices.

- No, we do not have the appropriate stakeholders.**

Action: Identify new partners and stakeholders with expertise in supporting diversity, equity, and inclusion. Establish consistent communication to form and sustain a relationship.

Question 3.3: Have you engaged stakeholders and partners in a way that helped achieve the program goals and objectives?

- Yes, stakeholders and partners have been engaged on a long-term basis, and that is contributing to how our program is reaching its goals and objectives.**

Action: No action needed.

- No, our engagement with partners and stakeholders is not effectively helping our program reach its goals and objectives. There is a need for greater or different engagement with partners and stakeholders.**

Action: Develop a plan to reach out and form relationships with new stakeholders and potential partners. Engagement should include describing your program's goals, and how the relevant stakeholder/potential partner may impact or be impacted by your program. Stakeholders and partners may engage in the areas of program design, development, marketing, and recruitment, to name a few.

Evaluation Findings for Step 3

Evaluation 3.1: Are the relevant stakeholders and partners (e.g., employers, community-based organizations) engaged with your workforce program?

- Yes
- No

Evaluation 3.2: Describe why your engagement and outreach practices were effective or ineffective.

Evaluation 3.3: Based on your findings above, describe proposed changes (if any) to your engagement and outreach practices with stakeholders to improve program outcomes (e.g., you may consider seeking new partners or changing the scope of the partnerships).

After responding to Step 3's evaluation questions, SEOs can proceed to Step 4, Evaluating Activities.

Step 4: Evaluating Activities

Step four in our framework is key to determining the effectiveness of program activities such as technical skills training, internships, outreach events, etc.

Key Evaluation Questions for Step 4

Question 4.1: Do goals and objectives inform the program activities?

- Yes, our program includes a relevant set of activities.**

Action: Describe how your activities support program objectives and are aligned and communicated to program participants and stakeholders.

- No, our program does not include a relevant set of activities.**

Action: Consider new activities or refining existing activities that will help directly achieve program objectives and goals.

Question 4.2: Do the activities support the needs of the participants?

- Yes, activities support needs of the participant.**

Action: Describe how activities support participant needs (e.g., balancing virtual and in-person events, have sufficient number of instructors, have appropriate training materials).

- No, activities do not support needs of the participant.**

Action: Consider offering new activities or refining existing activities.

Question 4.3: Do the activities address the needs of employers?

- Yes, the activities address the needs of employers.**

Action: Describe how activities support employer needs (e.g., balancing technical and soft skills development, offering the most relevant certification, training for in-demand occupations).

- No, the activities do not address the needs of employers.**

Action: Consider new activities or refining existing activities.

Question 4.4: Do the activities meet the needs of underrepresented workers?

- Yes, the activities address the needs of underrepresented workers.**

Action: Describe how activities support the needs of underrepresented professionals (e.g., wraparound service support, professional development support).

- No, the activities do not address the needs of underrepresented workers.**

Action: Consider new activities or refining existing activities.

Evaluation Findings for Step 4

Evaluation 4.1: Were the activities of the workforce development program effective?

- Yes
- No

Evaluation 4.2: Describe why your activities were or were not effective in achieving the program objectives or goals.

Evaluation 4.3: Based on your findings above, describe proposed changes (if any) to your activities to improve program outcomes (e.g., you may consider adding, removing, or refining program activities).

After responding to Step 4's evaluation questions, SEOs can proceed to Step 5, Tracking Metrics and Data Collection.

Step 5: Tracking Metrics and Data Collection

After reviewing the scope of activities, step five will guide SEOs in assessing if they are collecting data on the most relevant metrics to track their program's progress and outcomes.

Key Evaluation Questions for Step 5

Question 5.1: Is the relevant data collected with sufficient frequency (ongoing, quarterly, annually) to measure progress?

- Yes, we are collecting the relevant data.**

Action: List the metrics for your program, how you collect the data for those metrics, and how often they are measured.

- No, not collecting the relevant data.**

Action: Consider revising the metric(s). Establish a plan for data collection (how is it collected, who is responsible, and how frequently?)

Question 5.2: Are we able to collect the necessary data to measure our metrics?

- Yes, we are able to collect the necessary data to measure our metrics.**

Action: Describe data collection methods.

- No, we are not able to collect the necessary data to measure our metrics.**

Action: Consider revising data collection method or the metric itself if data collection is not feasible.

Question 5.3: Is the data appropriately stored?

- Yes, we are storing the data appropriately.**

Action: Describe your process including who stores the data, where is the data stored, and who has access to it.

- No, not storing the data appropriately.**

Action: Your data collection plan should include gathering relevant stakeholders to determine where data should be stored, who should upload data, who should have access to data, and how the data should be disseminated.

Question 5.4: Do the metrics support program objectives?

- Yes, metrics align.**

Action: No action needed.

- No, metrics do not align.**

Action: Revisit the metrics and consider revising (see Appendix B in the white paper).

Evaluation Findings for Step 5

Evaluation 5.1: Did you select the most relevant metrics to collect data for your workforce development program?

- Yes
- No

Evaluation 5.2: Describe why your metrics were or were not successful in tracking relevant data and information to communicate program progress, performance, or impact.

Evaluation 5.3: Based on your findings above, describe proposed changes (if any) to your selection of metrics to improve program outcomes (e.g., you may consider revising metrics to better support program objectives, removing a metric if data collection is not feasible, or developing a data collection plan).

After responding to Step 5's evaluation questions, SEOs can proceed to Step 6, Reporting.

Step 6: Reporting

This step enables SEOs to share program progress, successes, lessons learned, and maintain accountability to stakeholders, partners, and the public.

Key Evaluation Questions for Step 6

Question 6.1: Are stakeholders, partners, and the public informed and presented with the data collected on program progress and equitable outcomes?

- Yes, we effectively communicate the data with stakeholders, partners, and the public.**

Action: Describe how you are communicating progress and the data to the program participants and stakeholders.

- No, we do not effectively communicate the data with stakeholders, partners, and the public.**

Action: Consider establishing a process to disclose progress and share evaluation results. Even if results seem unfavorable, keep in mind that you cannot manage what you don't measure. Share the broader story, key findings, and plans for program refinement/improvement with your partners and stakeholders.

Question 6.2: Are the program reporting requirements being met and results published or announced?

- Yes, meeting reporting requirements.**

Action: No action needed.

- No, not meeting reporting requirements.**

Action: Consider refining your process for reporting. This may include selecting additional metrics, establishing a communications plan to share results with relevant stakeholders, identifying a responsible party to complete the report, etc.

Question 6.3: Are any proposed program changes disclosed to stakeholders, employers, and the public?

- Yes, program changes are communicated to stakeholders.**

Action: No action needed.

- No, program changes are not communicated to stakeholders.**

Action: Consider refining your process for sharing changes in the program with internal and external stakeholders. Sharing key findings and plans for program refinement/improvement with your partners and stakeholders could be an opportunity for feedback, buy-in, and further program refinement.

Evaluation Findings for Step 6

Evaluation 6.1: Were your reporting methods successful in communicating a program's impact, progress, or performance?

- Yes
- No

Evaluation 6.2: Describe why your reporting method was or was not effective in disclosing a program's performance, progress, or missteps.

Evaluation 6.3: Based on your findings above, describe proposed changes (if any) to your reporting methods to improve program outcomes (e.g., you may consider exploring different communication channels to disclose findings or data).

Conclusion

By adopting this framework, SEOs can effectively tailor program components to align with the evolving workforce, incorporate activities that meet the current and future energy efficiency and clean energy needs, and build a workforce that is qualified, inclusive, and diverse.



Learn more

[An Evaluation Framework for State Energy Offices' Energy Efficiency and Clean Energy Workforce Program](#)¹

[Better Buildings Workforce Accelerator's Program Design & Evaluation Fact Sheet](#)²

[Training the Workforce for High-Performance Buildings: Enhancing Skills for Operations and Maintenance](#)³

[Fostering Equity Through Community-Led Clean Energy Strategies](#)⁴

[Community-Led Clean Energy Strategies](#)⁵

¹ www.nrel.gov/docs/fy24osti/88796.pdf

² betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/BBWA%20Program&Design%20Fact%20Sheet_.pdf

³ <https://www.aceee.org/research-report/b2003>

⁴ <https://www.aceee.org/research-report/u2105>

⁵ <https://storymaps.arcgis.com/stories/88cd8a715089418890d9ec4d09a25648>

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