Advancing the Clean Energy Workforce Through Skills Training

An Introduction to the Social Impact Partnerships to Pay for Results Act (SIPPRA) Evaluation

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Even in good economic times, many adults in the United States have trouble finding jobs that pay enough to support their families.[1] One policy response has been to help these workers build more skills, with promising findings from some sector-based programs that train individuals to work in specific high-demand industries.[2] These programs have typically focused on a handful of sectors, such as information technology, health care, and construction. The clean energy sector is a natural next step, given the growing efforts to combat climate change, the rising investment in clean energy jobs, and the reported challenges that employers face in finding qualified candidates to fill those jobs.

The Pay for Success Clean Energy Training project addresses these challenges by providing training in clean energy jobs to individuals earning low wages and facing other barriers to employment.[3] MDRC is working with the New York State Energy Research and Development Authority (NYSERDA) and Social Finance (a nonprofit organization that works across the public, private, and social sectors to create partnerships and investments that measurably improve lives) to evaluate the employment and earnings impacts of the training as part of the Social Impact Partnerships to Pay for

Results Act (SIPPRA). SIPPRA is a project of the U.S. Department of Labor and U.S. Department of the Treasury. This brief provides an overview of NYSERDA's SIPPRA project, highlighting the participating training providers and the evaluation structure, and noting both the project's successes and challenges.

Background

NYSERDA's mission is to advance clean energy innovation and investments to combat climate change, improving the health, resiliency, and prosperity of New Yorkers, and delivering benefits equitably to all.[4] In pursuit of its mission, NYSERDA supports numerous clean energy training programs by providing funding for technical training and job placement services to training providers across the state. In 2021, NYSERDA was awarded a contract under the SIPPRA Act through which it will be reimbursed for some of the funding it provides to clean energy training providers if the training is determined to be successful by an independent evaluator.[5] (See Box 1 for details on SIPPRA's "pay for performance" funding model.) MDRC is acting as the independent evaluator on this project. Social Finance provides technical assistance to the training providers to help them with marketing and recruitment, collects data on their performance, and periodically brings the providers together in a "community of practice" so that they can learn from each other.

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Box 1. What is the "Pay for Success" Model?

Projects funded by the Social Impact Partnerships to Pay for Results Act (SIPPRA) must implement the Pay for Success Model, in which the government will reimburse up-front funding, in the form of outcome payments, if projects are determined to be effective based on an independent evaluation.*

Typically, for a project like the New York State Energy Research and Development Authority's (NYSERDA) SIPPRA project, Social Finance would raise private investment funds to pay for the up-front costs of training. Those investors would then be reimbursed if the training led to a positive impact on earnings. Because reimbursement will only be provided if the impact is statistically significant, and because of the risks associated with that, Social Finance decided not to raise private funds for this project; instead, NYSERDA funded the training providers directly. NYSERDA will be reimbursed by the United States Departments of Labor and Treasury (with funding appropriated by Congress) if the evaluation determines that earnings gains over a six-year period are statistically significant. The amount of the reimbursement will be based on the extent of the earnings gains and a formula for the savings to the government from those earnings gains.

NOTE: *U.S. Department of the Treasury, "SIPPRA Frequently Asked Questions," (website: https://home.treasury.gov/services/social-impact-partnerships/sippra-pay-for-results/sippra-frequently-asked-questions, n.d., accessed August 22, 2024).

The Evaluation

The evaluation includes both an impact analysis and an implementation study. The impact analysis uses a randomized controlled trial research design, in which eligible applicants at each training provider are randomly assigned to either the program group, which is offered clean energy training, or the control group, which is not offered clean energy training. Applicants assigned to the control group can seek out other training services in the community; two of the participating training providers also offer control group members alternative training and other supports. Applicants assigned to the program group are offered various services, such as case management; referrals to providers who can help with transportation, mental health services, and childcare services; and career services such as job search assistance and résumé and interview preparation; in addition to training. Eligible individuals are New York State residents who have low incomes or meet NYSERDA's definition of disadvantaged communities.[6]

The programs' "impacts" are the differences between the employment rates and earnings of people in the program group and the employment rates and earnings of people in the control group. Since the two groups are assigned at random, they are similar on average across all characteristics, including unmeasurable characteristics such as motivation, and the control group represents what would have happened in the absence of the program. The differences between the outcomes for these two groups can therefore be attributed to the program. When those differences are "statistically significant," this means that the differences were unlikely to have occurred by chance and can be interpreted as program impacts.

The primary goal of the evaluation is to assess whether the programs lead to statistically significant impacts on earnings for program group members, such that NYSERDA would be reimbursed for its investment in these training programs. A secondary goal is to learn more about clean energy training programs, including the skills they teach, how they are designed and delivered, and how staff members and students experience them.

To accomplish this, the study includes a qualitative analysis of program implementation, which will also serve to provide context for any observed impacts. For example, the implementation analysis could identify program features that may potentially help explain any observed positive impacts or uncover weaknesses in program design that may help explain a lack of impacts. MDRC will track both the program and control groups for up to six years to estimate impacts on earnings using unemployment insurance wage records from the New York State Department of Labor.

Participating Training Providers

NYSERDA uses a competitive process to fund proposals for technical skills training, experiential learning, and job placement and support services that enable New York State to meet the requirements of a clean energy economy and advance the climate equity and just transition goals of New York's Climate Act.[7] The Act intends to shift New York State away from fossil fuels and toward

green energy sources and create new jobs in the decarbonization sector — that is, the part of the economy that is being transformed to reduce carbon emissions — including in the wind, solar, hydropower, and energy storage sectors.[8] Projects that meet these requirements for new worker training programs for individuals with low incomes are eligible to become SIPPRA projects and receive additional funding.[9]

This project is currently working with three training providers, all of which have completed their enrollment of training cohorts:

- **BUILDING SKILLS NEW YORK (BSNY)** is a New York City-based nonprofit construction workforce development organization.[10] BSNY offered a three-month High Efficiency Heating, Ventilation, and Air Conditioning (HVAC) Careers Program to program group members. The program included skills training, case management, career professionalism and job readiness assistance, and job placement services. Applicants assigned to the control group were not offered training and received no special services but could pursue other training and services elsewhere. BSNY enrolled four cohorts: in September to October 2021, January to February 2022, April to May 2022, and October to December 2022.

- **THE HOPE PROGRAM** is a New York City-based nonprofit organization that runs work readiness programs to prepare participants for jobs in a range of industries with a focus on green careers, such as high efficiency HVAC systems, energy efficient roofing, and solar panel installation and maintenance.[11] Program group members could enroll in The HOPE Program's Green and Clean HVAC Training Program, a 10-week program that focused on the management and maintenance of energy efficient heating and cooling systems across New York City. The program also included the HOPEWorks career readiness training course.[12] Control group members were not offered the clean energy training course but were encouraged to apply for HOPEWorks. The HOPE Program enrolled five cohorts: in October 2021, February 2022, July to August 2022, February to May 2023, and October 2023 to January 2024.

- **NONTRADITIONAL EMPLOYMENT FOR WOMEN (NEW)** is a New York City-based nonprofit organization that prepares, trains, and places women, transgender people, and nonbinary people in careers in the skilled construction, utility, and maintenance trades.[13] Program group members could enroll in the Green Collar Prep Program, which included training in basic construction with added green components (such as solar panel installation and HVAC systems with heat pump technology). Green Collar Prep participants also received career and employment preparation and soft skills (such as teamwork, communication, and problem solving) and wellness (including, for example, physical and mental health, nutrition, stress management, and financial literacy) training courses. Control group members could enroll in NEW's Blue Collar Prep program, which provided basic construction and pre-apprenticeship training without the green energy components but with the same support services.[14] NEW enrolled nine cohorts: one in July 2023 and one in October 2023, and seven cohorts in 2024 between January and November.

Successes and Challenges

Successes

The NYSERDA SIPPRA team reports having had some success working with the training providers to improve the recruitment-to-job placement pipeline. With assistance from these partners, providers have seen improvements in the following areas:

- **MARKETING:** Training providers have used creative marketing solutions to address low program recruitment. These solutions include subway ads, customized emails, and social media posts.

- **PROGRAM GRADUATION RATES:** Program graduation rates, which started low, have improved over the course of the study with technical assistance from Social Finance and MDRC. These improvements are likely due to the inclusion of supports offered by the programs, such as financial literacy services and cash assistance for expenses such as transportation costs.

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Additionally, the community of practice led by NYSERDA and Social Finance, which meets quarterly, has led to successes both for providers' operations and for NYSERDA's workforce development strategy. The meetings provide a forum for training providers to discuss successes and challenges in program implementation, as well as a venue to discuss providers' preliminary performance on priority metrics, such as program completion and job placement rates, and to brainstorm strategies to improve results. These community of practice meetings have led to a few additional successes:

- **REDUCED PROGRAM GROUP MEMBERS' EARLY EXITS FROM THEIR TRAINING PROGRAMS.** In response to data showing that a high percentage of individuals randomly assigned to the program group exited very early from the training programs, training providers adjusted their recruitment and enrollment processes by, for example, adding questions to their screening processes to understand and support program participants' needs (for example, housing instability or lack of transportation access) and requiring that participants either had or were willing to obtain New York State driver's licenses given employer demand. Over time, the early exit rates decreased as a percentage of total enrollment in the training programs, most likely because of a combination of the provision of needed supports to those who enrolled and the screening out of more people who were unlikely to succeed in the programs.

- **IMPROVED COMPLETION RATES.** In response to data showing lower-than-expected overall program completion rates, training providers adopted strategies such as offering stipends, providing math tutoring, and referring participants for additional support services, such as childcare programs. Over time, program data revealed higher completion rates in general for those receiving training and specifically for program participants receiving key services, such as stipends, financial literacy training, and transportation assistance.

NYSERDA is encouraged by the operational progress that has been made among the SIPPRA training providers. The authority posits that the community of practice shows that knowledge-sharing among training providers can inspire operational changes that affect program participants — emphasizing the value of conducting real-time performance management, in addition to the randomized controlled trial and implementation study.

Challenges

MDRC's goal for the SIPPRA evaluation is to learn about and assess the clean energy training offered by participating training providers and estimate the program's impacts to determine any resulting federal reimbursement that may be due to NYSERDA. The evaluation has faced some challenges, including:

- **FEWER PROVIDERS THAN EXPECTED:** Over several years, NYSERDA, Social Finance, and MDRC engaged a total of nine training providers to discuss their participation in the study. Participation was voluntary, and of these nine providers that were engaged for recruitment, five agreed to participate. Of those five, and after a significant investment of time and resources, two decided to opt out of the study, leaving three providers in the study. Some factors that contributed to this low provider enrollment were a lack of suitable programs — for example, training providers that were unable to recruit and enroll the higher number of participants needed for both a program and control group — and concerns that the services offered to the control group were too similar to those offered to the program group, which could dilute any potential impacts on earnings. Additionally, a few providers had concerns about the process of random assignment and were reluctant to not provide services to individuals assigned to the control group.

- **CLEAR MESSAGING:** The social service or community-based dimension of the training partners' missions at times made it especially important for the team to work closely with the participating providers to ensure their messaging clearly communicated the study's randomization process — that is, that it explained clearly that training slots were limited and that not all applicants would be able to receive the training they wanted.

- **SLOW PARTICIPANT ENROLLMENT:** Providers have had difficulty recruiting enough participants. Some anecdotal reasons include the need for participants to forego earning income while in training, which some could not afford to do, and the relatively high wages one could earn in the retail sector without any training. Enrollment in the programs was completed as of early 2025 and providers had enrolled a total of 553 participants out of the project's overall goal of 1,000 — only slightly more than half the goal. This small sample size will make it challenging for the evaluation to discern statistically significant effects.

- **VARIATION AMONG SITES:** At BSNY, the program group received technical skills training and support services, while the control group did not receive any direct assistance from BSNY. Applicants assigned to the control group were referred to seek other training and supports in the community. At the HOPE Program, the program group received technical skills training, career-readiness

training, and support services, while the control group was offered the same career-readiness training and more limited support services. At NEW, the control group is automatically placed into Blue Collar Prep, which provides pre-apprenticeship training in the building trades and all the same supports that Green Collar Prep participants receive, but without the green modules, such as heat pump technology and solar panel installation. The NYSERDA SIPPRA team moved forward with these training providers despite this variation in order to meet the enrollment target for the project and the study. However, these variations in service contrast will make it challenging to interpret estimated impacts because the analysis will pool results across the three training providers. The pooled results will reflect a mix of the effects of clean energy training relative to no training, career readiness training, and technical training for other types of jobs, respectively.

- **INITIAL JOB PLACEMENT RATES ARE LOWER THAN EXPECTED:** Job placement rates among individuals in the program group who completed their training programs are lower than hoped for. According to program data, job placement rates across all cohorts and among individuals who completed their training programs, is about 60 percent. Placement rates for individuals who enrolled in the first year or so of the study, who have had more time since graduation to find employment, are higher at about 77.5 percent on average, consistent with NYSERDA requirements. It is possible that the placement rates for later cohorts will increase over time.

Next Steps

The project is no longer enrolling new training providers. For the remainder of the six-year study, MDRC will continue to track participants' outcomes, conduct an implementation analysis, and produce a final report in 2028, presenting the program's effects on earnings and employment.

Notes and References

1. Thirty percent of workers earn wages that would leave a family of four below 125 percent of the poverty line, which in most places is much less than what is considered a living wage. Economic Policy Institute, "State of Working America – Data Library," (website: https://www.epi.org/data/#?subject=povwage, n.d., accessed August 24, 2024).

2. Kelsey Schaberg and David H. Greenberg, *Long-Term Effects of a Sectoral Advancement Strategy: Costs, Benefits, and Impacts from the WorkAdvance Demonstration* (MDRC, 2020).

3. NYSERDA, "Pay for Success Clean Energy Training," (website: https://www.nyserda.ny.gov/All-Programs/Clean-Energy-Workforce-Development-and-Training/Resources/Pay-for-Success-Clean-Energy-Training, n.d., accessed April 28, 2024).

4. NYSERDA, "NYSERDA – New York State Energy Research and Development Authority," (website: https://www.nyserda.ny.gov/, n.d., accessed April 28, 2024).

5. NYSERDA, "Pay for Success Clean Energy Training" (n.d.).

6. Priority populations include veterans, individuals with disabilities, individuals with low incomes, 16- to 24-year-olds who have completed training programs, and incumbent or unemployed fossil fuel workers, among others. Disadvantaged communities have been identified by NYSERDA based on indicators that represent the environmental burdens or climate change risks within a community, or population characteristics and health vulnerabilities that can contribute to making the adverse effects of climate change even more severe. NYSERDA, "Energy Efficiency and Clean Technology Training Program Opportunity Notice PON 3981," (website: https://www.nyserda.ny.gov/All-Programs/Clean-Energy-Workforce-Development-and-Training/Resources/Pay-for-Success-Clean-Energy-Training, n.d., accessed April 28, 2024).

7. New York State's Scoping Plan, which includes recommendations to meet the Climate Act's goals, "identifies actions needed to advance a just transition to a clean energy economy that creates opportunities for new entrants to low carbon and clean energy occupations; builds connections among industry, State, and local interests to realize business opportunities for New York manufacturers and service providers so they can grow and thrive; and creates economic conditions that will result in an improved quality of life for all New Yorkers." New York State, "Climate Act," (website: https://climate.ny.gov/-/media/Project/Climate/Files/NYS-Climate-Action-Council-Final-Scoping-Plan-2022.pdf, 2025). NYSERDA, "Energy Efficiency and Clean Technology Training," (website: https://www.nyserda.ny.gov/All-Programs/Energy-Efficiency-and-Clean-Technology-Training, n.d. accessed April 28, 2004).

8. NYSERDA, "Accelerating the Transition," (website: https://www.nyserda.ny.gov/Goals-Accelerating-the-Transition#:~:text=Achieving%20a%20Just%20Transition%20Off%20Natural%20Gas&text=New%20York's%20electric%20grid%20will,hydro%20power%2C%20and%20energy%20storage, n.d., accessed April 28, 2024).

9. NYSERDA, "Energy Efficiency and Clean Technology Training Program Opportunity Notice PON 3981" (n.d).

10. Building Skills New York, "About Us," (website: https://buildingskillsny.org/about/, n.d., accessed April 28, 2024).

11. The Hope Program, "Programs," (website: https://www.thehopeprogram.org/, n.d., accessed April 28, 2024). The Hope Program, "What We Do," (website: https://www.thehopeprogram.org/what-we-do/, n.d., accessed April 28, 2024). The Hope Program, "Donate to the HOPE Program," (website: https://thehopeprogram.funraise.org/, n.d., accessed April 28, 2024).

12. The Hope Program, "Green and Clean HVAC," (website: https://www.thehopeprogram.org/green-and-clean-hvac/, n.d., accessed April 26, 2024).

13. Nontraditional Employment for Women, "About Us," (website: https://www.new-nyc.org/aboutus, n.d., accessed April 28, 2024).

14. Nontraditional Employment for Women, "Programs," (website: https://www.new-nyc.org/programs, n.d., accessed April 28, 2024).

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