ShaleNET Round 2 TAACCCT Grant
Third-Party Evaluation
Final Report
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Cover Photo: In PCT’s Floorhand and Roustabout noncredit programs, students work extensively on PCT’s rig simulator and aerial lift equipment—both purchased with grant funds—to learn and practice hand placement, safe operation, and the fundamental components of operating a drilling rig. In this picture, Roustabout students use the rig simulator to learn how to pull a drillstring (including the drillpipe) out of the drilling hole and replace it with a new one. PCT’s rig simulator is one of only two in the United States owned by a college.
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Executive Summary

Funded most recently by a Round 2 Trade Adjustment Assistance and Community College and Career Training (TAACCCT) grant from the U.S. Department of Labor (USDOL), the ShaleNET initiative was aimed at expanding the breadth and effectiveness of the training options and career pathways through which individuals could work towards careers in the shale oil and gas industry. A consortium of four educational institutions (referred to as “hubs”) located in three states received funding from the Round 2 TAACCCT grant: Pennsylvania College of Technology (PCT) and Westmoreland County Community College (WCCC) in Pennsylvania, Stark State College (Stark State) in Ohio, and Navarro College (Navarro) in Texas (see Exhibit ES-1). PCT was the leader of the consortium during the grant period. Each of these institutions was located in or near three major shale gas and oil production plays: the Marcellus Shale Play (located under parts of Pennsylvania, West Virginia, Ohio, and New York), the Utica Shale Play (located under nearly all of the Marcellus Play, but covering a bit more of Ohio and Pennsylvania), and the Eagle Ford Shale Play (located under a large swathe of southern Texas).¹

¹ A play is a shale formation that contains significant accumulations of natural gas.
Overview of the TAACCCT Grant-Funded ShaleNET Initiative

ShaleNET programs at each hub were led by a hub director, who, under the leadership of non-grant-funded college administrators, oversaw and managed grant- and ShaleNET-related tasks and staffs. Each hub also had at least one career counselor who served as the primary liaison with ShaleNET students, and a support technician who either provided administrative support for the grant (at PCT and WCCC), or maintained ShaleNET equipment and labs (at Navarro and Stark State). Finally, each hub used TAACCCT grant funds to hire at least one full-time instructor and multiple adjunct instructors whom taught the technical classes required for ShaleNET training programs.

Hubs, in turn, were supported by two additional staff members based at PCT (the Grant Project Director and Data Manager). Two staff members from the Allegheny Conference on Community Development (ACCD), a ShaleNET Consortium partner and grant subcontractor, also assisted hubs. These ACCD staff members (the senior vice president of workforce and special projects and the workplace project manager) assisted hubs in two primary ways: (1) brokering relationships and supporting partnerships between the consortium and the oil and gas industry and policymakers and (2) providing the consortium with marketing materials and branding assistance.

A primary activity of ShaleNET hub staff members was to develop and enhance a series of stackable credential training programs that allowed individuals to follow career pathways in the shale oil and gas industry. ShaleNET’s “stackable credential” model, is displayed in Exhibit ES-2. This iteration of the ShaleNET initiative focused primarily on developing new curricula for Tiers 3 and 4 and enhancing programs in Tiers 1, 2, 3, and 4.
Exhibit ES-2: ShaleNET Stackable Credential Model

Other key TAACCCT grant-funded ShaleNET activities included:

- enhancing the ShaleNET website, and carrying out other marketing and branding;
- providing students at each hub with support and assistance related to enrollment, academic and career planning, job placement, and life issues; and
- enhancing collaboration among hub members and partners through articulation agreements, hub and advisory committee meetings, consortium planning retreats and conference calls, and other ShaleNET consortium and hub activities.

Overview of the Third-Party Evaluation of ShaleNET During the TAACCCT Grant

In July 2013, Social Policy Research Associates (SPR) was awarded a contract to serve as third-party evaluator for the ShaleNET initiative. SPR’s evaluation of the ShaleNET initiative during the Round 2 TAACCCT grant was focused on answering the following high-level research questions:

- What administrative and partnership structures were established to guide the initiative?
• What was the nature of outreach to and assessment of prospective ShaleNET students, including TAA-eligible workers and veterans?
• How was each of the initiative’s major components developed and launched?
• What were the initiative’s outputs, outcomes, and impacts?

To examine these questions, SPR conducted a multi-method evaluation that included an analysis of the implementation, outcomes, and some impacts related to the ShaleNET initiative during the grant. To collect the data needed to conduct these analyses, the evaluation team carried out the following data collection activities: conducted three rounds of multi-day site visits to each hub; observed consortium planning retreats; extracted educational data from each consortium college, UI wage data from Pennsylvania, Texas, and Ohio, and survey data from the Marcellus Shale Coalition; conducted surveys of local workforce development board directors within hub service regions and employers who had hired ShaleNET participants.

**Key Findings regarding the ShaleNET Initiative During the Round 2 TAACCCT Grant**

Overall, the ShaleNET Initiative operated quite successfully during the period of the Round 2 TAACCCT grant, despite having to face a number of serious challenges, including a major downturn in the oil and gas industry. This success, even in such a challenging external environment, provides further evidence of the strength of the ShaleNET Consortium and the value of its programming.

**Delivery of Training Programs and Student Support**

The ShaleNET Consortium was generally quite successful in developing and enhancing ShaleNET training programs during the TAACCCT grant. As evidence of this success, ShaleNET TAACCCT-supported hubs were able to develop 19 new credit-bearing training programs—more than doubling the number of oil and gas training programs available across the four hubs.

The TAACCCT-supported hubs also obtained nearly 2.5 million dollars worth of additional equipment (almost a third of it donated by industry partners) for use by students and instructors in these programs and the 12 pre-existing ShaleNET training programs. This huge influx of new
equipment certainly enhanced the hands-on component of ShaleNET training programs, even though three of the four hubs were not able to develop the capacity to share video images of lab equipment with students in remote locations. Three of the four TAACCCT-funded hubs also used or leveraged grant funds to create new facilities specifically designed to house some or all ShaleNET program equipment.

The ShaleNET Consortium was also fairly successful in recruiting and enrolling participants into these new and enhanced training programs. Although enrollment declined during the second half of the grant period—and was a significant challenge for noncredit programs at two hubs even earlier—ShaleNET hubs were able to enroll 1,276 unique participants, achieving 116 percent of the consortium’s overall enrollment goal for the grant (see Exhibit ES-3). These participants were primarily white and male, and most held at least a high school diploma, but they included a mix of ages ranging from 17 to 65 (see Exhibit ES-4). Partly as a result of the major recruitment and enrollment...
challenges faced by noncredit programs, but also because of the consortium’s focus during the grant, about 80 percent of ShaleNET participants enrolled in a credit program—either a Tier 4 AAS degree or, slightly less commonly, a Tier 3 certificate program.

The four TAACCCT-funded hubs were also generally successful in providing ShaleNET participants with enhanced support for academic and career planning and for dealing with life issues. Although career counselor turnover and heavy workloads at three of four hubs may have limited the amount of support some ShaleNET students received, students who did receive assistance were quite appreciative. These students commented that this assistance helped them to stay on track toward program completion and to find jobs after they graduated.

**Partnerships**

During the grant, ShaleNET hubs and the consortium as a whole were also quite successful in developing partnerships, particularly with components of the oil and gas industry. As an indication of the consortium’s success in partnering with the industry, oil and gas companies, industry associations, and industry foundations contributed nearly 1.7 million dollars in funding and in-kind donations to ShaleNET TAACCCT-supported hubs during the grant period, as well as $100,000 to the consortium as a whole to support the development of a strategic business plan for post-grant sustainability. Further, as a result of the consortium’s multi-year partnership with industry giant Chevron, that partner had agreed, as of the summer of 2016, to provide another $456,920 to the three Appalachian Basin TAACCCT-supported hubs for 2016-2017 (as well as another $297,093 to ShaleNET’s newest Appalachian Basin hub, Pierpont Community and Technical College in West Virginia, which did not receive Round 2 TAACCCT grant funding).
The ShaleNET Consortium and hubs established three key partnerships with other educational institutions during the grant. The first of these was developed by the Navarro hub, with assistance from PCT, and was with the Eagle Ford Center for Research Education and Outreach (EFCREO) at Texas A&M Kingsville. This partnership enabled EFCREO to offer ShaleNET noncredit training programs. Unfortunately, due to the downturn in drilling in the Eagle Ford Play, EFCREO discontinued offering these programs, and this partnership ended. However, the ShaleNET consortium and another hub did succeed in establishing other educational partnerships that were ongoing as of the writing of this report. These included establishment of Pierpont Community and Technical College as the consortium’s affiliate hub for West Virginia in mid-2014 and the establishment in 2016 of the Ohio ShaleNET Share partnership between Stark State and two other community colleges in Ohio—Eastern Gateway and Hocking (see Exhibit ES-5). The latter partnership allowed students in a specific ShaleNET AAS program to complete 40 percent of their credits toward the degree at their home college (Hocking or Eastern Gateway) and 20 percent of the credits (including all of the most oil-and-gas specific) during an intensive summer session at Stark.
As of the end of the grant period, the ShaleNET Consortium and hubs had also developed some key partnerships with government-related bodies. For example, PCT developed partnerships with three nearby Pennsylvania counties and, as a result, had received $195,000 in scholarship funding for residents of those counties to participate in PCT’s noncredit programs. Further, during the latter portion of the TAACCCT grant, the Consortium’s Appalachian Basin members (PCT, Stark State, WCCC, Pierpont, and ACCD) became involved with the Tri-State Shale Summit, a high-level collaborative formed by the governors of Ohio, Pennsylvania, and West Virginia to increase economic development related to the Marcellus and Utica shale plays. In addition, Stark State received a grant of more than $500,000 from the Ohio Department of Higher Education to support implementation of its Ohio ShaleNET Share partnership.

Finally, three of the four Round 2 TAACCCT-funded hubs also developed fairly strong partnerships with the public workforce system, particularly the staff members of their closest WDBs and AJCs. Two of these hubs reported that as a result of these partnerships a number of their ShaleNET students received funding from WIA or WIOA to cover some or all of their ShaleNET tuition costs.

Participant and Employer Outcomes

Likely as a result of the initiative’s successful service delivery and partnership development, ShaleNET participants were generally quite successful in achieving positive educational and labor market outcomes. For example, approximately 65 percent of ShaleNET grant participants had either completed their ShaleNET programs or were still working toward completion as of the end of the grant period. Forty percent of these participants completed a program: 22 percent completed a noncredit program (and received, on average, five industry-recognized credentials); 9 percent completed a certificate program, 3 percent completed an AAS, and 6 percent completed more than one type of program (see Exhibit ES-6). Although the remaining 35 percent of
ShaleNET participants withdrew from their ShaleNET program (almost all of these withdrawals were from credit programs) and hub, this percentage is far lower than the 80 percent of community college students nationally who do not complete their programs.²

Labor market outcomes for ShaleNET completers were also generally quite strong, particularly during the early years of the grant before oil prices declined in mid-2014, sending the oil and gas industry into an economic contraction that seriously affected hiring in 2015. Overall, according to wage record data—which should be considered only a lower-bound estimate given its limitations—about three-fourths of ShaleNET completers throughout the grant period were employed in the first and fourth quarters after program completion. The rate of post-program employment, however, was quite a bit higher for participants who completed prior to 2015 (81 percent for those who completed in 2014), particularly for noncredit program completers (90 percent).

² Of the cohort of students that entered a certificate or AAS program in 2010, only 19.5 percent completed their programs within 150 percent of the expected normal time. National Center for Education Statistics, Digest of Education Statistics, http://nces.ed.gov/programs/digest/d14/tables/dt14_326.20.asp.
Further, a rigorous comparison of ShaleNET noncredit completers in Pennsylvania with recipients of other short-term employment services in the same state showed that ShaleNET program participation had a positive and significant impact on post-program employment and earnings, particularly in the years prior to the oil and gas industry downturn.

The ShaleNET Initiative during the TAACCCT grant also appeared to meet and ease the hiring needs of employers. Proof of this was the relatively high rate of post-program employment cited above. Several employer representatives stated that they chose to hire ShaleNET completers primarily because of their technical skills and knowledge of the industry and others stated that ShaleNET hires performed better than other similar employees across multiple work domains. Multiple employer representatives also stated that it was easy to hire ShaleNET graduates because career counselors provided them with information about graduates’ qualifications and facilitated the process of setting up interviews with them.

Sustainability

As a result of these generally successful outcomes, as well as the ShaleNET Consortium’s early focus on sustainability, many ShaleNET programs and services were still operating as of September 2016 and were expected to continue to do so in the future. The majority of ShaleNET training programs were expected to continue enrolling new students, and two of the four TAACCCT-funded hubs were expected to retain their oil and gas career counselors through at least the end of the 2016-2017 academic year (and a third hub planned to replace its oil and gas career counselor sometime during 2016-2017). Further, all hubs reported that they had at least some ongoing funding for equipment maintenance and repair. Also, as part of the business planning process, hub representatives and ACCD continued to collaborate on an ongoing basis through both conference calls and in-person meetings.
However, some elements of the ShaleNET model—particularly at certain TAACCCT-funded hubs—had stopped operating as of the writing of this report or would end after September 30, 2016.

- Cross-consortium marketing of ShaleNET—including maintenance of the ShaleNET.org website and production of a quarterly newsletter and marketing materials—had ceased.
- Two of the hubs were expected to lose their TAACCCT grant-funded ShaleNET hub director as of September 30, 2016, and as they did not have equivalent college-funded oil and gas positions, they will likely be unable to conduct as much outreach to partners, particularly employers, as would be ideal.
- One of the hubs that no longer employed an oil-and-gas-focused career counselor also had no plans to replace that position; consequently it would continue to be hampered in its ability to support ShaleNET participants for the foreseeable future.
- Two hubs had lost one or more of their full-time instructors and thus had to rely more on adjunct instructors, making it more difficult for them to offer as many ShaleNET classes as needed (due to the challenge of finding enough qualified adjuncts).

Still, based on an assessment of the factors deemed by some experts to be critical to sustainability—and despite the ongoing oil and gas industry downturn—there were, as of the writing of this report, many reasons to be optimistic about ShaleNET’s future prospects:

- The consortium as a whole and three hubs had strong internal and external champions.
- Multiple sources of fairly stable funding were available, particularly for Appalachian Basin hubs.
- Collaboration among ShaleNET Consortium members was strong and ongoing.
- Core ShaleNET leaders at ACCD and the Appalachian Basin hubs had been retained.
• Strategic planning about how to best adapt the ShaleNET Initiative to changing circumstances and position it for future success was underway.

• Rigorous evaluation activities that could provide additional evidence of the ShaleNET Initiative’s success were ongoing.

Reasons to be Optimistic about ShaleNET Sustainability

ShaleNET has:

- Strong internal & external champions
- Multiple funding sources
- A strong consortium
- Retained core ShaleNET leaders
- A strategic planning process underway
- Ongoing rigorous evaluation activities