



**Workforce Development Agency, State of Michigan  
Michigan Strategic Fund**

**Michigan Electric Power Workforce Training Strategy  
Award Number: DE-OE0000443  
Project Topic Area B**

**Submitted By: Marcia Black-Watson, Industry Talent Director**

**Final Report for July 30, 2010 to July 29, 2014**

**October 27, 2014**

**U.S. Department of Energy  
National Energy Technology Laboratory**

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## **I. Executive Summary**

*Through the Workforce Training for the Electric Power Sector grant, the Workforce Development Agency, State of Michigan (WDA) trained Michigan workers and created career pathways in skilled trades and other in-demand jobs related to the electric power sector and the implementation of smart grid technology. Training activities were designed to enhance the skills of both new hires and incumbent workers in response to technology changes associated with a smarter electric transmission and distribution system. Michigan committed to training 588 individuals through the grant, providing a combination of preparatory assessments, basic training, pre-apprenticeship, apprenticeship, and occupation specific incumbent worker training.*

*Based on information from employers, Michigan's project initially focused on five occupational areas: 1) Electrical Line Technicians (overhead and underground); 2) Substation and Engineering Technicians; 3) Substation Operators; 4) Electrical Maintenance; and 5) Advanced Metering Infrastructure (AMI) Technicians. As industry needs shifted, other occupations were incorporated into the work plan including Cogeneration Power Plant Operation and Maintenance and Smart Grid Component Manufacturing.*

*605 individuals participated in grant activities, 481 completed training, 154 have been placed in employment, and 236 retained employment as a result of the training they received.*

## **II. Goals and Objectives from Statement of Project Objectives**

Task 2.1 – The Recipient shall launch project plan and begin grant administration.

Task 3.1 – Assign project operators for preparation, recruitment and management of activities at regional Michigan Works! Agencies.

Task 4.1 – Conduct outreach and recruitment of participant's for the program through regional Michigan Works! Agencies.

Task 5.1 – Screen for work, language, academic, and transferable military skills through regional Michigan Works! Agencies.

Task 6.1 – Refer participants to an applicable training mechanism through regional Michigan Works! Agencies.

Task 7.1 – Conduct training and follow up of Pre-Apprentice Lineworker Training through the appropriate community colleges, and/or utility/union training trusts, or other training providers.

Task 7.2 – Conduct training and follow up of Apprentice Lineworker through the appropriate utility/union training trusts or other training providers.

Task 7.3 – Conduct training and follow up of Pre-Apprentice Cable Splicer Training through the appropriate utility/union training trusts or other training providers.

Task 7.4 – Conduct training and follow up of Apprentice Cable Splicer Training through the appropriate utility/union training trusts or other training providers.

Task 7.5 – Conduct training and follow up of Underground Lineworker Training, Wind Turbine Safety Training, and Wind Turbine Operation and Maintenance Training at the appropriate community colleges or other training providers.

Task 7.6 – Conduct training and follow up of Substation / Engineering Technician Training and Smart Grid Component Manufacturing Training through the appropriate community colleges, and/or utility/union training trusts, or other training providers.

Task 7.7 – Conduct training and follow up of Substation Operations / Maintenance through the appropriate community colleges, and/or utility/union training trusts, or other training providers.

Task 7.8 – Conduct training and follow up of Advanced Metering Infrastructure (AMI) Technician Training through the appropriate community colleges, and/or utility/union training trusts, or other training providers.

Task 7.9 – Conduct training and follow up of Pre-Apprentice Electrical Maintenance Training through the appropriate community colleges or other training providers.

Task 7.10 – Conduct training and follow up of Apprentice Electrical Maintenance Training through the appropriate community colleges or other training providers.

### III. Accomplishments

- a. Discuss your accomplishments relative to the Goals and Objectives of the project, including the success criteria against which each accomplishment is measured. Please include an explanation if the goals/objectives were not met or were substantially exceeded.

**Task 3.1** – Assign project operators for preparation, recruitment and management of activities at regional Michigan Works! Agencies.

*Outcome* – WDA partnered with regional Michigan Works! Agencies to establish five project and implementation teams:

- 1) Capital Area Michigan Works! (CAMW)
- 2) The Job Force Board
- 3) Kalamazoo/St. Joseph
- 4) Oakland County Michigan Works! (OCMW)
- 5) Southeast Michigan Community Alliance (SEMCA)

Task 4.1 – Conduct outreach and recruitment of participant’s for the program through regional Michigan Works! Agencies.

*Outcome* – Each regional Michigan Works! Agency (MWA) partnered with employers, unions, community colleges, and other training providers, as appropriate to conduct outreach and recruitment. Outreach and recruitment strategies included:

- Line Technician Recruiting Expo – half day event designed to help jobseekers determine whether a utility career was the right fit for them. The Expo included

*demonstrations of work environment, safety procedures, common tasks, tools, and equipment used on the job. This event was designed to address the difficulty attracting lineworker applicants and the high fail rate for pole climbing and Construction and Skilled Trades (CAST) testing.*

- *Public Release of Line Technician Video – outreach and recruitment was done on a statewide basis through the release of a line technician video developed during the Line Technician Recruiting Expo. The video went to hundreds of media outlets across the state and triggered substantial response from individuals interested in participating in the training provided through the grant. Wait lists were established for line technician programs already underway.*
- *Informational Sessions – coordinated informational sessions consisting of job training opportunity information provided to job seekers from the perspective of the employer, regional MWA, and educational institution.*

Task 5.1 – Screen for work, language, academic, and transferable military skills through regional Michigan Works! Agencies.

***Outcome** – Each regional MWA partnered with employers, unions, community colleges, and other training providers, as appropriate to screen for qualified trainees. Screening and assessment activities included:*

- *Pre-Screen Activities – activities on the front end, prior to candidates starting training to build a successful workforce development pipeline of excellent pre-hire candidates. The “pre-screen” activities focused on the employer’s recruiting and hiring processes and incorporated initial activities that screen and identify potential candidates for the training. This helped refine the process from a candidate completing training and becoming ready for employment. Many of these activities were incorporated in to orientation sessions.*
- *Orientations - informational sessions were followed by orientations to explain the application and selection process to potential training participants, accept and screen applications, and determine eligibility for training. Orientations also included assessing aptitude or job fit, WorkKeys testing, COMPASS testing, testing for Commercial Drivers Licensing (CDL), driving record screening, drug screening, and national criminal background checks.*
- *Joint On-Site Orientations – orientations conducted jointly by the Michigan Works! Agency and the community college at the employer’s facility streamlined many activities required by both the college (application and intake process) and the MWA (paperwork and documentation collection) and reduced the amount of employee release time. Some orientation sessions included a tour of the facility/prospective work site depending on the location.*

Task 6.1 – Refer participants to an applicable training mechanism through regional Michigan Works! Agencies.

**Outcome** – Each regional MWA partnered with employers, unions, community colleges, and other training providers, as appropriate to refer trainees to established training programs.

*Training programs included:*

- *Combined Distribution Boot Camp at MIAT College of Technology*
- *Electrical Maintenance Journeyman Training Program at Oakland Community College*
- *Great Lakes Center for Utility Training at Lansing Community College*
- *Kalamazoo Valley Community College Lineworker Program*
- *Lansing Community College Lineworker Program in partnership with the Consumers Energy Marshall Training Center*
- *National Utility Industry Training Fund Lineworker Boot Camp*

Task 7.1 – Conduct training and follow up of Pre-Apprentice Lineworker Training through the appropriate community colleges, and/or utility/union training trusts, or other training providers.

<b>Pre-Apprentice Lineworker Training</b>	<b>Started Training</b>	<b>Completed Training</b>	<b>Placed in New Jobs</b>	<b>Incumbents Retained</b>
Capital Area Michigan Works!	112	59	20	35
Kalamazoo/St. Joseph	15	14	11	14
Southeast Michigan Community Alliance	234	159	57	12
<b>Total</b>	<b>361</b>	<b>232</b>	<b>88</b>	<b>61</b>

*Pre-Apprentice Lineworker Training projects under the grant were successful in building a talent pipeline for qualified lineworker apprentices. 361 of 338 planned participants started training resulting in 232 graduates. While job placements and retention are currently 64% of training graduates, hiring pools have been established to support both Consumers Energy and DTE Energy.*

*Strategies to meeting the demand for qualified lineworker apprentices varied by regional team, but all contributed to an education and training infrastructure that will prove beneficial for years to come:*

- *Capital Area Michigan Works! – resulted in the development of a “school-to-work” arrangement between Consumers Energy; their training center in Marshall, MI; and Lansing Community College (LCC) as well as the launch of Lansing Community College’s Great Lakes Center for Utility Training (GLCUT). Even though the GLCUT was already in the early stages of planning at LCC, grant activities helped improve procedures and develop curriculum for the college’s dedicated training facility for the training of lineworkers in the future.*
- *Kalamazoo/St. Joseph – Kalamazoo Valley Community College Utility Line Worker Academy, launched in May 2012, is another “school-to-work” partnership with*

*Consumers Energy and their training center in Marshall, MI. The Academy includes classroom instruction, physical fitness programming, and hands-on work in the lab and on poles to prepare individuals for utility lineworker apprenticeship opportunities.*

- *Southeast Michigan Community Alliance (SEMCA) – this regional team has had great success with developing and operating lineworker boot camps to provide a qualified pipeline of lineworker apprenticeship candidates for DTE Energy. Three lineworker boot camps, one combined distribution multi-feeder boot camp and a natural gas boot camp (not funded by this grant) during the grant period. This*

Task 7.2 – Conduct training and follow up of Apprentice Lineworker through the appropriate utility/union training trusts or other training providers.

<b>Apprentice Lineworker Training</b>	<b>Started Training</b>	<b>Completed Training</b>	<b>Placed in New Jobs</b>	<b>Incumbents Retained</b>
Kalamazoo/St. Joseph	73	73	0	73
Total	73	73	0	73

*The Kalamazoo/St Joseph Project Team implemented incumbent in-house apprentice and safety lineworker training when plans to conduct additional pre-hire cohorts through the KVCC Utility Line Worker Academy were cancelled due to insufficient demand for new lineworker apprentices.*

Task 7.3 – Conduct training and follow up of Pre-Apprentice Cable Splicer Training through the appropriate utility/union training trusts or other training providers.

<b>Pre - Apprentice Cable Splicer Training</b>	<b>Started Training</b>	<b>Completed Training</b>	<b>Placed in New Jobs</b>	<b>Incumbents Retained</b>
Southeast Michigan Community Alliance	22	12	0	22
Total	22	12	0	22

Task 7.4 – Conduct training and follow up of Apprentice Cable Splicer Training through the appropriate utility/union training trusts or other training providers.

<b>Apprentice Cable Splicer Training*</b>	<b>Started Training</b>	<b>Completed Training</b>	<b>Placed in New Jobs</b>	<b>Incumbents Retained</b>
Southeast Michigan Community Alliance	12	12	0	12
Total	12	12	0	12

*Trainees from Pre - Apprentice Cable Splicer Training progressed to apprenticeship training.*

Task 7.5 – Conduct training and follow up of Underground Lineworker Training at the appropriate community colleges or other training providers.

*Occupational training program was never launched due to changes in workforce demand.*

Task 7.6 –Conduct training and follow up of Substation / Engineering Technician Training and Smart Grid Component Manufacturing Training through the appropriate community colleges, and/or utility/union training trusts, or other training providers.

<b>Smart Grid Component Mfg. Training</b>	<b>Started Training</b>	<b>Completed Training</b>	<b>Placed in New Jobs</b>	<b>Incumbents Retained</b>
The Job Force Board	14	14	2	13
<b>Totals</b>	<b>14</b>	<b>14</b>	<b>2</b>	<b>13</b>

*Hiring, and therefore training, for the occupations identified in the initial grant proposal was slower than anticipated due to a weak economy and delayed retirements from the utility industry. As a result, WDASOM has pursued additional training opportunities that aligned with the intent of Michigan’s Electric Power Workforce Training Strategy. On October 16, 2012, WDASOM released the Energy Sector Partnerships and Training: Local and Regional Projects Request for Proposals (RFP) to identify high-demand energy related projects across the state. Proposals were due October 30, 2012 and were reviewed by WDA staff, members of the Governor’s Talent Investment Board, and the State Energy Sector Partnership Team Steering Committee. One proposal, the Job Force Board Project, was selected by WDA and approved by DOE based on its alignment with the intent of the grant.*

*The Job Force Board Project provided incumbent worker training to employees at Systems Control, a division of Northern Star Industries, Inc. Systems Control is a leader in the design and manufacturing of transmission and distribution relay protection and control panels as well as equipment enclosures for the electrical utility industry and its implementation of smart grid technologies. Entry-level employees received wiring training as well as on-the-job training in one of three career pathways: 1) Equipment Enclosure Wiring Technician; 2) Equipment Enclosure Assembly Technician; or 3) Electrical Testing Technician.*

Task 7.7 – Conduct training and follow up of Substation Operations / Maintenance through the appropriate community colleges, and/or utility/union training trusts, or other training providers.

<b>Substation Operations/Main. Training</b>	<b>Started Training</b>	<b>Completed Training</b>	<b>Placed in New Jobs</b>	<b>Incumbents Retained</b>
Kalamazoo/St. Joseph	3	3	0	3
Oakland County Michigan Works!	35	35	35	2
<b>Totals</b>	<b>38</b>	<b>38</b>	<b>35</b>	<b>5</b>

Task 7.8 – Conduct training and follow up of Advanced Metering Infrastructure (AMI) Technician Training through the appropriate community colleges, and/or utility/union training trusts, or other training providers.

*Occupational training program was never launched due to changes in workforce demand.*

Task 7.9 – Conduct training and follow up of Pre-Apprentice Electrical Maintenance Training through the appropriate community colleges or other training providers.

*Occupational training program was never launched due to changes in workforce demand.*

Task 7.10 – Conduct training and follow up of Apprentice Electrical Maintenance Training through the appropriate community colleges or other training providers.

<b>Apprentice Electrical Main. Training</b>	<b>Started Training</b>	<b>Completed Training</b>	<b>Placed in New Jobs</b>	<b>Incumbents Retained</b>
Oakland County Michigan Works!	29	17	29	17
<b>Totals</b>	<b>29</b>	<b>17</b>	<b>29</b>	<b>17</b>

*This training program created a career pathway for incumbent workers, increased their wages, and provided technology skill sets necessary for the rapidly changes electric power industry sector. The anticipated graduation rate for the program is 100%. Graduation for cohort 2 is expected in June 2015.*

Other Training - As changes in industry’s hiring projections and training needs remained constant throughout the duration of the grant, each project team actively pursued additional training opportunities that aligned with the intent of Michigan’s Electric Power Workforce Training Strategy. For example:

- *Capital Area Michigan Works! identified the incumbent training needs of the municipal utility the Lansing Board of Water and Light (BWL.) BWL had significant training demands associated with their construction of a new, high-tech co-generation plant, which resulted in training individuals in new technologies aligned with the smart grid.*

<b>Cogeneration Power Plant Operation and Maintenance Training</b>	<b>Started Training</b>	<b>Completed Training</b>	<b>Placed in New Jobs</b>	<b>Incumbents Retained</b>
Capital Area Michigan Works!	45	45		45
<b>Total</b>	<b>45</b>	<b>45</b>		<b>45</b>

b. Summarize your enrollment/graduation rates in the table below.

*Note: This is the same information that has been submitted quarterly for the metrics data; only now the information needs to be cumulative. Please report the same training metrics (i.e. Program Descriptions) that have been reported in your quarterly reports*



***Enrollments and Graduation Rates by Project Operator***

Project	Number of Enrollees		Number of Graduates	
	Planned	Actual	Planned	Actual
<b>Oakland County Michigan Works!</b>				
Substation Operators	64	35	64	35
Electrical Maintenance	50	29	50	17
<b>SEMCA Michigan Works!</b>				
Line Technicians (Overhead & Underground)	185	221	185	138
Energy Industry Fundamentals (pipeline building)	80	58	80	33
<b>Capital Area Michigan Works!</b>				
Line Technicians (Overhead & Underground)	117	112	117	59
Co-Generation Operations and Maintenance	44	45	44	45
<b>Kalamazoo-St. Joseph Michigan Works!</b>				
Line Technicians (Overhead & Underground)	36	91	36	90
<b>Michigan Works! The Job Force Board Project</b>				
Smart Grid Component Manufacturing	12	14	12	14
<b>Total</b>	<b>588</b>	<b>605</b>	<b>588</b>	<b>431</b>

***Enrollments and Graduation Rates by Training Program***

Training Program	Number of Enrollees		Number of Graduates	
	Planned	Actual	Planned	Actual
<b>Pre-Apprenticeship Training</b>	306	361	306	232
<b>Apprenticeship Training</b>	138	159	138	137
<b>Other Occupation Specific Training</b>	144	85	144	62
<b>Total</b>	<b>588</b>	<b>605</b>	<b>588</b>	<b>431</b>

***Enrollments and Graduation Rates by Job Classification***

Training Program	Number of Enrollees		Number of Graduates	
	Planned	Actual	Planned	Actual
<b>Lineworker</b>	273	409	273	272
<b>Underground Lineworker / Cable Splicer</b>	96	12	96	12

<b>Substation / Engineering Technician</b>	40	0	40	0
<b>Substation Operations / Maintenance</b>	64	38	64	38
<b>AMI Technician</b>	40	0	40	0
<b>Electrical Maintenance</b>	75	29	75	17
<b>Other</b>		117		117
<b>Total</b>	588	605	588	431

### Schedule Summary

- a. Discuss all major project milestones (and list in table below), deliverables, decision points and success criteria relative to the approved schedule. Include a discussion of rationale if a milestone(s), deliverable(s) and/or remaining schedule was not met /or was exceeded.

<b>MILESTONE</b>	<b>STATUS</b>	<b>START DATE</b>	<b>COMPLETION DATE</b>
Launch project plan and begin grant administration	Complete	08/2010	07/2014
Convene bi-monthly Michigan Energy Workforce Development Consortium meetings	Ongoing	08/2010	Ongoing
Conduct outreach & recruit participants for the grant program	Complete	08/2010	03/2014
Pre-Apprentice Lineworker Training	Complete	06/2011	07/2013
Apprentice Lineworker Training	Complete	04/2012	09/2013
Pre-Apprentice Cable Splicer Training	Complete	06/2011	07/2013
Apprentice Cable Splicer Training	Complete	04/2012	09/2013
Underground Lineworker Training	On hold based on employer demand	N/A	N/A
Substation Operations/Maintenance Training	Complete	09/2011	09/2013
Advanced Metering Infrastructure (AMI) Technician Training	On hold based on employer demand	N/A	N/A
Pre-Apprentice Electrical Maintenance Training	On hold based on employer demand	N/A	N/A
Apprentice Electrical Maintenance Training	In Process	02/2012	In Process
Cogeneration Power Plant Operation and Maintenance Training	Complete	03/2013	07/2014
Smart Grid Component Manufacturing Training	Complete	09/2013	03/2014
Combined Distribution Multi-feeder Training	In Process	07/2014	08/2014

*All training milestones and deliverables were met with the exception of three occupational training programs including Underground Lineworker Training, Advanced Metering Infrastructure (AMI) Technician Training, and Pre-Apprentice Electrical Maintenance Training, which were never launched due to changes in workforce demand.*

- b. Discuss all significant schedule changes from the original project award (i.e., extensions, schedule changes, etc.).

*Training under the grant did not commence until June 2011, almost a year after the grant award of July 30, 2010. Hiring projections and training needs outlined in the grant proposal submitted in November 2009 indicating the needs of the employers had changed by the time of the grant award and execution. As the industry needs shifted, so did the need for specific training providers. This required significant modifications to the grant agreements between WDA and its subgrantees, as well as modifications between WDA and DOE, thus the delay in the implementation of the grant.*

*In addition to the initial grant implementation delay, hiring and therefore training for the occupations included in WDA's original grant proposal was slower than anticipated due to a weak economy and delayed retirements from the utility industry. While the demand for lineworkers remained fairly consistent with what was anticipated during the development of the grant proposal, other job classifications did not keep pace with what was projected in 2009. In fact, three occupational training programs were never launched including Underground Lineworker Training, Advanced Metering Infrastructure (AMI) Technician Training, and Pre-Apprentice Electrical Maintenance Training due to changes in workforce demand. Additionally, employer partners did not phase out some of the occupations that were projected to be feeders for the training that was proposed under the grant.*

*WDA requested and was granted a no cost time extension. This extension allowed local projects to align training timing more closely with hiring needs projections for the first and second quarters of 2014 - particularly for overhead and underground lineworkers.*

*Despite the necessitated modifications and delays, the number of individuals participating in grant activities was exceeded; 588 were planned and 605 actually participated in training.*

#### IV. Cost and Financial Summary

Provide the final financial status of the project in the Project Financial Summary table below

Project Team	Total Grant Funding by Project		Total Cost Share by Project		Total Funding Expenditures by Project	
	Projected	Actual	Projected	Actual	Projected	Actual
Workforce Development Agency	\$ 129,014.00	\$102,165.00			\$ 129,014.00	\$ 102,165.00
Capital Area	\$1,359,160.00	\$1,329,160.00	\$8,430,765.00		\$9,789,925.00	\$ 1,329,160.00
Great Lakes Bay*	\$ 789,660.00		\$6,374,182.00		\$ 7,163,842.00	
Macomb/St. Clair*	\$ 520,895.00		\$ 117,372.00		\$ 638,267.00	
Oakland	\$ 452,196.00	\$ 289,300.91	\$ 657,714.00		\$ 1,109,910.00	\$ 289,300.91
SEMCA	\$1,852,995.00	\$2,110,716.96	\$1,202,102.00		\$ 3,055,097.00	\$ 2,110,716.96

Kalamazoo/St. Joseph**	\$ 556,336.00	\$ 536,189.12	\$1,019,433.69		\$ 1,575,769.69	\$ 536,189.12
Job Force Board	\$ 20,493.01	\$ 20,493.00		\$ 41,019.00		\$ 61,512.00
Unobligated	\$17,830.99					
DTE Energy				4,848,226.00		\$ 4,848,226.00
Consumer Energy				1,671,140.00		\$ 1,671,140.00
Lansing Board of Water & Light				\$ 237,746.00		\$ 237,746.00
<b>Total</b>	<b>\$4,388,025.00</b>	<b>\$4,388,025.00</b>	<b>\$16,782,193.00</b>	<b>\$6,798,131.00</b>	<b>\$21,170,218.00***</b>	<b>\$11,186,155.99</b>

\* *Project grant funding and projected total funding amounts for the Great Lakes Bay and Macomb/St. Clair projects are not included in the totals because these projects were canceled due to changes in employer demand. The projected cost share for these projects are included in the projected total cost share total in order to show the original proposed total cost share.*

\*\* *The projected cost share for the Kalamazoo/St. Joseph project is not reflected in the total in order to show the original proposed total cost share.*

\*\*\* *Total Projected Funding Expenditures by Project amount is based on grant agreement and not the sum of projects listed above due to project modifications during the grant period.*

- a. Discuss in detail the Recipient (claimed) cost share, compared with what was stated in the approved budget in the Assistance Agreement. Discuss any major changes or other issues relating to financial status.

*The State of Michigan did not achieve its original cost share projection of \$16,782,193 for our Michigan’s Workforce Training for the Electric Power Sector grant. Our cost share was \$6.8 million, 155% of the grant award of \$4.3 million, and 65% of the total project cost, well above the required 50% leverage/match. This shortfall is attributed to changes in workforce demand leading to changes to project training plans.*

*The proposal submitted to U.S. Department of Energy (DOE) in November 2009 was based on expected attrition within Michigan’s utility industry and hiring projections from both DTE Energy and Consumers Energy. Due to the state of the economy during the grant period, including Michigan’s slow recovery from the Great Recession, retirement attrition did not occur across the utility industry to the magnitude expected during the grant period. While generally, the demand for line technicians has remained consistent with what was anticipated during the development of the proposal, other job classifications did not. Growth and attrition within those classifications did not keep pace with what was projected in 2009. In fact, training programs for underground lineworkers, advance metering infrastructure (AMI) technicians, and pre-apprentice electrical maintenance were put on hold and never launched under the grant due to changes in workforce demand. Additionally, the employer partners did not phase out some of the jobs that were projected to be feeders for the training that took place under the grant as quickly as anticipated, most notably meter reader positions.*

*Industry's geographic focus and associated preferred training providers also changed. Specifically, when the grant proposal was submitted, Consumers Energy had significant need for line technicians and other positions in the Great Lakes Bay region and Delta College was its preferred training provider at the time. Consumers was also expecting a significant grant award from DOE to support the procurement of AMI meters. Therefore, the original cost share projection was based on a heavy load of Incumbent Worker Training for Consumers Energy. The plan was for Consumers Energy to transition low-skill, lower wage meter readers to higher skill jobs in higher demand, primarily line workers. In order to accomplish this, the grant would pay for classroom training through community colleges as well at Consumers Energy's line worker training facility. The company planned to make a significant investment in this effort by paying wages, benefits, and travel costs for those employees as they participated in that classroom training. An economic shift in Michigan coupled with the fact that the AMI grant was not awarded led Consumers Energy to make a business decision not to transition meter readers, and forced a change in the grant's training strategy. By the third quarter of 2011, Consumers Energy was no longer utilizing Delta College's training and the line technician program was shut down. The in-kind support associated with the Great Lakes Bay Region identified in the grant proposal totaled \$6,374,182. This project was replaced with work in the Kalamazoo/St. Joseph region, which consisted primarily of new hire training for line technician positions and short-term incumbent worker training with far less associated in-kind support, \$1,019,433.69, than the longer-term training originally planned in the Great Lakes Bay region.*

*The impact this had on the grant is that much more training was focused on preparing new hires as opposed to providing new skills to existing employees. From a workforce development and outcomes perspective, this was a positive change as it increased the number of new jobs filled. However, this also significantly impacted the in-kind match proposed in Michigan's grant as many of the training participants were receiving long-term training while "on-the-clock."*

## **V. Continuity of the Project Objectives into the Future**

- a. Provide a brief discussion of the project's next steps and/or plans of going forward.

*Since November 2008, DTE Energy, Consumers Energy, utility municipalities and co-ops, the Utility Workers Union of America, AFL-CIO, the International Brotherhood of Electrical Workers, Michigan Community Colleges, local Michigan Works! Agencies, the Michigan Workforce Development Agency, and other relevant partners have worked together to create the Michigan Energy Workforce Development Consortium (MEWDC), formerly referred to as the Michigan Utility Workforce Development Consortium, an industry-led partnership of more than 30 representatives of industry, workforce, education, and veterans, with an aim to develop solutions to looming skilled worker shortages in Michigan's energy utility industry. MEWDC's vision and mission are as follows:*

### *VISION*

*The Michigan energy industry is adequately staffed with a qualified and diverse workforce to provide safe and efficient energy.*

### *MISSION*

*To identify and act on current and future workforce issues that are crucial to building and sustaining Michigan's energy industry. The goals of the MEWDC are to:*

- *Attract, retrain and retain a qualified and diverse talent pool for Michigan's energy industry.*
- *Identify specific workforce needs of Michigan's energy industry including specific skill sets resulting from projected growth and attrition.*
- *Meet the needs of employers in Michigan's energy industry.*
- *Align education and training resources across the State of Michigan to assist Michigan's energy industry.*
- *Raise awareness of the energy industry and promote the value of the consortium by communicating with and recruiting support from key decision makers in Michigan.*

*MEWDC served in the oversight role for the Workforce Training for the Electric Power Sector grant ensuring that grant activities aligned with industry demand. Additionally, they played an important role in developing strategies to sustain the project's efforts beyond the grant period. To that end, the MEWDC recently partnered with the Center for Energy Workforce Development (CEWD) to engage utility industry partners and stakeholders to 1) expand the composition of the Consortium; and 2) assist with developing goals and activities for the work of the Consortium.*

*The Consortium is now focused on four strategic objectives through 2018:*

- ***Strategic Objective 1:*** *Create awareness among targeted populations of the critical need for a skilled energy workforce and the opportunities for education that can lead to entry-level employment.*
- ***Strategic Objective 2:*** *Implement clearly defined education solutions that link industry recognized competencies and credentials to employment opportunities and advancement in the energy industry*
- ***Strategic Objective 3:*** *Balance the supply and demand for a qualified and diverse energy workforce*
- ***Strategic Objective 4:*** *Organize and manage the MEWDC to maximize its positive impact on national, state, and individual company initiatives*

*Three taskforces were established around Strategic Objectives 1 – 3 and each has recently developed short- and long-term strategies to address each objective. The executive committee of MEWDC convenes monthly and the full consortium meets three times a year.*

*The Regional Project Teams including Michigan Works! Agencies, which were WDAs subgrantees and educational institutions, which provided training under the grant are all members of the consortium and are assisting with the efforts and sustainability of the consortium.*

*Recent work beyond the grant to date has been focused on career awareness. At the request of MEWDC, October 13 – 19 was proclaimed by Governor Snyder as "Careers in Energy Week" in Michigan. Through this effort, Michigan joined several other states*

*in a nationwide effort to increase public awareness of careers in the energy sector and, in particular, the more than 1,200 annual job opportunities in Michigan.*

*During the fall, and predominantly in October, the leaders of the MEWDC, Consumers Energy and DTE Energy, and their consortium partners will:*

- *Reach out to students at elementary and secondary schools to talk about the industry, safety, and energy efficiency. It is estimated that 32,050 students will be reached throughout the fall, and energy efficiency kits will be distributed to many of those students.*
- *Recruit the best and the brightest students for 2015 co-op, internship, and full-time opportunities from at least 13 college campuses including Central Michigan University, Eastern Michigan University, Ferris State University, Grand Valley State University, Lawrence Technological University, Michigan State University, Michigan Technological University, Oakland University, University of Detroit Mercy, University of Michigan - Ann Arbor, University of Michigan - Dearborn, University of Michigan - Flint, Wayne State University, and Western Michigan University throughout October*
- *Continue to support youth education through combined Utility Foundation contributions of over \$3,000,000 annually.*

*Between October 13 and 19, Consumers Energy, DTE Energy, the State of Michigan, and other MEWDC members issued communications that included messages highlighting Careers in Energy Week. In addition, the Great Lake States energy consortia, with assistance from CEWD worked together to launch a joint website which serves as a career discovery tool for individuals looking to enter the energy industry, keep the public abreast of energy industry data, and serve as a clearinghouse for MEWDC information.*

*The primary strategy of WDA focuses on aligning all efforts - initiatives, programs, and funding – around priority industry clusters for a demand-driven system. Through extensive labor market research, WDA has initially identified five state priority clusters: agriculture, energy, health care, information technology (IT), and manufacturing, and is driving workforce development efforts toward meeting the skills needs within these clusters.*

- b. Did you collaborate or share your materials with other organizations? If not, do you plan to do so in the future? (please explain in 1-2 paragraphs, if needed)

*A contingent of the MEWDC attended the CEWD Midwest Region Meeting and National Energy Education Network Meeting in Kansas City Missouri, June 17 – 19, 2014. Michigan attendees included representatives from DTE Energy, Consumers Energy, WDA, and the community college system. During the Region Meeting, a DTE representative, Deborah Majeski, presented on Operations Boot Camps, some of which were funded under this grant, as a CEWD-recognized best practice for understanding education talent supply.*

**VI. Lessons Learned and Recommendations**

<b>Things That Worked Well</b>	<b>Things That Were a Challenge</b>
<i>Industry, government, workforce development, education partnerships resulting in concerted talent development practices beyond the grant</i>	<i>Changing talent and workforce demands (hiring projections and training needs) of industry during the course of the grant and the ability to project realistic performance outcomes under the circumstances</i>
<i>Communication and coordination among partners. Each project team built strong partnerships with the employers in order to keep up-to-date on industry trends and training needs. Over the grant period, Michigan’s project teams had to make several adjustments to meet the regional demand for energy related skills. They had to focus on the real-time skill needs and adjust their training responses quickly to meet demand.</i>	<i>Reduced number of opportunities for unemployed jobseekers to participate in training for direct employment</i>
<i>The Southeast Michigan project teams coordinated the recruitment and training process flow for grant activities with DTE Energy. Within Southeast Michigan, the MWAs each serve individuals in the Greater Detroit Metropolitan Area. Because businesses span over multiple Michigan Works! areas, the MWAs collaborated to ensure that employers receive seamless services across Southeast Michigan.</i>	
<i>Outreach and recruiting efforts such as the Line Technician Recruiting Expo and the videos released to media outlets statewide to address difficulty attracting lineworker applicants and the high fail rate for pole climbing and CAST testing.</i>	
<i>Michigan Works! System incorporated pre-screen activities on the front end, prior to candidates starting training to build a successful workforce development pipeline of excellent pre-hire candidates. The “pre-screen” activities focused on the employer’s recruiting and hiring processes and incorporating initial activities that screen and identify potential candidates for the training helped to refine the process from a candidate completing training and becoming ready for employment.</i>	
<i>The development of a statewide Energy Industry Fundamentals Certificate Programs, which Consumers Energy and DTE Energy</i>	



<i>attached to a Natural Gas Boot Camp. This did not qualify for grant funding, but the product is a direct result of partnerships developed through MEWDC and the grant.</i>	
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- a. Provide a brief discussion of the project’s outcomes relative to the stated project goals and objectives.

*605 individuals participated in grant activities compared to 588 planned participants, 431 or 71% completed training, 154 have been placed in employment, and 236 retained employment as a result of the training they received.*

- b. Discuss any observations, benefits or opportunities for improvement resulting from the project. (Please limit to no more than two paragraphs).

In addition to the 390 individuals that were placed and retained in jobs, Michigan’s Electric Power Workforce Training Strategy was instrumental in:

- Building a qualified pre-hire talent pool in the highest priority occupations across the utility industry.
- Enhancing the skills of the current incumbent workforce to keep pace with emerging technologies.
- Establishing industry/workforce development/education partnerships that did not exist prior to the grant, which ensures excellent pre-hire candidates at the end of both recruitment processes and training.
- Developing and fine-tuning education and training programs that are responsive to the changing talent and workforce demands of industry employers.