

EDUCATION SUBCOMMITTEE A

House Judiciary Committee Room
June 16, 2014

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West Virginia
Higher Education
Policy Commission



**Report to
Education Subcommittee A**

June 16, 2014

Reverse Transfer

REVERSE TRANSFER

I. DEFINITION

The process of transferring academic credit from a baccalaureate college back to a community college for the purpose of awarding an associate degree.

II. WHY REVERSE TRANSFER FOR WEST VIRGINIA?

- a. West Virginia has one of the lowest educational attainment rates in the country; 28% of West Virginians age 25-64 have earned an associate degree or higher; the national average is 39%.
- b. West Virginia has approximately 185,000 people with some earned college credit but no degree, who have dropped out of school.
- c. Approximately 1,600 – 1,700 West Virginia community college students per year transfer to WV public baccalaureate colleges; transfer graduation rates are approximately 52%-55%.

III. BENEFITS

- a. Students achieve a milestone en route to the baccalaureate that encourages further degree acquisition.
- b. Students may achieve an edge in the workforce with increased career options and earnings by having earned a recognized credential, especially in cases where students are unable to complete the baccalaureate.
- c. Students are awarded what they earned
- d. Positive impact on the state's economic development profile
- e. Increases graduation rates and assists in meeting college completion goals

IV. PROCESS

- a. Select degrees to be awarded
 - i. Transfer degrees only: AA and AS
 - ii. Program Area; ie. Business, Technology, Health Sciences
- b. Must meet accrediting agency requirements
- c. Determine eligibility requirements:
 - i. All transfer students or just those not earning a baccalaureate degree
 - ii. Determine minimum number of credit hours completed at the community college
- d. Determine individual college or state-level process:
 - i. State level
 - ii. College to College
 - iii. Regional
- e. Determine manual or automated system to identify students and complete credit evaluations.

V. CHALLENGES

- a. Labor intensive, especially for smaller colleges
- b. Determine technology requirements
- c. FERPA considerations; transfer of information from college to college
 - i. Student consent
- d. Which college awards the degree?
 - i. Community College
 - ii. Baccalaureate College
- e. Cost
 - i. Tennessee; State-Level Initiative
 - 1. \$400,000 Grant
 - 2. \$300,000 State Appropriation
- f. Locating students
- g. Low population density in WV working against us

Project Win-Win: Going to Scale

Basic Description

Project Win-Win involves 35 colleges in six states (Louisiana, Missouri, New York, Ohio, Virginia, and Wisconsin) in finding former students, no longer enrolled anywhere and never awarded any degree, whose records qualify them for associate's degrees, and get those degrees awarded retroactively. Simultaneously, this effort will identify former students who are "academically short" of an associate's degree by no more than 9 credits, find them, and seek to bring them back to complete the degree.

"Win-Win," undertaken in a partnership of the Institute for Higher Education Policy (IHEP) and the State Higher Education Executive Officers (SHEEO), and funded by the Lumina Foundation for Education, is a major expansion of a Pilot conducted in the fall and spring terms of 2009-2010 in nine of the 35 institutions and under the sponsorship of the Education Trust. The pilot schools (six community colleges in New York, Ohio, and Louisiana, and three four-year colleges in Louisiana that award associate's degrees) discovered that finding the students and awarding these degrees is neither a simple nor an instant matter. But by the end of their 7-month pilot, these institutions had already awarded or certified for award, 592 associates degrees, and had lined up 1,596 students who were short by 9 or fewer credits, hence "potential" degree recipients. The Pilot schools will continue in the expanded version of Win-Win for one year, by the end of which IHEP expects to see them award about 1,000 associate's degrees, and have at least 2,000 students in line to complete the degree in a timely manner.

If one projects those numbers out across both U.S. community colleges and four-year colleges that award associate's degrees, one is looking at at least a 12 percent increase—and possibly more—in the number of associate's degrees awarded. If one adds in four-year colleges that do not award associate's degrees themselves but can target students who transfer in from community colleges without the degree, and work with the originating institutions for those students to get the degrees awarded, the total number of new associate's degrees conferred could reach 250,000. This is an enormous down-payment on the "big goals" of increased degree completion set by the Lumina Foundation, the Nation's governors, and President Obama. These students are comparatively easy candidates for credentials.

The new institutions participating in Win-Win include six community colleges in Virginia, three four-year colleges of the University of Wisconsin System as well as the System's UW Colleges (which comprises 13 two-year liberal arts campuses), two major community college districts and two private institutions in Missouri, two community colleges in Ohio plus three branch campuses of Kent State University, two technical colleges and two community colleges in New York, and one four-year college and two community colleges in Louisiana (all are listed in Appendix A). All participating institutions were selected and recruited by the central state or system higher education authority. Each participating institution receives a small grant to support its efforts,

administered—with other support—by its state system central office. All participating institutions are contributing a significant amount of staff time to this effort because they realize the potential of its impact on local graduation rates.

Scenarios for Finding Qualifying Students

There are seven (7) distinct procedural scenarios reflected in the plans and commitments of participating institutions. What Win-Win calls the “Full Cycle” is the default model, and is being pursued by a majority of the 35 institutions. The other scenarios are products of either local institutional design or variations on procedures followed by institutions in the Pilot phase of Win-Win. All of these employ elements of the “Full Cycle.”

1) Full-Cycle.

The basic scenario for all participating institutions is involves seven steps:

- (1) identifying students in their data systems who had entered the institutions at any time *after* 2001, earned at least 60 credits and the minimum grade point average required for graduation, but who never received the associate’s degree and had not been enrolled at the institution for at least a year;
- (2) matching that initial list against state system records to determine who is either currently enrolled elsewhere in the state or earned a degree from another state institution, and removing them from the population under consideration;
- (3) taking the reduced list after step 2 and sending it to the National Student Clearinghouse to determine if anyone on the list is currently enrolled in another state or received a degree in another state, and removing them from the group under consideration;
- (4) taking the residual list of students after step 3, and subjecting each student to a “degree audit” to reach a final determination on degree eligibility;
- (5) for all degree “eligibles,” determine whether there are any administrative “holds” on degrees and resolve as many of these as possible;
- (6) for all those for whom the Degree Audit determined “academic shortfall” by 9 or fewer credits, find these “potential” degree earners, and

(7) contact as many of #6 as can be found with templates for finishing degrees that include formal class work, credit-by-examination, and/or development and review of a dossier that documents and validates experiential learning.

This process takes two years to complete, with the largest portions of time spent on Degree Audits and locating the potential degree-completers.

2) Full-Cycle interstate. Win-Win was fortunate when the Missouri Department of Higher Education recruited two large community college districts—St. Louis and Metropolitan (Kansas City, MO)—whose students often flow back and forth across state lines (Illinois and Kansas, respectively), earning credits from schools on both sides of the state line. This scenario presents distinct challenges in matching data from more than one state system.

3) Feeder. In this case, the community college initiates a follow-up of students who transferred to a specific four-year college, one for which the community college is a high-volume “feeder.” Both Monroe Community College and Suffolk Community College in New York (participants in the Pilot project) are following this process with The State University of New York at Brockport and the State University of New York at Stony Brook, respectively. Based on analysis of combined records at the feeder community college and the specific institution “fed,” the two community colleges will seek to award associate’s degrees to those either still enrolled or no longer enrolled (and without any degree).

4) Reverse feeder. This case is a mirror image of the process in which Monroe and Suffolk community colleges are the instigators. Here, the four-year college, the University of Louisiana/Lafayette, identifies students from a specific feeder community college (Southern Louisiana CC) who, by its analysis, have met requirements for an associate’s degree, and negotiates with the community college to get those students credentialed. This process is appropriate—and replicable—to four-year colleges that do not themselves award associate’s degrees.

5) Resident four-year. This model applies to any four-year college authorized to award associate’s degrees itself, and without negotiation with its feeder community colleges. The institution looks at all its currently resident students in terms of associate’s degree eligibility, and moves through the seven steps of the Full Cycle with that group. The three participating Louisiana universities in the Pilot phase of the program fall in this group, as do the two technical colleges in the State University of New York system (Alfred and Cobleskill).

6) Branch campus cycle. This scenario is unique to those state universities with associate's-degree granting branch campuses, and in which students sometimes attend both the "home" university and a branch campus. For the Win-Win expansion, the case will be illustrated by three branch campuses of Kent State University in Ohio: Stark, Trumbull, and Tuscarawas.

7) Four-year resident, retroactive. This approach in Wisconsin is modeled on that originally developed by the Univ. of Wisconsin/Oshkosh. It focuses on four-year college students who left the institution in good academic standing, never earned any degree, and who are no longer enrolled anywhere. It seeks to confer associate's degrees on these "drop-outs," retroactively. Current resident students are not at issue.

Problems Revealed on the Road to Documentation

Among the bumps on these roads discovered during the course of the Pilot project:

- local data systems may be hampered by prior changes in or upgrades to software, e.g. a software change in 2005 may isolate all students who entered before that date hence exclude them from the universe under investigation;
- local and state data may not be wholly compatible, e.g. they may use different identification systems for which cross-walks must be developed;
- not every institution possesses a membership level in the National Student Clearinghouse that allows them to find degree awards;
- degree audit software is, to put it kindly, immature, e.g. it is often not populated with courses that no longer are offered and for which equivalents are not programmed, or it sets degree fulfillment criteria to those in force in 2009 when the student in question entered under different criteria in 2003; most institutions had to turn to hand-and-eye review of transcript records for the degree audit, and this task is very time-consuming;
- nearly half of the 9500 students in the Pilot phase of Win-Win who passed through step 1 of the default process were transfers in (see Appendix B for data on this feature of the population), and ultimately, the most frequent "hold" on degrees lay in the fact that transcripts from other institutions attended by the student had never been received (and, by most state system policies, without a full transcript record, degrees cannot be awarded);
- the default associate's degree offered or awarded to the student is the A.A., A.S. or A.G.S., i.e. standard transfer degrees, whereas some students will be on the institution's record books as candidates for an Associate of Applied Science (A.A.S.) in a particular occupational field, and may resist the offer of a standard transfer degree (even though they have been out of school for at least a year) on the false assumption that once the A.A. or A.S. is awarded they cannot return to

- school to finish requirements for the A.A.S.; participating institutions will be testing strategies for dealing with this problem;
- locating students who are “academically short” and hence potential degree completers is a major undertaking.

All of these lessons from the 9 institutions in the Pilot phase of Win-Win will help the expanded group of institutions negotiate the complex process of awarding degrees retroactively. The result will be far fewer qualified students walking around empty-handed and much improved degree completion rates at the associate’s level for community colleges and colleges, i.e. Win-Win.

Evaluation and State Policy Issues

The State Higher Education Executive Officers will be bringing the lessons of these efforts to their members, highlighting areas in which state system policies and regulations need to be reexamined in light of the Win-Win experience. The SHEEO formative evaluation of all institutional efforts will include in its consideration such issues as cost-benefits, comparative demographics (i.e. aggregate portraits of the student populations to whom degrees are awarded and those placed in the line of “potential” completers compared with degree recipients under regular progression), types of “holds” on degrees that are products of institutional and state policies, and degree audit procedures and problems. The SHEEO presence, activities, and advocacies will have considerable multiplier effects.

Appendix A

Project Win-Win, Phase 2: Who is Participating—and How?

<u>State</u>	<u>Institution</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Model</u>
Louisiana	Bossier Parish CC	X			Full-cycle, completing
	Delgado CC	X			Full-cycle, completing
	McNeese State University	X			Resident and transfer 4-year, completing
	Northwestern State University	X			Resident and transfer 4-year, completing
	Southeastern State University	X			Resident and transfer 4-year, completing
	Univ. of La./Lafayette	X			Transfer students from Southern La. CC, new (Reverse feeder)
	Nunez Community College		X	X	Full-cycle, new
	Baton Rouge Community College		X	X	Full-cycle, new
Missouri	St. Louis CC District	X	X		Full-cycle, interstate (IL), new
	Metropolitan CC District		X	X	Full-cycle, interstate (KS), new
	DeVry University, Kansas City	X	X		Full-cycle, new
	Columbia College		X	X	Full-cycle, new
New York	Monroe Community College, #1	X			Full-cycle, completing
	Monroe Community College, #2	X			Transfer students to SUNY/Brockport (feeder)
	Suffolk Community College, #1	X			Full-cycle, completing
	Suffolk Community College, #2	X			Transfer student to SUNY/Stony Brook (feeder)
	Orange Community College	X	X		Full-cycle, new
	Clinton Community College		X	X	Full-cycle, new
	Alfred State Technical College		X	X	Resident 4-year, new
	SUNY at Cobleskill		X	X	Resident 4-year, new

Ohio	Clark State Community College	X			Full-cycle, completing
	Lakeland Community College	X			Full-cycle, completing
	Kent State Univ/Trumbull	X	X		Branch campus cycle, new
	Kent State Univ/Stark	X	X		Branch campus cycle, new
	Kent State Univ/Tuscarawas	X	X		Branch campus cycle, new
	Northwest State Community Coll		X	X	Full-cycle, new
	Sinclair Community College		X	X	Full-cycle, new
Virginia	Tidewater Community College	X	X		Full-cycle, new
	Virginia Western CC	X	X		Full-cycle, new
	Germana Community Coll		X	X	Full-cycle, new
	New River Community Coll		X	X	Full-cycle, new
	Northern Va. Community Coll		X	X	Full-cycle, new
	Thomas Nelson Comm Coll		X	X	Full-cycle, new
Wisconsin	Univ. of Wisc., Green Bay	X	X		4-year resident retroactive, new
	Univ. of Wisc., Platteville	X	X		4-year resident retroactive, new
	Univ. of Wisc., Stevens Point	X	X		4-year resident retroactive, new
	Univ. of Wisc 2-year Colleges	X	X	X	Full-cycle across all campuses

Appendix B**Project Win-Win, Phase I
Transfers-in and Subsequent Population Who Earned Degrees Elsewhere**

School	Of initial Win-Win universe, percent transfers-in	Average credits transferred-in	Percent transferring-in more than 20 credits	Number of initial Win-Win universe earning degrees elsewhere	Percent of original universe
Delgado CC (LA)	49.9%	35.9	43.8%	219	48.3%*
Bossier Parish CC (LA)	55.4	44.0	67.3	374	32.4
Monroe CC (NY)	47.9	29.4	61.4	404	30.4
Suffolk CC (NY)	34.6	16.5	32.9	143	3.3
Clark State CC (OH)	41.0	25.6	11.5	NA	NA
Lakeland CC (OH)	8.2	NA	NA	NA	NA
McNeese State (LA)	45.4	60.0	91.7	118	20.7
Northwestern State (LA)	54.3	60.0	90.4	185	18.9
Southeastern State (LA)	50.2	75.0	95.9	468	26.3



**Report to
Education Subcommittee A**

June 16, 2014

Implementation of
Advanced Career Pathway Programs of Study



CAREER PATHWAY PROGRAMS OF STUDY

SECONDARY/POSTSECONDARY TRANSITIONING OF STUDENTS

STATUS REPORT AND RECOMMENDATIONS

BACKGROUND

A great deal of effort has been expended in West Virginia in recent years to create opportunities for secondary students to seamlessly matriculate to postsecondary education. These efforts have focused primarily on using articulation, EDGE credit, dual credit or other mechanisms to grant secondary students advanced standing into community and technical college programs. Unfortunately, experience in using these tools has shown that:

- **Articulated credit**, as it has been defined in West Virginia, has not proven to be an effective tool in significantly impacting the number of secondary career and technical education graduates that successfully matriculate to the community and technical colleges. This fact has been substantiated through a number of studies done within the state.
- **EDGE credit**, while it has the advantage of being tuition free and reflective of the duplicated content between secondary career and technical education (CTE) offerings and related community and technical college (CTC) programs, has not resulted in significant increases in the number of students matriculating to the CTCs with earned credit. Data show that in 2012-2013, only 416 students from a potential cohort of approximately 10,000 high school graduates in the spring of 2012 with earned EDGE credit, actually enrolled in a CTC with transcribed EDGE credit. Unfortunately, the numbers are not any better for the 2013 high school graduates enrolled in the 2013 fall semester with EDGE credits, which has been reported as 257 students.
- **Dual credit**, while it has some advantages, including the fact that a student is pre-enrolled in college for credit while in high school, has come under scrutiny in recent years by the Higher Learning Commission and others, resulting in fewer offerings available to students at the high school level. Also, tuition charges for dual credit may negatively impact student enrollments and matriculation.

Even though educators at both levels, policymakers and the West Virginia employment sector agree that seamless student transitioning through quality career/technical education at both the secondary and postsecondary levels, leading to industry valued and recognized credentials, is paramount in assuring the availability of a well-skilled workforce, progress has been limited.

To adequately address this need, both secondary CTE and the CTCs must be willing to engage in an honest and open dialogue and agree to work together to develop well-designed ***Career Pathway Programs of Study*** that reflect advanced technical preparation and credentials in high-skill, high-wage, high-demand career fields that are in demand across this state. If both levels commit to this work, the number of high school graduates seamlessly matriculating to the CTCs and obtaining advanced credentials would increase significantly.

Definition of a Career Pathway Program of Study

The term “Career Pathways Program of Study” refers to a clear sequence of educational coursework/experiences that lead students to attain a postsecondary degree, industry-recognized credential(s), or certificate in a high-demand, high-wage, high-skill career field.

Quality Career Pathways Programs of Study must address the following criteria:

- Address the documented needs for skilled employment in high-demand, high-skill, high-wage career fields;
- Identify, validate and align secondary and postsecondary education content and standards;
- Include academic and technical content in a coordinated, non-duplicative progression of courses;
- Include a focus on authentic, robust, project-based instruction that grounds students in the real-world use of technical and academic knowledge;
- Offer the opportunity, where appropriate, for secondary students to acquire postsecondary credits; and,
- Lead to a valued industry-recognized credential, certificate, associate or baccalaureate degree.

Benefits to Students

Well-designed Career Pathway Programs of Study:

- Create smoother transitions for students as they move from secondary to postsecondary education and into the workforce, by avoiding the pitfalls that tend to derail their career plans, waste time and tuition, and frustrate them and their parents;
- Encourage students to set realistic career goals and complete a full sequence of courses, leading to a postsecondary credential;
- Assist students to develop education/career goals and a plan to achieve them, resulting in a more personal investment and motivation in their studies; and,
- Eliminate duplication of what students learn by granting credit for documented skills, regardless of where they were acquired.

Recommended Process for Developing Career Pathway Programs of Study

The most logical approach to addressing the development of Career Pathway Programs of Study in West Virginia would be through the District Consortia. As defined in statute, the district consortia are charged with bringing together secondary CTE representatives from each of the school districts within the Community College District to work collaboratively with the college to address the workforce training needs of the District.

To assist the District Consortia in this effort, the WVCTCC initiated an effort during the 2013-2014 school year to investigate the feasibility of developing model Career Pathway Programs of Study around selected Southern Regional Education Board (SREB) **Advanced Career** programs currently being developed, piloted and implemented by 9 member states, including West Virginia. The SREB Advanced Career Programs are, by design, ideal candidates for career pathway development and alignment between secondary and postsecondary education. Each AC program:

- Provides students a solid academic core in English, mathematics, and science;
- Engages students in challenging, authentic projects and assignments in context of a career field;
- Engaged business/industry in the design of the curriculum;
- Utilizes end-of-course assessments to measure student mastery of the content;
- Requires in-depth instructor training; and,
- Provides students opportunities to earn advanced credit in a number of related community and technical college programs.

Currently, there are eight Advanced Career programs available for implementation and/or pilot testing in the fall of 2014. These offerings include:

- Energy and Power (WV)
- Informatics (KY)
- Health Informatics (OH)
- Advanced Manufacturing (KY)
- Aerospace Engineering (AL)
- Global Logistics (NJ)
- Innovations in Science & Technology (AK)
- Clean Energy Technology (SC)

The current and projected secondary schools implementing the Advanced Career programs in West Virginia through the 2014-2015 school year include:

- **Power & Energy**
 - Randolph County Technical Center (2013-2014)
 - Preston High School (2013-2014)
 - Marion County Technical Center (2013-2014)
 - Jefferson High School (2013-2014)
 - Lewis County High School (2013-2014)
 - Ben Franklin Technical Center (2013-2014)
 - Wood County Technical Center/Caperton Center (2014-2015)
 - Monongalia County Technical Center (2014-2015)
- **Advanced Manufacturing**
 - Carver Career & Technical Center (2014-2015)
- **Informatics**
 - Mercer County Technical Center (2014-2015)
 - Ben Franklin Technical Center (2014-2015)
 - James Rumsey Technical Institute (2014-2015)
- **Innovations in Science & Technology**
 - Clay County High School (2014-2015)
- ***Others to be identified***

The 2013-2015 Advanced Career secondary programs/schools fall within the following Community & Technical College District Consortia:

- ⇒ North Central WV/Pierpont CTC
- ⇒ Mid-Ohio Valley/WVU Parkersburg CTC
- ⇒ Shenandoah Valley/Blue Ridge CTC
- ⇒ Advantage Valley I & II/Mountwest & Bridge Valley CTCs
- ⇒ Southeastern/New River CTC

Attached, is a map of West Virginia depicting the community & technical colleges offering advanced technical programs that have significant alignment with the Power & Energy and Advanced Manufacturing AC programs being offered in the secondary schools. This alignment was verified through a number of meetings and discussions with community & technical college faculty from across the state in the fall of 2013 utilizing the AC course descriptions provided by SREB and comparing the projects/content with college course syllabi and skills lists.

Based on these findings, career pathway development work needs to be addressed by each of the District Consortia in reference to the applicable AC programs being implemented within the district high schools and technical centers. This work should also be extended to other secondary technical programs in high-demand, high-wage, high-skill career fields that have a logical postsecondary connection/alignment.

This process of career pathway development should address the following protocol and involve both secondary and postsecondary technical faculty in the establishment of formal pathways:

1. Schedule meetings with appropriate community and technical college faculty and secondary CTE teachers to review the curriculum at both levels and determine the feasibility of career pathway development;
2. Review the content of both the postsecondary and secondary courses and develop a matrix, including additions or revisions needed in either the secondary or postsecondary content to better prepare students for successful transitions. This work should also include the identification of duplicated content and provisions for granting credit to matriculating secondary graduates;
3. Validate the career pathway content with applicable business/industry representatives to assure that the skills sets and/or credentials acquired by the students are consistent with the needs of the workplace;
4. Develop consistent procedures/processes for validating student acquisition of the skills associated with the credit awarded for the secondary component of the career pathway programs;
5. Develop Career Pathway Programs of Study illustrations that include both the secondary (9-12) academic and CTE coursework and the corresponding community and technical college requirements for the aligned certificates and degrees available. This illustration should also include the dual/EDGE credit available to students at the secondary level; and,
6. Develop marketing materials/strategies to inform students, parents, counselors and others of the Career Pathways available to students. This work should focus on both the middle and high school levels.

The overall goal of this work should be the development of clearly defined seamless pathways for students, middle school through postsecondary education, that, when completed, will result in the acquisition of the skill sets and habits of mind necessary for gainful employment in the high-skill, high-wage and high-demand career fields needed within the West Virginia economy.



MANUFACTURING RELATED PROGRAMS

Blue Ridge Community and Technical College

- Mechatronics Technology CAS, AAS

BridgeValley Community and Technical College

- Chemical Operations CAS
- Manufacturing Specialist CAS
- Advanced Manufacturing Technology AAS
- Applied Process Technology AAS
- Electrical Engineering Technology AAS
- Mechanical Engineering Technology AAS
- Instrumentation Technology (planned) CAS, AAS

Eastern WV Community and Technical College

- Electromechanical Technology CAS, AAS
- Wind Turbine Technology CAS, AAS

Mountwest Community and Technical College

- Biomedical Instrumentation Technology AAS
- Electronics Technology AAS
- Engineering Design Technology AAS
- Instrumentation Technology (planned) AAS

New River Community and Technical College

- Mechatronics Technology CAS
- Machining Technology (Greenbrier Co) CAS
- Electrical Technology (Greenbrier Co) CAS

Manufacturing Programs, continued

Pierpont Community and Technical College

- | | |
|--|-----|
| ▪ Mechatronics Technology | AAS |
| ▪ Process Technology (planned) | AAS |
| ▪ Instrumentation Technology (planned) | AAS |

Southern WV Community and Technical College

- | | |
|-------------------------------------|----------|
| ▪ Electrical Engineering Technology | CAS,AAS |
| ▪ Mechatronics Technology (planned) | CAS, AAS |

WV Northern Community College

- | | |
|---|-----|
| ▪ Mechatronics Technology | AAS |
| ▪ Chemical Process Technology (planned) | AAS |

WVU at Parkersburg

- | | |
|--|-----|
| ▪ Industrial Maintenance | CAS |
| ▪ Electricity and Instrumentation Technology | CAS |
| ▪ Chemical / Polymer Operator Technology | AAS |
| ▪ Machining Technology | AAS |
| ▪ Multi-Craft Technology | AAS |
| ▪ Automated Control Systems | AAS |

ENERGY RELATED PROGRAMS

Blue Ridge Community and Technical College

- Electrical Distribution Technology CAS, AAS

BridgeValley Community and Technical College

- Sustainable Building Technology CAS

Eastern WV Community and Technical College

- Wind Energy Turbine Technology CAS, AAS

New River Community and Technical College

- Electrical Distribution Technology CAS, AAS

Pierpont Community and Technical College

- Power Plant Technology CAS, AAS
- Electric Utility Technology AAS
- Petroleum Technology CAS, AAS

Southern WV Community and Technical College

- Mine Management AAS

WV Northern Community College

- Petroleum Technology CAS, AAS

WVU at Parkersburg

- Solar Energy Technology CAS, AAS
- Automated Control Systems AAS



● Existing Energy Technology Programs



● Existing Manufacturing Programs

■ Pending Manufacturing Programs

■ Pending Process Technology Programs