West Virginia Council for Community & Technical College Education

AGENDA

April 20, 2017
9:30 am

Members

Clarence Pennington, Chair
Robert Brown, Vice Chair
William Baker
Bruce Berry
Christina Cameron

Kathy D'Antoni
Steve Roberts
John Sorrenti
Woody Thrasher

Sarah Armstrong Tucker, Chancellor
Directions to the Advanced Technology Center of South Central West Virginia
1201 Science Park Dr. South Charleston, WV 25303

Arriving from the EAST on I-64
(after leaving Charleston)
1. At I-64 exit 55, take Ramp (RIGHT) toward Kanawha Turnpike
2. Stay on Kanawha Turnpike [CR-12]
3. After about 0.5 mile, turn LEFT into the West Virginia Regional Technology Park (3300 Kanawha Turnpike)

Arriving from the WEST on I-64
(approaching Charleston):
1. At I-64 exit 54, turn RIGHT onto Ramp towards US-60 / MacCorkle Ave / South Charleston
2. Keep RIGHT to stay on Ramp towards US-60
3. Bear RIGHT (East) onto US-60 [MacCorkle Ave SW], then immediately turn RIGHT (South-East) onto SR-601 [Jefferson Rd]
4. After 0.5 mile, bear left at the traffic light onto Kanawha Turnpike [CR-12]
5. Continue straight (0.1 mile) through the next traffic light on Kanawha Turnpike
6. After about 0.5 mile, turn RIGHT into the West Virginia Regional Technology Park (3300 Kanawha Turnpike)
I. Call to Order

II. Advisory Council of Faculty Briefing

III. Approval of Minutes
   A. *January 26, 2017, Meeting Minutes ................................................................. pg 6

IV. Academic Affairs
   A. *Annual Reauthorization of Two-Year Degree-Granting Institutions .................. pg 9
   B. *Review of WV Business College's Permit to Operate ........................................ pg 20
   C. *Compliance Warnings by the Accrediting Council for Independent Colleges and Schools (ACICS) for Mountain State College – Parkersburg, and Valley College – Beckley .............................................................................................................................. pg 38
   D. *Revisions to Procedural Rule, Series 25, Residency Classification for Admission and Fees, for Public Comment ................................................................. pg 41

V. Finance and Facilities
   A. *Eastern WV Community and Technical College Landscape Master Plan and Parking Lot Project ........................................................................................................ pg 47
   B. *WV Northern Community College WESCO Building Renovation Project .......... pg 51
   C. *Consolidated Audit Presentation FY 2016 ................................................................. pg 67
D. Higher Education Resource Assessment FY 2018.................................pg 78

VI. General

A. Technical Program Development Award.................................................................pg 80

B. 2018 Meeting Schedule of the WV Council for Community and Technical College Education..............................................................................................................................pg 81

C. Formation of Officer Nominating Committee of the WV Council for Community and Technical College Education

VII. Information

A. Eastern WV Community and Technical College Technology Center Energy Assessment Report...........................................................................................................................pg 83

B. Legislative and Agency Update

VIII. Additional Board Action and Comments

IX. Upcoming Meetings

• Special Meeting for Consideration of Proposed Tuition and Fees 2017-2018 (To be determined following state budget approval)

• June 8, 2017
  9:30 a.m.
  Advanced Technology Center – South Central West Virginia
  South Charleston, WV

X. Adjournment
A conference call meeting of the West Virginia Council for Community and Technical College Education was held on January 26, 2017, beginning at 9:30 a.m. originating from the Central Office of the WV Council for Community and Technical College Education in Charleston, West Virginia. Council members present were: Bill Baker, Bruce Berry, Bob Brown, Christina Cameron, Clarence Pennington, Steve Roberts, John Sorrenti, and Woody Thrasher. Council member absent was: Kathy D’Antoni. Also in attendance were Chancellor Sarah Tucker, Council staff, community and technical college presidents, faculty, staff, students and guests.

Call to Order

Chairman Pennington called the meeting to order and noted that a quorum was present.

1. **Oath of Office for Councilman Thrasher**

   Woody Thrasher, newly appointed Cabinet Secretary for the West Virginia Department of Commerce, was sworn in as a new Council member. Mr. Thrasher serves on the Council by virtue of his position at the West Virginia Development Office.

2. **Introduction of Dr. Casey Sacks, Vice Chancellor for Community and Technical College Education**

   Chairman Pennington introduced the new Vice Chancellor for Community and Technical College Education, Dr. Casey Sacks, who has an extensive background in higher education. Her most recent position was Assistant Provost at the Colorado Community College System. Dr. Sacks holds a doctorate in higher education administration and a master's in clinical psychology.

3. **Advisory Council of Faculty Briefing**

   Mark Goldstein, Advisory Council of Faculty Chairman, provided information to the Council on the Advisory of Council Faculty’s (ACF) goals going forward under the new administration of Governor James Justice. He stated the ACF will fully support both the West Virginia Council for Community and Technical College Education and the West Virginia Higher Education Policy Commission. He thanked Chancellor Tucker for her on-going support of the ACF.
4. **Approval of Minutes**

Mr. Roberts moved the adoption of minutes from the December 8, 2016, meeting of the West Virginia Council for Community and Technical College Education.

Ms. Cameron seconded the motion. Motion carried.

**Academic Affairs**

5. **Program Review for Mountwest Community and Technical College**

Mr. Baker moved the adoption of the following resolution:

RESOLVED, That the West Virginia Council for Community and Technical College Education accepts the program review actions of the institutional governing board.

Mr. Brown seconded the motion. Motion carried.

NOTE:
The agenda item include a summary table that provided total number of graduates for the last five years. The numbers provided were actually five year averages. Please note the original and corrected numbers below.

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<thead>
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<th>Program</th>
<th>Original</th>
<th>Revised</th>
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<td>AA General Studies</td>
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The revised numbers support the viability of the two programs. I apologize for the reporting error.

**General**

6. **Technical Program Development Grant Award**

Mr. Sorrenti moved the adoption of the following resolution:

RESOLVED, That the West Virginia Council for Community and Technical College Education approves the Technical Program Development grant award as proposed.

Mr. Brown seconded the motion. Motion carried.

**Information**

7. **West Virginia Business College Accreditation and Financial Issues**

Corley Dennison, Vice Chancellor for Academic Affairs, provided a detailed report to the Council on the denial of renewal of accreditation by West Virginia Business
College’s accreditation body and the consequent appeal by the institution. Further, Dr. Dennison also informed the Council that the two-year reauthorization committee, made up of members of the Academic Affairs Division of the Community and Technical College System and the Higher Education Policy Commission, are unwilling to recommend continued authorization to confer degrees in West Virginia. Staff recommended a comprehensive site visit to the institution necessary for the formation of a recommendation to the Council regarding authorization to confer degrees in West Virginia in accordance with Series 35, Correspondence, Business, Occupational and Trade Schools.

Mr. Brown moved the adoption of the following resolution:

RESOLVED, That the West Virginia Council for Community and Technical College Education, directs the Chancellor to assign staff to conduct a comprehensive site visit to WV Business College and report back to the Council on their findings.

Mr. Sorrenti seconded the motion. Motion carried.

Adjournment

There being no further business the meeting was adjourned.

Next Meeting

Location: Charleston, WV  
Date: Thursday, April 20, 2017  
Time: 9:30 a.m.

____________________________________
Clarence Pennington, Chairman

____________________________________
William Baker, Secretary
ITEM: Annual Reauthorization of Two-Year Degree-Granting Institutions

INSTITUTIONS: Blue Ridge Community and Technical College, BridgeValley Community and Technical College, Eastern West Virginia Community and Technical College, Mountwest Community and Technical College, New River Community and Technical College, Pierpont Community and Technical College, Southern West Virginia Community and Technical College, West Virginia Northern Community College, and West Virginia University at Parkersburg; American National University, Huntington Junior College, Laurel Business Institute, Martinsburg College, Mountain State College, Valley College of Technology (Martinsburg), Valley College of Technology (Princeton), Valley College of Technology (Beckley), West Virginia Junior College (Morgantown), and West Virginia Junior College (Charleston/Bridgeport).

RECOMMENDED RESOLUTION: Resolved, That the Council for Community and Technical College Education approves the Annual Reauthorization for Blue Ridge Community and Technical College, BridgeValley Community and Technical College, Eastern West Virginia Community and Technical College, Mountwest Community and Technical College, New River Community and Technical College, Pierpont Community and Technical College, Southern West Virginia Community and Technical College, West Virginia Northern Community College, and West Virginia University at Parkersburg; American National University, Huntington Junior College, Laurel Business Institute, Martinsburg College, Mountain State College, Valley College of Technology (Martinsburg), Valley College of Technology (Princeton), Valley College of Technology (Beckley), West
Virginia Junior College (Morgantown), and West Virginia Junior College (Charleston/Bridgeport).

STAFF MEMBER:

Mark Stotler

BACKGROUND:

Series 52, Annual Reauthorization of Degree-Granting Institutions, establishes a process for the Council to annually reauthorize degree-granting institutions in West Virginia offering associate degrees and lower. Institutions are required to provide all information “necessary to assess the performance of the institution and to determine whether the institution continues to meet the minimum standards for conferring degrees.” The annual reauthorization “application report” includes such information as verification of current accreditation status, student enrollment data, tuition and fee information, first to second year retention rates, graduation rates, student transfer information, licensure pass rates, student loan default rates, and campus crime statistics. For the first year, the team was able to discern financial health through the reporting of a Composite Financial Index (CFI) score.

This is the fourth year for the submission of the data which is reviewed by a Compliance Review Team. The Compliance Review Team is comprised of Council staff, external consultants, and representatives from public and private institutions. In addition to the data that is submitted, the Compliance Review Team may require additional information to assist in making a recommendation for reauthorization. The Compliance Review Team utilizes general institutional peer data and institutional trends. The Compliance Review Team identified concerns and requested institutions to address the concerns in a report prior to submitting this agenda item.

Some area of review had automatic triggers for citing concerns. These are summarized below.

- Retention rate: rates below the 25th percentile of Carnegie Peers
- Graduation rate: rates below the 25th percentile of Carnegie Peers
- Enrollment: four years of decline
- Financial health: CFI score below 1.0
- Loan default: rate above 25 percent which approaches critical threshold of 30 percent
- Crime numbers: numbers that are significantly higher than those reported by other institutions

In a general comparison to the last year’s review, the areas of concern remain relatively unchanged. Retention rates, graduation rates, and enrollment continue to be a problem. Institutions have cited numerous initiatives that have been implemented. The progress needs to be closely monitored.
The information provided below summarizes the institutional areas of concern identified by the Compliance Review Team along with highlights of the responses submitted by the institutions.

At the direction of the Compliance Review Team, a campus visit was made to West Virginia Business College. The results of that visit are being presented in a separate agenda item.

**Blue Ridge Community and Technical College**

- Team concerns:
  - Graduation rate of 23.5 percent
  - Loan default rate of 25.9 percent
  - CFI score of 0.89

- Institutional response:
  - The college acknowledges the low graduation rate. It is reviewed on a program basis with a commitment to identifying barriers. Students in many programs such as Electrical Distribution Engineering Technologies can gain employment prior to completing a certificate or degree. A default management organization has been hired which has resulted in a decrease in the loan default rate. Further decreases are anticipated as the college works toward a goal below 15 percent. At the completion of FY 2016, the college anticipates a CFI score above 1.0. This is a result of an increase in tuition and fee revenue and a decrease in operating expenses.

**Eastern West Virginia Community and Technical College**

- Team concern:
  - Graduation rate of 28 percent

- Institutional response:
  - Due to a reporting error in the previous year, the graduation rate actually increased from 22 percent to 28 percent.

**Mountwest Community and Technical College**

- Team concerns:
  - Retention rate of 43 percent
  - Four year enrollment decline

- Institutional response:
  - The college continues to implement strategies to promote access and success through institutionalization of Beacon project initiatives. The primary initiative is a Student Success Plan which is developed cooperatively by the student and a professional counselor. Enrollment decline is a function of the local economy. The college has implemented changes to its marketing and enrollment
and management strategies.

New River Community and Technical College

- **Team concerns:**
  - Retention rate of 39.7 percent
  - Graduation rate of 13.5 percent
  - Loan default rate of 25.5 percent
  - Four year decline in enrollment

- **Institutional response:**
  - Student success centers have been established on each of the four campuses. Resources offered include tutoring, test proctoring, academic advising, personal counseling, ADA student services, career counseling, career exploration assessments, student success workshops, DropGuard early interventions, credentialing testing, and placement testing. The college has been working with area high schools through dual credit, early enrollment, and articulation agreements to encourage students to continue their education past high school. New programs have been added that have the potential to enhance enrollment including Medical Laboratory Technology, Massage Therapy, and Electro-Mechanical Instrumentation. Culinary Arts has been submitted to HLC for approval. A Strategic Enrollment Management Plan 2015-2020 outlines a wide range of initiatives. Student default rates have decreased as a result of a Borrow Smart campaign initiated with support from EdFinancial, a third-party default prevention provider. A Default Management Task Force was formed to complement the initiative.

Pierpont Community and Technical College

- **Team concerns:**
  - Retention rate of 46 percent
  - Graduation rate of 14 percent
  - Loan default rate of 27.6 percent
  - Four year decline in enrollment
  - CFI score of 0.84
  - Crime number in the areas of drug law violation, sex offense forcible, and burglary

- **Institutional response:**
  - An Enrollment Taskforce Management Committee has been established and is working to define strategies to improve enrollment, retention, and graduation rates. A drop in adult enrollment has led efforts to work with marketing to create tools that will attract adult students back. The opening of the
Advanced Technology Center should assist in enhancing enrollment, particularly in energy programs. Important strategies to enhance retention and graduation include encouragement to stick to Guided Pathways, utilizing co-requisite support courses for gateway math and English courses, offering additional tutoring and support services, creation of an Office of Retention, and training faculty in intrusive/proactive advising. The loan default rate has decreased through collaboration with Inceptia, a third-party default prevention provider. It is anticipated that the rate will continue to decline. It is anticipated that the CFI will improve as the college has responded to enrollment declines and funding reductions by reducing the budget and instituting cost savings. The crime statistics are combined numbers for Pierpont and Fairmont State University. A web based product entitled Safe Colleges is provided to students as an education tool about Title IX and sexual harassment discrimination. The college is committed to reporting all offenses.

**Southern West Virginia Community and Technical College**

- **Team concerns:**
  - Retention rate of 50 percent
  - Graduation rate of 12 percent
  - Four year decline in enrollment

- **Institutional response:**
  In a global sense, the declines in all these measures can be attributed to the loss of population. A reorganization of academic affairs is expected to provide better alignment of academic programs and general education courses. New programs in agriculture and power sports technology are anticipated to attract more students. The course scheduling process has been revised that will allow students in technical programs to obtain a full-time schedule in two or four days. Two days per week will be devoted to general education courses while two days will be devoted to technical courses. Southern is in the process of developing an enrollment management plan. A number of activities were identified that are geared to enhancing retention and graduation rates including revisions to critical math courses, increased resources to tutoring efforts, and a commitment to a co-requisite model for delivering English.
**West Virginia Northern Community College**

- **Team concern:** Retention rate of 48 percent
- **Institutional response:** A number of strategies have been implemented including: a) development of a new academic advising system to be implemented in summer 2017, b) development of Guided Pathway sheets for all academic programs in April 2017, and c) full implementation of a co-requisite model for developmental education. In addition, the Institutional Effectiveness office will refine the collection of data regarding retention and improve the dissemination of this information on a timely basis to the entire college community.

**West Virginia University at Parkersburg**

- **Team concerns:** Retention rate of 50 percent
  
  Four year decline in enrollment
- **Institutional response:** Retention data does not present an accurate picture because WVU-P is classified as a baccalaureate institution in the Carnegie classification and thus reports “first time in college bachelor’s cohort retention rates.” Very few students at WVU-P are admitted directly into a bachelor’s degree program. While a decrease, the fall 2016 enrollment decline was the smallest decline in several years. Many initiatives have been implemented that are intended to have a positive impact on retention and enrollment, including: a) full adoption of the Guided Pathways to Success model for the entire institution, b) requiring freshman orientation courses for all incoming students, c) implementation of the co-requisite model for developmental education, d) establishment of a professional advising center staffed with five full-time advisors who work with all students with less than 30 hours of earned credit, and e) embrace the “15 to Finish” concept.

**American National University**

- **Team concerns:** Retention rate of 14 percent
  
  Graduation rate of 24 percent
  
  Eight percent decline in enrollment (second year of decline)
Institutional response: The institution has very few first-time, full-time freshmen (seven in 2014 cohort) and thus the data does not present an accurate measure for retention and graduation rates. When looking at the entirety of the student body, 53 of 75 students were retained (70.6 percent). Likewise, the graduation rate increases to 42.3 percent when the cohort population is expanded. The enrollment decline is attributed to an improvement in unemployment rates and the availability of distance education programs which allow students to pursue academic credentials in a more flexible time format. Twelve West Virginia residents are enrolled in distance education programs offered through the Virginia campus of American National.

Huntington Junior College

Team concerns:
- Retention rate of 40 percent
- Graduation rate of 19 percent

Institutional response: Efforts to enhance retention and graduation rates are intertwined. The college is in the second year of the Higher Learning Commission’s Student Persistence and Completion Academy which allows the college to work with HLC to develop and test processes to enhance these rates. The college has implemented changes in regard to how it awards financial aid and how it conducts new student orientation. A mentoring program is being developed for students who do not meet the Satisfactory Academic Progress Guidelines during their first term.
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<th>Institution</th>
<th>Type</th>
<th>Accreditation Status</th>
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ITEM: Review of West Virginia Business College’s Permit to Operate

INSTITUTION: West Virginia Business College

RECOMMENDED RESOLUTION: Resolved, That the West Virginia Council for Community and Technical College Education approves immediate withdrawal of the permit for West Virginia Business College to operate in the state of West Virginia as a correspondence, business, occupational or trade school as outlined in Series 35 of the Council’s rules.

STAFF MEMBER: Corley Dennison

BACKGROUND:

In a letter dated December 22, 2016 (attachment 1), the site visit team for the Accrediting Council for Independent Colleges and Schools (ACICS) recommended denial of accreditation for West Virginia Business College (WVBC) citing numerous areas of concern including faculty credentials, learning resources, financial aid processes, and transparency with students. WVBC appealed the denial of accreditation to the ACICS Review Board.

In a letter dated, March 30, 2017 (attachment 2), the Review Board acted to remand the decision to the ACICS Council determining:

- “The institution was not provided sufficient time to respond to concerns addressed in the (ACICS) Council’s December 22, 2016 letter of denial.”

“As part of this remand, the Review Board recommends the following for the (ACICS) Council’s consideration:

- The institution be provided additional time to satisfactorily address the remaining areas of noncompliance identified in the December 22, 2016, letter of denial for review at the August 2017 meeting of the (ACICS) Council.”

The ACICS Council met on April 7, 2017 to consider this matter and “found no credible basis upon which to summon confidence that additional time would serve to assure the institution’s compliance with standards of the Accreditation Criteria. Therefore, the (ACICS) Council has acted to reaffirm its decision to deny the institution’s application for
renewal of accreditation.” (attachment 3). This is the final decision of ACICS, which is not subject to further appeals by WVBC.

As a result of the loss of national accreditation, it is recommended that WVBC’s permit to operate in West Virginia be withdrawn effective April 20, 2017. This action is taken in accordance with Section 14 in Series 35, Business, Occupational, and Trade Schools, which reads:

14.2 The Council may for good cause suspend, withdraw or revoke authorization of a school to operate in this state or to solicit students within the state. Good cause shall consist of:

14.2.1 loss of accreditation by a nationally or regionally recognized accrediting agency.

WVBC has the right to appeal as outlined in Series 35. Council staff will be in contact with WVBC officials to arrange for an appropriate teach out and/or transfer plan for students currently enrolled in classes at WVBC.

Additional Background:

Staff informed Council members of accreditation issues at WVBC during the Council’s meeting of January 26, 2017. At this same meeting, Council members were further informed that, after an audit and second review, deficiencies were found in accounting processes for the Higher Education Grant Program at WVBC. It was determined that WVBC should return approximately $68,000 in misappropriated funds.

The Higher Education Policy Commission, at its February 3, 2017 meeting, voted to have WVBC’s participation eligibility removed from the Higher Education Grant Program effective at the end of this academic year and to return the misappropriated funds. Note: the Higher Education Grant Program is controlled by the Commission.

Additionally, at the Council meeting of January 26, 2017, a resolution was passed by Council members asking Council staff to conduct an on-site visit to both the Nutter Fort and Wheeling campuses of WVBC. The on-site visit was conducted on February 22 and 23, 2017. At the time of the visit, the appeal for the denial of accreditation was still outstanding. Concerns and recommendations for improvement were as follows:

Financial Aid

- A number of changes should be made to create more transparency in financial aid:
- Students are to be given a revised award letter when there are changes in financial aid.
- Students should be given an actual copy of their bill and not just provided with a summarized transcript of the account.
• The institution must make clear that students are signing a voluntary authorization to receive the monthly expense check and that the authorization can be modified or rescinded in writing at any point in time.
• Students are to be notified that they may receive any Title IV credit balance at the student’s request and those funds cannot be withheld by the institution.
• The institution must cease telling students loans will become due immediately if an exit interview is not completed. This is not compliant with current law.

Faculty

• Faculty credentials at the Nutter Fort campus are of particular concern. Credentialed faculty should be hired to teach English, math and phlebotomy. Credentialed is defined as having the appropriate degree or certification in field.

Learning Resources

• Instructional materials and learning resources at the Nutter Fort campus are sorely lacking. Each class session shall be provided with a large screen video monitor, digital projector, computer and dry erase whiteboard.
• In general, the Nutter Fort building is in such a condition that it is not conducive to a good learning environment. Hallways are dark, floors are warped and in need of refinishing, windows are dirty and heating and cooling are inadequate. The institution should seek to improve conditions in the current building or seek new quarters that present a more professional learning atmosphere to the public.

On April 10, 2017, Council staff received notification from ACICS of the rejection of the appeal by WVBC. The loss of accreditation results in “good cause” as noted in Series 35 for suspension, withdrawal or revocation of the permit to operate as an occupation, business or trade school in the state of West Virginia.
December 22, 2016

VIA E-MAIL AND OVERNIGHT DELIVERY

Ms. Julie Magers
Campus Director
West Virginia Business College
1052 Main Street
Wheeling, WV 26003

Subject: Denial of Renewal of Accreditation

Dear Ms. Magers:

At its December 2016 meeting, the Council considered your institution’s applications for a renewal of accreditation, the on-site teams’ visit reports, and the campuses’ responses to the 48 findings identified between both locations. As a result of its review, the Council noted serious concerns for the following areas based on the Accreditation Criteria:

WHEELING MAIN CAMPUS:

1. The CEP does not include an appropriate evaluation of the level of student satisfaction (Section 3.1.111). In its response, the campus submitted student satisfaction forms on which students rate their faculty and staff with a “Yes,” “No,” or “Sometimes” for different items. Students complete the surveys on the last day of class, prior to final exam reviews. The campus also provided a brief narrative summary of the results and an action plan. However, this response did not meet the Council’s expectations because the surveys submitted were mostly dated 2015, or were not dated; and only two surveys were from 2016. Thus, the results are not as relevant to a current campus effectiveness plan. Further, while the results included more positive “Yes” indications, the campus did not identify in its summary those items that received a “No” or “Sometimes” rating in order to determine areas for improvement. Also, the action plan included pertained to the provision and use of the survey itself (i.e. goals to increase participation, continue to analyze surveys, and address student issues quickly), but not the information gained from the survey.

2. The placement of one graduate could not be verified, calling into question the integrity of the data provided by the campus (Section 3.1.203). Originally, there were two graduates’ placements questioned by the team – that of Ms. LeeAnn Sine and Ms. LaShawnda...
Saunders. In its response, the campus submitted a signed attestation from Ms. Sine, indicating that she received a pay raise in the job she started in prior to graduation; and an unsigned attestation for Ms. Saunders’s receipt of a similar pay raise in her job, with a communication from the career services director to the campus director, explaining the situation. While Ms. Sine’s signed attestation was acceptable, the Council does not consider the explanation from the career services director and the unsigned attestation for Ms. Saunders appropriate. Additionally, as shared by the campus, both the graduate and the employer refused to sign the attestation, calling into question its validity.

3. The campus could not demonstrate that it reflects high ethical standards in its relations with students (Section 3-1-400). In its response, the campus submitted a narrative denying the finding and clarifying the items listed in the admissions notes that were deemed inappropriate by the on-site team. The campus also provided a copy of the admissions procedure manual/official presentation to be used by the admissions representative. The campus addressed the prematurely sent SAP termination letters with a narrative on each listed student. Further, the campus satisfactorily addressed the inappropriate weighting of the final exam. However, the admissions manual/presentation provided in the response did not include any signatures in the space at the bottom for the admissions representative to sign indicating that he/she has understood the presentation and that he/she will not elaborate on the presentation in any way or will be dismissed. Additionally, the campus did not provide any evidence of training for such personnel on ethical recruitment practices to reinforce the importance of compliance. The unsatisfactory response for the SAP issues is detailed below.

4. The campus does not document compliance with its SAP policy (Sections 3-1-422). In its response, the campus provided its catalog’s SAP pages and a narrative explaining why its application of the SAP policy for the students in question was accurate. The Council recognizes the clarification of the campus’s SAP evaluation points for diploma-seeking students. However, this response did not address the team’s concerns as the student documents, such as transcripts and copies of SAP notifications, were not provided to support the campus’s claim of compliance, and the Council was unable to conduct a complete review of the finding. The campus’s calculation of SAP for student Ashley Seymour remains incorrect, regardless; it claims that Ms. Seymour failed SAP at the 64-credit mark because she completed 44 credits when she needed to have completed 48, but the campus’s policy states that students must complete 66.67 percent of attempted credits per evaluation period, and 66.67 percent of 64 credits is 42.67 credits. Therefore, Ms. Seymour did meet SAP at the evaluation mark. The campus also did not address its use of “termination” at a first evaluation point, as with Ms. Tiffany Thompson, when it has an academic and financial aid warning status that is used at such a time.

5. The surgical technology program administrator does not have the qualifications to administer or teach in the program nor does she have sufficient time to devote to its administration (Sections 3-1-511 & 3-3-302(b)(d)). In its response, to evidence that Ms.
Debra Hammitt was qualified to lead and teach in the program, the campus submitted a copy of her current National Surgical Technology certification from the Association of Surgical Technologists, participation in continuing education courses, and letters/e-mails of recommendation from colleagues and former students. The campus also indicated that Ms. Hammitt's course load only requires 20 contact hours per week, leaving her with at least 18 hours per week for administrative duties; and she is supported by the medical department lead. However, the Council determined that a diploma in surgical technology and four months of unverified and limited experience in an oral surgeon's office are not sufficient to oversee, and teach in, an associate's degree program. In regards to time to being sufficient to administer the program, the campus alludes to at least 18 hours being available, but the faculty and staff summary document submitted as part of its application noted that she is a part-time employee. Hence, this questions Ms. Hammitt’s actual employment status and it remained unclear as to the amount of time assigned to fulfill administrative responsibilities.

6. The campus does not maintain evidence that a variety of community resources is utilized to enhance some of the educational programs (Section 3-1-512(c)). In its response, the campus submitted numerous field trip/guest speaker request forms, communications from program directors, and two student sign-in sheets as evidence of field trips taken and guest speakers hosted. Many field trips were taken to area hospital operating rooms, a corrections facility, and an organization specializing in employment assistance and preparation. While some of the documents reference all medical students, the campus does not address its utilization of resources in the medical assistant and nurse’s assistant/patient care aide programs, which were also found to be lacking adequate use of a various community resources, in addition to the surgical technology program. The only documents that clearly evidence student participation or verify a speaker's appearance before students were sign-in sheets for a blood drive on January 25, 2016, and an unidentified community service project on December 7, 2015. The majority of documents were field trip/guest speaker request forms, some of which were not signed by the campus director, or communications and summaries from instructors, stating that a field trip had occurred or a guest speaker hosted, or would happen in the future. These forms do not all identify for which program the activity or event was being planned. Without proper documentation, the campus has not evidenced that all the programs in question are using a variety of community resources.

7. The learning contracts for courses offered as independent study are incomplete and the externship agreement for the surgical technology program is incomplete (Section 3-1-513(a) and Glossary). In its response, the campus submitted a revised blank learning contract for independent study courses, which now includes the statement "Student and teacher understand that the course syllabus regarding text book, course objectives and procedures for the class (on file on the wvbc.edu website) is adopted within this Independent Study contract." However, the campus did not submit completed and signed copies of learning contracts for any students currently taking courses via independent
study. Hence, the campus failed to demonstrate its application of the revised contract to evidence compliance with the standard.

Concerning the externship contract, the campus resubmitted its contract with Wetzel Hospital that the team had reviewed on-site, and provided the outline of courses in the program, course descriptions, and numerous evaluation charts that would accompany the contract. The campus also provided its contract with Dr. Mandel, a new externship site. According to its narrative, the campus supplies the externship site with multiple documents that cover learning objectives, course requirements and evaluation requirements, and “the agreements simply reference this supporting documentation....”

Although the externship agreement with Wetzel Hospital does reference the copy of objectives that will be provided to the site, and establishes that the site will cooperate in the evaluation of the program, no mention is made of the course requirements or supporting documentation that will convey these requirements. Similarly, the agreement with Dr. Mandel indicates that the campus will provide a course syllabus with objectives and a course description, but no information about evaluation of the student is provided and no reference is made to the evaluation materials provided in the response.

Additionally, the new agreement raised a new concern with regards to the course requirements. The agreement with Dr. Mandel indicates that “The experience...hours will be set between the College, Externship Entity, and student in clock hours. There are no minimum or maximum hours; it is the quality of the externship not the quantity that is important. Clock hours may be expanded and/or minimized as needed.” This statement does not establish an understanding with the externship site that the student must participate in a minimum number of hours in order to fulfill the appropriate number of credits as required for the course, and for program completion. The “completion” of the externship in less than the required hours can also have serious Title IV implications. Finally, the second statement in the Wetzel Hospital contract alludes to an unidentified party (“PRH”) instead of the Wetzel County Hospital (WCH), and again, indicates that “The College will provide PRH with a copy of the objectives.” This confusion calls into question the validity of the contract itself and underscores the Council’s conclusion that the campus has not addressed the finding.

8. The campus does not provide appropriate equipment and instructional resources to support the surgical technology, medical assistant, and nurse assistant/patient care aide programs (Sections 3-1-531(a) and 3-1-601). In its response, the campus submitted a copy of the e-mailed receipts for the purchase of the EKG machine and a blood-drawing chair but contends that its one artificial arm for use in the medical assistant and nurse assistant/patient care aide programs is sufficient. With 17 currently enrolled students between the medical assistant and nurse assistant/patient care aide programs, the one artificial arm is sufficient to serve the students. However, since the equipment is critical to providing quality instruction and there is no evidence that they were delivered, set up,
and being used, the Council is unable to determine that the campus has satisfactorily addressed this concern.

9. The educational programs do not include specific and appropriate learning objectives for all programs (Section 3-1-53(b)). In its response, the campus submitted a sample of revised syllabi across all programs but most of the revised syllabi still do not include specific, outcomes-based, measurable learning objectives as they are all prefaced with “The student will learn...” instead of using active verbs to depict what the student will be able to do and discern by the completion of the course.

10. The medical assisting and paralegal programs do not incorporate the use of appropriate experiences and learning materials (Section 3-1-532(c)(f)). In its response, the campus submitted evidence that an EKG machine was purchased in line with the MD240 Medical Procedures II course description, and current textbooks were updated for two paralegal courses. However, the response did not include a revised syllabus for MD240 to include the EKG component, nor did the campus submit evidence that the textbooks have been updated and adopted for LG235 Immigration Law and LG228 Legal Analysis and Writing. Hence, the Council could not determine that the concern was satisfactorily addressed through implementation.

11. The campus does not demonstrate compliance with Council standards for advertising (Sections 3-1-703 and Appendix C). In its response, the campus added the phrase “for those who qualify” when referencing financial aid and removed the statement on its website “Launch your medical career: WV Business College can get you started in a medical field and find you a quality job for a bright future.” However, the campus did not remove the verbiage “Health Specialties Teacher, Postsecondary” from the associate’s degree in surgical technology gainful employment disclosures section on the website. The position of postsecondary health specialties teacher requires a bachelor’s degree and as such, the statement and disclosure are not accurate.

12. The teaching load is not reasonable for the one surgical technology instructor and, therefore, there is not an adequate core of faculty for the program (Sections 3-3-303 and 3-3-304). In its response, and as noted previously, the campus responded that Ms. Hammitt only teaches 20 hours per week and has 18 hours for administrative duties. However, the faculty and staff summary submitted in conjunction with the campus’s application stated that Ms. Hammitt is a part-time employee and the campus did not provide a current class schedule to evidence her actual teaching load.

NUTTER FORT BRANCH CAMPUS:

1. The CEP does not contain program improvement plans for programs with retention rates that are below Council standards (Sections 2-1-809, 3-1-111 and 3-1-512). In its response, the campus submitted an improvement plan for the medical assisting program.
However, improvement plans were not submitted for the other three programs cited in the report – the occupational associate’s degree programs in Business Administration/Computer Applications/Accounting, Computer Support Specialist, and Small Business Management. Hence, the concern has not been satisfactorily addressed.

2. The CEP does not include an appropriate evaluation of the level of student satisfaction (Section 3-1-111). In its response, the campus submitted student satisfaction forms on which students rate their faculty and staff with a “Yes,” “No,” or “Sometimes” for different items. Students complete the surveys on the last day of class, prior to final exam reviews. The campus also provided a brief narrative summary of the results and an action plan. However, the surveys submitted were mostly dated 2015, or were not dated; and only two surveys were from 2016. Thus, the results are not relevant to the current campus effectiveness plan. The campus presented the surveys with a short narrative describing the feedback, but without analysis of the results or description of activities to implement for improvement. The action plan included pertained to the provision and use of the survey itself (i.e. goals to increase participation, continue to analyze surveys, address student issues quickly), but not on improving the level of student satisfaction itself from the data collected from the survey. Lastly, a revised 2015-2016 plan was provided, the evaluation period of which has ended; and not a 2016-2017 plan that would guide the campus’s current efforts for improvement.

3. The campus does not evidence that periodic progress reports are completed to ensure and document the completion of activities listed in the CEP (Section 3-1-112). In its response, the campus submitted brief agendas of department meetings. However, this documentation does not evidence a review of all the required elements or the completion of progress reports on the campus’s progress in achieving specific goals.

4. There is no evidence that emphasis is placed on the efficiency and effectiveness of the overall administration of the campus (Section 3-1-202(a)). In its response, the campus terminated the employment of the campus director to evidence that it agreed with the finding and has corrected the deficiency. However, the individual assigned to assume the new vacant leadership role was not identified nor were he/her qualifications and experience provided. Further, the campus failed to address how the current administrative team, in the absence of the former campus director, would address all the outstanding concerns and evidence the measures implemented to demonstrate efficiency and effectiveness.

5. The campus does not maintain documentation of the evaluation of staff members (Section 3-1-202(b)). In its response, the campus submitted a formal evaluation for Mr. Robert Wright, the former campus director, and his subsequent termination paperwork; as well as an assertion of its position that the hand-written note from Mr. Wright on Ms. Burkhead’s performance is appropriate to serve as an evaluation. The campus also provided a memo to the leadership of the two campuses indicating that evaluations...
should occur at a designated time, and this procedure would be initiated annually on the second Tuesday of December. The other staff members were recently hired; therefore, evaluations have not been completed for them. However, a more formal evaluation of Ms. Burkhead, beyond a handwritten note, would be necessary to demonstrate that she understands the standards by which the success of her work is measured, and acknowledges that she has been evaluated.

6. Adequate records are not maintained by the campus relative to administrative operations (Section 3-1-303(a)). In its response, the campus submitted transcripts and certification for the instructors listed in the report, the termination paperwork of the campus director, and an admissions training log. While the documentation addressed the concerns in the team’s report, the campus failed to provide the records for the new campus director to include employment contract, evidence of qualifications, and an updated organizational chart to include this new administrator, that had been communicated to all faculty and staff.

7. There is no evidence that the campus reflects the highest ethical standards in its relations with students (Section 3-1-400). In its response, the campus terminated the campus director and provided a sample financial aid report available to students, if requested, a blank “EFT notification” form, and an updated Student Statement of Understanding to demonstrate its efforts to resolve student concerns for the transparency of their school finances. A core component of this area of concern was the students’ complaints on a variety of issues that were not addressed (lack of open door policy with administration, deteriorating facility, faculty turnover, etc.) and the campus did not provide any information on how it communicated any revisions in policies/procedures to the administrative team, any changes to the student grievance process, and how the replacement director would address these deficiencies.

8. The campus is not following its stated refund policy (Section 3-1-433). In its response, the campus agreed with the citation and corrected these errors prior to the team visit, following its financial aid audit. However, the campus did not provide evidence that the financial aid office has been trained and is being evaluated on the accurate and timely processing of student refunds to ensure the campus’s continued compliance with its refund policy.

9. The campus does not maintain evidence that a variety of community resources is utilized to enhance student enrichment and potential career opportunities in any of the programs (Section 3-1-512(e)). In its response, the campus submitted field trip and guest speaker forms in order to demonstrate its incorporation of community resources in the business, computer and paralegal programs. However, the forms provided were typed documents indicating that a field trip would be occurring or a guest speaker would be hosted, and the students that would be attending. No evidence was submitted to indicate that any of these events had already occurred. Additionally, in its response, the campus failed to address
the concern for the medical programs which were also identified in the team’s report as being inadequate.

10. The learning contracts for courses offered as independent study are incomplete (Section 3-1-513(a) and Glossary). In its response, the campus submitted a revised blank independent studies learning contract. However, the campus did not submit completed and signed copies of learning contracts for any students currently taking courses via independent study. Hence, the campus failed to demonstrate its application of the revised contract to evidence compliance with the standard.

11. Prerequisites are not being followed in a number of programs (Section 3-1-513(b). In its response, the campus claimed that the concurrent scheduling of DP216 Excel and IT102 MS Applications and Certification courses was that of the former campus director, who was terminated. The campus also provided a block schedule plan that is intended to eliminate inappropriate scheduling in the paralegal program, to ensure that no student will again take higher legal courses prior to the LG126 Legal Terminology prerequisite course. However, the campus did not address how the campus director’s replacement, and other appropriate staff members, have been trained on the policies that ensure that prerequisites are always followed, and the administrative checks and balances established to ensure oversight of the new block schedule plan. Additionally, the campus failed to address any remediation being provided for those students being instructed concurrently in the DP216 Excel and IT102 MS Applications and Certification courses, especially since DP216 is a prerequisite for IT102. The Council is seriously concerned with the completion of contact hours for both courses and students’ ability to be successful.

12. There is insufficient evidence to demonstrate that the campus provides appropriate instructional equipment, resources, and personnel in the medical assistant and nurse assistant/patient care aide programs (Section 3-1-531(a)). To address the concern with the instructional equipment and resources, the campus submitted a copy of the emailed receipts for a battery for the EKG machine, a blood-drawing chair with a patient safety mechanism, and an appropriate sharps container. The phlebotomy certification for Ms. Donna Daniels was submitted to evidence compliance with the personnel requirement. However, the phlebotomy certification for Ms. Becky White, another instructor in the programs, was not submitted. Additionally, since the equipment is critical to providing quality instruction and there is no evidence that they were delivered, set up, and being used, the Council is unable to determine that the campus has satisfactorily addressed this concern. Further, the campus stated that the artificial arm and the sphygmomanometer, with different size cuffs, were at the campus, but it did not address the fact that the artificial arm was not functional nor did it submit the documentation to support the claim that the sphygmomanometer, with different size cuffs, was available.
There was a concern with the lack of access by faculty and students to printing on the campus, to include the availability of syllabi, catalogs, and any materials that needed to be printed. This issue was originally considered as equipment not being appropriate and the campus responded by explaining that it is trying to conserve paper and become paperless, and as such, there is no need for faculty or students to have access to a printer. However, the campus did not address the concerns raised by faculty and staff about needing printing access and how the educational activities are being compromised, especially for those students who are more tactile and would be more successful with written materials.

13. The educational programs do not include well-defined instructional objectives for all programs (Section 3-1-532(b)). In its response, the campus submitted a sample of revised syllabi across all programs. However, specific, outcomes-based learning objectives that evidence measurable student learning outcomes were not included in the revised syllabi.

14. Some of the academic programs do not include the use of appropriate experiences and learning materials (Section 3-1-532(c)(f)). In its response, the campus submitted documentation that an EKG machine had been purchased for the MD240 Medical Procedures II course and indicated that updated textbooks for LG235 Immigration Law and LG228 Legal Analysis and Writing have been selected. However, the campus did not revise the MD240 course syllabus to include the EKG component nor did it submit evidence that the textbooks have been updated for LG235 Immigration Law and LG228 Legal Analysis and Writing.

15. Official transcripts are not maintained for all credentials that qualify faculty members to teach their courses (Section 3-1-542). In its response, the campus submitted transcripts and an ACICS data sheet for Ms. Alicia Yeager-Shaffer, who is replacing Mr. Jack Clark, indicating her qualifications to teach her assigned law courses. A transcript was also submitted for Mr. Michael Colley's MBA to evidence his qualification to teach Information Technology (IT) and Business courses. However, Mr. Colley’s transcript for his earned bachelor’s degree in information technology from ITT Technical Institute was not submitted but is needed to demonstrate that he is qualified to teach all assigned IT courses. Further, a current class schedule was not provided to evidence what Mr. Colley was actually assigned to teach any courses.

16. The campus does not provide or make available in hard copy, a copy of the catalog to all students (Sections 3-1-701 and Appendix C). In its response, the campus submitted a signed Student Statement of Understanding showing that students can have a catalog if they ask for one. However, the campus did not demonstrate that it is actually provided hard copies of the campus catalog to students who requested them, especially since this was a specific concern identified by the team from students.
17. Some faculty members are not qualified to teach their assigned courses (Sections 3-2-104(c) and 3-3-302(a)(b)(c)). In its response, the campus submitted an ACICS data sheet and transcripts for Ms. Alicia Yeager-Shaffer, as a replacement for instructor Jack Clark. However, the campus does not yet have a copy of Ms. Daniels’ phlebotomy certificate, nor did it submit any evidence that Ms. Daniels possesses academic credentials, given that her certification alone is not sufficient to qualify her to teach. Additionally, Ms. White has not yet earned her phlebotomy certification to be able to teach the phlebotomy course; and while the campus’s response mentioned that she has been removed from teaching that course, a current teaching schedule was not provided so her and Ms. Yeager-Shaffer’s teaching assignments could not be verified.

Council Action

The Council determined that the large number of findings from the campuses visits and the significant number of unresolved findings to be indicators of the institution’s substantive noncompliance with the Accreditation Criteria. Further, the likelihood that the institution can come into compliance with the Criteria within a reasonable time frame is called in question, especially given its history of renewal of accreditation visits with similar findings and concerns. Specifically, the institution’s last renewal visit occurred in 2013 and took five Council review cycles to demonstrate its correction of findings through deferral actions and show-cause hearings. Of more significant note is that the findings have been repetitive in areas such as course syllabi, catalogs, advertising, campus effectiveness plans, and administrative oversight, calling into question the institution’s good faith effort and commitment to correction, improvement, and growth. In addition, the concerns voiced by students and former faculty through on-site interviews, student surveys, and a call-for-comment preceding the visit perpetuate a framework of concern for the Council. It is especially disconcerting that some students and faculty have claimed that the campus is taking out loans without student approval and other students are convinced that the school is “stealing their money.” It is the judgment of the Council that the institution’s failure to demonstrate the systematic and effective implementation of operational characteristics essential to uphold the ACICS criteria in practice over time represents a lack of efficiency, effectiveness and administrative capability of the institutional administration.

Therefore, the Council acted to deny the institution’s application for a renewal of accreditation. The institution must notify the Council’s office in writing within ten days of initial receipt of this notice of its desire to appeal this decision to the Review Board. This appeal notification must include payment as detailed in the Schedule of Fees under Hearing Fees. The institution is advised that the Council’s decision is final and will be published if the appeal notice and appropriate fee are not provided within ten days of initial receipt of this notice. If the institution elects to appeal this action to the Review Board and remits the appropriate fee by the established deadline, then more detailed appeal procedures and information will be forwarded to the institution.
Institutional Teach-Out Plan

Finally, if the institution exercises its appeal rights, in compliance with Section 2-2-303 of the Accreditation Criteria, the institution is directed to submit to the Council office by January 31, 2017, the ACICS Campus Closing Application, which includes an appropriate teach-out plan and all applicable documentation requested by the application.

The Council expects that the institution will take the appropriate steps to assist its students through any transition to successfully complete their programs in an orderly manner. You are advised that Section 2-3-900 of the ACICS Accreditation Criteria stipulates that the Council may bar any person or entity from being an owner or senior manager of an ACICS-accredited institution if that person or entity was an owner or manager of an institution that loses its accreditation as a result of a denial or suspension action or that closes without providing a teach-out or refunds to students matriculated at that time of closure.

If the institution elects not to appeal this action, any comments you may wish to make with regard to this decision must be submitted to the Council office within two weeks of the date of this letter. Should you choose to submit any comments, these comments will be included in the summary detailing the reasons for the Council’s decision that will be made available to the U.S. Secretary of Education, the appropriate State licensing or authorizing agency, and the public through www.acics.org.

Current Grant Expires December 31, 2016

The institution is advised that the current grant of accreditation expires on December 31, 2016. However, should the institution elect to appeal the decision and remit the appropriate fee by the established deadline, the grant of accreditation will be extended through April 30, 2017.

If the institution elects not to appeal this action, comments with regard to this decision must be submitted to the Council office within two weeks of the date of this letter and will be included in the summary detailing the reasons for the Council’s decision that will be made available to the U.S. Secretary of Education, the appropriate State licensing or authorizing agency, and the public through www.acics.org.
Please contact Ms. Katie Morrison at kmorrison@acics.org or (202) 336-6783 if you have any questions.

Sincerely,

Roger J. Williams
Interim President

c: Ms. Cathy Sheffield, Accreditation and State Liaison, U.S. Department of Education (aslrecordsmanager@ed.gov)
Ms. Nancy Gifford, U.S. Department of Education, School Participation Team, Region III (nancy.paula.gifford@ed.gov)
Ms. Sonya Wilmoth, Nutter Fort campus (acicsnf@wvbc.edu)
Dr. Corley Dennison, West Virginia Higher Education Department (corley.dennison@wvhepc.edu)
March 30, 2017

MEMO TO THE ACCREDITING COUNCIL FOR INDEPENDENT COLLEGES AND SCHOOLS (ACICS)

Subject: Review Board Decision to Remand Action to Council

The Review Board has considered West Virginia Business College’s (“Institution”) appeal of the Accrediting Council for Independent Colleges and Schools’ (“Council”) December 22, 2017, decision to deny the institution’s application for renewal of accreditation. Based on the arguments presented by both the Institution and the Council, the Review Board acted to remand the decision to the Council because it determined that:

- The institution was not provided sufficient time to respond to the concerns addressed in the Council’s December 22, 2016 letter of denial.

As part of this remand, the Review Board recommends the following for the Council’s consideration:

- The institution be provided additional time to satisfactorily address the remaining areas of noncompliance identified in the December 22, 2016, letter of denial for review at the August 2017 meeting of the Council.

In accordance with Section 2-3-607 of the Accreditation Criteria, the institution’s appeal of the denial action will be finally disposed of when the Council takes the final action on remand.

Review Board Panel Attestation (by electronic signature)
By providing my signature below, I attest to my agreement of the language of the directive from the Review Board contained therein.

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
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<tr>
<td>Dr. Thomas Duff, Chair</td>
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<td>Mr. Francis Giglio</td>
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<td>Dr. Gary Meers</td>
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<td>Mr. Matthew Johnston</td>
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ACCREDITING COUNCIL FOR INDEPENDENT COLLEGES AND SCHOOLS
April 10, 2017

VIA E-MAIL AND OVERNIGHT DELIVERY

Mr. John Tarr
President
West Virginia Business College
1052 Main Street
Wheeling, WV 26003

Subject: Final Action Following Review Board Decision to Remand Action to Council

Dear Mr. Tarr:

At its April 2017 meeting, the Council reviewed the decision by the Review Board resulting from the February 28, 2017, hearing to remand the Council’s December 2016 denial of the institution’s application for renewal of accreditation. The Review Board recommended that the Council consider giving the institution more time to demonstrate compliance with the Accreditation Criteria.

In response to the Review Board’s recommendation, the Council again reviewed the record in question. Based on this review, the Council made the following observations:

1. The Council denied the institution’s application for renewal of accreditation in December 2016 based on its finding that the institution failed to comply with the Criteria in 29 areas between its two campuses.

2. These 29 findings were substantially similar to findings of noncompliance made back in December 2013.

3. It took the institution multiple attempts over approximately 18 months to address these findings based on written representations submitted to the Council to finally demonstrate compliance in April 2015.

4. Given the very protracted time it took for the institution to demonstrate compliance in early 2015, the Council expected that the institution would continue to be in compliance when it conducted the next evaluation in late 2016. Instead, the Council found the institution again to be significantly out of compliance.
Hence, the Council has found no credible basis upon which to summon confidence that additional time would serve to assure the institution’s compliance with the standards of the Accreditation Criteria. Therefore, the Council has acted to reaffirm its decision to deny the institution’s application for renewal of accreditation. This is the final action on remand and is not appealable.

Sincerely,

Roger J. Williams
Interim President

C:
Mr. Kenneth J. Ingram, Esq., Whiteford, Taylor & Preston (Kingram@wtplaw.com)
Ms. Cathy Sheffield, Accreditation and State Liaison, U.S. Department of Education (aslrecordsmanager@ed.gov)
Ms. Nancy Gifford, U.S. Department of Education, School Participation Team, Region III (nancy.paula.gifford@ed.gov)
Dr. Corley Dennison, West Virginia Higher Education Department (corley.dennison@wvhepc.edu)
Ms. Perliter Walters-Gilliam, Vice President – Accreditation (pwgilliam@acics.org)
ITEM: Compliance Warnings by the Accrediting Council for Independent Colleges and Schools (ACICS)

INSTITUTIONS: Mountain State College - Parkersburg and Valley College – Beckley campus

RECOMMENDED RESOLUTION: Information Item

STAFF MEMBER: Corley Dennison

BACKGROUND:

Mountain State College (MSC) and Valley College – Beckley campus have been placed on a Campus-Level Compliance Warning by the Accrediting Council for Independent Colleges and Schools (ACICS) effective, April 10, 2017 (letters attached).

MSC received the warning due to a sub-standard Campus Accountability Report (CAR) specifically citing a 56 percent placement rate and a 56 percent retention rate. Both of the percentages fall below the ACICS minimum standard of 60 percent.

Valley College – Beckley campus received its warning for reporting a placement rate of 54 percent, a rate below the ACICS standard of 60 percent.

Both schools must submit an improvement plan to ACICS and are on increased monitoring and reporting requirements.

As mandated by Chancellor Tucker, Mountain State College and Valley College are seeking accreditation under a new agency, the Accrediting Commission of Career Schools and Colleges. Both schools are progressing in their application process.

Council staff will continue to monitor this situation and will report developments as appropriate to the Council.
April 10, 2017

VIA E-MAIL ONLY

Ms. Judith Sutton
Director
Mountain State College
Spring At 16th Street
Parkersburg, WV 26101-3993

Subject: Student Achievement Review – Campus-Level Compliance Warning

Dear Ms. Sutton:

The Council has reviewed your most recently submitted 2016 Campus Accountability Report (CAR) and the campus-level 56% placement and 56% retention rates do not meet the Council's standard of 60%.

Council Action
Therefore, the Council acted to issue your campus a compliance warning for the below-standard results for 2016, subject to the Council’s review of updated information at its August 2017 meeting. Accordingly, the campus is required to complete and submit the following information:

1. An Improvement Plan that includes specific activities that have been implemented to clearly improve the programs that are negatively impacting campus-level placement and retention performance. The campus must also submit a progress report, corresponding documentation, and any necessary explanatory narrative of all policies and practices implemented and completed for the purpose of placement and retention remediation.

2. A cumulative three-quarter CAR, to include all student information for the period July 1, 2016, to March 31, 2017, along with evidence that supports the reported retention rates to include documentation of all retention exemptions and placement as reported and validated on the Placement Verification Program (PVP).

The information or reports listed above must be received at the Council office electronically, at reporting@acics.org by June 1, 2017. If you have any questions about this action, please contact Dr. Terron King at tking@acics.org or (202) 336-6771.

Sincerely,

Roger J. Williams
Interim President

c: Dr. Corley Dennison, West Virginia Higher Education Department (Corley.dennison@wvhepc.edu)

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ACCREDCITING COUNCIL FOR INDEPENDENT COLLEGES AND SCHOOLS
April 10, 2017

VIA E-MAIL ONLY

Ms. Margaret Stafford
Compliance Director
Valley College
120 New River Town Center, Suite C
Beckley, WV 25801

Subject: Student Achievement Review – Campus-Level Compliance Warning

Dear Ms. Stafford:

The Council has reviewed your most recently submitted 2016 Campus Accountability Report (CAR) and the campus-level placement rate of 54% does not meet the Council’s standard of 60%.

Council Action

Therefore, the Council acted to issue your campus a compliance warning for the below-standard results for 2016, subject to the Council’s review of updated information at its August 2017 meeting. Accordingly, the campus is required to complete and submit the following information:

1. An Improvement Plan that includes specific activities that have been implemented to clearly improve the programs that are negatively impacting campus-level placement performance. The campus must also submit a progress report, corresponding documentation, and any necessary explanatory narrative of all policies and practices implemented and completed for the purpose of placement remediation.

2. A cumulative three-quarter CAR, to include all student information for the period July 1, 2016, to March 31, 2017, along with evidence that supports the reported placement rates as reported and validated on the Placement Verification Program (PVP).

The information or reports listed above must be received at the Council office electronically, at reporting@acics.org by June 1, 2017. If you have any questions about this action, please contact Dr. Terron King at tking@acics.org or (202) 336-6771.

Sincerely,

Roger J. Williams
Interim President

c: Dr. Corley Dennison, West Virginia Higher Education Department
   (Corley.dennison@wvhepc.edu)
ITEM: Revisions to Procedural Rule, Series 25, Residency Classification for Admission and Fee Purposes

INSTITUTIONS: All

RECOMMENDED RESOLUTION: Resolved, That the West Virginia Council for Community and Technical College Education approves the proposed revisions to Procedural Rule, Series 25, Residency Classification for Admission and Fee Purposes, for submission to the Secretary of State for a thirty-day public comment period.

Further Resolved, That staff is instructed to final file the procedural rule with the Secretary of State at the conclusion of the comment period if no substantive comments are received.

STAFF MEMBER: Corley Dennison
L.G. Corder

BACKGROUND:

In light of federal changes and clarifications, it is necessary to make changes to sections 6 and 7 of Series 25, Residency Classification for Admission and Fee Purposes.

Section 6 of the rule addresses the military. In 2015, Council approved revisions to Procedural Rule, Series 25, Residency Classification for Admission and Fee Purposes, in order to require our institutions to charge in-state tuition rates to certain students using VA education benefits which ensured our institutions could maintain approval to educate GI Bill beneficiaries.

The federal law prompting the revision was amended on December 16, 2016, to require in-state tuition for dependents of active duty servicemembers using transferred VA education benefits as well as survivors using the Fry Scholarship regardless of the date of the servicemember’s death. The amendment will take effect July 1, 2017. All institutions were notified in January 2017 about the mandated amendments.

Suggested further revisions to Series 25 are proposed to bring the rule in compliance with the recent federal amendments.
Section 7 of the rule addresses aliens. It has become necessary to outline/define the criteria acceptable for granting in-state residency for admission and fee purposes to foreign nationals living in the United States with a visa status.

Currently, Series 25 states that:

“7.1. An alien who is in the United States on a resident visa or who has filed a petition for naturalization in the naturalization court, and who has established a bona fide domicile in West Virginia as defined in §135-25-3 of these rules, may be eligible for in-state residency classification: Provided, That person is in the state for purposes other than to attempt to qualify for residency status as a student. Political refugees admitted into the United States for an indefinite period of time and without restriction on the maintenance of a foreign domicile may be eligible for an in-state classification as defined in §135-25-3 of these rules. Any person holding a student or other temporary visa cannot be classified as an instate student.”

The current section as written is too vague and allows individual interpretation in determining residency for foreign nationals.

After consulting with U.S. State Department personnel, immigration attorneys and colleagues, new language has been identified that specifies conditions for determining residency for foreign nationals.

New section 7:

7.1. Students who meet the domiciliary requirements noted in Sections 3, 4, and 5 of this policy, and who are U.S. Permanent Resident Aliens, Political Asylees or Political Refugees, or who hold an A, E, G, H, I, L, O, P, R, TD, TN, U, or V visa, may apply to be reviewed for in-state residency for tuition purposes.

7.2. Students who hold B, C, D, F, J, K, M, or Q visas are not eligible for establishing in-state residency for tuition purposes.

7.3. Students who meet the domiciliary requirements and who are the beneficiary of a pending I-485 application to adjust status to permanent resident may apply to be reviewed for in-state residency for tuition purposes.

It is recommended that the Council approve the rule for filing with the Secretary of State for a formal thirty-day public comment period and further recommended that staff be instructed to final file the rule with the Secretary of State at the conclusion of the comment period if no substantive comments are received.

1.1. Scope. -- Rule regarding residency classification of students for admission and fee purposes.

1.2. Authority. -- W. Va. Code §§18B-10 and 18B-2B-6

1.3. Filing Date. – March 19, 2015

1.4. Effective Date. – April 20, 2015

1.5. Sunset Provision. – This rule shall terminate and have no further force or effect upon the expiration of five years from its effective date.

§135-25-2. Classification for Admission and Fee Purposes.

2.1. Students enrolling in a West Virginia public institution of higher education shall be assigned a residency status for admission, tuition, and fee purposes by the institutional officer designated by the President. In determining residency classification, the issue is essentially one of domicile. In general, the domicile of a person is that person's true, fixed, permanent home and place of habitation. The decision shall be based upon information furnished by the student and all other relevant information. The designated officer is authorized to require such written documents, affidavits, verifications, or other evidence as is deemed necessary to establish the domicile of a student. The burden of establishing domicile for admission, tuition, and fee purposes is upon the student.

2.2. If there is a question as to domicile, the matter must be brought to the attention of the designated officer at least two (2) weeks prior to the deadline for the payment of tuition and fees. Any student found to have made a false or misleading statement concerning domicile shall be subject to institutional disciplinary action and will be charged the nonresident fees for each academic term theretofore attended.

2.3. The previous determination of a student's domiciliary status by one institution is not conclusive or binding when subsequently considered by another institution; however, assuming no change of facts, the prior judgment should be given strong consideration in the interest of consistency. Out-of-state students being assessed resident tuition and fees as a result of a reciprocity agreement may not transfer said reciprocity status to another public institution in West Virginia.


3.1. Domicile within the state means adoption of the state as the fixed permanent home and involves personal presence within the state with no intent on the part of the applicant or, in the case of a dependent student, the applicant's parent(s) to return to another state or country. Residing with relatives (other than parent(s)/legal guardian) does not, in and of itself, cause the student to attain domicile in this State for admission or fee payment purposes. West Virginia domicile may be established upon the completion of at
least twelve (12) months of continued presence within the state prior to the date of registration: Provided that such twelve (12) months' presence is not primarily for the purpose of attendance at any institution of higher education in West Virginia. Establishment of West Virginia domicile with less than twelve (12) months' presence prior to the date of registration must be supported by evidence of positive and unequivocal action. In determining domicile, institutional officials should give consideration to such factors as the ownership or lease of a permanently occupied home in West Virginia, full-time employment within the state, paying West Virginia property tax, filing West Virginia income tax returns, registering of motor vehicles in West Virginia, possessing a valid West Virginia driver's license, and marriage to a person already domiciled in West Virginia. Proof of a number of these actions shall be considered only as evidence which may be used in determining whether or not a domicile has been established. Factors militating against the establishment of West Virginia domicile might include such considerations as the student not being self-supporting, being claimed as a dependent on federal or state income tax returns or on the parents' health insurance policy if the parents reside out of state, receiving financial assistance from state student aid programs in other states, and leaving the state when school is not in session.


4.1. A dependent student is one (1) who is listed as a dependent on the federal or state income tax return of his/her parent(s) or legal guardian or who receives major financial support from that person. Such a student maintains the same domicile as that of the parent(s) or legal guardian. In the event the parents are divorced or legally separated, the dependent student takes the domicile of the parent with whom he/she lives or to whom he/she has been assigned by court order. However, a dependent student who enrolls and is properly classified as an in-state student maintains that classification as long as the enrollment is continuous and that student does not attain independence and establish domicile in another state.

4.2. A nonresident student who becomes independent while a student at an institution of higher education in West Virginia does not, by reason of such independence alone, attain domicile in this state for admission or fee payment purposes.

§135-25-5. Change of Residence.

5.1. A person who has been classified as an out-of-state student and who seeks resident status in West Virginia must assume the burden of providing conclusive evidence that he/she has established domicile in West Virginia with the intention of making the permanent home in this State. The intent to remain indefinitely in West Virginia is evidenced not only by a person's statements, but also by that person's actions. In making a determination regarding a request for change in residency status, the designated institutional officer shall consider those actions referenced in §135-25-3 of these rules. The change in classification, if deemed to be warranted, shall be effective for the academic term or semester next following the date of the application for reclassification.


6.1. An individual who is on full-time active military service in another state or a foreign country or an employee of the federal government shall be classified as an in-state student for the purpose of payment of tuition and fees: Provided, That the person established a domicile in West Virginia prior to entrance into federal service, entered the federal service from West Virginia, and has at no time while in federal service claimed or established a domicile in another state. Sworn statements attesting to these conditions may be required. The spouse and dependent children of such individuals shall also be classified as in-state students for tuition and fee purposes.
6.2. Persons assigned to full-time active military service in West Virginia and residing in the state shall be classified as in-state students for tuition and fee purposes. The spouse and dependent children of such individuals shall also be classified as in-state students for tuition and fee purposes.

6.3. Any student living in West Virginia and receiving education benefits provided under Chapter 30 or Chapter 33 of the U.S. Department of Veterans Affairs shall be charged in-state tuition and fees to attend a West Virginia public institution of higher education. The student must be within the limits of the three (3) year eligibility period of discharge from a service period of at least 90 days at the time of enrollment. The student will be considered an in-state student for residency purposes as long as they remain continuously enrolled at the institution. In the event the student ceases enrollment, in-state residency will only be reassigned if the student re-enrolls at another West Virginia public institution of higher education within the eligibility period described above, so long as such student is considered a “covered individual” as described in 38 U.S.C. § 3679, as in effect at any time.


7.1. An alien who is in the United States on a resident visa or who has filed a petition for naturalization in the naturalization court, and who has established a bona fide domicile in West Virginia as defined in §135-25-3 of these rules, may be eligible for in-state residency classification. Provided, That person is in the state for purposes other than to attempt to qualify for residency status as a student. Political refugees admitted into the United States for an indefinite period of time and without restriction on the maintenance of a foreign domicile may be eligible for an in-state classification as defined in §135-25-3 of these rules. Any person holding a student or other temporary visa cannot be classified as an in-state student. Students who meet the domiciliary requirements noted in Sections 3, 4, and 5 of this policy, and who are U.S. Permanent Resident Aliens, Political Asylees or Political Refugees, or who hold an A, E, G, H, I, L, O, P, R, TD, TN, U, or V visa, may apply to be reviewed for in-state residency for tuition purposes.

7.2. Students who hold B, C, D, F, J, K, M, or Q visas are not eligible for establishing in-state residency for tuition purposes.

7.3. Students who meet the domiciliary requirements and who are the beneficiary of a pending I-485 application to adjust status to permanent resident may apply to be reviewed for in-state residency for tuition purposes.


8.1. A person who was formerly domiciled in the State of West Virginia and who would have been eligible for an in-state residency classification at the time of his/her departure from the state may be immediately eligible for classification as a West Virginia resident provided such person returns to West Virginia within a one (1) year period of time and satisfies the conditions of §135-25-3 of these rules, regarding proof of domicile and intent to remain permanently in West Virginia.


9.1. Each institution shall establish procedures which provide opportunities for students to appeal residency classification decisions with which they disagree. The decisions of the designated institutional official charged with the determination of residency classification may be appealed in accordance with appropriate procedures established by the president of the institution. At a minimum, such procedures shall provide that:
9.1.a. An institutional committee on residency appeals will be established to receive and act on appeals of residency decisions made by the designated institutional official charged with making residency determinations.

9.1.a.1. The institutional committee on residency shall be comprised of members of the institutional community, including faculty and at least three, in any event, an odd number. The student representative(s) shall be appointed by the president of the institutional student government association while the faculty representative(s) shall be selected by the campus-wide representative faculty organization.

9.1.a.2. The student contesting a residency decision shall be given the opportunity to appear before the institutional committee on residency appeals. If the appellant cannot appear when the committee convenes a meeting, the appellant has the option of allowing committee members to make a decision on the basis of the written materials pertaining to the appeal or waiting until the next committee meeting.

9.1.b. The residency appeal procedures will include provisions for appeal of the decision of the institutional committee on residency appeals to the president of the institution.

9.1.c. Residency appeals shall end at the institutional level.
West Virginia Council for Community and Technical College Education
Meeting of April 20, 2017

ITEM: Landscape Masterplan and Parking Lot Project

INSTITUTION: Eastern West Virginia Community and Technical College

RECOMMENDED RESOLUTION: Resolved, That the West Virginia Council for Community and Technical College Education approves Eastern West Virginia Community and Technical College’s Landscape Masterplan and Parking Lot Project with a projected budget of $171,500.

STAFF MEMBER: Richard Donovan

BACKGROUND:

Eastern West Virginia Community and Technical College developed a Landscape Masterplan for its main campus in Moorefield with assistance from Peter Butler, Associate Professor of Landscape Architecture, and Connor Price, a student in the landscape architecture program of West Virginia University’s Davis College of Agriculture, Natural Resources and Design. The plan identifies 18 discrete projects that can be implemented over time as funds become available through grants, public-private partnerships, and capital fees.

The first project that will be implemented in 2017 is a new parking lot facing the recently completed east academic wing addition. The project’s objective is to introduce water conservation and protective applications and materials in a parking lot project to reduce pollution and water runoff in the Chesapeake Bay Water Shed. This project will provide opportunities for secondary schools, community and technical colleges, state and federal agencies to see practical application of innovative materials and technologies that can be implemented in a cost-effective manner to support the Chesapeake Bay Water Shed initiative.

In order to help offset the cost of the project, Eastern applied for a grant of $71,500 to include the following:

- 20 spaces, 9’ X 36’ permeable pavers
- Installation of pavers
- Island conversions
- 2000 square feet of bio-retention islands (includes installation, but drainage already exists)
Eastern will contribute $100,000 in unspent construction contingency funds from the east academic wing addition project to match the grant and complete a parking lot that will include traditional paving and permeable paving blocks to demonstrate the differences.

The partners involved in the parking lot project are Eastern West Virginia Community and Technical College, West Virginia Department of Highways and West Virginia Department of Environmental Protection.

Another Landscape Masterplan project that is being actively planned is installation of a solar panel canopy over the faculty and staff parking area on the western edge of Eastern’s property. Eastern is working with Mountain View Solar on this project. A pre-proposal grant request for $50,000 was submitted to the Appalachian Stewardship Foundation. Eastern is also submitting a request for assistance to The Dominion Foundation and the USDA Community Development Office, and a request will be made to Tesla to provide and install charging stations for electric cars. The solar panel canopy is to be constructed over the employee parking lot permitting employees to park under it with solar panels on the roof.
EASTERN WEST VIRGINIA COMMUNITY AND TECHNICAL COLLEGE

CONCEPTUAL MASTER PLAN

PLAN ELEMENTS

1. FRONT COURTYARD
2. SCULPTURE GARDEN
3. MEDITATION LAWN
4. NATIVE PLANTINGS
5. SMART FIELD
6. HALF COURT BASKETBALL
7. SOLAR PANEL CANOPY
8. DEMONSTRATION RAIN GARDENS
9. EVENT LAWN
10. WALKING TRAIL
11. REAR COURTYARD
12. BANQUET PATIO
13. OVERLOOK
14. PROPOSED PARKING
15. ORCHARD
16. GAZEBO
17. TESLA CHARGING STATIONS
18. ELECTRONIC INFO SIGN

Parking Lot Enlargement (See pg. 2)

SCALE: 1" = 60'-0"
The proposed parking lot for the college provides a unique opportunity to demonstrate green infrastructure best management practices. Elements such as permeable paving, curb cuts, rain gardens, and vegetated swales help to capture stormwater runoff on site. This lessens the need for underground pipes and prevents possible erosion. The new lot can also serve as a teaching tool for students to understand proper green infrastructure implementation.
West Virginia Council for Community and Technical College Education
Meeting of April 20, 2017

ITEM: WESCO Building Renovation Project

INSTITUTION: West Virginia Northern Community College

RECOMMENDED RESOLUTION: Resolved, That the West Virginia Council for Community and Technical College Education approves the schematic design for the Wesco Building Renovation and the project budget of $4.7 million.

STAFF MEMBER: Richard Donovan

BACKGROUND:
At its meeting of October 22, 2015, the Council approved purchase of the WESCO building for $205,000. Since that time, Council staff worked with West Virginia Northern Community College (WVNCC) to advertise for architects and through an interview process hired M&G Architects/Engineers of Wheeling as the project architect. Working with M&G, a detailed building evaluation was performed, the project programmed, and a schematic design and project budget prepared. A subsequent environmental evaluation identified about 2,000 square feet of asbestos-containing floor tile that needs to be abated. No other interior building materials require professional asbestos abatement prior to renovation and no PCBs were detected in or around the building.

WVNCC, Council staff and the architect also reviewed several construction phasing concepts to build out the project over two or more phases. Ultimately, the WVNCC Board of Governors decided to renovate the building in one phase since this was determined to be the most cost-effective approach in the long term. The project is scheduled to bid in August 2017 and be complete by August 2018 for the 2018 fall semester.

The WESCO Building encompasses 26,910 square feet, 19,980 square feet on the first floor and 6,930 square feet on the mezzanine level. The mezzanine level will be used for storage since the ceiling height is too low for instructional space and offices. The two major programs that will be housed in this building on the first floor are the welding and petroleum technology programs. An unfinished area on the first floor has been set aside for future program expansion. The first floor will also provide one large classroom that can be subdivided with an operable partition wall; one small classroom; three faculty offices; a small conference room; a small IT room; a small student lounge; and restrooms circulation and building support spaces. All building systems will be upgraded to contemporary standards or replaced, the existing roof will be replaced with a new roof and insulation, and a new entrance and ramp for ADA access will be built on the south side of the building adjacent to the main parking lot.
The welding program in particular has outgrown the space it occupies in the Applied Technology Center. There are currently only eight welding booths in a fairly confined space. In the WESCO Building, the welding program will have 20 welding booths, two of which will be ADA accessible, in a much larger and more flexible space. The petroleum technology program will also have additional space that is more flexible than its existing space. Both programs will be supported by a dedicated tool storage room that they do not have in the Applied Technology Center. After the renovation, these programs will be in a better position to support the demands of the oil and gas industry and provide a skilled workforce for the three new cracker plants planned for the region.

The total project budget is $4.7 million as follows and will be paid from West Virginia Northern’s capital fees and reserves:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/E Fees and Expenses</td>
<td>$ 361,738</td>
</tr>
<tr>
<td>Construction</td>
<td>3,545,000</td>
</tr>
<tr>
<td>Furniture &amp; Equipment</td>
<td>355,500</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>77,762</td>
</tr>
<tr>
<td>Contingency</td>
<td>360,000</td>
</tr>
<tr>
<td><strong>Total Budget</strong></td>
<td><strong>$4,700,000</strong></td>
</tr>
</tbody>
</table>

The architect will provide a design presentation at the Council meeting.
WVNCC - WESCO Building Renovation - P.O. #16161

Wheeling, West Virginia

WV Council for C. & T. C. E.
EXISTING BUILDING EXTERIOR
EXISTING BUILDING EXTERIOR
EXISTING BUILDING INTERIOR
EXISTING BUILDING INTERIOR
EXISTING BUILDING INTERIOR
## Project Budget Summary

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Cost</td>
<td>$3,545,000.00</td>
</tr>
<tr>
<td>Furniture, Fixtures &amp; Equipment</td>
<td>$355,500.00</td>
</tr>
<tr>
<td>A/E Fees &amp; Expenses</td>
<td>$361,738.00</td>
</tr>
<tr>
<td>Other Misc. Expenses</td>
<td>$77,762.00</td>
</tr>
<tr>
<td>Contingency</td>
<td>$360,000.00</td>
</tr>
<tr>
<td><strong>Total Project Budget</strong></td>
<td><strong>$4,700,000.00</strong></td>
</tr>
<tr>
<td>Fund Type</td>
<td>Amount</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Tuition</td>
<td>8,440,000.00</td>
</tr>
<tr>
<td>Auxiliary</td>
<td>1,080,000.00</td>
</tr>
<tr>
<td>Capital</td>
<td>3,340,000.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 12,860,000.00</strong></td>
</tr>
</tbody>
</table>
ITEM: Consolidated Audit Presentation Fiscal Year 2016

INSTITUTIONS: All

RECOMMENDED RESOLUTION: Resolved, That the West Virginia Council for Community and Technical College Education accepts the audit of the Council’s Combined Financial Statements for the Fiscal Year ended June 30, 2016.

STAFF MEMBER: Ed Magee

BACKGROUND:

The Higher Education Policy Commission (Commission) is statutorily charged with the preparation of audited financial statements for West Virginia’s Higher Education Fund (Fund). The Fund is made up of all activity related to institutional operations of the Commission and the West Virginia Council for Community and Technical College Education (Council) member institutions. Each institution is independently audited as part of the Fund Statement. A combined financial statement is issued for the Community and Technical College System (System) which includes the Council and the community and technical colleges. The Council is charged with approving the System’s financial statements. The audit is completed by CliftonLarsonAllen, LLP under a contractual arrangement with the Commission. CliftonLarsonAllen subcontracted with Suttle and Stalnaker, PLCC, to complete audits for the Council and most of its institutions. The ultimate responsibility for performance is with CliftonLarsonAllen.

Staff compiled this report with two goals in mind:
1. To provide the Council with an understanding of the audit process;
2. To provide ratio analysis of data contained within the System Statement and the statements of the member institutions.

Staff believes that the overall status of the System is sound, although there are areas that should be monitored to ensure its continued viability.

The Audit Process

Independent Auditors’ Reports on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards were issued for all financial reports. The combined financial statements, as well as the financial statements for each institution, the Commission, and the Council can be viewed on the Commission’s website at:

http://www.wvhepc.edu/resources/purchasing-and-finance/financial-statements-2016/
Summary of Financial Results

A summary of the financial information for the System is provided in this section. As a point of reference, the dollar amounts numbers are presented in thousands.

Net Position

The Net Position is the total assets and deferred outflows less the total liabilities and deferred inflows of the System. The net position of the System decreased in fiscal year 2016 by $.1 million. This follows an increase of $19.3 million in fiscal year 2015. The change in fiscal year 2015 is primarily a result of increases in cash, and appropriations due from primary government and capital asset additions offset by depreciation expense and reductions in unearned revenues and deposits. The fiscal year 2015 change is mainly from capital asset additions offset by reductions in cash and appropriations due from primary government.

<table>
<thead>
<tr>
<th>Net Position (in 000s)</th>
<th>FY 2015</th>
<th>FY 2016</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Position</td>
<td>$252,264</td>
<td>$252,170</td>
<td>-$94</td>
</tr>
<tr>
<td>Current cash and cash equivalents</td>
<td>69,346</td>
<td>75,505</td>
<td>6,159</td>
</tr>
<tr>
<td>Appropriations due from Primary Government</td>
<td>1,154</td>
<td>1,692</td>
<td>538</td>
</tr>
<tr>
<td>Due from the Commission</td>
<td>115</td>
<td>59</td>
<td>-56</td>
</tr>
<tr>
<td>Capital Assets, net of depreciation</td>
<td>245,176</td>
<td>239,464</td>
<td>-5,712</td>
</tr>
<tr>
<td>Accrued Liabilities</td>
<td>6,207</td>
<td>6,927</td>
<td>720</td>
</tr>
<tr>
<td>Unearned Revenue and Deposits</td>
<td>17,620</td>
<td>14,622</td>
<td>-2,998</td>
</tr>
<tr>
<td>Funds due to West Virginia Development Office</td>
<td>2,620</td>
<td>2,554</td>
<td>-66</td>
</tr>
</tbody>
</table>

Tuition and Fee Revenue

Total student tuition and fee revenues net of the scholarship allowance increased $1.1 million in FY 2016. The FY 2016 change in tuition and fees was primarily a result of increased rates. Tuition and fee revenues decreased $3.8 million in FY 2015 over the previous fiscal year. The decrease was attributable to a decline in enrollment which was offset by tuition and fee increases.
Operating Expenses

Operating expenses decreased $3.2 million over FY 2016. Personnel and supply costs were reduced by institutions in response to lower enrollments. Scholarships and Fellowships expenses declined because federal financial aid decreased.

### Operating Expenses

<table>
<thead>
<tr>
<th>Operating Expenses Percent Increases</th>
<th>FY 2012</th>
<th>FY 2013</th>
<th>FY 2014</th>
<th>FY 2015</th>
<th>FY 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and Wages</td>
<td>4.21%</td>
<td>6.42%</td>
<td>-1.83%</td>
<td>-0.06%</td>
<td>-1.57%</td>
</tr>
<tr>
<td>Benefits</td>
<td>3.09%</td>
<td>-24.22%</td>
<td>-2.80%</td>
<td>7.58%</td>
<td>-1.36%</td>
</tr>
<tr>
<td>Supplies and Other Services</td>
<td>5.00%</td>
<td>-2.75%</td>
<td>-0.14%</td>
<td>-5.81%</td>
<td>-1.11%</td>
</tr>
<tr>
<td>Utilities</td>
<td>5.94%</td>
<td>23.20%</td>
<td>-1.68%</td>
<td>1.67%</td>
<td>-0.55%</td>
</tr>
<tr>
<td>Scholarships and Fellowships</td>
<td>-11.56%</td>
<td>-13.92%</td>
<td>-11.68%</td>
<td>-23.88%</td>
<td>-9.20%</td>
</tr>
<tr>
<td>Depreciation</td>
<td>9.49%</td>
<td>28.78%</td>
<td>13.97%</td>
<td>4.51%</td>
<td>7.05%</td>
</tr>
</tbody>
</table>

### Operating Expenses

<table>
<thead>
<tr>
<th>Operating Expenses</th>
<th>FY 2015</th>
<th>FY 2016</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and Wages</td>
<td>$72,654</td>
<td>$71,510</td>
<td>-$1,144</td>
</tr>
<tr>
<td>Benefits</td>
<td>18,760</td>
<td>18,505</td>
<td>-255</td>
</tr>
<tr>
<td>Supplies and Other Services</td>
<td>42,286</td>
<td>41,815</td>
<td>-$471</td>
</tr>
<tr>
<td>Utilities</td>
<td>2,920</td>
<td>2,904</td>
<td>-16</td>
</tr>
<tr>
<td>Student Financial Aid- Scholarships and Fellowships</td>
<td>23,005</td>
<td>20,888</td>
<td>-$2,117</td>
</tr>
<tr>
<td>Depreciation</td>
<td>10,260</td>
<td>10,983</td>
<td>$723</td>
</tr>
</tbody>
</table>
Other Post Employment Benefits

Beginning in FY 2008, the System adopted GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions. This statement provides standards for the measurement, recognition, and reporting of other postemployment benefit (OPEB) expenditures, assets, and liabilities. To address the issues raised by this Statement, the legislature created a postemployment trust fund for all State agencies. The System participates in this multiple employer cost-sharing plan, administered by the Public Employee’s Insurance Agency (PEIA).

The recognition of OPEB expenditures, assets and liabilities has created a substantial burden for institutions across the System and Fund. The liability totaled $27.5 million and $25.9 million in FY 2016 and FY 2015, respectively. As a result of 2012 legislation, this liability will continue to increase until FY 2022, when the liability will begin to be reduced as a result of credits applied to previously billed annual required contributions. The liability is estimated to be funded by 2034.

Analysis: Ratios and Financial Information

The purpose of this section is to provide a summary and analysis of the data included in the System’s financial statements. Only financial information is provided; therefore, this information should be combined with key performance indicators in other areas such as academics, and student and faculty satisfaction to acquire a more complete understanding of institutional strength.

To ascertain the financial health of a college, four questions should be asked:

1. Are resources sufficient and flexible enough to support the mission?
2. Does financial asset performance support the strategic direction?
3. Do operating results indicate the institution is living within available resources?
4. Is debt managed strategically to advance the mission?

To answer these questions, objective financial data should be analyzed within the context of the institutions’ strategic plans. These plans are often influenced by the political and economic environment within which the institutions operate.

To address the four questions listed above, a financial analysis is presented using the Composite Financial Index (CFI) and several other ratios. The CFI calculation uses the primary reserve, net operating revenues, viability and return on net position ratios. These ratios are converted into strength factors which in turn are weighted to allow summing of the four resulting ratio scores into a single, composite value. The strength factors are limited to a scale of -4 to 10.

Weights are applied to the strength factors depending upon the amount of capital debt. The primary reserve ratio and viability ratio are measures of financial condition based on the

†The CFI methodology is described in the Strategic Financial Analysis for Higher Education (Sixth Edition), jointly developed and sponsored by Prager, Sealy & Co., LLC, KPMG, LLP and BearingPoint, Inc.
expendable net position. The net operating revenues ratio measures an institution’s ability to live within its means on a short term basis. The return on net position assesses a school’s capacity to generate overall return against all net resources. The viability ratio was not computed for institutions with an insignificant level of debt.

<table>
<thead>
<tr>
<th>Composite Financial Index Weights (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
</tr>
<tr>
<td>Primary Reserve</td>
</tr>
<tr>
<td>Net Operating Revenue</td>
</tr>
<tr>
<td>Return on Net Assets</td>
</tr>
<tr>
<td>Viability</td>
</tr>
</tbody>
</table>

Other ratios were calculated to provide additional insight into the schools' financial health. Because the CFI primary reserve indices for some institutions were relatively low, the number of day’s cash on hand was also determined. The age of the physical plant for each institution was estimated to assess the physical resources available to advance the schools’ missions.

The *FY 2015 U.S. Public College and University Medians* published by Moody’s Investors Service was utilized to provide benchmark data for comparison purposes. The report includes median ratios for each rating category.

The rating category A3 was used because the characteristics of the related institutions are similar to those of the System’s institutions. It should be noted that Moody’ reviews many additional institutional characteristics such as management performance, market factors to determine their ratings. The CFI strength factors were applied to the Moody’s median ratios to derive scores for the rating.
Primary Reserve Ratio

The primary reserve ratio used to calculate the primary reserve score is determined by dividing the expendable net position into expenses and applying the appropriate strength factor. The results indicate that amounts held in reserve kept pace with expenditures for most of the colleges. The OPEB liability was a contributing factor in the reduction of all of the schools’ primary reserves. Excluding the OPEB and pension liabilities, Eastern West Virginia Community and Technical College, Mountwest Community and Technical College, and New River Community and Technical College experienced decreases in reserves as a percentage of operating expenses. The primary reserve scores excluding the OPEB and pension liabilities for the majority of the institutions were below the scores calculated for the schools included in the Moody’s report. The scores calculated for BridgeValley Community and Technical College, New River Community and Technical College and Pierpont Community and Technical College are significantly less than the scores calculated from the Moody’s data.

Net Operating Revenue

The increase or decrease in net position resulting from on-going operations is divided into the revenues from on-going operations to determine the net operating ratio. This ratio is used to determine the Primary Reserve Ratio Score.

Excluding the OPEB and pension liability related expenses, Blue Ridge Community and Technical College, Eastern West Virginia Community and Technical College, Pierpont Community and Technical College and West Virginia Northern Community College
experienced increases in net operating revenues over FY 2015. The operating results scores indicate that most of the institutions are not living within available resources.

Return on Net Position

The return on net position ratio is calculated by dividing the change in net position by the beginning net position. The resulting ratio is used to determine the return on net position score. This score is influenced by institutional income, capital grants and gifts, and capital bond proceeds. The scores for Blue Ridge Community and Technical College, Pierpont Community and Technical College and West Virginia Northern Community College increased over the previous fiscal year. New River Community and Technical College received significant capital funds during FY 2015. The FY 2016 score for New River Community and Technical College was well below the Moody’s average. For the majority of institutions across the system, the performance of financial assets provides a sufficient level of support for their respective core missions.
Viability

To determine the viability ratio of this calculation, the expendable net position is divided into capital project-related debt. This ratio was calculated for BridgeValley Community and Technical College, Mountwest Community and Technical College, Pierpont Community and Technical College, and West Virginia University at Parkersburg because they had significant debt levels. The result of this calculation is used to determine the viability score for each institution. An institution’s market position and capacity to raise fees to support debt service will influence its level of debt. Tuition and fee rates for resident students are limited; consequently, some institutions are not in a position to incur additional debt. Without the ability to incur debt, aging facilities are not renewed or replaced unless capital resources are provided from other sources.
The four ratio scores were combined to determine the CFI. Because the impact of the OPEB and pension liability related expenses was substantial, the CFI was calculated with and without the OPEB and pension information. A composite value of 1.0 is equivalent to weak financial health. A value of 3.0 signifies relatively strong financial health and scores above 3.0 indicate increasingly stronger financial health.

The CFI must be assessed in light of the strategic direction for each institution. Strong financial results are not beneficial unless resources are deployed effectively to advance mission specific goals and objectives. These indices are best used to track institutional performance, both historically and as a planning tool, over a long time horizon, rather than compare to other institutions as each institution is unique in terms of specific goals, objectives and funding composition.

Blue Ridge Community and Technical College, Pierpont Community and Technical College, and West Virginia Northern Community College experienced increases in the CFI calculated without the OPEB and pension liability related expenses. With the exclusion of the OPEB and pension liabilities, BridgeValley Community and Technical College, Eastern Community and Technical College, and New River Community and Technical College have poor financial health.

The Composite Financial Indices for most of the institutions demonstrate that reserves are not sufficient and flexible enough to support the schools’ missions. Operating results do not support the accumulation of adequate financial resources.
Number of Days Cash

The number of day's cash ratio was calculated to provide additional liquidity analysis. This ratio is calculated by multiplying the institutions' June 30 cash balances by 365 and dividing the result into total expenses less depreciation and the OPEB and pension liability related expenses. Data for discrete component units was not included in this calculation. The ratio West Virginia Northern Community College is well above the ratios of other institutions. The Moody’s median number of day’s cash ratios for institutions with A3 ratings is 116. The ratio for New River Community and Technical College is well below the Moody’s average.
Physical Plant Age

The physical plant age was calculated to estimate the adequacy of institutions’ physical resources. This ratio is computed by dividing the annual depreciation expense by the accumulated depreciation. Generally, institutions that have received capital appropriations, borrowed funds or used institutional resources for capital projects reflect a lower physical plant age. The Moody’s ratio for the A3 rating is 15.18. As mentioned above, institutional borrowing capacity is related to market position and the ability to increase fee revenues to pay debt service.

The ratios for new institutions are low because their facilities are relatively new. The physical plant age for West Virginia University at Parkersburg is relatively high.

Conclusion

Although the colleges and universities under the System exhibit relatively strong financial health, the adequacy of financial resources at several institutions is a significant concern. Most of the schools do not demonstrate the ability to operate within the resources available to them. Because the facilities at a majority of the institutions are relatively new, their physical plant age is comparatively low.
Higher Education Resource Assessment Fiscal Year 2018

All

Resolved, That the West Virginia Council for Community and Technical College Education approves the Higher Education Resource Assessment (HERA) for Fiscal Year 2018 to the community and technical colleges as shown in Table 1.

Ed Magee

West Virginia Code §18B-10-2 provides for the Council for Community and Technical College Education and the Higher Education Policy Commission to establish a Higher Education Resource Assessment. The Council and Commission are to use funds generated through the assessment to meet general operating expenses, fund statewide programs, and to “offset the impact, if any on financially needy students of any potential assessment increase” (West Virginia Code 18B-10-2(d)).

The passage of Senate Bill 448 in 2004 allowed the Council to adopt a procedure for assessing community and technical colleges at a fixed percentage of 1.5% of their prior year estimated gross tuition and required fees. The procedure minimizes annual changes in allocations by institution and is predictable for budgeting purposes. Council staff recommends continuing this assessment procedure for Fiscal Year (FY) 2018.

Table 1 shows the calculation of the HERA assessment at 1.5% of estimated gross tuition and required fees for each institution. The total FY 2018 assessment is $704,140 – an increase of $9,042 over the FY 2017 assessment of $695,098. The net change is due to an increase in tuition and fee rates from FY 2016 to FY 2017 and an increase in enrollment. Staff recommends that increased HERA revenue be dedicated to statewide initiatives.

The recommendation is to approve the Higher Education Resource Assessment (HERA) as presented.
### Table 1

West Virginia Council for Community and Technical College Education
FY 2018 Higher Education Resource Assessment

<table>
<thead>
<tr>
<th></th>
<th>Fall 2016 FTE Enrollment</th>
<th>2016-2017 Tuition Rate</th>
<th>2016-2017 Tuition and Required Fees</th>
<th>2017-2018 Assessment</th>
<th>Change from Prior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident</td>
<td>Reciprocity &amp; Metro</td>
<td>Non-Resident</td>
<td>Resident &amp; Reciprocity</td>
<td>Non-Resident</td>
</tr>
<tr>
<td>Blue Ridge CTC</td>
<td>1,806.43</td>
<td>85.31</td>
<td>59.81</td>
<td>$3,864</td>
<td>$6,192</td>
</tr>
<tr>
<td>BridgeValley: CTC</td>
<td>1,344.27</td>
<td>0.00</td>
<td>25.80</td>
<td>$4,120</td>
<td>$8,924</td>
</tr>
<tr>
<td>Eastern WV CTC</td>
<td>361.80</td>
<td>0.00</td>
<td>5.27</td>
<td>$3,270</td>
<td>$6,816</td>
</tr>
<tr>
<td>Mountwest CTC</td>
<td>1,213.87</td>
<td>214.13</td>
<td>50.93</td>
<td>$3,744</td>
<td>$8,946</td>
</tr>
<tr>
<td>New River CTC</td>
<td>1,118.93</td>
<td>0.00</td>
<td>12.20</td>
<td>$3,966</td>
<td>$4,794</td>
</tr>
<tr>
<td>Pierpont CTC</td>
<td>1,293.27</td>
<td>0.00</td>
<td>78.80</td>
<td>$4,684</td>
<td>$10,542</td>
</tr>
<tr>
<td>Southern WV CTC</td>
<td>1,215.87</td>
<td>81.07</td>
<td>0.20</td>
<td>$3,336</td>
<td>$4,676</td>
</tr>
<tr>
<td>WV Northern Community College</td>
<td>987.53</td>
<td>178.70</td>
<td>16.87</td>
<td>$3,504</td>
<td>$9,574</td>
</tr>
<tr>
<td>WVU at Parkersburg</td>
<td>1,766.27</td>
<td>37.47</td>
<td>39.27</td>
<td>$3,384</td>
<td>$10,416</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>11,108.24</td>
<td>596.68</td>
<td>289.15</td>
<td>$42,235,111</td>
<td>$2,154,753</td>
</tr>
</tbody>
</table>
ITEM: Technical Program Development Grant Award

INSTITUTIONS: West Virginia Northern Community College

RECOMMENDED RESOLUTION: Resolved, That the West Virginia Council for Community and Technical College Education approves the Technical Program Development grant award as proposed.

STAFF MEMBER: Casey Sacks

BACKGROUND:

Technical Program Development funding in the amount of $1.89 million was allocated in the Council’s FY 2017 budget.

Each community and technical college had an opportunity to submit a proposal and request up to $220,000 per program development. A committee comprised of Council staff reviewed the proposals and made recommendations as detailed below:

NEW PROPOSAL RECOMMENDED FOR APPROVAL

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree Level</th>
<th>Institution</th>
<th>Anticipated Enrollment Per Year</th>
<th>Recommended Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welding Technologies and Oil &amp; Gas Welding Program</td>
<td>AAS/CAS</td>
<td>West Virginia Northern CC</td>
<td>90</td>
<td>220,000</td>
</tr>
</tbody>
</table>

Total Amount of Recommended Awards: 220,000
ITEM: 2018 Council Meeting Schedule

INSTITUTIONS: All

RECOMMENDED RESOLUTION: Resolved, That the West Virginia Council for Community and Technical College Education adopts the recommended meeting schedule for calendar year 2018 as presented.

STAFF MEMBER: Sarah Tucker

BACKGROUND:

Although consideration has been given to currently scheduled, statewide and national conferences, we understand that it is difficult to avoid all scheduling conflicts. The recommended meeting schedule was also developed in consideration of joint staff, responsible for preparing agenda items for both the West Virginia Council for Community and Technical College Education and Higher Education Policy Commission meetings.

Therefore, the following meeting schedule for calendar year 2018, is recommended for adoption by the West Virginia Council for Community and Technical College Education with the understanding that additional meetings may be necessary for emergency or time-sensitive issues.
## WEST VIRGINIA COUNCIL FOR COMMUNITY AND TECHNICAL COLLEGE EDUCATION

### Meeting Schedule

**January 2018 – December 2018**

<table>
<thead>
<tr>
<th>DATE</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 25, 2018</td>
<td>ATC, South Central WV – South Charleston, WV</td>
</tr>
<tr>
<td>April - TBD</td>
<td>ATC, South Central WV – South Charleston, WV</td>
</tr>
<tr>
<td>June 14, 2018</td>
<td>ATC, South Central WV – South Charleston, WV</td>
</tr>
<tr>
<td>August 16, 2018</td>
<td>ATC, South Central WV – South Charleston, WV</td>
</tr>
<tr>
<td>October 11, 2018</td>
<td>ATC, South Central WV – South Charleston, WV</td>
</tr>
<tr>
<td>December 9, 2018</td>
<td>ATC, South Central WV – South Charleston, WV</td>
</tr>
</tbody>
</table>
West Virginia Council for Community and Technical College Education
Meeting of April 20, 2017

ITEM: Technology Center Energy Assessment Report

INSTITUTION: Eastern West Virginia Community and Technical College

RECOMMENDED RESOLUTION: Information Item

STAFF MEMBER: Richard Donovan

BACKGROUND:

West Virginia University’s Industrial Assessment Center (WVUIAC) evaluated Eastern West Virginia Community and Technical College’s Technology Center Building in Petersburg and identified six opportunities for energy conservation as follows:

- Replace electric heating system with propane heating system;
- Install new building energy management system;
- Replace the existing T12 florescent bulbs and magnetic ballasts with T8 LED bulbs and install occupancy sensors in designated areas;
- Utilize point of use water heaters for faucets;
- Repair compressed air leaks and reduce compressor set point pressure; and
- Reduce infiltration and doors.

The projected average annual energy savings if all of the measures were implemented is $13,315, and the estimated cost to implement these energy-saving measures is $60,298. This would result in an energy savings versus cost payback in approximately 54 months.
PREFACE

The work described in this report is a service provided by the West Virginia University Industrial Assessment Center (WVU IAC). The primary objective is to identify and evaluate opportunities for energy conservation through visits to industrial sites. Data are gathered during a one day site visit and assessment recommendations are identified, productivity improvement and waste minimization savings are estimated, and conceptual implementation costs are provided. When an assessment recommendation (AR) involving engineering design and capital investment is attractive to the company and engineering services are not available in-house, it is recommended that a consulting engineering firm be engaged to do the detailed engineering design and cost estimations for implementing the AR. Since the site visits are brief, they are necessarily limited in scope and a consulting firm could be more thorough.

The contents of this report are offered only as guidance. All technical sources referenced in this report do not (a) make any warranty or representation, expressed or implied, with respect to the accuracy, completeness, or usefulness of the information contained in this report, or that the use of any information, apparatus, method or process disclosed in this report may not infringe on privately owned rights; (b) assume any liabilities with respect to the use of, or for damages resulting from the use of, any information, apparatus, method or process disclosed in this report. This report does not reflect official views or policies of the previously mentioned institutions.

The assumptions and equations used to arrive at the energy consumption and cost savings for the recommended AR’s are given in the report. These assumptions are intended to be conservative. Using the equations given in the report, the assumptions may be modified to calculate new estimates for the energy and cost savings for each recommendation.

Please feel free to contact the Principal Investigator if there are any questions or comments related to this report.

Principal Investigator:

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Industrial and Management Systems Engineering
West Virginia University
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Morgantown, WV 26506-6070
Phone: (304) 293 9434
Fax: (304) 293-4970
Email: Bhaskaran.Gopalakrishnan@mail.wvu.edu
# TABLE OF CONTENTS

1. SUMMARY .................................................................................................................... 4

2. ENERGY ASSESSMENT RECOMMENDATIONS .......................................................... 6

   AR NO. 1: REPAIR COMPRESSED AIR LEAKS AND REDUCE COMPRESSOR
   SET POINT PRESSURE .............................................................................................. 21

   AR NO. 2: INSTALL A NEW BUILDING ENERGY MANAGEMENT SYSTEM
   (BEMS) .................................................................................................................. 8

   AR NO. 3: REPLACE THE EXISTING T12 FLUORESCENT BULBS AND
   MAGNETIC BALLASTS WITH T8 LED BULBS, ELECTRONIC BALLASTS AND
   REFLECTORS IN THE COLLEGE AREAS AND INSTALL OCCUPANCY
   SENSORS IN DESIGNATED AREAS .................................................................... 10

   AR NO. 4. REPLACE ELECTRIC HEATING SYSTEM WITH PROPANE
   HEATING SYSTEM .................................................................................................. 21
1. SUMMARY

<table>
<thead>
<tr>
<th>Eastern Community College</th>
<th>Assessment Date: December 21st, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Moorefield, WV</td>
<td>ZIP Code: 26836</td>
</tr>
</tbody>
</table>

1.1 Annual Energy Savings Summary

Energy consumption and the corresponding energy costs for 2015-2016 at this plant consisted of the following:

<table>
<thead>
<tr>
<th>Electricity</th>
<th>kWh/yr</th>
<th>Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>133,402</td>
<td>$15,278</td>
<td></td>
</tr>
</tbody>
</table>

Total energy costs for this period was $15,278. The assessment recommendations (ARs) contained in this report could save 68,365 kWh/yr of electricity. The total energy cost savings would amount to approximately $13,315/yr. The total estimated implementation cost is $60,298 which gives an average simple payback of 54 months.

Carbon dioxide emissions could be reduced by the following amounts if ARs No. 1 to 4 were implemented.

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Energy Conserved</th>
<th>CO₂ emission Rate</th>
<th>CO₂ emission Saved (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>68,365 kWh</td>
<td>2.19 lb/kWh</td>
<td>149,719</td>
</tr>
</tbody>
</table>

Table 1 below lists the unit costs of resources used in estimating the energy cost savings in assessment recommendations.

Table 1: Rate structure for resources

<table>
<thead>
<tr>
<th>Electricity</th>
<th>Propane</th>
</tr>
</thead>
<tbody>
<tr>
<td>$/kWh</td>
<td>$/MMBtu</td>
</tr>
<tr>
<td>$0.1145</td>
<td>$3.10</td>
</tr>
</tbody>
</table>
1.2 Energy Recommendations

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Resource</th>
<th>Propane Savings</th>
<th>Electricity Savings (kWh/yr)</th>
<th>Potential Savings ($/yr)</th>
<th>Implementation Cost ($)</th>
<th>Payback (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Replace Electric Heating System with Propane Heating System</td>
<td>Propane</td>
<td>-49</td>
<td>-</td>
<td>5,488</td>
<td>25,000</td>
<td>55</td>
</tr>
<tr>
<td>2</td>
<td>Install a New Building Energy Management System (BEMS)</td>
<td>Electricity</td>
<td>-</td>
<td>25,182</td>
<td>2,883</td>
<td>20,000</td>
<td>83</td>
</tr>
<tr>
<td>3</td>
<td>Replace The Existing T12 Fluorescent Bulbs And Magnetic Ballasts With T8 Led Bulbs And Install Occupancy Sensors In Designated Areas.</td>
<td>Electricity</td>
<td>-</td>
<td>38,719</td>
<td>4,433</td>
<td>14,082</td>
<td>39</td>
</tr>
<tr>
<td>4</td>
<td>Utilize Point Of Use (POU) Water Heaters For Faucets</td>
<td>Electricity</td>
<td>-</td>
<td>2,144</td>
<td>245</td>
<td>1,000</td>
<td>49</td>
</tr>
<tr>
<td>5</td>
<td>Repair Compressed Air Leaks and Reduce Compressor Set Point Pressure</td>
<td>Electricity</td>
<td>-</td>
<td>1,621</td>
<td>186</td>
<td>122</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Reduce Infiltration At The Doors</td>
<td>Electricity</td>
<td>-</td>
<td>699</td>
<td>80</td>
<td>94</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>-49</strong></td>
<td><strong>68,365</strong></td>
<td><strong>13,315</strong></td>
<td><strong>60,298</strong></td>
<td><strong>54</strong></td>
</tr>
</tbody>
</table>

It should be noted that a "law of diminishing returns" applies to the total cost savings. That is, the figure of $12,990 is based on the sum of the cost savings for each AR as if they were independent, but they are not.

1 Here negative sign indicates increase in consumption with new propane heating system.
2. ENERGY ASSESSMENT RECOMMENDATIONS
AR NO. 1. REPLACE ELECTRIC HEATING SYSTEM WITH PROPANE HEATING SYSTEM

Recommended Action

Replace the existing electric heating system with a new propane heating system to reduce energy costs.

General Information

Electricity based HVAC units are being used to heat the building. Due to the difference in cost between electricity and propane, it is recommended to replace the existing electric heating system with a new propane heating system. The annual electrical energy consumption for heating various areas of the building in seven winter months is estimated from energy bills to be 54,414 kWh/yr.

Anticipated Savings

The annual energy (heating load), \( Q \), which must be supplied by the heating system in MMBtu/yr can be estimated as follows:

\[
Q = \frac{Q_E \times \text{EFF}_E}{\text{CF}}
\]

Where,

\( Q_E \) = The annual electrical energy consumption for heating, kWh/yr

\( \text{EFF}_E \) = Thermal efficiency of electrical heating units, no units

\( \text{CF} \) = kWh-MMBtu conversion factor, 293 kWh/MMBtu

Therefore, the annual energy (heating load), \( Q \), which must be supplied by the heating system is,

\[
Q = \frac{54,414 \text{ kWh/yr} \times 0.95}{293 \text{ kWh/MMBtu}}
= 176 \text{ MMBtu/yr}
\]

The propane heating units generally have a thermal efficiency (\( \text{EFF}_P \)) of 75%. Therefore, the amount of propane heat to be supplied, \( Q_P \), to obtain the required heat is given by,
\[ Q_p = \frac{Q}{\text{EFF}_r} \]
\[ = 176/0.75 \]
\[ = 235 \text{ MMBtu/yr} \]

The cost savings, \( CS \), which can be realized by replacing the electric heaters with gas-heated units can be estimated as shown below:

\[
CS = Q \times [(293 \times \frac{P_e}{\text{EFF}_e}) - (\frac{P_g}{\text{EFF}_g})] 
\]

Where,

\[ P_e = \text{Cost of electricity, $/kWh} \]
\[ \text{EFF}_e = \text{efficiency of existing electric system (0.95), no units} \]
\[ P_g = \text{Cost of natural gas, $/MMBtu} \]
\[ \text{EFF}_p = \text{efficiency of propane system (0.75), no units} \]

Thus,

\[
CS = 176 \text{ MMBtu/yr} \times [(293 \times 0.1145/0.95) - (3.10/0.75)] 
\]
\[
CS = $5,488/yr 
\]

Note that since a propane-fired heating system has a lower efficiency than the electric heaters, there will be a slight increase in energy usage. This increase, \( EI \), can be estimated as:

\[
EI = (\frac{Q}{\text{EFF}_p}) - (\frac{Q}{\text{EFF}_e}) 
\]

Thus,

\[
EI = (176/0.95) - (176/0.75) 
\]
\[
EI = 49 \text{ MMBtu/yr} 
\]

**Implementation Cost**

The approximate cost of implementation, which includes procurement and installation of a propane-fired heating system can be $25,000. This estimate includes costs associated with installing flues and propane supply lines required to operate the gas units and labor charges too. The estimated annual cost savings of $5,488/yr will pay for the estimated implementation cost within about 55 months.
AR NO. 2: INSTALL A NEW BUILDING ENERGY MANAGEMENT SYSTEM (BEMS)

Recommended Action

Install a new building automation control system with demand control ventilation for automatically modulating heating and cooling loads based on the current needs, thus reducing energy use. Make a policy of setback temperature with new automation system for the facility.

General Information

During the energy assessment, it was understood by the assessment team that different locations in the building are being served by 6 different Heating Ventilation and Air Conditioning units. Each area has different occupancy, and heating load requirements necessitating the need for a centralized automated building control system to control the various heating and cooling loads across different locations of the buildings. Thermostats in the building were serving the front end area, Conference room, and main area. All the windows in the building are double pane. The building has old HVAC units run by electricity. The advancements in technology over the years have ensured that the modern control systems have much finer control over individual heating loads, and are much more efficient. They can also be controlled remotely, if so desired, making troubleshooting easier.

Managing the energy and other needs in buildings efficiently and intelligently can have considerable benefits. A building energy management system (BEMS) is a sophisticated method to monitor and control the building's energy needs. Next to energy management, the system can control and monitor a large variety of other aspects of the building regardless of whether it is residential or commercial. Examples of these functions are heating, ventilation and air conditioning (HVAC), lighting or security measures. BEMS technology can be applied in both residential and commercial buildings.

There is a variety of energy saving strategies built into the energy management function of the current generation of controls. Energy savings from these functions can help justify the cost of new energy management system. Some typical control strategies associated with a modern energy management systems are:

- Demand Control Ventilation (DCV)
- Night Setup/Setbacks
- Zonal Scheduling
- Simultaneous Heating & Cooling Control
- Air-Side Economizers,
- Interior & Exterior Lighting Controls etc.

Demand Controlled Ventilation (DCV) is automatic adjustment of ventilation equipment according to occupant choice. DCV is a control method that modulates the volume
exchange of fresh or outside air into an enclosed space by mechanical air conditioning equipment. There will be significant energy saving potential in rigorous outdoor air control.

There are many other advanced control capabilities including trending, energy use monitoring, and alarms to name a few. While all of the above mentioned strategies may not apply to the facility, it would still benefit significantly from the few that can be used. It is recommended that the owner and maintenance personnel discuss this with select vendors in order to choose the BEMS best suited for this application. Wireless technology has helped to reduce installation costs while increasing system flexibility. Advances in computer technology have significantly reduced equipment costs while vastly improving system performance. Software improvements have made the systems easier to use. A new control system with demand control ventilation in classrooms and office area together and with setback temperature can save at least 25-35% of HVAC and lighting electricity consumption over the existing system.

Estimated Savings

\[
\text{Electricity savings} = 20\% \times 125,911 \text{ kWh/yr} \\
= 0.20 \times 125,911 \text{ kWh/yr} \\
= 25,182 \text{ kWh/yr}
\]

\[
\text{Electricity Cost Savings} = 25,182 \text{ kWh/yr} \times 0.1145/\text{kWh} \\
= 2,883/\text{yr}
\]

\[
\text{Annual CO}_2 \text{ savings} = 55,149 \text{ lbs.} \quad \text{(Note: 1 kWh = 2.19 lbs. of CO}_2\text{)}
\]

Implementation Cost

The cost of building automation system varies according to its functions and size of the application. The price can vary from $5,000 to $200,000 depending on the number of control points needed. For this building not many control points are needed and the system will be only used for heating control.

The estimated annual energy savings resulting from this recommendation would approximate 25,182 kWh/yr of electricity with an associated annual total cost savings of $2,883. Implementation cost is roughly estimated to be $20,000 with a simple payback on investment of 83 months.
**AR NO. 3: REPLACE THE EXISTING T12 FLUORESCENT BULBS AND MAGNETIC BALLASTS WITH T8 LED BULBS AND INSTALL OCCUPANCY SENSORS IN DESIGNATED AREAS**

**Recommended Action**

Replace the existing T12 fluorescent bulbs and magnetic ballasts with T8 LED bulbs, electronic ballasts and specular reflectors in the College areas, and reduce the number of fixtures in designated areas. Install occupancy sensors in areas with less occupancy. This will reduce the energy usage while maintaining the same foot candle levels (or better) in all areas.

**Background**

Lighting technology has evolved rapidly in recent years. Significant reductions in energy use can be achieved by installing energy-efficient bulbs, fixtures, and controls. Retrofits to install new technologies such as electronic ballasts and specular reflectors are often cost effective, providing a payback within a few years. A specular reflector has highly polished, mirror-like surface, which usually concentrates light directly beneath the luminaire. In some cases the number of bulbs can be reduced by adding reflectors. If the number of bulbs is reduced, the lumen output per fixture may also reduce, but the lighting levels will remain the same as the existing levels because the reflectors direct more light onto the working area. Occupancy sensors can be installed in the areas with less occupancy. The existing T12 fluorescent bulbs can also be replaced with T8 LED bulbs provided that the existing fixtures are compatible for the T8 LED bulbs. Energy savings will be higher if the T12 fluorescent bulbs are replaced with T8 LED bulbs. The existing lighting system consists of 8 ft. T12 60W, 4 ft. T12 34W, lighting fixtures with magnetic ballasts, and 4 ft. T8 28W with electronic ballasts. The lumen outputs for the current T12 and proposed T8 bulbs are given in Table 1.

**Table 1: Lumen output for the current and proposed bulbs**

<table>
<thead>
<tr>
<th>Lamp</th>
<th>Wattage</th>
<th>Lumen output</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 ft. T12</td>
<td>60</td>
<td>4,400</td>
</tr>
<tr>
<td>4 ft. T12</td>
<td>34</td>
<td>1,650</td>
</tr>
<tr>
<td>4 ft. T8</td>
<td>28</td>
<td>2,645</td>
</tr>
</tbody>
</table>

**Anticipated Savings**

A detailed tabular breakdown of the lighting calculations for the designated areas is shown in Tables 2 through 4. The values given in Tables 2 and 3 are the result of a lighting survey conducted during this visit.

For the lighting in “Storage” (First entry in table 2), the current and the proposed lumen levels are;

\[
CLL = 16 \times 2 \times 4,400 \times 0.60 \times (1 - 0.15) = 71,808 \text{ lumens}
\]
PLL = 10 x 2 x 4,400 x 0.90 x (1 - 0.05)
    = 75,240 lumens

PFC = 40 fc x (75,240 lumens /71,808 lumens)
    = 42 fc

Therefore, the proposed lighting is brighter than the current lighting.
Table 2: Existing lighting in the designated areas*

<table>
<thead>
<tr>
<th>Area</th>
<th>Bulb Type</th>
<th>Light level (fc)</th>
<th>No. of Fixtures</th>
<th>No. of Bulbs per fixture</th>
<th>Total No. of Bulbs</th>
<th>Bulb Size (W)</th>
<th>Total Wattage (W)</th>
<th>Current Energy Usage (kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>T12 -8ft</td>
<td>40</td>
<td>16</td>
<td>2</td>
<td>32</td>
<td>60</td>
<td>1,920</td>
<td>3,776</td>
</tr>
<tr>
<td>Area Beside Storage</td>
<td>T12 -8ft</td>
<td>36</td>
<td>11</td>
<td>2</td>
<td>22</td>
<td>60</td>
<td>1,320</td>
<td>2,596</td>
</tr>
<tr>
<td>Wind Technology Lab</td>
<td>T8 -4ft</td>
<td>59.2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>28</td>
<td>448</td>
<td>881</td>
</tr>
<tr>
<td>Room Beside Wind Technology Lab</td>
<td>T8 -4ft</td>
<td>42.5</td>
<td>6</td>
<td>4</td>
<td>24</td>
<td>28</td>
<td>672</td>
<td>1,321</td>
</tr>
<tr>
<td>Utility Closet</td>
<td>T12 -8ft</td>
<td>11</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>60</td>
<td>120</td>
<td>236</td>
</tr>
<tr>
<td>Proposed Non Computer Class Room</td>
<td>T8 -4ft</td>
<td>69</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>28</td>
<td>448</td>
<td>881</td>
</tr>
<tr>
<td>Proposed Public Internet Access</td>
<td>T8 -4ft</td>
<td>72</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>28</td>
<td>448</td>
<td>881</td>
</tr>
<tr>
<td>Class room 201</td>
<td>T12 -8ft</td>
<td>88</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>60</td>
<td>60</td>
<td>118</td>
</tr>
<tr>
<td>Printer Area</td>
<td>T12 -4ft</td>
<td>60</td>
<td>3</td>
<td>4</td>
<td>12</td>
<td>34</td>
<td>408</td>
<td>802</td>
</tr>
<tr>
<td>Receptionist's Office</td>
<td>T12 -4ft</td>
<td>115</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>34</td>
<td>272</td>
<td>535</td>
</tr>
<tr>
<td>Room Beside Copier</td>
<td>T12 -4ft</td>
<td>86</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>34</td>
<td>272</td>
<td>535</td>
</tr>
<tr>
<td>Vending Machines Area</td>
<td>T12 -8ft</td>
<td>60</td>
<td>13</td>
<td>2</td>
<td>26</td>
<td>60</td>
<td>1,560</td>
<td>3,068</td>
</tr>
<tr>
<td>Vending Machines Area</td>
<td>T12 -4ft</td>
<td>60</td>
<td>6</td>
<td>2</td>
<td>12</td>
<td>34</td>
<td>408</td>
<td>802</td>
</tr>
<tr>
<td>Computer Area</td>
<td>T12 -8ft</td>
<td>60</td>
<td>17</td>
<td>2</td>
<td>34</td>
<td>60</td>
<td>2,040</td>
<td>4,012</td>
</tr>
<tr>
<td>Air Compressor</td>
<td>T12 -8ft</td>
<td>40</td>
<td>17</td>
<td>2</td>
<td>34</td>
<td>60</td>
<td>2,040</td>
<td>4,012</td>
</tr>
<tr>
<td>Work Bay</td>
<td>T12 -8ft</td>
<td>40</td>
<td>24</td>
<td>2</td>
<td>48</td>
<td>60</td>
<td>2,880</td>
<td>5,664</td>
</tr>
<tr>
<td>Service Bay Area</td>
<td>T12 -8ft</td>
<td>40</td>
<td>29</td>
<td>2</td>
<td>58</td>
<td>60</td>
<td>3,480</td>
<td>6,843</td>
</tr>
<tr>
<td>Megatech Trainer (Lab)</td>
<td>T12 -8ft</td>
<td>60</td>
<td>6</td>
<td>2</td>
<td>12</td>
<td>60</td>
<td>720</td>
<td>1,416</td>
</tr>
<tr>
<td>Megatech Trainer Oil less Engine</td>
<td>T12 -8ft</td>
<td>45</td>
<td>9</td>
<td>2</td>
<td>18</td>
<td>60</td>
<td>1,080</td>
<td>2,124</td>
</tr>
<tr>
<td>Area between Megatech Trainers &amp; Automotive Instructors Office</td>
<td>T12 -8ft</td>
<td>45</td>
<td>15</td>
<td>2</td>
<td>30</td>
<td>60</td>
<td>1,800</td>
<td>3,540</td>
</tr>
<tr>
<td>Automotive Instructors Office</td>
<td>T12 -4ft</td>
<td>68</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>34</td>
<td>272</td>
<td>535</td>
</tr>
<tr>
<td>Restroom</td>
<td>T12 -4ft</td>
<td>24</td>
<td>3</td>
<td>4</td>
<td>12</td>
<td>34</td>
<td>408</td>
<td>802</td>
</tr>
<tr>
<td>Proposed Welding Area</td>
<td>T12 -8ft</td>
<td>40</td>
<td>8</td>
<td>2</td>
<td>16</td>
<td>60</td>
<td>960</td>
<td>1,888</td>
</tr>
<tr>
<td>Exit Lamps</td>
<td>IC</td>
<td>-</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>40</td>
<td>160</td>
<td>1,402</td>
</tr>
</tbody>
</table>

**TOTAL**                                           | -         | -                | 207             | -                        | 469               | -             | 24,196            | 48,670                    |

*All T12 -8ft bulbs, and T-12 4ft bulbs have Magnetic Ballast, and T-4 4ft bulbs have Electronic Ballast. There are no Specular Reflectors.
Table 3: Proposed lighting in the designated areas

<table>
<thead>
<tr>
<th>Area</th>
<th>Bulb Type</th>
<th>No. of Fixtures</th>
<th>No. Bulbs per Fixtures</th>
<th>Total No. of Bulbs</th>
<th>Bulb Size (W)</th>
<th>Occupancy</th>
<th>Total Wattage (W)</th>
<th>Hours of Operation</th>
<th>Proposed Energy Usage (KWh/yr)</th>
<th>Energy Savings (kWh/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>T8 LED-8ft</td>
<td>10</td>
<td>2</td>
<td>20</td>
<td>33</td>
<td>60%</td>
<td>660</td>
<td>1,710</td>
<td>711</td>
<td>3,065</td>
</tr>
<tr>
<td>Area Beside Storage</td>
<td>T8 LED-8ft</td>
<td>7</td>
<td>2</td>
<td>14</td>
<td>33</td>
<td>60%</td>
<td>462</td>
<td>1,710</td>
<td>498</td>
<td>2,098</td>
</tr>
<tr>
<td>Wind Technology Lab</td>
<td>T8 -4ft</td>
<td>3</td>
<td>4</td>
<td>12</td>
<td>28</td>
<td>60%</td>
<td>336</td>
<td>1,710</td>
<td>362</td>
<td>519</td>
</tr>
<tr>
<td>Room Beside Wind Technology Lab.</td>
<td>T8 -4ft</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>28</td>
<td>60%</td>
<td>448</td>
<td>1,710</td>
<td>483</td>
<td>838</td>
</tr>
<tr>
<td>Utility Closet</td>
<td>T8 LED-8ft</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>33</td>
<td>40%</td>
<td>66</td>
<td>1,710</td>
<td>47</td>
<td>189</td>
</tr>
<tr>
<td>Proposed Non Computer Class Room</td>
<td>T8 -4ft</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>33</td>
<td>40%</td>
<td>14</td>
<td>1,710</td>
<td>36</td>
<td>132</td>
</tr>
<tr>
<td>Proposed Public Internet Access</td>
<td>T8 -4ft</td>
<td>3</td>
<td>4</td>
<td>12</td>
<td>28</td>
<td>60%</td>
<td>336</td>
<td>1,710</td>
<td>483</td>
<td>398</td>
</tr>
<tr>
<td>Class room 201</td>
<td>T8 LED-8ft</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>33</td>
<td>60%</td>
<td>33</td>
<td>1,710</td>
<td>36</td>
<td>82</td>
</tr>
<tr>
<td>Printer Area</td>
<td>T8 LED-4ft</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>15</td>
<td>40%</td>
<td>120</td>
<td>1,710</td>
<td>86</td>
<td>716</td>
</tr>
<tr>
<td>Receptionist's Office</td>
<td>T8 LED-4ft</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>15</td>
<td>100%</td>
<td>120</td>
<td>1,710</td>
<td>215</td>
<td>320</td>
</tr>
<tr>
<td>Room Beside Copier</td>
<td>T8 LED-4ft</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>15</td>
<td>60%</td>
<td>120</td>
<td>1,710</td>
<td>129</td>
<td>406</td>
</tr>
<tr>
<td>Vending Machines Area</td>
<td>T8 LED-8ft</td>
<td>8</td>
<td>2</td>
<td>16</td>
<td>33</td>
<td>40%</td>
<td>528</td>
<td>1,710</td>
<td>379</td>
<td>2,689</td>
</tr>
<tr>
<td>Vending Machines Area</td>
<td>T8 LED-4ft</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>15</td>
<td>40%</td>
<td>120</td>
<td>1,710</td>
<td>86</td>
<td>716</td>
</tr>
<tr>
<td>Computer Area</td>
<td>T8 LED-8ft</td>
<td>11</td>
<td>2</td>
<td>22</td>
<td>33</td>
<td>60%</td>
<td>726</td>
<td>1,710</td>
<td>782</td>
<td>3,230</td>
</tr>
<tr>
<td>Air Compressor</td>
<td>T8 LED-8ft</td>
<td>11</td>
<td>2</td>
<td>22</td>
<td>33</td>
<td>40%</td>
<td>726</td>
<td>1,710</td>
<td>521</td>
<td>3,491</td>
</tr>
<tr>
<td>Work Bay</td>
<td>T8 LED-8ft</td>
<td>15</td>
<td>2</td>
<td>30</td>
<td>33</td>
<td>80%</td>
<td>990</td>
<td>1,710</td>
<td>1,422</td>
<td>4,242</td>
</tr>
<tr>
<td>Service Bay Area</td>
<td>T8 LED-8ft</td>
<td>18</td>
<td>2</td>
<td>36</td>
<td>33</td>
<td>80%</td>
<td>1,188</td>
<td>1,710</td>
<td>1,706</td>
<td>5,137</td>
</tr>
<tr>
<td>Megatech Trainer (Lab)</td>
<td>T8 LED-8ft</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>33</td>
<td>60%</td>
<td>264</td>
<td>1,710</td>
<td>284</td>
<td>1,132</td>
</tr>
<tr>
<td>Megatech Trainer Oil less Engine</td>
<td>T8 LED-8ft</td>
<td>6</td>
<td>2</td>
<td>12</td>
<td>33</td>
<td>40%</td>
<td>396</td>
<td>1,710</td>
<td>284</td>
<td>1,840</td>
</tr>
<tr>
<td>Area between Megatech Trainers &amp; Automotive Instructors Office</td>
<td>T8 LED-8ft</td>
<td>9</td>
<td>2</td>
<td>18</td>
<td>33</td>
<td>60%</td>
<td>594</td>
<td>1,710</td>
<td>640</td>
<td>2,900</td>
</tr>
<tr>
<td>Automotive Instructors Office</td>
<td>T8 LED-4ft</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>15</td>
<td>40%</td>
<td>120</td>
<td>1,710</td>
<td>86</td>
<td>449</td>
</tr>
<tr>
<td>Restroom</td>
<td>T8 LED-4ft</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>15</td>
<td>40%</td>
<td>120</td>
<td>1,710</td>
<td>86</td>
<td>716</td>
</tr>
<tr>
<td>Proposed Welding Area</td>
<td>T8 LED-8ft</td>
<td>5</td>
<td>2</td>
<td>10</td>
<td>33</td>
<td>40%</td>
<td>330</td>
<td>1,710</td>
<td>237</td>
<td>1,651</td>
</tr>
<tr>
<td>Exit Lamps</td>
<td>LED</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>0.7</td>
<td>100%</td>
<td>3</td>
<td>8,760</td>
<td>26</td>
<td>1,376</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>137</strong></td>
<td></td>
<td><strong>315</strong></td>
<td></td>
<td></td>
<td><strong>9,142</strong></td>
<td></td>
<td><strong>9,951</strong></td>
<td><strong>38,719</strong></td>
</tr>
</tbody>
</table>

All T8 LED-8ft, and T8 LED-4ft have Electronic Ballast, and Specular Reflector
Energy Savings

The energy savings, ES, due to replacing the existing T12 fluorescent bulbs, T8 fluorescent bulbs, and magnetic ballasts with T8 LED bulbs, electronic ballasts and specular reflector, and reducing the number of fixtures are given by,

\[ \text{ES} = \text{CEU} - \text{PEU} \]

Where,

- \( \text{CEU} \) = Current energy usage, kWh/yr
- \( \text{PEU} \) = Proposed energy usage, kWh/yr

The current and proposed energy usage can be calculated as follows:

\[
\begin{align*}
\text{CEU} & = \text{NF} \times \text{NB} \times \text{WOEB} \times (1 + \text{BF}) \times \text{OL} \times \text{YOH} / 1,000 \\
\text{PEU} & = \text{NF} \times \text{NB} \times \text{PWOEB} \times (1 + \text{BF}) \times \text{OL} \times \text{YOH} / 1,000
\end{align*}
\]

Where,

- \( \text{NF} \) = number of fixtures
- \( \text{NB} \) = number of bulbs per fixture
- \( \text{WOEB} \) = wattage of each bulb, W
- \( \text{PWOEB} \) = proposed wattage of each bulb, W
- \( \text{BF} \) = ballast loss, 5% for fluorescent lighting with electronic ballast and 15% for fluorescent lighting with magnetic ballast
- \( \text{OL} \) = occupancy level
- \( \text{YOH} \) = yearly operating hours, hrs/yr

The current energy usage, \( \text{CEU}_1 \), for “Storage” (First entry in Tables 2 through 4) is estimated as:

\[
\text{CEU}_1 = 16 \times 2 \times 60 \times (1 + 0.15) \times 1.0 \times 1,710 / 1,000 \\
= 3,776 \text{ kWh/yr}
\]

The proposed energy usage, \( \text{PEU}_1 \), for “Storage” is estimated as:

\[
\text{PEU}_1 = 10 \times 2 \times 33 \times (1 + 0.05) \times 0.60 \times 1,710 / 1,000 \\
= 711 \text{ kWh/yr}
\]

Hence, the annual energy savings for “Storage” is:

\[
\text{ES}_1 = \text{CEU}_1 - \text{PEU}_1 \\
= 3,776 \text{ kWh/yr} - 711 \text{ kWh/yr} \\
= 3,065 \text{ kWh/yr} \\
= 10 \text{ MMBtu/yr} \quad \text{(Note: 1 MMBtu = 293 kWh)}
\]

Similarly, the annual energy savings are calculated for other areas, and the results are given in Table 3. The total annual energy savings for the facility, by implementing this recommendation, is 38,719 kWh (132 MMBtu).
The annual energy cost savings is:

\[
ECS = ES \times \text{Avg. unit electricity cost} \\
= 38,719 \text{ kWh/yr} \times 0.1145/\text{kWh} \\
= $4,433/\text{yr}
\]

Implementation Cost

The implementation cost for replacing the existing T12 bulbs and magnetic ballasts with T8 LED bulbs, and electronic ballasts and specular reflectors, and LED exit lamps is calculated as shown in Table 4.

<table>
<thead>
<tr>
<th>Table 4: Costs for replacing ballasts, bulbs and reflectors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixture Type</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>T8-4ft</td>
</tr>
<tr>
<td>T8-4ft LED</td>
</tr>
<tr>
<td>T8-8ft LED</td>
</tr>
<tr>
<td>Exit Lamps-LED</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

The occupancy sensors recommended would work in conjunction with the existing switches. Several types of controls are available, including motion sensors. An ultrasonic motion sensing controller, which produces a low intensity, inaudible sound and detects changes in the sound waves caused by any type of motion, is recommended for the designated areas. A single occupancy sensor is rated for lights up to 1,000W at 120V. The cost of each occupancy sensor is about $50. Cost calculations for the sensors are shown in Table 5.

<table>
<thead>
<tr>
<th>Table 5: Installation cost for occupancy sensors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area</strong></td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Storage</td>
</tr>
<tr>
<td>Area Beside Storage</td>
</tr>
<tr>
<td>Wind Technology Lab</td>
</tr>
<tr>
<td>Room Beside Wind Technology Lab</td>
</tr>
<tr>
<td>Utility Closet</td>
</tr>
<tr>
<td>Proposed Non Computer Class Room</td>
</tr>
<tr>
<td>Proposed Public Internet Access</td>
</tr>
<tr>
<td>Area</td>
</tr>
<tr>
<td>------------------------------</td>
</tr>
<tr>
<td>Class room 201</td>
</tr>
<tr>
<td>Printer Area</td>
</tr>
<tr>
<td>Receptionist's Office</td>
</tr>
<tr>
<td>Room Beside Copier</td>
</tr>
<tr>
<td>Vending Machines Area</td>
</tr>
<tr>
<td>Vending Machines Area</td>
</tr>
<tr>
<td>Computer Area</td>
</tr>
<tr>
<td>Air Compressor</td>
</tr>
<tr>
<td>Work Bay</td>
</tr>
<tr>
<td>Service Bay Area</td>
</tr>
<tr>
<td>Megatech Trainer (Lab)</td>
</tr>
<tr>
<td>Megatech Trainer Oil less Engine</td>
</tr>
<tr>
<td>Area between Megatech Trainers &amp; Automotive Instructors Office</td>
</tr>
<tr>
<td>Automotive Instructors Office</td>
</tr>
<tr>
<td>Restroom</td>
</tr>
<tr>
<td>Proposed Welding Area</td>
</tr>
<tr>
<td>Exit Lamps</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

Efficiency Smart offers rebates through its business lighting incentive program\(^2\). These rebates are intended for use with energy efficiency lighting projects to save energy. The rebates which qualify for this recommendation are mentioned in Table 6

### Table 6: Rebates

<table>
<thead>
<tr>
<th>Product</th>
<th>Rebate(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting Incentive</td>
<td></td>
</tr>
<tr>
<td>Wall mounted occupancy sensors</td>
<td>$25/Occupancy Sensor</td>
</tr>
</tbody>
</table>

The total material cost (TMC) is calculated as follows:

\[
\text{TMC} = \text{Ballast Costs} + \text{Bulb Costs} + \text{Reflector Costs} + \text{Occupancy Sensor Cost} - \text{Rebates}
\]

\[
= $1,644 + $6,763 + $2,104 + 1,200 - (24 \text{ Occupancy Sensors} \times $25/\text{Sensor})
\]

\[
= $11,711 - 600
\]

\[
= $11,111
\]


It is estimated that each fixture requires a total of 30 minutes to replace the T12 bulbs with T8, replace the magnetic ballast with the electronic ballast, and install specular reflectors. Hence the labor cost ($LC_1$) for installation:

$$LC_1 = 0.5 \text{ hrs./fixture} \times \$27/\text{hr} \times 137 \text{ fixtures}$$
$$= \$1,850$$

It may be noted that the fixtures that are not going to be used should be disconnected; otherwise there will be energy losses because of ballast consumption. It is estimated that it would take 15 minutes to disconnect each fixture. Therefore the labor cost to remove the fixtures is:

$$LC_2 = 0.25 \text{ hrs./fixture} \times \$27/\text{hr} \times 70$$
$$= \$473$$

It is estimated that the occupancy sensor requires 1 hour for installation. Hence the labor cost for installation is:

$$LC_3 = 1 \text{ hr/sensor} \times \$27/\text{hr} \times 24 \text{ sensors}$$
$$= \$648$$

Hence the total labor cost is estimated as:

Labor Cost = $LC_1 + LC_2 + LC_3$
$$= \$1,850 + \$473 + \$648$$
$$= \$2,971$$

The total implementation cost (IC) is given as,

$$IC = TMC + LC$$
$$= \$11,111 + \$2,971$$
$$= \$14,082$$

Payback period (PP) can be calculated as,

$$PP = (IC \$)/ TCS (\$/yr) \times 12 \text{ months/yr}$$
$$= (\$14,082/\$4,433) \times 12$$
$$= 38.12 \text{ months}$$
$$\approx 39 \text{ months}$$

The total cost savings of $4,433/yr will pay for the implementation cost of $14,082 in less than 39 months.
AR NO. 4: UTILIZE POINT OF USE (POU) WATER HEATERS FOR FAUCETS

Recommended Action

Replace the existing electric domestic heater with a new point of use heater to reduce energy costs.

General Information

The facility uses one conventional electric water heater to supply hot water to the faucets. During the energy assessment, it was observed that all of these heaters operate continuously at steady load to keep the supply water to these faucets at constant temperature. Faucets on average require only 0.5 to 1.5 gpm of water flow. Heating and maintaining the water at a constant temperature with electric heaters for such low demand and utilization is a waste of energy.

Tank-less electric water heating (also known as “demand,” “point-of-use,” or “instantaneous” electric water heating) has the potential to displace the electric water heating system and reduce energy consumption. The electric tank-less water heaters potentially offer elimination of standby losses when used in place of storage hot water systems. A tank-less water heater works by using heating elements that are activated by the flow of water when there is demand for hot water (e.g. when someone opens the faucet in the locker room, etc.). Water is heated instantly as it flows through the tank-less water heater. Since it does not store hot water in anticipation of demand, there is no storage tank (thus the term “tank-less”). Tank-less water heaters are available in either electric or natural gas models but it is recommended to consider using electric water heaters for this application.

In electric tank-less water heaters, the heating elements convert electrical energy into heat, and the elements are usually placed in direct contact with the water so that heat is directly transferred into the flow. The electric elements heat up when the flow of water begins and turn off when the water flow stops.

The increase in temperature of incoming water on these heaters strongly depends on water flow rates. It is important to note that as the demanded flow of hot water increases, the tank-less water heater’s ability to raise water temperature decreases and vice versa. In this particular application, the water flow rate at the faucets average around 0.5 to 1.5 gpm hence a raise in water temperature of up to 100°F is possible. Before purchasing an electric heater, it is important for the facility maintenance manager to note both the maximum flow rate as well as its corresponding rise in water temperature.
The installation at the facility would be considered a point-of-use installation. The heater should be installed directly under the sink. The proximity to the faucet virtually eliminates waiting time for hot water to arrive at the fixture, and also greatly reduces any heat loss that can occur if the hot water pipes are uninsulated.

The operational efficiency of the heating elements found in tank-less water heaters is almost identical to those found in conventional storage water heaters. 5.5 Kw water heaters were used supply domestic hot water. Therefore, tank-less water heaters save energy not by heating water more efficiently than conventional storage water heaters, but by reducing or eliminating standby losses associated with storing hot water in a tank. Also, the point-of-use application reduces or eliminates losses from stagnant hot water remaining in the pipes. Certain manufacturers claim that hot water heating costs will be reduced by 30 to 50 percent. The lower the demand for hot water use, the higher the energy savings. The savings are obtained by turning off the water heater completely and using POU instantaneous water heaters.

**Anticipated Savings**

Current Energy usage for water heater = 2,144 kWh/yr

Estimated energy savings, ES = 2,144 kWh/yr

Energy Cost Savings = ES x (unit cost of electricity)

= 2,144 kWh/yr x $0.1145/kWh

= $245/yr

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4 Tidwell, J. and Clamp, A. September 2004

Annual CO$_2$ savings $= 4,695$ lbs. (Note: 1 kWh of Electricity $= 2.19$ lbs of CO$_2$)

Implementation Cost

Implementation cost (engineering + labor + material) is $1,000.

Payback Period $= (\text{Investment ($)/Savings ($/yr)}) \times 12 \text{ months/yr}$

$= (\$1,000/\$245) \times 12$

$= 48.98 \text{ months}$

$\approx 49 \text{ months}$

Thus, the estimated annual cost savings of $245 will pay for the approximate implementation cost of $1,000 within 49 months.
AR NO. 5: REPAIR COMPRESSED AIR LEAKS AND REDUCE COMPRESSOR SET POINT PRESSURE

Recommended Action

Repair leaks in compressed air lines on a regular basis, improve controls on compressor and reduce the compressed air pressure control setting of the compressors from 125 psig to 100 psig.

General Information

The facility has one 7.5-hp air compressor. Electrical energy savings can be achieved as a result of fixing the air leaks, improving compressor controls and reducing the compressor set point pressure. The pressure setting for the compressor is higher than required for the operations (100 psig) in the facility.

Tools Used

The Best Practices software tool, AIRMaster+, was used during the development of this assessment recommendation.

Anticipated Savings

During energy assessment, the assessment team found 5 air leaks in hoses and fitting using the ultrasonic air leak detector. The leaks were found in different locations which the maximum was 85 db. It is observed that the compressor is loaded and unloaded frequently. The reasons could be poor storage, leaks, some instances of wastage of air in process, friction due to abrupt changes in piping dimensions, and ineffective controls. If the controls are modified to operate the compressor at full load instead of partial load, then this will add to the efficiency of the system and makes it easier for the compressor to unload.

The volumetric flow rate of free air exiting the hole is dependent upon whether or not the flow is choked. When the ratio of atmospheric pressure to line pressure, $P_i/P_o$, is less than 0.5283, the flow is said to be choked (i.e. it is traveling at the speed of sound). The ratio of 14.7 psig atmospheric pressure to 125 psig line pressure is $14.7 / (14.7 + 125) = 0.1052$, thus the flow is choked. The compressed air leaks were recorded with sensitivity readings from the ultrasonic leak detector. On the other hand, as mentioned earlier the compressors set point pressure can be reduced to 100 psi. Electrical energy savings by fixing the air leaks, improving compressor controls and reducing the compressor set point pressure can be 30 – 40% of current energy consumption (CEU).

Current energy consumption, CEU = 5,346 kWh/yr

Energy Savings, ES = 30% x CEU
= 1,621 kWh/yr

Energy Cost Savings = 1,621 kWh/yr x $0.1145/kWh
= $186/yr
Annual CO\textsubscript{2} savings = 3,550 lbs \hspace{1cm} (Note: 1 kWh = 2.19 CO\textsubscript{2})

**Implementation Cost & Pay Back**

The implementation cost will include the cost to find and fix the 5 leaks that the assessment team has found during the assessment. On the other hand, assuming that it takes about an hour to modify the controls and to make the set point pressure adjustment for the compressor, the labor cost to implement this recommendation can be calculated as:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Cost</td>
<td>(5 leaks x $10/leak)</td>
<td>$  50</td>
</tr>
<tr>
<td>Labor for Repairs</td>
<td>(5 leaks x 0.33 hrs/leak + 1 compressors x 1) x 27/hr</td>
<td>$  72</td>
</tr>
<tr>
<td>Total Cost (Material + Labor)</td>
<td></td>
<td>$122</td>
</tr>
</tbody>
</table>

Payback period = (Implementation cost ($) / Cost Savings ($)) x 12 months
= ($122/$186) x 12
= 7.87 months
≈ 8 months

Cost savings of $186/yr would pay for the implementation cost of $122 in 8 months.

**Note:**

The line pressure should be reduced in steps. First the pressure may be reduced by 2 psig. Then check if all machines are operating properly, and then it may be reduced further in steps of 2-3 psig each and so on.
AR NO. 6: REDUCE INFILTRATION AT THE DOORS

Recommended Action

Reduce infiltration of cold air in winter time, and hence reduce the annual energy consumption required for heating purposes.

General Information

During the assessment, it is observed that there is significant infiltration at various doors. This infiltration can be stopped by sealing these gaps with rubber insulation. On the day of assessment, the inside and outside temperatures were observed.

Anticipated Savings

The areas that need to be sealed in the facility are listed in table 7.

Table 7. List of Dock Doors

<table>
<thead>
<tr>
<th>Description/Area</th>
<th>Fuel</th>
<th>No</th>
<th>Total Area (ft²)</th>
<th>velocity of air V (ft/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dock Door 1</td>
<td>Electric</td>
<td>1</td>
<td>0.25</td>
<td>1.8</td>
</tr>
<tr>
<td>Dock Door 2</td>
<td>Electric</td>
<td>1</td>
<td>0.50</td>
<td>1.8</td>
</tr>
<tr>
<td>Dock Door 3</td>
<td>Electric</td>
<td>1</td>
<td>0.25</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>3</strong></td>
<td><strong>1</strong></td>
<td></td>
</tr>
</tbody>
</table>

The annual heating energy savings, ES, obtained by reducing the heating load due to infiltration of cold air through the door can be estimated as:

\[
ES = \frac{(KH \times A \times HI/HT)}{EFF}
\]

Where,

- **KH** = infiltration heat loss constant, Btu/yr ft²
- **A** = area of infiltration opening, ft²
- **HI** = hours that infiltration occurs during heating season, = \((7/12 \times 1,710^6 \text{ hrs/yr})\)
- **HT** = total hours in a year, \(8,760^7 \text{ hrs/yr}\)
- **EFF** = efficiency of heating system, taken to be 80%

The infiltration heat loss, \(KH\), is determined from the relationship:

\[KH = \text{Infiltration occurs in the winter months, irrespective of the operating hours of the plant.}\]
\[HT = \text{Infiltration occurs at all the times, irrespective of the operating hours of the plant.}\]
KH = CP x RHO x V x DHH x Z / (1 x 10^6)

Where,
- CP = specific heat of air, 0.24 Btu/lb F
- RHO = density of air, 0.076 lb/ft^3
- V = air velocity in the gap, ft/sec
- DHH = degree heating hours, °F-hr/yr
- Z = conversion constant, (3,600 sec/hr)

The value of KH for “Dock Door 1” (first entry in Table)

KH\textsubscript{1} = 0.24 \text{ Btu/lb F} x 0.076 \text{ lb/ft}^3 x 1.8 \text{ ft/sec} x 114,240 °\text{F-hr/yr} x 3600 \text{ sec/hr} / (1 \times 10^6)

= 14 \text{ MMBtu/yr ft}^2

ES\textsubscript{1} = 14 \text{ MMBtu/yr ft}^2 x (0.25 \text{ ft}^2) x (7 *1,710 \text{ hr/yr} /12) / (8,760 \text{ hrs/yr} x 0.8)

= 146 \text{ kWh/yr}

Similarly the Infiltration Heat Loss Constant, KH and Energy Savings, ES are calculated for all the other doors.

Energy Savings, ES = 699 kWh/yr
Energy Cost Savings = ES x (unit cost of electricity) = $80/yr
Annual CO\textsubscript{2} savings = 1,531 lbs (Note: 1 kWh = 2.19 lbs of CO\textsubscript{2})

Implementation Cost

Air gaps can be covered by installing strips of insulating rubber around the gaps. The implementation cost is based on the cost of strip for an area of 1ft\textsuperscript{2} at an average price of $40/ft\textsuperscript{2}. The implementation will require about 2 labor hours for all the gaps. Therefore,

Material cost (1 ft\textsuperscript{2} x $40/ft\textsuperscript{2}) = $40
Labor cost (2 hrs x $27/hr) = $54
Total = $94

Simple Payback period:

Payback = Implementation cost ($) / Energy cost savings ($/yr) x 12 months/yr
= ($94/$80) x 12
= 14.10 months
≈ 15 months

The annual cost savings of $80/yr will pay for the implementation cost of $94 in approximately 15 months.