HIGHER EDUCATION COORDINATING COMMISSION
December 14, 2017

Docket Item:

Community College Approval: Portland Community College, Associate of Applied Science in Electric Power Generation, within 47.0605 – Diesel Mechanics Technology/Technician.

Summary:

Portland Community College proposes a new AAS degree in Electric Power Generation. Higher Education Coordinating Commission (HECC) staff completed a review of the proposed program. After analysis, HECC staff recommends approval of the degree as proposed.

Staff Recommendation:

The HECC recommends the adoption of the following resolution:
RESOLVED, that the Higher Education Coordinating Commission approve the following degree: AAS in Electric Power Generation.

Portland Community College seeks the Oregon Higher Education Coordinating Commission's approval to offer an instructional program leading to a degree in Electric Power Generation.

Program Summary

Electric power generation (EPG) is a growing field which needs highly trained technicians to service equipment and meet current and future industry needs. This proposed Electric Power Generation AAS and Certificate is for individuals who have a background in diesel- or gasoline powered engines. The specialized certification will prepare them to work on the electric power generators. Electric power generators include standby generators at hospitals, businesses, colleges, and nursing homes. Generators are also used to provide temporary power on construction sites and oil fields. The Electric Power Generation AAS includes basic coursework from the diesel and dealer Service Technology departments and 26 credits specializing in the power generating machinery. AAS and will prepare graduates to work in the growing field of electric power generation maintenance.

1. ***Describe the need for this program by providing clear evidence.***

   The Diesel Service Industry Advisory Council has indicated a great need to skilled technicians to service electric power generators. Currently local positions must be filled by technicians from out of state because locally we do not have an educational program and pipeline to fill the open positions. This is an expanding industry and the need for technicians is expanding as well. As per OLMIS: Employment in the engine mechanic occupation in 2014 was at about the regional average for all occupations. The total number of job openings is projected to be somewhat higher than the regional average number of job openings for all occupations through 2024. Program completers can expect to earn $15-25 per hour depending on their experience.

2. ***Does the community college utilize systemic methods for meaningful and ongoing involvement of the appropriate constituencies?***

   The Electric Power Generation Service Technology program was developed in collaboration with two PCC programs, Dealer Service Technology, which services the Caterpillar machines, and Diesel Service Technology which services all types of diesel engines, regardless of the manufacturer. The Diesel Service Industry Advisory Council were also important collaborators in the shape and scope the Electric Power Generation AAS and Certificate. The college and Industry Advisory Council met several times to clarify the need and the council provided valuable feedback as curriculum was developed and vetted. The Diesel Service Technology Industry Advisory Committee will continue to advise the academic department of any changes within the industry which should be reflected in the course content. Diesel Service Technology as well as all programs at PCC are proactive at creating a welcoming and supported environment for all students regardless of the ethnicity, ability, and gender identification. The college has many resources available to students with no cost to them including, Disabilities Services, Multicultural Center, Women's Resource Center, Equity and Inclusion Office, childcare, ESOL, college prep courses, and many other resources for students.

3. ***Is the community college program aligned with appropriate education, workforce development, and economic development programs?***

   The Electric Power Generation Service Technology program supports workforce and economic development initiatives for the state and beyond. The program was developed with industry guidance so that the outcome of the curriculum is aligned with industry needs. The program will prepare students to transfer smoothly from student to employee. The program is part of a career ladder process. Students have two ways to earn a specialization in electric power

generator maintenance. Those new to the diesel industry can earn the Electric Power Generation AAS, content includes 64-credits of general diesel engine maintenance content and 26-credit specializing in electric power generator maintenance content. For those individuals with diesel engine experience or who have a degree in diesel service technology can take the electric power generation content focused courses and add a certificate and specialization to their resume. The program is aligned with Caterpillar dealers throughout the west, including Alaska. Caterpillar Dealerships must provide internships for any student in the Dealer Service Technology program. PCC has had a very long term relationship with the Caterpillar Dealerships and serves both the industry and the college very well. The diesel and electric power generation programs are aligned with K-12 education as several students have earned dual credit for diesel courses at local high schools. In 2017 the college and Beaverton School District began an innovative collaboration. PCC with input from BSD developed a career exploration course for juniors and seniors. The course, titled Career Encounters: Transportation brought the high school students to PCC to explore careers in transportation. There were five CTE programs students were introduced to and Diesel Service Technology was one of them. The goal of the career exploration class is to introduce students to careers which do not require a bachelor's degree and training opportunities at PCC. The program was successful, a few students chose to attend PCC based upon their experience during the course. This example is one was that PCC has aligned with local high schools to help students explore opportunities for their future. Submitted 10/03/2017 Approved The Electric Power Generation Service Technology program supports workforce and economic development initiatives for the state and beyond. The program was developed with industry guidance so that the outcome of the curriculum is aligned with industry needs. The program will prepare students to transfer smoothly from student to employee. The program is part of a career ladder process. Students have two ways to earn a specialization in electric power generator maintenance. Those new to the diesel industry can earn the Electric Power Generation AAS, content includes 64-credits of general diesel engine maintenance content and 26-credit specializing in electric power generator maintenance content. For those individuals with diesel engine experience or who have a degree in diesel service technology can take the electric power generation content focused courses and add a certificate and specialization to their resume. The program is aligned with Caterpillar dealers throughout the west, including Alaska. Caterpillar Dealerships must provide internships for any student in the Dealer Service Technology program. PCC has had a very long term relationship with the Caterpillar Dealerships and serves both the industry and the college very well. The diesel and electric power generation programs are aligned with K-12 education as several students have earned dual credit for diesel courses at local high schools. In 2017 the college and Beaverton School District began an innovative collaboration. PCC with input from BSD developed a career exploration course for juniors and seniors. The course, titled Career Encounters: Transportation brought the high school students to PCC to explore careers in transportation. There were five CTE programs students were introduced to and Diesel Service Technology was one of them. The goal of the career exploration class is to introduce students to careers which do not require a bachelor's degree and training opportunities at PCC. The program was successful, a few students chose to attend PCC based upon their experience during the course. This example is one was that PCC has aligned with local high schools to help students explore opportunities for their future.

4. ***Does the community college program lead to student achievement of academic and technical knowledge, skills, and related proficiencies?***
The Electric Power Generation Service Technology program is designed to meet the needs of students new to the industry and those working in the industry. There are two options available, 90-credit AAS and a 26-credit certificate. Electric Power Generation Service Technology prepares students for employment in the diesel mechanics service fields. The

decision to integrate two-options into the program was deliberate to meet the needs of individuals and the industry. The required courses lead to student achievement of academic and technical knowledge, skills and related proficiencies as expected by the diesel service industry. The course and program outcomes align closely with the course content and industry expectations for entry level employment. All courses in the program are offered at the Rock Creek campus of Portland Community College.

5. ***Does the community college identify and have the resources to develop, implement, and sustain the program?***
The college has a rigorous assessment and evaluation process to determine how well students meet course outcomes and certificate outcomes. Students who complete their program will be evaluated to determine how well they meet the outcomes. Data resulting from outcome assessment is used for program improvement and improved student learning. Instructional methods used for the program coursework reflect best practices in education. The diesel courses have been developed to provide students with appropriate sequencing of information and the later courses are built upon, and advance the skills and knowledge, covered in the early courses. The program follows a specific scheduling sequence to insure students acquisition of skills and knowledge. All courses focused on electric power generation service are scheduled during the summer term when the shop/lab is available. Standard E The college has the capacity to support the new program. The classroom and shop/lab space are readily available as the college has a strong diesel engine service program and has had one for many years. The current classroom and shop/lab facilities will be sufficient to support the new program. The electric power generation service courses will be offered in the summer when the Diesel Service Technology department is not using the shop/lab. All equipment needed for hands-on, skill based learning are either already available at the college or will be supplied by the industry. Industry partners have indicated a willingness to support the program by donating technical training material, several functioning electric power generators, technical support, and any proprietary technology and software needed to train students and future employees. Current financial resources are adequate to support the Electric Power Generation Service Technology program, no new faculty or staff will be hired. All PCC students have access to career counseling, academic advising and instructional support. The college provides full service library services at three campuses in the district. The college is committed to maintaining a complete catalog of lower division collegiate courses to accommodate students earning a degree or certificate and preparing to transfer to a university. The college has an open access policy, which ensures access for all individuals. PCC serves students with special needs including those with disabilities, displaced workers, and non-native speakers of English. Services include the provision of tutors, counselors, child care, financial aid, and ESL instruction. Other services may include interpreters and communication devices for deaf and hearing impaired students, note-taking options, taping of printed materials, test readers/writers, enrollment assistance, career guidance, and corrective physical education. Staff and students has have access to consultations and workshops designed to increase awareness of disability issues. PCC as a public agency provides comprehensive services for students with disabilities in both the classroom and online formats. The college has a Disabilities Services Office: http://www.pcc.edu/resources/disability/ PCC supports diversity in the student body and employment. The PCC Office of Equity and Inclusion provides leadership to facilitate, manage and coordinate college policies, procedures and programs related to diversity, inclusion and equity: https://www.pcc.edu/about/equity-inclusion/

Assurances

Portland Community College has met or will meet the four institutional assurances required for program application.

1. *Access.* The college and program will affirmatively provide access, accommodations, flexibility, and additional/supplemental services for special populations and protected classes of students.
2. *Continuous Improvement.* The college has assessment, evaluation, feedback, and continuous

improvement processes or systems in place. For the proposed program, there will be opportunities for input from and concerning the instructor(s), students, employers, and other partners/stakeholders. Program need and labor market information will be periodically re-evaluated and changes will be requested as needed.

3. *Adverse impact and detrimental duplication*. The college will follow all current laws, rules, and procedures and has made good faith efforts to avoid or resolve adverse *inter*segmental and *intra*segmental impact and detrimental duplication problems with other relevant programs or institutions.
4. *Program records maintenance and congruence.* The college acknowledges that the records concerning the program title, curriculum, CIP code, credit hours, etc. maintained by the Office are the official records and it is the college's responsibility to keep their records aligned with those of the Office. The college will not make changes to the program without informing and/or receiving approval from the Office.