



Washington State Department of  
Labor & Industries

# **Aerospace Workforce Council: A Report and Recommendations Regarding Apprenticeship Utilization in the Aerospace Industry**

2023 Report to the Legislature

December 2023

# Introduction

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Engrossed Senate Bill 6690 (ESB 6690), passed in March 2020, created the Aerospace Workforce Council and a conditional .357% Business and Occupation (B&O) tax rate for companies manufacturing commercial aircraft or components of commercial aircraft. The conditions for implementing the .357% B&O tax rate may be summarized as follows:

1. Resolution of the World Trade Organization dispute between the United States and the European Union expressly allowing a B&O tax rate reduction for commercial aircraft manufacturers to .357% or less.
2. A “significant commercial airplane manufacturer” has at least a .3% aerospace Apprenticeship Utilization Rate (AUR). Note that there is only one employer in Washington State that meets this definition.

Once the implementation conditions have been met, organizations that want to qualify for the .357% B&O tax rate must achieve an Apprenticeship Utilization Rate (AUR) of at least 1.5% of their qualified apprenticeable workforce. The Department of Labor & Industries (L&I) is tasked with calculating this AUR and reporting it annually to the Department of Revenue (DOR). For additional information, see [ESB 6690](#), [RCW 49.04.210](#), [RCW 49.04.220](#), and [RCW 82.04.2602](#).

The Aerospace Workforce Council is appointed by the Governor and is composed of 14 individuals representing business, labor, and government. The council is charged with reporting to the state Legislature the AUR across the industry and providing recommendations on implementing the .357% tax rate to include policy changes. To accomplish this task, the Aerospace Workforce Council has met 15 times since it was established in 2021. AUR implementation is new to the aerospace industry, and the council is confident it can be implemented successfully if the conditions allowing the legislation to become effective are met in the future.

## Registered Apprenticeship in Washington

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Registered Apprenticeship is a work-based learning model that enables apprentices to learn an occupation in a practical way through a structured, systematic program of on-the-job supervised learning. To be an apprenticeable occupation, it must involve attaining manual, mechanical, or technical skills and knowledge that, in accordance with the industry standard for the occupation, would require completing at least 2,000 hours of on-the-job learning.

Most apprenticeship programs require a committee responsible for the program’s day-to-day operations and operate the program consistent with Washington State Apprenticeship and Training Council (WSATC) requirements. Committees may be single employer (representing an individual employer) or group (representing more than one employer or employer association). Employers wishing to join an existing apprenticeship program will join a group program as a training agent.

They cannot join a single employer program. An exception to the committee requirement is a plant program, which is a program sponsored by the owner of a plant or plants at a particular location or locations. An apprentice in a plant program may work only on property owned by the employer.

The costs to join an existing apprenticeship program or establish a new one vary widely. Existing programs may have monthly and yearly fees per apprentice and employer. The costs to start a new program depend on a number of factors including, but not limited to, the occupation(s), administrative and equipment needs, and the Related Supplemental Instruction (RSI) development method.

# Aerospace Industry Apprenticeship Utilization Rates

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Apprenticeship Utilization Rates are calculated by dividing the number of apprentices in a specific occupation by the total number of people working in that occupation in an organization. There are currently three Registered Apprenticeship Programs in Washington State serving the aerospace industry. These programs are AJAC, the Northwest Machinists Apprenticeship Committee, and IAM/Boeing Joint Apprenticeship Committee. The Aerospace Workforce Council has identified the following list of qualifying apprenticeable occupations for the aerospace manufacturing industry:

Standard Occupational Code (SOC)	Occupation
43-5011	Cargo and Freight Agents
43-5061	Production, Planning, and Expediting Clerks
49-2094	Electrical and Electronics Repairers, Commercial and Industrial
49-3011	Aircraft Mechanics and Service Technicians
49-9041	Industrial Machinery Mechanics
49-9043	Maintenance Workers, Machinery
49-9071	Maintenance and Repair Workers, General
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders
51-4041	Machinists
51-4061	Model Makers, Metal and Plastic
51-4081	Multiple Machine Tool Setters, Operators, and Tenders
51-4111	Tool and Die Makers
51-4121	Welders, Cutters, Solderers, and Brazers
51-4194	Tool Grinders, Filers, and Sharpeners
51-4199	Metal Workers and Plastic Workers, All Other
51-7031	Model Makers, Wood
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers
51-9111	Packaging and Filling Machine Operators and Tenders
51-9161	Computer Numerically Controlled Tool Operators
51-9162	Computer Numerically Controlled Tool Programmers
51-9198	Helpers—Production Workers
51-9199	Production Workers, All Other

Currently, we are unable to provide an exact AUR within the aerospace industry for the following reasons:

1. DOR identified 238 businesses that (1): reported \$90 million or less in annual taxable income under the “Aerospace Manufacturing and Tooling” categories on excise tax returns in Fiscal Year (FY) 2022; and (2) reported employment data to the Employment Security Department (ESD). This does not include businesses with taxable income exceeding \$90 million, because this data is considered confidential taxpayer information. Also excluded are aerospace businesses registered with DOR but not reporting employment data to ESD. There are more than 150 organizations that are potential registered apprentice employers participating in the three Registered Apprenticeship Programs serving the aerospace industry in the L&I Apprenticeship and Registration Tracking System (ARTS). However, ARTS does not track employer industries, and two of the programs serving aerospace manufacturing employers also serve employers in other industries.
2. To calculate AUR in the aerospace industry, expanded data-sharing agreements among DOR, L&I, and ESD are necessary. ESD has the data containing the total apprenticeable occupation workforce; L&I has comprehensive apprentice data; and DOR has data regarding the industries in which employers are paying B&O taxes. These three datasets will have to be cross-referenced to calculate the AUR on a per-employer basis, and then a total can be derived across all aerospace manufacturing organizations that employ individuals working in qualifying apprenticeable occupations. The work described here would require not only the expansion of existing data-sharing agreements but a dedicated employee to cross-reference and analyze the data, as the datasets are quite large.

The Aerospace Workforce Council is confident in the ability to calculate AUR on a per-employer basis if the conditions for RCW 82.04.2602 are met. Specific recommendations to the Legislature to facilitate this calculation are contained in the “Recommendations to the Legislature” portion of this report, in addition to future collaboration among L&I, DOR, and ESD that may be accomplished without legislative action. Using the following information, we can come to an approximation of AUR in the aerospace manufacturing industry for employers with less than \$90 million in annual taxable revenue:

1. The three programs had a total of 459 active registered apprentices in qualifying apprenticeable occupations in FY 2022. The program exclusively serving “a significant commercial aerospace employer” accounts for 61 of these registered apprentices, leaving 398 registered apprentices working with other employers. The other two registered apprenticeship programs do not exclusively serve commercial aerospace manufacturers, so for the sake of this exercise it will be assumed that 60% (239) of the remaining 548 apprentices are employed by organizations qualifying as commercial aerospace manufacturers.
2. ESD data shows annual average employee counts of 14,210 for employers in this category. Many of these employees will work in roles that do not qualify as apprenticeable or are not

apprenticeable, such as human resources, accounting, management, etc. Apprenticeable occupations will be a relatively small share of this workforce as a result of the complexity and skillset required for an occupation to be considered apprenticeable. As such, it will be assumed that 50% (7,105 workers) of this workforce is employed in qualifying apprenticeable occupations.

With the prior assumptions taken into account, the Aerospace Workforce Council estimates an apprenticeship utilization rate of 3.4% (239 Apprentices/7105 Workers = 3.4%) for the aerospace manufacturing industry among employers with an annual taxable income of \$90 million or less for FY 2022. “A significant commercial aerospace employer” has calculated its apprenticeship utilization rate as 2.3% as of September 2023.

## Implementation Status & Policy Recommendations

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As of Sept. 12, 2023, negotiations in the World Trade Organization to resolve the dispute between the United States and the European Union had not started. As a result, the conditions allowing the implementation of the .357% B&O tax rate and associated AUR requirements have not gone into effect. However, “a significant commercial airplane manufacturer” is currently exceeding the required .3% apprenticeship utilization rate, and the Aerospace Workforce Council meets on a regular basis.

The Aerospace Workforce Council makes the following policy recommendations to the Legislature:

1. Starting and operating high-quality Registered Apprenticeship Programs is costly. As such, all policies should incentivize employers to participate in existing group Registered Apprenticeship Programs rather than individual employers trying to create and operate individual programs.
2. The Legislature may want to consider alternative incentives beyond the .357% B&O tax rate for small employers. While this incentive is significant for mid-size and larger businesses, in FY 2022, 220 employers in Washington identifying as aerospace manufacturing and tooling businesses generated less than \$30 million in taxable income. For an employer generating \$30 million in taxable income, the .357% represents a \$38,100 annual savings compared to the manufacturing rate of .484%. For an employer generating \$15 million, this figure falls to \$19,050 per year.
3. Update the language in [RCW 82.04.2602](#) to clarify that apprenticeship utilization rates for aerospace employers not meeting the criteria of “a major aerospace employer” are calculated on an individual, rather than collective, basis.

4. Revise RCW 49.04.220 to make motions passed by the WSATC binding policy for the purposes of AUR calculation in the Aerospace Industry.

## Conclusion

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RCWs 49.04.210, 49.04.220, and 82.04.2602 establish the Aerospace Workforce Council and the innovative application of Apprenticeship Utilization Rate requirements as a condition for a reduced B&O tax rate for the aerospace manufacturing industry. The aerospace manufacturing industry has met or exceeded the requirements for the reduced B&O tax rate to take effect. However, the conditions associated with resolving the World Trade Organization dispute between the European Union and the United States have not been met. The state Legislature may want to consider the possibility that the conditions will not be met in the future, and any adjustments that should be made to these laws as a result. The Aerospace Workforce Council will continue to meet, to discuss issues relevant to registered apprenticeship utilization rates in the aerospace manufacturing Industry, and appreciates the Legislature's consideration of the policy recommendations contained herein.