

# To land Boeing's next plane factory, Washington's training system must drill down

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Photo: Marcus R. Donner

Students, from left, Christy Cheever and Cindy Ohm practice riveting an airplane skin at the Washington Aerospace Training & Research Center in Everett.

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**Boeing** may need 5,000 workers a year with aerospace manufacturing skills in coming years. The state's colleges and technical schools graduate half that number.

To fill the gap, the state is rolling out cheaper, faster training programs and slicing away those that don't meet Boeing's needs. But it's unclear whether those efforts will persuade the plane maker to build the next version of its bestselling 737 in the state.

Boeing already is ramping up production of all five of its jetliner models. Yet a whopping half of its work force will be eligible to retire within five years, experts say. As a result, Washington will need to vastly expand what it does to get more people factory-ready.

"Already there is a shortage of people trained in blue collar trades such as assemblers and white collar jobs such as aerospace engineers," said **Bryan Wilson**, deputy director of the state Workforce Training and Education Coordinating Board.

That puts Washington leaders in a bind. Even while they are targeting work force training to help land Boeing's next jet, money for training programs is shrinking. Meanwhile, cities from Charleston, S.C., to Long Beach, Calif., are hoping to land the upcoming 737 MAX plant for their own locales. South Carolina, for one, is touting its own extensive training program.

When Boeing on Aug. 30 introduced its plans for the 737 MAX, the re-engined version of its venerable 737, Commercial Airplanes CEO **Jim Albaugh** said the jet maker would decide where to assemble the new aircraft in six to eight months.

This set off a frenzy of potential suitors, both inside and outside Washington state, seeking to wrest the 737 MAX assembly away from Renton, the incumbent site of the 737.

In December, Gov. **Chris Gregoire** created an organization called Pegasus and named prominent Seattle attorney **Taylor Washburn** to chair the effort to keep any new Boeing plane in Washington state.

Given the state's budget problems, improving aerospace education may be one of the few tangibles the state can offer to keep the 737 MAX in Washington, Washburn said in a recent interview.

What's needed, said **Dixie Simmons**, director for work force education at the State Board of Community and Technical Colleges, is an infusion of workers trained in five categories of factory skills: composites manufacturing, electronics, industrial manufacturing technology, machine tool technology and airframe mechanics.

"If we look at projected needs with baby boom retirement," Simmons said, "we will need to produce closer to 4,000 to 5,000 graduates a year — and we're producing about 2,500."

Statistics suggest the shortfall is even more dire.

Of the 55,951 full time equivalent students in "career and technical education" classes in community and technical colleges last year, just 12 percent of them, or 6,569, were in aerospace programs, said **Janelle Runyon**, director of communications for the community colleges board.

Reflecting the demand for workers, Boeing, **Esterline Technologies Corp.** and a group of college are sponsoring a daylong Washington Aerospace Job Opportunity and Career Expo on Sept. 23 at the **Lynnwood Convention Center**.

Washington state's 34 community colleges and technical colleges — 22 of which train people for aerospace work — are suffering from budget cuts. Statewide funding for postsecondary career and technical education dropped 31 percent, to \$242 million, from 2005 to 2010, according to the Workforce Training and Education Coordinating Board.

At the same time, contributions to state education from two key federal programs also have waned. Workforce Investment Act contributions fell 33 percent to \$53 million between 2005 and

2011, and money from the Carl D. Perkins federal program, which also funds work force training, dropped 16 percent to \$20 million.

The conundrum of falling resources and rising need is inspiring a hunt for ideas. There's a Sept. 27 legislative hearing at Paine Field organized by Rep. **Mike Sells** (D), chairman of the House Labor and Workforce Committee.

"We don't have enough revenue to do the things we need to do," Sells said. "How do we prioritize to meet those needs, or increase revenue to do all those things?"

Boeing has started collaborating in new ways with state educational leaders. In 2010, the company assembled a group of 10 managers called the Aerospace Academic Alignment Team, which now meets monthly with a group of 15 deans from regional technical community colleges, called the Aerospace Curriculum Alignment Team.

The mission: inject new thinking to help the colleges deliver more of the training Boeing needs for less money. The next meeting is Sept. 26.

"We're trying to have a skilled work force, and it's difficult when higher education is being cut... We as a system are truly trying to be more efficient with less," said **Mary Kaye Bredeson**, director of the Everett-based Center of Excellence for Aerospace and Advanced Materials Manufacturing, which coordinates aerospace-related training.

One shift emerging from these meetings is diverting resources to compressed training that prepares students for assembly jobs in six months rather than the year or more required by previous programs. For instance, local colleges had developed a two-year introduction to composites and composites repair, but with feedback from Boeing, an alternative is being offered — six months.

"Now industry is telling us a six-month introduction to composites and composite repair is (enough to teach) the skills they need to have an entry-level position," Bredeson said. "Boeing is saying, 'We really need people now.' "

A supporter of these new short-term certificates is **Michael Greenwood**, a senior human resources manager from Boeing corporate who is chairman of the Boeing Aerospace Academic Alignment Team. He points out that the plane maker has hired 5,000 people so far this year.

Even shorter are the three-month training programs for Boeing line workers being offered to high school graduates by the Washington Aerospace Training and Research Center, in Everett.

The center, run by Edmonds Community College in a former aerospace plant on Paine Field, is funded partly by more than \$2 million in funds from Gregoire. It's focused on quickly turning out assembly workers.

Since it started operations in June 2010, the facility has graduated 357 people, of whom 324 have snagged job interviews, said center director **Larry Cluphf**. Of those, 232 have taken union assembly jobs with Boeing, and Cluphf expects that number to rise.

“They start at \$15 an hour,” he said, “and get a 50 cents-an-hour raise every six months, up to \$31 an hour.”

Another approach schools are taking to match declining budgets with growing aerospace demand is to trim redundant programs that consume resources, said **Eleni Papadakis**, executive director of the state Workforce Training and Education Coordinating Board.

For instance, Walla Walla College dropped its carpentry program because there were so few jobs in that field.

“Aerospace — we know at the moment it’s a growth industry,” Papadakis said, “and we want to harness that.”