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Background Brief on ...

Emerging Industry: High Technology

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Background

High technology is Oregon's largest industrial sector. The industry employs more Oregonians than any other with approximately 42,900 people working in high tech manufacturing in October of 2006. Another 16,600 Oregonians work in the non-manufacturing high tech industries of software publishing, computer systems design and related services. Though most Oregon high technology firms are small, industry giants Intel, Hewlett-Packard, Hynix, Tektronix, Microchip, and Mentor Graphics, have operations in Oregon. An additional industry giant, Sony, previously had operations within the state, but closed operations in April of 2003.

Portland economist Joe Cortright points out that among major national high-tech centers, Oregon, like San Jose, California, Phoenix, Arizona, and Austin, Texas, shows significant innovation in electronics and software, with little activity in bio-technologies. However, Oregon recently completed the successful recruitment of an expansion facility being planned by bio-technology giant Genentech. That company selected Hillsboro for the site of a state-of-the-art “fill/finish” facility, now scheduled to begin construction in December 2006, with initial operation scheduled to begin in 2008. As a potential location for high-tech investment, Oregon competes with other states, as well as other nations around the world.

What Is “High Tech”?

The Oregon Employment Department (**OED**) defines “high tech” using the North American Industry Classification System (**NAICS**) as businesses in:

- *NAICS 334 – Computer and electronic product manufacturing*
- *NAICS 5112 – Software publishers*
- *NAICS 5415 – Computer systems design and related services*

Facilities Locations

There are concentrations of high technology production facilities in the Portland metropolitan area, especially in mid-Multnomah County and Washington County, and south through the Willamette Valley. Aside from small concentrations in the Medford and Bend areas, very little is present in other parts of the state. Generally, major capital investments in high tech production facilities are made in areas where

there are other high tech firms, a large workforce, and large parcels of industrial land, superior transportation infrastructure, and ready access to suppliers.

Strategic Investment Program

Enacted by the 1993 Legislature, the Strategic Investment Program (SIP) allows local governments to negotiate agreements for up to 15 years of property tax relief for key industry companies (including high tech) investing over \$100 million in new facilities (\$25 million for rural developments). The companies pay full property taxes on the first \$100 million in investments. Companies are also required to pay a Community Service Fee to the local governments equal to either 25 percent of the abated property tax savings or \$500,000 annually, whichever is greater. The program is especially valuable for high technology companies because of the relatively high investment costs for high tech production facilities. Since the program's inception, five applications for the SIP have been approved in the Portland area, including two for Intel. The most recent use of the SIP for a high technology company was the May 2005 application of Intel Corporation. This agreement provides for an additional \$25 billion in microprocessor-related capital investments at the company's Ronler Acres Campus in Hillsboro. This agreement was the company's fourth SIP with Washington County and Hillsboro since 1994.

Employment and Other Statistics

Employment Department statistics show 59,500 high tech jobs in Oregon in late 2006, down from 69,900 in 2001 but up from the 55,400 jobs reported in early 2004. The department projects high tech manufacturing employment (as defined using Standard Industrial Classification codes) will increase by about nine percent, or 5,000 jobs, between 2004 and 2014. Additional high tech jobs are expected in non-manufacturing but related industries. The majority of the industry's employment is expected to remain concentrated in Multnomah and Washington counties.

In 2005, the average annual wage for high-tech employees was \$79,442, more than double the

average private sector wage. High tech products also account for a significant share of the state's total foreign shipment. In 2005, the latest year for which data is available, high tech products accounted for more than 50 percent of the state's \$12.4 billion of products shipped to foreign countries.

Employment Multiplier Effect

Not only have major investments in high tech production facilities resulted in employment opportunities in those facilities, but expansions and relocations of these firms' suppliers (raw materials, services, software development, etc.) have created increased employment opportunities in the area's other high tech sectors. Further, investment in these facilities is beneficial to other businesses that support or rely on the production facility. The multiplier effect is estimated to be three to three and a half additional jobs created for each high tech job.

Workforce

Traditionally there has been a shortage of skilled Oregon workers for all types of high tech jobs; however, since the industry-wide downturn in 2001, there is currently a labor surplus. In the past, many firms recruited out-of-state for high level engineers, and some even recruit entry-level workers from outside Oregon as well.

Oregon Innovation Council

The 2005 Legislature enacted SB 838, which built on the foundation laid by the Oregon Council for Knowledge and Economic Development (OCKED) by creating a new, 16-member, Oregon Innovation Council (**Oregon InC**), charging it with developing a state innovation plan to guide the Governor and Legislature. The Council is a mix of business, education, and government leaders from around the state and across industry sectors. Oregon InC's mission is "to identify Oregon's top innovation-driven growth opportunities, maximize the state's competitive advantages and establish Oregon's niche in the global economy."

The Council submitted a proposed Oregon Innovation Plan to the Governor and Legislature in

September 2006. The Plan proposes a \$38.2 million investment portfolio in research and traded-sector industry initiatives that will create jobs across the state. The proposals recommend ongoing support of Oregon's first Signature Research Center, the Oregon Nanoscience and Microtechnologies Institute (**ONAMI**), as well as investments in emerging advanced energy development related to wave energy, and investments in established industry sectors such as manufacturing and food processing.

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OED employment projections, 2002-2012
<http://olmis.emp.state.or.us/pubs/indprj/industry.pdf>

Portland economist Joe Cortright's study
comparing major national high-tech centers is at
<http://www.brook.edu/dybdocroot/es/urban/cortright/specialization.pdf>

*Lynn Beaton, Economic and Community Development
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