



ALEC JOSEPHSON
ECONOMIST

PROFILE

Alec Josephson is an economist and President of Pinnacle Economics, Inc. He has extensive experience in economic and fiscal impact analysis; market, industry, and project evaluations; and energy and utility economics. Prior to forming Pinnacle Economics, Josephson worked for over two decades as an economic consultant with ECONorthwest, in Portland, Oregon. As ECONorthwest's Director of Economic Impact Analysis, Josephson directed, conducted, and/or authored well over 400 economic impact studies. Josephson brings to economic impact analyses a solid understanding of the input-output modeling framework, the IMPLAN economic impact modeling software, and the economic context within which specific impacts occur.

In addition to his consulting work, Alec has over 25 years of college-level teaching experience and has taught a wide range of lower and upper division economics courses, including the principles of microeconomics and macroeconomics, economic history, energy economics, environmental economics, and applied microeconomic theory.

EDUCATION

M.S. Economics, Portland State University

B.S. Political Science, Portland State University

SELECTED PROJECT EXPERIENCE

Josephson's clients are both private and public. He has worked for clients throughout the United States, and developed input-output models of foreign countries.

- **Green Industries, Oregon Workforce Investment Board.** Josephson lead a multi-disciplinary team that researched and developed detailed production functions, and then used the IMPLAN modeling system to calculate economic multipliers and other economic metrics for green industries that comprise the sector strategies formulated by the Governor's Green Jobs Council. Green industries included energy efficiency; renewable energy (solar, wind, wave, ethanol, biomass, small hydroelectric, geothermal, and biodiesel); green manufacturing; green transportation; sustainable farming, forestry, and fishing; energy transmission and storage; green building and development; and environmental technologies and services.
 - *Alec has extensive experience across the full range of renewable energy resources including wind, solar, wave, biofuels, geothermal, hydroelectric, electric vehicles, and energy efficiency. Clients include the Oregon Wave Energy Trust, Zeachem, the National Renewable Energy Lab, Columbia Biogas, and others.*

- **Energy Efficiency Program Impacts, Energy Trust of Oregon.** Since 2001, Josephson has quantified the annual economic and fiscal impacts of the Energy Trust of Oregon’s energy efficiency and renewable energy programs. This comprehensive impact analysis uses a state-of-the-art, hybrid modeling approach that relies on an input-output modeling framework, with detailed data for program spending, incremental measures costs, energy savings, and incentive payments as the key inputs into that model. Economic and fiscal impact measures are reported for commercial, industrial, residential, and renewable energy programs on a gross and net basis. The net economic impacts are relative to a base case scenario that assumes that program spending (administrative/implementation costs and program incentives) are returned and spent by ratepayers. In addition, the analysis measured the cumulative, longer-term economic impacts by isolating energy savings for all program participants. Our findings also identified those measures, end uses, and programs with the greatest energy savings potential and the greatest net economic impacts. For example, we isolated and separately measured the net economic impacts directly attributable to the Energy Trust’s weatherization measures. By doing so, we were able to determine that these measures generated, depending on the economic impact measure, nearly twice the net economic impacts as other measures.

 - *Similar, comprehensive impact analyses were conducted for the Bonneville Power Administration (“BPA”), Consumers Energy of Michigan, the State of Hawaii Public Utilities Commission, and the Oregon Department of Energy*
- **Impacts from Real Estate Investments, AFL-CIO’s Housing Investment Trust (“HIT”).** Josephson used the IMPLAN model to measure the economic and fiscal impacts associated with HIT’s investments throughout the United States. This included \$8.5 billion in spending on new construction and tenant improvements for over 400 projects in 25 states. In addition to standard measures of economic and fiscal impacts, Josephson developed a union-trade module to estimate the job benefits for union construction labor and added measures for green investments, i.e., sustainable developments (LEED-certified) and high performance property operations (Energy Star).

 - *Similar economic and fiscal impact analyses were conducted for Ullico, MEPT, and TCW*
- **Boardwalk and Downtown Revitalization Impacts, City of Bremerton, Washington.** Josephson conducted an analysis of the economic and fiscal impacts from a proposed Boardwalk project, including a market demand analysis, evaluation of tourism-related impacts and economic development potential. This was followed by a comprehensive socioeconomic impact study for the City of Bremerton’s proposed downtown revitalization program, including a 25 year forecast of the economic and fiscal impacts; estimation of the tax revenues to be received by various local entities such as schools, fire and police, and roads; and evaluation of a wide range of economic development issues such housing supply, commercial space, and changes in zoning regulations.

- **Large-Scale, Bond-Financed School Renovation Programs, Oregon.** For Portland Public School's proposed \$482 million, 32-year Capital Improvement Program and Clackamas Community College's proposed \$130 million Campus Renovation Project, Josephson developed a sophisticated economic impact modeling framework implemented within the IMPLAN economic impact software to measure the economic and fiscal impacts associated with large-scale, bond-financed construction and renovation projects for Portland area schools. With this modeling framework, Josephson was able to incorporate detailed project spending (hard costs, soft costs, and other costs) and financing costs over various time periods to measure both the gross impacts (unadjusted for bond financing) and net impacts (adjusted for bond financing).
- **Facebook Data Center Construction and Operations, Oregon.** Alec measured the economic and fiscal impacts associated with the construction and operations of its Prineville Data Center. The analysis provided detailed impacts for each phase of the \$210 million construction project. The report also served as a foundation for a presentation to persuade the Oregon Legislature to alter its property taxing policy on data centers. Alec was the sole analyst and author of this comprehensive analysis.
- **Nike Corporate Operations, Oregon.** Josephson evaluated the economic and fiscal impacts associated with Nike's headquarters operations in Oregon. This included the economic effects on employment, incomes, and output in the state and local economies. It also included a benefit/cost analysis for the fiscal impacts. This cutting edge approach measured both the revenues that state and local governments and school districts receive from Nike and its employees, and the costs of providing government services to Nike and its employees in Multnomah County, Portland area and state of Oregon. Phil Knight was so impressed with this work that he hosted a special event that was attended by the Governor, most of the Legislature, and many Portland metropolitan area politicians. The event also attracted widespread media attention.
 - *Josephson conducted similar economic impact analyses for Intel, Oregon Health Sciences University, Standard Insurance, Cambia Health Solutions, ESCO, Vestas, and Providence Hospitals*
- **Oregon State University Impacts.** Josephson was project director and contributor on a comprehensive study that measured Oregon State University's economic contributions to the local, state, and global economies. The analysis relied on the IMPLAN economic impact model and spending by OSU on operations and capital, student spending, and visitor spending to measure changes in output, wages, and jobs. Oregon State University used the analysis results for one of its central marketing efforts.
 - *Similar analyses were conducted for each of the seven Oregon public universities, the National College of Natural Medicine, The Evergreen State University, and Central Washington University*

- **Oregon Bioscience Association, Industry Contributions.** Conducted annual evaluations of the bioscience industry in Oregon to include private industry and bioscience life science research at universities and hospitals. The four major sectors of the private bioscience industry include: agricultural feed stocks and chemicals; drugs and pharmaceuticals; medical devices and equipment manufacturing; and research, testing, and medical laboratories. Employment and payroll data was obtained from the Oregon Employment Department and used to describe the direct dimensions of the private bioscience industry such as number of establishments, jobs, and payroll. In addition, funding, payroll, and employment data was obtained from research universities and hospitals in Oregon. Both data sets were then fed into an IMPLAN model to fully describe other dimensions, as well as the linkages or multiplier effects (i.e., supply-chain and consumption-driven impacts) of the bioscience industry in the Oregon economy.
 - *Alec conducted similar analyses for the Software Association of Oregon (now called the Technology Association of Oregon or “TAO”), the Oregon Association of Hospitals and Health Systems (“OAHHS”), the Oregon Cultural Trust, and Health Care Associations for Oregon, Washington, and Minnesota*
- **Entertainment Industry Impacts, Oregon Film & Video Office.** Alec used IMPLAN to measure the economic impacts for three segments of the entertainment industry in Oregon: Local film production, out of state productions filmed or taped in Oregon, and the local television broadcasting industry. For each segment the fiscal impacts on State and local governments were calculated.
 - *Josephson worked on similar analyses for The City of Seattle’s Office of Film + Music, and the Maine Film Office*
- **Impacts from Construction and Operations of Genentech’s Pharmaceutical Facility in Oregon.** Josephson prepared an analysis of the economic and fiscal impacts of Genentech's proposed facility in Washington County. Josephson assessed the expected employment, incomes, and output and the contribution to the establishment of a viable biotechnology cluster in the region resulting from the company's investments and operations in the State, and the revenues the firm and its employees will generate for state and local governments.
- **Construction and Operating Impacts of the Troutdale Energy Center ("TEC").** Josephson used detail construction and operating cost data to measure the economic and fiscal impacts of the proposed \$680.5 million power plant facility. In addition, the report described the fiscal impacts of the facility for property taxes and community service fees. The report assisted in the application for the State of Oregon’s Strategic Investment Program (SIP).
- **Economic Impacts of Oregon’s Ski Industry.** Using the results from a survey of skiers and snowboarders, estimated the economic impacts associated with the ski industry in Oregon during the 2011–2012 ski season. The survey gathered a broad range of data, including participation patterns, shopping patterns, on- and off-mountain expenditures, and ski vacations. This information was fed into a model of the Oregon economy

constructed using the IMPLAN economic impact software. Analysis showed that the ski industry contributed \$481.6 million in economic activity in Oregon, including \$194.4 million in income and almost 6,800 jobs.

- *Comparable impact analysis were conducted of a ski resort in the Catskill Mountains, recreation on the Rogue River in Oregon, recreational fishing on the Lower Columbia River in Oregon, racing and other user groups at Portland International Raceway, and Tribal gaming and recreational activities for various Northwest Tribes*
- **PGE Transmission Line Impacts.** Alec evaluated the economic and fiscal impacts associated with PGE’s nearly \$1.0 billion Cascade Crossing Transmission Project. Josephson used construction cost estimates, and the IMPLAN economic impact modeling software to measure the economic and fiscal impacts of the project. Impacts were measured for the state of Oregon and the US. Importantly, to meet critical project deadlines, Alec conducted all of the economic impact modeling and authored the report in about 45 days.
- **In support of New Market Tax Credit (NMTC) and EB-5 Investor Visa applications,** Josephson has evaluated the economic and fiscal impacts on almost 150 projects totaling more than \$10 billion in investment. Alec’s analyses have helped clients receive more than \$100 million in grant funding. The range of projects is extensive, and includes OSU’s Seafood Laboratory (Astoria, Oregon), Seattle’s Children Hospital, the Salvation Army (North Carolina), and the Nashville Opera. Most of these projects included both construction and operating impacts, and, where relevant, visitor spending impacts. To enhance proposers’ applications, in 2011, Josephson provided economic impact measures across industry sectors to show how the proposed project would affect regional economic development, and a living wage calculator to demonstrate the importance of long-term, operational jobs for local households.

Clients include:

- Gerden Edlen
- United Fund Advisors
- Shorebank Pacific Bank
- Kineticomm
- Ecotrust
- California Statewide Communities Development Authority
- Carroll Community Development
- American United Development Group

Projects include:

- Hotels, lodges, resorts, spas
- Arenas, parks, museums, conference centers
- Mixed used developments including residential, office, retail, and services
- K-12 education, colleges and universities, charter schools
- Medical clinics and offices, hospitals, long-term care facilities
- Electric vehicle, lumber, seafood, battery, RV, solar cells, chemical manufacturing
- Major retail developments, farmers markets, niche retailer