



### **Estimating job creation**

Major capital projects require the work of planners, engineers, construction workers and many others, and have the potential of generating many jobs. As part of the Final Environmental Impact Statement, Metro estimated that 14,500 direct, indirect and induced jobs will be generated by the Portland-Milwaukie Light Rail Project (PMLR).

- Direct jobs are occupations that work directly on the light rail project, such as project planners, designers, engineers and construction workers.
- Indirect jobs means positions at suppliers of materials for the project, such as steel, concrete, wood, and more.
- Induced jobs are jobs created by the spending of monies provided as project salaries for items such as groceries, gas, entertainment, etc.

### **IMPLAN methodology**

Estimates are intended to identify benefits to local economies from major capital investments. To estimate job generation, the project used IMPLAN, computer modeling software commonly applied to major capital projects. IMPLAN software uses the capital cost estimate as key input for determining the number of jobs created by a project. For FEIS purposes, Metro contractor, David Evans and Associates, used IMPLAN to calculate construction dollars with job multipliers to estimate jobs.

- The direct job estimate is based on a direct multiplier of 8.34 jobs per million dollars of construction spending, with project construction spending estimated at \$854 million; thus,  $8.34 \times 854 = 7,122.36$  direct jobs.
- The indirect and induced job estimate is based on a direct multiplier of 8.63 jobs per million dollars of construction spending, with project construction spending estimated at \$854 million; thus,  $8.63 \times 854 = 7,370.02$  indirect and induced jobs.

The 14,500 job estimate is based on the \$1.490 billion year-of-expenditure project budget likely to be spent in the Portland Region, minus costs for these items: new light rail vehicles, right-of-way, insurance and financing. The estimate includes temporary and full-time jobs during the design and construction period (FY2009-FY2015). As is typical with construction-related jobs, these jobs will dissipate as construction ends. This estimate includes all jobs created by the project. In this calculation, some jobs will last all six years while others last a few months.

### **ARRA methodology**

To estimate job creation under the American Recovery and Reinvestment Act, the White House provided this formula for job years:

- \$92,000 of government spending creates one job year
  - 64 percent of the job years represent direct and indirect effects
  - 35 percent of the job years are induced effect

ARRA considers a job to be a person working full-time (40 hours a week) for a quarter.

Applying the ARRA formula to the PMLR budget results in the following job estimates:

- \$1.490 billion project generates 16,200 job years
- \$1.490 billion project minus costs for financing generates 13,351 job years
- \$1.490 billion project minus costs for financing, right-of-way and vehicles generates 10,100 job years

### **APTA Methodology**

The American Public Transportation Association commissioned a study that finds each billion spent on capital investment on public transit generates 24,000 jobs. APTA's calculation includes the purchase of vehicles and equipment and the development of infrastructure and supporting facilities. Using this formula, the Portland-Milwaukie Light Rail Project, which subtracts financing, would generate approximately 29,400 jobs.