

MEMORANDUM

To: Matt Petersen, LACI
From: HR&A Advisors, Inc.
Date: June 1, 2020
Re: TEP Stimulus Job Creation Estimate

On April 27, 2020 the Transportation Electrification Partnership (“TEP”) sent a letter to Congress urging the passage of \$150 billion to support zero emissions vehicle manufacturing, innovation, and infrastructure to create jobs and safeguard our environment. LACI, who is the convener of TEP and one of the chief architects of this stimulus package, has asked HR&A Advisors (“HR&A”) to estimate the number of jobs this level of investment might create both nationally and in California. This memorandum summarizes these findings.

Methodology

The proposed stimulus package is comprised of five categories of funding which touch upon different aspects of zero emissions transportation (Figure 1). HR&A reviewed existing studies on the impact of green investment dollars on employment to create a jobs to investment dollar ratio for each bucket. Since these studies invariably differed in time of publication, HR&A adjusted all ratios to reflect the impacts of a billion dollars invested in 2020 dollars.

Figure 1: Five Categories of Investment

Category

Zero Emissions Vehicle Manufacturing, Assembly, and Adoption
Zero Emissions Infrastructure Investment
Zero Emissions Public and Active Transit
Workforce Development and Job Training
Innovation Ecosystem, Cleantech Startups, and Related Small Businesses

It is important to note that these job estimates represent a mix of both direct zero emissions transportation jobs as well as jobs that are supportive of zero emissions transportation. This includes indirect jobs located at suppliers as well as induced jobs which result from household spending. Additionally, since the time period of deploying the \$150 billion is unknown, for simplicity all jobs estimates are presented as one-time impacts based on one year of investment.

Findings

HR&A estimates that a \$150 billion stimulus investment in transportation electrification could create up to **2.3 million jobs nationally**, with 1.4 million jobs expected to build out our nation’s zero emissions transportation infrastructure (Figure 2). This value considers not only jobs immediately created from the stimulus, but also jobs generated from the structural changes this stimulus investment can have on the labor market and economy. For context, as of 2019, E2 estimates that there were 3.4 million clean energy jobs in the United States.

E2 also estimates that California is home to 16 percent of all clean energy jobs. Using this benchmark, **California** can expect to capture up to **370,000 new jobs** from the stimulus, with approximately 220,00\$ jobs supporting infrastructure build-out.

Figure 2: Stimulus Jobs Impact

Category	Job Creation Potential
Infrastructure Related Jobs	1,400,000
Other Zero Emissions Transportation Jobs	900,000
Total	2,300,000

Additional details can be found in Appendix A.

Appendix A – Jobs Estimate

Jobs Impact by Investment Category

Category	Amount (\$bns)	Jobs Estimate
Zero Emissions Infrastructure Investment	\$85.0	640,000
Zero Emissions Public and Active Transit ¹	\$25.0	1,210,000
Zero Emissions Vehicle Manufacturing, Assembly, and Adoption	\$25.0	330,000
Workforce Development and Job Training	\$12.5	100,000
Innovation Ecosystem, Cleantech Startups, and Related Small Businesses	\$2.5	20,000
Total	\$150.0	2,300,000
California Share	16.0%	370,000

¹This category also includes infrastructure related jobs. The American Public Transportation Association estimates that 63 percent of federal funding in public transportation goes towards capital improvements and infrastructure.

Jobs Impact by Geography and Type

Category	National	California
Infrastructure Related Jobs ²	1,400,000	220,000
Other Zero Emissions Transportation Jobs	900,000	150,000
Total	2,300,000	370,000

² Infrastructure jobs are comprised of the investment in Zero Emissions Infrastructure Investment and a portion of the investment in Zero Emissions Public and Active Transit.

Appendix B – Sources

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Greg Carlock, "Public Transit and Transportation Infrastructure: Creating Jobs and Supporting Transit Across the United States," World Resources Institute, April 2020, <https://www.wri.org/publication/public-transit-and-transportation-infrastructure-creating-jobs-and-supporting-transit>.

Marcy Lowe, Hua Fan, and Gary Gereffi, "U.S. Smart Grid: Finding New Ways to Cut Carbon and Create Jobs," Center on Globalization, Governance & Competitiveness, Duke University, April 19, 2011, <https://www.edf.org/sites/default/files/smart-grid-cut-carbon-create-jobs.pdf>.

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