

Economic Impact Analysis of Proposed Infrastructure Investments

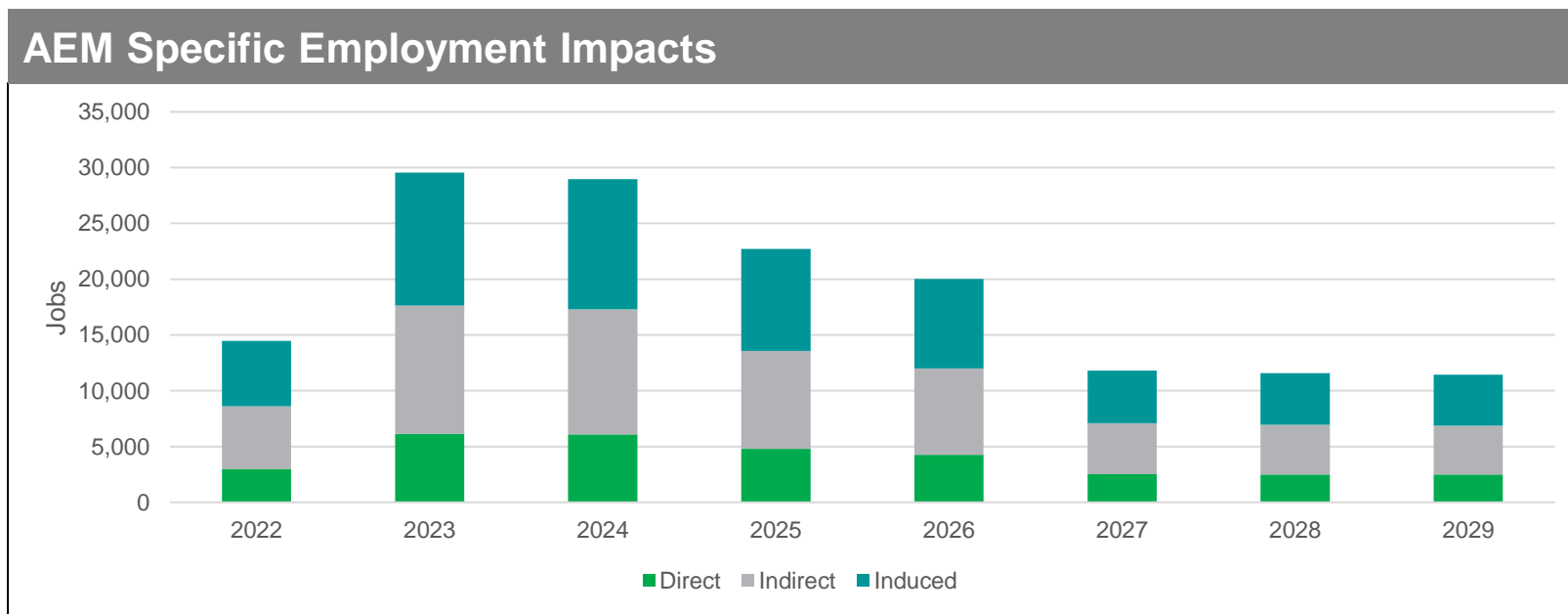
Prepared for Association of Equipment Manufacturers

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The significance of the proposed investments in US infrastructure

- The current bipartisan infrastructure framework (BIF), as well as the surface transportation reauthorization, is a welcome compromise that begins to address the nation's badly needed infrastructure shortcomings.
- The boost to the construction industry will help support construction equipment manufacturers, where the negative impacts from US trade policy in 2019 were compounded in 2020 during the pandemic.
- Proposed infrastructure investment will support over 100,000 above average paying jobs in equipment manufacturing and supporting industries before the end of President Biden's first term.
- The investment will spur nearly a half million U.S. manufacturing jobs before the end of President Biden's first term.
- The industry jobs generated by these bills are highly-skilled and will have an annual income of over \$88,000 that is more than 35% above the national average for all employees.
- From 2022-2024 equipment manufacturers and supporting industries will generate over \$27B in output as a result of the proposed investments.
- This investment will also result in \$2.25 billion in additional taxes paid to federal, state, local governments before the end of President Biden's first term by the equipment manufacturing industry and their supporting industries.

Bipartisan Infrastructure Framework Economic Impact Summary

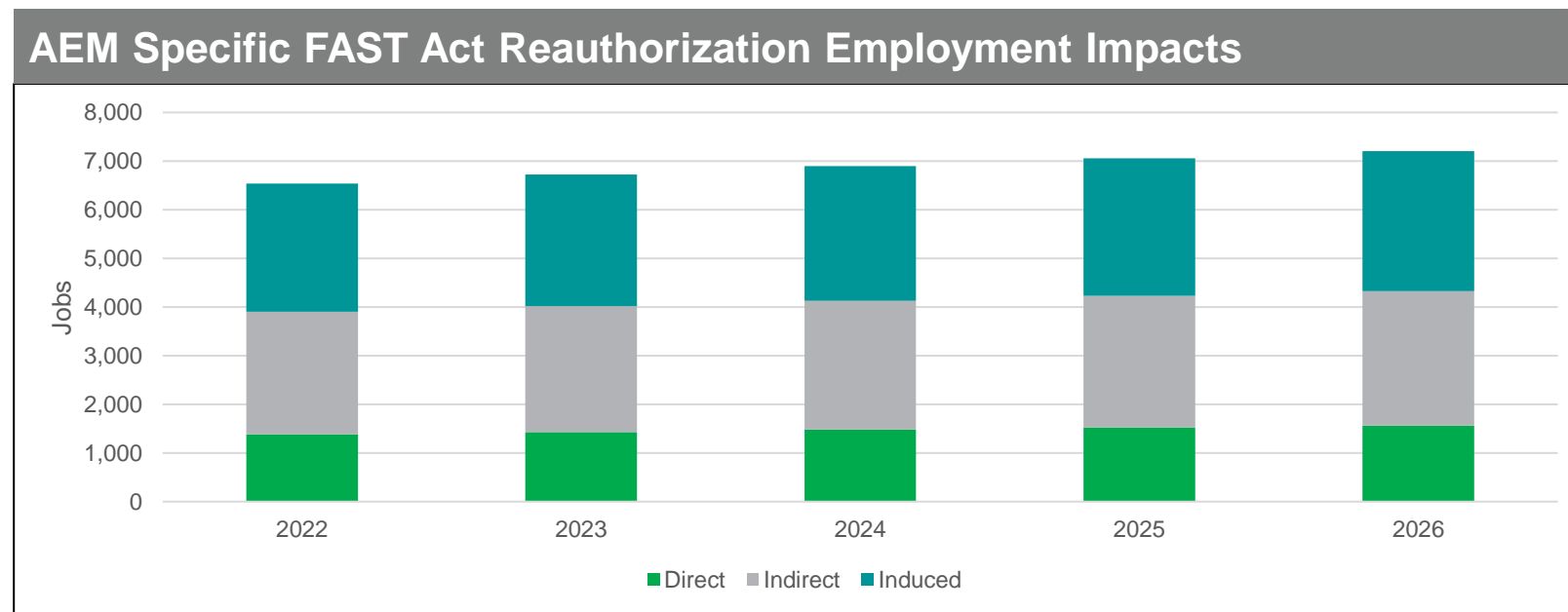


Source: IHS Markit Inc.

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- Total employment supported by the AEM related impacts of the BIF scenario will average nearly 19,000 jobs annually, with an average of over 29,000 jobs supported in 2023 and 2024.
- For every direct job supported by the BIF, an additional 4 jobs are supported through the indirect and induced impacts.

FAST Act Reauthorization AEM Economic Impact Summary



Source: IHS Markit Inc.

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- Total employment supported by the AEM related impacts of the FAST Act reauthorization will average nearly 7,000 jobs annually.
- For every direct job supported by the reauthorization, an additional 4 jobs are supported through the indirect and induced impacts.

Summary of industry related tax implications of infrastructure investments

AEM Specific Tax Impacts								
Industry supported BIF infrastructure deal tax impact								
	2022	2023	2024	2025	2026	2027	2028	2029
Millions of Dollars								
Government revenues (million US \$)	349	720	713	565	503	300	297	296
Federal tax	222	458	453	359	320	191	189	188
State and local	127	263	260	206	184	109	108	108

Source: IHS Markit

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Industry supported FAST reauthorization tax impact					
	2022	2023	2024	2025	2026
Millions of Dollars					
Government revenues (million US \$)	157	163	169	174	180
Federal tax	100	104	107	111	115
State and local	57	59	61	63	65

Source: IHS Markit

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- During the first three years, the BIF scenario will result in federal, state and local industry related taxes of \$1.82B. Over the full eight-year timeframe, industry activity will generate \$3.7B in total taxes
- The surface transportation reauthorization will generate nearly half a billion dollars in federal, state and local industry related taxes with almost \$850M across the five-year program timeline.

Study Background

Infrastructure Bills Economic Impact Study Scope

- This study presents the results of the IHS Markit assessment of the macroeconomic impacts of two potential infrastructure related bills. A renewal of the current surface transportation legislation and the second a large infrastructure bill of over \$1 trillion.
- Assumptions around the BIF proposal were developed in conjunction with our US Macro colleagues on the likely dimensions of such legislation and incorporated their assessment of the expected macroeconomic impacts from each, based upon their proprietary model of the US Economy.
- IHS Markit quantified the national and off-highway industry specific incremental direct economic contributions to the US economy from these two scenarios.
- IHS Markit also assessed the indirect and induced impacts to capture the effects on equipment supply chains and the induced effects of consumer expenditures associated with wage income related to the off-highway equipment industry.
- AEM was supplied with supporting tables and data in addition to this summary report.

Infrastructure Investment Proposal Overview

- IHS Markit initial estimates of the **full** American Jobs Program (AJP), as proposed in early 2021, suggest that the ramp up in spending could raise GDP growth by between 0.2 and 0.4 percentage point from 2022 through 2024—enough to lift the level of GDP about 1% above our baseline forecast by 2024 and push the unemployment rate below 3%—before the effects reverse.
- The media refers to AJP as an “infrastructure bill”, but less than a third of the initial proposed spending (\$621 billion) is for transportation projects conventionally considered infrastructure investments. Even within that first proposal of \$621 billion, \$174 billion is in “unconventional” support of electric vehicles.
- The infrastructure proposal has gone through numerous negotiations to move towards a package that can generate enough support to pass the Senate and the House. Certain assumptions had to be made about the details and this study assumes a \$1.1T package over an 8-year window with \$831B to be spent in the first five years.
 - > For this scenario, the final 3 years of the program were assumed to carry forward the full program spend at roughly \$90B annually to get the full \$1.1T package
 - > While not directly one-to-one, the value of Construction Put in Place for 2020 was \$1.36 trillion. While much remains to be ironed out in the details, the BIF has the potential to add 10% to the construction market in the coming years.

BIF Scenario Economic Impact Assumptions

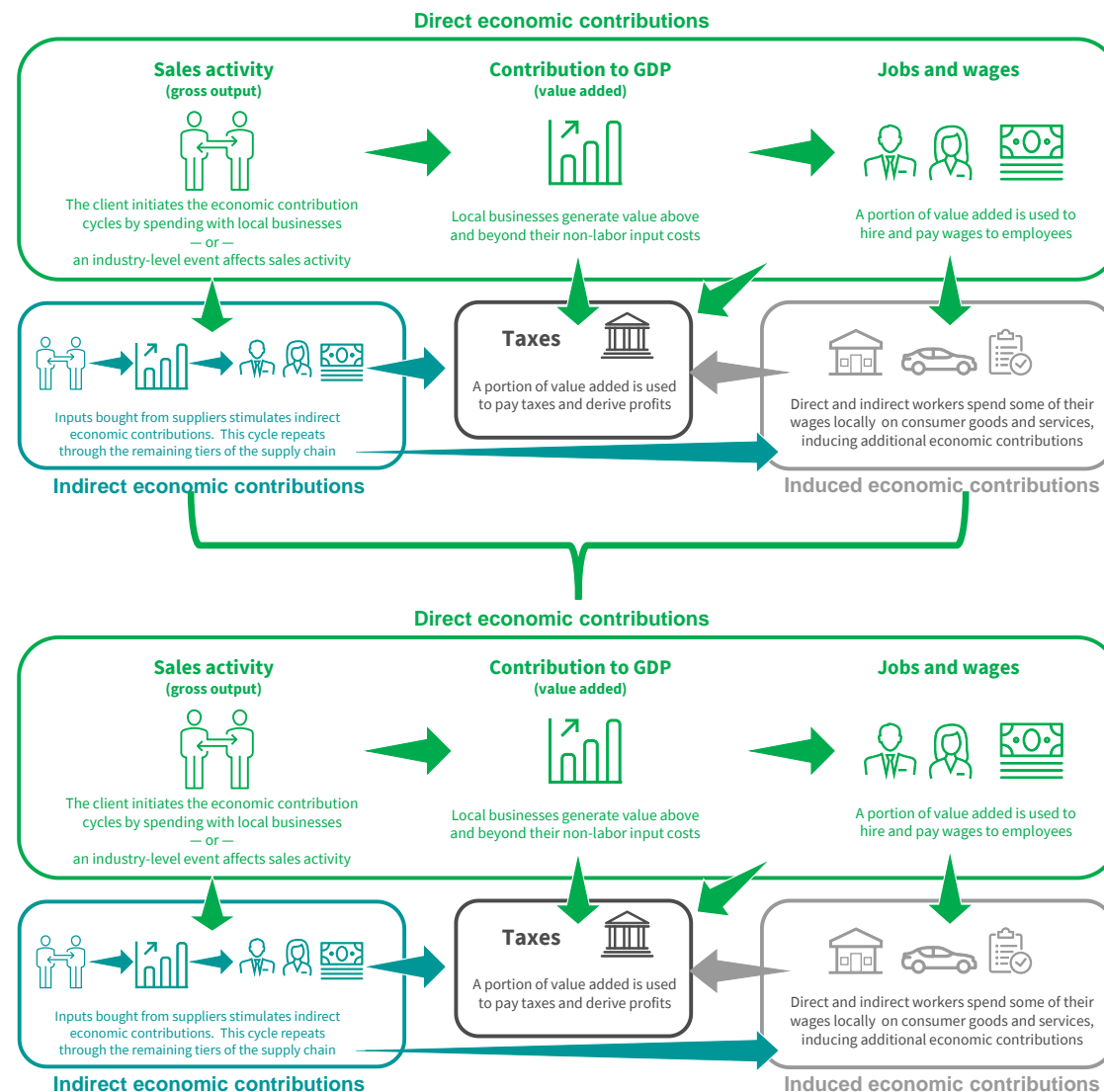
- Timing:
 - IHS Markit has assumed the spending will occur over 8 years, beginning in 2022.
 - Nearly 75% of the spending is expected to occur in the first 5 years of the program.
- Spending components: Scenario includes \$1.1T relevant infrastructure related spending, with the \$824B of the first five years allocated as follows:
 - Transportation infrastructure: \$372B
 - Other infrastructure: \$452B
 - \$49B for public transit
 - \$66B for rail improvements
 - \$60B for water infrastructure, upgrades and storage
 - \$65B broadband access
 - \$73B power infrastructure
 - \$47B climate resiliency
 - \$25B airports
 - \$16B ports
 - \$30B electric buses and clean transportation
 - \$21B mine reclamation

FAST Act Reauthorization Overview

- The current surface transportation authorization, known as Fixing America's Surface Transportation Act (FAST Act) covered fiscal years 2016 through 2020 for the highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology and statistics programs. The program was extended one additional year to cover 2021.
- Reauthorization, referred to as the Surface Transportation Reauthorization Act of 2021, is expected to occur in fall 2021 at a five-year total of \$303B
- Initial assumptions are that roughly 1/6 of the annual funding will be targeted to improvements in public transportation, with the remainder targeting highways, roads and bridges

Infrastructure Bill Economic Impact Process

- For each scenario, the broad spending categories were allocated to their relevant NAICS codes and were then mapped to IMPLAN codes
- Using IMPLAN models, national impact results were generated for each year based on the expected spending profile for the BIF scenario and the surface transportation bill
- The impacts were analyzed to quantify all employment impacts tied to AEM related industries
- AEM related employment impacts were then run through their own model to determine the downstream impacts for each scenario



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