

Capital Spending, GDP, and Employment Impacts of GHG Regulations under CAA¹

- The American Council for Capital Formation (ACCF) has investigated the likely impact of EPA's new GHG regulations on the cost of capital and U.S. investment.² ACCF estimated that the pending GHG regulations would "increase the risk premium added to the firm's cost of capital by 30% to 40%." Based on a conservative estimate of the changes in investment in response to changes in the cost of capital, ACCF concluded that:

"[I]t seems likely that U.S. investment could decrease by 5% to 15% over 2011 – 2014 period compared to the baseline forecast. In terms of real dollars, investment would be depressed by \$97 billion to \$290 billion in 2011 and by as much as \$301 billion in 2014."

- In ACCF's calculations, the 5% to 15% was applied to all capital investment in the U.S. economy, approximately \$2 trillion per year. However, only 25% of total investment (in both 2008 and 2009) occurred in sectors identified in EPA's Tailoring Rule GHG emissions threshold assessment. Limiting the 5% to 15% investment impact to only the affected industries would be approximately \$25 to \$75 billion annually over the 2011 to 2014 period. As EPA expands coverage by lowering the threshold in 2013 and subsequent years, or if the Tailoring Rule fails to survive judicial challenge, sectors and entities covered could expand dramatically and impact far more than the \$25 to \$75 billion in capital spending estimated herein.
- IMPLAN modeling was used to estimate the employment impacts of a drop of \$25 to \$75 billion per year in total capital investment. Direct investment was allocated based on 2008 capital expenditures from industries identified as being impacted by the EPA.
- Reduction in capital expenditures in one sector of the economy reduces capital expenditures in other sectors. In addition, a drop in capital investment will reduce economic activity in other non-capital sectors of the economy either through fewer purchases of inputs to produce capital goods or through income related effects. Using the IMPLAN modeling system, it is estimated that a decrease of \$25 to \$75 billion of capital investment would reduce total U.S. GDP by \$47 to \$141 billion annually given implementation of EPA GHG regulation under CAA.
- The reduction of GDP translates into employment losses that are projected to be between 475,000 to 1.4 million relative to a baseline without the new regulations as the GHG regulation takes effect. This would impact all sectors of the economy including up to an estimated 200,000 manufacturing jobs. If/when EPA coverage expands beyond the \$25 to \$75 billion in capital spending estimated herein, adverse impacts to jobs and GDP would likely increase as well.

¹ IMPLAN estimates undertaken by the American Petroleum Institute, February 2011.

² See American Council for Capital Formation – Special Report: "EPA Regulation of GHGs, U.S. Investment and Economic Recovery: Questions & Answers". See <http://www.accf.org/publications/143/epa-regulation-of-ghgs-us-investment-and-economic-recovery-questions-answers>

IMPLAN Modeling Results - Reduction in Capital Spending GDP and Employment Impacts

Value Added (Contributions to GDP) - Drop in Capital Investment by \$25 Billion				
\$Billions	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
Capital Sectors	(\$14.0)	(\$6.4)	(\$4.7)	(\$25.0)
<u>Non-Capital Sectors</u>	<u>\$0.0</u>	<u>(\$8.4)</u>	<u>(\$13.6)</u>	<u>(\$22.0)</u>
Total	(\$14.0)	(\$14.7)	(\$18.3)	(\$47.0)
Associated Employment (1000's)				
	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
Total	(119.5)	(141.4)	(215.3)	(476.2)
Agriculture	0.0	(0.9)	(5.0)	(5.9)
Mining	(13.4)	(1.2)	(0.6)	(15.1)
Construction	0.0	(2.4)	(2.1)	(4.5)
Manufacturing	(34.0)	(24.5)	(11.7)	(70.1)
Transport/Information/Utilities	(13.2)	(10.1)	(7.4)	(30.7)
Trade	0.0	(12.9)	(43.0)	(55.9)
Service	(59.0)	(87.0)	(142.7)	(288.7)
Government	0.0	(2.3)	(2.9)	(5.3)
Value Added (Contributions to GDP) - Drop in Capital Investment by \$75 Billion				
\$Billions	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
Capital Sectors	(\$41.9)	(\$19.1)	(\$14.1)	(\$75.0)
<u>Non-Capital Sectors</u>	<u>\$0.0</u>	<u>(\$25.2)</u>	<u>(\$40.8)</u>	<u>(\$66.0)</u>
Total	(\$41.9)	(\$44.2)	(\$54.9)	(\$141.0)
Associated Employment (1000's)				
	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
Total	(358.6)	(424.1)	(646.0)	(1,428.7)
Agriculture	0.0	(2.8)	(15.0)	(17.8)
Mining	(40.1)	(3.6)	(1.7)	(45.4)
Construction	0.0	(7.2)	(6.3)	(13.5)
Manufacturing	(102.0)	(73.5)	(35.0)	(210.4)
Transport/Information/Utilities	(39.6)	(30.4)	(22.1)	(92.1)
Trade	0.0	(38.7)	(129.0)	(167.7)
Service	(176.9)	(260.9)	(428.2)	(866.0)
Government	0.0	(7.0)	(8.7)	(15.8)

Source: ACCF, EPA, BEA, and IMPLAN Modeling