



THE COMMITTEE ON ENERGY AND COMMERCE

MEMORANDUM

June 18, 2013

To: Members of the Subcommittee on Commerce, Manufacturing, and Trade and
Subcommittee on Energy and Power

From: Majority Committee Staff

Re: Hearing on “U.S. Energy Abundance: Manufacturing Competitiveness and America’s
Energy Advantage”

On Thursday June 20, 2013, at 10:00 a.m. in 2123 Rayburn House Office Building, the Subcommittee on Commerce, Manufacturing, and Trade and the Subcommittee on Energy and Power will hold a joint hearing entitled “U.S. Energy Abundance: Manufacturing Competitiveness and America’s Energy Advantage.” Witnesses are by invitation only.

I. Witnesses

Paul Cicio
President
Industrial Energy Consumers of America

Dean Cordle
President and CEO
AC&S Incorporated

Phyllis Cuttino
Director
Clean Energy Program
The Pew Charitable Trusts

Drew Greenblatt
President
Marlin Steel Wire Products

André de Ruyter
Senior Group Executive
Sasol Limited

II. Background

The use of energy as a manufacturing input varies widely across industries but the four most energy-intensive sectors consume almost half of all energy used in manufacturing, totaling

over 10 percent of all U.S. energy consumption.¹ However, compared to many of the U.S.'s less-developed competitor nations, the U.S. is also much more energy efficient.² For example, in 2006, the iron and steel manufacturing process accounted for 13.6 percent and 1.4 percent of primary energy consumption in China and the U.S., respectively.³ Both decreasing energy costs and efficiency savings in the U.S. are combining to make energy expenditures on manufacturing relatively cheaper than abroad. These developments have contributed to enhanced U.S. competitiveness and resulted in what has been labeled the “manufacturing renaissance.”

Within the manufacturing sector, energy may be used as fuel (as a source of heat and power) or as a feedstock (as a material constituting part of the final product), particularly in the petrochemical industry.⁴ In 2010, the U.S. became the top natural gas producing nation in the world. The Potential Gas Committee's latest biennial assessment placed the total technically recoverable natural gas resource base in the U.S. at 2,384 trillion cubic feet (Tcf) as of end of 2012.⁵ Due in large part to advanced extraction techniques that greatly increased our domestic production of natural gas, energy costs in the U.S. are currently a fraction of those in Europe and Asia. As one steel manufacturing executive testified before the Commerce, Manufacturing, and Trade Subcommittee, 6 MMBTU in the U.S. cost \$25, whereas the same amount of energy in Europe would cost approximately \$75.⁶ To further illustrate the growing cost advantage of U.S. energy, in 2007, the cost of natural gas in the U.S. was 20 percent less than in Europe; today, the cost is 75 percent less than in Europe.⁷

The potential benefits of lower energy prices include increased output, increased employment, increased wealth, and reduced trade deficits. After decades of declining manufacturing employment - due in part to greater productivity, increased global competition, and offshoring production - domestic manufacturers are reestablishing operations in the U.S. while foreign-based manufacturers increasingly are investing in new plants in the U.S. For example, Caterpillar recently built a new 600,000-square-foot hydraulic excavator manufacturing facility in Victoria, Texas.⁸ GE also moved some production from China to the U.S.; moving these operations to Kentucky reportedly resulted in “a 20 percent lower sticker price for final

¹ See Climate change impacts on the competitiveness of energy-intensive manufacturing sectors (Visited May 28, 2013) <<http://www.millennium-institute.org/projects/region/na/usa/ncep.html>>

² See Summary results for the 2011 structural cost study (Visited May 2013) <<http://www.themanufacturinginstitute.org/Research/Structural-Cost-of-Manufacturing/2011-Structural-Cost-Report/Energy-Costs/Energy-Costs.aspx>>

³ See Comparison of Iron and Steel Production Energy Use and Energy Intensity in China and the U.S. (Visited May 28, 2013) <http://minotaur.lbl.gov/china.lbl.gov/sites/china.lbl.gov/files/US_China_Steel_Comparison_Report_EN_28June2011rev1.pdf>

⁴ See *id.*

⁵ Potential Gas Committee, “Potential Supply of Natural Gas in the United States” (April 9, 2013).

⁶ Surma, John, testimony before the Subcommittee on Commerce Trade, and Manufacturing hearing on “Our Nation of Builders: The Strength of Steel” March 21, 2013 available at <http://docs.house.gov/meetings/IF/IF17/20130321/100543/HHRG-113-IF17-Wstate-SurmaJ-20130321.pdf>

⁷ See European industry flecks to U.S. to take advantage of cheaper gas (Visited May 28, 2013) <<http://news.thomasnet.com/IMT/2013/04/16/is-the-u-s-the-next-low-cost-manufacturing-country/>>

⁸ See Is the U.S. the next low-cost manufacturing company? (Visited May 28, 2013)

<<http://news.thomasnet.com/IMT/2013/04/16/is-the-u-s-the-next-low-cost-manufacturing-country/>>

products, higher quality, and reduced lead times from factory to warehouse.”⁹ Since 2009, chemical giant BASF “channeled more than \$5.7 billion into new investments in North America, including a formic acid plant under construction in Louisiana.”¹⁰ In 2011, Rolls-Royce started making engine parts in Virginia destined for European and Asian jet engine factories, and Siemens began building power-plant turbines in North Carolina to be shipped to Saudi Arabia and Mexico.¹¹

U.S. natural gas increasingly is used in manufacturing to lower energy and input costs, which improves manufacturers’ price competitiveness and helps to mitigate other factors affecting their total cost structure (e.g. a higher corporate income tax rate, higher wages and benefits, and more stringent environmental regulations in the U.S. than developing countries). In manufacturing sectors that use natural gas as a feedstock, such as the petrochemical industry, the absolute price is not as important as the ratio of the price of natural gas to the price of oil. Natural gas liquids are used for ethylene products by petrochemical manufacturers in the U.S., while Europeans producers use crude oil derivatives. Similarly, the fertilizer industry stands to benefit greatly where natural gas is used as the primary raw material for nitrogen-based fertilizers, where the cost of natural gas is an estimated 70 to 90 percent of the cost of the final product.¹² An additional beneficiary is the steel industry, which benefits from both the cost savings of natural gas as an energy input as well as the increased output of products to supply the gas exploration industry. Recent studies have found that with the immense increase in domestic natural gas production there is a sufficient supply of natural gas to support liquefied natural gas (LNG) exports without seriously impacting natural gas prices, especially to the point of threatening energy intensive manufacturing.¹³

III. Questions for Consideration

- Is the United States’ “manufacturing renaissance” a structural or cyclical change?
- To what extent is current EPA regulation affecting energy costs in U.S. manufacturing, and if they are, to what effect on domestic manufacturing in the aggregate?
- What policies are needed to maintain a long term low-cost energy advantage?
- What is the effect of higher energy costs on the competitiveness of U.S. manufacturing?

Please contact Tom Hassenboehler, Jason Knox, Brian McCullough, Gib Mullan, or Shannon Taylor of the Committee staff at (202) 225-2927 with questions.

⁹ See *id.*

¹⁰ See European industry flocks to U.S. to take advantage of cheaper gas (Visited May 28, 2013) <<http://news.thomasnet.com/IMT/2013/04/16/is-the-u-s-the-next-low-cost-manufacturing-country/>>

¹¹ See Foreign manufacturers bringing jobs to U.S. (Visited May 28, 2013)

<<http://www.usatoday.com/story/money/business/2013/05/15/foreign-manufacturers-bringing-jobs-to-us/2070327/>>

¹² Pirog, Robert and Ratner, Michael, Congressional Research Service, “Natural Gas in the U.S. Economy: Opportunities for Growth”, November 6, 2012

¹³ NERA Economic Consulting, “Macroeconomic Impacts of LNG Exports from the United States”, (December 5, 2012)