

## Manufacturing Energy Legislation

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### Introduction

The past several years have seen an unprecedented flurry of activity on manufacturing legislation, beginning with the *Energy Independence and Security Act of 2007*, continuing with the *Emergency Economic Stabilization Act of 2008* (the so-called “bailout” bill), and the *American Recovery and Reinvestment Act of 2009* (ARRA or “stimulus”). All these bills contained important provisions that were intended to encourage greater energy efficiency in manufacturing. Unfortunately, federal agencies have been slow off the mark in implementing these provisions, in large part due to a lack of interest and leadership by the prior administration in meeting the needs of the manufacturing sector. With the arrival of the Obama Administration, we are seeing a major change, starting with the appointment of a manufacturing “czar,” Ron Bloom, and the establishment of an interagency working group on manufacturing, for which energy is a key focus.

We are also seeing major new federal legislation developing that will affect the manufacturing sector in profound ways, appearing to offer major benefits. Meanwhile, the impact of broader energy and climate legislation is less certain. This paper will discuss what is contained in the legislation already introduced and will conclude with a discussion of key outstanding issues and how the legislative process could evolve over the coming months.

### Current Legislation

The 111<sup>th</sup> Congress opened with the passage of ARRA, which offered \$156 million in funding for investment in manufacturing research and development, process improvements, combined heat and power (CHP), and waste energy recovery. The Department of Energy (DOE) received over \$3.8 billion in applications for this funding, and awards were made for the full amount in early November 2009.

Following the passage of ARRA, Congress turned its attention to other legislative energy provisions, some of which were explicitly targeted at addressing the energy needs of the manufacturing sector.

#### **S. 661: Restoring America’s Manufacturing Leadership through Energy Efficiency Act of 2009 and S. 1462: American Clean Energy Leadership Act (ACELA)**

The *Restoring America’s Manufacturing Leadership through Energy Efficiency Act of 2009* (S. 661) was a bipartisan bill introduced by Senate Energy and Natural Resources Committee Chair Senator Jeff Bingaman (D-NM) and Ranking Member Senator Lisa Murkowski (R-AK). This bill represents the most significant, comprehensive manufacturing energy legislation in the last quarter century.

The bill included many important new provisions, and would also reauthorize many of the activities of DOE’s Industrial Technologies Program (ITP). The bill passed the Committee and was subsequently incorporated in its entirety into the Committee’s sweeping energy legislation, the *American Clean Energy Leadership Act of 2009* (S. 1462). The manufacturing energy provisions in the bill are:

- **Sec. 201: State Partnership Industrial Energy Efficiency Revolving Loan Program**—This provision would authorize DOE to fund “eligible lenders” to establish a revolving loan fund. Commercial firms or industrial manufacturers could use these funds to either reduce energy intensity—including feedstocks—or increase their industrial competitiveness. The lenders would be community or economic development lenders who would partner with state government agencies and a private financial institution to provide additional funding. All federal funds would have to be matched at least dollar-for-dollar. Each program should last for 10 years. No lender would receive more than \$100 million in federal funds in a single year. The total authorization would be \$500 million per year for three years (2010-2012).

- *Sec. 203: Efficient Technology Assessment*—This section would direct DOE to conduct an assessment of cost-effective energy efficiency technologies “not widely implemented within the United States” that could be applied to several specific industries whose processes are particularly energy-intensive. DOE would produce a technical assessment report detailing, for each of the listed industries, the cost-effectiveness of the technologies, their efficiency and GHG reduction potential, and a comparison with international adoption.<sup>1</sup>
- *Sec. 204: Future of Industry Program and Sec.204(c): Industrial Research and Assessment Centers*—This provision would reauthorize many of the key activities of ITP. *Subsection (b)* would direct DOE to create industry-specific roadmaps to direct R&D funding through the program. *Subsection (c) Industrial Research and Assessment Centers* would expand authorizations for the highly successful yet underfunded Industrial Assessment Centers (IAC), which are located at universities throughout the country and train engineering students to, along with expert faculty, provide no-cost energy audits to small to mid-sized manufacturing firms. This provision would lift the cap on the number of IACs and establish up to 10 “Centers of Excellence” at current IACs around the country, which would house regional expertise and coordinate regional IACs. Each Center of Excellence would be funded at \$500,000. IACs would be directed to better communicate with other federal, state, and regional programs and organizations, such as Manufacturing Extension Partnership (MEP) centers and national labs. Up to \$5 million would go toward placing students at manufacturing sites after an audit to help identify more savings and implement recommendations. Internship costs would be shared with the employer. IAC authorizations would ramp up to \$40 million by 2012 and beyond.
- *Sec 205: Sustainable Manufacturing Initiative*—This section would create a sustainable manufacturing initiative within ITP. Under the initiative, at the request of manufacturers, ITP would provide onsite technical assistance to identify ways in which manufacturers could improve energy efficiency and achieve other environmental goals. The section would authorize “such sums as may be necessary” for this activity.
- *Sec. 206: Innovation and Industry Grants*—This provision would establish grants awarded to state-industry partnerships to develop, demonstrate, and commercialize new energy-, waste-, or pollution-reducing industrial technologies. Each grant would be no more than \$500,000 and each state-industry partnership would have to match federal funds dollar-for-dollar.

The overall ACELA bill was passed by the Senate Energy and Natural Resources Committee, and is now awaiting action by the Senate Environment and Public Works Committee on climate legislation and the Senate Finance Committee on tax provisions. It is, however, anticipated to be the basis upon which future Senate energy or climate legislation will be based.

### **H.R. 2454: American Clean Energy and Security (ACES) Act**

The House assembled combined energy and climate legislation, *the American Clean Energy and Security (ACES) Act of 2009* (H.R. 2454). This legislation would create a greenhouse gas cap-and-trade system, but includes only a few provisions targeted at manufacturing energy efficiency. These provisions include:

- *Sec. 241: Industrial Plant Energy Efficiency Standards*—This section would direct DOE to work with the American National Standards Institute (ANSI) on the development of and participation in a certification program for industrial plant energy efficiency. The intent of this provision is to encourage ITP to continue its work on the ISO 50001 standard and its related outreach activity, *Superior Energy Performance* project. The section would authorize “such sums as may be necessary” for this activity.
- *Sec. 242: Electric and Thermal Energy Efficiency Award Programs*—This section would direct DOE to establish an awards program for innovative waste heat recovery for electricity production or thermal use. The awards would be available for the owners and operators of new and existing electricity and thermal generation facilities using fossil or nuclear fuel. The awards would be as much as 25% of the value of energy projected to be recovered through the first five years of program activity or the amount necessary to make the project economically viable, as established by DOE. DOE would have to work with the state regulatory agencies to aid electricity providers in the sale of thermal byproducts. The section would authorize “such sums as may be necessary” for this activity.

<sup>1</sup> Alliance to Save Energy. American Clean Energy and Security Act of 2009. <http://ase.org/content/article/detail/5795>

- *Sec. 244: Motor Market Assessment and Commercial Awareness Program*—This section would require DOE to conduct a study of electric motors and the electric motor market in the United States, including the stock of motors and motor-driven equipment; efficiency categories of the motor population; and motor systems that use drives, servos, and other control technologies. (An essentially identical provision is also included in the Senate ACELA bill.) DOE would then have to estimate the opportunities for improvement in the energy efficiency of motor systems by market segment and provide recommendations to update motor profiles and methods to estimate the energy savings and market penetration attributable to the Save Energy Now program. Based on these findings, DOE would have to establish a national program targeted at motor end-users to increase the awareness of energy- and cost-saving opportunities in commercial and industrial facilities. These include employment of higher efficiency motors, improvements in motor system procurement, and criteria for making decisions as to whether to replace or repair motors and motor system components.
- *Section 245: Motor Efficiency Rebate Program*—This section would authorize funding of a motor crush-for-credit program, a motor efficiency rebate program for the purchase and installation of specified new electric motors. This program would authorize funding through appropriations beginning at \$80 million in 2011, and declining by \$5 million each year until 2015. (ACELA also includes this provision.)

In addition, *Section 101* would establish a combined renewable electricity and electric efficiency standard of 20% of electric sales by 2020. Of the 20%, 5–8% of electric sales would need to be met by energy efficiency by 2020. Energy efficiency programs could be used to meet 5% of the requirement, and governors could petition to bring the percentage devoted to efficiency up to 8%. Many utilities and states would likely choose to use the maximum amount of efficiency, as efficiency investments tend to be less expensive than renewable energy.

The bill would also allocate 15% of 2015 carbon allowances to address the impacts of increased energy costs on energy-intensive, trade-exposed (EITE) industries. Some problems have emerged with this provision:

- The procedures set forth for identification of EITE facilities appears unworkable using currently available public data.
- The identification process does not take into account supply-chain considerations.
- No guidance is provided on how the proceeds from the allowance sales are to be used.

Some Senate offices are engaged with representatives of manufacturing groups, labor, and the Administration in attempting to address these problems in upcoming Senate climate legislation.

### ***Other Pending Legislation***

In addition to these major legislative vehicles, a number of narrowly focused pieces of legislation have been introduced. These include:

#### **S. 1639: Expanding Industrial Energy Efficiency Incentives Act**

This bill, introduced by Senators Olympia Snowe (R-ME) and Jeff Bingaman (D-NM), would expand or establish tax incentives in four areas for industrial or large commercial facilities:

- *Section 2: Expanded CHP tax credits*—This provision would modify a recently enacted tax incentive for the installation of CHP. The new incentive would be eligible for any size system and apply to the first 25 MW, instead of the first 15 MW. Furthermore, it would expand the definition of "combined heat and power" to include backpressure steam turbines or waste heat from certain industrial processes.
- *Section 3: Advanced motor tax credit*—This would establish a tax credit for certain advanced motors with variable speed capability. The \$120/kW credit would be available to manufacturers of motors and other appliances.
- *Section 4: Advanced (non-CFC) chiller tax credit*—This would create a \$150/ton tax credit for replacing old chillers with newer, more efficient chillers that do not use chlorofluorocarbons (CFCs).
- *Section 5: Industrial water/energy efficiency tax credit*—This section aims to improve water efficiency. A 10–30% tax credit would be available to projects that reduce water consumption by roughly 20% with only a minor increase in energy use.

While there has been no action yet on this legislation, it is anticipated that this bill will be combined with other tax provisions as part of a finance title in Senate climate or energy legislation.

### **S. 1617: Investments for Manufacturing Progress and Clean Technology (IMPACT) Act**

This bill, which was introduced by Senator Sherrod Brown (D-OH):

- Authorizes \$15 billion per year for two years to provide grants of up to \$500 million per year to states to create revolving loan programs to help manufacturers retool or expand to make clean energy products and components, or to become more energy efficient. Grants would come from the Secretary of Commerce, but the loan programs would be administered by states.
- Provides additional funding for the Hollings Manufacturing Extension Partnership program to provide technical assistance. MEPs are run out of the National Institute for Standards and Technology, which is funded through the Department of Commerce.

This provision is very similar in intent to the loan program established in Section 201 of ACELA, though it is somewhat more restrictive than the ACELA provision in that it limits investment to small and medium manufacturing facilities and imposes a more constraining wage requirement.

### **Future Legislation and Steps Forward**

Senate leadership has indicated that it intends to combine ACELA with the new climate legislation introduced by Senators Barbara Boxer (D-CA) and John Kerry (D-MA) and attach tax provisions drawing upon those already introduced by Senators Bingaman and Snowe. The schedule of advancing these issues is somewhat uncertain, though Majority Leader Harry Reid (D-NV) has suggested that consideration of a combined package is unlikely until 2010. Many issues remain to be addressed, including the allocation of carbon allowances to various purposes including energy efficiency and EITE industries. If and when the combined legislation passes the Senate, the bill will have to be reconciled with the ACES bill passed by the House last summer, and then the conference report will have to pass both houses of Congress before it can reach the President's desk for signature.

There is a growing consensus that prior to passage of climate legislation, a new jobs bill will be enacted to address rising unemployment. Congressional offices are indicating that this bill will likely include additional provisions to encourage manufacturing investments. The size and nature of the provisions are not clear at the time of this writing, but Congressional leadership is suggesting that the bill could be sent to the President in early 2010.