

# Advanced Energy Project Credit (Section 48C)

Competition for clean energy manufacturing is fierce, especially from countries with established industrial policies that provide long-term, consistent support to their domestic clean energy sectors. We are at a point with the clean energy sector where we must take action to keep pace. While we must continue to foster demand for clean energy production – through tax credits, grants, a carbon price, and a federal renewable electricity standard – we must also continue to directly support our clean energy manufacturing sector.

The Advanced Energy Project Credit (48C) has proven successful in generating clean energy manufacturing growth, yet funding dried up well over a year ago. We must build off the success of this tax credit and provide additional funding to keep our clean energy manufacturing sector vital sector growing.

## Background

Passed as part of the American Recovery and Reinvestment Act (ARRA), 48C is a tax credit that was created to grow the domestic manufacturing industry for clean energy, thereby supporting the larger goals of stimulating economic growth, creating jobs and reducing greenhouse gas emissions.

48C invested \$2.3 billion for qualified investments in advanced, clean energy projects, to support new, expanded, or re-equipped domestic manufacturing facilities. It leveraged \$5.4 billion in private investment, creating jobs and economic growth in communities across the country.

## Expectations and Successes

At the time of creation, 48C was estimated by the Obama Administration to create more than 17,000 jobs. The investment was planned to be matched by as much as \$5.4 billion in private sector funding, which could support up to 41,000 additional jobs.

## According to the White House

“Because the 48C program generated far more interest than anticipated, DOE and Treasury have a substantial backlog of technically acceptable applications. Instead of turning down worthy applicants who are willing to invest private resources to build and equip factories that manufacture

clean energy products in America, the Administration has called on Congress to provide an additional \$5 billion to expand the program. Because there is already an existing pipeline of worthy projects and substantial interest in this area, these funds will be deployed quickly to create jobs and support economic activity. In doing so, the Administration will employ new approaches to ensure that we maximize private investment for every dollar we invest.”

The BlueGreen Alliance agrees, and also calls on Congress to provide an additional \$5 billion to expand 48C.

## Structure

48C is a tax credit equal to 30 percent of the qualifying investment with respect to any qualified advanced energy project. The \$2.3 billion in credits were allocated on a competitive basis to 183 manufacturing facilities across the country.

Projects were assessed based on: commercial viability, domestic job creation, technological innovation, speed to project completion, and potential for reducing air pollution and greenhouse gas emissions. Additional consideration factors included diversity of geography, technology and project size, and regional economic development.

According to the White House, qualifying manufacturing facilities included the production of a wide range of clean energy products:

- Solar, wind, geothermal, or other renewable energy equipment;
- Electric grids and storage for renewables;
- Fuel cells and microturbines;
- Energy storage systems for electric or hybrid vehicles;
- Carbon dioxide capture and sequestration equipment;
- Equipment for refining or blending renewable fuels;
- Equipment for energy conservation, including lighting and smart grid technologies;
- Plug-in electric vehicles or their components, such as electric motors, generators, and power control units; and
- Other advanced energy property designed to reduce greenhouse gas emissions may also be eligible as determined by the Secretary of the Treasury.

For more information, you can see the White House's fact sheet: <http://www.whitehouse.gov/the-press-office/president-obama-awards-23-billion-new-clean-tech-manufacturing-jobs>

## Case Study

One of the tax credits – for \$141.8 million – went to the Hemlock Semiconductor Group, a joint venture in which Dow Corning is the principal owner. It supported a \$1 billion expansion of its polysilicon production facility in Hemlock, Michigan. Polysilicon is a cornerstone raw material of the solar industry, used to produce solar cells that harvest renewable energy from sunlight. It is one of the solar manufacturing sectors where U.S.-based companies command a significant global market share. In 2009 an estimated 40 percent of global supply was produced in the United States. A large portion of that came from the Hemlock Semiconductor site in Michigan, which even before the ARRA-supported expansion was the largest polysilicon production facility in the world.

This is the third major expansion at the Michigan facility in the last five years. The latest expansion will add up to 13,000 metric tons of capacity to the site, which is close to having the footprint of a small city. The construction, which Hemlock Semiconductor expects to be complete this year, has supported the employment of approximately 800 construction workers. The new expansion will add an additional 300 to 500 permanent new jobs, ranging from mechanical engineers to pipefitters to chemical operators.

The U.S.-based Dow Corning has a large amount of polysilicon production in the United States, but faces pressure to place that capacity near key markets for the solar industry.

But the vast majority of the polysilicon produced at Hemlock Semiconductor won't be used in the United States. In 2009 the United States exported 12 times more polysilicon than it imported (\$1.1 billion to \$83.9 million).<sup>52</sup> Consistent with this trade flow, Hemlock Semiconductor will export most of the polysilicon it produces – to countries like Japan, China, and Germany. Why? Because the markets are there, not in the United States



**The BlueGreen Alliance is a national, strategic partnership between labor unions and environmental organizations dedicated to expanding the number and quality of jobs in the green economy.**

National Headquarters:  
2828 University Ave. SE, Suite 200  
Minneapolis, MN 55414

Washington, D.C.  
1020 19th Street NW, Suite 600  
Washington, D.C. 20036

San Francisco  
330 Townsend Street, Suite 205  
San Francisco, CA 94107

[www.bluegreenalliance.org](http://www.bluegreenalliance.org)

On Twitter @bgalliance and Facebook at [www.Facebook.com/BlueGreenAlliance](http://www.Facebook.com/BlueGreenAlliance)