



Department of Energy
Washington, DC 20585

ASSISTANT SECRETARY OF ENERGY
FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY

MEMORANDUM OF DECISION

SUBJECT: Determination of inapplicability (waiver) of section 1605 of the American Reinvestment and Recovery Act of 2009 (Recovery Act Buy American provisions) to EERE-funded projects for (1) 400 to 750 watt micro hydro-turbines meeting the specifications detailed below; (2) Oil fired direct vent space heaters for use in buildings that do not have ducts or piping for boiler heating systems; (3) ENERGY STAR rated electric heat pump water heaters; (4) Grid tied solar inverters of 800W or less, for applications where the panels generate 139VDC or less (not including micro-inverters); (5) 50 hp TEFC inverter duty motors for use in an existing Marley cooling tower; (6) Geothermal heat pumps for demonstration scale waste heat geothermal systems that allow the direct use of untreated wastewater to heat and cool commercial buildings; (7) Point to point/point to multi-point electronic broadband microwave radio systems with alignment tone and IE browser interface; (8) LED luminaires for roadway illumination with customized filter application to meet specific lighting requirements of Mauna Kea observatory; (9) Compressed Natural Gas (CNG) compressors, able to provide 3600 psi (248 bar) temperature compensated CNG supply to fast fill storage and fueling dispensers, efficient and adaptable to a small fleet (approximately 5 vehicles), as well as the wireless remote shut down controls (transmitters and receivers) for those CNG systems; (10) 8000W solar inverters for use with US manufactured 315W panels; (11) Electronically commutated motor (ECM) type inline pumps; and (12) Inverters that permit optimal output of four (4) or more types of modules per array connected to inverter.

Under the authority of American Recovery and Reinvestment Act of 2009 (Recovery Act), Pub. L. 111-5, section 1605(b)(2), the head of a Federal department or agency may issue a "determination of inapplicability" (a waiver of the Buy American provision) if the iron, steel, or relevant manufactured good is not produced or manufactured in the United States in sufficient and reasonably available quantities and of a satisfactory quality ("nonavailability"). On September 17, 2010, the authority of the Secretary of Energy to make all inapplicability determinations was re-delegated to the Assistant Secretary for Energy Efficiency and Renewable Energy (EERE), for EERE projects under the Recovery Act. Pursuant to this delegation the Acting Assistant Secretary, EERE, has concluded that: (1) 400 to 750 watt micro hydro-turbines meeting the specifications detailed below; (2) Oil fired direct vent space heaters for use in buildings that do not

have ducts or piping for boiler heating systems; (3) ENERGY STAR rated electric heat pump water heaters and ENERGY STAR rated through the wall air conditioners; (4) Grid tied solar inverters of 800W or less, for applications where the panels generate 139VDC or less (not including micro-inverters); (5) 50 hp TEFC inverter duty motors for use in an existing Marley cooling tower; (6) Geothermal heat pumps for demonstration scale waste heat geothermal systems that allow the direct use of untreated wastewater to heat and cool commercial buildings; (7) Point to point/point to multi-point electronic broadband microwave radio systems with alignment tone and IE browser interface; (8) LED luminaires for roadway illumination with customized filter application to meet specific lighting requirements of Mauna Kea observatory; (9) Compressed Natural Gas (CNG) compressors, able to provide 3600 psi (248 bar) temperature compensated CNG supply to fast fill storage and fueling dispensers, efficient and adaptable to a small fleet (approximately 5 vehicles), as well as the wireless remote shut down controls (transmitters and receivers) for those CNG systems; (10) 8000W solar inverters for use with US manufactured 315W panels; (11) Electronically commutated motor (ECM) type inline pumps; and (12) Inverters that permit optimal output of four (4) or more types of modules per array connected to inverter. The above items, when used on eligible EERE Recovery Act-funded projects, qualify for the “nonavailability” waiver determination.

EERE has developed a robust process to ascertain in a systematic and expedient manner whether or not there is domestic manufacturing capacity for the items submitted for a waiver of the Recovery Act Buy American provision. This process involves a close collaboration with the United States Department of Commerce National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP), in order to scour the domestic manufacturing landscape in search of producers before making any nonavailability determinations.

The MEP has 59 regional centers with substantial knowledge of, and connections to, the domestic manufacturing sector. MEP uses their regional centers to ‘scout’ for current or potential manufacturers of the product(s) submitted in a waiver request. In the course of this interagency collaboration, MEP has been able to find exact or partial matches for manufactured goods that EERE grantees had been unable to locate. As a result, in those cases, EERE was able to work with the grantees to procure American-made products rather than granting a waiver.

Upon receipt of completed waiver requests for the six products in the current waiver, EERE reviewed the information provided and submitted the relevant technical information to the MEP. The MEP then used their network of nationwide centers to scout for domestic manufacturers. The MEP reported that their scouting process did not locate any domestic manufacturers for these exact or equivalent items.

In addition to the MEP collaboration outlined above, the EERE Buy American Coordinator worked with other manufacturing stakeholders to scout for domestic manufacturing capacity or an equivalent product for each item contained in this waiver.

EERE also conducted significant amounts of independent research to supplement MEP's scouting efforts, including utilizing the solar experts employed by the Department of Energy's National Renewable Energy Laboratory. EERE's research efforts confirmed the MEP findings that the goods included in this waiver are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.

The nonavailability determination is also informed by the inquiries and petitions to EERE from recipients of EERE Recovery Act funds, and from suppliers, distributors, retailers and trade associations—all stating that their individual efforts to locate domestic manufacturers for these items have been unsuccessful.

Specific technical information for the manufactured goods included in this non-availability determination is detailed below:

- 1) 400 to 750 watt micro hydro-turbines meeting the following specifications: Available head: 15 feet; available flow: 230 gpm-450 gpm; allows a stand-alone application not tied into the grid.
These specifications were carefully and narrowly written to avoid any overlap with domestic manufacturers, who make similar items that are not usable for this particular application. Further, EERE's Wind and Water Program was unable to locate a suitable domestic manufacturer for this application.
- 2) Oil-fired direct vent space heaters for use in buildings that do not have ducts or piping for boiler heating systems.
These are primarily used in very cold rural areas without a substantial energy infrastructure, and are not broadly requested by Recovery Act grantees. The number needed by Recovery Act grantees was not sufficient for domestic heater manufacturers to re-tool manufacturing lines to produce these items, which are not currently produced domestically.
- 3) ENERGY STAR rated electric heat pump water heaters and ENERGY STAR rated through the wall air conditioners.
Extensive research through the ENERGY STAR program and through ASHRAE revealed no U.S. manufacturers of these products (rated or unrated).
- 4) Grid tied solar inverters of 800W or less, for applications where the panels generate 139VDC or less (not including micro-inverters).
No U.S. manufactured grid-tied solar inverters are compatible with the current design constraints of panels that general 139VDC or less.
- 5) 50 hp TEFC inverter duty motors for use in an existing Marley cooling tower
This motor is unique to the design of the cooling tower manufacturer and not a commercially available off the shelf item.

- 6) Geothermal heat pumps for a demonstration scale waste heat geothermal system that allows the direct use of untreated wastewater to heat and cool commercial buildings.

The system combines a geothermal heat pump with a patented anti-block filtration device to transfer heat energy directly from wastewater for commercial HVAC applications. While there are multiple heat pump and heat exchanger products, none is able to tap directly into the pre-existing geothermal loop provided by the sewer infrastructure. A U.S. company will install, own, operate and maintain a small, pilot-scale waste heat geothermal system, demonstrating an approximately 40% reduction in building heating costs. The technology is only currently available in overseas, where this product is currently manufactured. However, the pilot project will allow the company to demonstrate its system and seek out domestic partners. This site would be the first US commercialization of the waste heat geothermal system.

- 7) Point to point/point to multi-point electronic broadband microwave radio systems with an alignment tone and IE browser interface.

This system was approved by the state's department of transportation for this installation. The standardization of radio systems keeps confusion and costs to a minimum by keeping the same spares, parts, and software. These are distributed by a US company.

- 8) LED luminaires for roadway illumination with customized filter application to meet specific lighting requirements of Mauna Kea observatory.

This item is unique to the needs of Mauna Kea Observatory, the RFP was offered broadly, and no domestic company offered that it had the capacity to manufacture a product meeting these needs- where a cut-off shield was found to be insufficient to reduce its spectral radiance to sufficient levels.

- 9) Compressed Natural Gas (CNG) compressors, able to provide 3600 psi (248 bar) temperature compensated CNG supply to fast fill storage and fueling dispensers, efficient and adaptable to a small fleet (approximately 5 vehicles), as well as the wireless remote shut down control (transmitters and receivers) for those CNG systems.

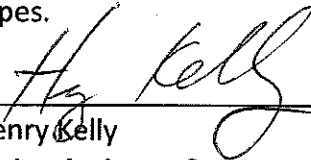
EERE specifically notes that there are domestic manufacturers of larger scale CNG fueling systems, and the use of a foreign manufactured system will not be permitted where a domestic manufacturer is willing and able to build the system.

- 10) 8000W solar inverters for use with US manufactured 315W panels
EERE and MEP have been unable to identify a domestic manufacturer of a solar power inverter compatible with US manufactured 315W panels. The manufacturer of the panels does not manufacture the inverters in the United States, but is working to increase domestic manufacturing capacity. Unfortunately, awaiting domestic manufacturing of the inverters would substantially delay, and potentially jeopardize, Recovery Act funded projects with spending deadlines.
- 11) Electronically Commutated Motor (ECM) type inline pumps
The ECM inline circulation pumps are used to circulate heating water used to condition the air temperature. Neither NREL nor MEP was able to identify a manufacturer of these pumps in the United States.
- 12) Inverters that permit optimal output of four (4) or more types of modules per array connected to inverter
No product manufactured in the United States is able to satisfy the needs of grantees utilizing diverse arrays of (often) donated panels. In some cases, these arrays include 15-20 different types and sizes of panels.

In light of the foregoing, and under the authority of section 1605(b)(2) of Public Law 111–5 and Redelegation Order 00-002-01D, with respect to Recovery Act projects funded by EERE, I hereby issue a “determination of inapplicability” (a waiver under the Recovery Act Buy American provision) for: (1) 400 to 750 watt micro hydro-turbines meeting the specifications detailed herein; (2) Oil fired direct vent space heaters for use in buildings that do not have ducts or piping for boiler heating systems; (3) ENERGY STAR rated electric heat pump water heaters and ENERGY STAR rated through-the-wall air conditioners; (4) Grid tied solar inverters of 800W or less, for applications where the panels generate 139VDC or less (not including micro-inverters); (5) 50 hp TEFC inverter duty motors for use in an existing Marley cooling tower; (6) Geothermal heat pumps for demonstration scale waste heat geothermal systems that allow the direct use of untreated wastewater to heat and cool commercial buildings; (7) Point to point/point to multi-point electronic broadband microwave radio systems with alignment tone and IE browser interface; (8) LED luminaires for roadway illumination with customized filter application to meet specific lighting requirements of Mauna Kea observatory; (9) Compressed Natural Gas (CNG) compressors, able to provide 3600 psi (248 bar) temperature compensated CNG supply to fast fill storage and fueling dispensers, efficient and adaptable to a small fleet (approximately 5 vehicles), as well as the wireless remote shut down controls (transmitters and receivers) for those CNG systems; (10) 8000W solar inverters for use with US manufactured 315W panels; (11) Electronically commutated motor (ECM) type inline pumps; and (12) Inverters that permit optimal output of four (4) or more types of modules per array connected to inverter. This waiver determination is pursuant to the delegation of authority by the Secretary of Energy to the Assistant Secretary for Energy Efficiency and Renewable Energy with

respect to expenditures within the purview of her responsibility. Consequently, this waiver applies only to EERE projects carried out under the Recovery Act.

Furthermore, I reserve the right to revisit and amend this determination based on new developments or changes in the domestic manufacturing capacity for these six product types.



Henry Kelly
Acting Assistant Secretary
Energy Efficiency and Renewable Energy
U.S. Department of Energy

Date: 3/31/11