



July 27, 2010

Mr. Cyrus Nasser  
U.S. Department of Energy  
Federal Energy Management Program, Room 5E-080  
1000 Independence Avenue, SW.  
Washington, DC 20585-0121.

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COMMENTS REGARDING:

10 CFR Parts 433 and 435  
Department of Energy  
Energy Efficiency and Sustainable Design Standards for New Federal Buildings

Docket No. EE-RM/STD-02-112  
RIN 1904-AC13

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Dear Mr. Nasser

The United States Clean Heat and Power Association (USCHPA), a trade association based in Washington, DC, represents companies and organizations to foster the use of clean, efficient local energy generation including combined heat and power (CHP) and other distributed generation sources that help reduce global greenhouse gas emissions. More than 60 organizations and their affiliates (including several Fortune 500 companies), 300 individuals, and allied industry groups are USCHPA members.

In general, we applaud the effort to increase the energy efficiency standards for Federal buildings in 10 CFR Parts 433 and 435, but we would also like to suggest some improvements that we think will expand the effectiveness and impact of the Order. As you probably know, CHP systems efficiently and cost-effectively produce electricity and heat from the same fuel source, at or near the site of use, making them much more efficient than separate heat and power. CHP is currently being used in numerous buildings around the country to provide clean, efficient and reliable power, heating and cooling. We believe that CHP can provide similar benefits to new Federal buildings and should be explicitly included in the proposed design standards. Our specific comments and recommendations include:

**Source Energy**

USCHPA believes that a critical element of sustainable design is the measurement of building energy use in source energy terms in addition to the conventional end-use energy efficiency Btu/ft<sup>2</sup> term. This metric is currently missing from the proposed standard and we believe its absence will negatively impact Federal buildings from ever achieving zero-net-energy by 2030 as required by Executive Order 13514—Federal Leadership in Environmental, Energy, and

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Economic Performance. We believe that all Federal building should be required to be dual rated in end-use and source energy terms. Source energy provides the natural correlation with resource conservation, greenhouse gas emissions and fossil fuel use – all of which contribute to sustainable design as defined in the proposed order.

**Recommendation:**

USCHPA recommends the following addition to § 433.6 Sustainable design principles for siting, design and construction. (f):

*Federal Register / Vol. 75, No. 103 / Friday, May 28, 2010 / Proposed Rules 29943  
§ 433.6 Sustainable design principles for siting, design and construction.  
(f) (11) Source energy. Federal agencies must calculate source energy use on all agency property in accordance with FEMP Section 502(e) Guidance Providing Credit toward Energy Efficiency Goals for Cost-Effective Projects Where Source Energy Use Declines but Site Energy Use Increases (Amended October 1, 2004).*

**Combined Heat and Power**

EPACT 2005, EISA 2007 and EO 13123 all contain recognition that combined heat and power (CHP) systems provided important energy efficiency, resource conservation and greenhouse gas reduction benefits to the nation. ESIA 2007 (see below), in particular, sought to move the use of CHP forward in institutional buildings (see below).

Energy Independence and Security Act of 2007

*“SEC. 399A. Energy Sustainability and Efficiency Grants and Loans for Institutions.*

*“(a) DEFINITIONS.—In this section: “(1) COMBINED HEAT AND POWER.—The term ‘combined heat and power’ means the generation of electric energy and heat in a single, integrated system, with an overall thermal efficiency of 60 percent or greater on a higher-heating-value basis... “(3) ENERGY SUSTAINABILITY.—The term ‘energy sustainability’ includes using a renewable energy source, thermal energy source, or a highly efficient technology for transportation, electricity generation, heating, cooling, lighting, or other energy services in fixed installations.... “(5) INSTITUTIONAL ENTITY.—The term ‘institutional entity’ means an institution of higher education, a public school district, a local government, a municipal utility, or a designee of 1 of those entities.... “(7) SUSTAINABLE ENERGY INFRASTRUCTURE.—The term ‘sustainable energy infrastructure’ means—“(A) facilities for production of energy from renewable energy sources, thermal energy sources, or highly efficient technologies, including combined heat and power or other waste heat use; and “(B) district energy systems.... “(8) THERMAL ENERGY SOURCE.—The term ‘thermal energy source’ means—“(A) a natural source of cooling or heating from lake or ocean water; and “(B) recovery of useful energy that would otherwise be wasted from ongoing energy uses.*

It is widely recognized that meeting a zero net energy building mandate will require efficient and or renewable on-site energy generation. Therefore, achieving zero-net-energy by 2030 as required by Executive Order 13514 will require more Federal use of clean CHP systems.

**Recommendation:**

USCHPA recommends the following addition to § 433.6 Sustainable design principles for siting, design and construction. (f):

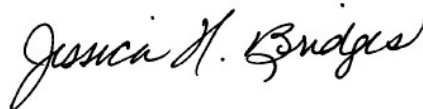
*Federal Register / Vol. 75, No. 103 / Friday, May 28, 2010 / Proposed Rules 29943  
§ 433.6 Sustainable design principles for siting, design and construction.*

*(f) (12) Federal agencies must implement combined heat and power (CHP) energy generation projects on agency property for agency use, when lifecycle cost effective.*

USCHPA recommends the following addition to § 433.2 Definitions.

*COMBINED HEAT AND POWER.(CHP) —The term ‘combined heat and power means the generation of electric energy and heat in a single, integrated system, with an overall thermal efficiency of 60 percent or greater on a higher-heating-value basis.*

Sincerely,



Jessica H. Bridges, CAE IOM  
Executive Director  
U.S. Clean Heat & Power Association