

## TITLE 17. CALIFORNIA AIR RESOURCES BOARD

### NOTICE OF PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE DISTRIBUTED GENERATION CERTIFICATION REGULATION

The Air Resources Board (the Board or ARB) will conduct a public hearing at the time and place noted below to consider adoption of amendments to the Distributed Generation (DG) Certification regulation.

DATE: October 19, 2006

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency  
Air Resources Board  
Byron Sher Auditorium  
1001 I Street  
Sacramento, CA 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., October 19, 2006, and may continue at 8:30 a.m., October 20, 2006. This item may not be considered until October 20, 2006. Please consult the agenda for the meeting, which will be available at least 10 days before October 19, 2006, to determine the day on which this item will be considered.

For individuals with sensory disabilities, this document is available in Braille, large print, audiocassette, or computer disk. Please contact ARB's Disability Coordinator at 916-323-4916 by voice, or through the California Relay Services at 711, to place your request for disability services. If you are a person with limited English and would like to request interpreter services, please contact ARB's Bilingual Manager at 916-323-7053.

### **INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW**

**Sections Affected:** Proposed amendments to title 17, California Code of Regulations, sections 94201, 94201.1, 94203, 94204, 94207, 94208, 94209, 94210, 94211, and 94212.

### **Background:**

Distributed generation refers to replacing or supplementing electricity from the grid with electrical generation sources that are located near the place of use. Some examples of electrical generation technologies are engines, turbines, fuel cells, and photovoltaic cells. Some businesses choose to operate distributed generation technologies with heat recovery systems that capture the heat produced from the electrical generation process. This captured heat can then be used to heat water, provide steam or space

heating, or power a chiller at the facility. Distributed generation can be used at various types of businesses such as hospitals, schools, libraries, breweries, utilities, and laundries.

Senate Bill (SB) 1298 (Stats. 2000, ch. 741) required the ARB to establish a distributed generation certification program for electrical generation technologies that are exempt from local air district permits. SB 1298 mandated that ARB establish at least two levels of emission standards for affected DG technologies. The law required that the first set of standards be effective no later than January 1, 2003, and reflect the best performance achieved in practice by existing DG technologies that are exempt from district permits. The law also required that, by the earliest practicable date, the standards be made equivalent to the level determined by ARB to be the best available control technology (BACT) for permitted central station power plants in California. The emission standards were to be expressed in pounds per megawatt hour (lb/MW-hr) to reflect the efficiencies of various electrical generation technologies.

Pursuant to SB 1298, the Board adopted a DG Certification regulation in 2001. The ARB staff proposed interim standards for 2003 and recommended that 2007 be considered the earliest practicable date for DG applications to meet central power plant emissions standards. In addition to establishing emission standards, the DG Certification regulation included testing protocols, calculation procedures, and other specified requirements that manufacturers must satisfy to certify DG technologies.

Generally, microturbines up to 250 kilowatts (kW), engines less than 50 horsepower (hp), and fuel cells are exempt from district permits. Although small engines are exempt from district permits, most engines used in distributed generation applications are larger than district permit exemption levels and therefore require district permits. Consequently, the regulation has so far only affected fuel cells and microturbines. These types of technologies were just entering the California market when the Board adopted the DG Certification regulation in 2001.

Because of uncertainties at the time regarding the development and deployment of these DG technologies, the regulation includes a requirement for a technology review within a few years to evaluate the status of the DG certification program and determine if revisions were warranted. The technology review was to address the feasibility of the 2007 standards, the credit given for utilizing combined heat and power (CHP)\* to meet these standards, emissions durability, and test methods and procedures. Evaluating these specific requirements was the primary focus of ARB staff's evaluation; however, ARB staff also evaluated other additions and changes to the regulation during the review. Staff's proposed amendments are a result of that review process.

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\* Combined heat and power (CHP) refers to the total amount of useful energy obtained from the DG equipment. It is the sum of the electrical output of the unit plus the amount of waste heat utilized in a productive manner, such as heating water or providing heat to industrial processes. These combined energy outputs are used to calculate the total megawatt-hours produced, and are therefore used when determining the emissions in pounds per megawatt-hour.

## DESCRIPTION OF THE PROPOSED REGULATORY ACTION

### *Emissions Durability and Testing Requirements*

The proposed amendments would require manufacturers of DG units, when preparing the application package, to identify key components of the DG unit that are most critical to ensuring compliance with the certified emission limits, such as fuel injectors, rotors, seals and bearings for a microturbine, and fuel cell stacks and catalysts for fuel cells. In addition, the manufacturer would be required to keep records relating to how often these components are replaced and submit the records to ARB upon request. In this manner, ARB staff will be able to track durability of equipment in the field.

Staff is proposing a number of changes to the testing requirements and parameters to improve and clarify the testing requirements and better reflect actual in-the-field operations of affected technologies. The proposed amendments would require manufacturers to test at only 100 percent load versus the three-load testing that is currently required because staff has determined that certified DG technologies are generally operated at only full capacity in the field. VOC testing would now be conducted using South Coast Air Quality Management District test method 25.3 to more accurately measure emissions at the low concentrations expected from certified technologies. To reduce recordkeeping and testing requirements for the manufacturers, they would no longer be required to test each individual DG unit for NO<sub>x</sub> emissions prior to commercial use. For clarification purposes, manufacturers would now be required to use a specific method to calculate recoverable heat if a CHP credit is being used to meet a standard. And, finally, the generator output measured during the source test would be based on net power output, not the gross output of the unit, to more accurately represent the actual available power from the unit.

### *Addition of Waste Gas Emission Standards*

The proposed amendments would add requirements to enable technologies fueled with waste gases (landfill, digester, and oil-field waste gases) to be certified under this program. The current regulation, although allowing for fuels other than natural gas to be used for certification, does not contain a practical method in which to accomplish this. The composition of waste fuels varies from site to site and season to season, which makes it challenging to issue statewide certifications on these variable fuels. Therefore, local air districts have had to issue permits to otherwise permit-exempt equipment. The ARB staff proposes to bring these waste-gas applications into the DG certification program where they appropriately belong. Both the local air districts and the manufacturers support integrating waste gas applications into the certification program.

To certify these permit-exempt waste-gas applications, ARB staff has developed surrogate fuel compositions based on data submitted to the ARB for landfill gases, digester gases, and oil-field waste gases. Manufacturers would be required to use these surrogate gases for certification testing.

Staff is proposing two sets of waste gas standards, much like what is currently in the regulation. Staff is proposing 2008 interim waste-gas standards that are similar to the current 2003 limits. Unlike the 2003 standards, the waste-gas 2008 standards would not include a particulate matter (PM) standard nor would they include a separate, less stringent, set of limits for units integrated with CHP. A PM standard is not being proposed because the impurities in waste gas that would contribute to PM emissions will be removed prior to being used with DG units in the field. Staff is not proposing to include less stringent 2008 limits for units integrated with CHP because manufacturers would now only have to test at 100 percent power load, which should allow them to meet the more stringent limits.

The proposed 2013 waste-gas standards are identical to the current 2007 limits, except for the omission of a PM standard as described above. The 2013 standards reflect central station power plant emissions, as required in SB 1298. As with the 2007 standards, a manufacturer can use a CHP credit to meet the 2013 standards if the unit is integrated and sold with a heat recovery system and can achieve a minimum overall efficiency of 60 percent. The proposed waste-gas emission standards are presented in Table 1.

Table 1: Proposed Waste Gas Emission Standards

Pollutant	Emission Standard (lb/MW-hr)	
	On or after January 1, 2008	On or after January 1, 2013
NO <sub>x</sub>	0.5	0.07
CO	6.0	0.10
VOCs	1.0	0.02

#### *Other Amendments*

The proposed amendments would clarify that the current 2007 standards apply only to natural gas and liquefied petroleum gas (LPG) units and would define LPG. In addition, staff proposes elimination of the PM standard in the current 2007 emission standards because staff has determined that it is unnecessary for these gaseous fuels to have a PM standard.

The proposed amendments would change the fee structure of the program to fully cover costs to the State to implement this program, as allowed by SB 1298. Initial certification application fees under the proposed amendments would increase \$5,000 from \$2,500 to \$7,500 to better reflect the average 60 hours the ARB staff has needed to review and process certification applications to date.

To provide an economic incentive for early introduction of the cleanest waste-gas-fueled DG technologies, manufacturers of technologies that can meet the 2013 standards by January 1, 2008 (such as fuel cells), would be exempt from submitting an initial application fee.

The current fee assessment for recertification is \$2,500. The ARB staff proposes maintaining that fee for DG units that do not require a source test for recertification but assessing a fee of \$7,500 for DG units that require a source test for recertification. These fees are based on staff time estimates of about 20 hours for applications that do not contain source test results, and about 60 hours to process applications that do contain source test results.

Currently, applicants seeking voluntary certification for DG technologies that do not emit an air contaminant are not charged any application fee. The ARB staff proposes that a fee of \$2,500 be assessed for manufacturers seeking voluntary certification. To date, ARB has not received any applications for voluntary certifications.

Since the waste-gas emission standards are five years apart (2008 and 2013) ARB staff is proposing that certifications issued to units meeting the 2008 standards on waste gas be valid for five years or to January 1, 2013, whichever comes first. For consistency, staff is proposing expansion of the duration of certifications based on the 2007 natural-gas standards from four years to five years as well.

ARB staff is proposing expansion of the allowable exemptions to the regulation to include units operated by the manufacturer for quality assurance testing, and units that are part of a research operation that the Executive Officer has approved. Staff is also proposing a clarification that all portable electrical generation technologies are exempt from this program, not just those that are registered in ARB's Portable Equipment Registration Program. These other portable DG units are already regulated under other ARB and United States Environmental Protection Agency (U.S. EPA) programs.

ARB staff is proposing the Board modify the inspection and enforcement provisions in the regulation, modify and add terms in the definitions section, and make other editorial changes throughout the regulation. These changes are considered to be non-substantive and are intended to improve and clarify the DG Certification regulation.

### **COMPARABLE FEDERAL REGULATIONS**

The certification program that staff is proposing to the Board amend is not required by federal law or regulation. There are no comparable federal regulations covering the certification of emissions from small DG technologies.

### **AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS**

The Board staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: "Staff Report: Initial Statement of Reasons for the Proposed Amendments to the Distributed Generation Certification Regulation."

Copies of the ISOR and the full text of the proposed regulatory language, in underline and strikeout format to allow for comparison with the existing regulations, may be accessed on the ARB's web site listed below, or may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1<sup>st</sup> Floor, Sacramento, CA 95814, (916) 322-2990 at least 45 days prior to the scheduled hearing on October 19, 2006.

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on the ARB's web site listed below.

Inquiries concerning the substance of the proposed amendments may be directed to the designated agency contact persons: Michael Waugh, Manager of the Program Assistance Section, Project Assessment Branch, Stationary Source Division at (916) 445-6018, and Dave Mehl, Air Resources Engineer, Stationary Source Division at (916) 327-1512.

Further, the agency representative and designated back-up contact persons to whom nonsubstantive inquiries concerning the proposed administrative action may be directed are Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, or Alexa Malik, Regulations Coordinator, (916) 322-4011. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on the ARB Internet site for this rulemaking at [www.arb.ca.gov/regact/dg06/dg06.htm](http://www.arb.ca.gov/regact/dg06/dg06.htm).

### **COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED**

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies and private persons and businesses in reasonable compliance with the proposed regulations are presented below.

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory action will not create costs or savings to any State agency or in federal funding to the State, costs or mandate to any local agency or school district whether or not reimbursable by the state pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, or other nondiscretionary cost or savings to State or local agencies.

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. The ARB staff has identified six manufacturers that will potentially be impacted by the proposed amendments: the same manufacturers who have already certified their units on natural gas. The overall

statewide cost of the proposed amendments is estimated to be \$1,800,000, with an estimated individual business cost of \$135,000 to \$158,000 for each DG model certified (assuming each unit is certified to operate on three waste gas fuels). Businesses will incur costs for conducting an emissions source test on each DG model and waste-gas fuel type to be certified, preparing and submitting a certification application, and paying an application fee.

The ARB staff does not expect complying with the proposed waste-gas standards to cause adverse economic impacts on businesses. ARB staff believes that both fuel cells and microturbines operating on waste gases can currently meet the proposed 2008 standards. Manufacturers should not incur significant adverse economic impacts from complying with the proposed 2013 waste-gas emission standards, as these standards are similar to the 2007 standards with which manufacturers must currently comply for their natural-gas-fueled units. ARB staff believes that fuel cells can currently meet the 2013 standards on waste gases, but that microturbines will need more time to achieve these standards on waste gases. Although the January 1, 2013, compliance date will give manufacturers five years to research and develop new products to meet central station emission limits with waste gases, much of the research and development effort needed to meet the 2013 standards will have already been spent on achieving the 2007 natural gas standard.

The Executive Officer has made an initial determination that the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California. A detailed assessment of the economic impacts of the proposed regulatory action can be found in the ISOR.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will affect small businesses. The ARB staff has identified two out of the six manufacturers that will potentially be impacted by the proposed amendments as small businesses. Both small businesses manufacture fuel cell technologies; however, neither company is in California. These businesses should incur costs of \$135,000 for each DG unit certified to comply with the proposed 2013 waste-gas standards.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the Executive Officer has found that the reporting requirements of the regulation which apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the Board or that has otherwise been identified and brought to the attention of the Board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

### **SUBMITTAL OF COMMENTS**

The public may present comments relating to this matter orally or in writing at the hearing, and in writing or by e-mail before the hearing. To be considered by the Board, written submissions not physically submitted at the hearing must be received **no later than 12:00 noon, October 18, 2006**, and addressed to the following:

Postal mail: Clerk of the Board, Air Resources Board  
1001 I Street, Sacramento, California 95814

Electronic submittal : <http://www.arb.ca.gov/lispub/comm/bclist.php>

Facsimile submittal: (916) 322-3928

The Board requests but does not require that 30 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The Board encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action.

### **STATUTORY AUTHORITY AND REFERENCES**

This regulatory action is proposed under that authority granted in Health and Safety Code, sections 39600, 39601 and 41514.9. This action is proposed to implement, interpret, and make specific section 41514.9.

### **HEARING PROCEDURES**

The public hearing will be conducted in accordance with the California Administrative Procedure Act, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340) of the Government Code.

Following the public hearing, the Board may adopt the regulatory language as originally proposed, or with non-substantial or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result from the proposed regulatory action; in such event the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before it is adopted.



The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1<sup>st</sup> Floor, Sacramento, CA 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

Catherine Witherspoon  
Executive Officer

Date: August 22, 2006