

Proposed Amendments to the Distributed Generation Certification Regulation

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Public Hearing

Sacramento, California



California Environmental Protection Agency

Air Resources Board

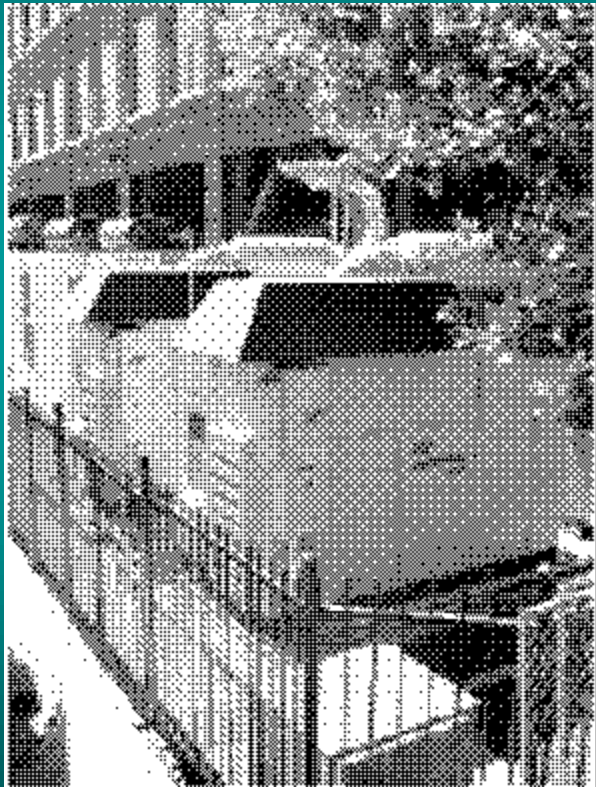
Today's Presentation

- **Background**
- **Proposed Amendments**

Distributed Generation

- **What is Distributed Generation (DG)?**
- **What are examples of DG?**
- **Where are DG units located?**

DG Devices



Senate Bill 1298

- Every DG unit must either be permitted by local air district or certified by ARB
- ARB must issue guidelines for permitting DG equipment
- ARB must adopt DG certification program for permit-exempt technologies
- DG units must meet large power plant BACT emission levels

DG Guidelines

- Board approved guidelines in 2001
- Guidelines represented BACT for turbines and internal combustion engines

DG Certification Regulation

- **Board adopted in November 2001**
- **Applies to DG not subject to district rules (e.g. fuel cells and microturbines)**
- **DG certified at the manufacturer level**

DG Certification Regulation (cont.)

- **Two sets of emission standards**
 - **Interim standards (2003)**
 - **Large power plant BACT (2007)**
- **Emission standards are output-based (lbs/MW-hr)**

Combined Heat and Power (CHP)

- **Credit given for CHP to meet the emission standards**
- **Total amount of useful energy**
 - **Electrical output**
 - **Useful heat from exhaust**
- **Higher overall efficiency**
- **Less CO2 emissions**

Emission Standards (lb/MW-hr)

Year		NOx	VOC	CO
2003	w/o CHP	0.5	1.0	6.0
	with CHP	0.7	1.0	6.0
2007		0.07	0.02	0.10

Certified Equipment

2003 Standards

- **4 microturbines**

2007 Standards

- **5 fuel cells**
- **1 microturbine**

Zero-Emission Technologies

- **Photovoltaics**
- **Wind Turbines**
- **Hydrogen Fuel Cells**

Technical Review Requirement

- **2007 Standards**
- **CHP Benefit**
- **Testing Procedures**
- **Emissions Durability**

2007 Standards/CHP Benefit

- No change to implementation of 2007 Standard
- No change to CHP credit

Proposed Changes to Testing Requirements

- Adding VOC test method
- 100 percent load testing only
- Eliminating NOx testing of all units prior to commercial operation
- Other minor testing changes

Proposed Changes to Emissions Durability Requirements

- **Identification of key components**
- **Additional recordkeeping requirements**

Additional Proposed Amendments

- **Adding standards for waste gas**
- **Modifying fees**
- **Other editorial and clarification changes**

Waste-Gas Fueled Devices

- Many waste-gas applications exempt from local air district permits
- DG Certification Program lacked methodology to address waste gases
- Districts issuing permits not otherwise required

Proposed Waste Gas Standards

- **Surrogate gases**
- **2008 emission standards**
 - **Similar to 2003 natural gas standards**
- **2013 emission standards**
 - **Identical to 2007 natural gas standards**

Fees

- **SB 1298 authorizes cost recovery**
- **2001 initial estimate inadequate**
- **Propose fee increase**
- **Early certification to 2013
standards exempt from some fees**

Recommendation

- **Adopt the proposed regulatory amendments**