

Clearing the Air

A Review of the Environmental Permitting Barriers to DER

**DOE Distributed Power and Industrial DG Quarterly Review
October 23 – 25, 2001
Golden Colorado**

Presentation Outline

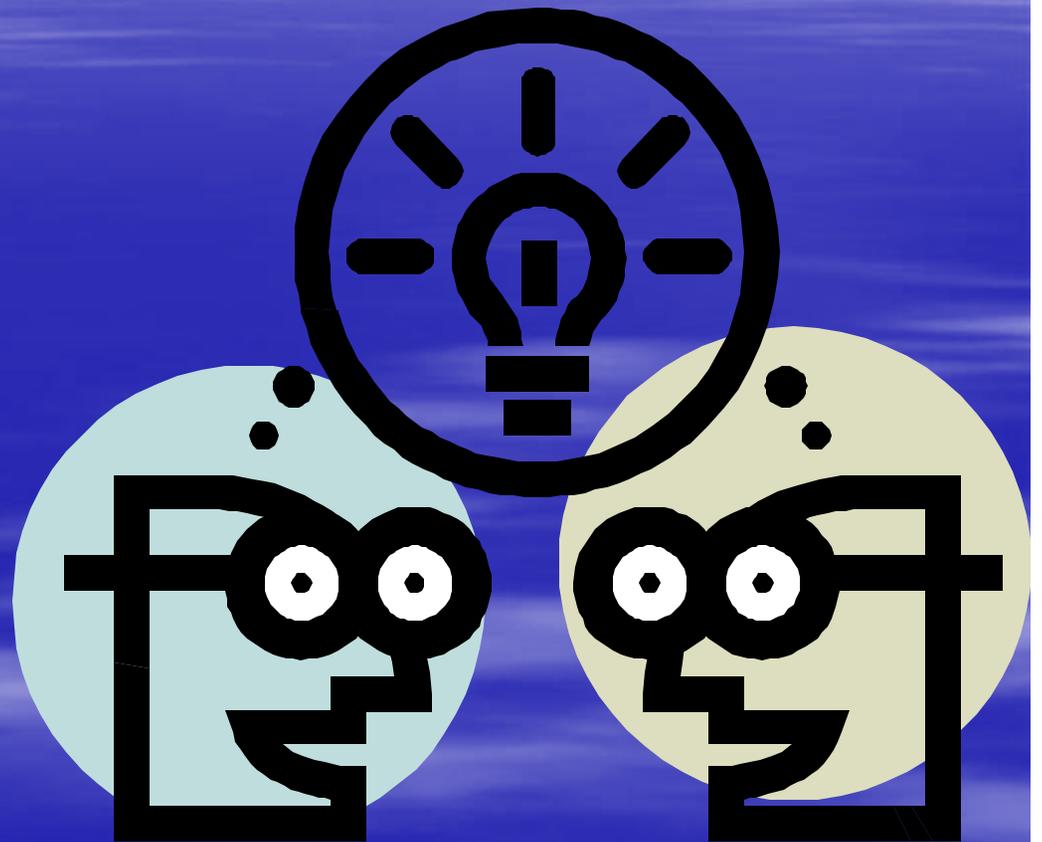
- **DPP Policy Task**
- **Background of Current Study**
- **Summary of Clearing the Air**
- **What's Ahead**



DPP Policy Task

“the policy aspects of technology diffusion”

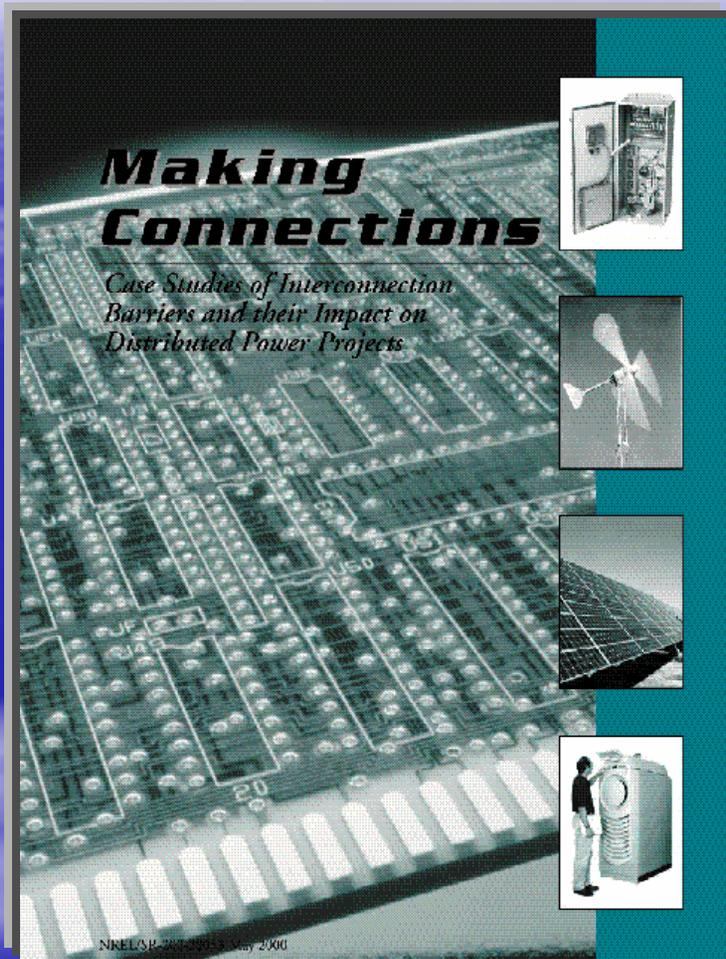
- **Issue Awareness**
- **Contribute to Quality of Discussion**
 - Research & Data
 - Support Regulatory Innovation
 - Support Policy Entrepreneurs Through Conferences, NARUC, Building Inspectors, and Environmental Projects



The Eightfold Path to Policy Analysis



“Making Connections” Report



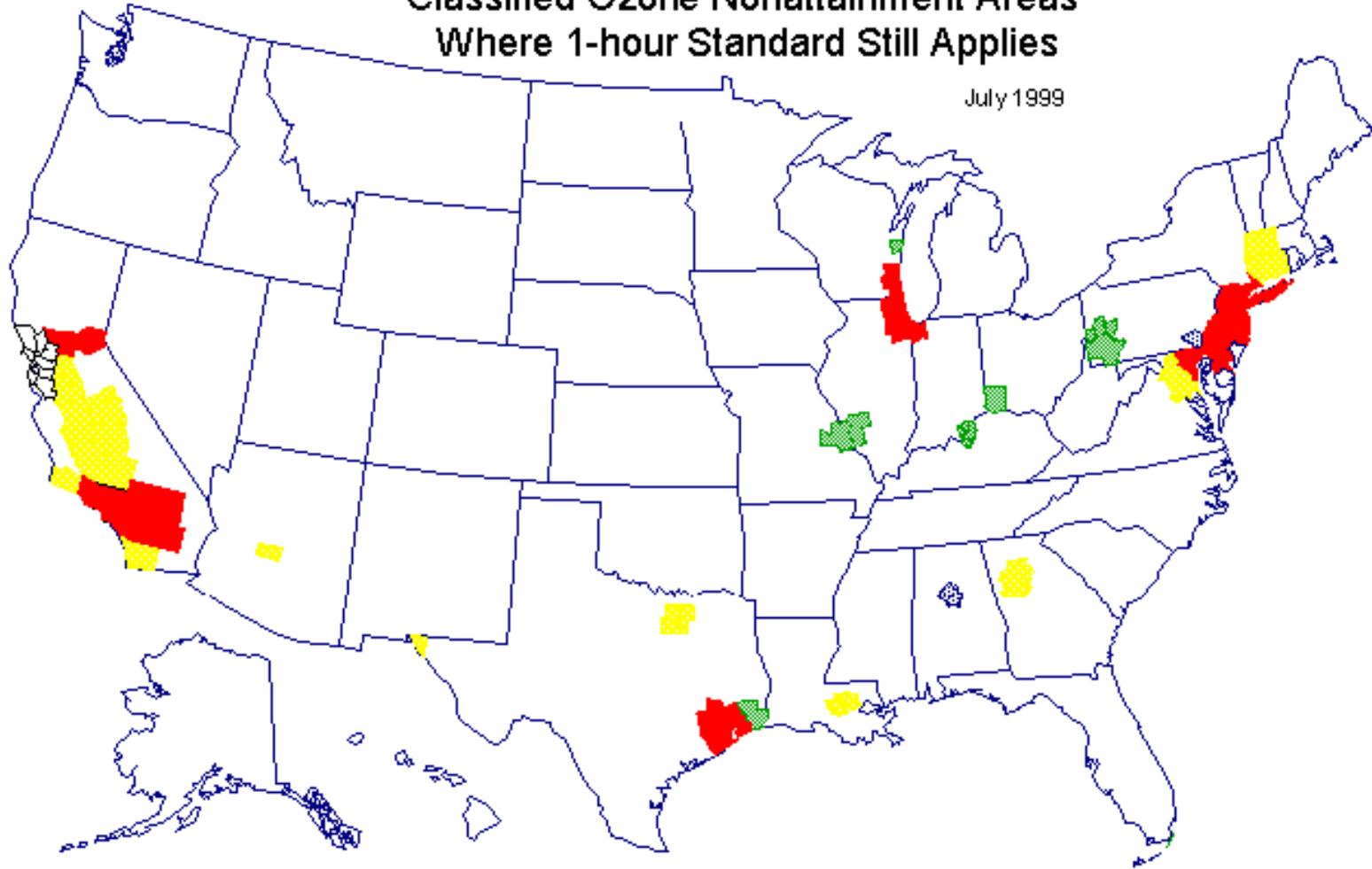
- Released May 1, 2000
- Financed and published by DOE/NREL, with support from
- 90 DG projects were identified, 65 surveyed, 26 summarized and included in report
- Projects ranged from 0.3 kW (PV) to 26 MW (gas turbine)
- Available on the Web as PDF file at the following address:
<http://www.eren.doe.gov/distributedpower/barriersreport/>

“Clearing the Air” Report Scope and Methodology

- **64 Case Studies**
- **Introduction to Environmental Regulation**
- **Review of Current State Activity**
- **Methodology**
 - **Identify Case Studies**
 - **Analyze Data**
 - **Regulatory Requirements**

Classified Ozone Nonattainment Areas Where 1-hour Standard Still Applies

July 1999



Classifications

■ Extreme (LA) & Severe

■ Serious

■ Moderate

■ Marginal

San Francisco is Classified Other / Sec 185A & Incomplete Data Areas Not Included

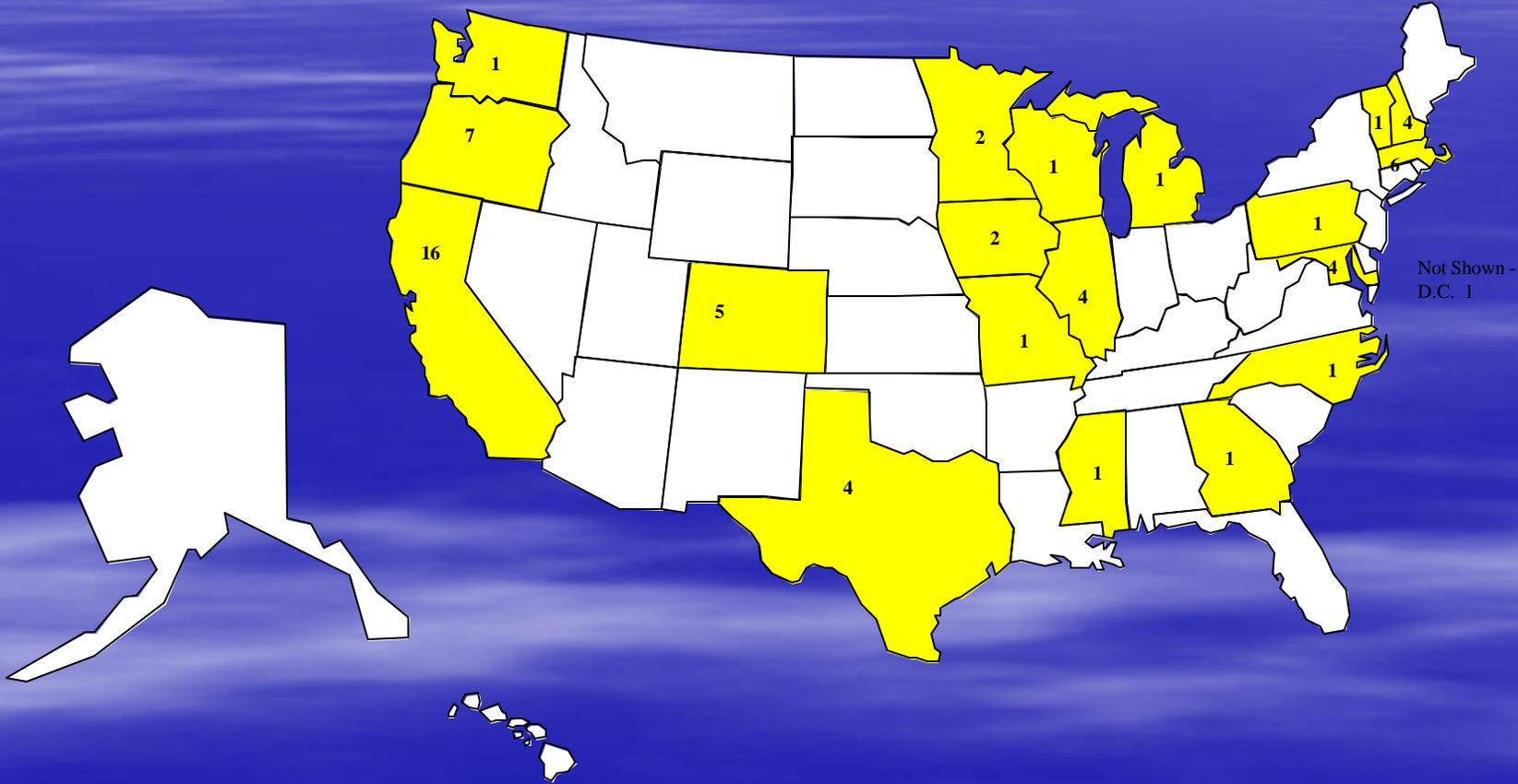
Target projects that met the following criteria were included

- Projects from key states to assess current regulatory status in different regions of the country.
- Projects that represent a diverse cross-section of DER technologies and fuel types.
- Projects with a capacity under 50 megawatts (MW).
- Projects with diverse applications, including: combined heat and power (CHP), peak shaving, emergency back-up, power quality, baseload, and aggregation for wholesale application.
- Projects in both attainment and non-attainment areas.
- Projects installed after December 31, 1995 or pending installation.
- Sixty-four projects with sufficient information met the final criteria. Many projects faced no barriers and provide these examples, insight and recommendations for removing barriers.

Background

- **Technology Overview**
 - DER Applications
 - DER Technologies
 - Fuels for DER Technologies
 - DER NOX Emission Control Technologies
- **Regulatory Requirements**
 - Operating Air Permitting Program
- **Existing Air Quality Regulations Applying to DER**
 - California
 - Texas
 - National Model Rule Project

Figure 1: Number of Environmental Barriers Cases by State



Categorization of Barriers

- **No Barriers Reported**
- **No-Credit-for-Benefit Barriers**
 - Replacing Much Higher Emission Sources with Lower Emission Equipment
 - Reduced Emissions from Processes or Activities Unrelated to Generation
 - CHP Avoided Boiler Emissions
 - “Atypical” Projects Reviewed on Case-by-case Basis
- **Process Barriers**
 - Denial of Permit
 - Moving Targets And Disparate Results
 - Delay
- **Economic Barriers**
 - Extensive Air Permitting Process Relative to Size and Air Quality Impact of Project
 - Uncertainty in Air Permitting Process
 - Higher Capital Cost Impact on Small Sources
 - BACT Determination did not Allow for Application

Figure 2: Environmental Barriers Encountered in Case Studies

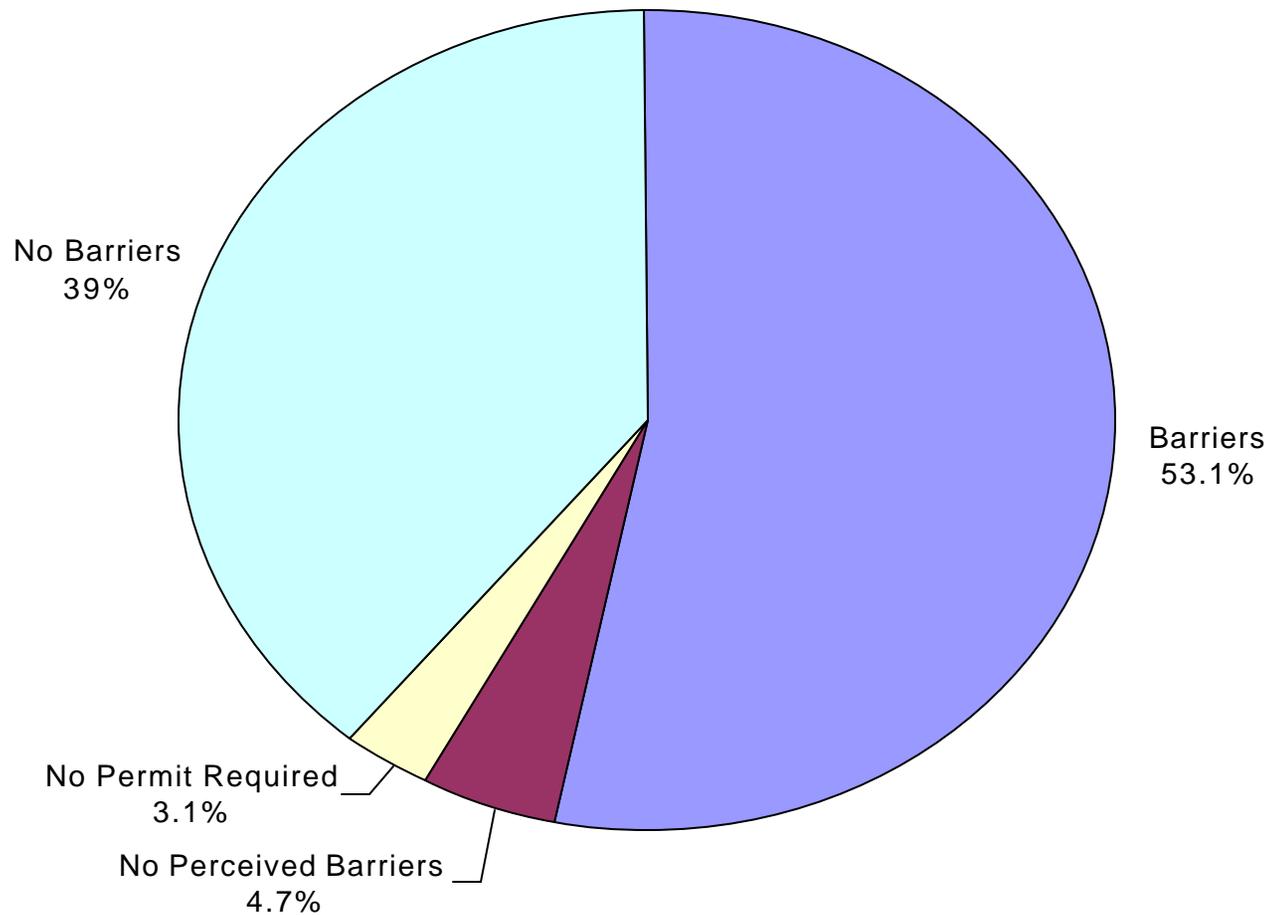


Figure 3: Environmental Barriers Case Studies

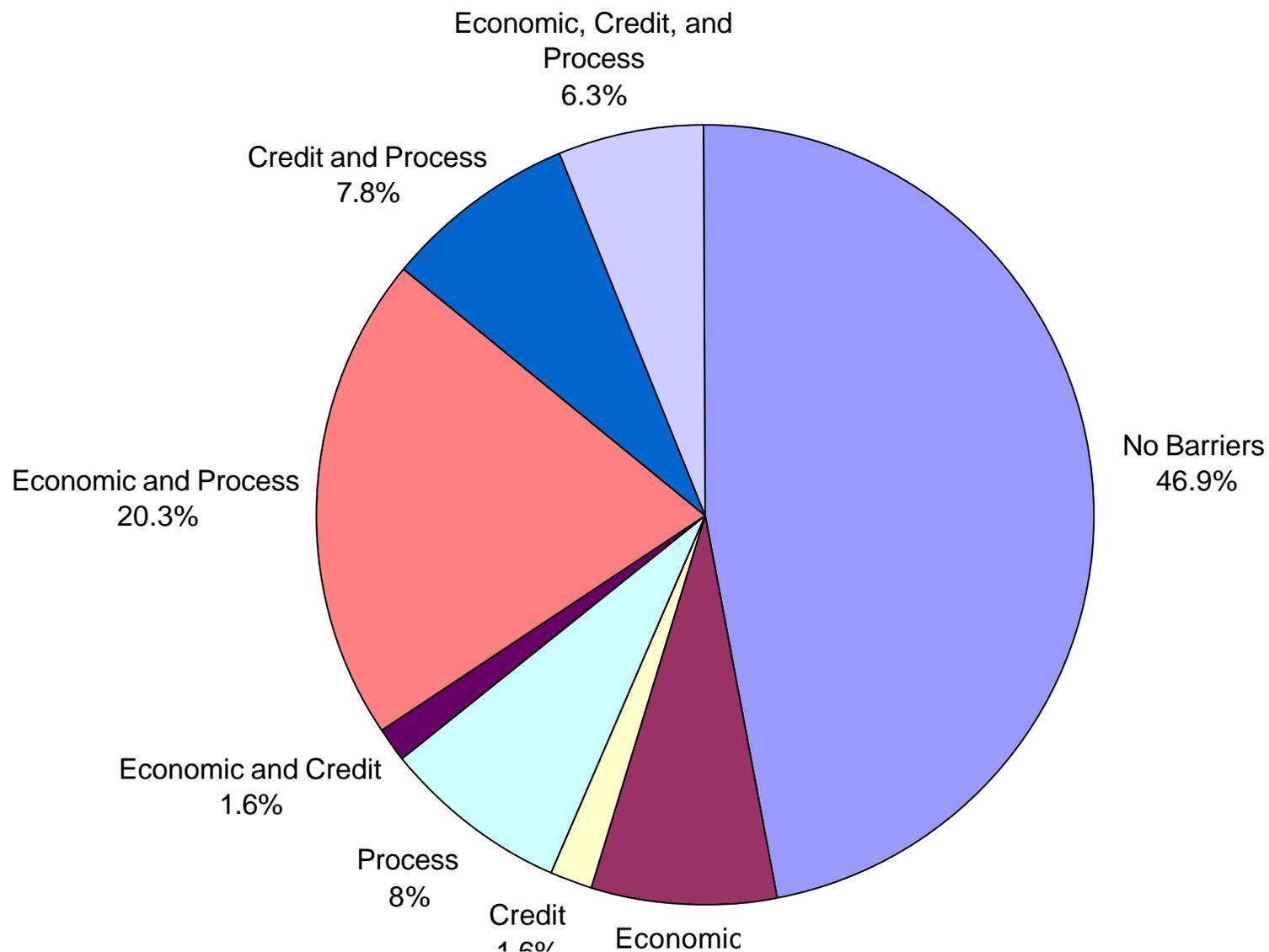
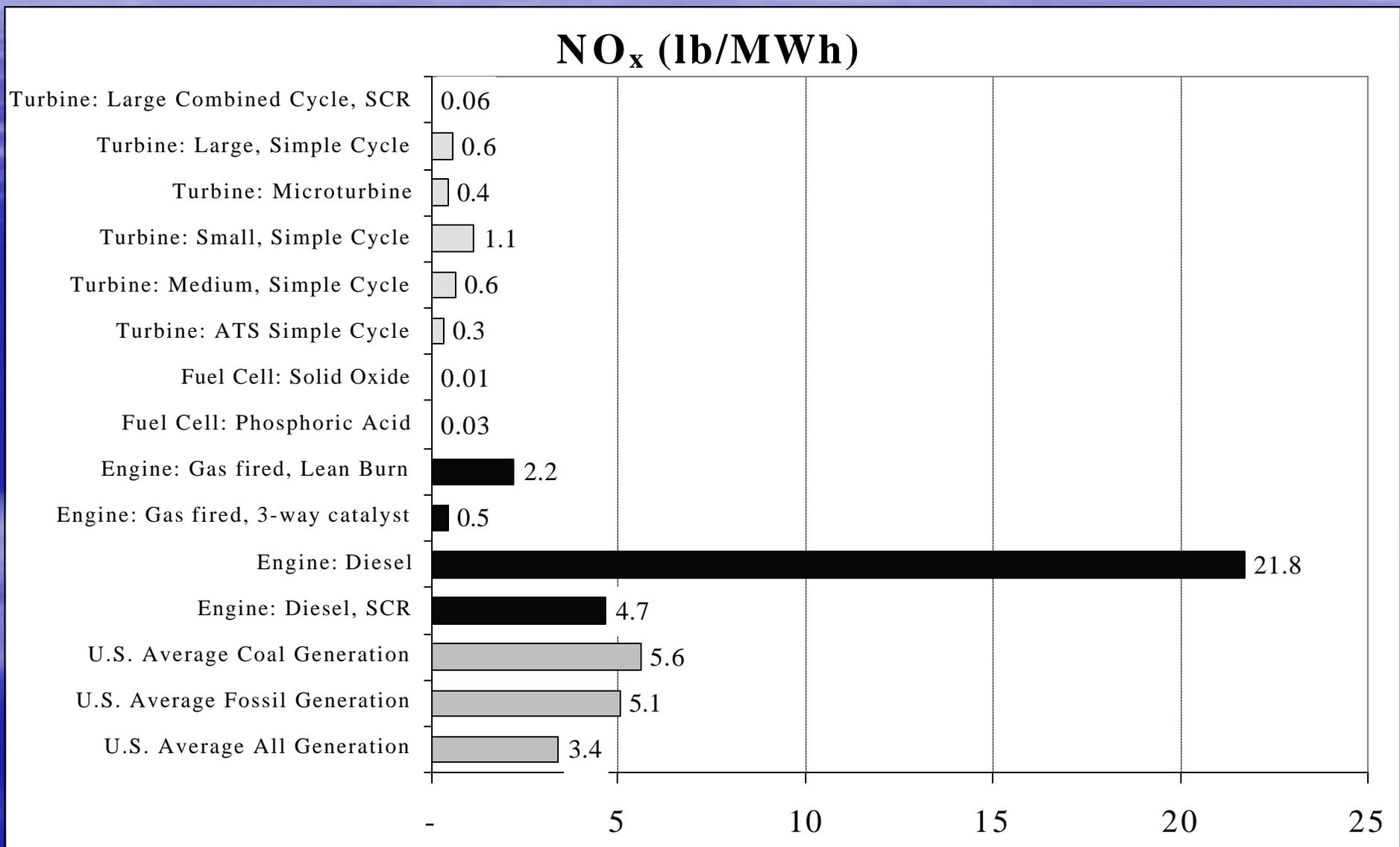
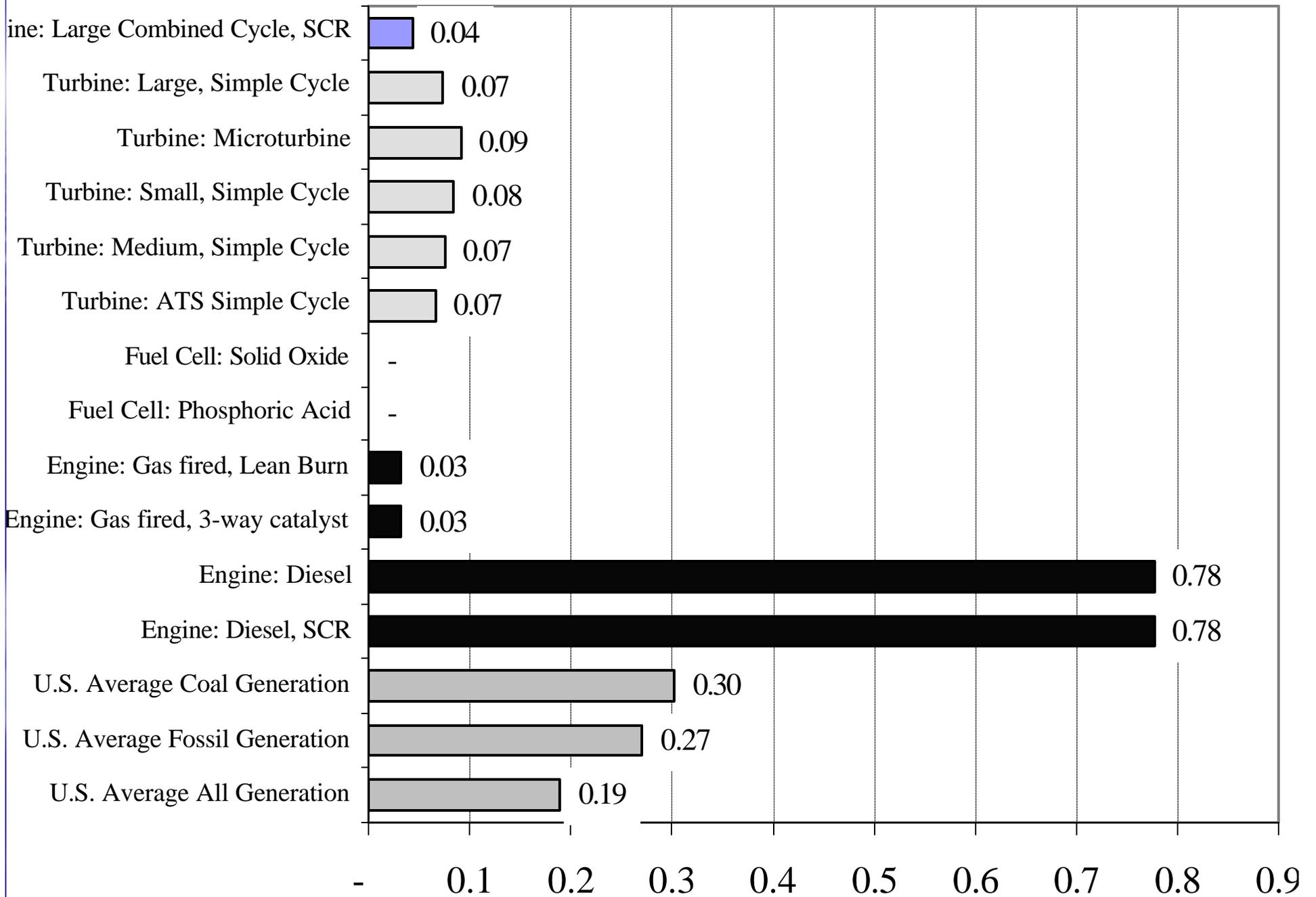


Chart 4-1: NO_x Emissions from DER Technologies



PM-10 (lb/MWh)



Conclusions / Recommendations

1. **Develop Streamlined Approach for DER Projects (Relative Burden Issue)**
2. **Develop Uniform Standardized Approach**
3. **Credit CHP Operations**
4. **Credit Offsetting Emissions from Other Processes (e.g., flaring, open burn)**
5. **Allow Replacement of Older Technology with New DER Technology**
6. **Accelerate Robust Regional Marketplaces for Emission Allowances for DGs**

Other Important DG Environmental Regulatory Activity

- **Texas Standard**
- **California Draft Sen 1298 Standards**
- **RAP Collaborative—DPP funded exploration of Model National Rule**
- **ACEE CHP recommendation**
- **EPA**

Upcoming Focus Areas “?”

- **Making Connections II**
 - Has the situation gotten better?
- **Regulatory Barriers to DER**
 - **Undue Discrimination in Pricing**
 - Standby Tariffs
 - Backup Tariffs
 - Economic Development Rates
 - **Load Retention As A Policy Goal?**
 - **“Business as usual” infrastructure investment**
 - Are “traditional” radial/one way investments imprudent?
 - Identification of high cost areas
 - Targeted distribution credits
 - All-source bidding
 - **“Avoiding the DSL Debacle”**
 - **General Systemic Bias Against Innovation**

