

# **A Review of OCDO's CCP Initiatives: A Program Perspective**

**International Ash Utilization Symposium  
October 20, 1999**



# Summary of presentation

- **Brief history of OCDO and its mission**
- **The evolution of OCDO's involvement in CCP projects**
- **A brief overview of CCP projects sponsored by OCDO**
- **Future efforts**



# Ohio Coal Development Office

- **Established in 1984**
- **By popular vote, authorized to have up to \$100 million in outstanding bond debt to finance coal R&D**
- **Objectives**
  - **Encourage promote & support commercialization of clean coal technologies**
  - **Improve environmental quality**
  - **Assist and cooperate with others in achieving these objectives**

# **OCDO Projects**

- **Over 150 projects since 1984**
- **\$129.0 million in OCDO funds committed**
  - **(\$31 million in outstanding bond debt)**
- **\$428.3 million leveraged from federal and private sources**



# **Coal Combustion By-products Initiative**

- **Recognized that SO<sub>2</sub> clean-up processes could produce large quantities of material to be discarded.**
- **In 1988, hired Battelle to conduct a baseline of knowledge study on the compositions of by-products from CCTs, and on their potential uses.**
- **In 1989, TAC decided to solicit projects to expand that baseline of knowledge.**

# Current CCP Production & Use in Ohio

- **10 million tons of CCPs per year**
  - **50% is flyash**
  - **30% is SO<sub>2</sub> scrubber product**
- **Less than 25% is used**
  - **25% of flyash and bottom ash is used**
  - **75% of boiler slag is used**
  - **6 to 10% of FGD material is used**



# **Advantages of CCP Use**

- **Decreased demand for landfill space and reduced environmental effects of landfilling**
- **Conservation of natural resources**
- **Reduced CO<sub>2</sub> emissions**
- **Reduced overall cost of electricity generation**
- **Economic savings for end users**
- **Helps enable the continued use of Ohio's high-sulfur coal**



# **OCDO Coal Combustion By-products Projects**

- **22 projects to date**
  - **OCDO contribution - \$10.3 million**
  - **Total project value - \$22.7 million**





# **OCDO CCP Projects**

## **Civil Engineering Uses**

- **OSU truck ramp**
- **State Route 541 highway embankment stabilization**
- **State Route 83 highway embankment stabilization**
- **Consol lightweight construction aggregate**



# **OCDO CCP Projects**

## **Mine Reclamation Uses**

- **Fleming AML reclamation project (dry FGD products)**
- **Caldwell AML reclamation project (wet FGD products)**
- **Roberts-Dawson FGD grout injection to abate AMD in an underground mine**



# **OCDO CCP Projects**

## **Agricultural Uses**


- **Agricultural liming and nutrient addition studies**
- **Low-permeability pond liner project**
- **Livestock feeding pads and hay storage pads**



# **OCDO CCP Projects**

## **Manufacturing Uses**

- **Autoclaved cellular concrete demonstration**
- **Production of wallboard quality gypsum**
- **Use of flyash in metal matrix composites**
- **Recovery of magnesium hydroxide for use as a water treatment chemical**



# **OCDO CCP Projects**

## **OSU Pilot Extension Program**

- **Objectives**
  - **Effect technology transfer of CCP R&D**
  - **Work with environmental agencies to develop environmental guidelines and standards**
  - **Complete an assessment of CCP markets and benefits**
- **2-year program, established in January 1998**
- **Sponsored by OCDO and OSU**
  - **Co-sponsorship by USDOE, AEP, Cinergy, FirstEnergy, Dravo Lime, ACAA, Ohio Farm Bureau & trade groups**
- **Seeking establishment of a permanent program**

# Current OCDO Solicitation

- **CCP field demonstration projects**
  - **Up to \$1.5 million and no more than one-half of total cost**
- **Other projects**
  - **Up to \$1.0 million and no more than one-half of total cost**



OHIO COAL DEVELOPMENT  
OFFICE

**SOLICITATION 99**  
CLEAN COAL TECHNOLOGY  
PROJECTS SOLICITATION

PROPOSAL DUE DATE: Friday, January 14, 2000

**[www.odod.state.oh.us/tech/coal](http://www.odod.state.oh.us/tech/coal)**