

Illinois Clean Coal Review Board Press Release – October 16, 2000

The Illinois Clean Coal Review Board announced today that ClearStack Combustion Corporation will receive a \$1 million grant to demonstrate its environmental control break-through technique called the Ashworth Combustor™. This innovative technique reduces the three major air pollutants (SO₂, NO_x and particulate) from coal combustion using a simple three-stage combustion system. Tests have shown that under deeply reducing conditions, with lime or limestone addition that coal sulfur (as CaS) can be captured in a non-leaching slag eutectic. Low NO_x emission levels can also be achieved (< 0.15lb NO_x/10⁶ Btu).

The Ashworth Combustor system captures most of the coal ash before it enters the boiler, greatly reducing particulate emissions. It is also expected that some of the coal mercury will be captured in the alkaline quenched slag. Bob Ashworth, Sr. VP of ClearStack says, *"The science for the technology is clearly there; how successful the demonstration will be centers only on our ability to implement it well. Once the technology is demonstrated, power plant operators will have a simple option to meet the stringent post Year 2002 regulations for SO₂ and NO_x. Nothing new is introduced that power plant operators are not already familiar with, and the troublesome backend chemical plants associated with SO₂ scrubbing and SCR for NO_x reduction are completely avoided."*

The host site for the demonstration is the Illinois Department of Human Service's Lincoln Development Center located in Lincoln, Illinois. The combustor will be retrofitted to Lincoln Boiler Unit #2, a 40 million Btu/hr coal-fired stoker that had been converted to burn natural gas. Both high sulfur Illinois and Ohio coals will be tested. The Illinois EPA has already issued DHS a construction permit. With the infusion of the \$1 million grant from the Clean Coal Review Board, adequate funding is now in place to complete the demonstration.

Regarding economics, the annual operating cost, including payback of capital of an Ashworth Combustor retrofit, is about 1/3 the cost of combining an SO₂ scrubber with Selective Catalytic Reduction (SCR) for NO_x reduction. Fred Murrell, Chairman of ClearStack said, *"The Ashworth Combustor holds the key to low cost NO_x and SO₂ reduction from coal-fired power plants. It can be used to retrofit all types of coal-fired boilers. Once successfully demonstrated, ClearStack intends to put it to work here in the United States and abroad."*

Much of the engineering has already been completed and part of the equipment has been purchased. Installation of equipment foundations will start this month. Construction is scheduled for completion in early 2001. The overall program is projected to cost \$3.34 million. Funding is being provided by ClearStack (\$1,331,737), the Illinois Department of Commerce and Community Affairs (\$450,000), the Illinois Clean Coal Review Board (\$1,000,000) and the Ohio Coal Development Office (\$157,500). In addition, there is in-kind cost sharing of \$393,876 from the Department of Human Services - Lincoln Development Center, and \$7,500 from the City of Orrville, Ohio.