

**TECHNICAL ADVISOR’S SUMMARY and RECOMMENDATION**

**LRC-LXXVII (77) – A**

**“Combustion Enhancement of Solid Fuels Using ClearSign's Technologies”**

**Submitted by: ClearSign Combustion Corporation**

**Request for: \$50,000; Total Project Costs: \$1,150,000;**

**Principal Investigator: Joe Colannino**

**Description of the Project:**

ClearSigns has developed a technology (ECC) that can manipulate the flame using high-voltage electric fields to prevent pollution from forming in the first place. The proposed project will evaluate the viability of the technology when applied to a lignite fired system. The impact of ECC technology on the following key performance parameters:

1. Environmental emissions (NO<sub>x</sub>, CO and PM).
2. Flame control. Manipulate flame geometry, provide better flame geometry control.
3. Air distribution. Improved control in a grated combustion system with heterogeneous fuel composition and uneven grate distribution.
4. Assess the potential of ECC technology to reduce fouling.

**Technical Advisor’s Recommendation: Fund**

Fund subject to the following:

- Matching Funding received from all the parties.
- Technical advisor participates in Advisory group

**Conflict of Interest:**

SaskPower  
GRE