



MEMORANDUM

TO: Mayor and Council Members
Marc Ott, City Manager

FROM: Roger Duncan, General Manager
Austin Energy

DATE: December 16, 2008

SUBJECT: Critical Business Need for Repair of Sand Hill Gas Turbine Engines, Units 1 and 4

ACTION:

In accordance with City Council-approved purchasing procedures, I am designating as a Critical Business Need of Austin Energy (AE), an amendment to a gas turbine maintenance contract in order to facilitate the repair of gas turbine Units 1 and 4 at the Sand Hill Energy Center. While undergoing planned inspection and repair, two significant unanticipated problems were found with the Unit 1 engine. These two repairs are estimated to cost \$1,100,000. During the Unit 4 routine inspection, there were problems found in both the high pressure (HP) and low pressure (LP) turbine sections. These unexpected repairs are estimated to cost \$900,000. In order to complete all these repairs in a timely manner, I am authorizing an additional \$2,000,000 to our existing gas turbine maintenance contract NA070000008. While these two Sand Hill units are out of service, Austin Energy is without approximately 100 Megawatts of efficient and low emissions gas fired generation. Both units should be back in service by the end of January, 2009, if we authorize the repairs within the next few days. It is important to our system reliability that these units be available for service during the month of February, when cold weather can cause sudden increases in our system load demand.

BACKGROUND:

Sand Hill Unit 1 gas turbine engine was removed from its enclosure and shipped to TransCanada turbines during a planned unit outage to repair known problems with the engine. This work was budgeted and planned as part of the Fall outage work at Sand Hill. During inspection of the disassembled unit, two significant additional problems were noted. The first stage HP turbine blades were damaged beyond serviceable limit and cracks were found in the first stage disk. The estimate to repair these problems is \$1,100,000. Likewise, during the Unit 4 planned maintenance inspection, unanticipated problems were found in the engine. These included cracks beyond serviceable limits in the second stage HP nozzle, damage beyond limits to the 30 fuel nozzle tips, lifting of 2nd stage shrouds and a nick, beyond serviceable limits in a first stage LP turbine blade. Estimated cost to pull the engine, separate components in the Sand Hill shop,

ship the LP and HP turbine sections to GE for repair, and reassemble and install the engine is \$900,000. Engineering evaluations, once the engine is disassembled may impact final repair cost. Without these two engines, Austin Energy is not able to operate approximately 100 MW of efficient, fast start, low emission natural gas fired generation. The funding for this repair is included in the FY08 Approved Budget.

Austin Energy plans to bring this item forward for ratification by the City Council in the next several weeks. Please let me know if you have any questions. I can be reached at 322-6157.

A handwritten signature in black ink, appearing to be 'RD' followed by a horizontal line.

Roger Duncan
General Manager
Austin Energy