




KENAI PENINSULA BOROUGH

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JOHN J. WILLIAMS
MAYOR

MEMORANDUM

TO: John J. Williams
Kenai Peninsula Borough Mayor

FROM: Richard Campbell 
General Services Director

DATE: May 25, 2006

Routed From
Mayor's Office to:

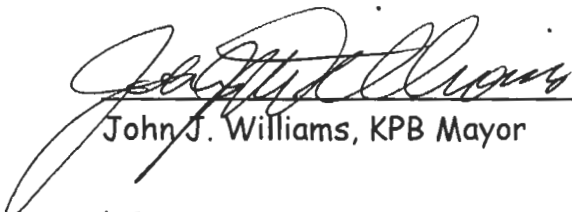
- Clerk *Migniel*
- Assembly
- Legal
- Finance
- Assessing
- Planning
- Roads
- SBB
- Purchasing
- Other *HIR*

Date: 5/25/06

SUBJECT: Purchase of Uninterruptible Power Supply (UPS)

The attached fact sheet outlines the reasons why a new UPS is needed for our central computer operations center. \$100,000 was budgeted in FY06 for a replacement. Unfortunately, the low bid for a new UPS came in at \$126,000 and the maintenance department recommends a budget of \$150,000 to account for in-house labor and contingencies. The finance department has confirmed that funds are available through the equipment replacement fund. Based on the critical function this UPS performs and the pressing need for a replacement, I am requesting approval to proceed with the purchase.

X Approved _____ Denied


John J. Williams, KPB Mayor

5-25-06
Date

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Attached: UPS Fact Sheet
MAYOR'S REPORT

MAYOR'S REPORT

Background

The uninterruptable power supply (UPS), which services the central computer room for both the borough and school district, is expected to provide clean power and avoid power lapses by providing a seamless power transition to its internal power source (batteries). In the event that the power isn't returned (either from generator or HEA) the battery power is expected to hold the power load long enough until an orderly shutdown can occur.

Computing equipment can tolerate slight power deviations, but significant deviations will cause the computer's power supply to fail and damage physical components. Abrupt power failures can impact software and data by causing file, database, and operating system corruption.

In summary we ask our central UPS to do four things:

- **Protect us from voltage surges and spikes** - Times when the voltage on the line is greater than it should be.
- **Protect us from voltage sags** - Times when the voltage on the line is less than it should be.
- **Allow us to transcend total power failure** – When HEA power fails, allows us to stay up during the transition to generator power (and back). When all sources of power fail, allows us enough running time to engage the systems in an orderly shutdown.
- **Protect us from frequency differences** – Condition our power feeds to our components during times external power is oscillating.

The current UPS was purchased in 1994. Its intent was to protect the existing Borough mainframe computer and three network file servers. It was expected to provide clean power for up to 60 minutes (which it did for the power draw at that time).

Issues

The issues that require UPS replacement are:

- **Load**
 - In the last 12 years the computing hardware that the Borough and School District rely on has increased significantly. That means more power draw. That draw has exceeded the capacity of the current UPS. This translates into critical application servers on small stand alone UPS's, non-essential components only being powered on when needed (monitors), and power phases being overloaded.
- **Sensitivity**
 - The current UPS has become too sensitive to commercial brown outs. It needlessly engages, unknowingly draining battery capacity, causing power loss to the server farm.
- **Support**
 - The unit is no longer eligible for manufacturer support. We are forced to rely on the good graces of specific individuals within the manufacturing company to provide guidance and answer the questions posed to them by KPB electricians.
- **Reliability**
 - Increasingly, the unit is subject to more and more unexplained failures.