

Work Project Number **01508**

AC Power Monitoring Improvements

Safety Interlocks Group

October 2005



*Argonne National Laboratory is managed by
The University of Chicago for the U.S. Department of Energy*

Project: AC Power Monitoring Improvements

Objective: To develop a replacement AC power monitoring system

Background Information:

- New Initiative
- Single Year Funding
- Medium priority

Justification:

- Existing power monitors are failing and are obsolete
- Existing system never worked well
- Interim Dranetz system worked well but doesn't interface with Siemens equipment
- New system is sold by Siemens but built by Power Measurements
- Interfaces to EPICS

Consequence:

- No means to troubleshoot power problems
- No means to take required meter readings
- No historical power data

Requested Funds (FY06): \$70 K (AIP)

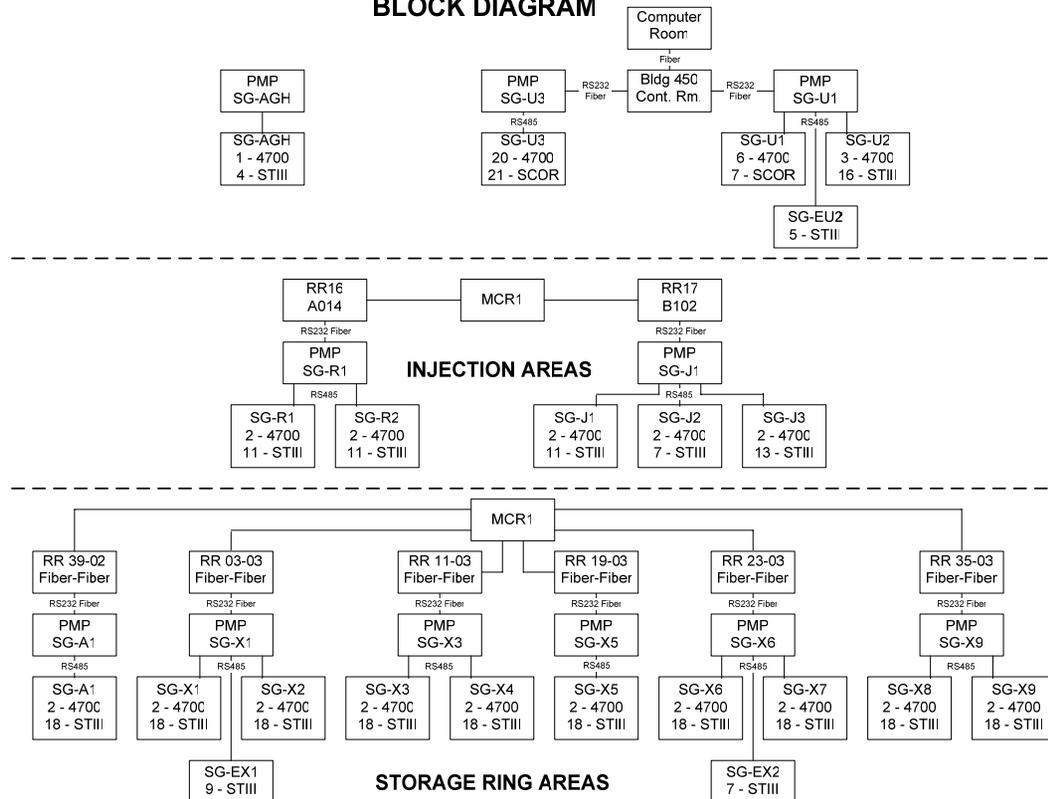
| FY | 2006 | 2007 | 2008 | Total |
|-----------------|--------|------|------|-------|
| Noneffort | \$70 K | | | |
| Existing Effort | | | | |
| New Effort | | | | |
| Total | | | | |

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Status:

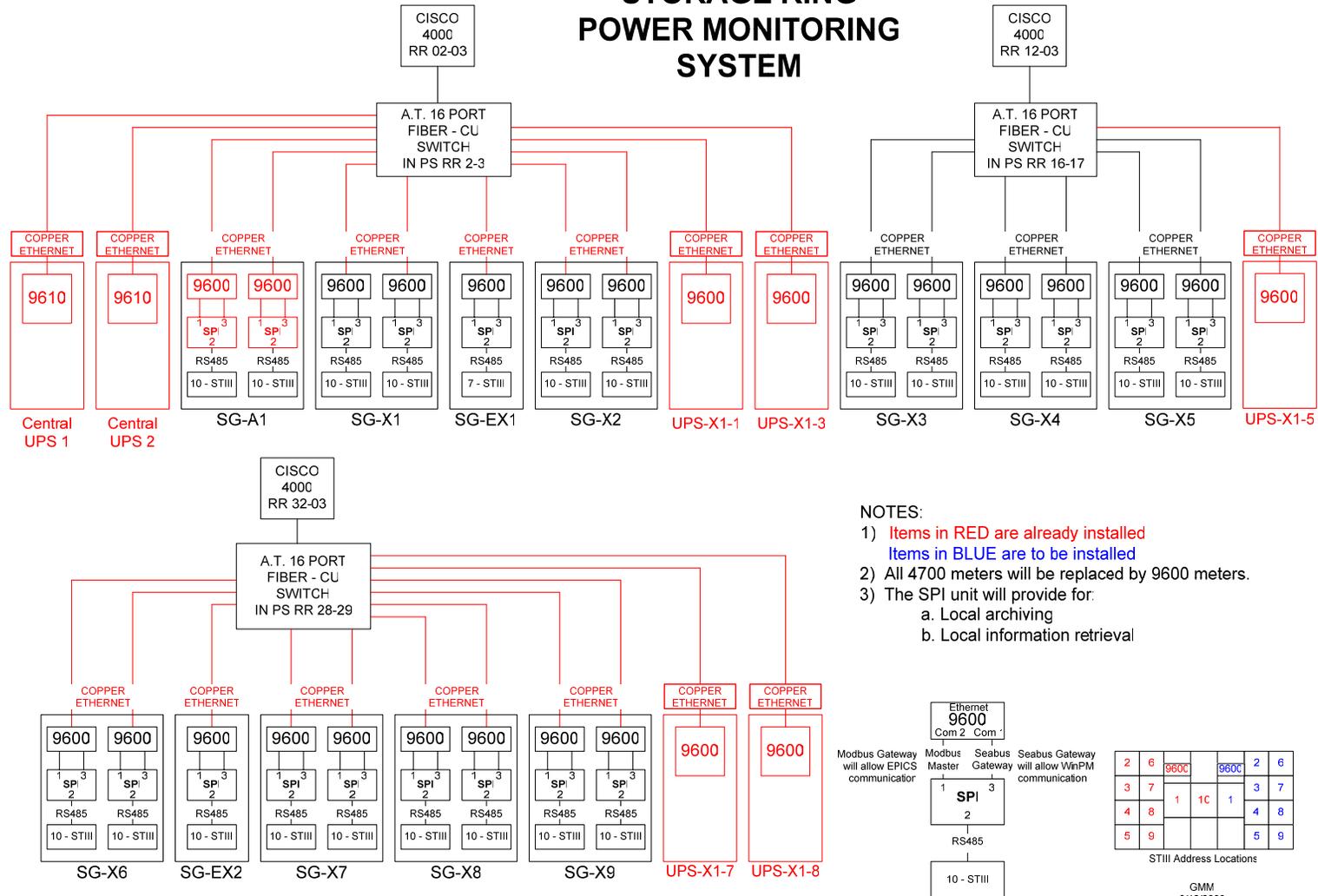
- Procuring Meters
- Procuring Software and Licenses for ~400 devices
- Procuring system design services
- Procuring on-site training

POWER MONITORING SYSTEM BLOCK DIAGRAM



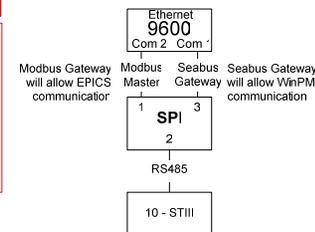
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STORAGE RING POWER MONITORING SYSTEM



NOTES:

- 1) Items in RED are already installed
Items in BLUE are to be installed
- 2) All 4700 meters will be replaced by 9600 meters.
- 3) The SPI unit will provide for:
 - a. Local archiving
 - b. Local information retrieval



| | | | | | | |
|---|---|------|----|------|---|---|
| 2 | 6 | 9600 | | 9600 | 2 | 6 |
| 3 | 7 | | | | 3 | 7 |
| 4 | 8 | 1 | 1C | 1 | 4 | 8 |
| 5 | 9 | | | | 5 | 9 |

STIII Address Locations