December 26, 2008 Piscataway Site Planned Electric Outage

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Project Background

Rutgers University has undertaken a major power upgrade project to the Busch / Livingston campus electrical system. This system provides electrical power to the UMDNJ Piscataway site. The upgrade included the building of a new 69,000 volt substation plus an expansion of Rutgers existing 26,000 volt substation.

This project not only affects the Rutgers and UMDNJ community but the surrounding Piscataway community as well. In order to provide the 69,000 volt service to the Rutgers substation, PSE&G had to provide new power lines from two different locations (Bridgewater and Piscataway) to the Rutgers Substation. This project has been underway over the past two years and will be completed shortly. We have been advised that Rutgers plans to energize the new substation over the next few weeks and begin providing power to the Busch / Livingston and UMDNJ campus sometime over the winter break. This transfer of power to this new substation will take approximately one hour to both Busch / Livingston campuses and UMDNJ. To date, Rutgers is planning to perform this electrical shutdown on Friday, December 26, 2008 from 2:00pm – 3:00pm in the afternoon.

This upgrade will provide the Busch / Livingston and UMDNJ campuses with additional electrical capacity for decades. In addition to added capacity, 69,000 volt feeders are historically more reliable and are less susceptible to power bumps and brown-outs as UMDNJ Piscataway has experienced over the past 6 month.

To take advantage of this transfer of power, UMDNJ Physical Plant is scheduling with Rutgers University a major Preventative Maintenance power outage so that six (6) 13,200 volt service switches can be serviced. These switches have not been serviced in many years and require a full inspection, cleaning and lubrication. Once these switches are inspected and verified that they are fully functional, future interruptions will be scheduled on a more local basis. These future shutdowns will be done to perform Preventative Maintenance on the various transformers that service the Piscataway site.

UMDNJ – Piscataway Electrical System

The Piscataway site obtains its electrical service from Public Service Electric and Gas (PSE&G) and Rutgers University.

PSE&G services the following buildings:
• Children’s Transitional Resident (CTR)
• Staged Research Building
• 151 Centennial
Rutgers University services the remaining buildings on the Piscataway site, which is divided into two Networks.

Rutgers Network #1 services the following Buildings:
- Research Tower / Research Tower Addition and Kessler Teaching Wing
- Research Annex Building
- Physician Assistances (Trailer 6) Building
- University Behavioral Health Care (UBHC) Building
- University Behavioral Health Care (UBHC) Building North

Rutgers Network #2 services the following Buildings:
- Center for Advanced Biotechnology and Medicine (CABM)
- School of Public Health (Research Tower II)

**Transfer of Power from the Old Substation to the New Substation**

**Buildings Affected during the Transfer of Power**
- School of Public Health / Research Tower II
- Center for Advanced Biotechnology and Medicine

To transfer power from the old substation to the new substation, Rutgers is going to shut off their entire electrical network (which includes Network 1 and 2 as described above) at 2pm and start the switch over from the old substation to the new substation. Rutgers anticipates the power outage will only be for one (1) hour. **All buildings on Network #2 (CABM and School of Public Health / Research Tower II)** will transfer from normal power to emergency power for that one (1) hour period. The buildings on Network #2 will already be in a reduced power capacity which is described in the next section. During the power transition, these buildings operational status will not change from what is described in the next section.

School of Public Health / Research Tower II houses several IS&T Servers. Physical Plant has reviewed over this with IS&T and are working together to ensure these servers are not affected during this outage.
UMDNJ Preventative Maintenance Shutdown

Buildings Affected during the UMDNJ Preventative Maintenance Shutdown

- Research Tower
- Research Tower Addition
- Kessler Teaching Wing
- Research Annex Building
- Physician Assitances (Trailer 6) Building
- University Behavioral Health Care (UBHC) Building
- University Behavioral Health Care (UBHC) Building North

For the UMDNJ Maintenance Shutdown – Network 1 power will be off for a period of 8 hours with various areas on Auxiliary Generators. The timing of the shutdowns is detailed at the end of this section.

The goal is to complete all of the preventative maintenance work by 2pm so that when the entire campus is without power all staff can be available. The specific items and areas that will be affected during the outage are described below:

- **Emergency Power Generator that services the Research Tower / Kessler Teach Wing / Research Tower Addition and UBHC** will not have to run during the shutdown. During the initial transition from Rutgers’s Power to the Auxiliary Generators, the Emergency Generator will be running. Once the Auxiliary Generators are on-line, the Emergency Power Circuits will be fed by the Auxiliary generator. This will minimize the run time of the Emergency Generator and have it available if one of the auxiliary generators were to fail.

- **PA Building** will be completely offline. The building will be closed for the day. Physical Plant has already spoken with Ms. Jill Reichman - Associate Director and indicated shutting down the building for the day will not be a problem. Physical Plant will be taking precautions to ensure the plumbing system is protected to prevent freezing of the pipes.

- **Research Annex** – Will be on emergency generator power. Building is required to be closed for the day. Physical Plant is providing emergency power for select RWJMS servers to keep the critical servers operational.

- **UBHC and UBHC North** - Will be on Auxiliary Generators (total of 2). Both buildings will be powered as if it was still connected to Rutgers. UBHC will have a lower building population during the day as the Child and Adolescent Day School Programs are closed. Emergency Power to the building will be provided by the Auxiliary generators with the Emergency Generator available to provide emergency power (as normal). With two (2) auxiliary generators servicing the building, if one (1) generator fails Physical Plant can go to a reduced power mode in UBHC and UBHC North and work off of one (1) generator. During the transition of power from Rutgers to the Auxiliary generators, UBHC will be on
emergency power. The area of concern in UBHC during the transition is the APS telephone system. Physical Plant and IS&T is working together to ensure the APS phone system is functional during this transition.

- **Research Tower Addition** –
  - Research Tower Addition will be closed for the day.
  - Only emergency lighting and circuits will be available.
  - Need to check with Cashier to see if they are open on Friday.
  - Vivarium AHU’s and Exhaust will be functional. Vivarium compressed air and cage washing system will not be functional.

- **Main Research Tower including Deans area (floors 1 through 8):**
  - No DI Water.
  - No House Vacuum.
  - No Compressed Air.
  - No Air Handling Units in the building except in the Vivarium. Vivarium AHU and exhaust system will be functional.
  - Vivarium Cage washing equipment will be non-functional.
  - Fume hoods will be operational but the hoods cannot be utilized during the day as a safety precaution.
  - Dean’s area will have full power.
  - One Passenger Elevator will be shut down to reduce the load on the Auxiliary Generator.
  - Baseboard / perimeter heat will be operational.

- **Kessler Teaching Wing**
  - Kessler Teaching Wing will be closed for the day.
  - No DI Water
  - No House Vacuum
  - No Compressed Air
  - Fume hoods will be down
  - No Air Handling Units
  - Emergency Lighting / Circuits Only
  - Elevator #4 will be shut down
  - Woody’s will be closed for the day. UBHC Café will be operational. Any stored food for Woody’s will need to be consolidated into the units by the old DNA lab and the cold box by the loading dock.
  - SB-11 server room will need to be powered down except for the Sun server. The Sun server is on emergency power. The main Verizon incoming fiber service and the network switches are currently not on emergency power. These circuits will be provided permanent emergency power before the shutdown.
  - Phone systems will have minimal interruption. As stated before, the Verizon systems will have emergency power which should maintain the phones to the campus.
  - Stock Room will be recommended to be closed. The two -20 freezers will need to be consolidated into 1 freezer and temporarily relocated to the Electrical Sub Station where emergency power will be provided.
  - Print Shop will be recommended to be closed.
o Morgue will have temporary power for the cold room and body storage refrigerator. Only emergency lights will be available in the morgue.

o N-203 cold room will have temporary power for the shut down

o Loading dock will be operational

The transfer from Normal Power to Auxiliary Power and back to Normal Power at the end of the day will take up to one (1) hour. Please plan accordingly.

All Preventative Maintenance work will be completed by 2pm. Once normal power is restored by Rutgers, Physical Plant will work on getting CABM and School of Public Health /Research Tower II operational. The next building that will be restored to normal power will be the Research Tower / Kessler Teaching Wing / Research Tower Addition and Research Annex. Once Research Tower is completed, UBHC and UBHC will transfer from the Auxiliary Power to Normal Power. The timing of this is described below.

Schedule of the Preventative Maintenance Shutdown

- **6am** – UBHC and UBHC North will transfer from Normal Power to Emergency Power.
- **Between 6am and 7am** contractor will be connecting the Auxiliary Generators to restore power to UBHC and UBHC North.
- **7am** – UBHC and UBHC North will be on auxiliary power and fully operational.
- **7am** – Research Tower, Research Tower Addition, Kessler Teaching Wing, Research Annex and PA Building will transfer from normal power to emergency power.
- **Between 7am and 8am** the contractor will be connecting the Auxiliary Generators to restore power to select areas of the buildings as previously described.
- **8am** – All buildings affected by the Preventative Maintenance Shutdown will be on Auxiliary Power or Emergency Power.
- **2pm** – Rutgers Substation Transfer Shutdown Begins. Note – the buildings already on Auxiliary Power condition **will not change**.
- **3pm** – Rutgers Substation Transfer will be completed.
- **4pm** - Research Tower, Research Tower Addition, and Kessler Teaching Wing, will transfer from Auxiliary Power to Emergency Power to transfer power back to Normal Power. Note - Research Annex and PA Building will already be on emergency power. **This transfer will take up to one (1) hour.**
- **5pm** - Research Tower, Research Tower Addition, Kessler Teaching Wing, Research Annex and PA Building power will be restored to normal power.
- **5pm** – UBHC and UBHC North will transfer from Auxiliary Power to Emergency Power to transfer power back to Normal Power. **This transfer will take up to thirty (30) minutes.**
- **5:30pm** – UBHC and UBHC North will be on Normal Power.