

Carbon Reduction

Regional and Local Efforts - Schools and Universities

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Director of Resource Management



Where the Rubber Meets the Road...



...Except when we go Airborne

Where is Rowan University?

Directions to the Campus

Rowan University is located in the southern New Jersey town of Glassboro, 18 miles southeast of Philadelphia. The campus is easily reached from the NJ Turnpike, the Atlantic City Expressway or any of the Delaware River Bridges. For a detailed campus map please visit <http://www.rowan.edu/campusmap>.

From the North

(Northern New Jersey, New York, etc.)

Take the NJ Turnpike South to Exit 2 and take Route 322 East. At the first traffic light (3 miles) turn right and then bear left (.4 miles) to stay on Rt. 322. Continue on Rt. 322 (7 miles) to the campus.

From Philadelphia

Take the Walt Whitman or Benjamin Franklin Bridge to I-676 South toward Atlantic City. Shortly after I-676 becomes Route 42 South, exit right onto Route 55 South. Take that to exit 50A (Glassboro-Mullica Hill). Take Route 322 East (2 miles) to the campus.

From the West

Take I-95 to the Commodore Barry Bridge. Follow Route 322 East (15 miles) to the campus.

From Central New Jersey

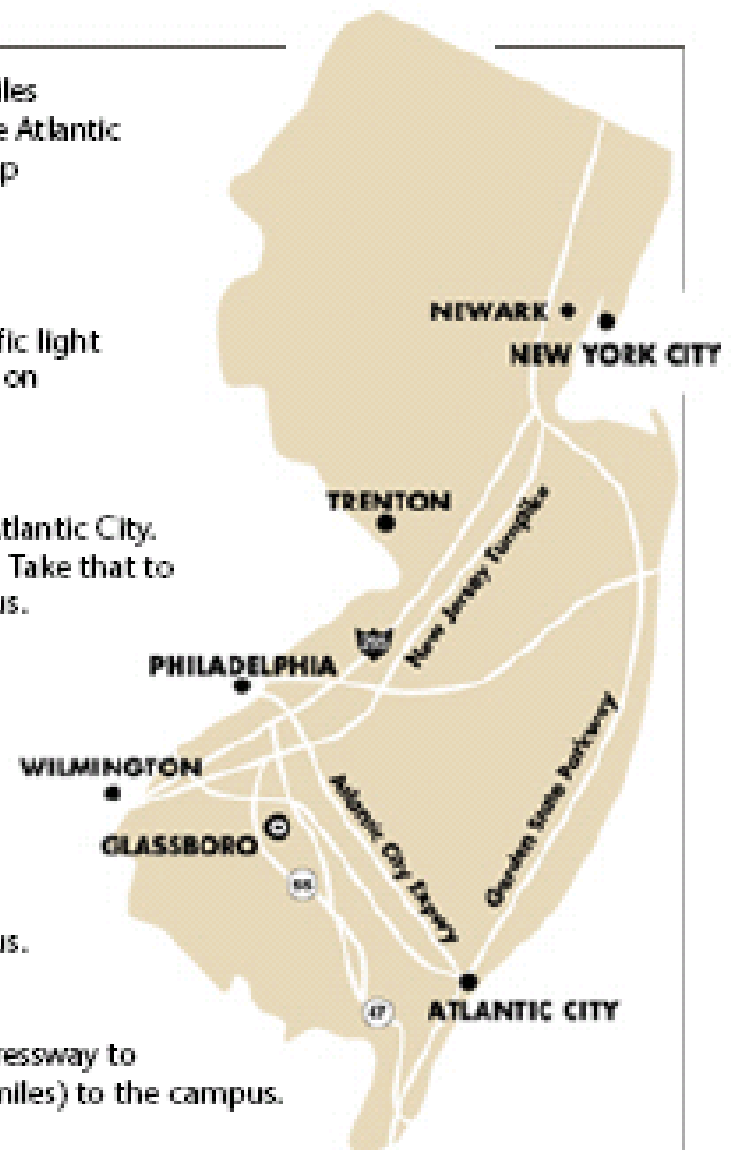
Take Route 70 West to I-295 South. Follow I-295 to Route 42 South (Atlantic City). Exit Route 42 South onto Route 55 South. Follow that to exit 50A (Glassboro-Mullica Hill). Take Route 322 East (2 miles) to the campus.

From the East

Take the Garden State Parkway to the Atlantic City Expressway. Take the Expressway to Exit 38 (Williamstown). Turn left after exiting and follow Route 322 West (8 miles) to the campus.

From the South (Maryland, Delaware, etc.)

Take I-95 North to the Delaware Memorial Bridge. Take the NJ Turnpike North to Exit 2 and take Route 322 East. At the first





Fast Facts about Rowan University

- 2.5 Million GSF
- 72 Buildings
- 800 Acres, 205 Developed
- 10,000 Students
- 6 Colleges, Grad. School, & Continuing Education
- 70 Majors: Undergrad, Grad, & Doctoral
- 13:1 Student/Faculty Ratio

Commitment from the Top



"We cannot depend on manufacturers alone to reduce global warming emissions. Colleges and universities, in many cases, are like small cities. We have a responsibility to address the issue of global warming both in our curriculum as well as in our practices. **We Must Lead By Example.**"

-Dr. Donald J. Farish, President



A Unique Public Offering



A Unique Public Offering

- Dr. Farish, active in the New Jersey Association of State Colleges and Universities, NJASCU.
- Chair of the NJASCU Liaison Subcommittee to NJHEPS.
- First College / University President in NJ to sign the Presidents Climate Commitment.

Rowan & the NJHEPS Program



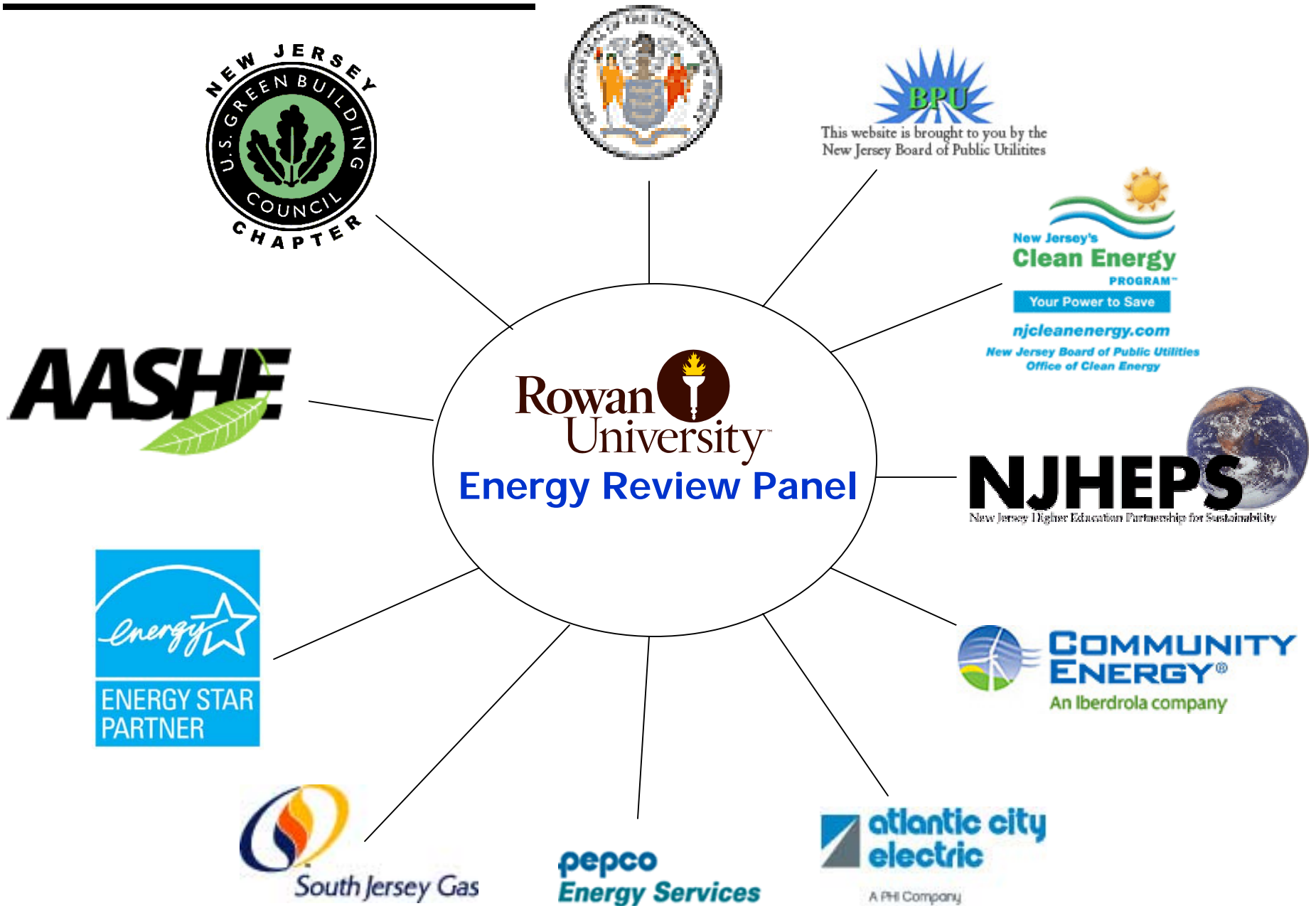
"Sustainable Campus Initiative"

- Five-Year Plan to change:
 - curriculum, research, campus facility operations and community outreach
 - focused on reducing campus impact on global climate change

Six Elements:

- Sustainability Education
- Energy Efficiency and Conservation
(in accord with NJDEP Greenhouse Gas Action Plan)
- High Performance Green Building Design
- Green Procurement
- Formation of Energy Team
- Student Involvement

COLLABORATION



Rowan Energy Engineering Education & Research

- ACE Renewable Energy Study: PV and Fuel Cells
- BP Solar / Mesa Environmental: PV site assessments throughout SNJ
- NJ Anemometer Loan Program
- NJ Wind Working Group
- Carbon Footprint Study of Rowan Residential Students
- NJHEPS/ Campus Building Audits
 - Camden County, Salem Community, College of St. Elizabeth



AMERICAN COLLEGE & UNIVERSITY
PRESIDENTS CLIMATE COMMITMENT



Rowan University President Donald J. Farish

The Commitment

- **Completing an emissions inventory**
- **Within two years, setting a target date and interim milestones for becoming climate neutral.**
- **Taking immediate steps to reduce greenhouse gas emissions by choosing from a list of short-term actions.**
- **Integrating sustainability into the curriculum and making it part of the educational experience.**
- **Making the action plan, inventory and progress reports publicly available.**

Jersey-Atlantic Wind Farm



25% of Electricity comes from Wind Sources this year!

Rowan University Policy

Approved by President and Cabinet on September 12, 2007

Title: **Purchasing Energy Star Rated Products**

Policy Statement: Effective September 15, 2007, all products purchased by Rowan University shall bear the Federal Environmental Protection Agency's Energy Star label in all areas for which such ratings exist. Examples include but are not limited to: computers, printers, copiers and other electronic devices, lighting and indoor climate control products, and commercial or residential appliances. Grants awarded to the university that designate specific equipment are exempt from this policy. Exceptions to this policy shall be determined by the Vice President for Administration and Finance or his/her designee on bases of reasonable cost and consistency with the public interest.



AMERICAN COLLEGE & UNIVERSITY
PRESIDENTS CLIMATE COMMITMENT

www.presidentsclimatecommitment.org

Campus Master Planning

- Rowan University has integrated Sustainability into their Campus Master Plan Guiding Principles as follows:
- “Sustainability – Sustainability is defined as the ability to provide for current needs without jeopardizing the ability of future stakeholders to provide for their needs. The Campus Master Plan will strive to be an outstanding example of long-term sustainable development in its plan and implementation. Our measures of sustainability will be gauged by our participation in NJHEPS and LEED environmental performance standards.”

Sounds great but what are our Marching Orders?

- Was anything mentioned about prescriptive design standards, technical specifications, and construction methods?
- Was anything even mentioned about stopping pollution, planting trees, or saving the whales?
- This is a very broad philosophy that addresses our habits, culture, how we live, work, and play
- What Tools are at our disposal?



AMERICAN COLLEGE & UNIVERSITY
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STATE OF NEW JERSEY

OFFICE OF THE GOVERNOR

April 22, 2006: Governor Corzine Signs Executive Order #11 to Increase Energy Efficiency in State Government

February 13, 2007: Governor Corzine Sign Executive Order #54 Calling for Sweeping Reduction of Greenhouse Gas Emissions in New Jersey



Incorporation of LEED Certified Design Standards

NJHEPS High Performance Campus Design Guidelines

HIGH PERFORMANCE CAMPUS DESIGN HANDBOOK



Volume II: Sustainable Design Guidelines

Prepared by
The Joint Higher Education Authority for New Jersey



A Unique Public Offering

What Else?

- Formation of Sustainability Council to Implement PCC
 - Student Recycling Team
 - 2007 US EPA Environmental Excellence Award for placing 3rd Nationally in Recyclemania
 - 2007 US EPA Green Power Partnership Award for Purchasing 25% of the Electricity we use.
-

Added 17 New Outdoor Recycling Stations



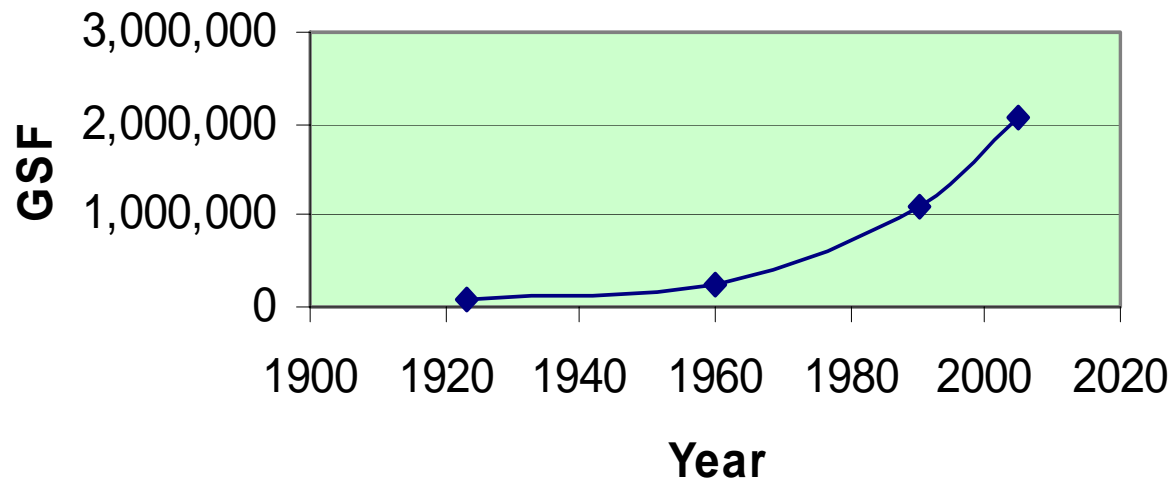
So How are we Really Doing?



GG Emissions Currently at 1990 levels!



Square Footage Growth



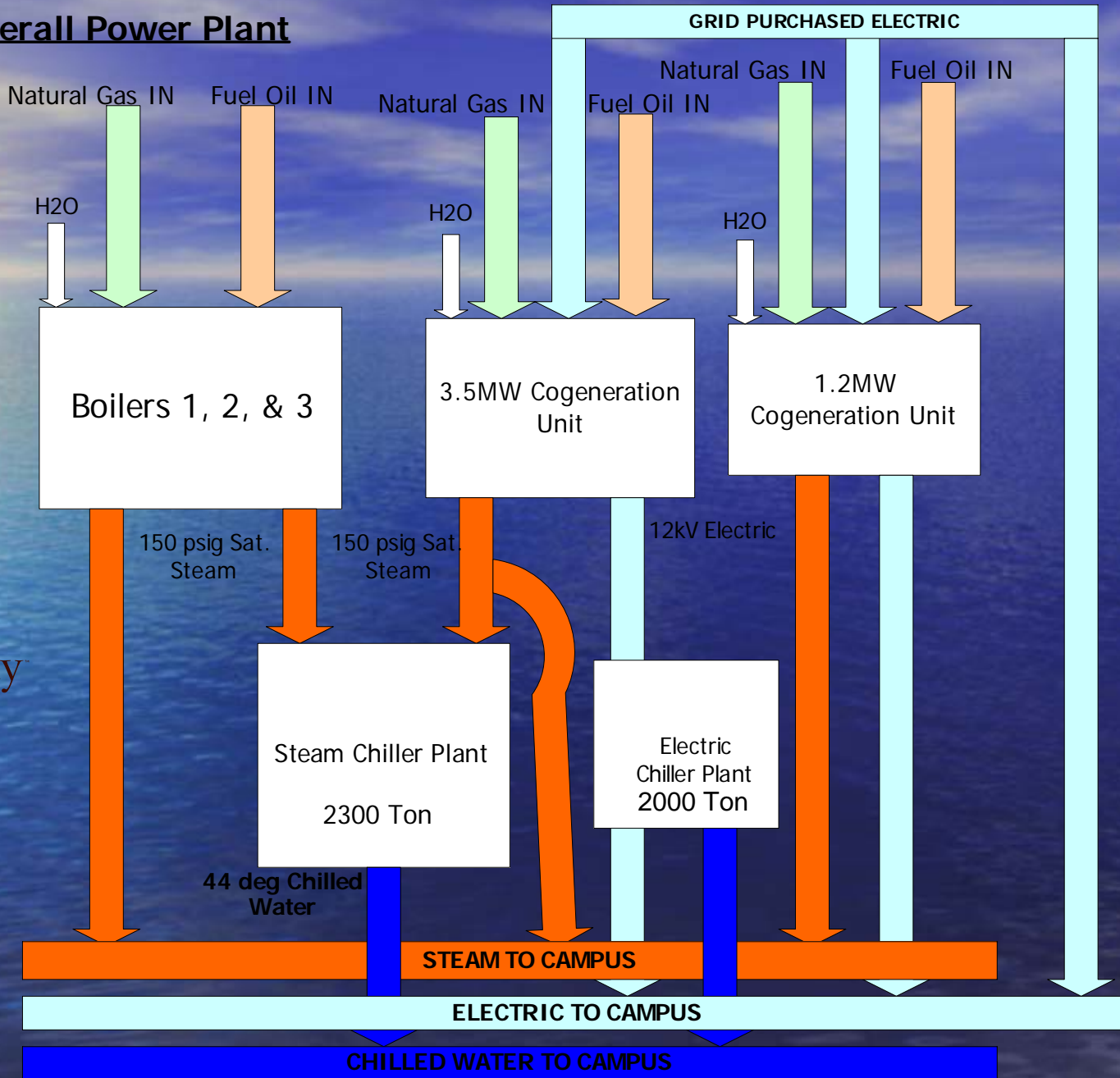


A Unique Public Offering

Physical Changes and Improvements

- Boiler Plant Upgrade to High Efficiency Received \$156K Rebate
- Upgrading and Expanding Existing CoGen from 1.5MW to 4.7MW
- Centralizing Chilled Water Production as Equipment Ages
- T8 Lighting Retrofits including Controls
- 45 VFD's have been installed in the 10HP to 50HP Range
- All New Computers Setup for Sleep Mode after 2 hours of Inactivity
- Energy Star "Back to School" List Distributed to Residential Students

Overall Power Plant



Questions?