Rowan University: Campus Expansion Issues

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Regional Context

Rowan University in Glassboro is located about 30 miles south of Philadelphia.

Part of NJ State College & University system.
Rowan University

- Comprehensive, 4-year university
- 9,500+ students
- Seven Colleges
  - Business
  - Communication
  - Education
  - Engineering
  - Fine & Performing Arts
  - Liberal Arts & Sciences
  - Professional and Continuing Education
Strategic Themes, 2007-2017

- **Education of the ‘whole person’**
  - Integrated & collaborative learning, scholarship, service

- **Attractive, high quality campuses**
  - Eliminate deferred maintenance

- **Developing stable funding base**
  - Optimize use of limited resources

- **Economic & cultural vitality of region**
We can grow, but…

- What areas do we grow in?
- How do we maintain quality of what we have now?
- How do we pay for it?
Meeting the Challenge

- Energy management
- Sustainability initiatives
- Curricular Offerings
- How are we doing?
**Infrastructure Improvements**

- Upgrade steam and condensate piping
- Upgrade boiler plant for high efficiency
- Centralize chilled water production
- Expand and balance electrical distribution
- Upgrade electricity source to transmission level (69kv)
- Upgrade and expand cogeneration plant
- Incorporate fuel diversity
Central Chiller & Co-Generation

- 2,400 ton Steam-driven chilled water plant
- Electric backup (2 @ 2,000 tons)
- Dual fuel co-gen
- 3.5 & 1.2 MW units
- Replaces existing 1.5 MW unit c. 1991
New 4.7 Megawatt Cogeneration Plant
Capital Spending: $270M +

- Equipment / Systems, $3.5
- Residential Learning, $42.0
- Physical Plant / Utility Infrastructure, $63.9
- Academic Buildings, $80.5
- Administrative Bldgs, $15.9
- Athletics, $4.0
- Rec Center / Student Center, $18.2
- Code compliance (ADA, etc.), $10.7
- Parking, $9.5
- Campus Planning, $3.8
- Landscape / Image, $6.8
- Deferred Maintenance, $15.0
- Maintenance, $15.0
- Landscape / Image, $6.8
- Administrative Bldgs, $15.9
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# Energy Costs – FY06 & FY07

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total Commodity Usage</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electricity (kWH)</td>
<td>Gas (Mcf)</td>
</tr>
<tr>
<td>FY06</td>
<td>44,161,465</td>
<td>48,773</td>
</tr>
<tr>
<td>FY07</td>
<td>41,674,595</td>
<td>36,759</td>
</tr>
<tr>
<td>Difference</td>
<td>-2,486,870</td>
<td>-12,015</td>
</tr>
<tr>
<td>% change</td>
<td>-5.63%</td>
<td>-24.63%</td>
</tr>
</tbody>
</table>
10 Year Total Energy Consumption Profile

MMBTU's

Climate Neutrality Plan

- President’s Sustainability Council
  - Develops & implements plan
  - 8 members:
    - 3 faculty (P. Jansson*, J. Everett, J. Hasse)
    - 2 administrators (J. Imperatore*, P. Mosto)
    - 3 students (B. Meyer, T. Sykes, A. Leonard)
- Greenhouse gas inventory by 2008
- Action plan by 2009
Tangible Actions – 2 or more:

- LEED certification
- Energy Star policy
- Air travel GG offsets
- Public transportation
- 15% electricity from renewable sources
- Investment policy
- Recycle Mania
Renewable Energy

25% of Rowan’s electricity comes from wind power!
Sharing information and progress

Outdoor Recycling Stations

Single-Stream Recycling Blitz, January 2008

17 Stations Installed - Summer of 2007
15 Stations to be added this Summer
RU Green Website
http://www.rowan.edu/rugreen/

Welcome to RU Green!
Rowan University is committed to going "green" and at RU Green you can read all about how we’re doing. From an all-new cogeneration plant to good old-fashioned plantings, the RU community is doing all it can to leave a smaller carbon footprint. We’re cutting emissions, trimming waste and running lean. Rowan University is going green!

TRANSPORTATION STUDY FOR CARBON FOOTPRINT
The Presidents Council for Sustainability is requesting your assistance in the participation of a study aimed at quantifying the carbon footprint of transportation at Rowan. We would greatly appreciate it if you would take a couple minutes of your time and go to the link below to participate. This information will be analyzed and made part...
National, Regional and State Awards

- 2007 US EPA Environmental Quality Award: 3rd Nationally in Recyclemania
- 2007 NJ BPU Clean Energy School of the Year.
- 2007 NJ DEP Governor’s Environmental Excellence Award.
- 2008 US EPA Green Power Partnership Award: Purchasing 25% of the electricity used from renewable sources
- 2008 NJCC Award for Excellence in Education for “Clean and Green” Event.
Sustainability at Rowan

◆ 1st in NJ to sign President’s Climate Commitment
  - Leadership in NJ HEPS; Environmental Excellence awards
◆ Education
  - Curricular offerings, Program structure
◆ Research
  - Special programs for undergraduates
  - Cutting-edge programs in Engineering & Sciences
◆ Practice
  - Making things happen in the real world - locally and abroad
  - Campus Master Planning, Guiding Principles
  - Policies: LEED certification, Energy Star products, more…
Sustainability Education

- Programmatic Offerings
  - Traditional courses at undergraduate & graduate levels
- Engineering Clinics
  - Structured & open-ended research & applications
- Extracurricular Activities
  - Service-learning projects
  - Engineers Without Borders
Economic Vitality of Region
Revitalization Goals

- Economic revitalization of historic downtown
- Create services, restaurants, entertainment near campus
- Provide housing
- Create seamless connection between town and campus
Rowan Boulevard

Apartments:
1 bed/room, 4 beds/suite

884 beds total

Phase I (568 beds): Fall 2009
Phase II (316 beds): Fall 2010
Rowan Boulevard
Goal

CREATE A PLACE OF COMMERCE • A PLACE TO LIVE, WORK, SHOP, PLAY, LEARN
How are we doing?

Assessment is “easy” for energy
- How much do we use?
- How much do we pay?

Assessment is harder for planning, design, cultural behaviors
- LEED rating systems (*USGBC*)
- STARS rating system (*AASHE*)
LEED for Neighborhood Development

- The LEED ND rating system integrates the principles of smart growth, urbanism and green building into the first national system for evaluating neighborhood design.
- 106 total possible points
- Three categories of credits
  - Site Location and Linkages
  - Neighborhood Pattern & Design
  - Green Buildings & Technology
Reduced Automobile Dependence
Housing and Jobs Proximity

Legend
- Area within 1/2 mile walk distance from the residential center
- Area beyond 1/2 mile walk distance from the residential center
- Project Boundary
- Residential Center

Buildings Types
- Mixed Use
- Non-Residential
- Residential

Description
This map depicts the 1/2 mile walkshed from the residential center of the Rowan Boulevard project.
Diversity of Uses

Legend:
- Diverse Uses listed in Apdx A
- Entrances
- Half Mile Buffer
- Project Boundary

Buildings Types:
- Mixed Use
- Non Residential
- Residential

Description:
This map shows residential buildings located within 1/2 mi walk distance of 34 diverse uses listed in Appendix A.
Walkable Streets

ROWAN BOULEVARD
GLASSBORO, NEW JERSEY

TOWN SQUARE