Energy at Tufts

Betsy Isenstein
Director, Facilities Technical Services
Energy Used at Tufts

- Electricity
- #6 Oil
- #2 Oil
- Natural Gas
- Propane
- Purchased Steam
Medford Heating Systems
Energy Systems
Medford/Somerville Campus

• Heating
  – District steam plants
    • Central, Tilton, Jackson
  – Stand alone boiler plants
    • Michael Pearson, 4 Colby Street, 80 George Street

• Cooling
  – Chiller systems
    • Tisch, 4 Colby Street, Granoff
  – Package units and split systems
  – Window units

• Purchased electricity
The Four Ps

- Efficiency and emissions reduction projects
- Procurement for price stability
- Policy
- Personal action
Projects

• High efficiency condensing boilers at 4 Colby Street, Sophia Gordon Hall, 80 George Street, 58 Winthrop Street, Admin Building, Large Animal Hospital

• Specific Building Projects
  – Science and Technology Center retro-commissioning
  – Pearson Chemistry heat recovery
  – The Fletcher School chiller replacement
  – Large Animal Hospital retro-commissioning

• Fuel switching
  – Large Animal Hospital – #2 oil to gas
  – Central Heating Plant -- #6 oil to gas

• Boiler Control Upgrades
  – Building 20
  – Large Animal Hospital
  – Central Heating Plant

• Comprehensive lighting retrofits and controls
  – Lighting in gymnasiums and machine shops
  – LED lights

• Steam trap replacement program
• Vending Misers
• Front load washing machines
Science and Technology Center
4 Colby Street

MM BTUs

FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10

Heating Degree Days

15,755 16,696 14,539 12,481 12,633 9,782 6,555 7,311 8,071

11,821 10,962 10,288 9,713 9,505 9,793 9,404 8,995 9,902

Facilities Services

Tufts

Lighting / controls retrofit September 2002
Retro commissioning February 2004
Hot water temperature lowered in preparation for new boilers November 2005
Condensing boilers installed November 2006
HVAC Chiller retrofit complete April 2008

Tufts facilities services

gets green
Heating and Cooling Controls

• Manual control valves  
  (heating only)

• Thermostats

• Energy Management System
Lighting Controls

- Light switch

- Occupancy sensors

- Energy Management System
Medford Utility Procurement

How Medford Utility Dollars are Spent

- Fuel
- Gas & Propane
- Elec
- Water & Sewer
Expectations

- Turn off computer at night
- Enable power management
- Buy a flat screen or laptop
- Turn off your lights
- Shut your fume hood sash
- Turn up/down thermostat (if available)
- Space heaters only if provided by Facilities because building heat is not available
Policy Options

- Temperature policy established
  - Lower heating temperatures – target 68°
  - Higher cooling temperatures – target 78°
  - Expectations during off hours
- Space heaters
- Window air conditioners
- Heating system on/off dates
- Design standards
Energy Consumption per Campus

- Boston
- Grafton
- Medford

Frequently Asked Questions

• Can I use a space heater?
• Why is it so hot on those nice spring/fall days?
• Why is it too hot/too cold?
• What should I do about that?
• Who do we call to report a problem?
• Should I open the window?
Common Misconceptions

- Heating/cooling systems go on with the “flip of a switch”.
- Chilly in the summertime means the most wasted energy.
- The campus energy management system controls everything – my thermostat does nothing.
- It doesn’t matter if I open the window.
- It doesn’t matter if I use a space heater.
- It is better to call someone in Facilities and skip the Work Control system.
How to Help (Personal Action)

Report to Facilities Work Control:

– Leaks, stuck windows etc.
– Occupancy sensors that need adjustment
– Extreme indoor temperatures
– Be patient, but persistent

Reporting is particularly important in areas where there is no “owner”
Online Service Requests
http://www.tufts.edu/central/facilities/index.html

Facilities Department

WELCOME

Welcome to the Home Page of Tufts University's Facilities Department.

Our department is responsible for the operation and maintenance of buildings and grounds on the Boston, Grafton and Medford/Somerville campuses. Other responsibilities include energy management, recycling, administration of the space inventory system and planning and implementation of deferred maintenance projects.

As you review the Operations Division constituent web pages, I would appreciate hearing from you on any suggestions to improve this presentation.

Sincerely,
Dick Reynolds,
Vice President of Operations

Updated on Sunday, August 25, 2002

Tufts University, Facilities
Website comments: Webmaster
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Non-Emergencies ONLY
On-line Service Requests

Facilities Services - Online Service Request System

You are here to report routine repair, non-urgent maintenance service requests. Service requests will be processed during normal business hours.

If this request is an emergency during business hours, please contact your Facilities Services Department:

**Boston:** (617) 636-3535 - 8:00 am to 5:00 pm
**Grafton:** (508) 839-7921 - 7:00 am to 5:00 pm
**Medford:** (617) 627-3496 - 7:30 am to 5:00 pm

If this request is an emergency during off business hours, please call your University Police:

**Boston:** (617) 636-6610
**Grafton:** (508) 887-4900
**Medford:** (617) 627-3030

Please enter your Tufts UTLN and password.*

UTLN [ ] Password [ ]

Submit

*If you have made your Tufts online directory information private your information will not be pre-populated in the work request form, nor will it ever be saved. You will also not be able to look up any of your previous requests.
On-line Service Requests

Welcome to Facilities Services, Tina.

Please select from the following options:

- Submit a work request
- Find my previously submitted requests

Tufts University
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Facilities Services - Service Request

UTLN*: two0801
First Name*: Tina
Last Name*: Woolston
Phone*: (617) 627-5517
Email*: tina.woolston@tufts.edu

If this request is on behalf of another party, please fill in the section below

Alt First Name:
Alt Last Name:
Alt Phone:
Alt Email:

Please select the location of your problem/event

Check here to type your location instead

Campus*: Medford Campus
Building*: Type a Building
Floor: Select a Floor
Room: Select a Room

If your event has a start and or finish date, please specify below

Event Start Date/Time
Event Finish Date/Time

Do you have an ID#?]

What's an ID#?

Please provide a detailed description of your problem/event:
A day in the life of Facilities Services…
Questions about energy at Tufts?

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