



# Laboratories for the 21st Century

## Pilot Partnership with the EPA and DOE

## Command, Control, Communication and Information(C<sup>3</sup>I) Systems Headquarters Marlborough, MA

Northeast Facilities Engineering



**Raytheon**

C3I Northeast  
Shared Services



505,000  
S.F.

R&D  
Facility

Offices and  
Labs



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**14 Million kilowatthours annually**

**(equivalent to 1,435 homes)**

**\$1.4 million per year**

**2.5 Megawatts peak demand**

**power plant production: 42 million KWH**

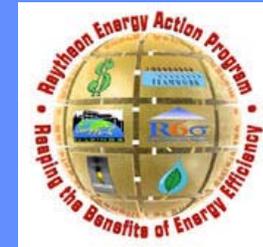
**Equivalent 9,450 tons CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>x</sub> emissions**

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## ENERGY MASTER PLAN

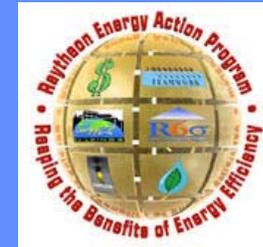
- v **Alternative Energy Technologies - Fuel Cells, etc...**
- v **Demand Side Management - Load Response Curtailments, Capital Planning, Retrofits, Retrocommissioning.**
- v **Energy Star™ Industrial Partners, Labs 21 Pilot Partners**
- v **Energy Awareness Programs - Posters, E-mail, Energy Week**
- v **Energy Procurement - De-regulation, Competitive Bids**
- v **Energy Efficient Design - Capital Planning, Rebates**
- v **Operations and Maintenance - Building Controls, Lighting Maint.**

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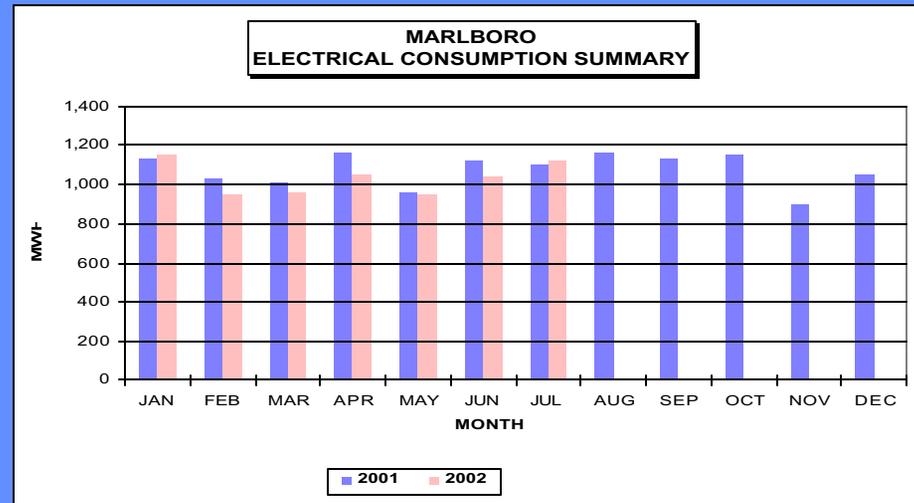


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Savings from Labs 21 Awareness Program  
 2002 through end of July 300,000 KWH  
 Equivalent to 200 tons of carbon dioxide

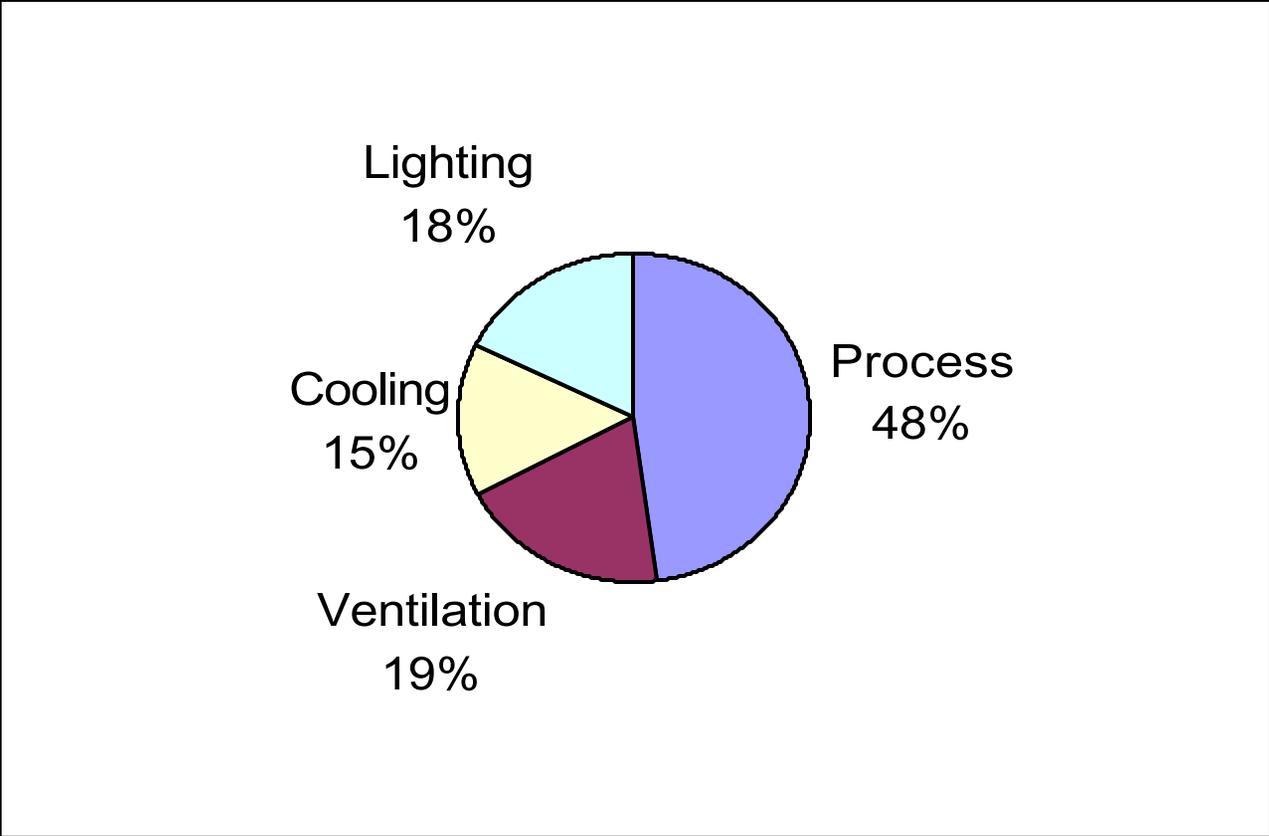


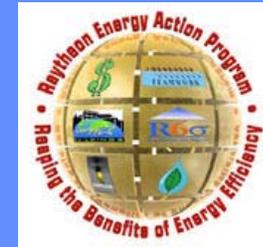
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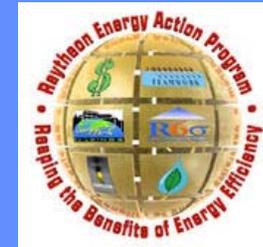


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70K SF  
SatCom



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## SatCom LEED Facility

- **Storm Water Detention Area**
- **Ergolights, occupancy and daylighting control.**
- **Demand Control Ventilation, (Carbon Dioxide Monitoring)**
- **Low Emitting VOCs interiors**
- **Low-E glass and white membrane roof**

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