Telecommunication Efficiency Evolution
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- Manual Operator Assistance
- Solid State Relay Switches
- Microprocessor Switching Equipment
- Server Equipment (Distributed Networking)
HVAC System Evolution

Dual Duct Low Velocity System

Dual Fan System

Single Duct

SPLIT 'Dx' UNIT PIPING DIAGRAM
NOT TO SCALE
HVAC Evolution in Data Centers

- Common Heating and Cooling Systems
- Removal of Heating System (Reuse for Cooling)
- Removal of Return Fans from Typical HVAC Systems and Manual System Balancing
- Installation of Building Management Systems
- Dynamic System Adjustment Through the Use of BMS and VFD Drives (Including Central Plant Optimization)
- Installation of Localized Cooling (DX units) on High Demand Areas
Other Infrastructure Efficiency Objectives

- LED Lighting
- Supply Damper Replacements
- Use of BMS to Make Additional Adjustments to Enhance Efficiency
Keys to a Successful Energy Program

• System Visibility (i.e. BMS reports, energy data)

• Educated and Knowledgeable Operations Personnel

• Continued Assessment/ Reassessment
at&t’s Efficiency Goals

• Continued Participation in the NYSERDA/ConEd Energy Rebate Programs

• Member of Save Energy Now’s LEADER Program (One of 30 companies that pledge to reduce their energy intensity by 25 percent or more during the next 10 years)

• LEADER Program Responsibilities Include:
  
  • Establish energy use and energy intensity baselines
  
  • Develop an energy management plan
  
  • Report changes in energy intensity, energy use data and achievements annually to the Department of Energy (DOE)
Questions