

The Walt Disney Company

Disney's Environmentalty

Welcome to
Walt Disney World!



- Paul Allen
 - Reedy Creek Energy Services
- Brett Rohring
 - Corporate Environmental Policy, TWDC

August 17-20, 2003

www.energy2003.ee.doe.gov

2

©Disney

- Environmentalty
 - The attitude and commitment to think and act with the environment in mind, both at work and at home
 - World wide program



August 17-20, 2003

www.energy2003.ee.doe.gov

3

©Disney

- Three Guiding Principles
 - Education
 - Communication
 - Action



August 17-20, 2003

www.energy2003.ee.doe.gov

4

©Disney

- Mission
 - The Walt Disney Company is committed to balancing environmental stewardship with its corporate goals throughout the world.

August 17-20, 2003

www.energy2003.ee.doe.gov

5

©Disney

- Cultural Diversity
 - Corporate
 - Parks and Resorts
 - Internet Group
 - Studio Entertainment
 - Media Networks
 - Consumer Products
 - Walt Disney International

August 17-20, 2003

www.energy2003.ee.doe.gov

6

©Disney

2003 Energy Business of Environmentalty

- Alternate Fuels
- Commuter Transportation
- Compliance
- Green Building
- Integrated Pest Management
- International Standards
- Outreach Programs
- Resource Conservation
- Strategic Sourcing
- Waste Minimization

August 17-20, 2003

www.energy2003.ee.doe.gov

7

©Disney

2003 Energy Alternate Fuels

- On Stage and Backstage Vehicles
- CNG + Electric + Hybrid Fuels
- Refueling Stations
- 27,000 Pounds of Vehicle Emissions Saved Annually

August 17-20, 2003

www.energy2003.ee.doe.gov

8

©Disney

2003 Energy Commuter Transportation

- Use of Single Occupant Vehicle Alternatives Helps Air Quality and Congestion
- Cast Member and Employee Incentives
- EPA Commuter Choice



August 17-20, 2003

www.energy2003.ee.doe.gov

9

©Disney

2003 Energy Compliance

- Maintenance Operations
- California Universal Waste Rule
 - Battery Recycling
 - Fluorescent Lighting
- Inspections



August 17-20, 2003

www.energy2003.ee.doe.gov

10

©Disney

2003 Energy Green Building

- Original Member, US Green Building Council
- Disney's Green Building Goals & Guidelines
- Master Building Specifications and Design Criteria
- The Disney Wilderness Preserve
 - 8,500 → 12,000 Acres
 - Managed by The Nature Conservancy
 - Green Office and Education Facilities

August 17-20, 2003

www.energy2003.ee.doe.gov

11

©Disney

2003 Energy Integrated Pest Management

- Florida and California Theme Parks
- Reduction and Elimination of Pesticides
- Weekly Release of Ladybugs and Butterflies at Walt Disney World – Unique Guest Interactive Experience



August 17-20, 2003

www.energy2003.ee.doe.gov

12

©Disney

2003 Energy International Standards

- Code of Conduct for Manufacturers
- Audits and Inspections
 - Laws and Regulations
 - Consistency
- Member of Businesses for Social Responsibility (BSR)

August 17-20, 2003

www.energy2003.ee.doe.gov

13

©Disney

2003 Energy Outreach Programs

- WOW – Wonderful Outdoor World
 - Urban Camping Experience to Introduce Environmental Education to Youth Ages 8 to 12 Years
 - Six States
- Jiminy Cricket's Environmental Challenge
 - Fifth-Grade Students in CA & FL Implement a Real-Life Environmental Action Project and Report Results
 - Over 120,000 Students Have Accepted the Challenge Each Year



August 17-20, 2003

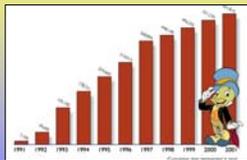
www.energy2003.ee.doe.gov

14

©Disney

2003 Energy Resource Conservation

- Water
 - WDW 2 Billion Gallons Saved Annually
- Energy
 - Savings Powered Disney's Animal Kingdom 1st Year
- Recycling of Commodities
 - 55,000 Tons Annually
- Reuse
 - Movie and Television Sets
 - 85% reused for daytime series General Hospital



August 17-20, 2003

www.energy2003.ee.doe.gov

15

©Disney

2003 Energy Strategic Sourcing

- Office Supply Sourcing
 - One Contract Company Wide
 - Maximize Savings
 - Recycled office paper and toner cartridges save approximately \$1M annually
 - MWBE
 - Environmental Partnerships
 - Take-back programs, etc.

August 17-20, 2003

www.energy2003.ee.doe.gov

16

©Disney

2003 Energy Waste Minimization

- Benchmark Existing Activities
- Study to Develop Potential
 - Food Waste Recovery
 - Asset Disposition Contracts
 - Electronics and Computers
 - Warehouse Housekeeping
 - Donations
 - LA Shares



August 17-20, 2003

www.energy2003.ee.doe.gov

17

©Disney

2003 Energy Disney's Environmental Fun!

- Sense of Ownership and Fun!
 - Employees
 - Green "Circles"
 - Earth Month Events
 - VolunTEARS
 - Communication
 - Internal Newsletter Articles
 - Intranet
 - Disney's Enviroport
 - Awards
 - Recognition



August 17-20, 2003

www.energy2003.ee.doe.gov

18

©Disney



Paul Allen

Reedy Creek Energy Services
Walt Disney World



Energy Star Buildings Program

1. Green Lights Upgrades
2. Building Tune-Up
3. Load Reductions
4. Fan System Upgrades
5. Heat and Cooling Plant Upgrades



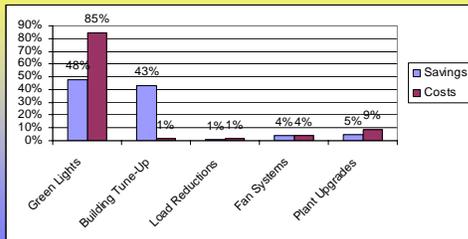
August 17-20, 2003

www.energy2003.ee.doe.gov

20



Energy Star Results



Overall Program Results – 44% IRR

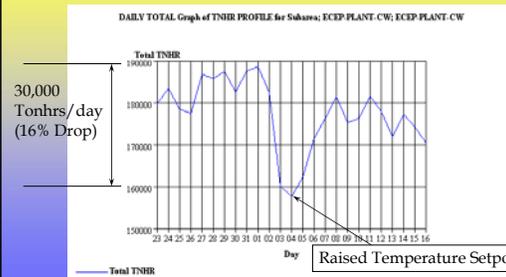
August 17-20, 2003

www.energy2003.ee.doe.gov

21



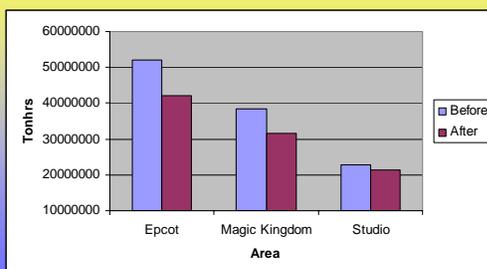
Epcot's Building Tune-Up



Lesson Learned: Slow & Steady Wins the Race



Chilled Water Savings



August 17-20, 2003

www.energy2003.ee.doe.gov

23



Building Tune-Up Process

- **Tune-Up HVAC Control System**
 - Optimize time/setpoint schedules - Auto-reset daily
 - Understand energy management system control strategies
- **Repair Controls that have Failed**
 - Control valves, dampers and sensors
- **Measure Utility Consumption**
 - Track monthly utility bills
 - Install submetering strategically
 - Publish the data on an Intranet



August 17-20, 2003

www.energy2003.ee.doe.gov

2003 Energy Building Tune-Up BTU Team Structure

- **Facilitator**
 - RCES Energy Management
 - Productivity Manager
- **Team Leader**
 - Engineering Services
- **Members**
 - EMS Global Support Team
 - Operations/Foods/Merchandise/Custodial
 - EMS Vendor Support (if needed)



August 17-20, 2003 www.energy2003.ee.doe.gov 25

2003 Energy Building Tune-Up System (BTUS)

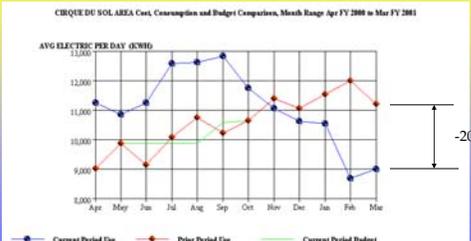
- **Energy Management System Data**
 - HVAC Equipment
 - Time Schedules
 - Setpoint Schedules
 - Link to Temp/RH Trends
- **Facility Time Schedule Program (FTS)**
 - Nightly Download of Time and Setpoint Schedules
- **BTUS Demo**



August 17-20, 2003 www.energy2003.ee.doe.gov 26

2003 Energy Cirque du Soleil BTU

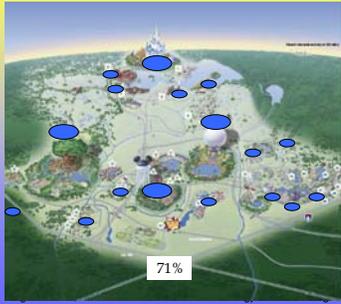
CIRQUE DU SOLEIL AREA Cost, Consumption and Budget Comparisons, Month Range Apr FY 2000 to Mar FY 2001



Used Energy Management System to Turn off HVAC units at night. Raised Temperature Setpoints.

©Disney

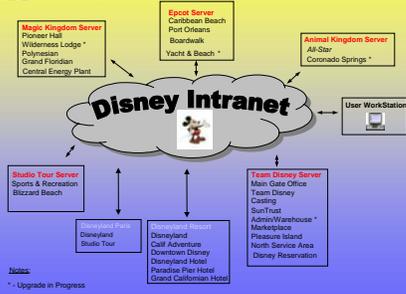
2003 Energy Carrier EMS Installations



DT/OSNEY	MARKETPLACE
DT/OSNEY	PLEASURE ISLAND
PARKS	ANIMAL KINGDOM
PARKS	EPCOT
PARKS	FEATURE ANIMATION
PARKS	MAGIC KINGDOM
PARKS	STUDIO
RESORTS	ALL STAR
RESORTS	CARIBBEAN BEACH
RESORTS	FT. WILD PIONEER HALL
RESORTS	GRAND FLA
RESORTS	POLYNESIAN
RESORTS	PORT ORLEANS
RESORTS	WILD LODGE
RESORTS	YACHT & BEACH
SPORTS/REC	BLIZZARD BEACH
SUPPORT	BVCC
SUPPORT	CASTING BLDG
SUPPORT	CENTRAL SHOPS
SUPPORT	DISNEY UNIVER
SUPPORT	FAM
SUPPORT	MANGATE MALL
SUPPORT	RESORT CENTER
SUPPORT	RIDE & SHOW
SUPPORT	SUNBANK BLDG
SUPPORT	TEAM DISNEY
SUPPORT	WAREHOUSE DC2
SUPPORT	WAREHOUSE DC3
SUPPORT	WAREHOUSE DC5
SUPPORT	WAREHOUSE DC6
SUPPORT	WAREHOUSE DC8
SUPPORT	WAREHOUSE DBRKR
SUPPORT	WAREHOUSE XMAS

©Disney

2003 Energy Central Energy Management System



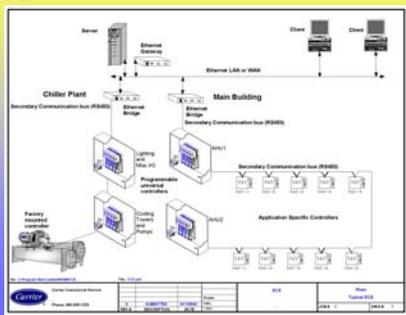
Disney Intranet

- Magic Kingdom Server**: Pioneer Hall, Wilderness Lodge*, Polynesian, Grand Floridian, Central Energy Plant
- Epcot Server**: Caribbean Beach, Port Orleans, Boardwalk, Yacht & Beach*
- Animal Kingdom Server**: All-Star, Coronado Springs*
- Studio Tour Server**: Sports & Recreation, Blizzard Beach
- Team Disney Server**: Main Gate Office, Team Disney, Casting, Sun-Tast, Admin/Warehouse*, Marketplace, Pleasure Island, North Service Area, Disney Reservation
- Disneyland**: Studio Tour
- Disneyland**: Calif Adventure, Downtown Disney, Disneyland Hotel, Pleasure Pier Hotel, Grand Californian Hotel

Notes: * Upgrade in Progress

©Disney

2003 Energy Carrier EMS Network



©Disney

2003 Energy Management Field Panels



August 17-20, 2003

www.energy2003.ee.doe.gov

31

©Disney

2003 Energy Management System (EMS) Reports

- **Creates Web Interface for Carrier Reports**
 - Alarm Summary Report
 - System Activity Report
- **Reports Updated Daily**
- [EMS Reports Demo](#)

©Disney

2003 Utility Reporting System (URS)

- **Intranet Database Program**
 - Use web browser to graph and report utility usage
- **Monthly Billing Data**
 - Utility bill data downloaded monthly from utility
- **Hourly Interval Data**
 - Power monitoring systems
 - Energy management systems
 - Other submetering systems
- [URS Demo](#)



August 17-20, 2003

www.energy2003.ee.doe.gov

33

©Disney

2003 Electric Sub-Meters



August 17-20, 2003

www.energy2003.ee.doe.gov

34

©Disney

2003 Water Meters



©Disney

2003 Living Seas Tank Lighting

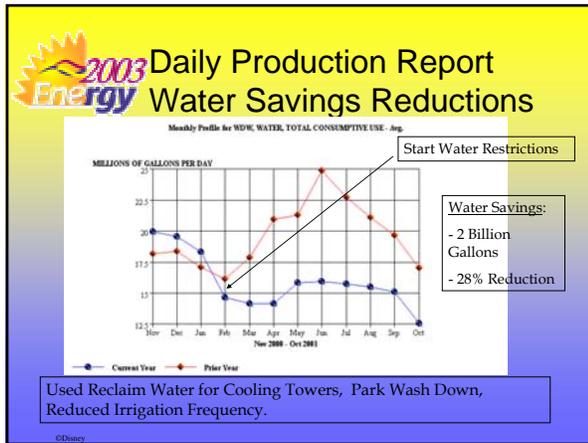
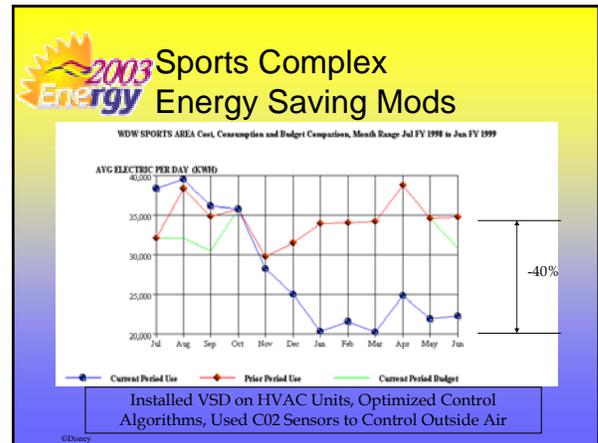
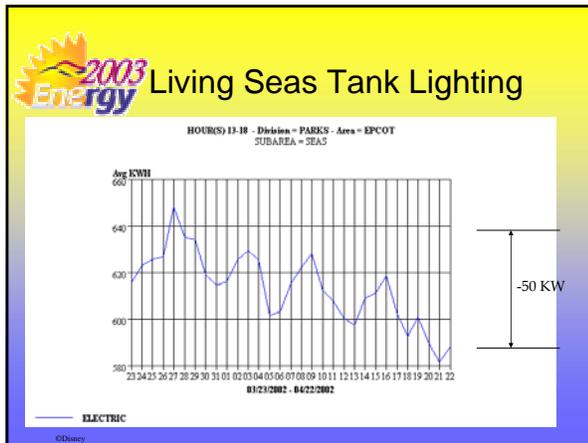


After - 250W & 400W Fixtures



Before - 1000W Fixtures

©Disney



2003 Energy An Energy-Efficiency Workshop and Exposition Orlando, Florida

Utility Reporting System

Visit <http://www.utilityreporting.com>

August 17-20, 2003 www.energy2003.ee.doe.gov 40