The Solutions Network

Rochester, New York

***Successful Energy Management***
***and***

# *THINKING OUT OF THE BOX*

***at the***
***Arizona Army National Guard***


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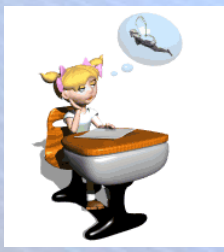
***Energy Manager***

**State of Arizona-DEMA**

***The Arizona Army National Guard***

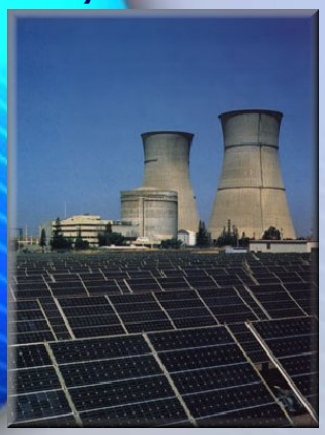
# The Concept

**Develop projects to conserve energy and lower operating costs.....**

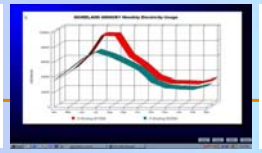


# The Goal

**Clean, Safe Energy**



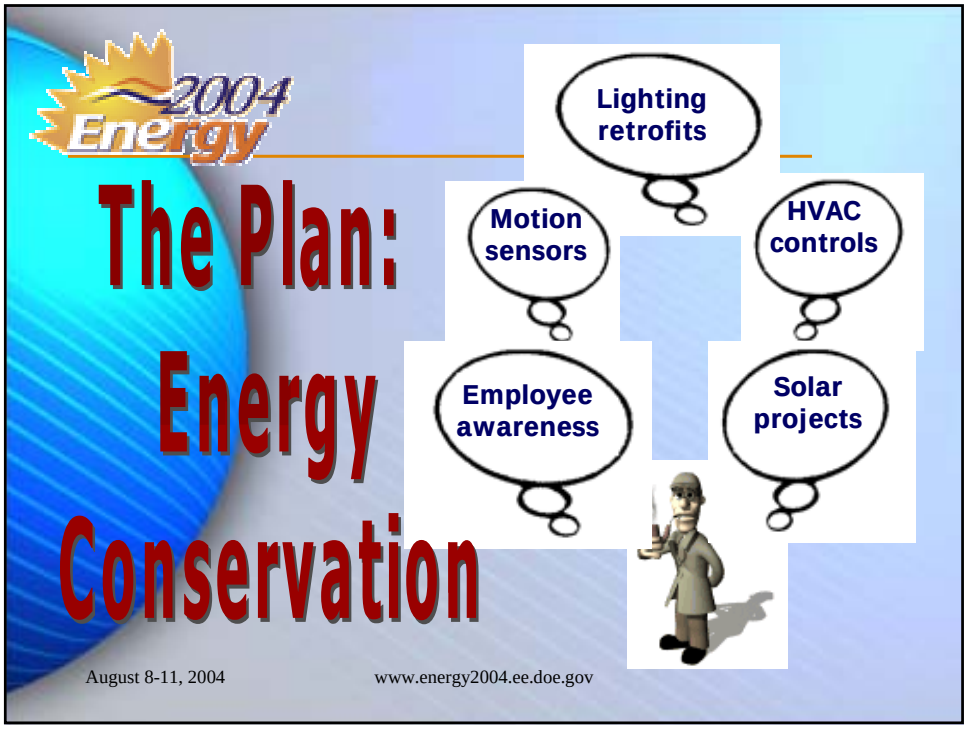
- Reduce energy usage
- Increase efficiency
- Reduce energy costs
- Be a visionary !
- Offer a visual statement
- Invest in the future



# The Facts

**ENERGY SAVED = DOLLARS SAVED**

- Good business sense
- Increases efficiency
- Reduces pollution


2004 Energy
The Plan:
Energy
Conservation
Lighting retrofits
Motion sensors
HVAC controls
Employee awareness
Solar projects
August 8-11, 2004
www.energy2004.ee.doe.gov

2004 Energy
The Commitment
Diving into partnerships
DEMA
ASU Arizona State University
Northern Arizona University
Alerton Technologies Inc.
FEMP
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Touchstone Energy
APS
Army National Guard
Save Army Energy
Tucson Electric Power
A UniSource Energy Company
SRP
Delivering More Than Power
TRICO
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Use in-house expertise & labor
TRAINING and LEADERSHIP !
Enjoy your job!
and believe in what you do!

2004 Energy
Making it all Work !
Using our OWN techs
REAL in-house experts!
August 8-11, 2004
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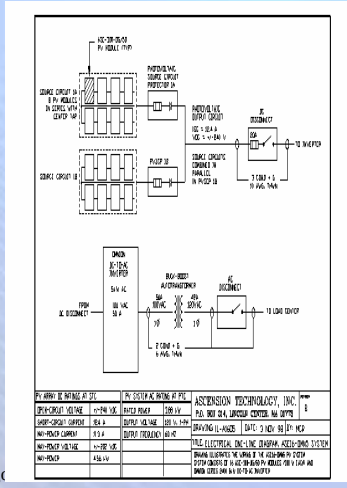
# The Engineering

- Important to get it right!
- Use in-house expertise?
- Use utility partnerships?
- Choose PE's carefully!
- Ask lots of Questions!





# The Projects

## Lighting

- T12-T8 retrofits
- Electronic ballasts
- Motion sensors
- LED exit signs
- Compact flourescents
- Photocells w/ timeclocks

## HVAC:

- Programmable T-stats
- Temperature settings
- BACnet EMS
- AWARENESS !

# The Costs

***Keeping your costs down***

- Life cycle costing upfront
- USE GSA PRICING for purchases
- Shop Around for Materials!
- Use Creative Project Management
- Get everyone involved up front
- Don't be afraid to ask for help!
- In-house labor saves much of cost

**Look for:**

**Simple Paybacks< 7 years**

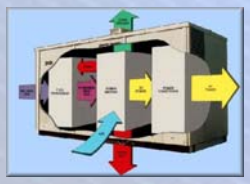


# A Question of Labor

**State technicians being trained for:**

- Installation
- Operating
- Troubleshooting
- Maintaining

# Embrace technology!



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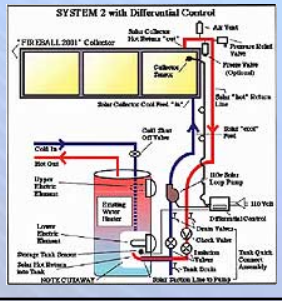
# Renewable Projects

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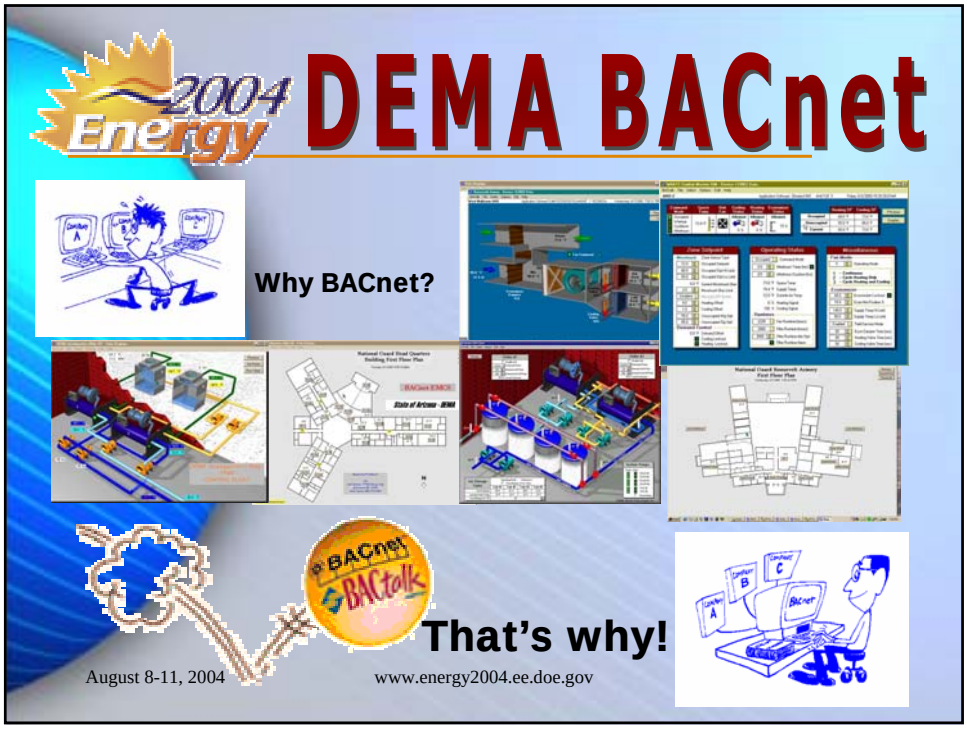
2004 Energy
DEMA BACnet
Why BACnet?
That's why!
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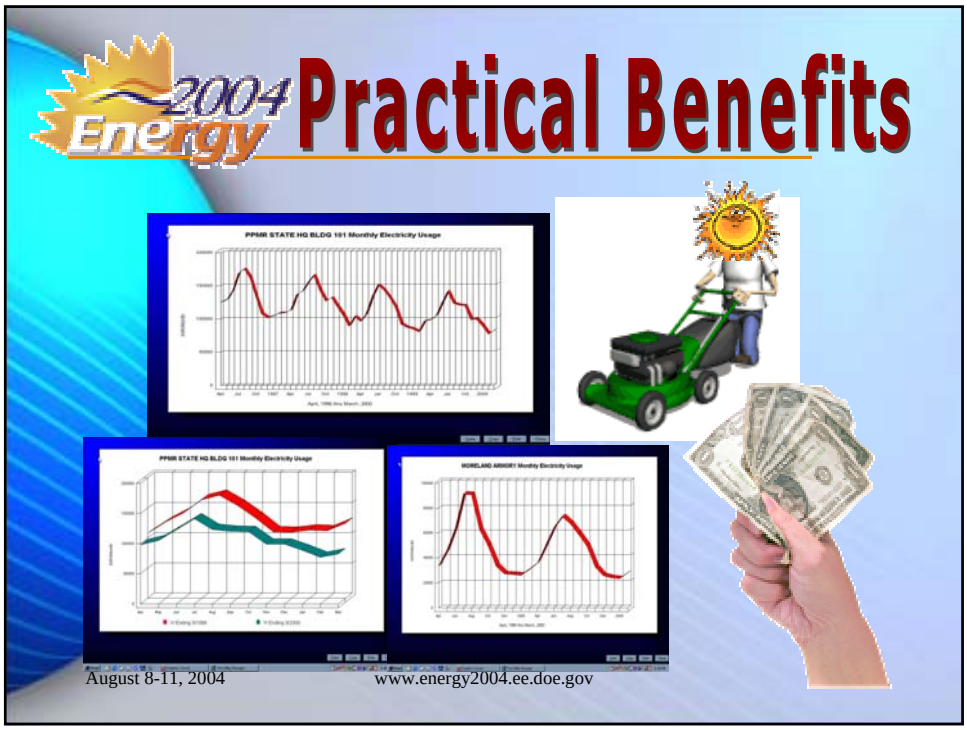
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# Meeting the Objectives

- Use Energy Wisely
- Reduce Operating Costs
- Increase Awareness

- Lead as the Visionary
- Protect Environment

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# Summary

*Saving ENERGY saves $ !*

- Start with an energy accounting system: find the HOGS!
- Savings can continue to fund new projects.
- Many new technologies out there – use what you can!
- Partnerships & Networking are important.
- Use in-house expertise to save LABOR COST$
- TRAIN your own people who show interest to learn.
- Life cycle cost the projects and TRACK their performance.

2004 Energy
Questions?
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