
**Environmental Subgroup
Environmental Safety & Health Working Group
Fall, 2008 General Meeting**

DOE Order 430.2B

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October 8, 2008

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Overview of DOE O 430.2B NSTec Approach

- DOE Order 430.2B, *Department of Energy, Renewable Energy and Transportation Management Requirements**
- Formed Energy Management Council (EMC)
- EMC representation: Engineering, Energy Management, Utilities, Fleet, Power, Water, Maintenance, Process Improvement, Facility Management, and ESHQ
- Energy Manager - Dawn Starrett
- Developed rough implementation cost
 - Order broken down by each CRD
 - Each EMC SME provided ROM estimates

** not currently in NSTec contract*

Environmental Management System

- The EMS is a requirement of DOE Order 430.2B
- Many of the EMS requirements under DOE Order 430.2B already institutionalized in work processes
 - The EMS meets requirements of DOE Order 450.1, “*Environmental Protection Program*” and includes ISMS elements
 - NSTec PD-0442.001, *Environmental Management System Description*, describes commitments and methods used to integrate environmental management requirements into work planning and execution
 - NSTec also meets the requirements of the 17 elements of the ISO 14001 Standard and is ISO 14001 certified
- Plan is to build on existing requirements within DOE Order 450.1 to fully integrate new activities and processes developed in response to DOE Order 430.2B requirements into the EMS as funding becomes available for implementation

DOE Order 430.2B Implementation Status

CRD Requirement No.	No. of Requirements	Completed	In progress	Future	N/A
1	5		3	2	
2	2		2		
3	1	1			
4	3		2	1	
5	6		2	4	
6	16	1	7	6	2
7	11	1		10	
8	11	11			
9	7	7			
10	1		1		
11	3			3	
12	3	2		1	
Total	69	23	17	27	
	Percent of Total	33.33%	24.64%	39.13%	

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Implementation Costs

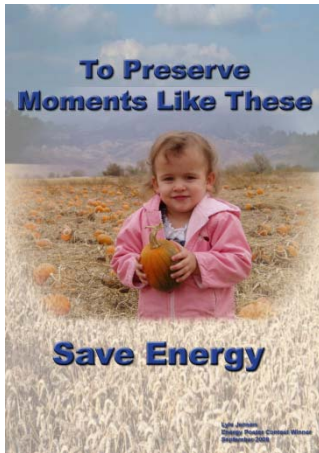
- Total cost to implement estimated at \$12M
- High cost elements
 - CSP: \$6M
 - ESPC contract: \$2M
- Low cost elements
 - Majority of the requirements fall into this category
 - Vary from \$1000 - 640,000

100 MW Concentrating Solar Plant

- Planned as an Energy Savings Performance Contract (ESPC)
- Savings will be a pre-determined block of electric power sold at a fixed rate lower than current electricity costs for the term of the ESPC contract
- Electricity will also be sold to commercial or other Federal agency customers willing to pay a premium for renewable energy
- If awarded, construction CSP will take 2 years
- Project still in the conceptual design stage
- Land and water rights issues could be show stoppers as could the length of time needed to obtain an approved Supplemental Environmental Impact Statement.

Increasing Employee Awareness

- *The Joule*
- Poster Contest



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The Joule The Monthly Energy Newsletter August 2008



Reduce Pollution

When fossil fuels are burned to produce energy, carbon dioxide is released. **Greenhouse gases** are one of the gases that cause the **greenhouse effect**. These gases act like a thin film that keeps heat from the sun inside our atmosphere. The greenhouse effect is changing the earth's climate.

Using energy efficiently at home, at school, and at work is a very good way to reduce **greenhouse gases** and other pollutants and help our planet stay healthy.

Factoids:

Plant a Tree: Trees take carbon dioxide out of the air and give back the oxygen we need to breathe. So, trees can help balance the effects of using energy.



If every family in the U.S. planted just one tree, all of these trees would remove more than a billion (1,000,000,000) pounds of greenhouse gases from the air every year!

If you have information to add to this newsletter, contact Roberto Reyes, editor, at 252-3467 or recesra@nvt.dos.gov

10 Energy Conservation Tips

1. **Be Bright About Light**
Today's artificial lighting account for 44 percent of the electricity use in office buildings. Make it a habit to turn off the lights when you're leaving any room for 15 minutes or more and utilize natural light when you can.

2. **Maximize Computer Efficiency**
Computers in the business sector unnecessarily waste \$1 billion worth of electricity a year.

3. **Print Smart**
The average U.S. office worker goes through 10,000 sheets of copy paper a year. Make it a habit to print on both sides or to use the back side of old documents for faxes, scrap paper, or drafts. Avoid color printing and print in draft mode whenever feasible.

4. **Go Paperless When Possible**
Make a habit to think before you print: could this be read or stored online instead? Request to be removed from mailing lists for any unwanted catalogs, newsletters, magazines, and junk mail. Visit www.newdps.org/junkmail for more information.

5. **Ramp Up Your Recycling**
Make it a habit to recycle everything your company collects. Just about any kind of paper you would encounter in an office, including fax paper, envelopes, and junk mail, can be recycled. So can your old cell phone, PDA, or pager (see <http://www.electronicrecycle.com> for more information.)

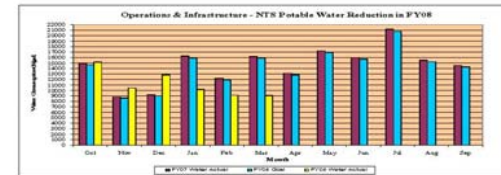
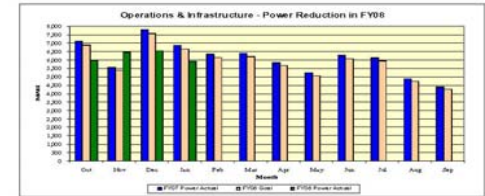
6. **Close the Loop**
Make it a policy to purchase office supplies and furniture made from recycled materials. To find out more about recycled office supplies, visit www.conservatree.org.

7. **Watch What (And How) You Eat**
Make it policy to provide reusable dishes, silverware, and glasses. Switch to Fair Trade and organic coffee and tea, and buy as much organic and local food as possible for parties and other events. Provide filtered drinking water to reduce bottled-water waste.

8. **ReThink Your Travel**
Make it a habit to take the train, bus, or subway when feasible instead of a rental car when traveling on business. If you have to rent a car, some rental agencies such as EV Rental Car (www.evrental.com) now offer hybrids and other high-mileage

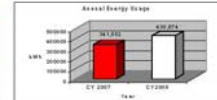
9. **Reconsider Your Commute**
Make it a habit to carpool, bike, or take transit to work, and/or Telecommute when possible. If you need to drive occasionally, consider joining a car-sharing service like Zipcar (www.zipcar.com) and Flexcar (www.flexcar.com)

10. **Create A Healthy Office Environment**
Make it a habit to use nontoxic cleaning products. Brighten up your cubicle with plants, which absorb indoor pollution. Make it a policy to buy furniture, carpeting, and paint that are free of volatile organic compounds (VOCs) and won't off-gas toxic chemicals.



High Use Energy Use Facility

Building 23-160: Main Warehouse
Facility Manager: Shevile, Charles
Building Gross Square Footage: 50,000



Current Usage: 26% increase in kWh for Jan-Mar 2008 when compared to the same months in 2007

Success Story – B3

- **Building B-3 faced potential deactivation and demolition NOW a LEED Silver Building**
- 75% of existing walls, floors, and roof been reused
- The new roof has 4” insulation and a white reflective finish
- 19 new HVAC units (High SEER 13) have been installed with no CFCs in HVAC materials
- Exterior wall insulation has been installed
- Low energy ballast were installed in all new and recycled light fixtures
- Xeriscape was installed next to the building to save water
- High efficiency drip system and other fixtures installed to achieve a 20% reduction in water use
- Carpet and tile were a minimum of 10% recycled content
- Concrete and insulation were obtained from 10% extracted regional materials
- Low-emitting materials were installed to reduce indoor pollution
- Additional thermostats were added to increase thermal comfort
- UV lamps and silver-coated drain pans were installed.

Path Forward

- Graded approach will be used to evaluate implementation
- Level of funding received will drive implementation schedule and approach used to meet requirements