



GovEnergy
www.govenergy.gov

The Premier Energy Training Workshop
and Trade Show for Federal Agencies

A River of Energy Solutions

Navy Techval

GovEnergy
Federal Technology Evaluation Programs
August 8, 2011
Cincinnati, OH
Paul Kistler, PE CEM
NAVFAC Engineering Service Center
Port Hueneme CA

Navy Techval

- **What Does The Navy Techval Program Do?**
- **How Can I Get Involved In the Navy Techval Program?**
- **How Techval Transitions Technologies**

Navy Techval Purpose

- First funded in FY 2004
- Identifies technologies that
 - have high Mbtu savings
 - broad application in the Navy
 - low maintenance impact
- Save the Navy money on it's energy bill through early adoption of new technologies.
 - Identify
 - Validate
 - Transition
- Help meet energy reduction mandates.
- Reduce dependence on congressional adds and allow for greater flexibility
- Identifies technologies that do not work as advertised.
- Technical assistance to rest of Navy.

Navy Techval Operating Procedure

- Demonstration proposals are accepted throughout the year from Navy, other Government Agencies and general public.
- Proposals are voted on by the Techval Working Group (TWG) using a set of weighted criteria in late April
 - TWG consists of approximately a dozen Navy energy experts, most but not all are energy managers
- Criteria for demonstration sites are developed and email blast sent to Navy energy managers requesting demonstration sites meeting criteria

Navy Techval Operating Procedure

- TWG selects demonstration sites in August at GovEnergy
- Prime Contractor designs and installs technology at selected sites
 - Monitoring, data analysis, report writing by Prime Contractor or National Lab
- Technology transition
 - Reports
 - Infosheets
 - Presentations
 - CECOS
 - GovEnergy
 - FUPWG
 - Army
 - REMs
 - Criteria
 - Navy Energy News Letter *Energized*



Navy Techval Operating Procedure

Criteria	Weight
Total Mbtu energy or Kgal of water saved Navy/Marine wide	1.6
Implementation cost, \$/MBtu or \$Kgal	1.4
Probability of project success Can we test the technology? Will Navy adopt?	1.2
Mission impact is neutral or improved	1.2
Overall environmental impact is neutral or improved	1.2
Payback within the lifetime of the equipment	1.1
Reliability	0.8
Low maintenance	0.8
Technology easy to remove or abandon if it does not work	0.6

Navy Techval

CURRENT PROJECTS

- **Boiler Controls**

- *NA Annapolis MD*

- **EMP Water Treatment**

- *NADEP San Diego CA*

- *Kitsap*

- **Large Ceiling Fans**

- *NAS Lemoore*

- **Work Station Specific**

- Lighting**

- *NBVC Port Hueneme CA*

- **Air Cooled Magnetic Bearing Chiller Compressor**

- *NAWS China Lake*

- *NSF Dahlgren*

- *NAS Oceana*

- **Duct Sealants**

- *NS Bremerton*

- *NS Newport*

- *NSA Mid-South*

- **Exterior Insulation**

- *NAWS China Lake*

- *Keyport*

Navy Techval

CURRENT PROJECTS

- **LED/Induction Lighting**

- *NS Newport*

- **Condensing Boilers**

- *MCAGCC 29 Palms*

- *Prospect Harbor*

- **LED Recessed Cans**

- *MCAGCC 29 Palms*

- **MR 16 LED**

- *NSB New London*

- **Condensing Water Heater**

- *MCLB Albany*

- *NAB Little Creek*

- **Solar PV AC**

- *MCAGCC 29 Palms*

- **Solar Thermal AC**

- *NAVCOMTELSTA Key West*

- *NAS Corpus Christi*

- **Direct LED Lighting Replacement for HID**

- *Meridian MS*

- *Naval Station Great Lakes*

Navy Techval

CURRENT PROJECTS

•Insulation

- *Portsmouth NSY*
- *Meridian MS*
- *NAS Fallon*
- *MCMWTC*

•Hybrid Heat Pump Water Heaters

- *Joint Base Pearl Harbor-Hickam*
- *NAS Fallon*
- *MCLB-ALBANY*
- *Portsmouth NSY*

•M-cycle Indirect Evaporative Coolers

- *NAWS China Lake*

Navy Techval

COMPLETED PROJECTS

- **Boiler Combustion Controls**

- *NB Kitsap Bremerton WA*

- **Power conditioner**

- *SUBASE New London CT*

- **30kW Microturbine**

- *SUBASE New London CT*

- **Walk in Cooler Fan Controller**

- *NBVC Port Hueneme CA*

- **RF Plug Controller**

- *NBVC Port Hueneme CA*

- **Plug Occupancy Sensor**

- *NBVC Port Hueneme CA*

- **HVAC CO2 Controls**

- *NAB Little Creek VA*

- *NAVSUPPACT Mid-South TN*

- *NB Kitsap WA*

- **HVAC Occupancy Controls**

- *NAS Oceana VA*

- **Thermal Destratifiers**

- *NAS Oceana VA*

- *NSWC Crane IN*

- *NSWC Carderock MD*

- **EER+ Retrofit**

- *NSWC Corona CA*

- *NB San Diego CA*

- *NWS Yorktown VA*

- *NAWS China Lake*

Navy Techval

COMPLETED PROJECTS

- **Magnetic Bearing Chiller Compressor**

- *NUWC Newport RI*
- *NRSW San Diego CA*
- *NAS Jacksonville FL*

- **HID dimming**

- *NBVC Port Hueneme CA*

- **Spectrally Enhanced Lighting**

- *Washington Navy Yard DC*

- **Wrap around heat pipe**

- *NS Pearl Harbor HI*
- *NAS Pensacola FL*

- **LED Parking Lot Lights**

- *NBVC Port Hueneme CA*

- **LED/Induction Lighting**

- *NBVC Port Hueneme CA*

- **Sand Filters**

- *NAS Lemoore CA*

- **Desuperheater**

- *NS Norfolk VA*
- *NAS North Island CA*

- **Aerosol Duct Sealants**

- *NSA Orlando FL*
- *NS Newport RI*
- *NSY Puget Sound WA*

Navy Techval

Reports Currently Available

- Premium Air Filters
- Power Conditioners
- CO2 HVAC Control
 - Day Lighting
- Thermal Destratifiers
 - HID Dimmers
- LED Airfield Lighting
 - Microturbines
 - Super T8 Lamps
- Magnetic Bearing Chiller Compressor I
- Vending Machine Occupancy Sensor
- Interior Storm Windows
 - 75 ECM's

Navy Techval

Reports Currently in Final Review

- Sand Filters
- Magnetic Bearing Chiller Compressor II
 - Spectrally Enhanced Lighting
 - Heat Pipe
 - Desuperheaters
 - LED/Induction Lighting
 - HVAC Occupancy Control
 - Duct Sealants

Navy Techval Transition

Green Light Technologies

- Oil Free Magnetic Bearing Chiller Compressor
- Vending Machine Occupancy Sensor
- Thermal Destratifiers
- Airfield LED lighting
- Super T8 lighting
- Day Lighting
- CO2 HVAC Control
- Spectrally Enhanced Lighting
- Duct Sealants
- HID Dimming
- Photo Luminescent Exit Signs
- Video Game Occupancy Sensors
- Video Game Timers
- Induction Lighting
- Exterior LED lighting
- RF Plug Controller
- Work Station Specific Lighting
- HVAC Occupancy Sensors

Yellow Light Technologies

- Desuperheaters
- Sand Filters
- EMP Water Treatment
- Boiler Combustion Controls
- Interior LED Lighting
- Walk in Cooler Fan Controller
- Exterior Insulation
- Air Cooled Magnetic Bearing Compressor

Navy Techval

Paul Kistler P.E. C.E.M.

Mechanical Engineer

NAVFAC Engineering Service Center

1100 23rd Ave.

Port Hueneme CA 93043

(805) 982-1387

paul.kistler@navy.mil