

USCG Energy Program
Resource Management, Fuel Logistics,
and Facility Energy

Presented by Daniel Gore
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Office of Resource Management



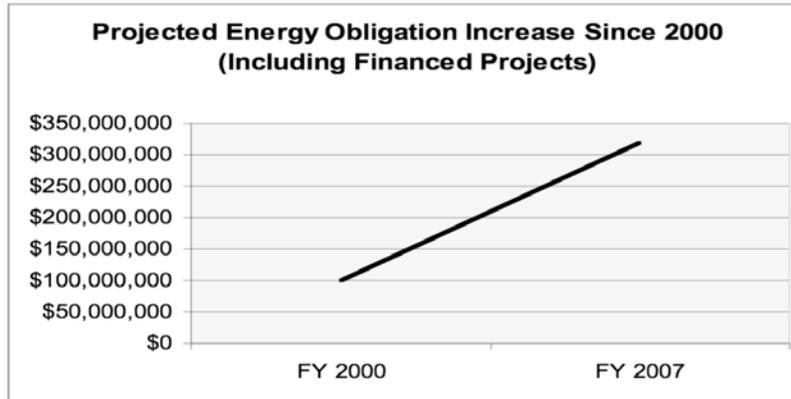
Presentation Contents

- Overview CG Energy Program
- Highlights
- Interesting Projects for Utilities
- Alternatively Financed Projects Discussion

Overview

USCG Energy Program Growth

- CG represents 80% of DHS energy consumption
- Obligations up 210% from FY 2000
- Energy = 25% of O&M budget



Energy Program Dynamics

Increasing Expenditures →

Increasing Politics & Mandates →

Increasing Scrutiny & Reporting →

Procurement & Credit Card Transformations →

Accounting System Improvements →

Organizational Strategic Transformations →



What is CG Energy Management?

- **Policies impacting \$306M annual obligations**
- **Facility Energy Mandate Compliance**
 - Energy intensity reduction
 - Renewable energy
 - Green house gas reduction
 - Facility energy auditing
 - Sustainable design
 - Metering program
- **Water Conservation**
- **Utility procurement/initiatives**
- **Quarterly/annual reporting**
- **\$50M alternative financed projects/annum**
- **Strategic planning**
- **Project technical analysis**
- **Fuel Logistics (180M)**
 - Fuel Logistic Policy (SPPM)
 - National Working Group Leader
 - Issue trouble shooting
 - DESC Liaison (SeaCard, AirCard, PORTs, Requisitions, Agreements)
 - Fuel credit card policy
 - Fuel procurement training
 - Fuel Credit Card Program (4) ????
 - Supply Fund Allowance Management ????
- **Alternative fuel analysis**
- **Resource Management**
 - Assist budgeting and distribution (254M)
 - Energy efficiency project funds
 - Energy IT tracking systems
 - Energy spend accounting
 - Contracting consultants
 - Project financial analysis

USCG Energy in FY07 Dollars (Projected)

Category	Projected Consumption	Energy Projects
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- | | | |
|--|-------|-------|
| • Aircraft - | \$71M | |
| • Auxiliary – | \$3M | |
| • Cutter – | \$88M | |
| • Shore Facility - | \$75M | |
| • Boat – | \$17M | |
| • 3 ESPCs | | \$50M |
| – Elizabeth City, Kodiak, West Coast (9 sites) | | |
| • Energy Efficiency Program | | \$2M |

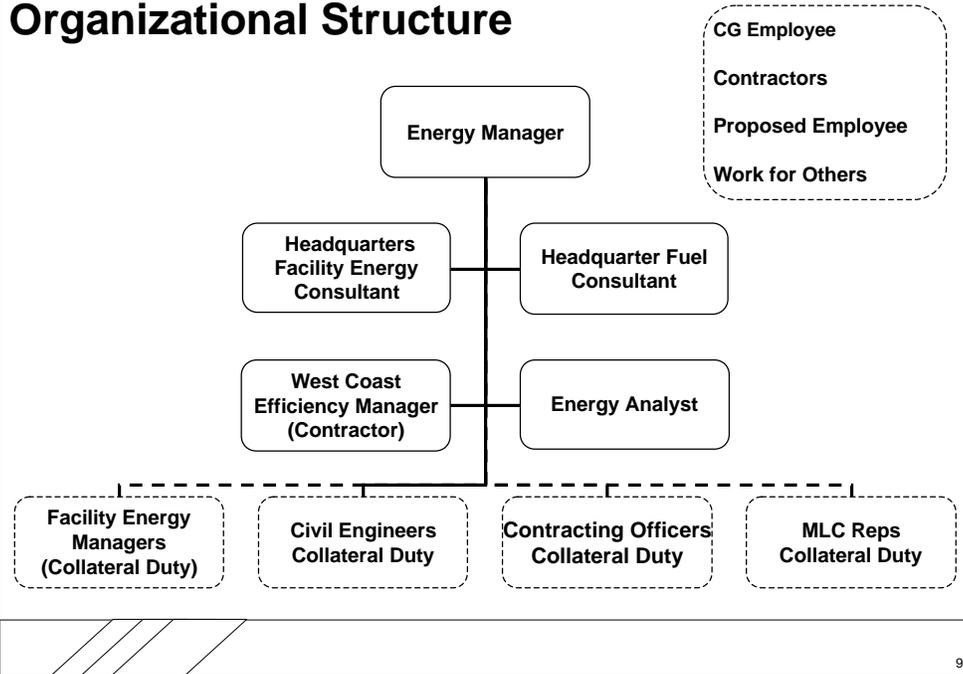
• Sub -Totals	\$254M	\$52M
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• Total Energy Program -	\$306M	
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Facility Energy Facts and Figures

- \$75 M in Shore Energy Spending
- 8,000+ Owned Buildings Nationwide
- 30M GSF
- 3Trillion Site Delivered BTU
 - 455M kWh Electricity
 - 513B Btu NG
 - 6.5M gal Fuel Oil
- 5600 Utility Accounts
 - 3,300 Electricity
 - 1,200 Natural Gas
 - 1,200 Water Accounts

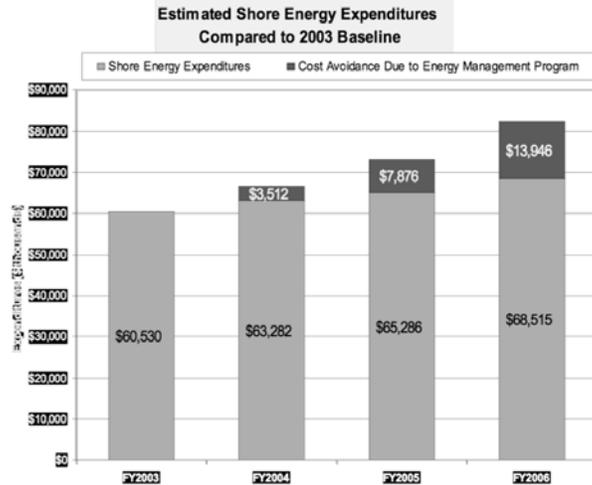
Organizational Structure



Highlights

Highlights - Facility Energy

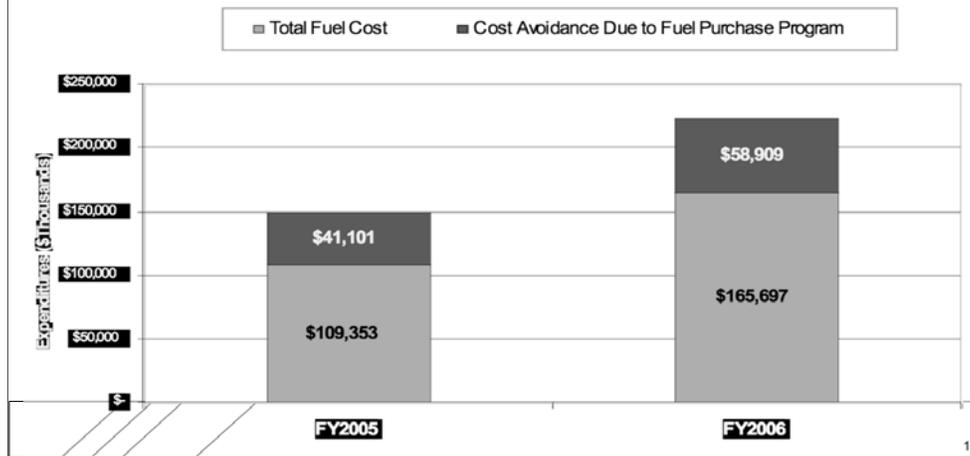
- From 1985 Baseline
 - Reduced intensity 27%
 - Annual \$25M avoidance
- FY06 Energy Scorecards
 - 16.9% Intensity Reduction from FY03
 - Highest DHS Marks
 - Met all 17 OMB Goals:
 - Intensity Reduction,
 - Renewable Energy,
 - ESPCs etc.
 - Ahead of EPACT 05 and EO 13423 Goals



Strategic Sourcing of Fuel via DESC

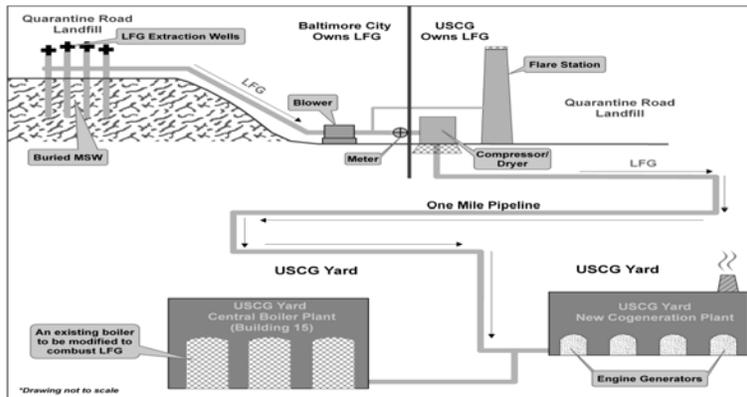
- Signed DESC MOA - guarantees military standard pricing
- Established Liaison Desk at DESC Headquarters

FY06 Fuel Expenditure Savings



Baltimore Shipyard Landfill Gas ESPC

- FY08 signed \$41M ESPC with Ameresco
 - Signed \$4M contract with City of Baltimore for 15 year gas supply
 - Methane for turbine cogeneration and steam plant
 - Equivalent of 4% CG electricity load (8% for reporting)



Programs of Utility Interest

Utility Procurements

The Competitive Energy Supply Landscape
Source: www.sel.com

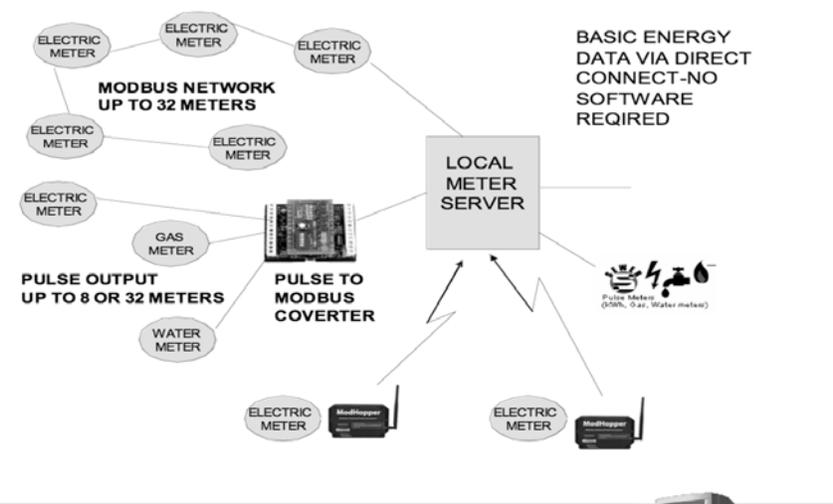


- Competitively award utility contracts in deregulated states
 - Via DESC or GSA
 - Electricity and natural gas
 - Roughly \$3M per annum
- Re-negotiate rate structures
 - Example: \$145 K savings NESU Charleston

Renewable Energy Initiatives

- Landfill Gas Project at Curtis Bay Shipyard
- Wind turbine feasibility studies
 - Puerto Rico, Massachusetts, N. Carolina, New Jersey, Alaska,
- Solar Projects
 - Existing project Petaluma. Small projects elsewhere.

PHASE I - Basic Metering



Practicable to Meter Top 16 Sites

Unit Name	Funding	Metering
Air Station Borinquen		
Air Station Cape Cod	Energy Efficiency Funds	In Process
Air Station Port Angeles	ESPC - FY07	ESPC - In Process
CG Academy	Energy Efficiency Funds	Planned
CG Yard	ESPC Planned	Installation Complete
ISC Alameda	ESPC - FY07	ESPC - In Process
ISC Honolulu	ESPC - FY07	ESPC - In Process
ISC Kodiak	ESPC - FY07	Installation Complete
ISC Portsmouth	Energy Efficiency Funds	In Process
ISC San Pedro	ESPC - FY07	ESPC - In Process
ISC Seattle	ESPC - FY07	ESPC - In Process
ISC Ketchikan	Energy Efficiency Funds	Installation Complete
Aircraft Support Center	ESPC - FY07	Installation Complete
TraCen Cape May	Energy Efficiency Funds	In Process
TraCen Petaluma	Energy Efficiency Funds	Planned
TraCen Yorktown	Energy Efficiency Funds	In Process
		Approx 45% Total Electricity
Legend		
In Process		
Planned		
Complete		

Alternatively Financed Projects Discussion

FY07 ESPCs (3.5% National Energy Reductions)

Energy Savings Performance Contract Location	Energy Conservation Measures In Project	Estimated Energy Savings (Million Btu/Yr)	Total Contract Costs	Finance Term
Air Support Center Elizabeth City	Lighting Control System Load Management	6,797	\$1.5M	12 yrs
West Coast (9 Sites) Astoria, Port Angeles Seattle, Alameda, San Francisco, San Pedro San Diego, Sand Island Barber's Point	Boilers, Chillers EMCS, Vending Misers HVAC, Lighting Motors, Compressed Air Day lighting, Solar DHW Water Conservation	28,158	\$15M	11 yrs
ISC Kodiak	Lighting Plant Optimization Steam improvements Refrigeration and HVAC Controls Water conservation	81,225	\$33M	13 yrs

Essentials for Alt. Financed Project

- OMB says - invest 20% energy payments / annum
 - In order to meet Federal Mandates
 - The only way to meet the 20% goal is by alternative financing
 - However, alternative financing is complex; not for the faint hearted
- First Four Essentials
 - Utility or Contractor fully willing to play
 - On-site Representative buy-in
 - Technical Champion
 - Contracting Officer
- Next Four Essentials
 - Financial Analyst
 - Budget Office buy-in
 - Legal Support
 - DES / Investment Grade Audit Funding

ESPCs/UESCs in Play

Unit	Contract Type	Project Status					Estimated Contract Value (Millions)
		Under Consideration	Initial Proposal	Delayed due to lack of Contracting Officer or Champion	Notice of Intent to Award	Recently Awarded	
TRACEN Cape May	ESPC	X					\$2.0
TRACEN Petaluma	ESPC	X					\$2.0
ISC San Pedro	UESC		X	X			\$0.6
CG Academy	ESPC		X				\$20.0
TRACEN Cape May	UESC		X				\$1.0
Air Station Borenquin	ESPC		X	X			\$2.0
Sector New York (3 sites)	ESPC		X	X			\$14.0
CG Yard (BAMF)	ESPC					x	\$41.0
E-City	ESPC					X	\$1.5
West Coast - 9 Sites	ESPC					X	\$14.7
ISC Kodiak	ESPC					X	\$33.3
						TOTAL	\$132.1

Power Purchase Agreement

- Potential Training Center Petaluma Solar Project
- Land easement to contractor - solar power generation
- CG pays utility bills
- Future utility receipts, rebates, and tax credits to finance installation capital costs
- If solar – how about wind?

Thank You

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ESPC Funding Model

