

FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

April 12-13, 2017
Savannah, Georgia

Naval Air Station Whiting Field (NASWF)
Utility Energy Savings Contracts (UESCs)
With Gulf Power Company

Hosted by:





Presented By: Egas "EJ" Gomes

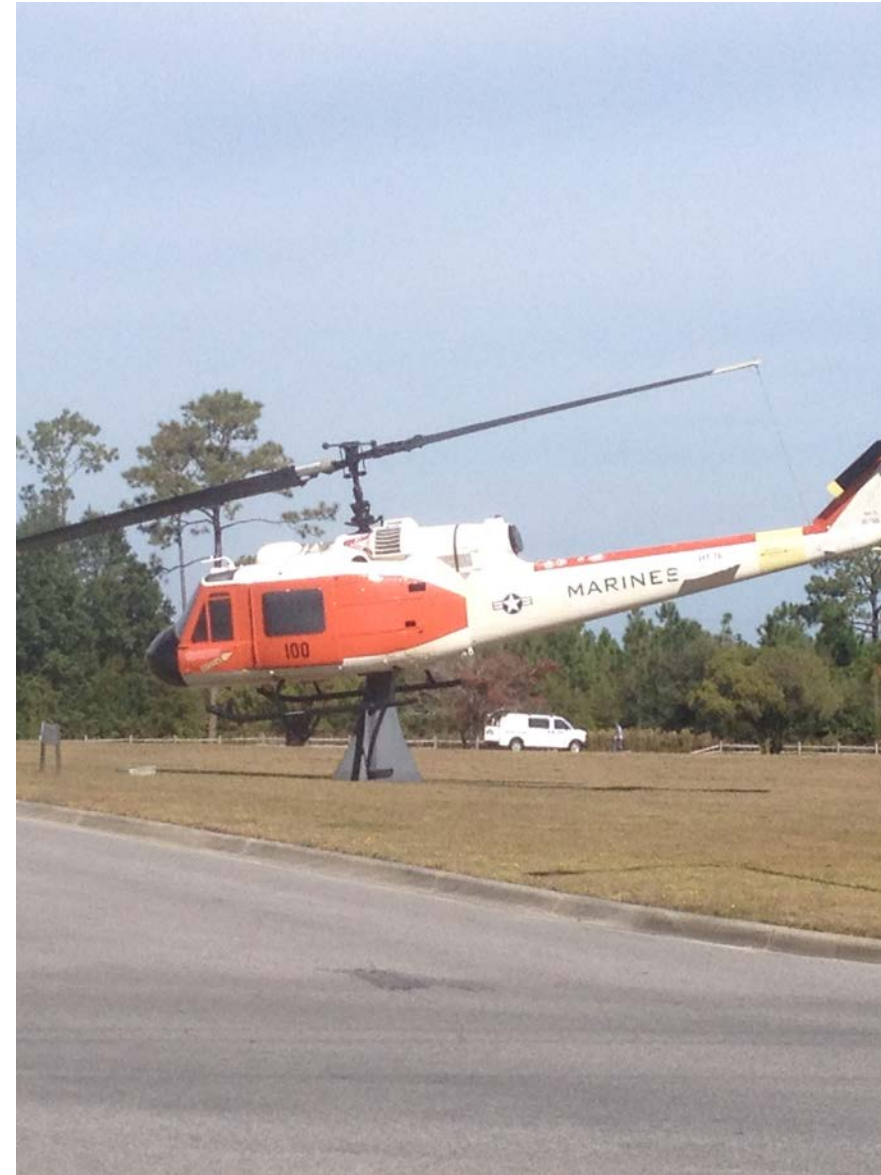
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NASWF Base Overview

- Located in Milton, FL (24 miles from PNS)
- 12,000 acres, three (3) fully operational airfields, 13 outlying airfields
- Busiest air station in the world
 - Six (6) training squadrons
 - Two (2) instructor squadrons
 - Flight training for 1,200 students/yr including 600 helicopter pilots
 - 100% of Navy, Marine and Coast Guard pilots are trained at Whiting Field (WF)
- 62 buildings, 1.16 million SF
- Two UESCs executed under Gulf Power
- Nearly \$11M in customer requirements

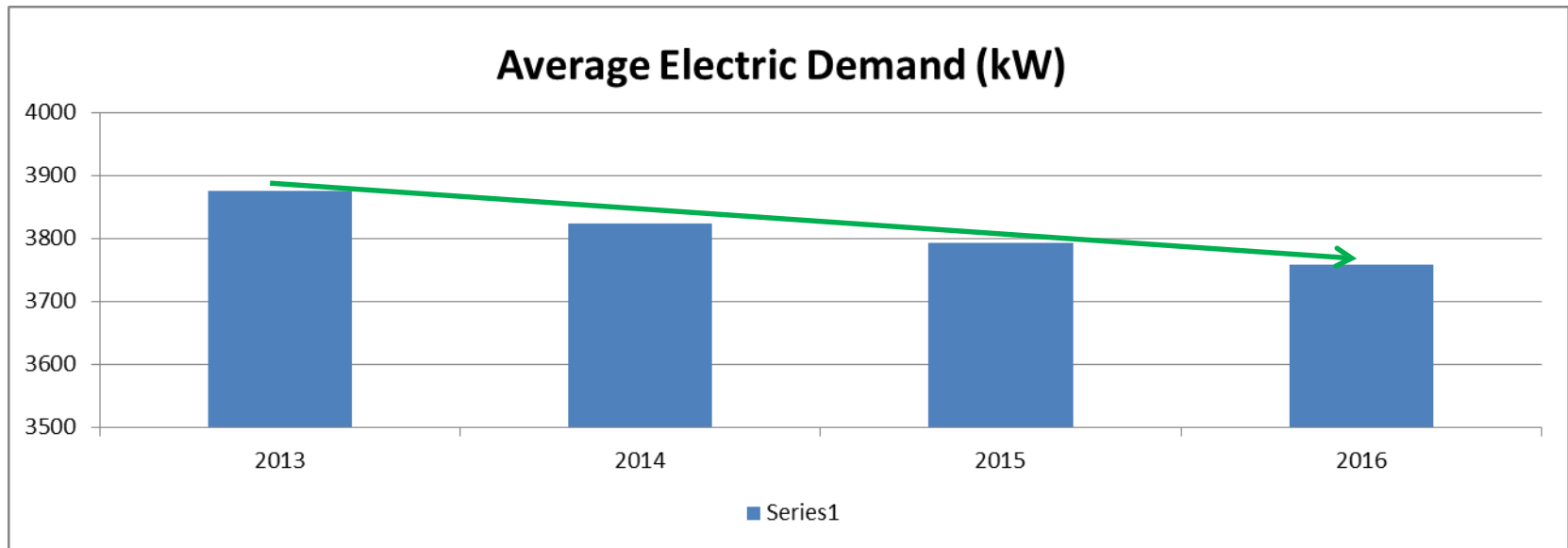


NASWF Phase 1 UESC Summary

Phase 1 included 12 facilities (416,952 sf or 33%) on the WF complex

- Project Award: April 2012 (\$3.5M)
- Construction Complete: April 2013
- Lighting, Water & HVAC ECMs
- One year of M&V performed under UESC

Calendar Year	Demand (kW)
2013	3876
2014	3824
2015	3794
2016	3758



NASWF Phase 2 UESC Drivers

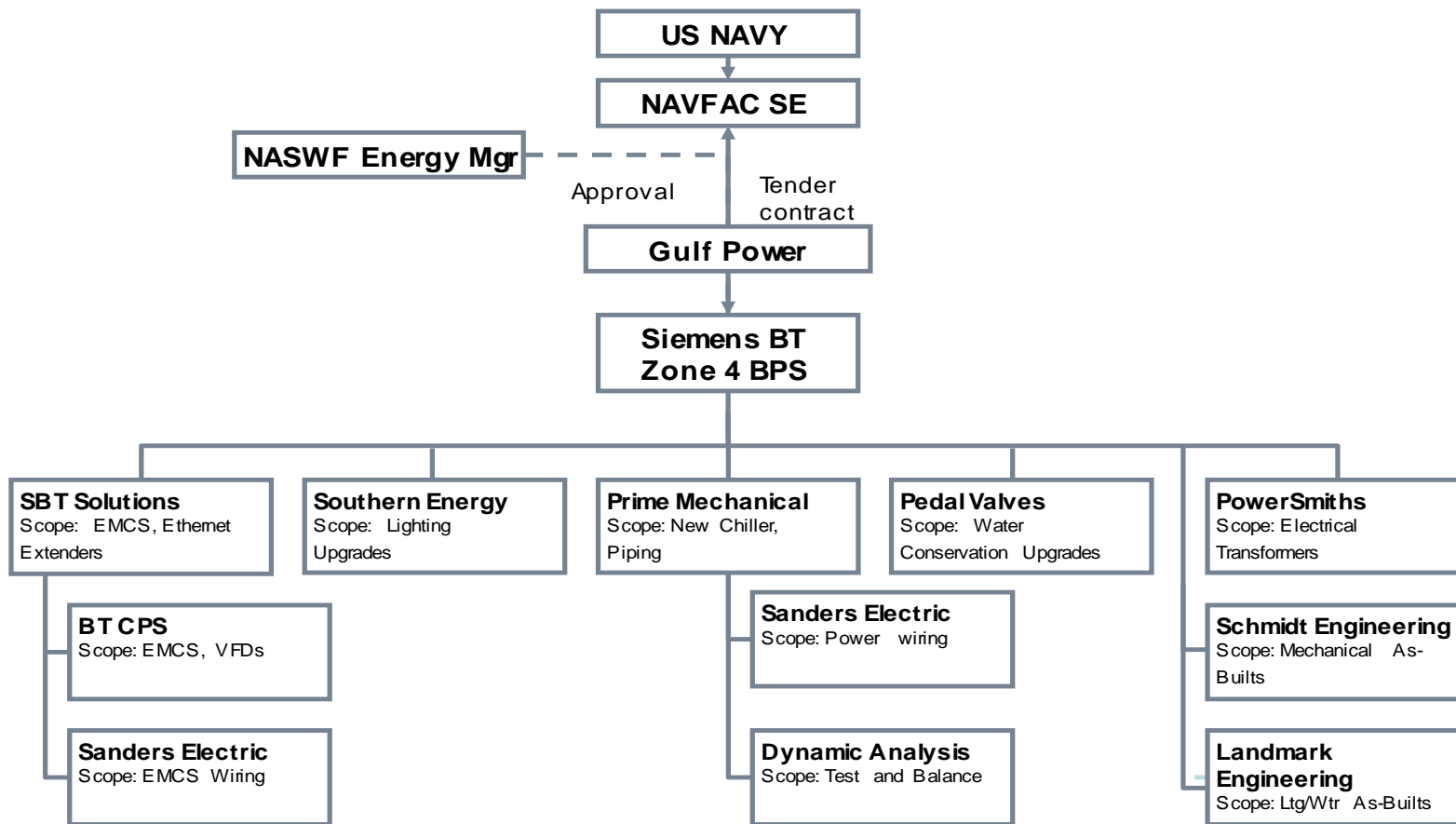
Customer Requirements

- Funding thru UESC to meet energy efficiency targets
- Communications infrastructure upgrades (currently using dial-up modems for EMCS)
- Replace existing pneumatic controls with new DDC controls
- New HVAC equipment – older DX units and chillers
- Better EMCS scheduling
- LED lighting upgrades

UESC Strategy

- Strengthen relationships among Key Account customers
- Design a project that best addresses the Base's needs and objectives using savings
- Recommend ECMs that can pass muster of the Navy's SIR (Savings to Investment Ratio) requirements
- Enable customer flexibility and control throughout UESC process

NASWF Phase 2 Contracts Hierarchy



NASWF Phase 2 Overview

Phase 2 included 48 facilities (1,140,229 sf or 92%) on the Whiting Field complex

- Project Award: Sep 2016 (\$9.8M), Under Construction
- Top 75% of energy consuming facilities addressed
- Included eligible facilities not encumbered by UESC phase 1
- Included simulator building 3005 – a large “process energy” hog
- \$51K in O&M and avoided costs captured by base
- One year of M&V performed through UESC remaining performed by IEM



NASWF Phase 2 Scope

- Interior lighting upgrade to TLED
- Exterior lighting upgrade to LED
- Water conservation upgrade
- Extension of existing Siemens EMCS
 - Converting pneumatics to DDC
 - Converting dial-up comm to Ethernet using Ethernet extenders and existing base telephone infrastructure (copper phone pairs)
 - “Always on” remote communications will enable tighter TOD scheduling, night setback
- Upgrading multiple electrical transformers to high-efficiency units
- Converting CV AHUs and ERVs to VAV



NASWF Phase 2 Financials

- Project implementation price: \$7,485,411
- Financing term: 17 years
- Finance rate: 2.93%
- Total financed cost: \$9,804,295
- Quarterly payments escalating at 2% annually
- Annual Savings (year 1): \$495,388
- Annual Energy Savings: 17,612 MBTU
 - Gas: 3,932 MBTU
 - Electric: 4,015 MWH
- Annual Water Savings: 2,554 KGAL
- Estimated overall installation energy consumption reduction compared to FY15: 15%

NASWF Phase 2 Performance Verification

- One (1) year annual PV setup included in contract, remainder by IEM
- Operational savings generated by development team and delivered in PV Plan
- PV Option A for Interior and Exterior Lighting
- PV Option A for Water Conservation and Transformers
- PV Option B for Chiller Replacements and Demand Flow Upgrades



NASWF Phase 2 Non-Viable ECMs

- Key-Activated Thermostat Setback Controls for BOQ
- Solar Thermal System for Pool Heating
- Solar Thermal Domestic Hot-water System for BOQ
- Variable Refrigerant Flow HVAC System
- Geothermal System for BOQ
- Chilled Water Plant

NASWF Phase 2 Lessons Learned

- IGA Scope Change and Modifications
- T.O. Schedules & Finance Terms
- Delivering EROI
- Timelines and Expectations
- Post Award Contract Management
- BOS Contracts & Construction

QUESTIONS?



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