Homeland Security

United States Coast Guard

U.S. Coast Guard Advanced Metering Program

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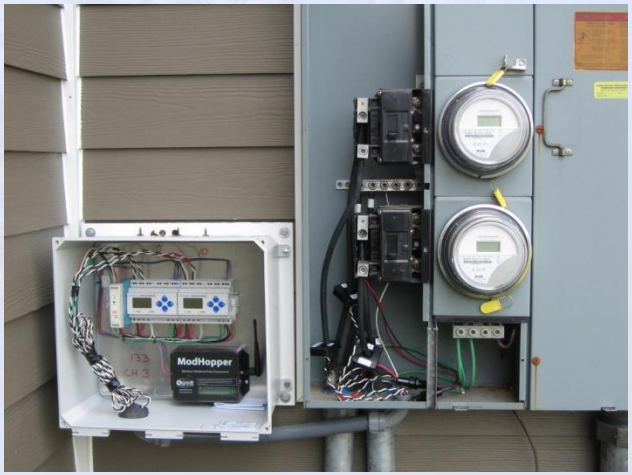
14 November 2013

Agenda

- History of USCG Metering Program
- Description of Equipment
- Current Data Management System
- Metering Lessons Learned
- Questions

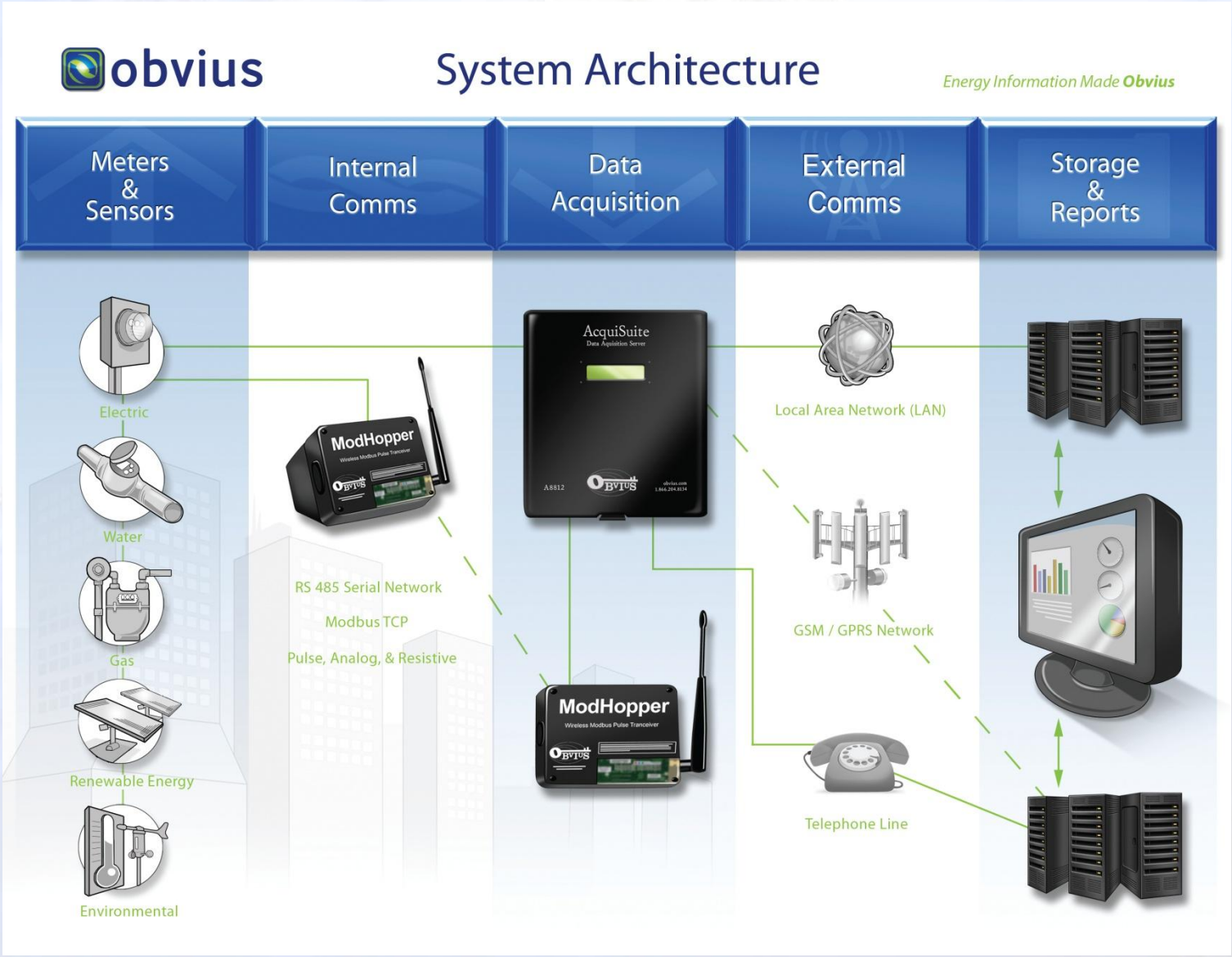
History of Metering Program

- $8M Project Funded through the American Recovery and Reinvestment Act (ARRA)
- Awarded in September 2010 and completed in October 2012
- Installed 2900+ pieces of equipment nationwide at over 200 Coast Guard units
  - Buildings greater than 5,000 S.F.
  - Cutter Shore Ties
- Efforts were coordinated out of Civil Engineering Unit Providence in collaboration with the CG Office of Energy Management



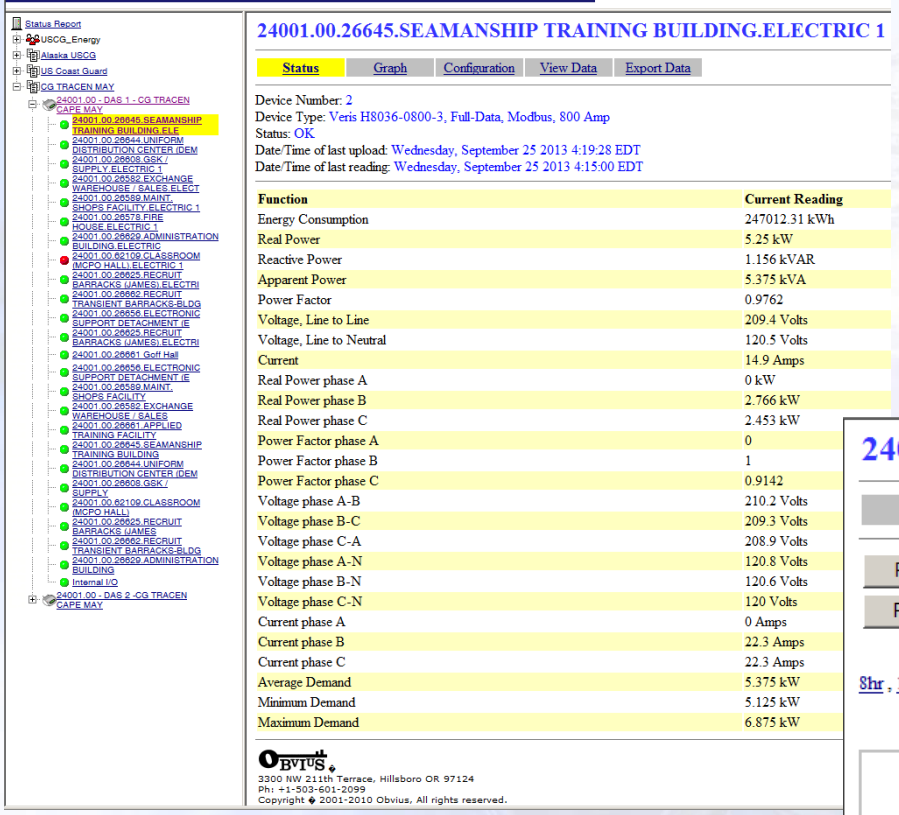
Description of Equipment

- Obvius Metering Components
- Wireless system (RF)
- Readings taken every 15-minutes
- Data uploaded at least every 24-hours from the DAS
- Current transducers output 26 variables (i.e. kW, kWh, volts, amps, power factor).
- Low Failure Rates
- Captures approx. 60%-70% of the CG infrastructure

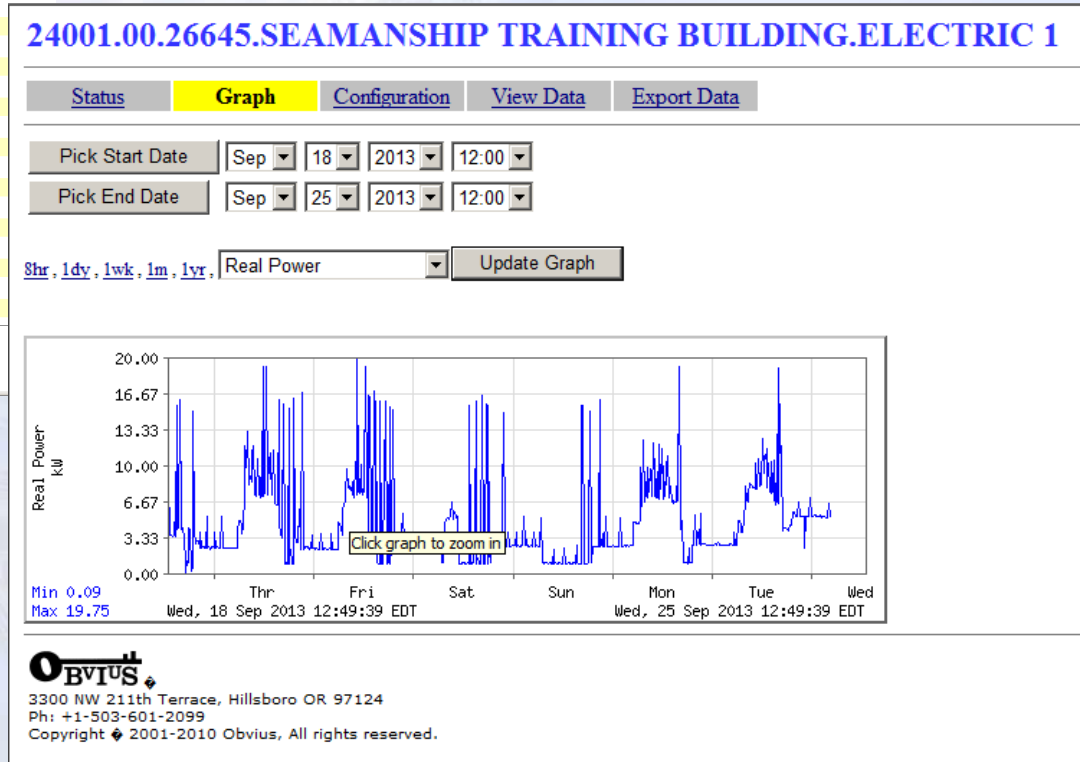


Data Management System

BUILDING MANAGER ONLINE



- Provide trended data over a selected period of time
- Monitor energy consumption
- Alarm notification when set parameters are exceeded
- Investigate potential problems



- Identify buildings or campuses that would benefit from the implementation of energy conservation measures
- Track and validate savings as projects are implemented

Metering Lessons Learned

- Replacement/Installation Expense – requires use of commercial electrician; CG facilities are small and are not staffed with required level of expertise
  - Old infrastructure - difficult to segregate utility use to the building level
  - Utility Feeds – difficult to meter utility owned transformers (multiple tenants, use agreements, etc.)
  - At times, must still use revenue meter information
- Configuration Control – units must use same equipment for it to be supportable & compatible with the DMS
- Coast Guard Network - all equipment connected to the intranet must undergo extensive testing
- DMS Selection – many products are web-based which pose security concerns to the network infrastructure and are expensive to customize
  - Store & Manage data within the firewall
  - Decreases cost significantly

Questions?