

US Virgin Island Energy Workshop

Role of Utility in Delivering Energy Efficiency

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Session Objectives

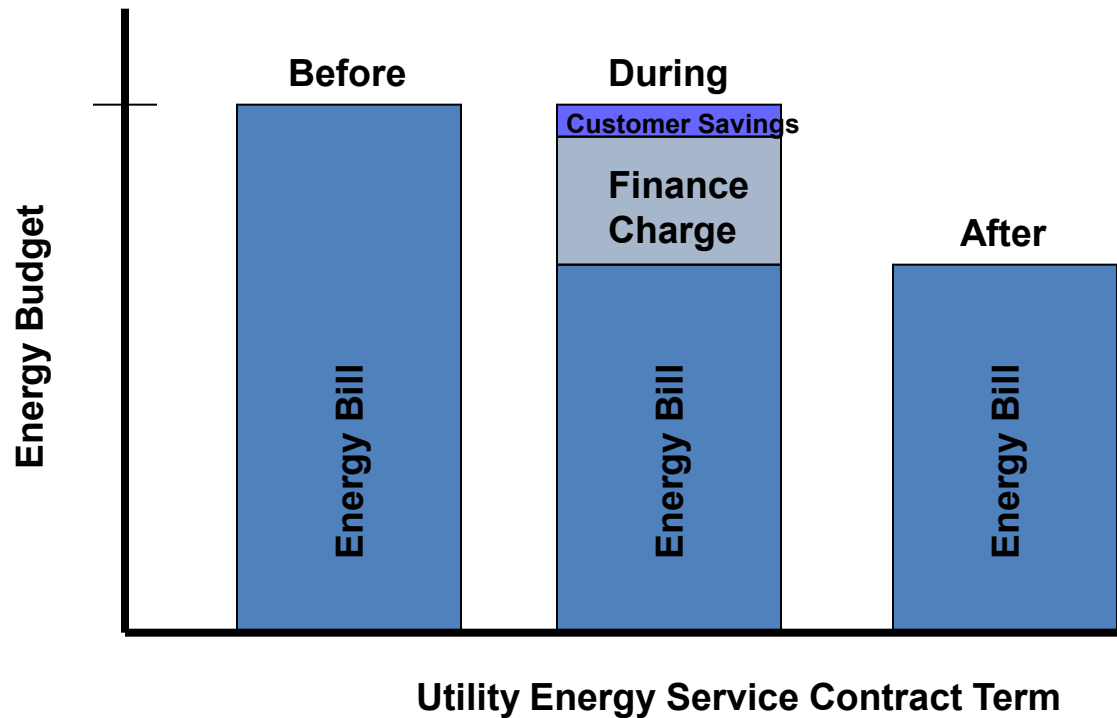
- Provide an overview of utility's role in energy efficiency
 - Background
 - Utility energy service program philosophy
 - Benefit to utility and customers
 - Energy project process
 - Case Studies
- Next steps...

Background

- Permanent Legislative Authority for Utility Energy Service Programs
 - 42 USC 8256 (civilian authority) – Energy Policy Act of 1992
 - 10 USC 2913 and 10 USC 2866 (DOD authority) – National Defense Authorization Act of 2007
 - Up to 25 year contract term

Energy Contracting Philosophy

Leverage your future energy and water savings to fund new energy efficiency investments.



Potential WAPA Energy Service Business Unit

- WAPA offers Energy Savings Service options to all customer classes
- WAPA is the prime contractor – “Established Source”
- WAPA selects ESCO or Utility partner
- Characterize as Facility Services for:
 - Energy Efficiency
 - Water Conservation
 - Load Management
 - Renewable Energy
 - Measurement/verification
 - O&M services options
- Core WAPA team manages program
 - ESCO or Utility partner does the work
 - WAPA facilitates loans and processes payments

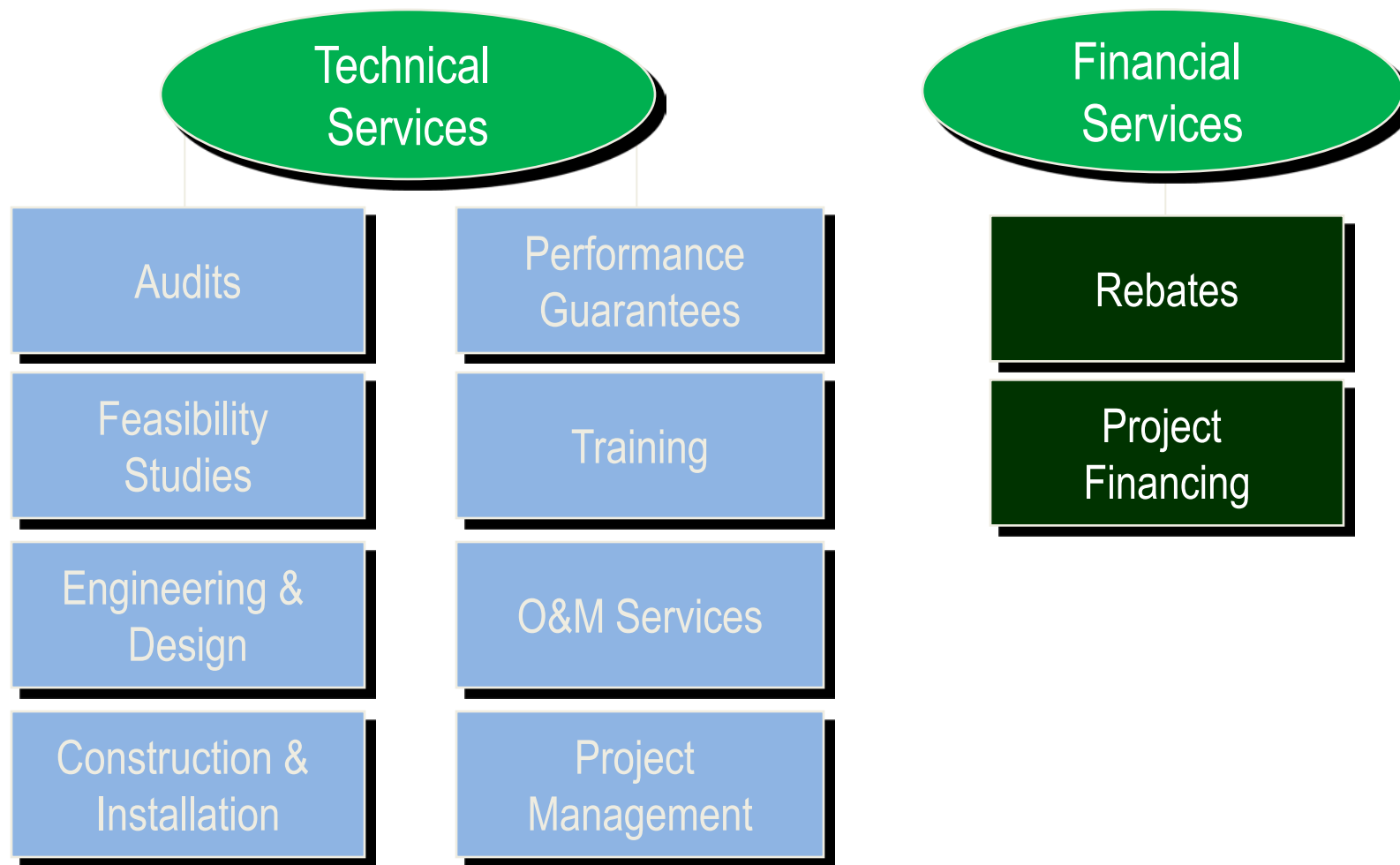
WAPA Energy Service Program

- WAPA customers' energy & water cost savings generates revenues to:
 - Recover WAPA debt service
 - Cost for ESCO/Utility partner project implementation
- Attractive to customers as a service
 - Work with known entity
 - WAPA provides turnkey service
 - Pay for service on utility bill
- Consider Basic Ordering Agreement format
 - FEMP/Edison Electric Institute (EEI) developed model contracts with standard terms and conditions
 - Available for WAPA Use

WAPA Energy Service Program Benefits/Actions

- Positions WAPA to generate revenue stream to offset lower commodity sales
- Supports Governor's and USVIEO achievement of goals for energy reduction, RE use and reduced dependence on oil-based generation
- Better to pay for energy efficiency/conservation than build new resources
- Lower operating costs – preserves customer
- Builds customer loyalty
- Board/Commission oversight supporting a WAPA Energy Service program

Typical Utility Company Offerings



The Utility Energy Service Project Process

Educate
Acquisition
Team

Determine Contract
Vehicle

Utility Audit / Initial
Proposal

Feasibility Study
& Agency Review
/ Estimate

Task Order for Audit

Develop Contract
/Establish Terms &
Conditions

Planning

Identification

Engineering &
Design Package

Construction,
Installation, and
Proof of
Performance

Develop Contract
/Establish Terms &
Conditions

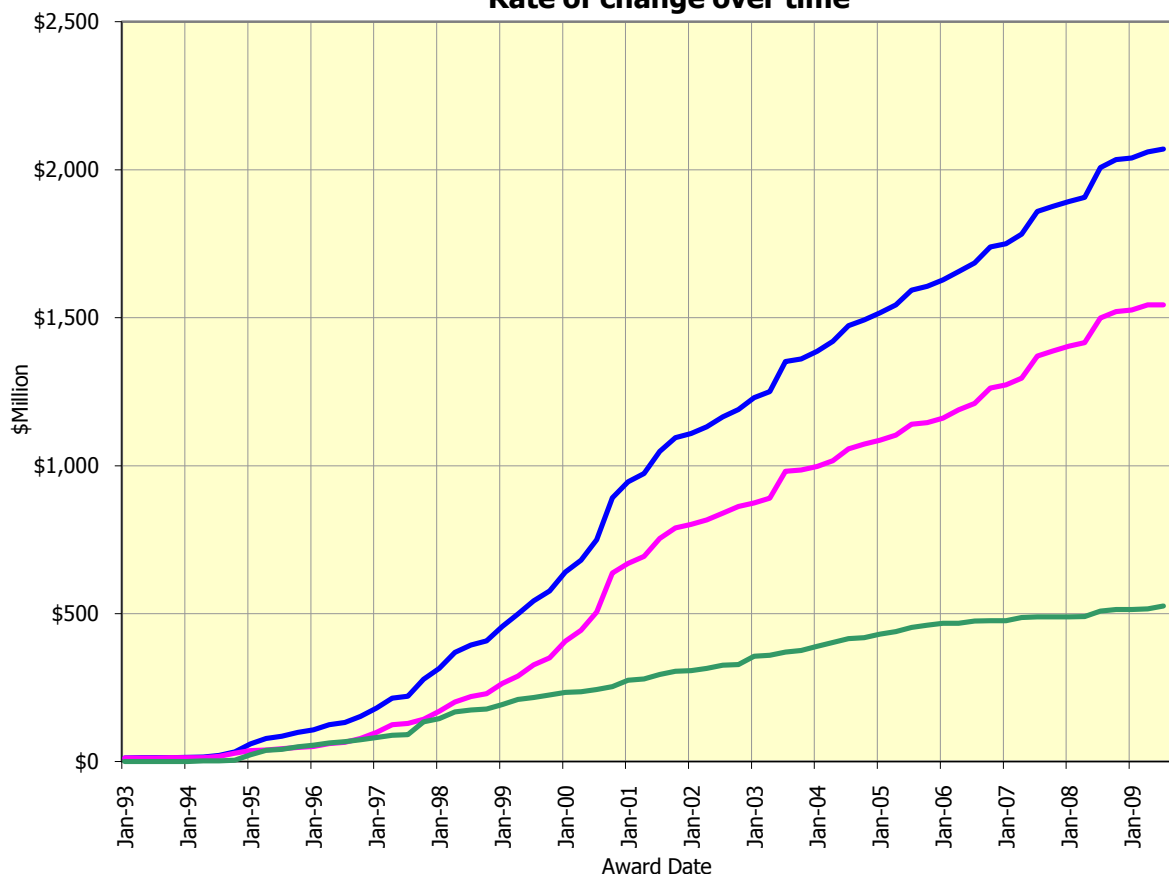
Final Contract

Implementation

Customers Cannot Meet Goals without Utility Partner!



**UESC Project Total Capital Investment
Rate of change over time**



Electric Utility Industry Pledge (EEI)

Provide Federal customers w/ alternative financing & support services to implement at least \$2.0 billion in LCC-effective facility improvement projects to achieve 2010 EE & RE goals

— Total Capital Investment — Private Sector Investment — Federal Sector Investment

Notes:

Investment is based on projects' capital cost.

Data was last edited on 10/16/2009 and is subject to change.

Municipal utilities offering energy projects in U.S.

- Arizona Public Service Company
- City of Alameda, California
- City of Oakdale, Louisiana
- Colorado Springs Utilities
- Dayton Power and Light Company
- Montana -Dakota Utilities Co.
- Okaloosa County Gas District
- Omaha Public Power District
- Public Service Company of Colorado
- Southwestern Public Service Company

Case Study

- Nolin Electric Cooperative & Fort Knox
- Objective: Reduce electric, natural gas and water consumption; reduce peak demand; provide funding; meet federal goals
- Approach: Team approach to identifying viable projects and implementing simple task orders. Offset project costs offset by energy saving generated by retrofits

Case Study

- Nolin Electric Cooperative & Fort Knox (continued)
 - Technologies installed:
 - Lighting retrofits, window replacements, boiler-chiller replacements, high-efficiency motor replacements, geothermal heat pumps, SCADA system (greater reliability and better quality service)
- Program highlights
 - 40 MW peak demand; 3000 buildings
 - Cooperative and base identify projects
 - Keep it simple – minimal paperwork
 - Positive “can do” attitude

Case Study

- Florida Power & Light and Patrick Air Force Base
 - Objective: Improve base's energy efficiency and exceed federal energy goals
 - Five-phase approach based on strategic plan:
 - 1) Survey and analysis of targeted facilities
 - 2) Conduct feasibility study of selected energy conservation measures
 - 3) Develop firm-fixed price proposal
 - 4) Implement energy conservation measures
 - 5) Monitor and evaluate energy conservation measures, including post-installation measurement and verification

Case Study

- Florida Power & Light and Patrick Air Force Base (continued)
- Technologies installed
 - Chillers, decommissioning steam plant, ground source heat pumps, water-saving technologies, solar pool heating, building envelope, load control and more
- Program highlights
 - Each step is reviewed and approved by Florida Power & Light and Patrick Air Force Base team before proceeding to next step
 - 19 MW peak demand; 200 buildings
 - Team provides coordination and captures institutional knowledge
 - Florida Power & Light is replicating strategic plan approach with additional customers

Case Study

- Florida Power & Light and NASA Kennedy Space Center
- Objective
 - Maximize outreach, strengthen relationship and realize synergies
 - Meet Governor's goal for private-public partnerships
 - NASA did not want to own the PV system
- Program Success
 - Focused team approach
 - Viewed as component of FP&L's overall renewable energy program
 - Obstacles viewed as challenges; not roadblocks
 - MOU establishing partnership was key

Case Study

- Florida Power & Light and NASA Kennedy Space Center (continued)
- Technology installed
 - 10 MW Photovoltaic System
- Program highlights
 - FP&L has invested \$9 million in renewable energy projects across the country and are world leaders
 - Hydroelectric, wind and solar
 - Optimize energy efficiency at sites first
 - Agreement signed Summer 2008; Groundbreaking May 2009, Construction June 2009, Completion September 2009
 - Replicating projects

FP&L's and Nolin's Perspective for Energy Partnerships

- Customer Service
- Energy efficiency cost less than building new resources
- Lower operating costs
- Improve customers' load profile
- Build customer loyalty

Available Resources for WAPA Energy Service Program

- Sample solicitation for utility partner – bring EE and RE capabilities and experience
- Template for utility/ESCO or Utility partner agreement
- Sample statements of work for cost-effective energy projects
- Partnership building
- GSA energy project implementation experience

Next Steps

- Consider joining Federal Utility Partnership Working Group (FUPWG)
- Select ESCO or Utility partner to serve as energy project implementer
- Use FEMP's model Utility /ESCO partnering agreement
- Implement pilot project at GSA facility – Almeric Federal Building in St. Croix (GSA willing to “Lead by Example”)
- Hold Strategic Partnership meeting
- Offer energy projects to all customer classes



Questions?