

ESCO Briefing

Bureau of Overseas Buildings Operations
US Department of State

Who are we?

U.S. Department of State

Advance freedom for the benefit of the American people and the international community by helping to build and sustain a more democratic, secure, and prosperous world composed of well-governed states that respond to the needs of their people, reduce widespread poverty, and act responsibly within the international system.

--From the, FY 2009 Agency Financial Report
released December 2009

Overseas Buildings Operations:

Providing safe secure functional facilities for the conduct of U.S. Diplomacy and the promotion of U.S. interests worldwide.

Facility Types

The primary facility type for the Department of State is general office

- **Embassies**
- **Consulates**
- **Missions**

Support facilities include:

- Storage
- Utility
- Shops
- Residences
- Pools/Rec Centers
- Compound Access Buildings (CACs)

Building Vintage

- **New Embassy Compounds (NEC):** The NEC program started in 2002 and has incorporated the Standard Embassy Design (SED). The primary goal of this program was to construct safe, functional facilities. More than 80 facilities have been constructed to date; the primary office buildings associated with these facilities range from 2000sM to 6000sM. Significant energy conservation measures have been built into these buildings; however, there are **opportunities for Renewable energy installations**
- **Inman Era Buildings:** From 199x to 2002 the New Embassy Program centered around replacement of obsolete facilities. These facilities have significant opportunity for equipment replacement and upgrade due to age and inefficiencies as well as addition of renewable energy technologies.
- **Legacy Buildings:** The buildings acquired or constructed prior to standardized designs. A vast majority of facilities are aging and in need of repairs, refreshment and upgrades. Some buildings are considered historically significant. These facilities will be the focus of OBO and its attention for ESPCs.
- **Housing:** There is a wide range of residential facilities throughout the world from short term leased apartments to large residential compounds

Facility Size

- **Department of State Assets**
 - **280 sites Worldwide**
 - **15,000 Individual buildings**
- **The largest facility in the inventory is the Consulate in Frankfurt.**
 - **70,000 m²**
 - **\$2.2M Energy costs per Year (FY2009)**
- **59,000 m² Residential space in 8 buildings in a large housing compound**
 - **\$2.1M Total Energy costs (2008)**
- **A majority of facilities in Europe include smaller facilities like the Embassy in Stockholm**
 - **5500 m²**
 - **2.5 Acres**
 - **\$254k Total Energy costs per Year (FY2009)**
 - **1,040,501 M³ District Heat**
 - **1,110,969 kWh Electricity**

Prior Use of ESPCs

To date, OBO has successfully executed four ESPC projects:

- **Santo Domingo – Lighting and Controls Upgrade**

Contract Value: \$721,000

Savings: 697,000 kWh/yr

Construction Completed: July 2005

Payback: \$80,000/yr for 10 years

Close-out: October 2008 (early payoff)

- **Mexico – Lighting and Controls Upgrade**

Contract Value: \$578,000

Savings: 787,000 kWh/yr

Construction Completed: May 1999

Payback: \$67,000/yr for 9 years

Close-out: March 2006 (early payoff)

Prior Use of ESPCs

- **Dhaka – Gas Micro-Turbine Generators at Residences**

Contract Value: \$725,000

Savings: 632,000 kWh/yr

Construction Completed: June 2007

Payback: \$64,000/yr for 11 years

Close-out: June 2018

- **Seoul – Ground Source Heat Pumps at Residences**

Contract Value: \$12,500,000

Savings: 1.65 million kWh/yr (plus fuel oil and boiler maintenance)

Construction Completed: March 2001

Payback: \$350,000/yr for 19 years

Close-out: March 2020

OBO ESPC Process

Project Identification: Government Initiated Option

This option will be the preferred method for allocating OBO resources to projects.

- 1. OBO sends notice to all 16 ESCOs with requirements and selection criteria**
 - Requirements: e.g., buildings, Energy Conservation Measures (ECM)
 - Selection criteria: e.g., technical approach, past performance, price
 - Government Hosted unfunded site visits
- 2. One or more ESCOs submit proposals**
- 3. OBO, using “fair consideration,” issues statement selecting one based on best value**

OBO ESPC Process

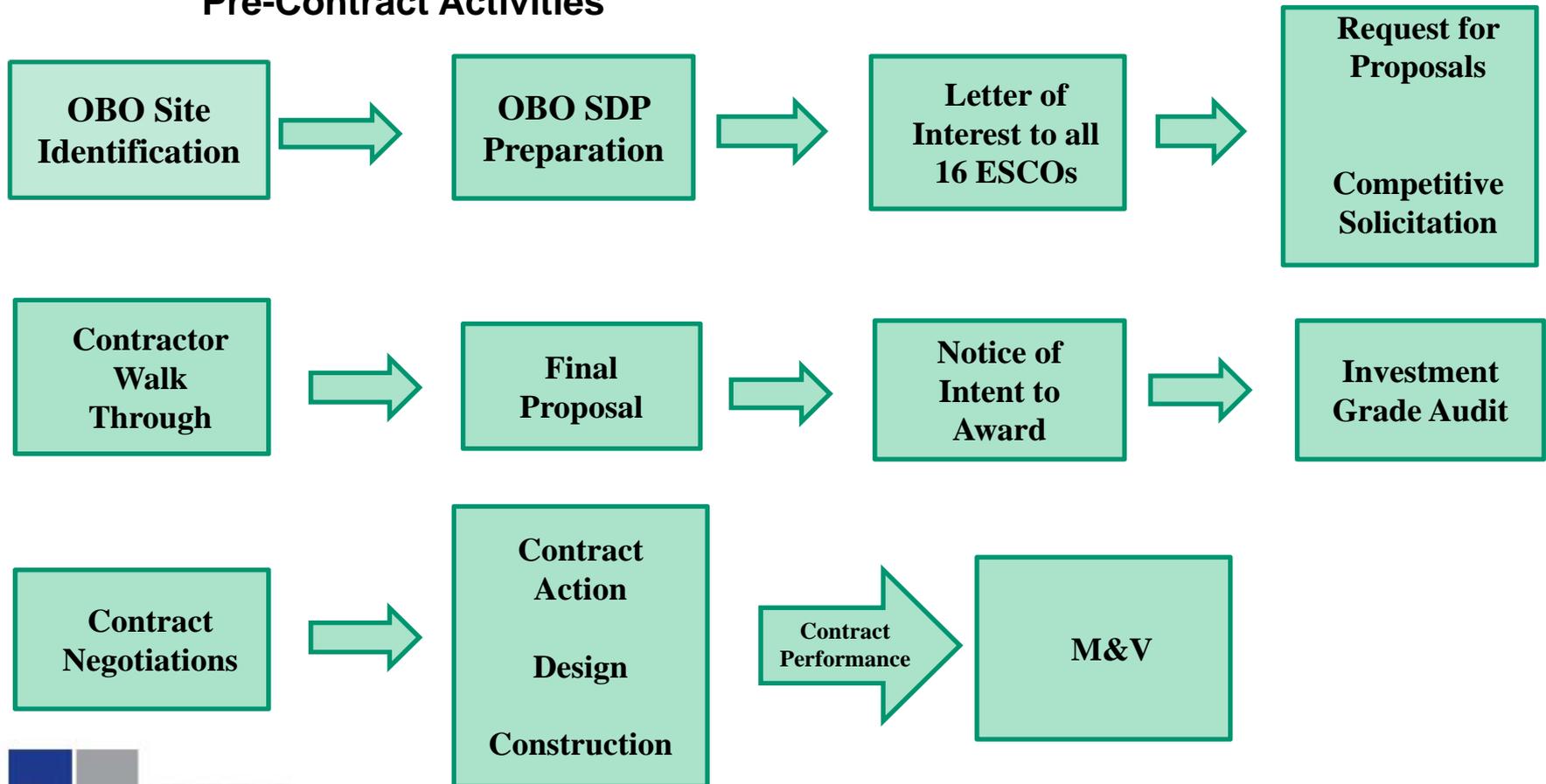
Project Identification: Contractor Initiated Option

- 1. ESCOs alert agency of desire to submit proposal**
- 2. Agency must notify other Super ESCOs and identify requirements for fair competition**
 - Requirements: Desired ECMs, buildings
- 3. Other ESCOs can then submit proposals**
- 4. OBO, using “fair consideration,” issues statement selecting one based on best value**

ESPC Execution Plan

Post Implemented

Pre-Contract Activities



ESPC Execution Plan

Phase 1

A three phase Execution Plan as follows:

1. Pre-Contract Phase

This is the preliminary data collection and project planning phase, which uses the Utility Data to identify energy usage and cost factors. High priority posts receive preliminary energy assessment audits. The resulting deliverable called The **Site Data Package** is used as attachments to the ESPC Request For Proposal.

•Energy Assessment Audit

- Site Data Package (SDP)
 - Building System Descriptions
 - Utility Data
 - Photos
- Energy Conservation Measures Report
 - ECMs Identified
 - Financial analysis

ESPC Execution Plan

Phase 2

2. Contract Phase

This is the solicitation, award and construction phase following IGA negotiations. This phase is treated as a typical design build renovation project. OBO has specific requirements for the proper completion of projects:

- Site Visits
- Design Commencement
- Construction Security Plan
- Final Design
- DS Accreditation
- OBO Permitting
- Project Director
- Material Procurement/Shipping/Storage
- Site Security During Construction
- Inspection
- Final Acceptance/Commissioning

ESPC Execution Plan

Phase 2

2. Contract Phase - Permitting

The office of Design and Engineering holds Permit issuance authority for all construction projects undertaken at DOS facilities overseas. There are a number of offices and disciplines that are required to sign off on all designs that are performed for OBO.

- Architectural
- Mechanical
- Electrical
- Civil/Structural
- Physical Security
- Technical Security
- Cost
- Fire/Life Safety
- Facilities Maintenance
- Commissioning

ESPC Execution Plan

Phase 2

2. Contract Phase – Requirements

Site Visits: Travel expenses

Design: OBO Design Standards

- Standard Embassy Design (SED)
- Technology Design Standards

Construction Security Plan: Building Areas (GWA, LAA, CAA, Core)

- Secure Procurement
- Secure Shipping
- Secure on site Storage
- Monitoring
- Personnel: (CST, CAG) Construction Security Technician, Cleared American Guard

ESPC Execution Plan

Phase 2

2. Contract Phase – Requirements (cont)

Diplomatic Security (DS) Accreditation:

- Design Security Requirements
- Construction Requirements

OBO Permitting: Design and Engineering (DE)

- OBO Design Standards
- Contract Compliance

On Site Project Director (PD):

- Construction Administration
- Site Engineering Team
- Temporary Office Space

ESPC Execution Plan

Phase 2

2. Contract Phase – Hidden Costs

The contractor will be required to include all costs of construction in their proposal and construction costs. All efforts and costs under an ESPC must be borne by the contract. There are limited resources to support an ESPC contract within OBO.

Contractor Responsibilities:

DOE Project Facilitator

A/LM Contracting Fee

Procurement/Shipping/Storage

On site PD and Office Space

- OBO or 3rd Party PD

Site Security

- Monitoring Installations
- Security Personnel
- Disposal

ESPC Execution Plan

Phase 3

3. Performance Phase – Post managed and funded with OBO input

This is the long term period of performance when energy conservation measures are put into service. The facility is required by OBO to engage an independent auditor for the certification of Measurement and Verification (M&V):

- **The cost of this third party contractor must be borne by the contract**
- There is always a potential for early payoff of all contracts