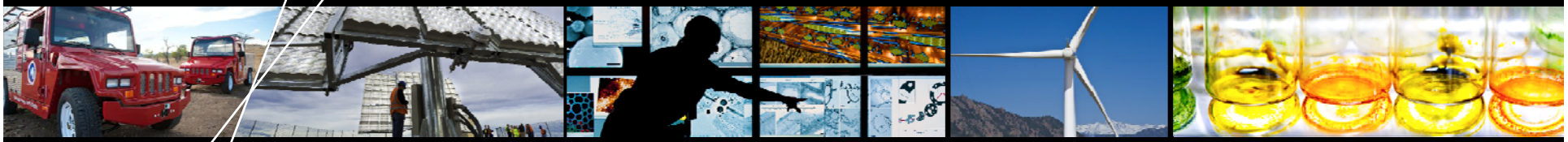
NREL
NATIONAL RENEWABLE ENERGY LABORATORY

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

FEMP
Federal Energy Management Program

Acquisition Process for the Design-Build of the Research Support Facility



NASA Net Zero Workshop

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Types of Design-Build Acquisition Strategies

- **Bridging Documents**
  - A preliminary design is developed as the basis for a offeror to develop a proposal.
  - Spearin Doctrine: Owner is responsible for the sufficiency of documents given to offerors.
  - Bridging places liability on accuracy and completeness of documents on owners
  - Some overlap of A/E costs

Types of Design-Build Acquisition Strategies

Performance Specifications

- What something must do not what it must be
- Subcontractor must substantiate their design meets requirements
- Owner must not give the subcontractor technical direction

Criteria Consultant/Owner's Representative

Use of Criteria Consultants

- Aid owner with the creation of performance specifications
- Provide owners representative services
- Is not to act as a referee between owner and design-builder
- Serves as "eyes and ears" of owners during construction
- Fixed-Price type subcontract highly recommended

Design-Build Institute of America (DBIA) Best Practices

Use of Seven DBIA Best Practices:

- Best Value Procurement
- Two-Phase Solicitation
- Short-List To No More Than Three Qualified Teams
- Conduct Interim Interviews During Competition
- Payment of Stipends to Unsuccessful Offerors
- Offer an Award Fee Program with Incentives
- Use of Performance Specifications versus Technical Specifications

Best Value Procurement

- Use of a Project Objectives Checklist to Communicate the Mission Critical, Highly Desirable, and If Possible scope items in the RFP document. Items within each catetory are prioritized by the Owner.
- Use of Weighted Technical Evaluation Criteria which is significantly more important than cost.
- NREL had more scope that funding for the RSF which resulted in competitions being focused on amount of scope that can be provided for the money available.

RSF Mission Critical Objectives

- **Safety**
  - Performance
  - Safe Design
- **LEED™ Platinum**
- **Energy Star**

Highly Desirable Objectives

- 800 Staff Capacity
- 25 kBTU/sf/yr
- Architectural Integrity
- Honor Future Staff Needs
- Measurable ASHRAE 90.1
- Support Cultural and Amenities
- Expandable Building
- Ergonomics
- Flexible Workspace
- Support Future Technologies
- “How To” Manual
- “Real-Time PR” Campaign
- Secure Collaboration with Outsiders
- Building Information Modeling
- Substantial Completion by 2010

If Possible Objectives

- Net Zero Design Approach
- Most Energy Efficient Building in the World
- LEED™ Platinum Plus
- ASHRAE 90.1 + 50%
- Visual Displays of Current Energy Efficiency
- Support Public Tours
- National and Global Recognition and Awards
- Support Personnel Turnover

Two Phase Solicitation Process

Request for Qualifications:

- **General Evaluation Criteria**
  - Resumes of Key Personnel
  - Experience of Design-Build Team
  - Past Performance
  - Safety

Request for Proposals:

- **Project Specific Weighted Technical Criteria**
  - Demonstrated experience for all Mission Critical Items
  - Demonstrated experience in Performance Based Design-Build
  - Demonstrated experience in Energy Efficient Building Designs

Short-List to No More Than Three Teams

- Cost of Preparing Technical Proposals for the RSF Project
- Gives Firms a 1 in 3 Chance of Winning
- Firms More Willing to Participate in Competition
- Keeps Owner's Cost Reasonable if Paying Stipends
- Source Evaluation Team's Review is Manageable

Conduct Interim Interviews

Conduct Interim Interviews during the Competition.

- Interviews held a couple of weeks after issuance of RFP documents.
- Interview discussions limited to clarification on the requirements of the RFP.
- Owner lead and controlled the interviews.
- Owner video-taped the interviews.

Payment of Stipends

- Stipends were paid to unsuccessful offerors.
- Stipends were paid to offset the high cost of providing conceptual design documents as part of the technical proposal.
- Stipends were not paid to cover bid and proposal preparation costs.
- Owner gained rights to use of conceptual design ideas obtained in the unsuccessful proposals by payment of stipends.

Award Fee Program

Award Fee must be large enough to motivate the design-build team. Normally 2 – 3% of total subcontract value.

- Motivates/modifies subcontractor behavior
- Guarantees the Owner to have a “voice” during the design/construction
- Owner determines the amount of award fee earned by the subcontractor
- Award Fee Program is at Owner’s sole discretion
- Award Fee Evaluation Criteria is established by Owner

Subcontract Negotiation

- **Subcontractor included 31 exceptions to the terms and conditions of the subcontract in their technical proposal**
- **Exceptions included:**
  - Structure of Liquidated Damages: Set at $11,900/day
    - NREL agreed to tier Liquidated Damages
  - Liquidated Damages and Mutual Waiver of Consequential Damages
  - Intellectual Property rights over design documents
  - Insurance Level Requirements: E&O Insurance
    - $2M claim and $4M aggregate

Two Phased-Subcontract

- **NREL issued the subcontract in two phases**
  - Preliminary Design
  - Design Development and Construction

- **Phased Approach used to Management Risk for both Owner and Subcontractor**

Partnering

Partnering is a very important aspect of Design-Build

- Builds trust between Design-Build Team/Owner/Owner's Rep.
- Should be collaborative and not adversarial.
- Integrated Project Team (IPT) is crucial to develop solutions during the design-build project
  - Members of IPT must include all members of the design-build team and all stakeholders in the project
- Ensures the IPT continues to work as a team
- Partnering Sessions should be a safe environment for all parties to be completely transparent

SUMMARY - Benefits of Fixed-Price Design-Build

- Reduction in Schedule by approximately 33%*
- Reduction in Cost by approximately 6%*
- Reduction in Change Orders
- Encourages Innovative Design
- Shift in Risk from the Owner
- Subcontractor has control of the schedule

*Experience throughout Design-Build Industry