SOLAR RFP
Minnesota Solar Energy Procurement Workshop
Minneapolis | September 18, 2019

Photo: NREL/DOE
## Project Development Process

1. Identify Project Lead & Convene Stakeholders
2. Goal Setting
3. Site Identification and Data Collection
4. Site Feasibility Screening
5. Financing Options Assessment
6. RFP Development & Solicitation
7. Pre-Proposal Conference & Site Visit
8. Proposal Evaluation & Comparison
9. Contract Selection & Negotiation
10. Project Construction
11. Project Commissioning & Optimization
12. Operations and Maintenance
What is a Solar RFP?

A solar request for proposal (RFP) is a solicitation process used by agencies looking to obtain solar products or services from potential providers.
Why consider or start with an RFI/Q?

• An RFI/Q is a “Request for Information/Qualifications” that is issued prior to an RFP and is useful in collecting information pertaining to your project

• An RFI/Q may be useful in:
  • Adjusting the scope of the project to accommodate common or unique design and build elements (i.e., w/wo storage)
  • Evaluating the quality and quantity of potential bidders (i.e., evaluate your promotional reach)
  • Confirming your market understanding (i.e., RECs) or project approach (i.e., PPA vs self-gen)
  • Obtaining general feedback or suggestions on your project approach

• Avoid making your RFI/Q so burdensome as to discourage RFP participation
RFP Inputs

Source: DOE/FEMP
Stakeholder Involvement

Early Involvement is Critical!

- Engineering
- Financial
- Legal
- Sustainability/Environment
- Energy
- Procurement
- City Council / Mayor’s Office
- Community
Financing Considerations

1. **Direct Purchase**
   - You finance, own and operate the project yourself
   - Capital intensive
   - $ per kW

2. **Third-party contracts**
   - You purchase the output from a project that is financed, owned and operated by a third-party provider
   - Most common financing approach is the Power Purchase Agreement
   - $ per kWh
   - Unique elements of third-party PPAs
     - Fixed electricity price
     - Rate escalators
     - Term Length
     - Liability
     - Buy-out terms
Know your goals

What do you want your project optimized for?

- Energy Savings
- Cost Savings
- Emissions reductions
- Reliability
- Safety
- Education
- Job creation or economic development
- Public visibility
- Other?

Make sure your RFP clearly identifies your goal preferences
Example Goals

• Some of the benefits that the Municipality wishes to realize from this project include, but are not limited to, the following:
  • Annual solar PV production to be at least “X”% of site annual consumption (kWh), as averaged over the previous three years
  • Reduce the operating costs of municipal buildings
  • Create a degree of certainty to future energy costs
  • Exceed municipal sustainability mandates and goals
  • Promote the development of sustainable and renewable energy sources and related technologies
  • Decrease reliance on greenhouse gas-producing energy-generating systems
  • Create locations for electric vehicle (EV) charging stations, integrated into shaded carports by making these structures “EV Charger Ready”
  • Provide fleet vehicle shade protection from direct exposure to sunlight as part of solar PV systems installed in parking lots
  • Make effective use of often limited and valuable ground, roof, and carport areas made available for solar arrays by the municipal government. Effective use is maximizing annual kWh production and/or maximizing annual savings based on the current electric rates.
Develop Proposal Evaluation Criteria

• Bidders want to know if they won or if they lost
• Ensure a balance between criteria and weighting
• Criteria groups
  • Cost effectiveness
  • Technical approach and implementation
  • Qualifications for designing, developing, owning, operating and maintaining project
  • Project team, experience and organizational approach
• Consider a two-stage selection process with staged levels of response (so respondents don’t have to do all the work only to lose out on a single screening criteria)
• Follow-up interviews can be used to break scoring ties
Example Evaluation Criteria

• Criteria 1 – Cost Savings (Weighting 35%)
  • Sub Criteria 1.1 – Solar PV System Electricity Firm Fixed Price(s)($/kWh)
  • Sub Criteria 1.2 – Remove and Restore Roof Arrays—Cost ($)

• Criteria 2 – Technical Approach/Implementation/Capabilities
  • Sub Criteria 2.1 – Adherence to Technical Requirements
  • Sub Criteria 2.2 – Team Qualifications, Certifications & Trainings
  • Sub Criteria 2.3 – Annual Energy Production

• Criteria 3 – Experience

• Criteria 4 – Past Project Performance

• Criteria 5 – O&M & Performance Monitoring
  • Sub Criteria 5.1 – Warranty linked to rated power output
  • Sub Criteria 5.2 – Post commissioning on-site training
  • Sub Criteria 5.3 – Annual maintenance contract option

• Criteria 6 – Resiliency
### Example Criterion and Evaluation Matrix

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Available Points</th>
<th>Rating</th>
<th>Points Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach and Schedule</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent’s Qualifications and Experience</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel Qualifications and Availability</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance Record of Respondent</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Understanding</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Knowledge and Experience</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relevant Specific Knowledge and Experience</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy and Environmental Experience</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leveraging Project Educational Value</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability to Contribution to Local Economic Development</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1: Sample Bid Scorecard**  

<table>
<thead>
<tr>
<th>Weighting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>Unacceptable - The Proposer did not address the criterion.</td>
</tr>
<tr>
<td>20-40%</td>
<td>Not Advantageous - The Proposer addressed the criterion minimally. The detail was insufficient and/or little understanding for the subject was exhibited.</td>
</tr>
<tr>
<td>41-60%</td>
<td>Advantageous - The Proposer addressed the criterion adequately ranging from some capability to basic capability for the subject. Information provided was either inconsistent or was missing critical detail where needed.</td>
</tr>
<tr>
<td>61-80%</td>
<td>Highly Advantageous - The Proposer addressed the criterion well, had a thorough understanding of the subject and provided a solid presentation of the information requested in the category and its subsections.</td>
</tr>
<tr>
<td>100%</td>
<td>Superior - The Proposer addressed the criterion thoroughly, exhibited a superior understanding of the topic and the information supplied demonstrated an outstanding capability in this area.</td>
</tr>
</tbody>
</table>

**Figure 2: Sample Bid Weights and Definitions**  
Ensuring Comparable Bids

Best Practices in Standardizing the Response Format

• Objective is to be able to make apples-to-apples comparisons

• If the RFP does not explicitly express instructions for proposal submission and uniformity then it will not happen

• Develop a template that provides a standard response format and structure for respondents to follow

• Ensure that requirements across different sections are not contradictory – for example, allowing modifications in one area, disallowing in another, but not realizing that one effects the other

• If you are allowing for different financing approaches you will need to determine a common metric (i.e., NPV) to compare project that use different financing options

• The criteria and scoring matrix will have a huge impact on RFP responses
Municipal RFP Approach

Options:
1. Self-administered
2. Hire outside consultant

Solar RFPs are unique enough that the hiring of an outside consultant who can manage the process may save you time and money.
Outcome-based RFPs

Best Practices:

• Specify performance not equipment

• Define metrics (i.e., kWh, kW) that will be the basis of your performance decision

• Require that project analysis and estimates use the same industry tools (scrutinize production estimates)

• Consider removing financial analysis from the responses (these can be full of assumptions and add cost to the proposal)

• Compartmentalize bids into different areas of focus (align with range of inputs from different stakeholders)
  • Components and materials
  • Site prep
  • Labor
  • O&M
  • Financing
Key Solar RFP Ingredients

Site information to include in your solar RFP:

• Site Assessment Results
• Facility Load Data (consumption)
• Type of electrical service (physical interconnect and rate schedule)
• Site photos/maps/plans
• Electrical line drawings
• Site visit schedule
Key Solar RFP Ingredients

Respondent Qualifications:

- Who are you?
- What are your qualifications?
- Do you have references?
- What is your project history?
- What specialized training does your team have?
- What licenses do you carry?
- What certifications do you carry?
- Any past disputes?
- What is your insurance situation?
- What is your bonding situation?
- What is your project pipeline and schedule look like?
- What kinds of solar technologies and manufacturers do you work with?
Key Solar RFP Ingredients

Financial requirements of respondent:

- Bid bond / Bid Deposit
- Income Statements
- Investment Rating
- Audited Annual Reports
- Balance Sheet / Cash flow Statement
Key Solar RFP Ingredients

RFP Technical Requirements:

• Avoid Restrictive Technical Requirements

• Product Standards
  • Modules UL 1703
  • Inverters US 1741 & IEEE 1547

• Codes
  • National Electric Code
  • International Building Code
Key Solar RFP Ingredients

RFP Technical Requirements (cont.):

• Manufacturer Warranties
  • Modules
    • 90% rated power output after 10 years
    • 80% rated power output after 25 years
  • Inverters
    • Expect to replace the inverter once over the life of the modules
    • Manufacturer inverter warranties can range from 10-20 years
    • Extended warranties can be purchased at an extra cost

• Workmanship installation warranties are often provided by the respondent; sometimes required by law
Key Solar RFP Ingredients

Roof integrity and warranties:

- Do no harm when it comes to the integration of a system into the roof
  - Age of roof
  - Structural integrity of roof
- Direction of roof surface
- Shading of roof surface (seasonal)
- Existing roof warranties
- Does the solar developer work with a roofer?
  - Roofers can extend warranties to project
Key Solar RFP Ingredients

Other Site Information Considerations:

- Size of land or area for ground mount or parking facility
- Property access points
- Facility use profile
- Utility interconnection points
- Soil, subsoil or surface conditions
- Site uses
- Shading
Key Solar RFP Ingredients

Permitting and Interconnection Responsibility:

- Place responsibility on winning respondent
- RFP can help to inform respondents of local ordinances, regulatory requirements and permitting processes and application forms
Key Solar RFP Ingredients

Other RFP elements:

• Performance Monitoring and Guarantees
  • Remote monitoring
  • Minimum response time for system performance irregularities

• Schedules and Timeline of Project Milestones
  • Timelines can drive cost
    • Materials costs
    • Incentive availability
    • Interconnection availability
  • Time is equal to risk for developers and investors (be fair and clear)

• Labor requirements

• Other terms and conditions
  • Fire safety/access; system removal; buyout etc.
Key Solar RFP Ingredients

Operations and Maintenance:

• Solar doesn’t require much, but you should have a plan and address O&M in the RFP

• Options
  A. Do it yourself
  B. Contract it out

• Factors that affect your O&M plan
  • Financing approach
  • Size of system
  • Site Location
  • Environmental Conditions
Key Solar RFP Ingredients

What does an O&M plan include? (not an exhaustive list)

• Site access considerations
• Module cleanings
• Snow removal
• Schedule of O&M activities
• Monitoring and troubleshooting performance issues
• Optimizing project performance
• Response time guarantee
• Corrective compensation for failure to meet requirements
• Documentation requirements of O&M activities
• Ground cover maintenance
• Erosion control
• Tracking system maintenance
RFP Administration
Promoting Your RFP

• Direct contact with local vendors
• Local government home page
• News outlets
• Social media
• Local chapters of major RE trade associations

*Remember that an RFI/Q can help you identify whether additional promotion will be required for the RFP
RFP Administration
Pre-Proposal Conference & Site Visit

• Purpose: Review the RFP and answer questions
  • Usually incorporates a site visit so the offerors can gather information for proposal development
  • Tour potential renewable project location(s) and review pertinent site and electric infrastructure information

• Best practices
  • Make it mandatory (if possible)
  • Reserve room that is large enough for expected attendees
  • Develop agenda and presentation
  • Determine how to deal with Q&A
  • Site access and security requirements
  • Safety plan

Source: DOE/FEMP
RFP Administration
Fielding Questions

• Questions are part of the process
• The key is making all questions and answers available to all bidders
• Establish a point of contact to field inquiries
Summary: RFP Success Drivers

- Early stakeholder involvement
- Know your goal(s)
- Know you financing options and preferences
- Provide detailed site information
- Develop clear selection criteria and scoring
- Ensure that environmental attribute and REC ownership are clear in RFP

- Focus on outcome-based performance requirements; not on technical specifications
- Define requirements for proposal response
- RFP dissemination
- Longer contract terms may result in lower annual costs
- Larger projects are generally more cost effective
Unsolicited Project Proposals

Potential Risks
- Due diligence not performed by proposer
- Internal stakeholders not involved
- Project design not optimized for organizational goals
- Pricing not realistic or not competitive
- System specification may be out of market best-practice
- Contract terms not competitive
- Procurement process not administratively acceptable

Options
- Use contacts from unsolicited proposal sources as part of RFP promotion
- Leverage RFI/Q as first stage qualification step to vet unsolicited proposal sources
Questions?