



# 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

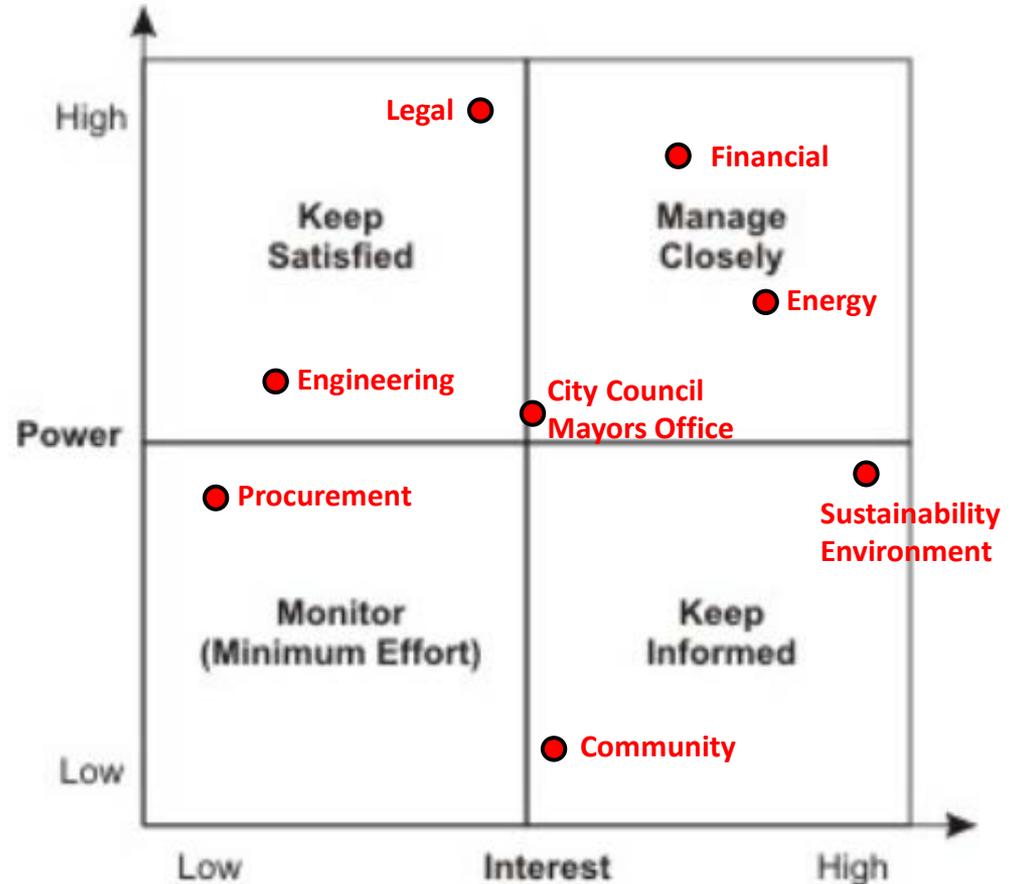
# RFP Inputs



# 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

	Available Points	Rating	Points Received
Approach and Schedule	5		
Respondent's Qualifications and Experience	15		
Personnel Qualifications and Availability	15		
Performance Record of Respondent	20		
Project Understanding	10		
Local Knowledge and Experience	5		
Relevant Specific Knowledge and Experience	15		
Energy and Environmental Experience	5		
Leveraging Project Educational Value	5		
Ability to Contribution to Local Economic Development	5		
<b>Total</b>	<b>100</b>		

Weighting	Description
0%	<b>Unacceptable</b> - The Proposer did not address the criterion.
20-40%	<b>Not Advantageous</b> - The Proposer addressed the criterion minimally. The detail was insufficient and/or little understanding for the subject was exhibited.
41-60%	<b>Advantageous</b> - 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.
61-80%	<b>Highly Advantageous</b> - 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.
100%	<b>Superior</b> - The Proposer addressed the criterion thoroughly, exhibited a superior understanding of the topic and the information supplied demonstrated an outstanding capability in this area.

**Figure 1: Sample Bid Scorecard**  
 Source: Town of Lee, Massachusetts and Town of Lenox, Massachusetts. n.d. Request for Proposal Available at [www.lee.ma.us/Bids/Lee-Lenox%20Solar%20energy%20RFP%2011-0621F.pdf](http://www.lee.ma.us/Bids/Lee-Lenox%20Solar%20energy%20RFP%2011-0621F.pdf)

**Figure 2: Sample Bid Weights and Definitions**  
 Source: Town of Lee, Massachusetts and Town of Lenox, Massachusetts. n.d. Request for Proposals: Energy Management Services. Available at [www.lee.ma.us/Bids/Lee-Lenox%20Solar%20energy%20RFP%2011-0621F.pdf](http://www.lee.ma.us/Bids/Lee-Lenox%20Solar%20energy%20RFP%2011-0621F.pdf)

# 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

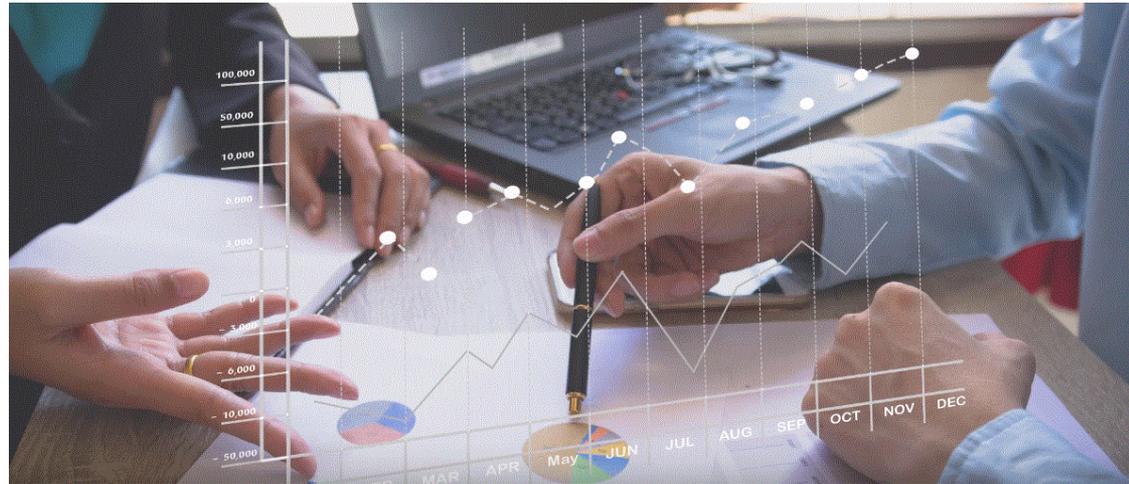
## Best Practices:

- 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:

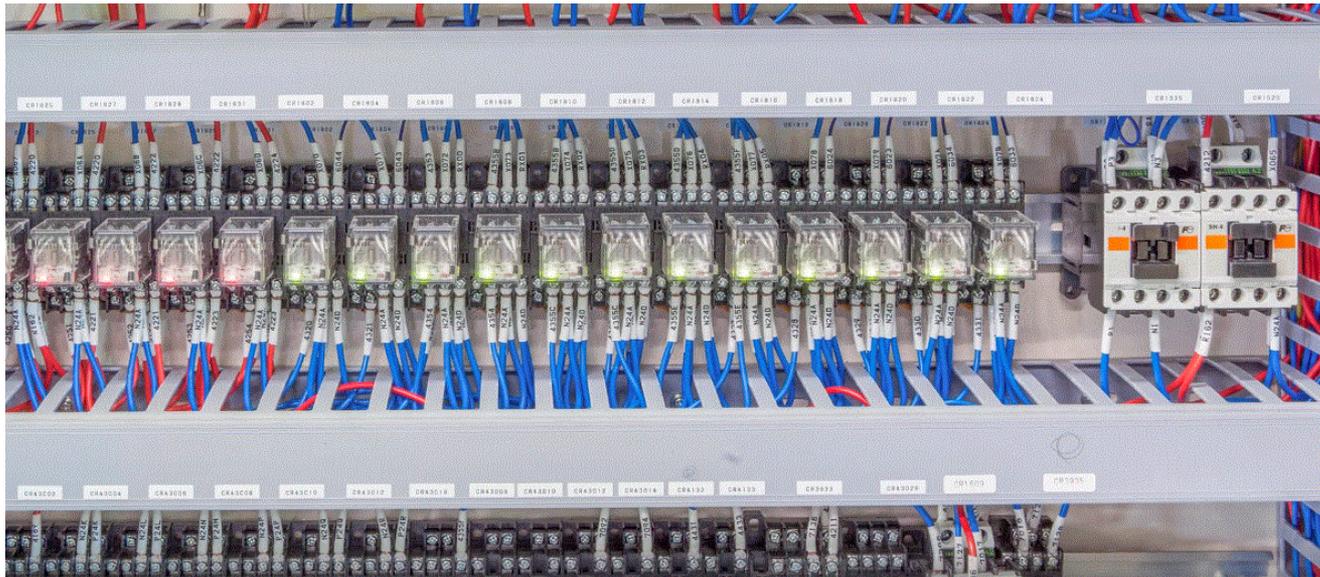
- Size of land or area for ground mount or parking facility
- Property access points
- Facility use profile
- Utility interconnection points
- Soil, subsoil or surface conditions
- Site uses
- Shading



# 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

# 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 your 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?