DOE OFFICE OF INDIAN ENERGY

Step 3: Project Refinement

Day 2

Selecting project financing, interconnection, and vendor procurement
### Step 3: Refinement

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential</td>
<td>Options</td>
<td>Refinement</td>
<td>Implementation</td>
<td>Operations &amp; Maintenance</td>
</tr>
</tbody>
</table>

- Financing commitments
- Organization/business structure
- Detailed economic models
- Vendors selected
- Completed environmental reviews
- Finalized permits
- Interconnection agreement
Step 3: Refinement

- Select Ownership and Business Structure
  – See slides from Step 2
- Finance
- Risks
- Interconnection Agreements
- Vendor Procurement
Step 3: Ownership and Financing Options

1. Potential
2. Options
3. Refinement
4. Implementation
5. Operations & Maintenance

- Finance Considerations
- Direct ownership (cash)
- Grants
- Incentives
- Debt
- Energy savings performance contracts (ESPCs) and Utility Energy Savings Contracts (UESCs)
- Power Purchase Agreements (PPAs)
- Tax Incentives
- New Market Tax Credits
- Bonds
Financing Considerations: Givey

- Cost Avoidance
- Energy Efficiency
- Public Dollars – traditional grants are dwindling
- Private Dollars – ESCOs, loans
- Grant Writing – have a Strategic Energy Plan
- Project Management
- Tighten Procurement
- Be consistent with the STATE model
- Aggregation on the regional level (economies of scale)
Grants: State, Local, Utility, & Private-Sponsored

Grant Programs for Renewables

www.dsireusa.org / January 2013

Notes: This map only addresses grant programs for end-users. It does not address grant programs that support Research & Development, nor does it include grants for geothermal heat pumps or other efficiency technologies.

22 states + 2 territories offer grant programs for renewables
### Grants: Federal Government Sponsored

<table>
<thead>
<tr>
<th>Program</th>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rural Energy for America Grant Program (USDA)</strong></td>
<td>Grant</td>
<td></td>
</tr>
<tr>
<td>- $2,500 - $500,000 or 25% of project costs, whichever is less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Requirements: borrower must be rural small business or agricultural producer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Technology: biomass, solar, wind, hydro, hydrogen, geothermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Applications: equipment, construction, permitting, professional service fees, feasibility studies, business plans, land acquisition</td>
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</tr>
<tr>
<td><strong>High Energy Cost Grant Program (USDA)</strong></td>
<td>Grant</td>
<td></td>
</tr>
<tr>
<td>- $75,000-$5,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Requirements: community's average home energy costs must exceed 275% of national average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Technology: solar, wind, biomass, hydro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Applications: Energy generation and transmission and distribution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- No open solicitations</td>
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</tbody>
</table>
# Grants: Federal Government Sponsored

<table>
<thead>
<tr>
<th>Program</th>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Tribal Energy Program Grant (DOE)**        | Grant    | • Amount varies  
• Requirements: varies by solicitation  
• Technology: solar, wind, biomass, hydro, geothermal  
• No open solicitations                                                             |
| **Energy and Mineral Development Program (BIA)** | Grant    | • Amount varies  
• Applications: Evaluation of energy and mineral resources on tribal lands.  
• Annual solicitations                                                              |
## Regional Corporations

<table>
<thead>
<tr>
<th>Program</th>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
</table>
| Partner with Regional Corporations (13 Regions)  | Create | ● Form a business plan  
● Take advantage of tax incentives and rebates  
● Collaborate with other villages  
● Start from scratch |
| Alaska Native Village Corporations (Over 200 existing) | Join   | ● Seek an existing Regional Corp with experience in energy business  
● Propose a renewable arm to an existing corporation |
Incentives: Rebates

Rebate Programs for Renewables

www.dsireusa.org / January 2013

- 16 States +
  Washington DC
  and 2 territories offer rebates for renewables

Notes: This map does not include rebates for geothermal heat pumps, daylighting or other energy efficiency technologies.
Database of State Incentives for Renewable Energy

Check DSIRE:
http://dsireusa.org
## Debt: Government Sponsored Loan Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
</table>
| Rural Development Biorefinery Assistance Program (USDA)                 | Guarantee   | • Up to 90% of loan amount  
• Technology: commercial-scale bio refinery  
• Applications: equipment, construction, permitting, land acquisition, cost of financing |
| Power Project Loan Fund (Alaska Energy Authority)                       | Loan        | • Amount varies  
• Technology: solar, wind, MSW  
• Applications: for development or upgrade of small-scale power production (<10 MW), conservation facilities, and bulk fuel storage, includes transmission and distribution |
| Indian Affairs Loan Guaranty, Insurance, and Interest Subsidy Program (BIA) | Guarantee   | • Max 90%; interest subsidy covers the difference between the lender’s rate and the Indian Financing Act rate  
• Requirements: borrower must have 20% tangible equity in the project; this is for business development. |
| Rural Energy for America Loan Guarantee Program (USDA)                  | Guarantee   | • Up to 85% of loan amount  
• Requirements: borrower must be rural small business or agricultural producer  
• Technology: biomass, solar, wind, hydro, hydrogen, geothermal  
• Applications: equipment, construction, permitting, professional service fees, feasibility studies, business plans, land acquisition  
• No open solicitations |
Energy Savings Performance Contracting (ESPC)

• Re-purpose money spent on wasted energy and maintenance into payment stream for capital improvements

• Energy Service Company (ESCO)
  – Identifies energy conservation measures
  – Designs, engineers and constructs measures
  – Guarantees savings
  – Pays any savings shortfalls
Typical ESPC Measures

- Lighting – indoor, outdoor, street lights
- Heating Ventilation & Air Conditioning (HVAC)
- Energy Management Systems
- Motors and Variable Speed Drives
- Building Envelope Measures
- Water Conservation Measures
- DG and CHP – renewable or fossil fuel
- Other Systems (kitchen, security, etc.)
ESPCs

An ESPC is a no up-front cost contracting mechanism between a site customer and an energy service company (ESCO). Energy conservation measures and on-site generation are financed and implemented by an ESCO, which is repaid through energy savings. This would be done as a PPA, in conjunction with energy efficiency, to bring costs down.

More Than 90 DOE-Qualified ESCOs, including:
Ameresco · McKinstry · Chevron · Siemens
Honeywell · Tetra Tech · Johnson Controls · Trane

For full DOE Listing: http://energy.gov/eere/femp/qualified-list-energy-service-companies.
ESPCs Reallocate Current and Future Energy Spending

- **Customer's Cash Flow**
  - No ESPC
  - During ESPC
  - After ESPC

- **Customer's Savings**
- **Guaranteed Savings for ESCO Services Fee and Financing**
- **Energy and Operations and Maintenance Costs**
GSA Pricing for the ENABLE program

- ESPC ENABLE program allows smaller low-risk projects to be funded through an ESCO contract using GSA pricing schedule
  - ESCOs that work on GSA ENABLE projects: [http://energy.gov/eere/femp/espc-enable-energy-service-companies](http://energy.gov/eere/femp/espc-enable-energy-service-companies)
Utility Energy Service Contracts (UESCs)

UESCs are contracts that allow utilities to provide their federal customer agencies with comprehensive energy and water efficiency improvements and demand reduction services.

Utility provides analysis, design, installation, and may arrange financing.

Types of UESCs
1. **Area-wide Contracts (AWCs)**
   - Indefinite delivery, indefinite quantity (IDIQ)
2. **Basic Ordering Agreements (BOAs)**
   - Not a contract
   - Establishes general terms and conditions for future contracts
3. **Model Agreements**
   - Template for agencies to use in establishing UESCs or as master agreements within an AWC
   - Contain approved, required clauses for federal contracts
   - Most comprehensive compilation of contractual language for UESCs available
   - Can be added to an AWC or BOA
   - Can also be used alone
The Tribe is the host in this structure and agrees to buy electricity generated by the renewable energy system.

Benefits:
1. No/low up-front costs
2. No O&M
3. Save on electricity costs
Community Projects PPAs: Eventual Tribal Ownership Example

- Developer and investor form a special purpose vehicle/entity to develop a solar/wind/biomass/MSW power plant

- Tribe executes a PPA with wind project to purchase power
  - Hopefully at a discount to current power price
  - Discount will depend on project economics and local rates

- At end of 6 years (ITC) or 10 years (PTC)
  - Investor ownership “flips” from 99% down to 5%
  - Developer buys investor 5% ownership at “fair market value”

- In year 7 or 11, developer can sell project to Tribe, which assumes the project’s debt
  - Project price is substantially reduced compared to Tribe project development from year 1
PPA Considerations to Weigh

Disadvantages

• May not beat current electricity rates
• Tough economics for small projects
• Higher transaction costs
• Renewable energy credit (REC) and project ownership requirements

Advantages

• No/low up-front costs
• No O&M
• Benefit from tax incentives
• Locked-in energy price
• Path to ownership
## Comparison of Tax Incentives

<table>
<thead>
<tr>
<th></th>
<th>Investment Tax Credit (ITC)</th>
<th>Accelerated Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value</strong></td>
<td>Tax credit of 10% or 30% of project costs, depending on tech</td>
<td>Depreciation of eligible costs (not all project costs qualify)</td>
</tr>
</tbody>
</table>
| **Select Qualifying Technologies** | • Solar  
• Fuel cells  
• Small wind  
• Geothermal                                                        | Depreciation can be taken with either PTC or or ITC             |
| **Basis**             | Eligible project cost. Credit taken at the time the project is placed in service. Can be combined with depreciation. | **MACRS:** 5-year depreciation schedule  
**Bonus:** 50% first year accelerated depreciation on equipment |
| **Expiration**        | Placed in service before 1/1/2017*                                 | **MACRS:** None  
**Bonus:** 1/1/2014                                           |
So Why Seek a Tax-Equity Finance Partner?

- Tax incentives such as Modified Accelerated Cost Recovery System (MACRS) and either Production Tax Credit (PTC) or Investment Tax Credit (ITC) can represent up to half the project value, or reduce project capital costs by ~50%.

- Tax incentives can help achieve a competitive price of power.

- Many projects also require state-level incentives to be economic.
Bonds: CREBs cont.

Challenges

• Not truly equivalent to interest-free bond
  – Assumes bond issuer is equiv. to AA corporate
  – Public entities with weaker credit must either:
    • Make supplemental interest payments, or
    • Sell the bond at a discount

• Transaction costs are high
  – Allocations made from smallest to largest projects
  – **Solution**: MA bundled 12 projects (1 MW)

• First principal payment due in December of the year the CREB is issued
Bonds: Green Bonds

• Finance tool for green projects: projects and activities that promote climate and other environmentally sustainable purposes
  – Renewable energy
  – Energy efficiency
  – Sustainable waste management
  – Clean transportation

• Nascent market for institutional investors who have climate considerations in their investment objectives
  – Currently led by international organizations (World Bank, International Monetary Fund)
  – Some states beginning to look at these instruments (MA has issued some green bonds)
PROJECT RISKS
## Project Risk: Community-Scale Post Step 3

<table>
<thead>
<tr>
<th>Risks</th>
<th>Risk Assessment Post Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development</strong></td>
<td></td>
</tr>
<tr>
<td>• Poor or no renewable energy resource assessment</td>
<td>Low; site picked ✓</td>
</tr>
<tr>
<td>• Not identifying all possible costs</td>
<td>Low; detailed model ✓</td>
</tr>
<tr>
<td>• Unrealistic estimation of all costs</td>
<td>Low; detailed model ✓</td>
</tr>
<tr>
<td>• Incorrect estimation of long-term “community” energy use (energy efficiency first)</td>
<td>Low; final projection ✓</td>
</tr>
<tr>
<td>• Utility rules and ability to offset use with centralized production</td>
<td>Reduced ✓</td>
</tr>
<tr>
<td><strong>Site</strong></td>
<td></td>
</tr>
<tr>
<td>• Structural (e.g., rooftop solar, wind loading, soil conditions)</td>
<td>Assumed low; assessed</td>
</tr>
<tr>
<td>• Installation safety (e.g., wind tower, hazard for adjacent sites)</td>
<td>EPC assumes risk</td>
</tr>
<tr>
<td>• Site control for safety/security purposes</td>
<td>Low; site secure ✓</td>
</tr>
<tr>
<td><strong>Permitting</strong></td>
<td></td>
</tr>
<tr>
<td>• Tribe-adopted codes and permitting requirements</td>
<td>Low; complete ✓</td>
</tr>
<tr>
<td>• Utility interconnection requirements</td>
<td>Low; complete ✓</td>
</tr>
<tr>
<td><strong>Finance</strong></td>
<td></td>
</tr>
<tr>
<td>• Capital availability</td>
<td>Low; PPA complete ✓</td>
</tr>
<tr>
<td>• Incentive availability risk</td>
<td>Low; risk on developer ✓</td>
</tr>
<tr>
<td><strong>Construction/Completion</strong></td>
<td></td>
</tr>
<tr>
<td>• EPC difficulties</td>
<td>Low; allocate to EPC or developer</td>
</tr>
<tr>
<td>• Cost overruns</td>
<td></td>
</tr>
<tr>
<td>• Schedule</td>
<td></td>
</tr>
<tr>
<td><strong>Operating</strong></td>
<td></td>
</tr>
<tr>
<td>• Output shortfall from expected</td>
<td>Assumed low, mitigable, or allocatable</td>
</tr>
<tr>
<td>• Technology O&amp;M</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Adapted from Holland & Hart, RE Project Development & Finance & Infocast, Advanced RE Project Finance & Analysis

*NOTE: Underlining signifies that the risk assessment outcome changes during the step at hand.*
Conclusion

• There is large potential for renewable energy development in Alaska. To date, projects in Alaska have been largely publicly financed, but there is opportunity to expand into private financing in order to capture more project potential.

• Renewable energy development often requires innovative financing structures in order to fully realize the tax benefits available and typically includes a combination of government-sponsored and private funding.
Next Steps

• Evaluate options for sources of capital, tax equity partnerships, project terms, and ownership interest when selecting the optimal financing structure.

• Tax credits and accelerated depreciation are by far the most powerful government-sponsored drivers of renewable energy project development in the United States, as they attract the private capital necessary to ensure a project’s economic viability.

• There are opportunities for tribal governments and Alaska Native corporations to participate in renewable energy project development, both independently and through tax-equity partnerships.
INTERCONNECTION AND NET METERING
What is Net Metering?

“Net metering allows residential and commercial customers who generate their own electricity from [eligible technologies] to feed electricity they do not use back into the grid” for utility credit.

Interconnection & Net Metering

• Required Agreements
• General Process for Interconnection
• How to Find Utility Rules on Interconnection
• Common Missteps and Caveats
Note: Numbers indicate individual system capacity limit in kilowatts. Some limits vary by customer type, technology and/or application. Other limits might also apply. Additionally, this map generally does not address statutory changes until administrative rules have been adopted to implement such changes.
**Net Metering Variations**

- Net metering works best for
  - Home owners (not renters)
  - Single dwellings (not multi-unit homes/businesses)
  - Customers located in same utility territory
  - Distributed generation (DG) located in the same utility territory

- Variations on net metering allow for broader participation
  - Group billing
  - Virtual net metering
  - Joint ownership
Group Billing

- Allows multiple participants to receive net metering credits from a single renewable energy facility
  - Great for multi-family homes or multi-tenant business buildings
  - Utility’s rules must allow for group billing
- Utility plays an active role
  - Produces group bill for all energy consumption and charges
  - Output from net metered system is credited against group bill
  - Remaining costs are allocated according to participant agreement
- Requires
  - Customer representative as utility contact to do administrative work
  - Creditworthy customer representative
- Example: Vermont
Virtual Net Metering

• Similar to group billing
  – Multiple participants receive net metering credits from a single renewable system
  – Offsets load at multiple retail electric accounts
  – Must be within a utility’s service territory

• As with traditional net metering, credits appear on each individual customer’s bill, instead of on a group bill

• Sometimes, the DG system is not required to be behind the customer’s meter

• Examples: Colorado, Delaware, Massachusetts, and California
Sample Net Metering Agreement

MINNESOTA SOLAR®REWARDS CUSTOMER CONTRACT
Application ID: __________

Customer-Sited Photovoltaic (PV) Systems
Greater than 0.5 kW and Less than 40 kW DC Nameplate Capacity

This Contract is made and entered into by and between Northern States Power Company, a Minnesota corporation, having a mailing address of 414 Nicollet Mall, Minneapolis, Minnesota 55402 ("Company"), and _____________________________ (whether one or more, "Customer"), whose mailing address for billing and notice purposes is _____________________________ concerning electric service at the following address: _____________________________ (the "Service Address").

1. Fact Background.
   a. Customer will be installing the electric generating facilities described in Exhibit 1 (the "PV System") and meeting the requirements stated in this Contract, with a nameplate capacity rated at greater than 0.5 kilowatts and less than 40 kilowatts direct current (DC), on property located at the Service Address.
   b. Customer’s PV System also meets the requirements of the Minnesota Public Utilities Commission (the "Commission") Rules Chapter 7050 onpower, and Small Power Production and any technical standards for interconnection the Company has established that are authorized by those Rules.
   c. Customer is prepared to operate the PV System.
   d. Customer has submitted to Company an application and paid an application fee of $250.00, to participate in Company’s SolarRewards program using the PV System.
   e. The Company is certified under federal and Minnesota state law to interconnect with Customer and to purchase electricity generated by Customer through qualifying facilities and offered for sale to Company by Customer.
   f. Customer and Company enter into this Contract which sets out the terms and conditions for the purchase and sale of the electricity generated by the PV System ("SolarRewards Program"), and related matters.

Minnesota Solar®Rewards Customer Contract
Page 1 of 13

2. Purchases and Sales of Electricity.
   Customer and Company agree:
   a. Company will sell electricity to Customer under the rate schedule in force for the class of customer to which Customer belongs.
   b. Customer agrees to supply electricity generated by the PV System in the form of ___ phase, ___ wire, alternating current at the nominal frequency of 60 hertz, and at a nominal voltage ___.
   c. Company will buy electricity generated by the PV System from Customer under the applicable Company rate schedule filed with the Commission. Customer elects to sell electricity generated by the PV System in excess of Customer’s own use under the terms of the following Company rates:
      i. Net Energy Billing Service, Rate Code AS1
      ii. Purchase and Sale Billing Service, Rate Code AS1
      iii. Time of Day Purchase Service, Rate Code AS1
   A copy of the currently filed electric tariff is attached at Exhibit B. The rates, terms and conditions for sales and purchases of electricity may be changed, and the Contract is in force, due to actions of the Company or of the Commission, and Customer and Company agree that sales and purchases will be made under the rates in effect each month during the time the Contract is in force.
   d. Customer will pay a monthly metering charge under the Company rate schedule elected by the Customer, provided in Exhibit 2, and according Renewable Production Requirements in Section 5b. The monthly metering charge pays for the cost and installation of the bi-directional meter at the Service Address which measures electricity delivered by the Company to the Customer and energy received by the Company from the Customer, and the associated billing, operating and maintenance expenses. The metering charge may be changed, and the Contract is in force, due to actions of the Company or of the Commission, and Customer and Company agree that the metering charge will be under the rates in effect each month during the time the Contract is in force.
   e. Company will calculate the charges and payments for purchases and sales of electricity for each billing period. The payments for electricity generated by the PV System and sold to Company exceed the charges for electricity which the Company supplies to Customer (i.e. net positive production by the PV System), the credit will accumulate on the Company’s billing statement to Customer and will be paid by check to Customer within fifteen (15) days of the billing date once the accumulated credit exceeds $25.00.

 Minnesota Solar®Rewards Customer Contract
Page 2 of 13

What is Interconnection?

“The technical rules and procedures allowing customers to ‘plug in’ to the grid.”

What is Interconnection? (cont.)

• Agreement required to connect your facility- or community-scale system to the grid

• Distribution-level interconnection is largely the domain of state policy
  – Rules and regulations are highly variable between states

• Involve your utility *early and often* in the project development process
  – Many utilities have their interconnection procedures and the necessary contacts posted on their website
Common Interconnection Elements

• Application
• Designated interconnection utility representative
• Generator size thresholds
  – Different tracks for generators of certain sizes
  – Fast-track procedure for systems smaller than a certain size (generally ~2 MW)
  – Technical screens, feasibility studies, etc., for larger, more complex systems
• Timelines for each step
• Standard agreement between utility and customer
Database of State Incentives for Renewable Energy

- Check DSIRE: http://dsireusa.org.
Interconnection Policies

43 States, + Washington DC and Puerto Rico, have adopted an interconnection policy.

Notes: Numbers indicate system capacity limit in kW. Some state limits vary by customer type (e.g., residential versus non-residential). “No limit” means that there is no stated maximum size for individual systems. Other limits may apply. Generally, state interconnection standards apply only to investor-owned utilities.
EXHIBIT 3A

Simplified Interconnection
Terms and Conditions for Generating Facilities With a Rated Capacity up to and Including 10kW

1.0 Construction of the Facility

The Interconnection Customer (the "Customer") may proceed to construct the Generating Facility when the utility approves the Interconnection Application (the "Application") and returns it to the Customer.

2.0 Interconnection and Operation

The Customer may operate Generating Facility and interconnect with the utility’s electric system once all of the following have occurred:

Upon completing construction, the Customer will cause the Generating Facility to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction, and

2.2 The Customer returns the Certificate of Completion to the utility.

3.0 Operation and Maintenance

The Customer shall operate, maintain, and repair the Generating Facility as required to ensure it complies at all times with the interconnection standards to which it has been certified.

4.0 Access

The utility shall have access to the disconnected switchgear and primary equipment of the Generating Facility at all times. The utility shall provide reasonable notice to the Customer when possible prior to using its right of access.

5.0 Disconnection

The utility may temporarily disconnect the Generating Facility upon the following conditions:

5.1 For scheduled outages per notice requirements in the utility’s tariff or Commission rules.

5.2 For unscheduled outages or emergency conditions pursuant to the utility’s tariff or Commission rules.

5.3 If the Generating Facility does not operate in the manner consistent with these Terms and Conditions.

5.4 The utility shall inform the Customer in advance of any scheduled disconnection, or it is reasonable after an unscheduled disconnection.

6.0 Indemnification (Optional)

The Interconnection Customer shall indemnify and hold harmless the Utility against all damages, expenses and other obligations to third parties attributable to the negligence, strict liability or intentional acts of the Interconnection Customer. The Utility shall indemnify and hold harmless the Interconnection Customer against all damages, expenses and other obligations to third parties attributable to the negligence, strict liability or intentional acts of the Utility. The terms “Utility and Interconnection Customer” for purposes of this indemnification provision, include the directors, trustees, managers, partners, employees, representatives, affiliates, successors and assigns.

7.0 Insurance

All Generating facilities with a rated capacity of 10kW or less are strongly urged to obtain liability insurance to cover risks, liabilities, and consequences which may arise as a result of interconnection with the Utility System.

8.0 Limitation of Liability

Except in the event of acts of willful misconduct, each Party’s liability to the other Party for failure to perform its obligations hereunder this Agreement, shall be limited to the amount of direct damages actually incurred. Neither Party shall be liable to the other Party for any indirect, nominal, special, or consequential damages of any kind whatsoever, including for loss of business opportunity or profits, regardless of whether such damages were foreseen.

Notwithstanding any other provision in this Agreement, with respect to Utility’s provision of electric service to any customer including the Interconnection Customer, the Utility’s liability to such customer shall be limited as set forth in the Utility’s tariffs and terms and conditions for electric service, and shall not be affected by the terms of this Agreement.

9.0 Termination

The agreement to interconnect may be terminated under the following conditions:

9.1 By the Customer: By providing written notice to the utility.

9.2 By the utility: If the Generating Facility fails to operate for any consecutive 12 month period or the Customer fails to remedy a violation of these Terms and Conditions.

9.3 Permanent Disconnection: In the event this Agreement is terminated, the utility shall have the right to disconnect its facilities or direct the Customer to disconnect its Generating Facility.

9.4 Survival Rights: This Agreement shall continue in effect after termination to the extent necessary to allow or require either Party to fulfill its rights or obligations that arose under the Agreement.

10.0 Assignment/Transfer of Ownership of the Facility

This Agreement shall survive the transfer of ownership of the Generating Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and notifies the utility.

http://xcelenergy.com/staticfiles/xe/Marketing/Files/NM-Small-Program-20Interconnection-Agreement.pdf
PROCUREMENT
Procurement Process

Facility- and Community-Scale Projects

- Potential Procurement Roles
  - Consider the General Services Administration (GSA) as a resource for procurement: [http://www.gsa.gov/portal/category/20998](http://www.gsa.gov/portal/category/20998)
  - Project developer
  - Engineering, procurement, and construction (EPC) contractor
  - Environmental permits contractor
    - May apply to some community projects, but not to others
Outline of the RFP Process

1. **Develop RFP**
   - Timeline: 1 month to 1 year (depends on project scale and site complexity)
   - Who creates the RFP: project leader, contract officer/lawyer, site manager(s), energy manager and technology expert. RFP writers will receive input from utility, tribal leaders, and stakeholders
   - RFP content

2. **Issue RFP**
   - Tribal, federal, and industry networks

3. **Administer the RFP**
   - Proposal meeting(s)
   - Site tour(s) – can be concurrent with proposal meeting
   - Q&A process – ensure all developers get same information

4. **Evaluate Criteria**
   - Should be a clear process with well defined criteria
   - Evaluation panel recommended to consist of an odd number of members (typically 3 to 7)

5. **Award Contract**
   - Four approaches
Native American Tribes

GSA offers a range of services available to federally recognized Native American Tribes, from surplus property donations to vehicle purchases. In addition, recognized tribes can use this page to receive notice of GSA actions and policies that affect tribes, as well as provide comment.

GETTING STARTED

How It Works - New to dealing with GSA? Here's how it works.

REAL PROPERTY TRANSFER

Federal property available for transfer ranges from undeveloped land to commercial property to single- and multiple-family housing.

HOW GSA HELPS CUSTOMERS

- Introduction to Real Property Transfer for Tribes
- Real Property Transfer
- Finding Federal Property
- Outleasing
Develop RFP

Key Elements of the RFP

• **Type of procurement for EERE projects**
  - Purchase renewable equipment & installation
  - Power Purchase Agreement (PPA)
  - ESCO

• **Technical specification (scope of work)**

• **Criteria for evaluating proposals: 3–5 of most important project aspects**
  - Proposed project solution that meets specified criteria
  - System performance guarantee
  - Developer experience, track record, and customer satisfaction
  - Developer financial health/longevity
  - Maintenance plan
  - Reasonable timelines
  - Other
Develop RFP (continued)

Key Elements of the RFP

• **Description of RFP administration process**
  - Typically 2–5 months
  - Key dates: proposal meeting(s), sites visit(s), proposal due date
  - Description of how questions will be handled and answered

• **Defining responsible parties**
  - Who is responsible for permits
  - Who is responsible for interconnection agreements
  - Who is responsible for applying for incentives

• **Any preferences on parties allowed to submit proposals**
  - Small business
  - Minority-owned
  - Other

• **Land use agreements**
  - Address site access and land use issues as relevant to ownership model
RFP Technical Specifications

Define Scope of Work

• What is the project scale
• Type of renewable energy technology
• Site information:
  — Location
  — Interconnection requirements as known
  — Applicable codes and standards
  — Roof structure, soils, other (as applicable and available)
  — Site prep: fencing, roads, grading limitations, etc.
  — Installation requirements: min/max heights of equipment, vegetation mitigation, design standards for structural/electrical
• Equipment minimum standards and warranties
• Expected minimum performance (recommended) or capacity
• Strategy for training maintenance and operations staff
• Commissioning plan
RFP Evaluation Criteria

Two Typical Approaches

• Best value:
  – Typically 3–5 criteria with weighting based on importance
  – Score proposal on each criteria
  – Somewhat subjective and can lead to contentious, time-consuming evaluations but good method to capture best value

• Low price, technically acceptable
  – Proposals initially stripped of pricing/cost information
  – First evaluation determines proposals that meet technical hurdle
  – Technically acceptable proposal with lowest cost gets award
  – More transparent process but may not capture best value
RFP Award Contract

Choose One of These Four Typical Approaches

1. Award based on proposal: awarded solely on merits of proposal

2. Award with discussion: awarded on proposal but contingent on clarifying discussions

3. Award with discussion and negotiation: awarded on proposal but contingent on further negotiation

4. Award with best proposal:
   - Best proposals are short-listed
   - Short-listed proposals asked for best final proposal revision
   - Award based on final proposal revision
Summary: Project Procurement and Implementation

- Procurement strategy will vary depending on the project scale and financing solution selected

- Increasingly more complex for larger projects

- Post procurement issues are critical as these are very long term assets and relationships

- Utilize GSA pricing to save time and money

- Review NREL’s RFP packet before procurement is started
OPERATIONS AND MAINTENANCE
Project Refinement: O&M

• Evaluation criteria for RFP should consider O&M
• Budget for maintenance, repairs, and operations and include in the financial plan
• See O&M Step 5 for excellent resources