



Request for Proposal (RFP) Process:

Utilities issuing RFPs for power

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Avant Energy

- Supporting Tribes and Public Utilities for over 30 years
- Unique blend of strategic consulting experience and utility management expertise
 - Strategic long-term planning and daily utility operations
 - We manage public power agencies
 - We build and operate power plants
- We understand wholesale and retail electric markets
 - Buy and sell power in multiple energy markets daily



Presentation Outline

- Background
- Utility process for procuring power through an RFP
 - Develop power supply plan
 - Issue an RFP
 - Evaluate proposals
 - Make decision
 - Execute
- Key takeaways for Tribes

Background

- Tribal lands have significant renewable potential
 - 2% of the total land area in the U.S.
 - 5% of the total renewable potential in the U.S.
- Taking full advantage of renewable potential on Tribal lands requires large projects with off-Reservation buyers
 - Generate revenue vs. offset purchases
- One option is to respond to utility RFPs
 - Tribes may want to also consider a reverse RFP

DOE Announcement...



Department of Energy

Department of Energy Issues \$2 Billion Tribal Energy Loan Guarantee Program Solicitation

JULY 17, 2018

WASHINGTON D.C. – Today, the U.S. Department of Energy (DOE) issued the first loan guarantee solicitation for the Tribal Energy Loan Guarantee Program (TELGP) under DOE's Loan Programs Office. This solicitation provides as much as \$2 billion in partial loan guarantees to support economic opportunities for Native American and Alaska Native communities through energy development projects and activities.

Utility Power Supply Planning

- Utilities typically have a long-term **Integrated Resource Plan (IRP)**
 - Forecast future load
 - Identify potential resource options to meet future loads
 - Determine optimal mix of resources
 - Create and implement the resource plan
- Utilities have many options to match supply and demand
 - Supply-side
 - Build generation
 - Buy power
 - Demand-side
 - Efficiency projects
 - Demand response programs

Example: Arizona Public Service

2014 Integrated Resource Plan

2014-2029 (PROJECTED)

**FUTURE ADDITIONAL RESOURCES:
6,613 MW AT PEAK MET WITH**

a. New Utility-Scale Resources

Natural Gas - **4,205 MW**

Renewable Energy - **425 MW** (818 MW Nameplate Capacity)

b. New Customer Resources

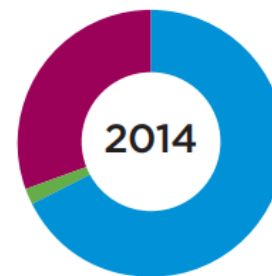
Energy Efficiency - **1,447 MW**

Distributed Energy - **261 MW** (722 MW Nameplate Capacity)

Demand Reponse - **275 MW**

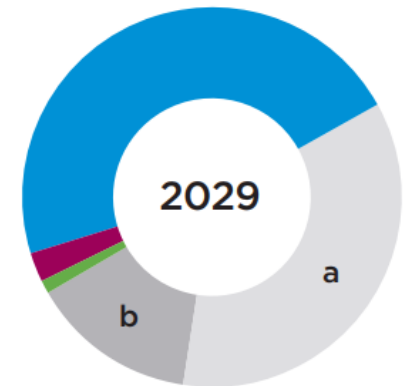
■ Existing Customer Resources
■ Existing Contracts
■ Existing Utility-Scale Resources

■ a New Utility-Scale Resources
■ b New Customer Resources



8,124 MW

peak requirement
100% met with
existing resources



12,982 MW

peak requirement
50% met with
existing resources

- APS anticipates needing over **6,600 MW** of additional resources
- APS plans to add more than **5,000 MW** of new utility-scale resources
- APS plans to invest **\$13.6 billion** over **15 years** in its energy portfolio

Issuing the RFP

- Key components of the RFP
 - **Resource type** (defined in IRP)
 - **Delivery**
 - **Evaluation criteria**
- Balance specificity with flexibility to allow potential suppliers to offer creative solutions
- Distribute to a large audience to encourage participation and encourage competitive responses
- Key is to end up with viable responses that meet minimum requirements and bring something else to the table.

Evaluation Criteria

- Prior experience with similar projects
- Energy price/term
- System benefits (intermittent vs. dispatchable)
- Delivery
 - Interconnection costs
 - System impact costs
 - Transmission costs (basis risk/LMP/transmission tariff)
- Risks
 - Financing and credit
 - Development
 - Project economic life – the pace of change is quickening
 - Congestion costs
 - Legal, regulatory, and tax policy
- Environmental considerations

Key Differences in Offers

Evaluating responses can be difficult since some contracts include ambiguous pricing details and others have cost escalators.

■ Physical characteristics

- Technology type
- Fuel type
- Deliverability
- Infrastructure requirements

■ Stage of development

- Site control
- Permits
- Interconnection studies
- System impact studies
- Financing

■ Operational characteristics

- Dispatchability
- Availability
- Ramp rates and cycling features
- RTO requirements

■ Contractual arrangements

- Allocation of risks
- Structure of payments
- Services provided
- Supplier obligations
- Maintenance responsibilities

Example RFP Results

NV Energy RFP

| Name | Developer | Solar capacity | Storage capacity | PPA price |
|-----------------------|-------------------|----------------|------------------|---|
| Eagle Shadow Mountain | 8minutenergy | 300 MW | - | \$23.76/MWh |
| Copper Mountain 5 | Sempra Renewables | 250 MW | - | \$21.55/MWh with 2.5% annual escalator |
| Techren V | 174 Power Global | 50 MW | - | \$29.89/MWh |
| Battle Mountain Solar | Cypress Creek | 101 MW | 25 MW / 100 MWh | \$26.50/MWh, \$7,755/MW-month capacity payment |
| Dodge Flat | NextEra Energy | 200 MW | 50 MW / 200 MWh | \$27.51/MWh (\$26.51/MWh if Fish Springs approved), \$6,110/MW-month capacity payment |
| Fish Springs Ranch | NextEra Energy | 100 MW | 25 MW / 100 MWh | \$29.96/MWh, \$6,200/MW-month capacity payment |

Note: Dodge Flat and Fish Springs battery capacity payments escalate at 2% annually.

Selection and Negotiation

- RFPs are very competitive
 - Xcel received more than 230 responses in recent RFP
- Wide range of competitors
- Offers are ranked based on value to the utility
 - Duration of value is shrinking
 - Markets change, but the pace of change is increasing
 - Regulatory policy (Federal/State) and tax incentives
- Lowest-cost approach may be a self-build option

Key Takeaways for Tribes

- Utility-scale projects require selling power off-Reservation
- One option to sell off-Reservation is to respond to a utility RFP
- Utilities seek competitive offers that:
 1. Fulfill a **resource requirement**
 2. Offer competitive **pricing & delivery**
 3. Minimize **risks**
- Tribes seeking to respond to RFPs should:
 - Understand the Tribe's advantages (land, resources, infrastructure, location)
 - Begin to identify costs to deliver to liquid pricing hubs
 - Identify potential project sites
 - Consider creative business models and contractual arrangements
 - Develop relationships with experienced developers



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Questions?

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