Strategies to Address Challenges to Tribal Renewable Energy Project Development

Western Area Power Administration Webinar

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Define where you want to go and develop a roadmap to get there.

- Cultural and Environmental considerations
- Integrated Resource Planning
- Organizational Considerations
- Financial Considerations
- Legal and Regulatory Considerations
Cultural & Environmental Considerations

- Natural Resource Valuation
  - Water and Air
  - Wildlife Habitat
  - Other Resources

- Technology Impacts
  - Emissions, Aesthetics, Noise

- Economic Development Trade-offs

- Cultural Impacts – (Sacred Sites, Plants, Burial Grounds)

- Tribal Impact- Community & Government

- Other Considerations, like holistic approach to development
Do you have an Integrated Resource Plan (IRP) ?

1. Set objectives
2. Develop evaluation criteria
3. Forecast demand
4. Evaluate demand-side options
5. Evaluate supply options
6. Review alternatives vs. criteria established
7. Develop implementation plan
8. Implement
9. Measure and repeat
Organizational Considerations: Out-Sourcing

Generally, some of the benefits of out-sourcing tasks may include:

- Quicker results, more expediency
- More professional experience brought to the task
- Responsibility for results carried by outside firm
- Overall costs may be lower in the initial stages
- An opportunity to build internal capacity

How much do tribes want to invest in cultivating and developing internal expertise and in-house skill sets?
Selecting the Right Partner

• Interview prospective partners at length
• Ask about their previous experience with tribes
• Check references
• Talk to other tribes about the partners with whom they have worked
• Ask government and other organizations about references about particular consultants
• Then – once selected:
  ➢ In the feasibility stage, make sure the methodology to be used is spelled out.
  ➢ Make sure the exact scope of what is expected is put in writing, including information transfer, on the job training, and, ultimately, jobs for the tribe.
Financial Considerations

• Project purpose and ownership
  ➢ Local consumption of power only?
    o Smaller project
    o Match generation to local demand
  ➢ Consume power locally with possibility of selling excess power to the grid?
    o Larger project
    o Design generation to maximize efficiency (lowest costs)

• Pro-forma financial analysis
  ➢ Initial costs
  ➢ Annual costs
  ➢ Periodic costs
  ➢ Credits/incentives
  ➢ Revenue sources
  ➢ Analysis
Project Ownership Considerations

Tribal ownership
- Public ownership financing advantages to project
- Greater control

Developer ownership
- Payments from developer to tribe
- Less control

Joint ownership
- Partnership allows more tribal control while taking advantage of tax incentives
Initial Costs

**Feasibility study phase**
- Site investigation
- Cultural assessment
- Resource assessment
- Environmental assessment
- Preliminary design
- Detailed cost estimate

**Development Phase**
- Power Purchasing Agreement (PPA) negotiation
- Permits and approvals
- Land survey
- Transmission agreement
- Legal agreements
- Detailed engineering design

**Equipment and plant**
- Equipment installation
- Spare parts
- Road construction
- Transmission line and interconnection
- Control buildings
Annual & Periodic Operating Costs

Annual Costs
• Maintenance
• Debt service
• Insurance premium
• Administration and management costs
• Warranty premiums
• Property tax
• Income tax
• Royalty payment

Periodic costs
• Wind
  ➢ Drive train
  ➢ Blades
• Hydro
  ➢ Turbine overhaul
• Photovoltaic
  ➢ Battery replacement
Project Income Sources

Electricity sales

- Local consumption revenue
- Sale of excess electricity to the grid
  - Price according to historical data
  - Regulated vs. deregulated markets
  - Purchase Power Agreement

Green Tags (or Tradable Renewable Energy Certificates)

- Payments for environmental values (e.g., emission reductions) separate from payment for electricity
- Could be sold to help meet green energy mandates and/or allow end users to support green energy
- Most commonly sold through a broker
Financing Options

Mix of debt and equity

- Tribal government vs. Tribal enterprise ownership
- Loan term
- Interest rate

Credits and Incentives

- Grants
- Accelerated depreciation
- State-level credits/incentives
- Guaranteed loans

Financial Analysis Methods

- Net present value of project net revenue
- Internal rate of return (IRR)
- Make sure debt service requirements are met
What will happen to wind markets when federal incentive programs expire at the end of 2012?

Recent federal legislation has benefitted renewable energy project financing in a variety of ways.

- **Section 1603 cash grant**: proven to be highly successful and is credited for keeping the industry afloat during the economic crisis.
- **Bonus Depreciation**: adds significant value to a wind project, but it is also being phased out by the end of 2012.
- **DOE Section 1705 Loan Guarantee**: has not been particularly helpful to wind project development.
- The project finance markets are recovering slowly from the financial crisis.

The Levelized Cost of Electricity (LCOE) of wind will increase significantly without these incentives.
Legal & Regulatory Considerations

• Tribal Sovereignty
  ➢ Governing Law/Jurisdiction
    o Energy Project Development will raise jurisdiction/sovereignty issues.
    o Jurisdiction? Tribal, Federal, or State?
    o Trend: Case law has chipped away at Tribal control of nonmembers on non-tribal fee land.

• Tribal Governments and Infrastructure
• Resource Rights & Right-of-Ways
• Tax Issues
  ➢ Taxation is related to business arrangement
  ➢ Tax-Exempt Bonds are an option
    o In 1982, Congress passed the Indian Tribal Governmental Tax Status Act providing Tribes with same federal tax treatment as states.
    o Facilities must serve essential government function (schools, streets, etc)
  ➢ Accelerated Depreciation
  ➢ Indian Employment Tax Credits
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