

DOE OFFICE OF INDIAN ENERGY

Introduction to Developing and Financing Renewable Energy Projects on Tribal Lands



U.S. DEPARTMENT OF
ENERGY

Office of
Indian Energy

Review of Workshop Structure

- Introduction and Motivation
- Renewable Energy Technology Overview
- Abbreviated Five-Step Development Process
- System Advisor Model Training
- “Office Hours” for detailed technical assistance/Q&A on your specific projects

Why Complete a Renewable Energy Project?

Economic

- Jobs
- Income
- Cost savings
- Cost stabilization
- Industry exposure

Social

- Energy reliability (diversification)
- Energy independence
- Quality of life
- Community and stakeholder participation
- Educational Benefits

Environment

- Air Quality
- Avoided Emissions
- Climate change
 - Mitigation
 - Adaptation
 - Resiliency
- Demonstrated Environmental Leadership

Benefits vary based on the type and scale of projects

Terminology: Project Scale



Facility: single-building system

Primary goals: offset building energy use, costs

Development timeline: 1 month to 1 year



NC Solar Center, NREL 09373

Community: multiple buildings/campus

Primary goals: Offset community energy costs, promote energy self-sufficiency

Development timeline: 6 months to 2 years



Orange County Convention Center, NREL 18077

Commercial: stand-alone project

Primary goals: sale of power generation, financial benefits

Development timeline: 3 to 5 years



Tucson Electric Power, NREL 13327

Determining Project Scale

Facility-Scale

- Available, Tribe-controlled, appropriate location and ownership options
- Lower capital investment and overall risk
- Opportunity to gain experience with renewables before doing a larger-scale project
- Increased self-sufficiency, offset utility electricity costs
- Cost certainty
- Visual impact
- Reduced environmental impact
- Diversification of energy supply with local, renewable sources

Community-Scale

- Available, Tribe-controlled, appropriate location and ownership
- Greater impact on community (good or bad)
- Offset community electricity costs (primary use is on-site)
- Minimized environmental impact
- Diversification of energy supply with local, renewable sources
- Reduced energy off-taker complexities
- Smaller capital requirements
- Job development (construction and maintenance)
- Self-sufficiency, pride

Why Elect to Do a Commercial-Scale Project?

- Available, Tribe-controlled, appropriate location
 - May/may not be Tribe-owned
- Tribe has significant capital in-hand
- Tribe has identified a potential off-taker that will buy the power and renewable energy credits (RECs)
- Tribe wants to get into renewable project development *for more than one project* (higher risk/higher return)
- Job development (construction and maintenance)
- Diversify energy supply with local, renewable sources



Photo by Dennis Schroeder, NREL 20097

Attendee Introductions

- What is your name, tribal affiliation, and role in your Tribe?
- What are the primary objectives you have for being here?
- Do you have any examples of a renewable energy project your Tribe has worked on or is considering?
- Are there challenges and/or successes you can share?