U.S. DEPARTMENT OF ENERGY | Office of Indian Energy

Community-Scale Tribal Renewable Energy Project Development and Finance Workshop

February 9-11, 2016

Agua Caliente Resort and Casino
Rancho Mirage, California

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Looking for further assistance?

Federally recognized Indian tribes, bands, nations, tribal energy resource development organizations, and other organized groups and communities—including Alaska Native villages or regional and village corporations—can access technical assistance designed to advance renewable energy and energy efficiency projects.

Technical assistance is typically limited to 40 hours and may include, but is not limited to, the following priority areas:

- Strategic energy planning
- Grantee support
- Transmission/interconnection
- Project development
- Finance
- Lease agreements

How to Apply

The application process is quick and easy: simply complete the online technical assistance form here:

http://apps1.eere.energy.gov/tribalenergy/request_assistance.cfm

The program will then determine whether your request fits within the program's scope and can be met with available resources. If approved, your request will be forwarded to the appropriate DOE national laboratory representative, who will contact you before beginning work.

U.S. DEPARTMENT OF ENERGY | Office of Indian Energy

Renewable Energy Project Development and Finance Workshop
AGENDA
Feb. 9–11, 2016

Agua Caliente Resort and Casino
32-250 Bob Hope Dr.
Rancho Mirage, CA 92270

Learning Objectives

1) Understand the process for and potential pitfalls of developing and financing community- and facility-scale renewable energy projects
2) Discover how the development of a renewable energy project can further tribal goals
3) Learn from the experience of other tribes that have undertaken renewable energy development efforts.

Anticipated Results: Attendees will be comfortable discussing renewable energy project development possibilities with project developers and project financing options with potential investors. Potential tribal roles will be clear and participants will better understand the five-step project development and financing process.

What to Do Ahead of Time:

- Email your tribe's strategic energy plan (if available) to tribalworkshops@nrel.gov
- Email available relevant background and information on existing or planned renewable energy projects to tribalworkshops@nrel.gov
- Be prepared to identify and share with the group your primary reasons for coming/what you hope to get out of the training
- Consider whether your project would benefit from up to 40 hours of technical assistance from DOE. You can learn more about it here: www.energy.gov/indianenergy/technical-assistance. If interested, bring an outline defining the type(s) of assistance you need. We will have technical assistance experts from DOE's National Renewable Energy Laboratory (NREL) on hand who can explain the various offerings, talk through what might make the most sense for your project, and sign you up onsite!

What to Bring to the Workshop:
Bring your laptop so you can connect with National Renewable Energy Laboratory (NREL) technical experts in Colorado (please be sure you have Skype installed) and download and use online tools and models and tools to complete workshop exercises onsite.

Day 1 – Tuesday, Feb. 9, 2016

Time	Topic	Speaker/Activity
8:15–8:30 a.m.	Registration and Networking (Light Breakfast Provided)	
8:30–9:00 a.m.	Welcome	Sarai Geary, Program Manager, DOE Office of Indian Energy Policy and Programs Agua Caliente Band of Cahuilla Indians
9:00–9:30 a.m.	Workshop Overview	NREL
9:30–10:00 a.m.	Introductions Around the Room	NREL
10:00–10:15 a.m.	Break and Networking	
10:15–11:00 a.m.	Strategic Energy Planning	NREL Activity 1: Identify Key Stakeholders Activity 2: Strategic Energy Planning Key Questions/Considerations
11:00–11:30 a.m.	U.S. Department of Agriculture (USDA) Rural Energy for America Program (REAP) Overview	Matthew Koch, USDA
11:30 a.m.–12:00 p.m.	Overview of the Five-Step Process for Developing Tribal Energy Projects	NREL
12:00–1:00 p.m.	Lunch (Provided) and Networking	
1:00–2:00 p.m.	Case in Point	Todd Hooks. Agua Caliente Band of Cahuilla Indians
2:00–4:00 p.m.	Tour of Agua Caliente Solar Installations	Agua Caliente Band of Cahuilla Indians

Day 2 – Wednesday, Feb. 10, 2016

Time	Topic	Speaker/Activity
8:45–9:00 a.m.	Coffee and Networking (Light Breakfast Provided)	
9:00–10:00 a.m.	Project Potential: What can we do?	NREL Activity: Resource Map/Siting
10:00–10:30 a.m.	Case in Point	Jana Ganion, Blue Lake Rancheria
10:30–10:45 a.m.	Break and Networking	
10:45–11:15 a.m.	Project Options: How do we want to pursue a project?	NREL Activity: Tribal Roles
11:15–11:30 a.m.	Break and Networking	
11:30 a.m.–12:00 p.m.	Project Options Continued	NREL
12:00–1:00 p.m.	Lunch (Provided) and Networking	
1:00–2:00 p.m.	Project Refinement: How do we finance the project? Activity	NREL
2:00–2:30 p.m.	Case in Point	Rebecca Kauffman, Southern Ute Alternative Energy
2:30–2:45 p.m.	Break and Networking	
2:45–3: 30 p.m.	Project Refinement Continued	NREL Activity: Request for Proposal (RFP) Ranking
3:30–4:00 p.m.	Project Implementation: How do we complete the project?	NREL
4:00–4:10 p.m.	Break and Networking	
4:10–4:45 p.m.	Case in Point	Brian Adkins, Bishop Paiute Tribe
4:45–5:15 p.m.	Wrap-Up and Activity	Activity: Jeopardy!

Day 3 – Thursday, Feb. 11, 2016

Time	Topic	Speaker/Activity
8:45-9:00 a.m.	Plan for Day 3	NREL
9:00–9:45 a.m.	Operations & Maintenance (O&M)	NREL
9:45–10:15 a.m.	Case in Point	Michael Castello, Soboba Band of Luiseño Indians
10:15–10:45 a.m.	Technical Assistance: System Advisory Model (SAM) Live Walkthrough	NREL
10:45–11:00 a.m.	Workshop Evaluation	NREL
11:00 a.m.–12:00 p.m.	Lunch (Provided) and Networking	
12:00–2:00 p.m.	Technical Assistance: Apply Onsite	NREL

Renewable Energy Project Development and Finance Workshop
Speaker Bios (per order of speaking)
Feb. 9–11, 2016

Agua Caliente Resort and Casino
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Rancho Mirage, CA 92270

Sarai Geary, Program Manager, DOE
Ms. Geary (Muscogee Creek Nation) designs and implements technical assistance and educational programs that positively impact Indian energy development and promote energy education for Indian Tribes. Ms. Geary also provides advice and assistance in the identification of new and important issues related to tribal and domestic energy, analyzes potential impacts, and recommends appropriate actions. Prior to joining the Department, Ms. Geary served as the Director for the Muscogee (Creek) Nation Office of Community Research & Development. Ms. Geary was responsible for providing program management, leadership, technical assistance, training, and technical assistance design and implementation for 25 chartered Indian Communities throughout eight counties in eastern Oklahoma. In her capacity as Director for the Muscogee (Creek) Nation Community Research & Development Department, Ms. Geary was able to drive change and innovation in community development, community research, and strategic planning. Ms. Geary has a bachelor's degree in organizational communication from the University of Portland and a law degree from the University of Missouri, Kansas City.

Sherry Stout, Engineer, NREL
Sherry Stout is an Engineer at the National Renewable Energy Laboratory with expertise in sustainable development at the community scale, case study research, and data management. Ms. Stout's research interests include the use of advanced technologies for resiliency and disaster recovery, the synergy of water and energy development and use, and the interaction between technology and society.

Travis Lowder, Analyst, NREL
Travis Lowder is a Renewable Energy Analyst at the National Renewable Energy Laboratory in Golden, Colorado. His research centers on solar PV finance and financial innovations, market analysis, and renewable energy policy. He also works directly with municipal governments, universities, Tribal nations, and other public and private institutions on technical assistance matters related to PV economics, tax implications, capacity building, and training. Travis holds an M.A in International Development from the University of Denver and a B.A. in English from the University of Colorado.

Matthew Koch, USDA
Matthew A. Koch served in the U.S. Navy and received an honorable discharge in 1997 as a 2nd Class Petty Officer. After completing his military service, he attended California State University, San Bernardino and California State University, Sacramento earning his B.A. in Business Administration with a concentration in Business Finance in 2002. He then attended and graduated from the University of Redlands earning his Masters of Arts in Management (M.A.M.) in 2005. For most of his post-military career, Matthew has worked

in the private banking sector holding titles such as SBA/Commercial Lending Officer and SBA Liquidation Specialist for a few Southern California banks. He now serves as a Business and Cooperative Program Specialist for the United States Department of Agriculture.

Todd Hooks, Economic Development Director, Agua Caliente Band of Cahuilla Indians
Born and raised in Monrovia California, Todd has worked for numerous Southern California cities and agencies in Economic Development and Redevelopment. Todd came to the Tribal Planning and Development Office from the City of San Diego where he spent 5 years as the Redevelopment Deputy Director. He was responsible for the projects and activities of a redevelopment agency that encompassed over 8,000 acres with 10 project areas. Prior to his time in San Diego, Todd worked for the cities of Burbank, San Bernardino and Pomona. His experience with implementing creative approaches to tough commercial, industrial, and housing projects in these cities has given him a firm background in working with the business sector, public agencies, and local community leaders. His job with the Tribe involves pursuing business and commercial real estate and housing development opportunities that benefit the Tribe and Tribal members. He also acts as an economic development liaison for the Tribe to the Cities of Palm Springs, Cathedral City, and Rancho Mirage as well as to the local Chambers of Commerce, Palm Springs EDC, and the Coachella Valley Association of Governments. Todd has served on the Planning Commission for the City of Cathedral City for 8 years. A resident of Cathedral City, Todd got his B.A. from Harvard University. He completed his education at UCLA with a Masters in Educational Administration.

Jana Ganion, Energy Director, Blue Lake Rancheria (A Federally Recognized Tribal Government)
As the Energy Director for the Blue Lake Rancheria, Jana has helped establish the Tribe's energy strategy, and implemented a wide array of clean energy initiatives to reduce the Tribe's carbon footprint, reduce retail costs of energy, increase climate and community resilience, and fight climate change. She has developed projects in energy efficiency, renewable energy, green fuels, and resilience, including biomass, biodiesel, electric vehicle infrastructure, and most currently a low-carbon community-scale microgrid—a combination of distributed generation 500kW solar, 175kW biomass, and 1MW and 150kW diesel gensets, with 1MWh of battery storage, and a microgrid control system to provide power for community and critical facilities. Jana currently serves on the U.S. Department of Energy, Office of Indian Energy, Indian Country Energy and Infrastructure Working Group (ICEIWG). She spearheaded the Tribe's entry in the White House "Climate Action Champion" competition, and the Blue Lake Rancheria became one of 16 U.S. communities selected as a 2015-2016 Climate Action Champion for leadership on greenhouse gas reductions and community resilience.

Rebecca Kauffman, Southern Ute
Rebecca joined the Southern Ute Growth Fund in August of 2007 to explore business expansion into the alternative and renewable energy sectors. Prior to joining the Growth Fund, she was an Executive Director at Morgan Stanley Inc. within the Institutional Operations Security Group in strategy and planning. Her work focused on international operations and infrastructure development. Rebecca has extensive project experience in large capital projects related to building and optimizing supply chains, operations and infrastructure. The majority of her work has been in the manufacturing and service industries. She has an undergraduate in biology from University of Oregon and earned a master's in environmental engineering from Stanford University.

Brian Adkins, Environmental Director, Bishop Paiute Tribe
Brian has worked for the Bishop Paiute Tribe since 1998 helping the them build their capacity to manage air, water, natural resources and energy programs. Prior to his experience at the Tribe his work experience included petroleum & mineral exploration and environmental consulting projects. He is a CA registered professional geologist with an MS in Environmental Systems - Geology from Humboldt State University.

Michael Castello, Tribal Administrator, Soboba Band of Luiseno Indians
Michael Castello is a member of the Soboba Band of Luiseno Indians and currently serves as their Tribal Administrator. Over the past 20 years Michael has worked for his Tribe in many facets, including as Chairman of the Soboba Tribal Gaming Commission, General Manager of the Soboba Casino and two terms as Tribal Council Treasurer. Michael has also served as President of the Soboba Tribal Credit Corporation which provides loans from the Tribe to eligible Tribal Members. Michael is helping to oversee Soboba's $10,000,000 Housing project through which the Tribe will be providing home loans to the Members for new construction and renovations of existing homes. Most recently Michael is working with the Optimum Group on a Solar Energy Project through which the Tribe hopes to become self-sustaining with energy usage.

DOE OFFICE OF INDIAN ENERGY

Overview
DOE Office of Indian Energy

U.S. DEPARTMENT OF ENERGY | Office of Indian Energy

Office Overview: Mission and Goals

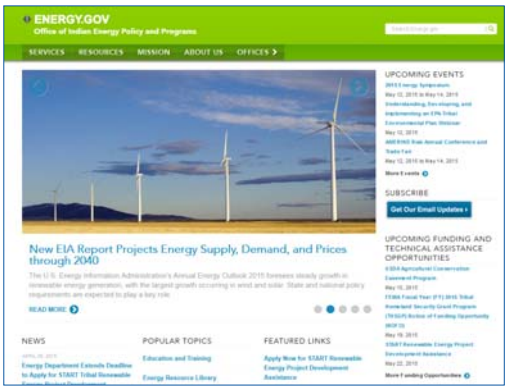
- The U.S. Department of Energy (DOE) Office of Indian Energy Policy and Programs is charged by Congress to direct, foster, coordinate, and implement energy planning, education, management, and programs designed to:
  - Assist Tribes with energy development, efficiency, and use; build **tribal capacity**
  - Help reduce or stabilize **energy costs** in tribal communities
  - Enhance and strengthen tribal **energy and economic infrastructure** relating to natural resource development and electrification
  - Bring **electrical power and service** to Indian land and homes of tribal members

Office Overview: Offerings

- The DOE Office of Indian Energy works with Tribes to accelerate energy development in Indian Country by providing:
  - **Technical support**—Strategic Technical Assistance Response Team (START) Program; on-demand technical assistance
  - Reliable, accurate **information**
  - Quality **training** (workshops, online curriculum)
  - **Financial assistance** (DOE Office of Energy Efficiency and Renewable Energy Tribal Energy Program grants)

Available Information and Assistance for Tribes

- Technical Assistance energy.gov/indianenergy/technical-assistance
- Federal Energy Development Assistance Tool energy.gov/indianenergy/fedprograms
- Energy Resource Library energy.gov/indianenergy/resources/energy-resource-library
- Education and Training energy.gov/indianenergy/education-and-training



www.energy.gov/indianenergy

Subscribe to receive email updates:
http://eepurl.com/HyL2X

Course Audiences

Tribal Leaders

- Primary decision makers
- Understand terminology
- Understand key decision points and influencing factors

Staff/Project Management

- May be self-managing project or managing consultants
- Communicate at key points with decision makers
- Require in-depth knowledge of process

Overall Learning Objectives

- Understand the process for and potential pitfalls of developing and financing community and facility-scale renewable energy projects.
- Determine how the development of a renewable energy project could further a Tribe's goals.
- Learn from the experience of other tribal efforts in renewable energy development.
- Have an actionable plan for moving forward with a project.

DOE OFFICE OF INDIAN ENERGY

Introduction to Developing and Financing Renewable Energy Projects on Tribal Lands

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Review of Workshop Structure

- Introduction
- Five-Step Development Process
- "Office Hours" for detailed technical assistance/Q&A on your specific projects

Agenda Walk-Through; Use of the Workbook

- Strategic Energy Planning
- Step 1: Project Potential
- Step 2: Project Options
- Step 3: Project Refinement
- Step 4: Project Implementation
- Step 5: Operations & Maintenance (O&M)
- Jeopardy!

Note: See the workbook for resources, further work, etc. at the end of each section of the agenda.

Why Complete a Renewable Energy Project?

Economic	Social	Environment

• Jobs
• Income
• Cost savings
• Cost stabilization
• Industry exposure
	• Energy reliability (diversification)
	• Energy independence
	• Quality of life
	• Community and stakeholder participation
	• Educational Benefits
		• Air Quality
		• Avoided Emissions
		• Climate change
		  • Mitigation
		  • Adaptation
		  • Resiliency
		  • Demonstrated Environmental Leadership

Benefits vary based on the type and scale of projects

Why Complete a Renewable Energy Project? cont.

- Considering long-term costs of finite resources will more than likely continue to increase, the opportunity to reinvest cost savings locally can be realized.
- Other examples of reinvestments (such as housing support)?*

* These will vary depending on project scale.

Terminology: Project Scale

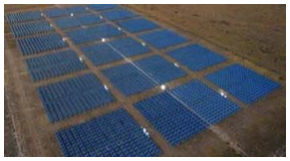
Facility: single-building system
Primary goals: offset building energy use, costs
Development timeline: 1 month to 1 year


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	Community-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	• 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

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?

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The Five-Step Process Framework for Project Development

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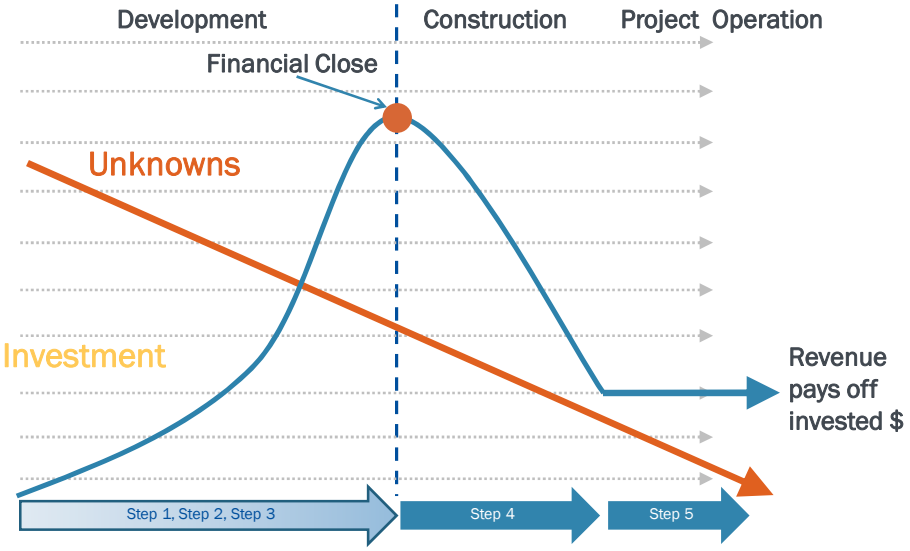
Project Development Process: What Is It?

- Framework based on experience
- Focuses on key decision points
- Shows that project development is iterative
- Emphasizes that delaying or deciding against a project that does not meet current goals is a viable outcome and option

Project Uncertainty/Capitol at Risk



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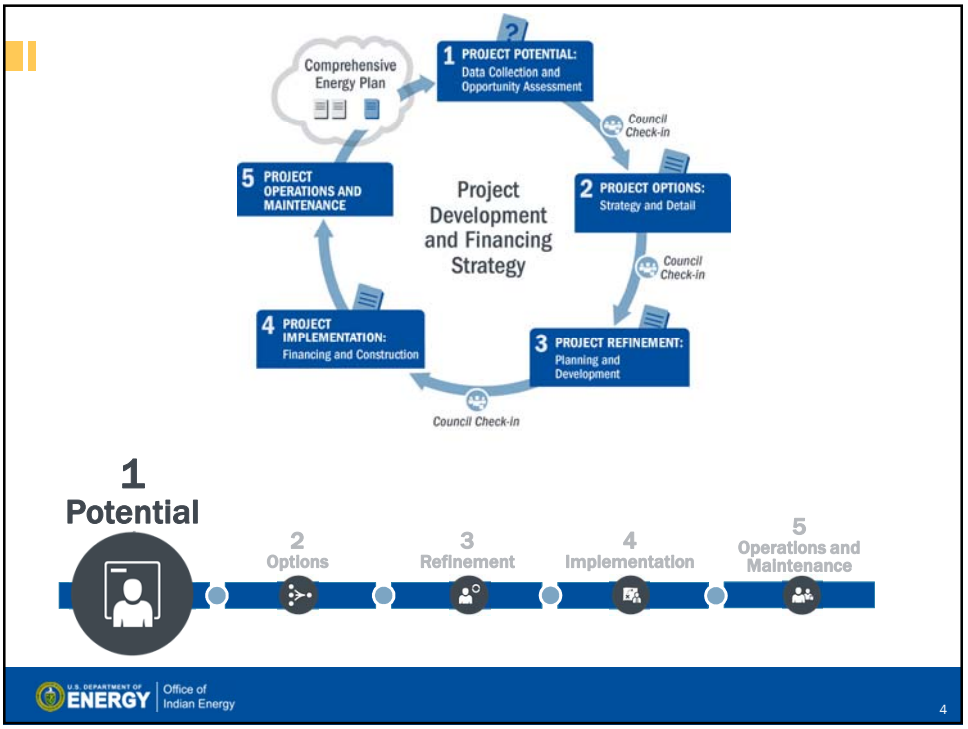

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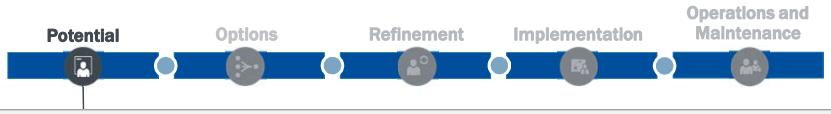
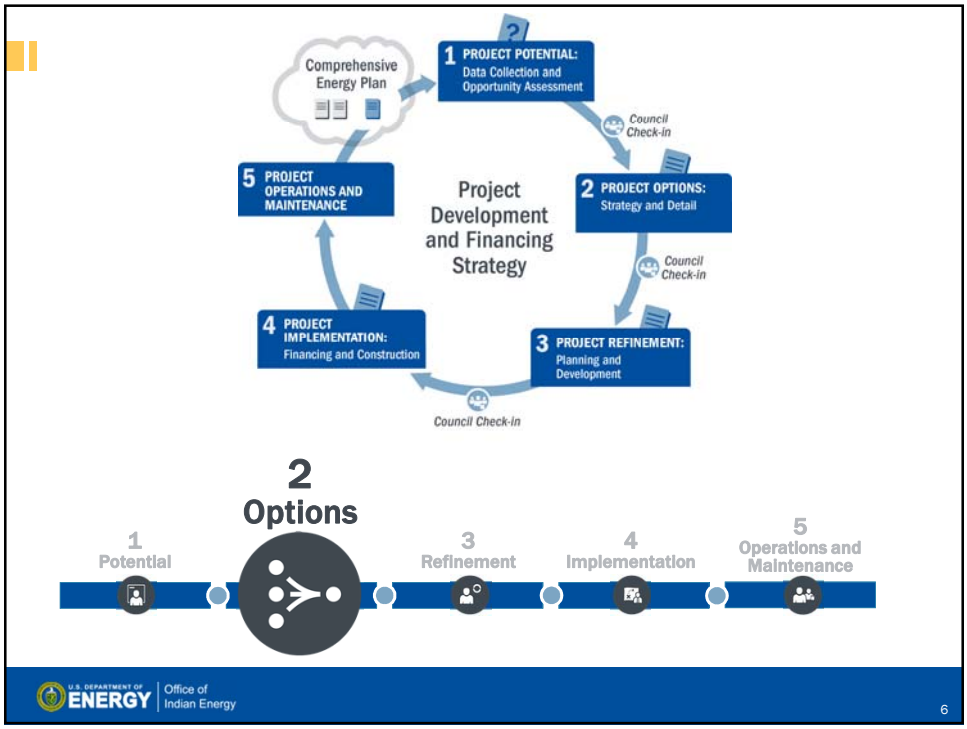
Step 1: Site, Scale, Resource, and Community Market Potential



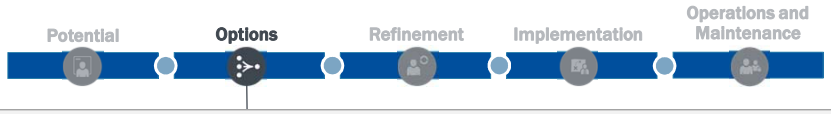
Purpose: Determine whether basic elements for a successful project are in place

Tasks:

1. Identify possible **sites** for project locations
2. Determine the **energy load/demand** for these sites using past electric bills for these facilities
3. Confirm renewable energy **resource**
4. Review tribal facility electric cost data, regulations, and transmission and interconnection requirements
5. Evaluate community market potential for renewable sales. **Your community is the marketplace/energy –user.**
6. Assemble or communicate with the right team—those in positions or with knowledge to facilitate, approve, and champion the project



Step 2: Roles, Business Structures, & Regulatory Considerations



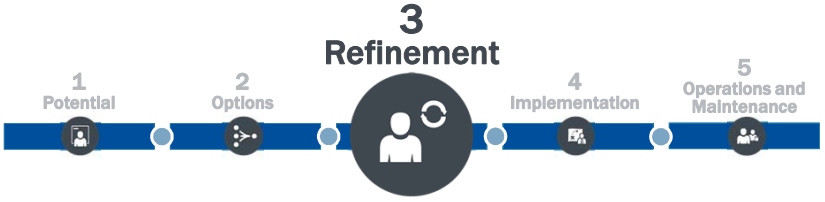
Purpose: Determine ownership structure and permitting considerations if any.
(Note: It is likely that internal tribal permitting is required if developed on tribal lands, however, state and federal permitting may be required if the Tribe is dealing with fee or trust land outside the tribal land holdings.)

Tasks:

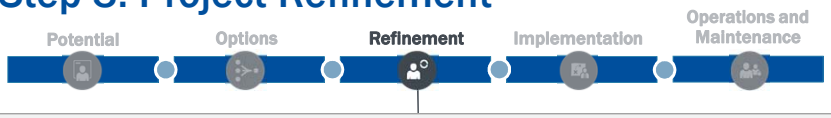
1. Understand tribal role(s) and risk allocations/business structure
2. Identify permitting needs and site use considerations
3. Identify interconnection rules and net metering options with the local utility

Outputs:

1. Clarify tribal roles
2. Decide on business structure
3. Understand the permit needs and process
4. Understand interconnection and net-metering options



Step 3: Project Refinement



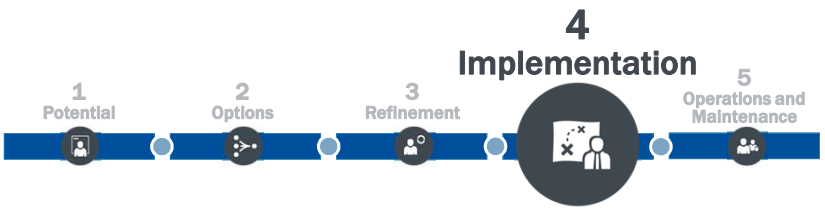
Purpose: Validate decisions and finalize project structure

Tasks:

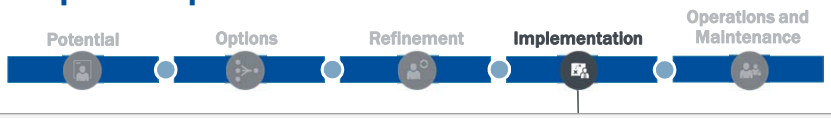
1. Finalize ownership structure and project team identification
2. Finalize permitting, including environmental reviews, net metering, and interconnection
3. Finalize technology, financing, and development costs

Outputs:

1. Proposed financing/commitments and organization structure
2. Detailed economic models
3. Vendors selected
4. Completed environmental reviews and finalized permits
5. Net-metering and interconnection agreement
6. Transmission finalized, if necessary



Step 4: Implementation

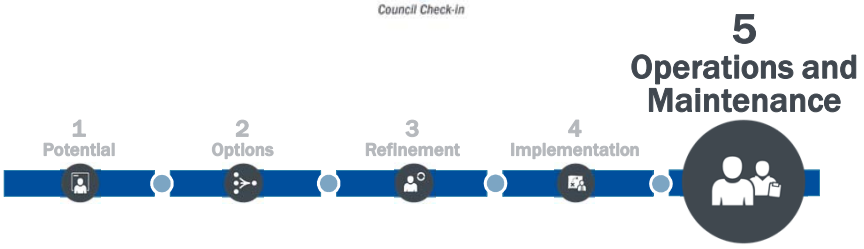


Purpose: Contract for and ***build*** the project

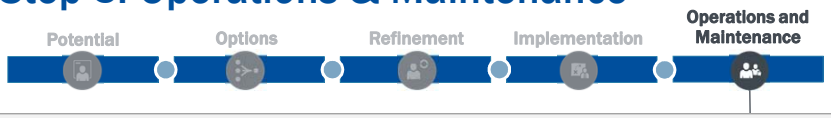
Tasks:

- Finalize pre-construction activities including project agreements—financial, contractual, and interconnection
- Start construction and equipment installation
- Interconnect project to the grid
- Start project commissioning leading to facility/community project operation

Output: Completed project (operation)



Step 5: Operations & Maintenance



Purpose: Conduct or ensure ongoing operations and maintenance (O&M), including repair and replacement (R&R)*

Task:

- O&M agreements
- Warranties
- Monitoring system
- System performance
- Production guarantees
- Buyout Options

Photo by Warren Getz, NREL 00180

Outputs:

- Ensure responsible party carries out O&M/R&R*
- Measuring and tracking success
- Correlate with business plan and strategic energy plan
- Contract compliance
- Reporting of generation
- Met or exceeded energy and financial performance

**Especially if owner – role of highest O&M risk*

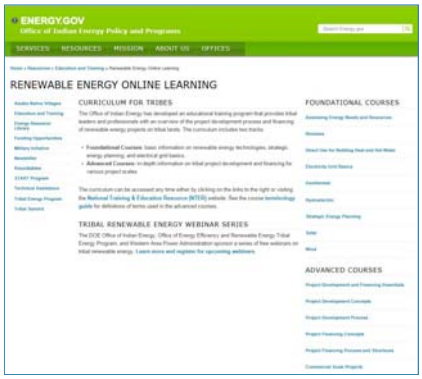
Revisit Energy Plan

- Check back in with planning document—update as necessary
- Identify next potential project from plan

Resources: On-Demand Curriculum

Access free courses anytime

- **Foundational Courses**
  Overview of specific renewable energy technologies, strategic energy planning, and grid basics
- **Leadership & Professional Courses**
  In-depth information on the components of the project development process and existing financing structures



energy.gov/indianenergy/curriculum

Notes

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Community & Facility-Scale Renewable Energy
Project Development and Finance
Rancho Mirage, CA | February 9-11, 2016

1. List two things you liked about workshop activities (specific discussion or presentations).

2. List three things that you think need improvement or need more emphasis.

3. What could be added to the curriculum to assist your tribe in the development or implementation of renewable energy projects?

4. What is your preference for delivery of this type of information? Please circle one…
   a. Workshop (like this one)
   b. Live webinars with Q&A
   c. One-on-one technical assistance
   d. Other

5. How do you plan to apply this information when you return home? (e.g. specific project planning, proposal to tribal council, strategic energy planning)

6. Were your project development and finance questions answered at this workshop?

7. How did you hear about the workshop?

8. Other suggestions/feedback?

Continued on second page…

On a scale of 1 (lowest) to 5 (highest), please rate the overall usefulness of the workshop.

Question/Rating	Describe the reason for the rating:
1. Overall Workshop Rating. 1 2 3 4 5	
2. The speakers' ability to communicate relevant information. 1 2 3 4 5	
3. Your knowledge gained of the Five Step Project Development Process 1 2 3 4 5	
4. How much has this workshop contributed to your ability to begin a renewable energy or energy efficiency project? 1 2 3 4 5	
5. How valuable was the workbook and materials offered? 1 2 3 4 5	
6. How was the pace of the workshop? 1 2 3 4 5	
7. How likely are you to recommend this workshop to others? 1 2 3 4 5	