DOE OFFICE OF INDIAN ENERGY

Energy Planning

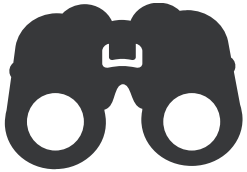
U.S. DEPARTMENT OF ENERGY | Office of Indian Energy

Agenda

- What is energy planning?
- The process
- The plan
- Strategic Energy Planning (SEP) Workbook
- Other resources

What is Energy Planning?

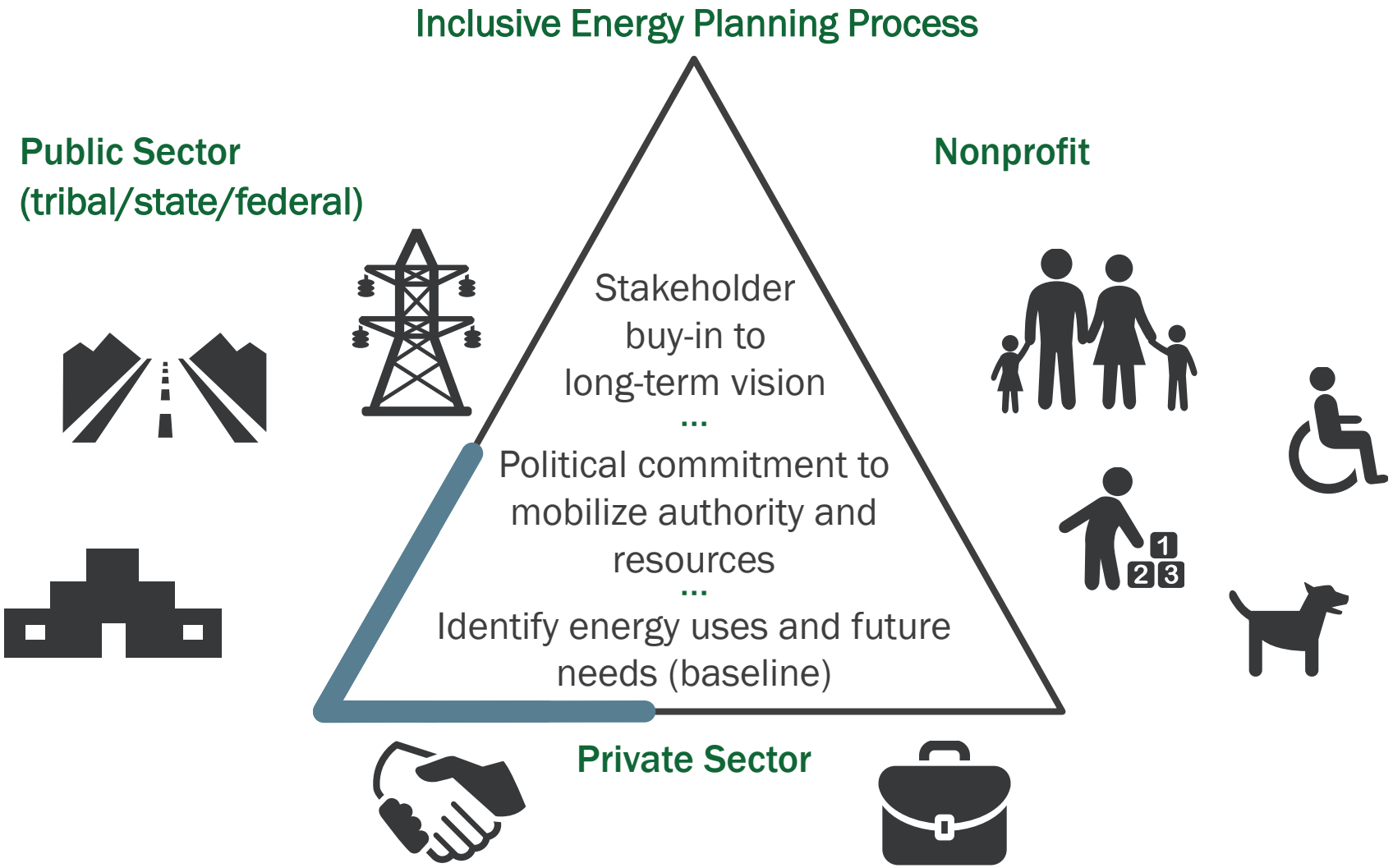
The plan should be "*Strategic*" by applying Strategic Energy Planning (SEP) principles.



vs.

- Brings desired clean energy future into clear focus (**Empowering**)
- Considers current reality (**Baseline, Data-Driven**) and leverages local resources
- Considers hurdles/challenges before you reach them (**Inclusive**)
- Maps out a more efficient path to achieve your desired energy future
- Clarifies progress indicators (**Measurement and Verification**)
- Documents the game plan for short- and long-term success

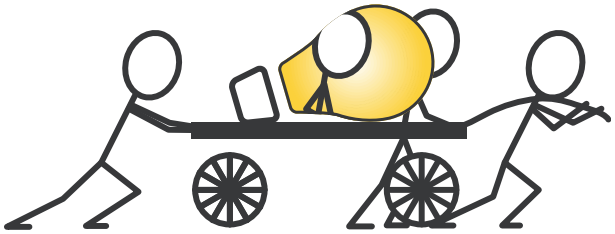
What Makes Energy Planning "Strategic"?



Graphic concepts reprinted with permission from Lesley Kabotie, Indigenous Collaboration, Inc..

Strategic Energy Planning: Leadership Team

vs.



Not just people with the "right" idea, but those committed to the long-term task with personal and political influence.

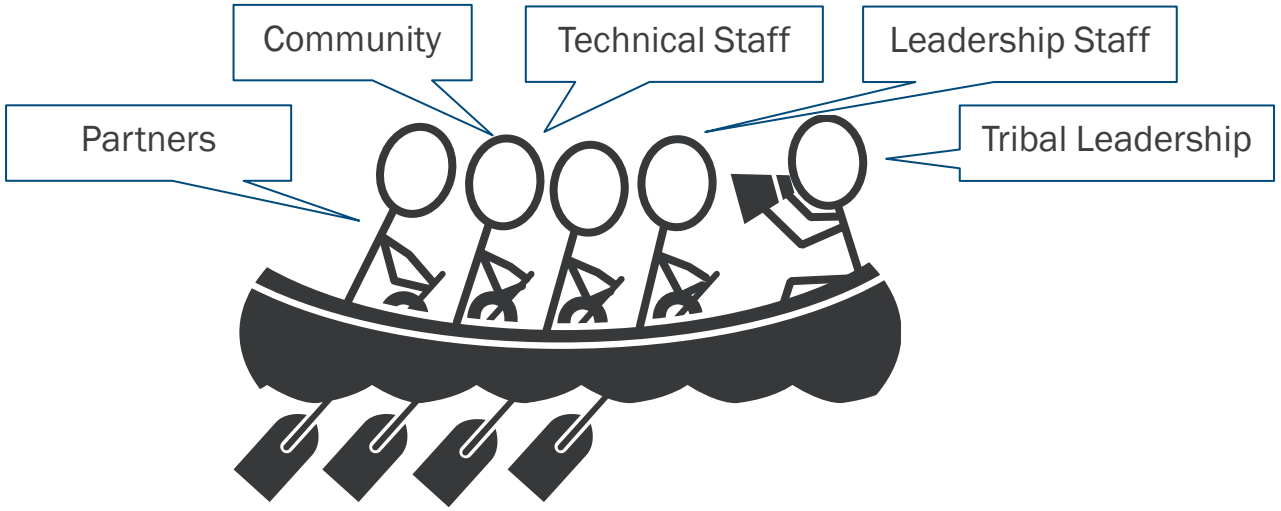
✔ Include

- Individuals with authority to direct resources
- Individuals with a passion for the "destination"
- Individuals with influence in the community and administrative abilities to keep the project alive
- Individuals with the technical ability
- Individuals who can "tell the story"

✖ Avoid

- Exclusively political appointees
- Exclusively technical staff
- Exclusively implementers

Planning is Coordinated and Collective Action



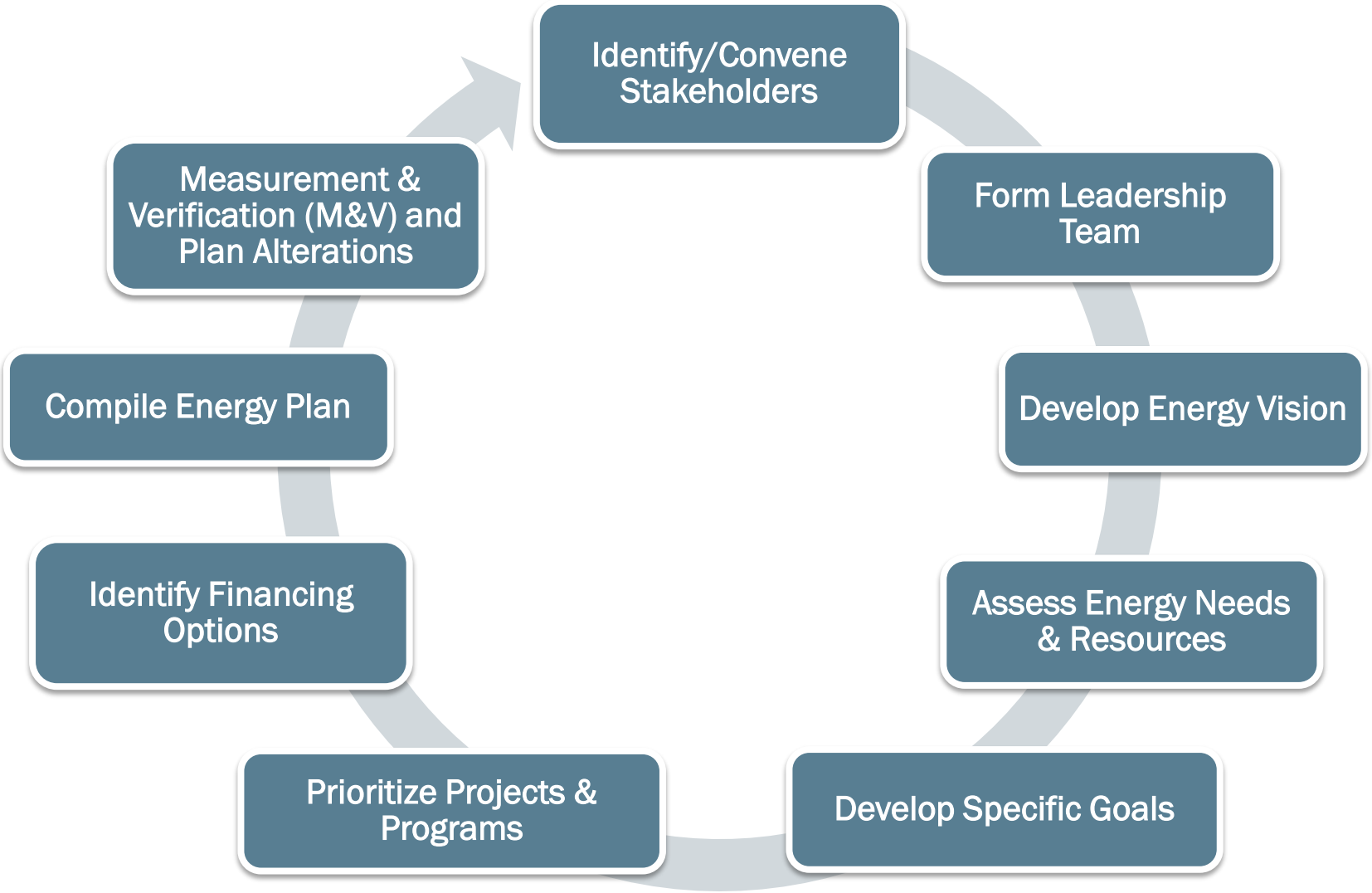
Proper planning and strategic energy plan development helps stakeholders:

- Direct action
- Sustain momentum
- Motivate involvement
- Reduce/minimize reactive decision-making
- Go the distance.

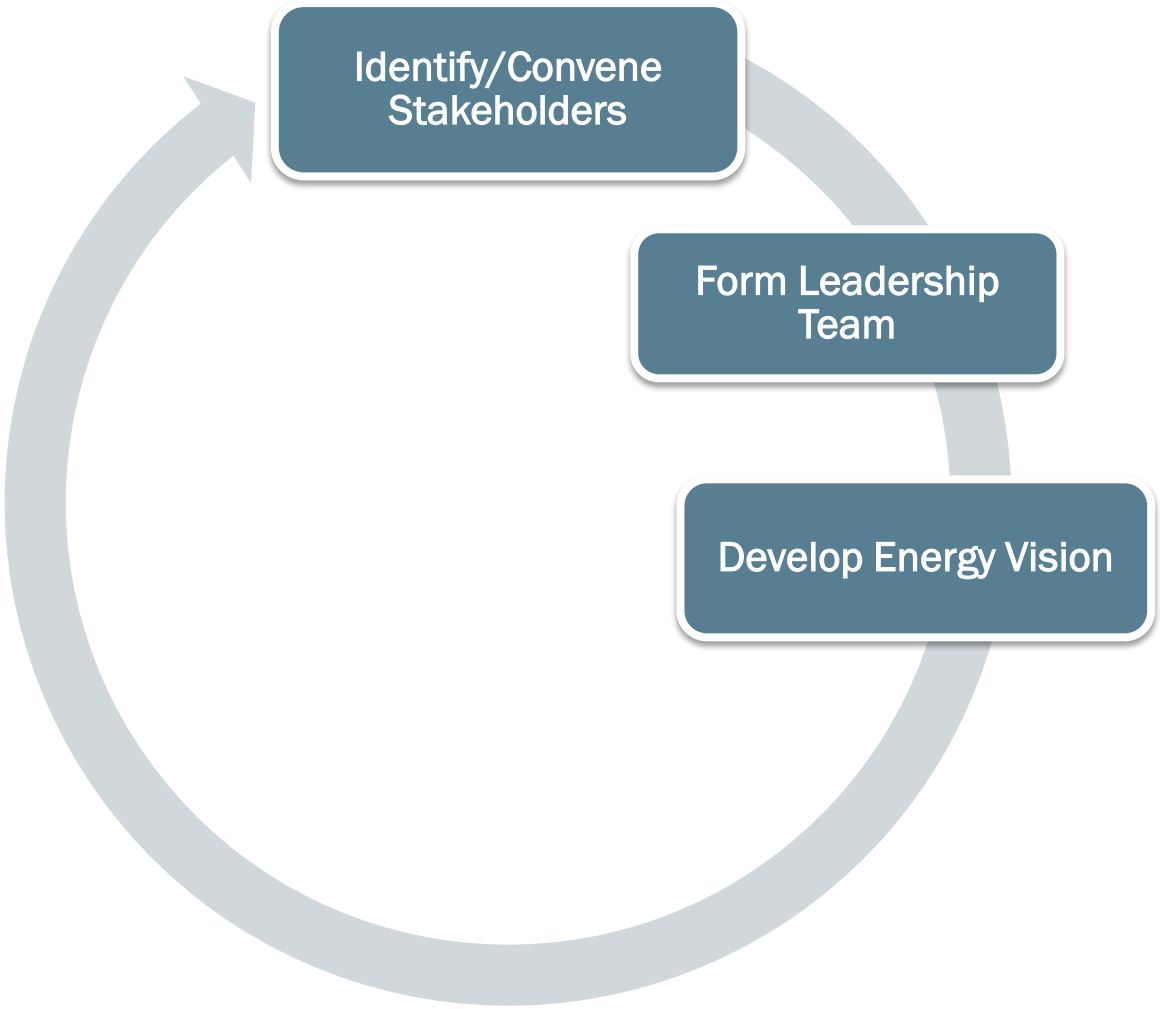
Why Does Strategic Energy Planning Fail?

- Short-sighted predictions of the situation, timeline
- Unrealistic predictions of resources
- Uncoordinated implementation
- Narrow ownership
- Failure to follow the plan
- Poor, or casual, communication.

Steps in Strategic Energy Planning



Strategic Energy Planning: First Steps



First Steps: Identify and Convene Stakeholders

- Tribal members
- Tribal council
- Tribal government
- Tribal utilities
- Tribal enterprises
- Large energy users
- Local utilities

Key success component:
Identify and select an energy "champion" to shepherd the process

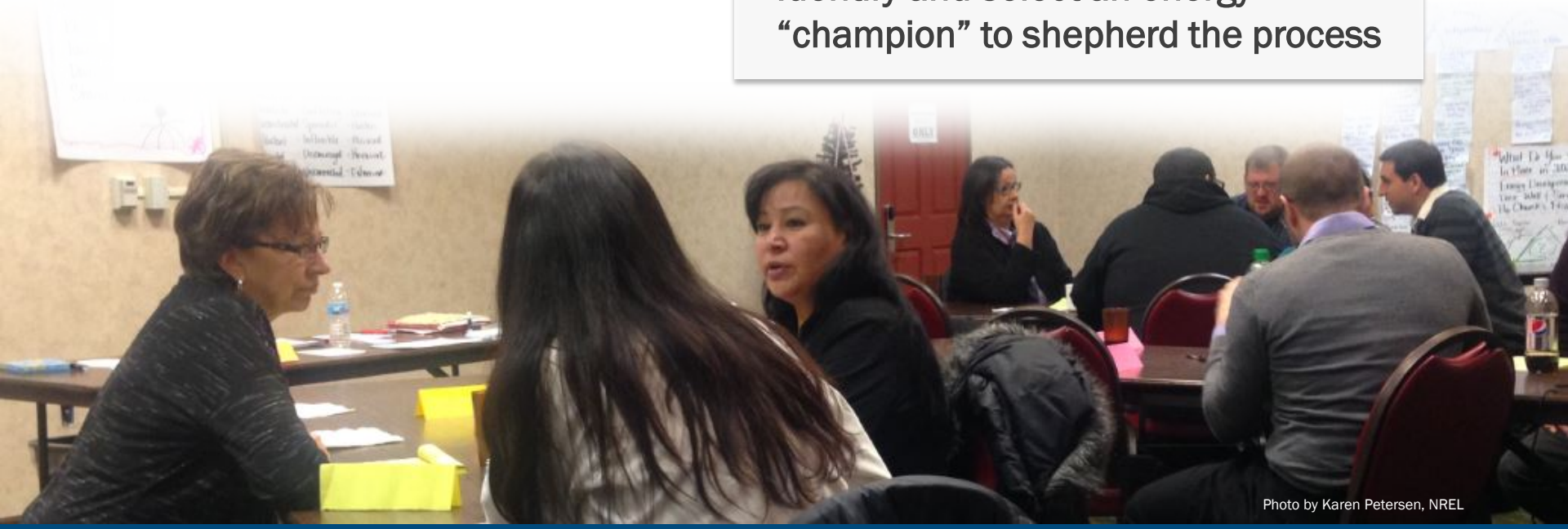


Photo by Karen Petersen, NREL

First Steps: Form a Leadership Team

Draw from the stakeholders:

- Tribal council member(s)
- Tribal government executives
- Tribal member representative(s)
- Tribal enterprise leader(s)

Photo by Dennis Schroder, NREL

First Steps: Develop an Energy Vision

Common objectives include:

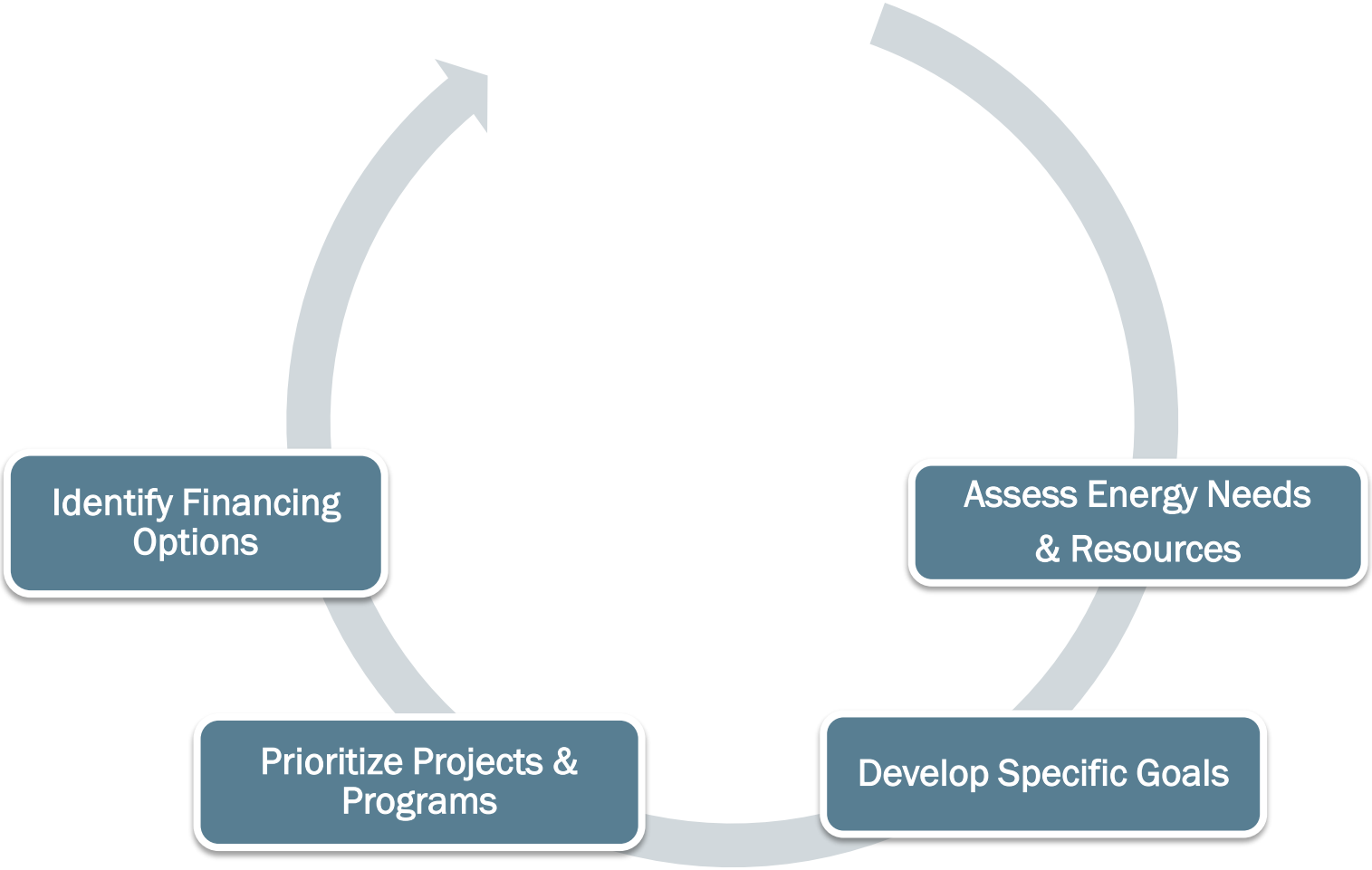
- Increase and ensure energy reliability
- Minimize environmental impacts
- Diversify energy supply
- Use local, renewable resources
- Strengthen, support economic development
- Build workforce/jobs
- Ensure energy affordability
- Generate revenue for tribe
- Energy security/self-sufficiency
- Off-grid electrification
- Save money (offset energy costs)
- Keep money in tribe
- Stabilize energy costs for tribe and tribal members.

Energy Vision Example: Forest County Potawatomi, WI

"Ultimately reduce the tribe's carbon footprint to zero while leading energy strategy initiatives, which support and promote the efforts of others working to reduce their own carbon footprints."

The Forest County Potawatomi Tribe's 30-kW solar PV system on the roof of its administration building in Milwaukee, WI. Photo from the Forest County Potawatomi Tribe, NREL 20107.

Strategic Energy Planning: Priorities & Decisions



Priorities & Decisions: Assess Energy Needs

Document the community baseline:

- Determine energy use by "sector" including government, residential, school, and commercial
- Use available tools:
  - Energy audits
  - EPA Portfolio Manager (non-residential buildings)
- Forecast future load
  - New housing
  - New government facilities
  - New/expanded enterprises
- Verify current service providers and rates for electricity, gas, propane, wood, and others.

Photo by Alex Dane, NREL 22724

Priorities & Decisions: Develop Specific Goals

Examples:

- Reduce electricity use by ___% by 2022
- Obtain ___% of electricity from renewable sources within 10 years (similar to a renewable portfolio standard or RPS)
- Reduce energy costs by ___% within 5 years

Photo by Karen Petersen, NREL

Priorities & Decisions: Prioritize Projects & Programs

- Develop a ranking system to understand cost-effectiveness of different projects
- Best practice models:
  - Total resource cost
    - Model considers life-cycle benefits for projects
  - Levelized cost of energy
    - Allows comparison across different technologies
- Tribal energy policy/program examples:
  - Incentives to reduce energy use
  - Incentives to promote renewable energy
  - Sustainable/green building codes, standards, or other requirements or guidelines.

Photo by Bob Gough, NREL 15954

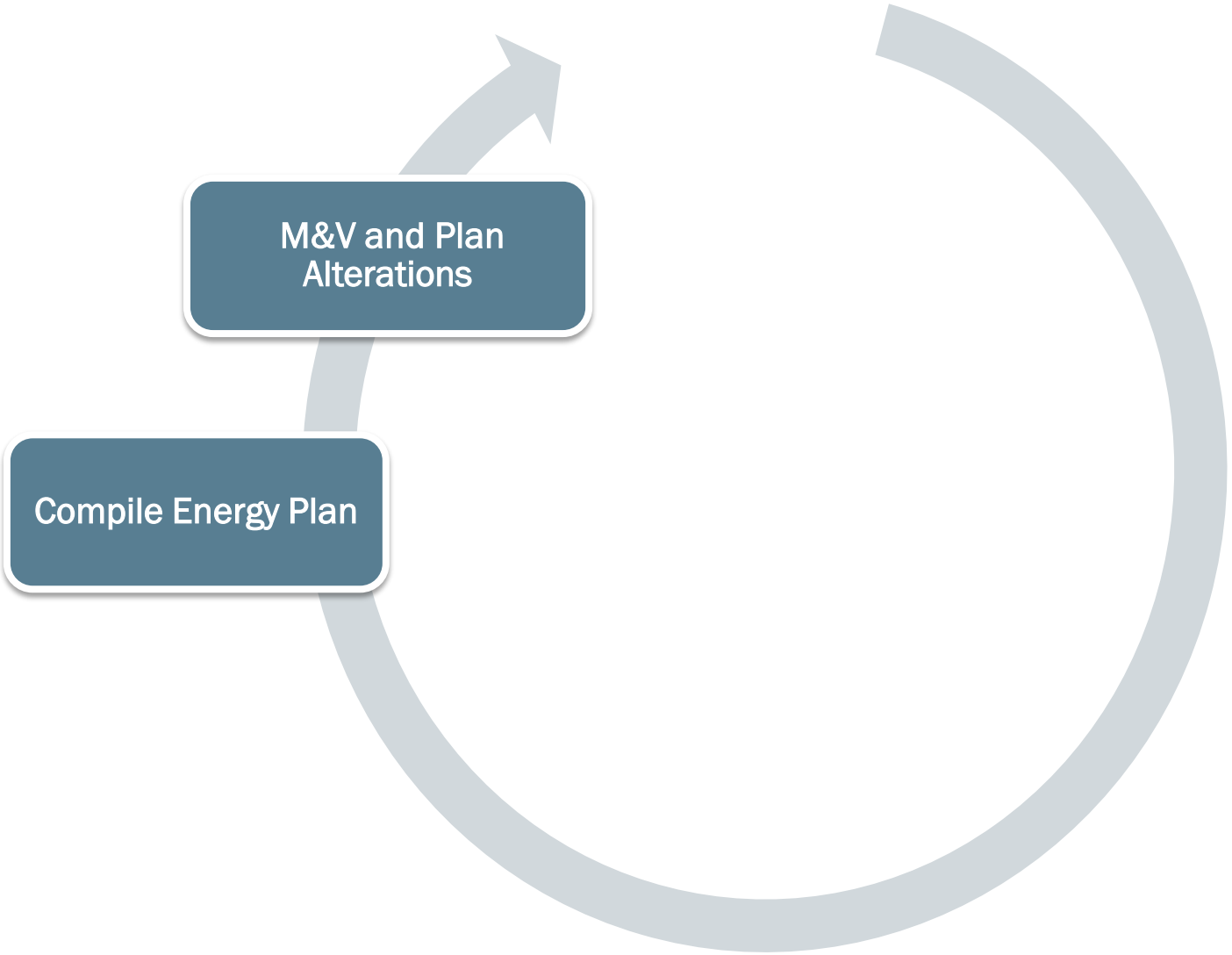
Priorities & Decisions: Identify Financing Options

Secure planning and project funding sources:

- Tribal funding (energy.gov/indianenergy/fedprograms)
- Database of State Incentives for Renewables & Efficiency (http://www.dsireusa.org/)
- DOE Technical Assistance (TA) Program (http://www.energy.gov/indianenergy/resources/technical-assistance)
- Other federal agency TA and grant programs
- State programs
- Non-governmental organizations (NGOs)

Photo by Alex Dane, NREL

Strategic Energy Planning: Energy Plan



Energy Plan: Purpose and Functions

Purpose:

- Document near-term goals
- Sustain momentum
- Achieve long-term goals

Functions:

- Creates “road map” to hold accountability to the destination
- Provides the means to consistently share the story with others
- Creates resources to help guide and filter priorities, providers, and decisions

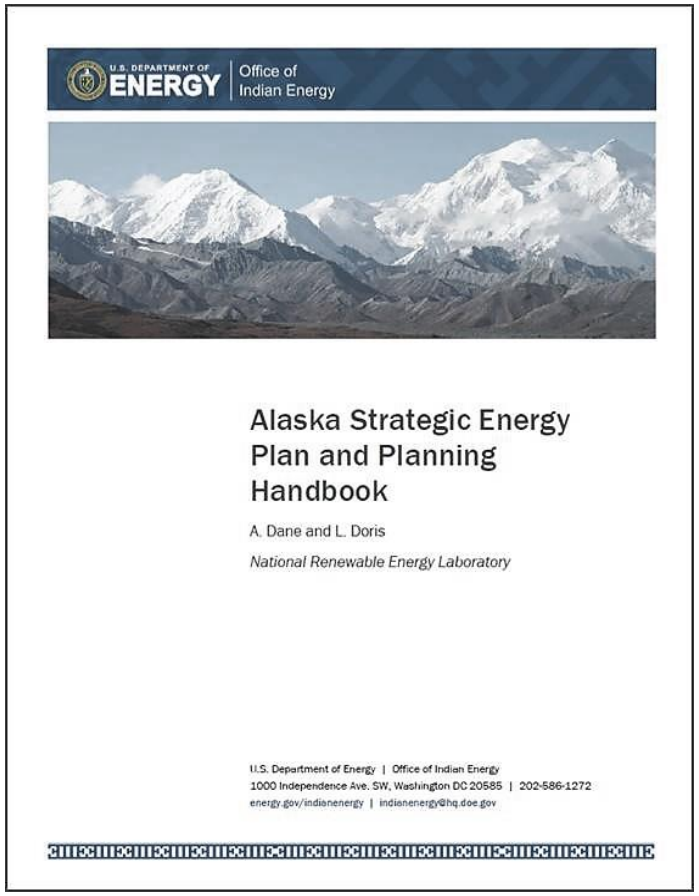
Energy Plan: Components

Include:

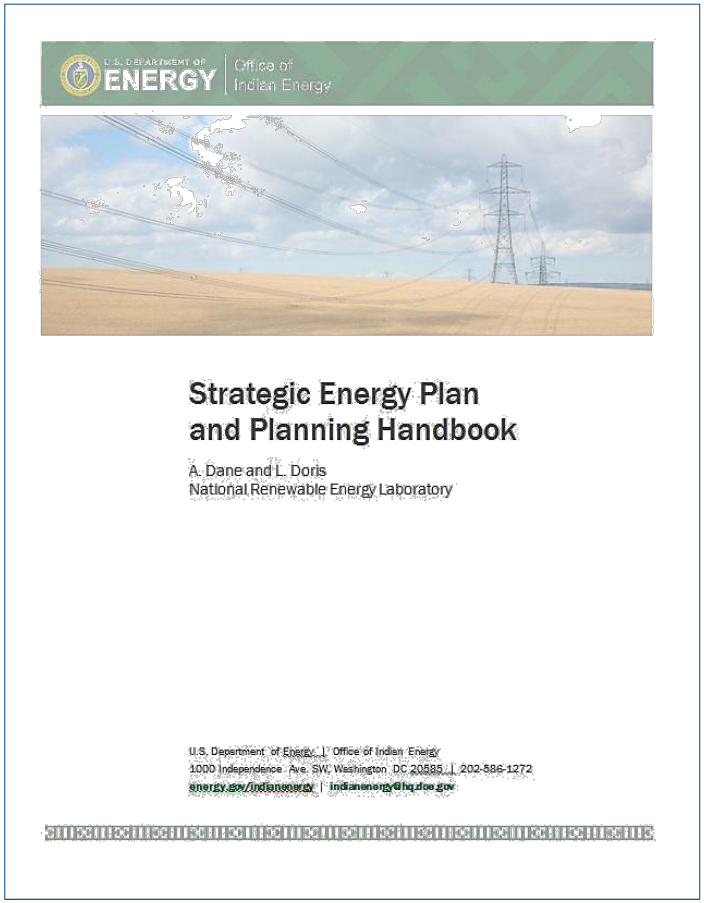
- Vision
- Objectives
- Goals
- Baseline
- Barriers
- Program/project options
  - Demand side
  - Generation
- Recommendations
- Adoption by Tribal Council

Photo by Paul Dearhouse, NREL 24503

Strategic Energy Planning Handbook for Lower 48 Tribes and Alaskan Native Villages



http://www.energy.gov/indianenergy/downloads/alaska-strategic-energy-plan-and-planning-handbook



http://www.energy.gov/indianenergy/downloads/tribal-strategic-energy-plan-and-planning-handbook

Other Resources to Consider

- *Community Greening: How to Develop a Strategic Energy Plan (SEP)*. This paper provides a succinct overview of each step in the strategic energy planning process for local jurisdictions. http://www.nrel.gov/tech_deployment/pdfs/community_greening.pdf

- *Community Energy Strategic Planning*. This guide provides a more thorough review of the energy planning process. http://energy.gov/sites/prod/files/2014/05/f15/cesp_guide.pdf

- U.S. DOE Energy Efficiency and Renewable Energy Office SEP Resources. This website provides tools and tips for each step in the SEP process and there are case studies available examining other cities experiences with the SEP process. http://energy.gov/eere/slsc/guide-community-energy-strategic-planning

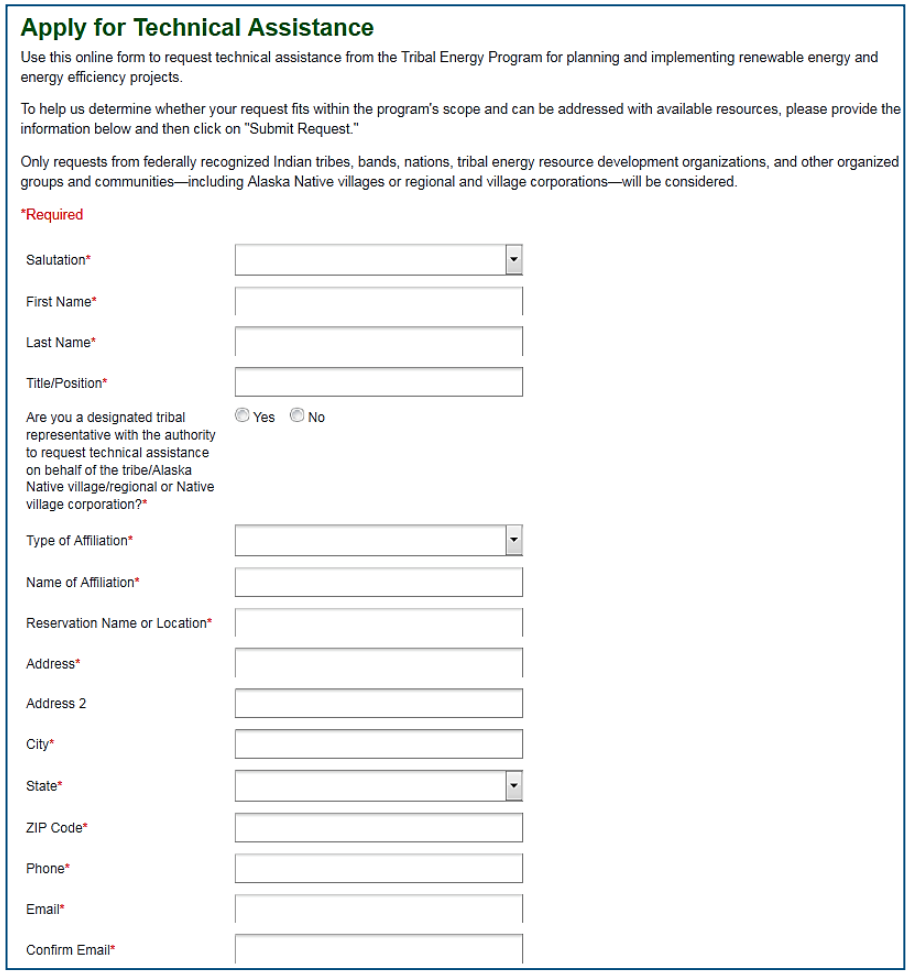
On-Request Technical Assistance

Apply for up to 40 hours of in-depth technical assistance to:

- Address a specific challenge
- Fulfill a need that is essential to a current project's successful implementation.

Two categories of technical assistance:

1. **Strategic Energy Planning**—An on-site workshop that walks tribal leaders and staff through a nine-step planning process
2. **Project Development Support**—Expert guidance and analysis that helps address specific project barriers. Examples include:
   - Third-party independent reviews of transmission studies, financing structures, lease agreements, project reports
   - Modeling and analysis (or assistance using modeling/analysis tools)
   - Pre-feasibility transmission studies
   - Interconnection agreement facilitation
   - Economic evaluations
   - System design reviews.



Apply for Technical Assistance

Use this online form to request technical assistance from the Tribal Energy Program for planning and implementing renewable energy and energy efficiency projects.

To help us determine whether your request fits within the program's scope and can be addressed with available resources, please provide the information below and then click on "Submit Request."

Only requests from 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—will be considered.

*Required

Salutation*

First Name*

Last Name*

Title/Position*

Are you a designated tribal representative with the authority to request technical assistance on behalf of the tribe/Alaska Native village/regional or Native village corporation?* Yes No

Type of Affiliation*

Name of Affiliation*

Reservation Name or Location*

Address*

Address 2

City*

State*

ZIP Code*

Phone*

Email*

Confirm Email*

Learn more and apply online:
energy.gov/indianenergy/technical-assistance