

| 2 - CREATING AN ENERGY PLAN

Define Leadership and Organizational Structure

Energy planning is most effective when done centrally and holistically. That is, there should be central coordination of efforts that span a wide variety of the tribe's departments and activities. At the outset, an inter-departmental group of engaged members should be brought together to evaluate what kind of capacity and expertise are available for energy planning. Most likely this begins with the person or department that first conceives the idea to develop an energy plan. By the end of the first meeting, it should be clear why individuals are interested in developing an energy plan for the tribe, and roles should be assigned. If the tribe has a strong Planning Department, it makes sense that someone within that department would take the lead. While there may be some fluidity to organizational structure, the stronger the appointments of roles like Project Manager are, the more easily an energy planning project will proceed from conception to development to implementation.

As with any major project, the establishment of an energy plan will likely require a resolution from Tribal Council. Involvement of Council members at this initial meeting can certainly be useful. Tribal Council may also be interested in taking on a leadership role.

Conduct Research

Before designing energy goals and the appropriate actions for the tribe to take, the tribe must invest some time in researching and understanding their energy usage history. It is essential to engage those who are, and have

been, involved with utilities, facilities, planning, development, and energy management. Energy planners should report and build on knowledge such as:

- What are the predominant uses of energy?
- What sources of energy are used?
- Where does the tribe's energy currently come from?
- What are the costs of current energy sources?
- What are the trends and projections for future energy needs?
- What are the environmental and social impacts of current energy sources?
- What resources are available to tribe members (i.e. weatherization agencies, utility company programs, housing authority programs) and how well are they used?

In addition to providing critical background information, researching past tribal energy efforts and engaging respective individuals will also help build early community support for the energy plan (building community support is discussed in more detail later). This background information should therefore be included in the energy plan, and should be woven into the project goals, outline, timeline, and discussion of team member roles.

Identify Goals and Motivations

The goals and motivations for completing an energy plan are determined by the goals and development plans of the Tribal Council. Clarifying these goals is a necessary step to

creating an energy plan that will be relevant and useful. A discussion along these lines at a council meeting resulting in a resolution is a good way to ensure that the energy plan will address the tribe's needs. A sheet with leading questions for brainstorming motivations and goals is provided in Appendix A. Below are several possible goals that could be brought to the table by whomever is spearheading the energy plan, whether a staff member or contractor. These should be modified to suit the tribe's own situation and are not all applicable to every energy plan.

- Goal 1: To reduce the energy bills of tribe members and administration.
- Goal 2: To minimize the environmental impact of current and/or future development.
- Goal 3: To use local resources sustainably.
- Goal 4: To meet energy needs without relying on an outside utility.
- Goal 5: To encourage economic development through green technologies.
- Goal 6: To set an example for other tribes and communities by living in a sustainable manner.
- Goal 7: To ensure that energy use and production are in tune with cultural values.

The types of projects to be addressed by the energy plan should follow naturally from a clear statement of goals.

Match Projects with Goals

After the energy plan goals have been defined, a thorough assessment of the type of projects that

will most likely achieve these goals should be conducted. Projects will typically fall in the following categories:

Conservation and Efficiency Education Projects

Energy conservation and efficiency education projects address all of the goals suggested in the previous section and can be conducted on the residential or commercial level. Working to reduce energy use through education reduces energy costs and impacts on the environment, and promotes awareness of the issues associated with energy use. These projects can range from a booth at a residential housing fair to energy audit training for facilities managers. Energy efficiency and conservation education are addressed further in Section 3.

Conservation and Efficiency Implementation Projects

Once people know how to conserve energy and use it efficiently, it is important to provide opportunities for implementing energy-saving measures. Low-cost measures include providing materials such as compact fluorescent light bulbs to residents. More residential measures might involve an appliance replacement program or weatherization for inefficient homes. Commercial projects that upgrade heating and cooling and lighting systems will save significant amounts of energy. More conservation and efficiency projects are discussed in Section 3.

Renewable Energy Generation Projects

Tribes whose energy goals include energy independence and economic development through the sale of energy will require energy plans with detailed information on commercial-scale energy generation projects. Tribes focused on increasing sustainability and reducing the energy bills of individual members may be

interested in smaller renewable systems. Section 4 includes a detailed discussion of renewable energy generation projects.

Green Building Projects

If plans for the tribe include growth—whether that be in housing a growing population, expanding economic development with commercial enterprises, or adding to the facilities that meet tribe members’ needs—green building projects can be a way to plan for growth in a way that meets certain goals for energy use. The best time to incorporate energy efficiency or on-site generation into a building is during the conception, design, and construction phases. More information on green building measures and how to plan for green construction can be found in Section 5.

Transportation Projects

Transportation projects can address issues of efficiency and conservation and the use of renewable fuels. Increased availability of public transportation and use of efficient or alternatively fueled vehicles in a fleet can contribute to sustainability efforts. Transportation projects are further discussed in Section 6.

Create an Energy Plan Outline and Timeline

Once a Project Manager has been assigned and goals have been established, the next step is to develop an outline for the energy plan. Again, this may be fluid over the course of the plan’s development, but a good outline is a necessary starting point to assign more specific roles to team members. The outline will also help divide the energy plan into manageable pieces and provide clarity to roles and responsibilities. For

example, the residential sector opportunities may best be researched and written by the Tribal Housing Authority, while the Planning Department may be best to provide the detailed work on transportation options. Also, goals may need to be further developed for each section of the plan before in-depth writing even begins. Some useful considerations include: What specifically are the goals for conservation of energy within the residential sector? What are the goals for the tribe in terms of economic development in the event that renewable energy ownership is pursued? A sample outline and work plan are included on the following pages. Much of the content of this guidebook follows the logical order of an actual energy plan as well.

The Project Manager should also establish a work plan for developing the energy plan. The process may take anywhere from a few months to a few years, depending on the complexity of the plan and available capacity. Realistically, funding for energy plan development may be a key driver to the plan’s timeline. Keep in mind that a work plan should include team management, research, writing, editing, garnering acceptance (both from tribe members and officially from Tribal Council), and thinking ahead to implementation. A Gantt chart like the one following is a useful tool for establishing the project timeline, and keeping team members on track.

Sample Energy Plan Outline

1. Summary of vision, mission, and goals
2. Background information
 - 2.1. Why an energy plan is important
 - 2.2. Current energy sources, costs, and demands
 - 2.3. Future energy sources, costs, and demands
 - 2.4. Acknowledgement of partners
 - 2.5. Resources and opportunities for external collaboration
3. Energy conservation and efficiency
 - 3.1. Why energy conservation is important
 - 3.2. Residential energy conservation opportunities and projects
 - 3.3. Commercial energy conservation opportunities and projects
 - 3.4. Other energy conservation opportunities and projects
4. Clean energy generation
 - 4.1. Why clean, community-based energy is important
 - 4.2. Solar, wind, hydro, biomass, and/or geothermal energy opportunities and projects (as applicable)
5. New construction projects
 - 5.1. Why green building is important
 - 5.2. Green building opportunities and projects
 - 5.3. Tribal policy-making for new construction projects
6. Transportation projects
 - 6.1. Why transportation is addressed
 - 6.2. Public transportation opportunities
 - 6.3. Biofuels project opportunities
7. Other energy-related projects
8. Conclusion
9. Appendices and bibliography

Figure 2.1 - *Sample Energy Plan Outline*

Sample work plan for developing an energy plan

Task	Lead	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Establish vision and goals	Mary (Planning)									
Convene partners										
Brainstorm and recommend energy goals										
Take recommendations to Council for approval										
Conduct Background Research	Joe (Utilities)									
Current energy uses, costs, etc										
Plans that impact future uses, costs, etc										
Resources for energy services										
Identify Residential Conservation and Efficiency Projects	Jane (Housing)									
Evaluate residential energy use										
Identify opportunities for efficiency upgrades										
Develop recommendations for res. conservation programs										
Identify partnerships, management, and needs										
Identify Commercial Conservation and Efficiency Projects	Fred (Utilities)									
Identify commercial energy users										
Conduct commercial energy audits										
Develop recommendations for commercial efficiency upgrades										
Identify partnerships, management, and capacity needs										
Identify Clean Energy Generation Projects	Mary (Planning)									
Develop goals for renewable energy projects										
Conduct resource assessment										
Determine desired technology and scale of project										
Evaluate cost, return on investment and financial resources										
Identify partnerships, management, and capacity needs										
Identify Green Building Projects	Roger (Planning)									
Identify construction plans on the reservation										
Evaluate green building opportunities and needs										
Identify partnerships, management and capacity needs										
Recommend policies for long-term green building										
Other Energy Projects	TBD									
Identify topics important to plan vision and goals										
Evaluate opportunities										
Make project development or policy recommendations										
Identify partnerships, management, and capacity needs										
Energy Plan Development Management	Mary (Planning)									
Develop energy plan outline and identify leads										
Overall coordination of the various sections										
Take recommendations to committees or Council for approval										
Involve community and garner support from tribe members										
Edit and Publish										

Figure 2.2 - Sample Energy Plan Work Plan

Identify Internal Capacity and External Collaboration

In many cases, the tribe's leadership may be aware of what energy projects need to be done, but lack the time and resources to take action. A tribe's energy plan should acknowledge the existing capacity to take on energy projects, and include external resources, contact information and related opportunities. Speaking with people from diverse agencies about various programs for energy plan development will also help establish the relationships necessary for implementation.

The following are some of the agencies, organizations, and companies that offer resources and technical assistance for energy plan development:

- Electric and gas utilities
- Bonneville Power Administration
- Community Action Agency or local weatherization agency
- Low Income Home Energy Assistance Program (LIHEAP)
- State energy office
- State energy funds (ie. Energy Trust of Oregon)
- Local, state, and regional non-profit organizations
- US Department of Housing and Urban Development (HUD)

For specific funding resources, see *section 7: Financial Resources for Energy Plan Development and Implementation*.

In addition to leveraging external resources, an energy plan may include recommendations for internal capacity-building in order to make the implementation of energy projects more feasible. It may be productive to hire an Energy Manager, Sustainability Coordinator, or other such position for the tribe as a first step- prior to tackling energy efficiency programs and renewable energy development.

Depending on the size, administrative structure and existing capacity of the tribe, hiring an Energy Manager may be considered a high priority for the plan. Most tribes have some variety of overlapping, and sometimes inconsistent, policies and practices that cross departmental lines, making it difficult to coordinate energy projects across all sectors. A staff person dedicated to looking for energy saving opportunities can also save the tribe money, often saving enough to offset the salary of the staff person. The duties of a tribe's Energy Manager could include:

- Conducting building inventories and cost benefit analysis for all tribal buildings with regard to energy efficiency and renewable energy measures,
- Coordinating services with external partners,
- Seeking funding for the capital costs of energy projects,
- Conducting conservation education for tribal members,
- Overseeing the implementation of energy projects prioritized in the plan,
- Tracking costs and life-cycle cost savings of

efficiency upgrades and other energy projects,

- Communicating and coordinating with other tribes to strengthen regional clean energy efforts.

Although Energy Managers for cities and corporations throughout the country have demonstrated that the money they save on reduced energy costs more than compensate for their salaries, a tribe may still struggle with finding the upfront cash before the position's benefits are realized. Creating a new position while the tribe faces immediate needs in other essential services may not be feasible.

Recommending a phased-in position over time (e.g. starting quarter-time or half-time) could be a practical way to demonstrate an Energy Manager's positive impact on the budget. A successful energy manager should be able to quantifiably reduce energy use and costs for the tribe and tribe members.

Building Community Support

Community support can make or break successful implementation of an energy plan. Even if the content is agreeable to the tribe, without a broad range of awareness, understanding, and support for the final document the plan itself is more likely to sit on a shelf collecting dust. An even graver result of foregoing community support would be a plan that contradicts tribe member's values and faces strong opposition.

If energy planners work from the outset to:

- make the process inclusive,
- establish broad representation of tribal

sectors in energy plan roles, and

- work with Tribal Council to establish goals based on the tribe's values,

then the plan should not encounter the barriers that occur when a project lacks community support. However, even with the best of planning processes, adoption and implementation of bold changes will require even more education, capacity, skill, and momentum than the planning itself. It is therefore critical to the plan's success to build in plenty of time and resources for outreach and education.

There are multiple levels of outreach and education that should be explored. First, there is the presentation of high-level information to the broadest constituency (the tribe members) about what the plan is, why it has been created, and what it might mean to tribe members' lives. This type of outreach is often done through the existing social infrastructure of the tribe. For example, energy planners may want to host a dinner to announce the plan, or it might work best to simply staff tables at other events and informational fairs.

Second, there is outreach to business and community leaders about specific opportunities presented in the plan. This may be conducted through more formal meetings and/or site visits. Again, engaging these leaders early in the planning process may help pave the way for broad support later on.

Finally, those involved in the implementation of the energy plan may need specific education. Examples include training housing staff on residential conservation measures and programs and educating business owners about

opportunities to participate in efficiency programs. If the tribe's energy plan includes green building recommendations, then energy planners must offer training opportunities for those in the development and construction field. If the plan includes pursuit of renewable energy project development, leaders will need access to technical assistance on resource assessment, siting, business plan development, etc.

Energy planners should not expect to be experts on every single energy issue and implementation measure. A lack of in-depth knowledge on how to develop a renewable energy project, for example, should not prevent a tribe from pursuing such plans. It is important, though, to understand that within the energy plan there may be easy, moderate, and difficult actions that require various levels of community input, understanding, advanced knowledge, or the ability to obtain outside assistance.

Putting the Energy Plan into Practice

The successful implementation of any energy plan depends vitally on its careful and comprehensive development. Time and consideration given to each of the areas outlined above—establishment of strong leadership, performance of background research, development of goals and corresponding energy project ideas, creation of an energy plan outline and work plan, and expansion of project capacity through external and community support—will be effort well spent towards the successful implementation of specific projects based on the energy plan.

Examples of specific energy projects are outlined in Sections 3-6.