

Recommendations to Improve Effectiveness of Statewide Wood Energy Teams



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Executive Summary

Since 2013, the U.S. Forest Service (FS) has funded 20 Statewide Wood Energy Teams (SWETs) – a “boots on the ground” network of diverse professionals committed to successfully implementing wood energy projects. These teams identify, analyze, and develop a technical review and funding process to facilitate implementation of wood energy systems.

SWETs are working with hundreds of different organizations and have successfully increased the visibility and installation of renewable wood energy systems in communities across the United States through completed feasibility studies, public outreach events, and educational materials.

The collective experience of SWETs helps us better understand how to promote wood energy across the country. SWETs are an invaluable resource to state leaders as they explore policies and incentives to promote wood energy. States are learning from each other and the federal government is learning from states.

The purpose of this report is to articulate both findings and recommendations to improve effectiveness of SWETs. Best Practices will daylight how to best facilitate a collective learning environment and leverage each state’s valuable resources. SWETs, FS personnel, and key external partners recently participated in interviews. During these discussions, respondents answered a series of ten questions geared toward increasing the efficiency, communication, and sharing of information between SWETs.

This feedback shed light on six critical needs:

1. Facilitator to: (1) facilitate SWET needs, trainings, and communications; and (2) track SWET progress and activities.
2. Common data sharing website for SWETs to post information and communicate with each other.
3. Educational outreach materials and market development tools;
4. Face time for networking between SWETs;
5. Simple method to track SWET progress and accomplishments; and,
6. Succession planning for SWETs after Forest Service funding expires (typically 2-3 years for most SWETs).



Introduction

The purpose of this report is to provide recommendations to improve the effectiveness of Statewide Wood Energy Teams (SWETs). Recommendations are based on in-person and telephone interviews with SWETs, U.S. Forest Service (FS) personnel, and a variety of stakeholders conducted between February and April 2015.

What are SWETs?

Since 2013, the FS has funded 20 SWETs in states with strong opportunities and incentives to expand wood energy markets (see Figure 1, Appendix A). SWETs energize and stimulate expansion of the renewable wood energy market sector through unique collaborative partnerships with government, industry, and community leaders. Team members include wood energy experts and a robust cross-section of professionals (e.g., foresters, economists, business owners, and policy analysts, etc.).

Each SWET is uniquely organized and operates independently, but communicates regularly with other SWETs by quarterly conference calls. SWETs have a specific focus unique to its state's needs and each state is in a different stage of wood energy development. For example, New Hampshire and Vermont possess a mature biomass infrastructure so the focus in these two states is on smaller thermal and combined heat and power projects. In Oregon, the current focus is on identifying volumes, technology, fuel mix, co-products, and financial tools that allow woody biomass to compete effectively with natural gas. In many states, SWETs are in their infancy and focused primarily on education and outreach to identify conversion opportunities.

“Thanks to the Forest Service for recognizing state differences, allowing diversity to happen, and its willingness to facilitate collaborative partnerships.”

What do SWETs need?

As the number of SWETs continues to grow, there is a greater need to improve efficiencies in communication and to share information, track progress, identify gaps, and best leverage each state's resources. Earthtech Energy reached out to SWETs in 2014 to identify these needs and Best Practices.¹

“We must do a better job of engaging federal, state, and county legislators in order to overcome policy hurdles.”

To expand upon those needs identified by Earthtech, Tami Sabol, who was on a two month assignment for the Washington Office State & Private Forestry, contacted each SWET directly to better gauge SWET needs. FS Regional Woody Biomass Utilization Coordinators, Forest Products Specialists, the Wood Education and Resource Center, and key external partners also participated in discussions.

¹ Earthtech Energy. Report for Southern Regional Extension Forestry. Wood Energy Financial App Outreach and Usability Testing in the Southern U.S., October 27, 2014.

What are SWETs doing?

To date, approximately \$4,900,000 of federal grant money has been awarded to SWETs to promote the expansion of renewable wood energy across the United States. Cooperators have contributed an additional estimated \$6,600,000 through cost-share agreements. SWETs are collectively working with hundreds of different organizations and partners. Most teams are in the scoping and technical assistance stage. Eleven teams currently have websites (see Figure 2, Appendix A), with the most useful being interactive sites that list grants and other funding options as well as provide learning resources.

By 2017, SWETs expect to complete hundreds of pre-feasibility studies, public outreach events, and webinars/trainings. SWET efforts are estimated to stimulate establishment of dozens of wood energy systems with many more systems under construction in the near future. SWETs will substantially increase participation in National Bioenergy Day as well as develop resources for communities interested in wood energy (e.g., list of funding sources, sample pre-feasibility studies, assessment tools, educational materials, etc.).

SWETs provide assistance primarily in three stages of development:

SCOPING (stakeholder capacity assessments, education, and outreach):

- State-specific wood energy websites, materials, and case studies;
- Educational workshops, conferences, site tours, and community engagement;
- Assessment of state boiler databases;
- Permitting/regulatory review and updates; and,
- Woody biomass supply studies.



TECHNICAL ASSISTANCE (project scoping, pre-feasibility assessments, and targeted training)

- Training workshops and assistance;
- Sector opportunity analyses (e.g., poultry, greenhouses, hospitals, schools, etc.);
- Engineer-for-a-day programs;
- Pre-feasibility studies; and,
- Preliminary engineering assessments.

PROJECT IMPLEMENTATION (project development and facility/community assistance):

- Comprehensive feasibility, detailed engineering, and 3rd party verification studies;
- Technical training and workforce development (e.g., boiler operator workshops);
- Environmental impact assessment development; and,
- Funding opportunities (e.g., grants, cost-share, low interest debt/financing).



What questions did we ask SWETs?

During interviews, SWETs were asked a series of questions ranging from how to improve efficiencies in communication and information sharing to identifying major barriers to success. Respondents were guaranteed that all information would be confidential and assimilated in a manner to ensure anonymity.

What are the findings?

SWETs have been successful in developing relationships with potential wood energy users and increasing the visibility of wood as a clean source of renewable energy. However, the teams have faced many challenges that vary by locale, regulatory climate, and available funding.

SWETs possess a wealth of knowledge in different topic areas and desire to share that information with and learn from other teams. First, the SWETs need a facilitator to engage individually and collectively with SWETs, track SWET progress, and identify specific training needs and key issues. SWETs also need a common data sharing website or central repository to store and access information from other teams and external stakeholders as well as communicate with each other.

SWETs value training opportunities and need an effective medium for participating in educational events, especially trainings on woody biomass market development and learning about funding opportunities. Many SWETs expressed the urgency to better engage policy makers, manufacturers, trade associations, tribal entities, and other high level stakeholders. Webinars may be the most appropriate and cost effective forum for topic specific trainings.

The SWETs highly value face time. By making personal connections with peers, teams are more comfortable reaching out to others. Relationships are built when folks know each other. The SWETs need opportunities to personally network in order to form a strong cohesive team nationally. A regional or national meeting would be of value, especially in conjunction with another event to minimize travel costs. Videoconferencing is also a less expensive option for increasing face time between SWETs.



What are the recommendations?

1. Designate a FS facilitator (1 full-time employee) to oversee SWET progress, facilitate SWET needs, and coordinate additional learning opportunities.
 - Networking Resources: Connect SWETs with key external stakeholders (e.g., Department of Energy, Department of Defense, trade associations, public buildings, policy makers, manufacturers, rural electric co-ops, etc.); develop ad-hoc groups for specific topics; facilitate peer mentoring and coaching.
 - Training Resources: Identify key needs and develop training materials; host/facilitate webinars; pair up states at similar stages of development; coordinate research on new technologies (e.g., pellet/chip combination systems, etc.).
 - Universal Resources: Build a repository of streamlined templates and examples to be used by all SWETs (e.g., pre-feasibility, conflict of interest, etc.); identify policies and barriers to wood energy development across SWET states; identify high priority projects/areas with multiple objectives (e.g., close to supply, hazardous fuels, WUI communities, aging boiler infrastructure, etc.).
 - Communication: Organize SWET quarterly calls; use a variety of communication forums (e.g., conference calls, webinars, videoconferencing, etc.); facilitate sharing of tangible results and challenges; notify SWETs of pertinent information.
 - Accomplishment Reporting: Track, consolidate, and post quarterly SWET accomplishments.
2. Launch a common data sharing website with communication capacity (e.g., alerts/notifications, discussion threads, links to email). SWETs believe a FS facilitator is the best fit to manage this site. Several potential data sharing options are:
 - Basecamp Project Management Application (<https://basecamp.com/>);
 - Knowledge Discovery Framework (KDF) by DOE Oak Ridge National Lab (<https://bioenergykdf.net/>);
 - Biomass Logistics Model (BLM) Data Library, by DOE Idaho National Library;
 - CloudVault, USDA CIO Interim External FTP Replacement (<https://ems-team.usda.gov/sites/fs-int-ecm/SitePages/CloudVault.aspx>); and,
 - A SharePoint site where all SWETs would have access.

The website would be primarily for internal SWET use, but should have the capability to grant access permissions to key external stakeholders. The platform should be organized by topics of interest for easy navigation. For example:

- Universal Resources: Outreach/educational materials (e.g., shared media and FAQs); case studies/success stories; challenges/failures; funding opportunities; sample pre-feasibility templates; engineering firms/contractor contact information; links to SWET websites.

- SWET Specific Information: Preliminary and full feasibility studies; progress reports, photos, and quarterly tracking tables.
 - Subject Specific Resources: Sector analysis; policy incentives; types of systems/technical assistance; trainings/webinars.
3. Establish an ad hoc group or coordinator to work with SWETs to develop standardized outreach materials and market development tools to effectively promote wood energy. Market awareness and market development are critical to SWET success, but individual SWETs have limited resources to develop outreach tools, events, and information.
- Outreach and Educational Tools: Develop broad brush media attention (e.g., You Tube, FAQs, success stories, key messages); “virtual tours” of different types of facilities; market sector assessments; and preliminary feasibility studies.
 - Funding Opportunities: Generate a table that summarizes federal funding and technical assistance opportunities (e.g., Rural Energy for American Program, Biomass Crop Assistance Program, Forest Service Wood Innovations Grants, and Department of Energy Combined Heat and Power Technical Assistance) as well as non-federal funding or financing sources. Be sure to hone in on funding or financing opportunities for the project construction phase because the need is great, yet these options are limited.
 - Networking Resources: Actively engage businesses, policy makers, community leaders, land managers, fuel producers, investors, engineering/architectural consultants, and other key stakeholders.
4. Facilitate in-person interactions between SWETs. The SWETs need face time together, especially within the same region, but funding is a major limiting factor. For example, the in-person meeting organized by western SWETs in 2014 proved invaluable. Consider the following options:
- Organize a regional or national SWET meeting in conjunction with another conference;
 - Highlight and share SWET accomplishments at a conference attended by multiple SWETs; and,
 - Engage SWETs in person to work on key initiatives or collective action items.
5. Develop and regularly maintain a simple tracking system to monitor and gauge SWET progress and successes. The FS developed a draft quarterly progress tracking table for SWETs to report progress and various metrics (see Figure 3, Appendix A).
6. Determine succession planning for SWETs. Identify funding or partnering options to sustain SWETs after FS funding expires (typically 2-3 years for most SWETs) so that SWETs can continue promoting wood energy in their states for the foreseeable future.

“We need to communicate the importance and benefits of forest restoration and the connection of biomass to renewable energy.”

Summary

The SWETs are increasing the visibility of wood as a clean source of renewable energy and are achieving tangible results. SWETs have connected key players throughout the country to successfully convert existing fossil fuel systems to renewable wood energy systems or build new wood energy systems for heating, cooling, or electricity. These recommendations will improve the effectiveness of SWETs by improving how they communicate, engage, and share information. SWETs need to leverage shared resources among teams and other stakeholders to independently and collectively expand wood energy markets, thereby supporting forest management, stimulating rural economies, and promoting vibrant communities.



Figure 2. SWET Websites (as of May 2015)



Figure 3. Quarterly Tracking Table (DRAFT)

Statewide Wood Energy Team's Activity Record			
Please report all activity from inception of SWET until 2/28/15			
State SWET team: <input type="text"/>			
Name of person submitting quarterly results: <input type="text"/>			
Organization: <input type="text"/>			
E-mail Address: <input type="text"/>			
Telephone Number: <input type="text"/>			
ACTIVITY	#	NARRATIVE	INSTRUCTIONS
Number of training sessions:	<input type="text"/>	<input type="text"/>	For each metric, when helpful, please provide more information in the Narrative section to the right of the metric. For example, describe the trainings or marketing materials. If site visit or tour is particularly notable, please indicate this and explain why. Brief narrative notes give context to your work and better help others understand what your SWET team is up to!
Number of outreach/public events:	<input type="text"/>	<input type="text"/>	
Number of site visits/tours:	<input type="text"/>	<input type="text"/>	
Number of pre-feasibility studies of wood energy facilities completed:	<input type="text"/>	<input type="text"/>	
Number of full feasibility studies of wood energy facilities completed:	<input type="text"/>	<input type="text"/>	
Number of wood energy facilities under construction:	<input type="text"/>	<input type="text"/>	
Number of facilities converted to wood energy:	<input type="text"/>	<input type="text"/>	
Number of green tons of biomass used annually by newly converted wood energy facilities:	<input type="text"/>	<input type="text"/>	
Number of jobs created:	<input type="text"/>	<input type="text"/>	
Have you created new marketing materials?	YES/NO	<input type="text"/>	
Do you have useful outreach materials that can be used universally or readily tailored by other SWETs?	YES/NO	<input type="text"/>	Describe the type of materials.
Do you have a wood energy website?	YES/NO	<input type="text"/>	Provide website link.
Have you held any webinars?	YES/NO	<input type="text"/>	Describe the type of webinar.
Do you use social media?	YES/NO	<input type="text"/>	Describe the type of social media.
Other notable accomplishments:	YES/NO	<input type="text"/>	This is your time to brag! What has changed in the dialogue in your state? Policy? Budget? What difference has your SWET team made? Anecdotal stories and comments are welcome!