

**Sierra Institute Rural Community Development Initiative
Workshop Notes April 2 & 3, 2015**

This workshop was made possible by a grant from USDA Rural Development, California.

Day 1

Thursday, April 2, 9:30 a.m. to 6:00 p.m.

9:30 – 9:45 Registration, Refreshments

9:45 – 10:10 **Opening: The Rural Community Development Initiative**
Jonathan Kusel

An overview of the workshop’s purpose, objectives, and intended outcomes and implications for the participants’ forest biomass utilization and wood-related projects.

Participant Introductions

10:10 – 10:30 **Why It Matters: CalEPA, Forest Climate Policy, Communities, and Project Support**

Speaker: Ashley Conrad-Saydah, Deputy Secretary for Climate Policy, CalEPA

- Biomass funding opportunities are available through several existing grants (such as SB 1122 and the Greenhouse Gas Reduction Fund) and we may see more opportunity with the outcome of California’s application to the National Disaster Resiliency Competition, Forest Carbon Action Plan and the upcoming GGRF Investment Plan
- Ashley encouraged the groups to include forests’ “value” to rural communities in their plans to manage forests for carbon
- For the upcoming GGRF Investment Plan, her proposal suggestions include:
 - All proposals to the CalEPA must directly show greenhouse gas reductions; they are looking for projects with implementation plans and GHG reduction strategies.
 - She encouraged applicants to address questions like “Why does this matter?”; “what do we need in rural communities?”; “how do rural communities provide benefits statewide?”; and “Why do we need forests and natural resources in this state?”
 - Projects should seek to find evidence in scholarly journals and peer reviewed articles on how to mitigate leakage and other risks.
 - The need for proposals to include peer reviewed, scientific support may be a barrier for rural communities.
 - She encourages applicants to consider their projects with a perspective that takes the forests’ life cycles into account and to think about what the forest provides and the systematic aspects of forest health.

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- Do not suggest adding rural communities as “disadvantaged communities,” rather suggest the components of a stand-alone program that would benefit rural communities.
- During outreach for the Greenhouse Gas Reduction Fund Investment Plan, CalEPA/ARB will host at least one public meeting north of Sacramento, with the potential for satellite meeting locations to better engage with rural communities. Ashley is looking for partners to host these satellite meetings.

10:30 – 10:45 Capacity Building

Lead: Nick Goulette and Jonathan Kusel

Review of the capacity building template and how it will be used throughout this workshop; introduction to thinking in the framework of capacity.

- “Capacity” refers to the assets as well as needs/deficits that a community has.
- Types of capacity include financial (ex: liquid capital), human (ex: expertise), social (ex: community cohesion), cultural (ex: cultural history/traditions), and physical (ex: infrastructure). All of these elements play a role in a community project.
- The role of capacity in success is why taking the time to build capacity is critical; applying lessons learned or “failures” to an organization’s capacity is an effective way to grow from experiences.
- Speakers encouraged the groups to consider their capacity assets and deficits in the context of the various sessions ahead.
- As state policy and rural culture shifts, projects like those represented in the room have an increased chance at success, but again, only if capacity is addressed.

10:45 – 11:45 Participant Presentations, Part 1

Moderator: Allison Reeves Jolley

Groups: Calaveras Healthy Impact Product Solutions (CHIPS), CCP, Fall River Resource Conservation District, Foresthill

Each group will present the following components: (1) *For the Public*: an overview of their work/project, progress to date, and a brief timeline of activities; (2) *Behind the Scenes Challenges*: Barriers to success (both past and present), and the associated lessons learned; and (3) *Q & A*. Total time/ group: 15 minutes.

I. Calaveras Healthy Impact Product Solutions (CHIPS) – Steve Wilensky, Board President

- History of CHIPS – Located in Calaveras County, CHIPS first came together when several major disasters happened (fires, murders, drugs, etc.) Once a very prosperous area, they’ve had 22 mills close over time. They had a toxic political and legal environment. They blamed each other for their fate, but not many people were doing anything about it.
- When the community finally had a meeting, they had an idea to unite around a common slogan: *Doing Good with Wood*. They formed CHIPS. The next step was to get some money. They presented themselves to the Economic Development Corporation, asking for a letter of support for a grant application. What they got was a lecture about not ‘rubbing elbows’ with certain parts of the community. Outcome – CHIPS still exists, and the EDC died 7 years ago.
- They lacked social infrastructure. CHIPS’ board got together to plot a course. They have a diverse board: an engineer, a realtor (editor of newsletter), a social services rep (financial officer), a

representative from Indian Manpower, representation from Motherload job training, and former and current county supervisors. They are all participating as volunteers; the only paid people are those who are doing the restoration work in the forest.

- They brought a congressman for tour of area along with Diane Feinstein, which got them their first earmarked funding (\$500,000). They realized they didn't know what they were doing and they got a small grant from the National Forest Foundation to help them pay for phone calls to get assistance with legal, organizational, and operational issues from a more experienced organization. They've relied greatly on the charity and assistance from their friends. They recently got BLM to agree to turn over some of its lands for their bioenergy/ community forest project, which is what their mentor organization (WRTC) had done. CHIPS worked with partner agencies to start Amador-Calaveras Consensus Group and helped procure a \$10 million CFLR grant.
- Challenges:
 - They had/have to do it themselves. This is unlike communities that already have FSCs, RCDs, or other organizations to help.
 - No staff to write grant applications.
 - Worker turn-over – they do drug testing and they lose folks from this. They need agency support to help workers.
 - Some disputes between Tribal communities.
 - Ebb and flow of federal money. Local contracts that they expected to get were given to an out of town firm that underbid them. This almost put them out of business.
 - PG&E
 - Making the water-forest connection with East Bay MUD. Beneficiaries could easily provide funding for upper watershed protection. They have a champion on that Board who they hope will help bring that about.
- Final message: Even though many of the groups in the room are competing for the same money, “a rising tide will float all boats.” If groups work together and boost one another, we can get out there and make a difference. The collective is stronger and more able to leverage more funding.

II. Camptonville Community Partnership – Regine Miller, Bioenergy Project Lead

Background:

- CCP came to be part of the bioenergy project almost by coincidence. They are a community organization who is fiscal agent for their local Fire Safe Council. They went to a meeting about siting a bioenergy facility and suggested a site near Camptonville, which was chosen as the location.
- Currently looking for a 3 MW project or less. They are in the feasibility study phase. Their needs for the project are based on their interest in a fire safe community, a revived economy, a redeveloped former sawmill site, and improvements in air quality.
- Their site is a mill that closed in 1994. It was one of two located in Camptonville.
- Their project goal is a CHP located at the mill site with co-located businesses. A study was conducted in 2010 and Celestial Valley (near Camptonville) was one of two upcountry sites suggested. CCP took on the management of the project recognizing there was a significant opportunity to improve local community health. In 2013-14 they received a NFF grant.

- Grant support: Currently working within the RCDI grant, DOE Pacific CHP TA Partnership Program, and SNC grant. Pending: Wood Innovations grant – joint application with Nevada County Biomass Task Force.
- They have questions about the Pacific CHP TA Partnership. They did initial suggestions even before completing feasibility study, but are refining suggestions now.

Barriers to success:

- Organizational capacity – low paid staff hours. Too much dependence on volunteers. The community supports the project but doesn't necessarily have skills and knowledge to move the project forward.
- No clear understanding of how this sort of project is developed. It hasn't been a methodical approach, and it appears as if everyone working on these projects is a pioneer.

Lessons learned:

- Going slow has worked for their community, as it has allowed time for dialog.
- It's helpful to ask questions and use the expertise of others who are willing to share. They've made a lot of cold calls just asking for information.
- Collaborate – by working together we can leverage one another's expertise and resources. (Nevada County, UC Cooperative Extension agent in the area.)
- No models of what they want to do, so they have to have trust in the process and that “the path will be built as we walk.”

Discussion:

- What was it like for CCP to expand from a family services agency to an economic development and environmental stewardship organization?
 - Their Board is trusting that this is a good thing for the organization. They have a ‘community health plan’, and this fit within that plan in that it will potentially improve the local economy. Being the fiscal agent for the FSC helps with their financial sustainability.

III. Fall River RCD – Todd Sloat, Watershed Coordinator

Background:

- Todd was formerly funded by a Department of Conservation grant for community development project work. He no longer has that grant, so he is a consultant to the RCD.
- They face a social capacity issue – they have infrastructure but not a lot of advocates to move things forward. His role is to try to do that. There are sad stories about kids in the community, which always highlights to him the importance of creating more viable jobs in the community. There is always a risk, but doing nothing is a huge risk as well. It's hard to create lasting jobs.
- Their Board is committed to moving forward with a CHP project, but there is no one in particular to manage/coordinate the effort.
- They conducted interviews to develop list of potential sites and found a good site, but it only had the capacity of 1.3 MW.

- Their major need is to identify someone locally who has capacity to lead effort. Todd is realizing that there probably is no one in the region who can do this. They'll likely have to bring in someone in from outside.
- They are working with the Sierra Institute on the concept of bringing in a 'Sierra Fellow' to help lead this forward. They would like to turn over project management (Bioenergy and CWPP) and related grants to an individual or organization for this effort. They are talking with Jonathan Kusel and Nick Goulette to find out what would be good individual/entity to take on that role.
- They have a good mix of private timberland and FS lands. They also have juniper woodlands that are being treated to improve sagebrush communities.

Challenges:

- Limited local capacity to lead the effort because they have lost a lot of their bioenergy facilities. They lost a 10 MW and a 7 MW facility in the last seven years.
- Their best chance is to build a 3 MW plant that is SB 1122 eligible, but the stakeholders in the region are open to anything that will create more jobs.
- The primary reason why plants have closed appears to be a low profit margin.
- Another significant void is the absence of a good business model. At the same time, there are people with money in the region who are dedicated to the community.

IV. Foresthill Bioenergy Group - Sherry Wicks, PUD Board Member

Background:

- Foresthill has 6,000 residents, many of whom are older residents. ~200 people do the volunteering for the whole community.
- One major project driver is that they've had several big fires. They lost their bank and their school downsized.
- They started investigating bioenergy in 2013. They had a town hall meeting and started a bioenergy committee to seek funding for a feedstock feasibility study.
- The amount of available biomass reduced after the King fire.
- The county is very interested in having a bioenergy project in Foresthill. They were involved in getting funding for the feasibility study. They had draft presentation showing a feasible 1-2 MW project. A value-added assessment is also underway for standard wood products. The County and the RCD have taken a lead on project development.
- They are moving forward with a 501c3, "Foresthill Community Development Council," that will work on a variety of community issues, including this project.
- Hopefully the 501c3 will help form partnerships and address the lack of communication described.

Challenges:

- How to get the rest of the residents involved.
- There are ~15 stakeholder groups, yet communication is rare.

11:45 – 12:30 Lunch

12:30 – 1:15 Participant Presentations, Part 2

Moderator: Allison Reeves Jolley

Groups: Watershed Research & Training Center, Yosemite-Sequoia Resource Conservation and Development District, Greenville/Indian Valley Community Service District, and the City of Portola

V. Watershed Research and Training Center – Nick Goulette

Background:

- Trinity County is outside the IOU area. They have a local public utility district that gives them cheap electricity, so SB 1122 won't assist with biomass power. They've operated multiple forest products business over the years, typically focused on value-added wood products. This is easier than the complexity of energy projects.
- Current project: They looked at the most valuable wood in their area that wasn't being utilized. This was hardwood residuals, so they decided that bundled firewood would be most valuable product. They are working with a business that already produces and sells this.
- They are starting with private land wood and businesses that can make supply commitments. Over time they want to broaden and move into the public land context.
- They are in the process of purchasing a privately-owned mill site that still has a lot of good infrastructure. Having a business venture ready to go is helpful with that. The Watershed Center will be a primary owner. They are going to use a kiln and certify as pest-free.
- They are learning to work with business partners already in the business, work with private landowners, and stack both capital (private and grant) and debt.
- There is not another entrepreneur in the community that will do this. They had to build that capacity as an organization.
- They will be looking for additional value-added products in the future (such as tan oak baseball bats).
- They hope to be operating by June 2015. They have raised about ½ of their funding.
- The project turns profitable at 200 truckloads/year; they are going for 400 truckloads/year. This would create 8 jobs.

Challenges:

- Resource commitment (wood supply)
- Market identification
- Site control – a lot of their old mill sites are not very accessible
- Finding business partners
- Raising capital/building equity

Discussion:

- Project Representative – their coalition involves environmental organizations that don't want to deal with SPI (private landowners). How do you deal with that?
 - WTRC is acting as a business, so they don't have to ask permission.

VI. Yosemite-Sequoia RC&D – Justine Reynolds

Background:

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- Y-S RCDC was contracted by the Sierra RCD. S RCD received an Interagency Agreement to assist with a bioenergy facility.
- The idea for facility started in early 2000 – after their mill closed, the community was interested in finding other wood products businesses for site. They started pushing for a biomass facility in 2011 and did a feasibility study and project design. They applied for and received Conditional Use Permit (CUP). Since then, they are trying to get funding to move forward with construction and financing.

Barriers to success

- Moving the project forward quickly but collaboratively—they want to make sure that the local organizations have been involved and their voices are heard. For example, the Center for Biological Diversity (CBD) challenged the project, yet it didn't attend any of the community workshops when they were invited, which reduced the CBD's leverage.
- Paying for pre-development project needs not covered by grants
- Cost of harvesting and transporting biomass.
- Fire burned some of their feedstock area.

VII. Indian Valley CSD and City of Portola

- The Sierra Institute is looking at the whole system and encourages folks to read its [Plumas Energy Efficiency and Renewables Management Action Plan](#).
- Indian Valley:
 - They have a vision and an excellent project. There is an anchor institution with a significant heat need (because natural gas is not available), and this presents opportunity. The main highway is getting torn up to install a new sewer system, so there is the opportunity to heat water with a community thermal system.
 - Barriers: the CSD has faced embezzlement, a subsequent recall election, and a declining budget. The CSD is in turmoil and moving forward with another project seems impossible, yet at the same time, such a project seems like exactly the opportunity for progress that the community needs.
- Portola – has a similar project as IVCS, but for District Heating that initially aimed to include the hospital, city facilities, and school. The school went ahead and put in a boiler, so it is no longer a potential partner in this project. The City and Hospital have been very supportive, but once they excluded the school the concept has struggled to make sense.
 - The regulatory process involved with putting a boiler in a hospital will take years. This is really difficult. They were advised to put it slightly off site.
 - Another challenge is who will own the facility. The project is financially feasible. The hospital has greater heat demand and understands the economics. But hospital cannot come up with the money, especially because the regulatory body won't pay for it if it is not the primary/secondary source. To meet current regulations, this system needs to be tertiary, which comes down to control panel. They are looking for how to do this, so that the heat can be used elsewhere.

Discussion:

- IVCS representative is looking at this as a way for the community to come back together. This is small but it can involve everybody and it may potentially provide some healing for the community.

1:15 – 2:30

Biomass Utilization Technologies and Development Pathways

Moderator: Jonathan Kusel

Presentations followed by collective Q &A:

1. Greg Stangl, Phoenix Energy: *Gasification*
2. Andrew Haden, Wisewood: *Combined Heat & Power*
3. Nick Goulette, Watershed Research and Training Center: *Value Added Wood Products*
4. Peter Tittmann, University of California, Berkeley: *Technology Pathways*

I. Greg Stangl, Phoenix Energy, Gasification

- Technology to turn biomass into energy has been viable since 1999 and is ready to get out! Greg states that there has been 6 years of a “desert climate” for biomass.
- Phoenix Energy was started in 2007 and has built two plants to date.
- They are the developer of the North Fork project, which after a long road will be built by the end of the year.
- Phoenix is a private label power company focusing on joint ventures. They become an equity owner along with community entities.
- Phoenix spends \$5.5 million / MW “all in”.
- Biochar used to be a waste product but right now it’s the co-product that is paying for projects. Greg suggests future discussion about the benefits of biochar for agricultural projects.
- Energy is expensive and it is the driver for their projects.
- They were able to finance projects before [SB1122](#) because power is expensive and producing power on site can significantly reduce costs. Air quality regulations are also driving electrification. Most entities formerly running diesel grinders are now using electric grinders.
- Greg suggests that projects “sell the heat to themselves,” as this will better ensure that the jobs and energy is kept local.
- BTUs are “worth” more than kWh, but an extra BTU is worthless and while an extra kWh does hold market value.
- Private capital costs 20% interest. Investors like numbers that “have a ‘2’ in front of it”. That works out to about to about 12.1%
- Greg voices that such projects will yield great resistance from utilities. Yet he believes that project partner persistence will win out. He promotes grit as the catalyst for a successful project.
- In his experience, interconnection cost certainty is a huge scare for investors. He suggests that projects play down the risk. Since it’s a cost that you do not control, he suggests drawing a 2 mile circle around the closest substation and find a site within that circle.
- Greg states that utilities are paid to move power not to make it and that nothing is more expensive than free wood in the forest.
- Biochar does not currently associate with contracts and people are generally unaware of it at this point.

- Greg suggests that projects get qualified for SB1122 and complete the various stages of project development, including Single Line Diagram, System Interconnection Study, CEC, CEQA, Site Plan, Site C; he also suggests to get permits not plans, and contracts not reports.
- Greg suggests that project manager's focus on what they need to build the plant and not to forget investors and profitability. He points out that any grant will be useless if your project isn't feasible.

II. Andrew Haden, Wisewood, Inc., Co-generation Technologies

- There are two pathways to generate electricity from woody biomass:
 1. Combustion: burning wood to make steam or hot oil
 2. Gasification: making gas to put in an engine
- Co-generation uses one of two turbines:
 1. Steam Turbines: backpressure turbine, extraction/condensing turbine. (Technological diagram shown on slide 5)
 - Strengths
 - High quality heat for a variety of industrial process applications
 - Reliable/durable, good electrical efficiency
 - Weakness: Requires 24/7 operation, involves intensive water consumption
 2. ORC turbine: Thermal oil-fired ORC turbine (technological diagram shown on Slide 8)
 - Strengths:
 - Unmanned because of the lower pressure
 - Reliable and durable- some in Europe have been going for 10 years with no end in site
 - There is low erosion of this turbine because of its high molecular mass
 - Low/no water consumption
 - Weaknesses: low quality heat, low efficiency, high cost

Nick Goulette, WRTC: Wood products and Value Added Products

- Value Added Wood products encompass everything else you can make out of wood besides heat and power- from hog fuel to solid logs
- Because energy has the lowest "value," it is important to ask, "What else can you make?"
- Nick discourages the groups from trying to compete with SPI and make 2x4's (something SPI is very "good" at), but he also points out that there are several other options.
- Products can range from small scale to large scale and can include things like mulch and soil amendments, mushroom media, posts and poles, baseball bats, flooring, and cabinetry
- The development pathways and thinking about engaging in what you can develop begin with an understanding of what your feedstock looks like. There is usually more than just slash that is not utilized by the big products and energy companies, so it is advisable to look at what they are not using.
- These projects require research on the species and sizes available, the quality of wood, the price of wood and delivery, and the potential terms of procurement (buying on spot market verses buying from loggers or from a broker).
- The publication from USFS and UCANR includes information on several products and also details on technology risk, capital investment required, market competition, and raw material supply requirements.

- Production of these products requires heat, so it is ideal to look at these products as way to use the thermal energy that your power project is making.
- Looking at the market and moving backwards allows for a financially viable product. You can study your wood all day, but if you have nowhere to sell it then you haven't gotten very far. Post and pole, for example, in California is an easy product to make and has a low capital cost, but you can only use ponderosa pine to make it, and if you look at the price point in the market, you'll most likely find that you won't have a profit large enough to move the product out of the woods.
- If you are trying to finance a project, demonstrating that you understand the market, knowing the marketing pathways, and having a strategy for marketing in the future is critical.
- We all want to "make jobs" but it is important sure that you have people that want those jobs

III. Peter Tittmann, Center for Forestry: Due Diligence

- His presentation can help you and your organizations develop capacity to evaluate technologies and to avoid some of the problems that have tripped projects in the past.
- Definitions:
 - Technology is a unit or package being considered from a given vendor.
 - A vendor is the person you are buying the package from.
 - Conversion is the entire process: what are all the steps between buying a raw product and selling the product.
 - Projects entail a set of values, goals and objectives that lead to evaluating conversion technologies.
 - Values are a set of principles or ideals that guide and define the project.
 - Goals are general statements aligned with values. Articulating these are critical.
 - Objectives are specific, tangible outcomes, i.e. creating 10 long-term living wage jobs.
- Before you jump into evaluating a technology, it is important to define the project. Know what capacities you have and what capacities you need. Where are uncertainties? How do you increase the certainty in things that you know? Know what you don't know, and know how to try to know it.
- Due diligence is evaluating all of the above.
- Ask questions like "does the technology do what I want it to do?"; "How does it perform?"; and "What are the specifications of the technology package?" Consider operating conditions, feedstock requirements, etc.
- See slides for categories of things you should ask / know, they fall into the categories of capabilities, efficacy, and cost.
- It is critically important to understand the development status of the technology
 - Development Stage, Production and Operating hours, and Guarantee/serviceability are important things to know.
 - Peter suggests to ask vendors for raw data on installed projects.
 - Thermal projects should also look at the latency and consistency of a technology: How quickly can the technology heat up or cool down, and does it have base load or peak capacity specs?
- Finally, does your project pencil out? Is the cost of making your product more than you can sell it for?
- When doing a cost evaluation, if your goals are broad, you may be able to accept more risk

- It is important to evaluate your relationship with your vendor- how do you need to interact with them? How are they able to interact with you? There are several types of vendors.
- Equally important is ensuring that you know something about every aspect of your business: contracts, fuel handling, processing, marketing. You don't need to be an expert in any of these, but you do need to be able to think about-and talk about- all of them.

Discussion:

- Technical Representative: Peter, you raised the issue of the fact that with renewables, there is an intermittency issue. We need to have “flexible” energy and some bills are now even looking at providing funding for this issue.
 - Greg: we run synchronous generators and can flip them on or off, but I don't get paid if they're turned off. So unless someone gives me a capacity payment to just sit there, I don't want to do it. But technically, that's no problem at all.
 - Peter: California has 1 GW or more of natural gas capacity being paid to sit offline just because they want to be ready to turn it on when the grid is ready. Also, the genset you use will determine a lot.
 - Greg: A generator takes 10 min or so to turn on/off.
 - Andrew: if you're going to spend all that money to install a turbine, you're going to want to turn them on. Natural gas is a better fuel for peaking than biomass.
 - Peter: There is some R&D biomass that could do; if you can store biogas on site rather than run 24/7, that could be good.
- Technical Representative: I'm surprised to hear that biochar brings 40% of the profit for a gasification system yet doesn't have much of a market.
 - Greg: We cannot produce zero biochar. We can tweak things but ultimately 9-15% of the feedstock will be used.
- Technical Representative: Is the pricing of that product durable?
 - Greg: Activated carbon is a billion dollar industry in California. If we can tap the water treatment option then we will be stable.
 - Peter: don't forget that you have to activate the carbon in order to enter that market
- Project Representative: We have an enormous amount of elephant manure and three turkey farms. If we can combine these things together with forest humus and other things, we can create a product. We want to know who can help us analyze the micronutrients and other compounds in that product.
 - Nick: UC can help, but as far as we can tell, when you go to these facilities that are successful doing that, there is a soil cooking wizard who knows the inputs and uses art and science to create their product.
 - Peter: There is a UC Davis scientist, Sanjai Parikh (sjparikh@ucdavis.edu), who keeps a biochar database and they can do the biochar analysis, but not necessarily an analysis on the other inputs. Knowing the primary nutrients will get you a long way down the road for helping a person grow a better plant and keeping a customer.
 - Christa: You might talk with Charborn about creating agricultural amendments. The contact person for Charborn is Debbie Pierce (debbie@charborn.com, 510-457-0482).

- Technical Representative: The focus here is on organizational and technological capacity building, and I've been thinking about this all day. [Community Capacity and Land Stewardship Grants from the NFF](#) are accessible to groups like this, as long as they go for project implementation projects.
- Project Representative: Why does Phoenix do projects as a joint investor? And why is your after tax IRR 22%?
 - Greg: I am a purchaser of capital, and I buy it at 20%. If I could get it at 18%, I would, because then I would make more money. For the level of risk that comes with these projects, we will pay 20% to get equity. We can get debt at 4% or 3.75% and that's unprecedented. Most recently, we got 5.75% on \$700,000, so the price is going up, but debt is still your friend.
- Technical Representative: Don't be scared off by all of these questions that Peter is talking about- you can hire people to help you answer the questions and sometimes the answers are short.
 - Peter: Do be careful when you are hiring people to ask these questions for you because they will not always share your same insights and values. For this reason, it is important for communities to be engaged in developing projects and participating in studies. Otherwise studies are going to be done by outsiders and end up sitting on a shelf.
 - Christa: Be careful when you are thinking about technologies. Electrostatic precipitators don't handle CO, so you might need to use a catalytic converter, which can drive up your costs quickly.
 - Jonathan: have this conversation with your air managers while you are selecting technologies, not after. In general, they want to work with you, but they don't want to be blindsided or rushed through permitting.
- Technical Representative: Nick, can you speak to the difference between getting feedstock supply agreements from a private and public landowner?
 - Nick: people have financed projects with stewardship contracts in other parts of the country where people have secured 10 year SCs. You can get financing for straightforward technologies with a stewardship contract.
 - Greg: You can finance anything with a Power Purchase Agreement. Selling heat is harder to prove because people ask about what will happen when the heat user moves away. Operating hours are harder to prove, but we at least are starting to get performance guarantees from Caterpillar and GE. That was not the case 5 years ago.

2:30 – 2:45

Break

2:45 – 3:35

California Wood Business Innovation Opportunities and Markets Assessment, The BECK Group

Moderator: Elissa Brown

Presentation from the BECK group: 20 minute presentation, sharing their project, market research and what they have discovered to date; 15 minutes Q & A; 15 community recommendations for the work and discussion on additional topics that BECK might consider exploring.

- BECK is the consulting firm awarded a USFS contract to perform a “California Assessment of Wood Business Innovation Opportunities and Markets” (CAWBIOM).

- NFF is administrating this project
- One of BECK's key services is feasibility studies
- CAWBIOM's objectives are to:
 - Assess the current status of the CA forest products industry.
 - Identify legitimate business opportunities for the USFS to increase the pace and scale of forest restoration.
 - Identify gaps and weaknesses in policy that must be addressed.
 - Prepare business feasibility and business planning for the most promising opportunities.
- The projected project completion date is November 2015.
- Methodology:
 - They started with list of 45 technologies, with purpose of telling USFS about what would work best.
 - They used a screen matrix to create a weighted prioritization of the technologies, with variables such as:
 - Market attractiveness
 - Commercial readiness of technology
 - Scale of operation
 - Raw material supply
 - Policy/regulatory constraints
 - Scale (in terms of whether or not the technology uses a large volume of material and the scale of the associated impact on the land).
 - SB1122 Market incentives.
 - The screening process is complete.
 - The next step is to do a detailed analysis of raw material supply.
- According to their screening matrix, their "top ten" technologies are as follows:
 - Cross Laminated Timber (CLT)
 - Note: current building codes aren't set up for CLT, but especially because of its sturdiness in the face of earthquakes, this may change.
 - Veneer – Laminated Veneer Lumber
 - Oriented Strand Board (OSB)
 - Note: Not having an OSB plant within 100 miles of California is largely why it ranks so highly.
 - Veneer – Plywood
 - I-joists, Finger-jointed Lumber, Glulam
 - **Post and Pole**
 - Lodgepole is the ideal species, which is a concern in terms of supply in CA. Most poles are treated prior to use, and there are treating plants in CA even though most posts and poles currently come from MT and ID.
 - **Animal Bedding**
 - In CA, the demand is mostly for horse bedding, but there is also a demand for poultry bedding in Southern CA. There is currently one known CA producer.
 - **Small Biomass CHP**
 - **Small Gasification/IC Engine CHP**
 - **Small Gasification/IC Engine**
- In their perspective, technologies listed above in orange seem most relevant for RCDI.
- Bill Carlson has helped develop ~13 CHP plants: Bill presented on processing materials that don't produce value added products (VAPs), but instead produce heat/ power.

- Gasification CHP has high flexibility in terms of its ability to produce syngas and carbon products.
 - A gas turbine makes it even more efficient, but there is a lack of confidence among some regarding how “clean” that technology is.
 - Potential heat customers in CA forests (prisons, university campuses, etc.) are based on scale; that is why things like community centers, etc., are not on the list.
 - Key thermal characteristics include:
 - Current fossil fuel use
 - Fairly consistent need year round
 - Low grade heat requirements
- Small Scale Conventional CHP
 - Bill urges the audience to not underestimate the influence that the CA carbon market has on how these technologies’ “rank,” especially since it is only guaranteed, for now, until 2020 per [Assembly Bill 32](#)).

Discussion:

- Project Representative: Can you provide clarification on the gasification process?
 - Bill: you grind up the wood into a certain size, place it in an enclosed vessel with regulated air pressure, and a low grade degradation process produces syngas (carbon and oxygen). Syngas is combustible, cooled, and cleaned. It captures some heat in that process, so a chip generator can then use cleaned syngas to create additional heat and power.
- Project Representative: Why aren’t casinos in the list?
 - Bill: I’m not sure; I will follow up on that.
- Project Representative: Benign treatments have high value; has BECK looked into that?
 - BECK- not yet.
- Project Representative: Are you looking at return on equity?
 - BECK is trying to get it down to five technologies first, and then they will develop a full business plan for those five, which will include return on equity estimates.
- Project Representative: Sierra’s markets, needs, and benefits are different than the rest of the state, especially after having lost its forest infrastructure. How does that fit in to the study?
 - The project genesis is to increase the scope and scale of forest restoration, so a technology must “show up on the radar” in order to be considered in the study. BECK’s results therefore may not necessarily match the specifics of Sierran forest communities.
 - BECK does consider how many projects there are likely to be in the market in the ranking system (in terms of whether or not the market might become saturated).
- Technical Representative suggests that they develop business plans for five technologies that pertain to rural communities rather than only two. Or that they generate aspects of a business plan that could be a template.
 - BECK does anticipate producing a template that the groups could use to develop a business plan for things other than the two they plan to fully develop.
- Comment: Oil prices make the conversion of syngas into liquid form unfeasible; however, certain final products require infrastructure changes, which is also a feasibility issue. The carbon market, regulations, and taxes will all impact this market.
- BECK suggests that it is a good idea to oversize the facility enough to have excess for new/emerging sales as markets develop and mature, but not increasing size so much that projects sacrifice currently available contracts.

3:35 – 4:45

Building Organizational Capacity for Success: What are the metrics and GANTT Chart Redux

Moderator: Elissa Brown and Jonathan Kusel

1. Group identification of key capacity issues
2. RCDI Groups share their metrics of success with the group. Refresher on GANTT chart compilation; participants begin to complete their GANTT charts
3. Refining issues and developing questions for tomorrow's presenters and beyond

I.) Participants broke out into small groups to identify key capacity issues and reported back to the collective.

Fall River RCD

- They have human capital and financial capital issues. Even having folks available to write editorials is difficult.
- They need to hire a manager who can focus on completing agreements and delineating next steps. A sign of success will be that Todd Sloat (the current Fall River rep at this meeting) will not be involved because things will have moved forward.
- Their end goal: to have a facility built. A landowner and feedstock are all available. The gaps are a developer and money.

CHIPS

- The challenge is to have someone manage the project and to secure all the knowledge to build the facility.
- They want to recruit a recently retired biomass power plant builder to be on their board or hire a project coordinator from a consulting agency. They prefer the first option because the second will divert money away from their community.
- They need money for administrative staff because there are 15 moving parts and their volunteers are burning out.
- They need to work more closely with tribal entities in order to better achieve their mission.
- Their six month goal is to secure a PPA, ATC, a feedstock agreement, financing, an interconnection agreement, building permits, construction and a permit to operate.

Y-S RC&DC

- They want to contract out on-site technical expertise for construction.
- They also need to raise more funds for administrative costs.

WRTC

- Success will be when they grow their firewood business from 200 truckloads to 350-400/year.
- One area of need is improved physical infrastructure at the site, such as reinforced building, paved and graded surfaces, and increased water supply.
- Their organizational goals include bringing in unrestricted revenue and increasing business development capacity.

Mariposa Biomass Working Group

Background:

- Jay has been involved with the project for 6 months.
- His group's primary reason to build a 1 MW SB 1122 project is to promote forest thinning.
- They have identified a site (near a landfill and adjacent to a substation), created non-profit, are currently engaging in community outreach and have lots of support.

Challenges/ Opportunities:

- Their biggest challenge has been to try to make the economics work.
 - They are looking at doing a fuel feasibility study to get a range of fuel costs.
 - They are also looking closely at biochar and what to do with that. UC Merced is working with them to turn the biochar into activated carbon. Their local wastewater treatment plant has agreed to try to use their carbon- the plant it currently paying \$1 pound for activated carbon and if Mariposa can get half that, they'd be happy.
- They are also looking for a steam customer; there might be an option for a laundromat.

Foresthill PUD

- Getting a 501(c)3 incorporated and filling the board is one of their 18 month goals, so that they can start bringing the social capital to the table.

Camptonville Community Partnership (CCP)

- Their key capacity issues include organizational capacity. CCP is a small non-profit working grant-to-grant and is constantly looking for revenue.
- Engaging its board of directors in the project itself can also be difficult. The board has several projects to track.
- There is also a lack of human capacity. They do have some retired foresters in the community but could use additional interested community members.
- Metrics of success include a favorable feasibility study, having a better idea of what businesses could be co-located at the site, and having investors. They have not yet begun to explore the notion of a stewardship contract but would like to utilize material from Forest Service, community members, and private timber companies alike.
- They are also interested in the option of a [B Corporation](#) running the business as a means to ensure there is alignment with the project owners and CCP's mission and objectives.

Mooretown Rancheria

Background:

- This group is a federally recognized tribe located 1.5 hours north of Sacramento.
- They have 116 acres of Federal Trust land.
- They will be building a 3 MW CHP system on the back corner of the lot.
- Originally they were interested in powering and heating its internal enterprises but the International District Heating Agency's screening recommended that they use the "buy all, sell all" power model.
- They now therefore planning to participate in SB 1122.

Challenges:

- Human capacity- folks are not interested in hearing about this project anymore.

- A key metric of success is a completed favorable investment-level feasibility study that reflects total stakeholder investment.

City of Portola

- Success in 18 months would be a project on the ground and working.
- Also, higher awareness of biomass challenges and opportunities within the community would be a measure of success.
- A key challenge is social capacity. Youth in the community are particularly apathetic, and they also lack a cohesive city council.

Round Valley Indian Tribe

Background:

- They applied for a \$75,000 DOI grant to cover a full feasibility study. They put the application together in 3 weeks, which they think may have been too quickly.
- They have developed a relationship with engineering and financing consultants.

Challenges:

- Timeline- they did their planning too late and were unable to get full attention of the tribal council (due to all that the council had on its plate at the time).
- They “have” a lot of human capacity but are having a hard time engaging that asset.

Indicators of Success (in 18 months)

- A realistic project timeline, a stewardship agreement with FS, a site selected, and values and community benefits embedded in the plan.

II.) Elissa Brown provided a refresher on the GANTT chart and groups began to work independently on their charts.

4:45 – 5:15

New Developments Associated with Wood Products

Glenda Humiston, State Director, California Rural Development

- Rural development provides funding and technical assistance for projects that promote:
 - Business & Cooperatives Development
 - Renewable Energy & Broadband
 - Community Facilities & Rural Utilities
 - Water, Sewer & Solid Waste Systems
 - Single, Multi-Family & Farmworker Housing
- USDA supports the development of biomass facilities as a means to address forest fire risk, bolster rural economic development, improve air quality, and meet renewable energy goals
- Glenda reminds the audience that their work in biomass has support from multiple entities, including the White House (re: [President Obama’s 2012 Executive Order on Accelerating Investment in Industrial Energy Efficiency](#)). This EO requires federal agencies and contractors to utilize bio-based products to the extent that is “feasible”). It’s that “feasibility” part that reduces the amount of bio-based products currently being utilized.
- Glenda presented on cellulosic nanomaterials as one of many “biomass” opportunities and explains its value based on its strength, low density, low cost, and renewable nature .

- Rural Development seeks to find synergy among the workforce, suppliers, capital, infrastructure, markets, research, and operation improvements to yield triple bottom line outcomes.
- Glenda reminds the audience that woody renewables can improve watershed health, create jobs and revenue streams, and equity.

5:15 – 6:15 **Beer/wine and networking**

7:00 **Dinner, location TBA**

Day 2

Friday, April 3rd, 8:30 a.m. to 3:30 p.m.

7:45 – 8:15 **Breakfast, served in Conference Room**

8:30 – 8:45 **Quick Review of Day One: Lessons Learned**
Moderator: Jonathan Kusel

8:45 – 9:30 **Stories of Success**
Moderator: Allison Reeves Jolley

Individual presentations from Watershed Research & Training Center (Nick Goulette), Yosemite-Sequoia Resource Conservation & Development (Elissa Brown), and Sierra Institute (Jonathan Kusel) on organizational capacity success stories and lessons learned in the context of biomass utilization projects; 10 minutes each followed by 15 minutes of collective Q & A.

9:30 – 10:30 **Capacity-Building Continued**
Moderator: Elissa Brown

Work session on GANTT charts (40 minutes); report-backs and brainstorming on next steps, networks, and mentoring partnerships (20 minutes)

The groups broke out into small groups to discuss their project's immediate next tasks, steps related to accomplishing those tasks, and resources that either are available to them or that they would like to have available to them to accomplish those tasks.

A few groups reported back, and all groups will email a proposal of how they would like to see RCDI help them address their capacity needs. Their proposals are due to Allison on 4/20/15 and will include:

1. Next tasks for their project
2. Why those tasks are important
3. The steps necessary to complete those tasks
4. What resources (technical and/or organizational capacity building services) are needed to accomplish those tasks.
5. Suggestions as to who could best provide that assistance.

6. Their organization's strengths and assets from which others can learn.

RCDI participant groups will then have follow-up phone calls with Allison to strategize next steps and RCDI assistance opportunities. These calls were scheduled during lunch; please email Allison if you need an "appointment" reminder.

Examples:

CCP:

- Task: Initial outreach
- Steps → Resources:
 - Compile key questions and answers → technical information to respond to those questions; a neutral facilitator to help navigate issues
 - Strategizing outreach → Success models to emulate
 - Developing materials → Identify other materials to work from

Fall River RCD:

- Task: Secure a project manager
- Steps → Resources:
 - Write a job description → utilize templates from other RCDI/BWG groups

Foresthill PUD:

- Tasks: Build board and organization capacity, then define goals, objectives, research, funding
- Steps → Resources
 - Strategic planning → Other nonprofits with successful strategic planning efforts

Next steps for RCDI technical assistance:

Groups will submit their proposals to Allison by 4/20/15; see notes above.

10:30 – 10:45

Break

10:45 – 12:15

Financing Community Development Projects

Moderator: Jonathan Kusel

20 minute presentations, followed by collective Q & A.

1. Seth Wilson, Director, Energy and Economic Development, Cutting Edge Capital
2. Jessamine Fitzpatrick, Vice President, New Island Capital
3. David Wilkinson, Real Estate Consultant, Northern California Community Loan Fund, New Market Tax Credits and other Investment Mechanisms

I. Seth Wilson Director, Energy and Economic Development, Cutting Edge Capital

- The eight Sierra Nevada RCDI counties have ~100,000 households holding ~\$13.2 billion in assets that could potentially be accessed for local investing.

- Local investors investing for local impact receive quality of life benefits in addition to financial returns.
- Local investing can also attract outside capital including non-local angel investors (defined below) and venture capitalists, as well as leverage from government programs.
- Civic engagement is essential to improving the community development business and investing climate.
- Seth revisits the asset based community development breakdown of community capital, which includes built, financial, political, social, human, cultural, and natural capital.
- Seth describes the relationship between well-being and “local issues” (such as civic engagement, safety, and access to services). Multiple studies indicate that these issues play a greater role in well-being than GDP.
- Seth explains the pools of financial asset holders as potential, accredited investors
- The US Securities and Exchange requires that a company or private fund may not offer or sell securities unless the transaction has been registered with the SEC or an exemption from registration is available. Certain securities offerings that are exempt from registration may only be offered to, or purchased by, persons who are accredited investors.
- [32% of the US households control 51% of investable assets.](#)
- Within the Sierran/RCDI counties (Calaveras, Madera, Placer, Plumas, Shasta, Siskiyou, Trinity, and Yuba Counties), 4% of the households control 26% (\$7.01 billion) of the financial assets.
- According to the 2009 Business Dynamic Statistics Briefing, job creation in startups is significantly greater than net job creation in market without startups. The Longitudinal Business Database also finds that [startups are less impacted by recessions.](#)
- Startups often go through a [financing cycle](#) where their relationship between time and revenue dips, increases, and plateaus.
- Angel investors, are characterized as affluent individuals who provides capital for a business start-up, usually in exchange for convertible debt or ownership equity. According to the [2015 Pepperdine Private Capital Markets Report](#), angels provide ~90% of outside equity for startups.
- The average angel’s investor profile, again according to the 2015 Pepperdine Private Capital Markets Report, are summarized on Slides 13 and 14 of Seth’s presentation. Venture capitalists profiles, according to the same report are on Slide 15
- Seth recommends using strategies that create investment funds in which unaccredited investors can participate to consider strategies that compliment Community Development Loan Funds, Community Development Venture Capital, Small Business Investment Companies (SBIC), and California Capital Access Company.
- Potential opportunities include RSF Social Finance, Calvert Foundation, the Northern California Community Loan Fund, and CERO (Cooperative Energy, Recycling, and Organics)
- A [Direct Public Offering](#), or Investment Crowd Funding” is a SEC exempt security (subject to state regulation) that can be made to the public, which includes an unlimited number of accredited AND *unaccredited* investors as well as directly to investors (without a middleman)
- Community Development Financial Institutions (CDFIs) have been awarded \$2B (\$250M in CA) since inception; \$40B has been invested through New Market Tax Credits (\$3.6B in CA) since inception.

- [Studies suggest](#) that Community Development Venture Capital (VC) investments are less likely to go public or be acquired, are less likely to receive traditional VC capital, are in regions without many traditional VCs, attract VC firms and VC investments to regions in which they invest, and may have a positive return to their community when viewed through a broader lens of all stakeholders
- The Small Business Administration and Small Business Investment Company (SBIC) partnership has \$23.8 billion in assets (2014), \$1.3 billion in new commitments to SBICs, \$5.5 billion in financing dollars were invested in small businesses, and financed 1,085 small businesses, 26% of which were in low-to-moderate income areas or were minority-, women-, veteran-owned businesses.
- The Capital Access Company Law (CACL, [SB 1155](#)), authored by Senators Bob Dutton and Current Price and enacted in 1998, aims to make the law more user friendly and permit capital access companies to become licensed SBICs.
- The law creates exemptions from the regulations mandated under the Investment Company Act of 1940. The exemption is subject to three conditions: a state must enact a statute that licenses and regulates these funds, it limits investors to accredited investors only, requires the funds invest in small businesses in the state.
- Actions Seth views as necessary to make CACL a tool for local business development include establishing “investor suitability standards for non-accredited investors” and ensuring that the Securities and Exchange Commission issues a Rule recognizing that the CAC securities approved by the state are “appropriate in the public interest and consistent with the protection of investors.”

II. Jessamine Fitzpatrick, Vice President New Island Capital

- New Island’s mission is to invest patient capital – at scale – to generate risk-adjusted financial returns and transform the way natural resources are used, businesses are built and communities thrive.
- They currently work with three asset classes (liquid assets, real assets, and private equity) to impact four key areas:
 - Environment – projects that drive land conservation, water conservation and efficiency, low-impact lifestyles (consumer products), green buildings, pollution abatement solutions, environmental markets.
 - Sustainable agriculture – companies and technologies driving agricultural solutions that promote sustainability and support small and mid-sized farmers. Green agriculture technologies and input, farmland, aquaculture, organics, community-scale food production, and farm energy solutions.
 - Alternative energy – which currently includes solar, wind, and hydro, as well as the supply chain for alternative energy, like materials and technologies that support alternative energy production. These products include racks to mount solar panels on roofs, alternative fuels, and energy storage solutions. The underlying goal in this category is to drive widespread access to affordable, climate neutral and environmentally benign renewable energy. Looking for products, technologies, business models that can dramatically accelerate the adoption of renewable energy.

- Communities – both virtual and place based models that utilize communities as lever points for disruptive change. Village oriented models that re-localize food, energy, economic systems. Virtual platforms that transform the flow of conversation, resources, and capital around sustainability-related practices. Green affordable housing, community banks, municipal level energy projects. Platforms that support transparency and sustainability in consumer products.
- Their current portfolio snapshot, broken out by these categories is shown on Slide 5.
- When accessing a potential investment, their first step is to determine fit as it relates to the investment’s impact orientation, risk/return profile, size, duration, long-term goals, and partnership approach. Examples of sub-categories are shown on Slide 8.
- Jessamine presents what New Island Capital views as the range of return expectations from various sources of capital. These expectations range from 0% (grants) to 20%+ (private equity); other sources and expectations shown on Slide 7. Jessamine encourages folks to consider how they can change the risk of their project’s profile with tools like contracts, loan guarantees, and leverage.
- When working with groups like New Island Capital, she encourages folks to expect diligence, financial analysis, negotiation, conversation, iteration, and difficult and/or seemingly “uninformed” questions.

III. David Wilkinson, Real Estate Consultant, Northern California Community Loan Fund (NC CLF)

- The mission of the NC CLF is to promote economic justice and alleviate poverty by increasing the financial resilience and sustainability of community-based nonprofits and enterprises.
- Their programs include lending, investing, and real estate/financial consulting as it relates to stronger communities; they serve 47 counties in CA (Slide 4).
- [New Market Tax Credits](#) (NMTCs) were created as a bipartisan effort in 2000 to encourage investment in low-income communities.
- NMTCs are made to Community Development Entities (CDEs); hundreds of CDEs compete annually for a limited supply. 30% funding rate. Allocations have recently averaged at \$3.5 billion/year.
- This year’s announcement is in May-June 2015. CDEs can be for-profit or non-profit, but must have low-income representation on the board.
- NCCLF is among the award CDEs; there are others in CA.
- The 2013-14 NMTC authorization has expired; bipartisan bills have been introduced in Congress to extend the program.
- President Obama has requested an increase from \$3.5 to \$5 billion and to make the NMTC program permanent.
- AB185 introduced in State Legislature to create a California NMTC; AB771 also introduced to create a State Historic Preservation Tax Credit.
- Over a period of seven years, the tax credit totals at 39%. From a \$10 million tax credit allocation, this would yield \$3.9 million to the investor over those seven years.
- Eligibility is based on the census tract’s poverty rate, median family income, unemployment rate, and secondary criteria (listed on Slide 14).

- When awarded a NMTC, the CDE sells it to an investor (typically a large bank) who then makes a loan to the project.
- NMTC investments are typically paired with loans, grants, and land proceeds to fund a project.
- The net benefit to a project must take into account equity; CDE, legal, accounting, annual asset management, and monitoring fees. These fees will vary, but Slide 23 provides an example.
- After 7 years the loans are forgiven and converted to equity, and the bank is typically bought out for \$1000.
- The ideal transaction meets the NMTC eligibility requirements, is in a location that meets highly distressed criteria, will yield significant community impact (such as jobs, health care, child care, education, manufacturing, sustainable energy), has significant local support, meets the CDE community impact objectives, and is a ready project except that it needs gap financing.
- “Readiness” ideally includes a site control agreement, architectural construction documents in place, all regulatory approvals defined and schedule, selected contractor with a draft contract, and other financing sources secured.
- Community development block grants (CDBGs) is a flexible source of grant money for a wide variety of projects for rural cities and counties. Grants can go towards infrastructure, loans to developer or businesses, real estate loans, and/or microenterprise loans. Currently it targets areas with a median household income of \$35,000 and they can be paired with NMTCs.
- [Economic development block grants](#) (EDBGs) are another pairing opportunity, but they do require NEPA and Local Housing compliance
- The California Infrastructure Bank, a state chartered bank based in Sacramento, also makes below market loans to nonprofits, and their loans can be paired with NMTCs as well.

12:15 – 1:00 **Lunch**

1:00 – 1:30 **[SB1122](#) Implementation**
Moderator: Angie Lottes

Christa Darlington, Darlington Legal Services, (20 minutes, 10 minutes Q & A)

- Christa formerly worked ½ time for the Placer County Air Quality District
- In September 2012, Gov. Brown signed SB1122, *Rubio*, into law, requiring an incremental 250 MW of renewable Feed-in Tariff (FIT) procurement from small-scale bioenergy projects that commence operation on or after June 1, 2013.
- The statute requires that each of California’s three large investor owned utilities (PG&E, SCE, and SDG&E) must procure a share of the statute’s 250 MW requirement based on the ratio of each utility’s peak demand to statewide peak demand. Additionally, the statute orders the CPUC to allocate the 250 MW procurement requirement among the following categories:
 - (i) For biogas from wastewater treatment, municipal organic waste diversion, food processing, and co-digestion, 110 megawatts.
 - (ii) For dairy and other agricultural bioenergy, 90 megawatts.
 - (iii) For bioenergy using byproducts of sustainable forest management, 50 megawatts.
- Current status of program implementation:

- Comments were accepted on the template Power Purchase Agreement (PPA) and program instruction guide (called “The Tariff”) in early March; they are now in the final phases of the PPA template review.
- She expects a final decision in May. There may be changes in the decision that go beyond just the PPA and Tariff.
- The first auction will likely occur about 60 days after the decision is voted on; so that means sometime this summer we expect the program to go live.
- SB1122 creates opportunity for the projects represented in this room to get more competitive prices.
- Pricing electricity under BioMat is as follows:
 - The price for every KWh that a facility produces will depend on a variable price mechanism (auction every sixty days)
 - Currently, the price is set to open at 12.7 cents per kwh
 - The price cap is at 19.7 cents per kwh
 - The price moves by an increment of 0.4 cents, then 0.8 cents, then 1.2 cents thereafter
- Price movement
 - The minimum number of bidders is initially three, then after first bidder strikes at a price, there must be at least five projects in the queue before the price will move again.
 - The price will rise if less than 20% of 9 MW available (1.8 MW) is allocated. Then, the price remains static for the next auction, and then will rise if no one strikes at the price in that following auction. If all MW are ever subscribed in one auction, the price will decrease for the following auction.
- A state-wide price pool is maintained; so minimum number of bidders and price changes are considered within one group, statewide. Individual IOU allocation targets are still handled independently.
- Once a project accepts a price (“strikes”) it will go through a process to enter into a PPA that has standard terms and conditions with very few modifiable terms. This inflexibility is why the template is so important; the template will be available online.
- These mechanisms intend to find a balance between protecting rate payers and instigating competition.
- In terms of pricing and project financial feasibility, the bottom line is that projects are needed in the queue soon. Prices will go slowly up over time.
- There is 9 MW available at every option, until utilities have allocated their total capacity
- Qualifications to enter the queue in BioMat:
 - \$2/KW fee
 - The Rule 21 pre-application report is not a requirement to be in the queue, but it is a tool available to communities that are very early on in their process. It costs \$300, and SWET may be able to pay for it for you. You need to have a site chosen and a general idea of site layout and then PGE will calculate the capacity vs/ average usage of that line. This study helps projects determine whether or not you’ll need to upgrade the line (which can cost between \$100,000- \$2 million).
 - Must have a System Impact Study or Phase 1 Study on interconnection.
 - 100% site control that is owned, leased or optioned upon execution of PPA.
 - One member of the project team has completed at least one project of similar capacity or technology, or have begun construction on similar project.
 - The project must be online within 30 months of signing the PPA.
- Required characteristics of a generation facility:

- Produces no more than 3 MW of electricity
- Must be certified as RPS eligible
- Must commence on or after June 1, 2013
- Located within service territory of SDG&E, SCE or PG&E (note that SCE only will have 2.5 MW allocated for forest biomass projects, and SDG&E is required to support one .5 MW project, leaving 47MW in PG&E territory)
- Strategically located: meaning that transmission level upgrade costs over \$300,000.00 must be bought down by project developer.
- Feedstock requirements for projects to be considered as “bioenergy using byproducts of sustainable forest management”:
 - 80% of the feedstock must be forest biomass derived waste
 - 20% may be other wood that qualifies for the program in other categories: such as agricultural or urban wood waste.
 - Forest biomass must be “sustainable” as defined by the CPUC specifically for this program, as waste derived from (1) fire threat reduction activities (2) fire threat clearance activities, (3) infrastructure clearance projects, or (4) “other” waste wood that must be analyzed through a check list that generally assures it comes from projects associated with the current forest practice act and other federal and state rules.
 - There are fuel source verification and monitoring processes generally outlined that will be further described by the CPUC in upcoming months.
- FYI- International experience is accepted
- SWET may be contracting her to put together a 3-5 pager on the required characteristics of facility.

Discussion:

- Is 3 MW net or gross?
 - Christa: GROSS
- Comment: All of us are RPS eligible
- Comment: an ag-biomass project would be a different queue than woody biomass (woody biomass projects need to be 80% wood). The CPUC definition was created specifically for this program, and the 4th feedstock requirements is a checklist.
 - Christa: There is annual auditing on these feedstock requirements.
- Comment: There is not a cap on the variability on prices.
- Comment: If you get an EPIC grant, you can still be in 1122.
- Christa: Multiple projects using the same vendors can be in queue simultaneously, but you can't have multiple projects with the same owner in the queue at the same time (even if they are only a partial owner there could be problems; this requires analysis).
 - Project Representative- Part of Greg's model is partial ownership, so does that mean he is cut off from projects now that he is already an owner of the North Fork project?
 - Christa: As an owner in Northfork, any other project in which Greg maintains an ownership interest could be excluded from counting towards the three project participation requirement that will trigger price increases. He can be hired as a consultant/employee, and that project using him would still count as a separate project that could trigger price increases, but he cannot be an owner (but again, defining “owner” requires analysis).
- Christa: Remember, the PPA is automatically cancelled if you miss that 30 month deadline, which includes needing permitting to be done.

- Project Representative- For SB1122 purposes, what is the definition of a forest?
 - Christa: The type of tree doesn't matter, generally using Cal Fire guidelines that 10% of the land needs to be cover by forest. PG&E clearing road lines counts as acceptable feedstock under the program.
- Project Representative- Does manzanita count as "forest"?
 - Christa: In terms of viable biomass, she suggests that people look into the research. In terms of the 10% requirement, she is not sure that Manzanita qualifies.
- Christa: The worst case scenario is that someone strikes before the price is not high enough for most other projects.
- Christa: PG&E can create obstacles by being overly aggressive when assessing compliance with program criteria, but we don't need to worry about them "not playing" as they are legally bound to participate.
- Project Representative- Would bundling investors create an eligibility problem?
 - Christa: 20% investor is likely OK, but if they become an owner of the project, that creates the problem, but this does get complicated. It is based on more factors than the percentage of business ownership.

1:30 – 2:00

Local Incentives, Support, and Learning Opportunities

Moderator: Allison Reeves Jolley

General Grant Opportunities, Elissa Brown, 15 minutes

Biomass Working Group, Angie Lottes, 15 minutes

I. Elissa Brown, Fund Development Analyst, Sierra Nevada Conservancy

Elissa's goals are to try and get more funding for projects like those in the room, to provide support for grant management, and to look at investment funding.

Of the funding sources that she is aware of, there are three general categories of funding types:

1. Capacity building/outreach funding
2. Project planning/feasibility studies
3. Development costs and implementation

Review the list of grant opportunities (distributed) for more information.

II. Angie Lottes, Biomass Project Manager, The Watershed Research and Training Center

- SWET is made up of a team of members, many of whom are in the room.
- SWET looks at proposals and discusses whether or not they match its funding priorities.
- SWET is in the process of redesigning its application and will be wrapping up their current award and applying for the next round of funding in one year.
- What SWET offers:
 - Opportunity scan: this fund is for projects that early on and have limited funds.
 - Project Development: this fund is for projects that have completed pre-feasibility (site selection and feedstock research) and are ready for next phase of major development.
 - Barrier Issues: this fund is used to addresses significant issues that affect several communities.

- Angie reminds the group of the importance of networking. Call, email, text Angie/SWET with questions and ideas. Also, it is helpful to network with similar projects.
- Look at Biomass Working Group meeting notes and emails—available for those interested.
- SWET can hold workshops and appreciates feedback as to what information/training would help advance projects.
- They want SWET to be as useful for as many projects as possible and do not a set limit on funding amounts.

Discussion

- Project Representative: Would SWET support other IOU territories?
 - Angie: Yes, SWET will work with all types of biomass energy projects in CA. In Southern California, we mostly hear from technology developers and engineers.
- SNFCI expires in May. They are looking for ways to continue it and have maximum communications in various communities. Do folks have ideas of other funding options that could cover the cost and keep it viable? We could put some portion of funds towards something supported by another agency, but SWET would need to weigh the pros and cons.
- Project Representative: Sharing information is very valuable. How stable is Angie's role for SWET?
 - Angie: SWET started through Wood Innovations last year; there were 5-7 nationwide at that time; now there are 27. Two states were funded in the test round, and both were re-awarded. SWET programs are strong and growing exponentially. We'll have to reapply, and need to put in a strong application that demonstrates that we had an impact.
- Project Representative: Has SWET held any webinars?
 - Angie: Not yet, but definitely willing.
- Project Representative: the idea of the RCDI community meeting via teleconference once a month and then reporting back to the BWG could be useful.
 - Angie: the USFS supplies money to SWET and SNC/CAL FIRE provided a lot of match to make their application competitive. SCE/PG&E also cut checks to help support SWET; this cash match got SWET a cooperative agreement and put them high up on the list.

2:00 – 2:40

Agencies, Energy, Wood Utilization and Communities

Kim Carr, Assistant Deputy Director for Climate Change and Energy, CALFIRE

Bruce Ross, District (1) Director for Assemblyman Brian Dahle

I. Kim Carr, Assistant Deputy Director for Climate Change and Energy, CAL FIRE

- Kim worked for conservancies for years and just moved to CAL FIRE, an organization of 7,000
- Her position is focused on climate and energy; it is CAL FIRE's first time with someone in that position. This area could be a full program down the road.
- Many climate action teams are putting together plans and policies.
- A minority of the CA population live in forested regions, so there is a need to continue telling the rural story. It's a little bit less accessible for the urban population, which again is CA majority.
- Kim emphasized the high fire risk component of why these projects are so important.
- Without local people driving these projects in rural communities, Kim believe that they are much less likely to happen. Community, rather than just local government, support is also critical.
- A useful technique is to find the USFS personnel excited to do this work and to get them to implement their contracting tools (which are used elsewhere). 10 year contracts that guarantee

quantity provides local communities a revenue source. Those dollars stay local and go to restoration projects.

- Kim reiterated the importance of finding motivated district rangers and district supervisors.
- CBD (Center for Biological Diversity) has appealed three projects already. Buena Vista and Cabin Creek both resulted in significant concessions. North Fork was also appealed and but had success in terms of the lack of concessions made. North Fork a good example of success, especially concerning why community organizing throughout the process helps mitigate such contentions.
- Cabin Creek doesn't fall within 1122, so they are having challenges with securing a PPA.
- She reminded the audience to communicate on the issues relating to both renewable energy and wildfire risk mitigation, not "either/or."
- The University of California Forest Research and Outreach Program has a [California Forests and Greenhouse Gas Reduction Webinar Series](#) and the 4/3/15 session discussed biomass quite a bit.
- The Forest Carbon Action Team thinks that the Biomass and Bioenergy document to be adopted by the Governor will be influential.
- Kim encourages the group to keep working together to overcome their shared challenges.

II. Bruce Ross

- [AB 590](#) and [AB 1345](#), both introduced by Assembly Member Brian Dahle, are also relevant pieces of legislation for these issues.
 - AB 590 aims to get the currently fallow biomass plants back running (such plants exist in Burney, Susanville, and Loyalton). How this bill would work and what they'd do with the money is still a question. It could be subsidy, etc. They are currently welcoming ideas.
 - AB1345 proposes to count fire emissions as greenhouse gases (GHGs). The Air Resources Board doesn't currently take forest fire emissions into account as GHGs, largely because they were created to regulate tailgate emissions. This bill also proposes that 100 million dollars be allocated towards fuel reduction in Sierras and thus acts as a companion bill to AB 590.
- Wildfire is changing the carbon cycle
 - Ex: the Rim Fire emissions were ~10% of annual vehicle emissions.
 - It's not just that they're big, it's the intensity that has greatly escalates wildfire GHGs.
 - Instead of forests acting as a carbon sink, they are becoming a carbon source when they burn with such intensity.
- Assemblyman Dahle understands the role of the forest in climate change and recognizes that biomass seems to currently have a competitive disadvantage, compared to wind and solar in terms of subsidies. He supports biomass subsidies to level the playing field for woody biomass.
- Bruce points out that this issue often creates division within in the environmental community (CBD resistance, etc.)
- People in urban areas (even the environmentally aware folks) often don't know about the urgency of the overstocked forests in terms of climate change and wildfire. As a group, Bruce suggests that we work to identify how do we help the people of LA/ San Francisco understand these issues so that we can get biomass projects supported at the policy level.

Discussion:

- Project Representative: Prescribed burns are an important tool for non-accessible overstocked areas.
- Project Representative: Will the North Fork investors' portfolio be applicable/ available as a template to others?

- Justine: Yes, YSRCDC is mostly pursuing contracts with USFS because of availability. It also looked at contracts with contractors, but SPI seems hesitant due to liability concerns.
- Project Representative: What role does the USFS Regional Office play?
 - Kim: R5 staff is based in Vallejo and includes contracting team.
 - Jonathan: The Sierra Institute is having success with R5 on issues relating to local benefit, and there is buy-in to notion that there is a regional responsibility to refine and distribute local contracting mechanisms.
- Project Representative: CHIPS had a successful walkthrough of their forest with CBD.
- Kim will follow up on Bruce's exemptions question.
- Comment: AB32 captures the value of ecosystem services related to forests, but there isn't currently a tool like that for water.

2:40 – 3:15

Moving Forward

Moderator: Jonathan Kusel

Formalizing of next steps and partnerships. Groups identify three things they are going to do, one or two of which they would like assistance on from fellow groups and/or the RCDI grant. Other communities welcome to comment.

SB1122- who will be ready, when?

- SWET and the BWG group manage a list of the potential SB1122 projects and their timeline; email Elissa for an updated list of who is likely to be ready when.
- Angie has a map for those interested.

Collective Action Engagement and Next Steps

- Project Representative: These projects are each drawing on the same staff and resources; it would really help if these groups partnered. We need to bundle funders/investors and also resources to lower the risk. Maybe these funders could cover the planning costs of the projects. This could be a joint SF/Sac trip.
- Seth, David and Jessamine have interest in how to collectively structure that conversation; if you are interested in that please let Allison know.
- Technical Representative: With the New Enhanced Program, there are opportunities for groups to give feedback/presentations to foundations on how they might shape their grant RFPs etc.
- Christa has relationships with banks in Sacramento and Walnut Creek and there could be a potential finance day with these groups as well; there are multiple investors that folks could choose from.
- Technical Representative: It would be helpful for Seth to put together a scope of work to help groups get our "fit" right. Seth will submit a one page proposal to RCDI and SWET.
- Technical Representative: There are political organizing aspects, investor components, comprehensive funding strategies that should be addressed as we move forward.
- RCDI recipients could join together for regular peer-learning conference calls and then representative reporting back to SWET. RCDI could facilitate this process; Allison will follow up on this with Angie.
- RCDI is a resource for travel/ asset mapping/ peer learning to address and progress these issues; remember that as you submit your proposals.

3:15 – 3:30

Wrap-up and adjourn

Sierra Institute Rural Community Development Initiative Workshop Notes April 2 & 3, 2015

The notes included in this document reflect the opinions and expertise of the presenters and workshop participants. They are provided to document the workshop and do not constitute support for one position or perspective over another.