ENVIRONMENTAL QUALITY COUNCIL

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ENVIRONMENTAL QUALITY COUNCIL
ENERGY POLICY SUBCOMMITTEE
MINUTES

Date approved: *

March 9, 2004 Room 137, State Capitol Building

Please Note: These are summary minutes. Testimony and discussion are paraphrased and condensed. Exhibits for this meeting are available on request.

COMMITTEE MEMBERS PRESENT

SEN. WALTER MCNUTT
SEN. GLENN ROUSH
SEN. KEN TOOLE
REP. NORMA BIXBY
MR. TOM EBZERY

COMMITTEE MEMBERS ABSENT

SEN. DANIEL MCGEE, CHAIR

STAFF PRESENT

TODD EVERTS, Legislative Environmental Analyst

AGENDA

Attachment 1

* These minutes were completed after the interim recessed and were not approved by the subcommittee.

COMMITTEE ACTION

- Approved the outline of and continued work on the draft subcommittee report.
- Agreed to have staff work with the DEQ to update Understanding Energy in Montana and the Energy Law Handbook.

CALL TO ORDER AND ROLL CALL

Sen. Walter McNutt called the EQC Energy Policy Subcommittee to order.

ADOPTION OF MINUTES

The minutes for the last meeting were not available.

UPDATE ON ENERGY AND TELECOMMUNICATIONS INTERIM COMMITTEE

Ms. Mary Vandenbosch, lead staff for the Energy and Telecommunications Interim Committee (ETIC), provided an update on the committee's activities. She noted the ETIC met on January 29th and 30th in Great Falls. A panel discussed the merits of clearly authorizing the default supplier of electricity to own generation assets and include them in their rate base and earn a rate of return. She noted no one opposed the idea and most favored it. The committee asked Mr. Everts, staff attorney for the committee, to identify all the changes that would be necessary to authorize the new policy.

Ms. Vandenbosch continued that Mr. Pat Corcoran from NorthWestern Energy described the NorthWestern Energy 2004 Electric Supply Default Procurement Plan that was submitted to the Public Service Commission (PSC) in January. Mr. Gerald Mueller described the role of the associated technical advisory committee and their general observations and the advice they had offered.

Also at the January meeting, the ETIC decided to send a letter to the Montana Department of Labor and Industry (DLI) urging them to adopt energy efficient building codes without waiting for the committee to complete its HJR 13 study. The DLI replied to the letter and indicated they had begun their rulemaking process.

Ms. Vandenbosch explained that the ETIC asked her to prepare a white paper on potential energy efficiency measures. The committee also asked her to identify changes in the law that would be necessary to authorize ring fencing and to give the PSC express authority over certain utility transactions. She noted the Governor's Task Force is also discussing potential types of ring fencing that should be authorized. The ETIC also heard from experts on transmission capacity and efforts underway to improve the transmission system.

Ms. Vandenbosch concluded that the committee will meet again on March 25th in Helena and make a decision on Universal System Benefits programs that are authorized under both the electric and gas laws. She added the electric program receives much more attention so she wanted to emphasize that they are looking at the natural gas program as well. The ETIC will hear presentations on the most cost-effective energy efficiency measures that can be implemented in Montana from Tom Eckman, Northwest Power and Conservation Council; demand side management from NorthWestern Energy; and an update on the NorthWestern bankruptcy from NorthWestern, the PSC, the Montana Consumer Counsel and the Attorney General's Office.

- **Questions from the Subcommittee**

Sen. Roush asked if he understood it correctly that the committee had given the PSC authority over utility transactions. Ms. Vandenbosch answered that the ETIC asked her to identify changes in the law that would need to be made to give them that authority but they haven't yet asked for a bill. If they did request a bill only the Legislature could give the PSC that authority.

Sen. Roush asked as a followup if that would only relate to what is now covered under the PSC, not electric co-operatives. Ms. Vandenbosch replied that the ETIC hasn't made that decision but she is assuming that they are looking at regulated utilities and co-operatives are not regulated by the PSC.

Sen. Toole asked that when the ETIC discussed the utility owning generation assets, could she describe if there was a discussion about the possible mechanisms for preventing a utility cutting itself a deal if it owned its own generation. Ms. Vandenbosch replied that Mr. Corcoran suggested looking at virtual rate-basing where they would bid competitively and the utility's assets could be part of that process. She remarked that the concern did arise and that the committee agreed protections were necessary. Mr. Bob Nelson from the Consumer Counsel in particular had given that issue a lot of thought.

Mr. Everts added that he was drafting a concept bill for the ETIC and part of it was functionally separating the default supply process as a distinct unit within the utility.

Sen. Toole offered that in the past that concern had been addressed through least cost planning and he didn't know if that needed some special consideration.

WHAT ARE THE BARRIERS TO AND THE OPPORTUNITIES FOR COMMERCIAL WIND FARM DEVELOPMENT IN MONTANA

Mr. Everts introduced the presenters: Mr. Dave Ryan, NorthWestern Energy; and Mr. Chris Moore, Navitas Energy, who would be participating by phone.

- **Mr. Chris Moore, Navitas Energy**

Mr. Moore referred to his Power Point presentation (Exhibit 1-not available). He gave a brief description of his company, Navitas, noting that they are currently developing over 1,000 megawatts of wind projects throughout the U.S. In December they just completed the first utility scale wind farm in Illinois, a 50 megawatt facility. They have been awarded two 80 megawatt projects in the state of Wisconsin. Since 2001, they have also been pursuing a 50 to 80 megawatt project in Whitehall, Montana.

Fundamentals of Wind. Mr. Moore explained that the first fundamental to consider is geography, wind facilities typically go where the wind blows. If the wind blows where there aren't any loads, then the wind must be transmitted to where the loads are. For example Montana, North Dakota and South Dakota are all among the top 10 wind producing states but are in the bottom 10 for consumption. They have the ability to produce energy but no place for it to go. He added that wind energy is expensive. Ninety percent of the cost of wind generation is embodied in the first investment.

Fundamentals in Montana. Mr. Moore commented that Montana has an abundance of wind and a lack of people. The lack of people can be a benefit since wind facilities are large structures and it is easier to get permits in isolated areas. Within the state, transmission is relatively good, but moving it outside of the state to markets is difficult. As far as expenses are concerned, the labor force costs are good but there is a substantial distance from ports or manufacturing facilities. There are currently no state incentives for utility-grade facilities.

Montana Barriers. The barriers Navitas has experienced have been in getting a contract, a contract term, a contract approved, and recently, the counter party credit. Industry wide, utilities are experiencing a down grading in the credit. The financing of wind generation facilities is becoming more difficult everywhere. For the contract terms and approval, the process that a company needs to go through in Montana is somewhat difficult and not very well spelled out. It's hard to know exactly what the process is and when it's completed.

Potential Solutions. Mr. Moore said one solution to promote wind development would be to provide an incentive, either to the developer or the utility, since the bottom line is always money. Many states are pursuing a renewable portfolio standard, which he commented is not necessarily a bad idea, but it's hard to get people excited about something they are required to do, in particular the utilities. That's the stick approach. The carrot approach for a utility might be to allow an unregulated activity payment, either as a mill rate in dollars per megawatt hour of renewable energy that gets directed to the shareholders, or an increase in the allowable rate of return. On the developer's side an incentive would be to provide a development incentive in dollars per megawatt hour. Other states have done this and depending on the value of the incentive, it can really motivate a developer to put wind power generation in place.

Another incentive would be to provide contract surety term and credit. In Montana, Navitas is struggling with the ability to get a long term contract that is backed by something that the company can finance. Other incentives may be to provide land or to provide sites. A long term incentive may be to provide transmission or to invest in technology that eliminates the need for transmission, such as hydrogen.

- **Questions from the Subcommittee**

Sen. Toole inquired, given a scenario where Navitas was producing wind power in Montana and selling it out of state, what sort of contracts would the company negotiate—would they essentially be firm power contracts where they have a buyer? And how would they deal with the intermittency problem? Mr. Moore said they are not firm contracts for firm electricity, they are as-produced contracts.

Sen. Toole remarked that the actual time that there is no space on transmission lines tends to be a pretty small percentage of the total year. If Navitas' contracts are already discounted from a firm price because it's as-produced, how much of an issue is transmission out of state if the company can get nonfirm access to transmission?

Mr. Moore answered that the issue for a long term contract would be that there was a guarantee that the intermittency would not get any worse than it is when the contract is agreed upon. In other words, if there was a curtailment period of 600 hours, the company could negotiate a financial arrangement around that amount of time. The uncertainty enters if it's 600 hours the first five years, 1,000 hours the second five years and 1,500 hours in the third five years.

Sen. Toole changed topics and said one of his concerns about utility scale development and the issues of intermittency and reliability is that typically these issues are thought of in terms of having a number of towers in a limited space. He wondered if the generators were more scattered if there would be more reliability and what the trade-off is for cost efficiency.

Mr. Moore explained that there is nothing wrong with the concept of scattering generators and the issue is cost. He said that distributing the generation may add 10% to 20% to the cost of installing the same amount of generation in one reasonably organized area. Each group of towers must have its own utility grade protection system to interconnect to the utility safely.

Sen. Toole asked if the increased benefit of reliability compensates for the increased costs. Mr. Moore answered that there may not be any increased reliability.

- **Mr. Dave Ryan, NorthWestern Energy**

Mr. Ryan noted he is a mechanical engineer for NorthWestern Energy and has worked on renewable energy projects for several years. He said he would talk about technical issues. He added that he often gets calls from the public about developing wind on their property and tells them they need three things: wind, transmission and a customer.

Location barriers. Mr. Ryan began by explaining that renewable energy generation is very site specific. Location is important. Investors are generally very conservative and look carefully at the quality and quantity of the wind available. This is a barrier because it takes time to gather wind data. Although NorthWestern has been gathering wind data in Montana for decades, the turbines that were considered utility scale wind turbines in the 1980s had hub heights of 20 meters—so much of the data was collected at 10 to 20 meters high. For modern utility scale turbines, the hub heights can be up to 100 meters, so financiers are interested in more modern data. A 50 meter tower and a year's worth of data can cost $50,000 which is totally at the developer's risk. Other up front costs are transmission feasibility studies and scoping studies.

Another financial barrier is that the entity that is a party to the power purchase agreement must have sufficient credit quality to allow the project to be financed. A rough cost estimate for a large wind development is $1 million a megawatt. Also, for a 100 megawatt wind plant with a 30 percent capacity factor, the equity investor needs a federal tax liability of nearly $5 million a year to take advantage of the federal production tax credit. Though the tax credit has been renewed in the past, it died last December and there's no certainty that it will be renewed in the future.

Studies must be completed to determine that a facility isn't sited somewhere that causes unnecessary risks to birds and bats. Avian assessments before and after construction may cost up to $100,000. The U.S. Fish and Wildlife Service, NorthWestern Energy and Montana State University have proposed avian guidelines for use nationally. If those are adopted it will streamline the process.

Mr. Ryan also noted that the developer has to own or have a lease on the site.

Transmission barriers. Electric power in Montana is an export industry. There are physical transmission constraints. There are also contractual constraints. A power generator will generally contract for transmission capacity on an annual, year ahead, basis even though they may only use that capacity for just a few hours of the year. Often a wind generator may not be generating during those hours because the typical peaks are for export during the summertime.

Transmission ancillary services are services the company provides such as voltage and frequency controls, firming, reserves, balancing and load following to ensure power quality. Wind generation is a challenge because the company doesn't know until the plant is built what

the impact will be. When projecting costs into the future, and wanting to be conservative about it, it can represent a higher cost. Until the plant is built and operating, there is some uncertainty about what those impacts will be.

Customer barriers. Mr. Ryan remarked that securing customers is probably the biggest barrier. Customers generally have long term contracts so new customers are hard to find. The first step toward financing is the development of a power purchase agreement and without that the development won't happen.

Mr. Ryan said, given the barriers, the main opportunity or driver to wind power is a concern for the environment. People like the idea of clean power and are willing to pay a premium price for it. There are a couple ways to get green power. The only sure way to get completely green power is to disconnect from the grid, generate your own energy with a wind turbine and use battery storage to make up for when the wind isn't blowing. This is very expensive. A more flexible approach is to have an energy mix. Another strategy is to sell the green power as a separate product which is called green tagging. The generation doesn't have to be in a utility's service area. Mr. Ryan said he believes the biggest benefit to the utility is that there are zero fuel costs—the energy is delivered free on site. Once a generator gets past the initial daunting investment, the operation costs are pretty low. Landowners may benefit from land lease payments. There are some impacts, including roads, foundations for turbines, etc. Many times the land can be used for what it was used before, wind may be considered a second crop.

Mr. Ryan continued, as noted earlier, the main problem with wind is the intermittency. A couple strategies currently being used are pump storage; a wind plant can be used to pump water uphill and then when the wind isn't blowing the water can run back through a hydroelectric turbine. Another is compressed air energy storage. There is a 500 megawatt plant in Germany where they compress air off-peak into a cavern.

Tape 1, side B, is corrupted and inaudible.

WHAT ARE THE BARRIERS TO AND THE OPPORTUNITIES FOR HYDROGEN DEVELOPMENT IN MONTANA

Tape 2, side A

▸ Dr. Paul Williamson, Dean of the University of Montana, College of Technology

Dr. Williamson said since he last appeared before the subcommittee he has given a lot of thought to how the state can take advantage of the opportunities for hydrogen development. He added there are 20 other states currently ahead of Montana. He noted the starting point is House Joint Resolution No. 26 (2003) that said Montana should do everything possible to move

forward in a hydrogen based economy. Dr. Williamson added that he developed *Montana Vision 2020* to see where they want to be at that date and work backwards. He noted energy is the common denominator to all economic development.

In *Vision 2020* (**Exhibit 2**), Dr. Williamson remarked that he has identified four goals, and after conducting extensive research on other states, has listed objectives and sub-objectives that if accomplished would make Montana a significant leader in the alternative energy and hydrogen field. The four goals for the year 2020 are:

1. Have in place a comprehensive statewide energy production and management system. As he noted at the last meeting, the state currently has no ability to take advantage of the billions of dollars that will be available if the 2003 federal energy bill passes.
2. Have in place a comprehensive, coordinated statewide air, water, land and waste management system working with an energy overview.
3. Have in place a 21st century vehicle and transportation system.
4. Have in place a comprehensive statewide energy economic development plan.

He added that he provided a worksheet to begin working through each objective and sub-objective, recognizing that this is a massive undertaking that will require a huge paradigm shift.

- **Mr. Howard Haines, Montana Department of Environmental Quality (DEQ)**

Mr. Haines agreed that the point that there is no coordinated effort in the state among the interested entities is absolutely right. Last year when the DEQ worked with Dr. Williamson to develop a proposal for a regional area educational center in Montana, they identified that many people are working with different pieces in hydrogen economy development. They found university professors were competing with each other for the same programs.

Projects are being developed in Billings, Havre, Butte, Missoula and at Montana State University (MSU) in Bozeman. All have something different and something different to offer. He added that an opportunity he sees is to put together a working group or task force to develop and coordinate universities, small businesses and governments. It would allow a central focus for the development of projects, possibly even a funnel for information on funding opportunities and a base for assistance with grant writing efforts.

Another challenge in Montana is that a lot of research projects with the federal government require a match so a way to match those funds needs to be developed. There are programs already in existence that seem like they may assist with funding, such as the Renewable Resource Development Program, but those programs have other funding priorities such as mined land reclamation or water projects. Usually there are more projects than funding.

Another opportunity he sees is working with corporations to investigate the use of Montana as a cult climate higher elevation laboratory for demonstrating various parts of their technologies, specifically hydrogen fuel vehicles.

- **Questions from the Subcommittee**

Sen. Toole remarked that in the 1970s during the energy crisis the state did have a well-staffed energy office that atrophied and now that idea is being discussed again. He asked the presenters if their vision when discussing a statewide management system was as a state program or a group of the actual people involved in acquiring and providing power serving in that role.

Dr. Williamson answered that he envisioned it as a hybrid of those two groups. The state first needs a policy and plan and also the involvement of a business council who know what's going on and are passionate about it.

Sen. Toole said he has been enthusiastic about hydrogen since he is an advocate for green power but at the last meeting heard that the plan is to get it from coal, gas or nuclear reactors. He says his impression is that one barrier is that people see it as too far away, but another could be that hydrogen has been promoted as clean energy and its recent association with coal may be causing a disconnect. Why would someone promote extracting hydrogen from coal and natural gas when there is so much wind and potential use of water in the state?

Dr. Williamson explained that he agrees that if they could use just renewable resources to produce hydrogen that would be the best way to go. In Montana, however, one of its greatest resources is coal and coal will continue to be used for the next 20 to 50 years and can't be overlooked. There is a large interim moving from where the state is now with a carbon based economy to a hydrogen based economy. He added his feeling is if the state can still use their carbon based fuels in a reasonable and responsible way, where the pollutants are sequestered, the state can move more quickly to a hydrogen economy and be more economically and fiscally situated to change to electrolysis and other renewable sources. He sees it as a necessary step.

Mr. Haines agreed and said most the funding sources available are from the federal government and they are backing coal and natural gas rather than renewable resources. The state is still trying to proceed with renewables. They are working with the U.S. Department of Defense, Leonardo Technologies, Concurrent Technologies and Ida Tech from Oregon to help field a 5 kilowatt biomass-fired fuel cell in Gardiner, Montana next January at the Xanterra Laundry.

Sen. Toole remarked that the power system in Montana was constructed to facilitate and was based on large central system plants that run all the time. It's not that the state can't use renewable energy, it's that the whole structure has not been set up to deal with problems like

the intermittency of wind, which seems fairly small in the big picture but has functioned very effectively to keep wind from being developed. He sees the same problem if the drivers and the support and funding to transition to a hydrogen economy come from the fossil fuels industry. He wonders if the state will ever get to the point of having green hydrogen development.

Dr. Williamson said he agreed but still believes the larger problem in Montana is that there is no control, management or vision. He saw that illustrated in the last legislative session where there were a half dozen initiatives and even if they all passed it would not have nudged Montana forward economically at all. He sees a need for a massive overhaul.

Mr. Everts asked if Ms. Lou Moore or Mr. Haines could provide more context to the discussion by giving a summary of state energy programs now and in the 1970s.

Ms. Louise Moore, Chief of the Air, Energy and Pollution Prevention Bureau, DEQ, explained she has been working in energy since the late 1970s when the state had an energy office under then Lieutenant Governor Bill Christiansen. The energy office was formed in response to the energy crisis of the 1970s and funded largely with federal monies. It became part of the Montana Department of Natural Resources and Conservation by about 1978 and at that time included energy policy work and staff with expertise in gas, transmission and electricity in addition to a large staff focusing on conservation and renewable energy. At one point when they moved to the Metcalf Building they had about 50-60 staff with approximately 25 working in conservation and renewable energy. The program was funded largely by the Coal Severance Tax Fund, Renewable Resource Grant and Loan Program. The program also received General Fund money for the policy work, a component of which was the Major Facility Siting Act group.

She added there are now 10 people working in energy at the DEQ. One of the reasons that staff has been reduced is because for the last five to seven sessions, when the department looked for General Fund money to cut, it is easier to cut staff and money that is not specifically tied to a specific piece of legislation that mandates the DEQ to do particular work.

Currently, the program's funding is primarily from the U.S. Department of Energy, some Universal System Benefits funding, Highway Administration and General Funds to the extent that they are needed to secure federal money.

Mr. Everts asked if Ms. Moore could describe the activities of the energy program staff and if there are any still involved in energy policy development.

Ms. Moore answered that their emphasis is on state buildings and the staff has done an excellent job on retrofitting state structures to conserve energy. The program needs to focus more on schools. They also have staff working in the residential housing market focusing on new construction. There is some wind and solar work that includes data gathering and

education. Last month in Havre they had over 230 people show up for one of the program's four week-end workshops on what's available in the farm bill. The program has one economist they share with other programs in the agency. Mr. Paul Cartwright is their remaining energy analyst.

Sen. Roush remarked that he remembered the efforts of Lieutenant Governor Christiansen and he thought there had been a small amount of progress, but given the interest of the public as reflected in the turn out in Havre, the state should increase its efforts. He asked Ms. Moore if she had policy recommendations for the subcommittee.

Ms. Moore agreed with Sen. Roush that the state needs to move in a positive direction. She said the country is using more imported oil now, around 55%, than it did during the 1970s oil crisis when it was about 35%. She said her personal opinion is that she would appreciate direction from the EQC for energy policy planning.

Mr. Haines added that he addresses policy recommendations later in the agenda. One recommendation based on what is done in other states, for example, in Minnesota, is allowing co-operatives to join to amass capital and invest in renewable energy projects, which is now not allowed in Montana. Most other states except for Montana are still regulated which affects what actions can be taken.

Ms. Moore noted that when developing policy there is the EQC, the Governor's Office, the Northwest Power Planning Council and the coal research and the public interest groups. She isn't sure if all those groups have been brought together to brainstorm.

Sen. Roush said he believed progress needed to be made before the session in January and a coordinated effort among those groups is a good idea. He wondered if the subcommittee could promote this.

Mr. Ryan suggested that there have been some venues for discussion with broad representation, for example, events hosted by the Wheeler Center. He said if a coordinated effort was made by the universities or the state, NorthWestern would be glad to participate.

Sen. Toole commented on the collaborative model. His experience was that some collaborative efforts were good and some were bad. He noted in his experience the best was hosted by Montana Power Company in the 1990s and the worst was the Major Facility Siting Act collaborative which everyone couldn't wait to escape. He believed it only works when there isn't another venue for people to get what they want. The reason the Montana Power collaborative worked so well was that Montana Power had been drubbed by Colstrip IV and the environmentalists has been drubbed through the legislative session so both parties believed it was the best place to get something done. He concluded there needs to be a vision and a solidifying force.

Sen. McNutt asked Dr. Williamson if he believed the state could leverage its coal resources in a responsible way to help fund the transition to a hydrogen based economy.

Dr. Williamson said he thought they could and that's why he targeted coal as a transition fuel. He said he has talked to the PSC about the technology they are using now for coal development and believed the state is 20 years behind. He said he believes coal is the state's only stepping stone.

Dr. Williamson added that in every state someone has stepped forward as a leader: the Governors of New Mexico and California, the Governor and Legislature in New York and similarly in Illinois and Michigan. The state needs a complete leadership overhaul. In academia, ideas are researched to death and in government ideas are "bureaucrat"ed to death. It takes decades to get results. He said that is the reason he put together his Vision 2020 document with very specific objectives, so people are held accountable.

Sen. McNutt added that he was not just asking about leveraging coal in relation to hydrogen, but wondered about using it to fund wind development. He said all the stakeholders need to get together because not everything could be settled in the courts.

Sen. Toole said he agreed that not everything could be settled in the courts though he thought that whole problem was overstated. He said he also liked the idea of all the stakeholders getting together and leveraging coal to promote these other ideas, but he didn't think a collaborative effort would work because the history is that industry groups promote only their specific type of resource. He said he doesn't think coal is evil but he thinks the state has been over dependent on it and it has stifled other types of energy development. He's not sure that a company that wants to develop a 500 megawatt central station coal plant will embrace putting 100 megawatts of wind on the Rocky Mountain Front.

Sen. McNutt said the state now owns some coal they could leverage to promote wind energy and the Hydrogen Futures Park and maybe the stakeholders could agree to use coal for bonding and match dollars to attain this new vision.

Mr. Everts asked Dr. Williamson how unified the university system is in favoring hydrogen development given the multiple campuses.

Dr. Williamson answered there is great interest university system wide in economic development. His overriding concept has been to identify technology and training that are needed by a workforce of the future and replicate it around the state where they are most applicable; for example, there is no reason for teaching coal gasification technologies in Missoula when it's suited for Miles City or natural gas reforming in Missoula when it's better suited for Havre, etc. MSU has been doing quality research on fuel cells for almost two decades

and will continue to do that. U of M has been doing valuable hydrogen research since the 1980s. His idea with the Hydrogen Futures Park is to have a gateway to bring these technologies into the state and a coordinated way of replicating those technologies, training and education so they can benefit every community. This is the route that other states have taken. Michigan has smart zones, Hawaii has power parks, etc. Economic development in the states that are moving forward are using one and two year work based education. The college of technology in Billings hosted one of the wind workshops. The FutureGen discussion was hosted by Miles City.

WHAT ARE THE BARRIERS TO AND THE OPPORTUNITIES FOR ETHANOL DEVELOPMENT IN MONTANA

Mr Everts introduced the ethanol panel: Jim Curry, Deputy Director and Bob Turner, Chief of the Fuel Tax Management Analysis Bureau, both from the Montana Department of Transportation (DOT); Mr. Howard Haines, DEQ; and Mr. Todd Sneller, Nebraska Ethanol Board.

Mr. Curry explained he would be discussing Montana's ethanol incentive program. He said the program was established in 1983 and was designed to provide an incentive for the development of plants to produce ethanol for use in blended fuel. The way the process works is, if and when an ethanol plant is up and producing, and the ethanol is derived 100% from Montana agricultural products, the plant gets 30 cents per gallon incentive. That amount is prorated if the plant uses products from out of state. When the program was established, the Legislature recognized the ability of the Highway State Special Revenue Fund to absorb an incentive like this. The Highway State Special Revenue Fund is the account where all of the gas and diesel tax dollars, TVW? fees and permit revenue are deposited. These funds are allocated to transportation and traffic safety. There is a cap on the program of $6 million a year, with a $3 million cap per ethanol facility. In order to be eligible for the incentive, a company must file a business plan with the DOT 24 months prior to anticipating collecting expenses. During the last legislative session, the department realized there were some problems with the law because there were no criteria to substantiate that a company was following through on its business plan. As a result, a facility must now start construction of the facility within 24 months of filing their plan, the construction must be 50% complete within 36 months, and 100% complete within 48 months. The reason those criteria are important is that the ability of the facility to receive this incentive is on a first come, first served basis. Of the applications on file right now, Rocky Mountain Ethanol in Hardin, AgriTech in Great Falls, Yellowstone Power in Hardin—Rocky Mountain and AgriTech are projected to produce a sufficient quantity to receive the full $6 million, so the next applicant in line would not be eligible. If the first two companies in line fail to meet the timelines, they would fall out of line to receive the funding and the third applicant would be eligible.

The timetables are important for the companies that are developing the plants as well as the state because it gives them a goal and a guarantee of an incentive if they can get the financing and get the plant built. One of the problems for the companies with getting plants built has been getting financial backing.

Rocky Mountain Ethanol and AgriTech are currently on schedule to meet their timelines. If they remain on schedule, beginning in 2005 and 2006 they will be collecting the $6 million incentive. One thing the DOT has noticed with the program that may require additional work is that facilities can insert themselves at different places in the list. The third company in line, Yellowstone Power, is a shell company for the first company in line, Rocky Mountain Power. If Rocky Mountain was unable to make their deadlines, it gives that particular plant another option to stay in line for the incentive. This action isn't illegal, but Mr. Curry remarked he's not sure it's the intent of the incentive.

- **Questions from the Subcommittee**

Sen. McNutt noted that the projected production for these two plants is 30 million and 100 million, yet they get the same amount of tax credit. He wondered if there was any discussion about basing the incentive on the amount of gallons produced. Mr. Curry answered that thus far only the maximum cap has been discussed and that's why the companies get the same incentive even though one is producing more than the other.

Sen. Roush referred to the handout Mr. Curry gave to the committee that showed the companies in line for the incentive (Exhibit 3-not available). He asked how long a company can tie up the incentive and if there are any companies that are being hindered from developing a facility because of the first two companies in line.

Mr. Curry answered that they can tie up the process until the deadlines expire. He believed there was one other company talking about building a plant in Miles City but as of now, the DOT just has the three business plans he mentioned.

Mr. Turner informed the subcommittee that this would be a big year for the program. According to the timeline, by the end of the year, either Rocky Mountain Ethanol or Yellowstone Power will fall out of line and Great Falls will have to break ground by the end of May or they will fall out of line too.

Sen. Roush said he understood the facility in Hardin had several components including a power plant and since the incentive was intended to increase ethanol production, could the power plant be entitled to the incentive?

Mr. Curry said the intent of the legislation was for the plant to actually produce ethanol and the power plant would not be eligible.

Mr. Haines informed the committee that Yellowstone Power had permits from the DEQ for the power plant. The ethanol plant will use the steam for condensing as well as some of the power for ethanol production. The fact that it is a cogeneration facility may have some impact on its ability to sell some power at a different rate. The ethanol incentive could not be used unless they produce ethanol. With other potential producers, their attitude has been, if the list is already full, why send additional information to the state—so the companies locate elsewhere. One example is a 50,000 gallon a year ethanol plant that eventually located near Williston, ND. Some Montana farmers however will benefit by selling barley as a feedstock to the plant for ethanol production and cattle feed.

Mr. Turner noted that there are no other applications that they've received but also he hasn't received any inquiries for about a year.

- **Mr. Todd Sneller, Nebraska Ethanol Board**

Tape 3, side A, is inaudible.

WHAT ARE THE BARRIERS TO AND THE OPPORTUNITIES FOR BIODIESEL DEVELOPMENT IN MONTANA

- **Mr. David Max, Sustainable Systems, LLC**

Portion of discussion is missing.

Tape 3, side B

Mr. Ebzery noted a lot of the product made in Billings gets piped across Montana to Missoula and Spokane. He asked Mr. Max if he was aware of that? He added he thought Exxon Worldwide may have a local fit.

Mr. Max said, so far, in the conversations he has had with Exxon and with the distributors that market Exxon products, they haven't indicated that they are ready to welcome biodiesel. One of the issues his company is going to face is getting access to Exxon's racks. If Cenex in Missoula wants to do this, they get their fuel from the ConocoPhillips Terminal in Missoula. It's part of a relationship that gets ConocoPhillips access to Cenex's rack and refinery in Laurel. He added his company is pretty small potatoes. He's hoping their partnership with Cenex will help open some doors. While they are talking with the distributors, they are also talking with the end users since that will ultimately determine whether Sustainable Systems is successful.

If an Exxon distributor has a large customer who decides that they want to use a 2% or 5% or 20% biodiesel blend, then Exxon will ultimately embrace biodiesel. For Sustainable Systems to break ground on their facility, they need to demonstrate a need for 3 million gallons a year. The optimum efficiency for the facility is for 7 to 13 million gallons a year. The cost is about $1.10 per gallon. One of the things about biodiesel is that for one unit of energy a company puts into production they get about 3.2 units of energy back out. With ethanol the best estimates are 1.4 and with petroleum diesel it is .89. To demonstrate to investors that they have a market for the fuel is critical.

Mr. Max explained that right now in the U.S. there is about 25 to 30 million gallons a year annual production. If the U.S. as a whole adopted a 2% biodiesel blend it would create a 700 to 800 million gallon market. If his company got the necessary money tomorrow, they could get into production in late 2005. Their goal is to get funding within the next 6 months. They have been working on this for 2 years and in the last 6 months their funding has come together. In the last couple months they started working with a crusher to get added value out of the canola meal and it has made their financials look a lot better.

Mr. Ebzery asked what a facility costs to build. Mr. Max answered $1.10 per gallon. If the company built a 10 million gallon facility the cost would be about $11 million. They have been diligent in researching biofuels technology and have looked at projects worldwide.

He added that biofuels is one product at Sustainable Systems, LLC. The other is the biolubricants that are described in the company's brochure (Exhibit 4-not available). They are through phase II testing of hydraulic fluids and hope to be through phase III testing in the next couple weeks. Sustainable Systems is working with an independent lab and Wright Patterson Air Force Base. Techlan, Inc., from Bozeman will be doing their field studies on hydraulic fluid. Their product will be the most biodegradable of any hydraulic fluid on the market. There are three tiers of biodegradability that a lubricant can fall under. Above 60% is considered the ultimate biodegradability and as far as he knows there are only a couple lubricants in that category and he believes Sustainable Systems will have the highest percentage. It is slightly more costly than a conventional lubricant which is $5.50 a gallon coming in and theirs will be $6.50. A synthetic lubricant is $10.00 a gallon and the biolubricant will perform as well as the synthetics and it will be biodegradable. He hopes they can get into their field trials this spring and summer and maybe by fall get it out to distributors. Their product can be produced in their pilot facility in Missoula. The pilot facility originally started out just producing biodiesel for the University of Montana biobus and a few local customers. They decided to get out of biodiesel production in their pilot facility mainly because they have to meet ASTF specifications for fuel and the cost for doing that is about $800. Even if the company did a sample of 10,000 gallons it would raise the cost 8 cents a gallon. With their scalability in the pilot facility it didn't make sense. It was actually cheaper to import it and demonstrate the market with imported fuel. But

they can produce the hydraulic fluids and some of the other products they are working on at that facility.

The other product they are excited about is penetrating oil, similar to WD-40, except biodegradable. It is through phase I testing and they feel there is a market for that as well.

The lubricant facility can be housed at the same facility as the biodiesel facility. The base oil that they are looking at using for a lubricant grows very well in Montana. They will be working with the seed stock of a Montana crusher, Montola. The cooperation between the two companies will also benefit Montola and the researchers that are working with producing that seed.

The company consists of two people plus a legal counsel. There are a couple of people they are evaluating adding to their staff—an agricultural specialist based in Washington and a chemist in Seattle. He and Paul worked with Holly to draft the legislation. They had very short notice to put together a draft and based it on what was done in Minnesota. The purpose was to eventually create a 7 million gallon a year demand and have good information to take to their investors to finance their facility.

Mr. Ebzery mentioned HB 502 (2003) and said he recalled that the bill had a mandate provision and wondered if that was necessary for the financing.

Mr. Max said the company doesn't need the mandate, they need the market. Unless they get a very progressive investor who sees the market developing without them proving that it's there, he doesn't see how they can get funding. But he believes they can prove the market between Montana, Idaho and Washington—those are the places they can realistically distribute to from Montana. A mandate would be invaluable, and if not that, then some sort of reduction. One of the things they looked at was a state excise tax reduction on B2 or B5. At the federal level there is a proposed excise tax reduction, which would reduce 1 cent per percent of the 20%, so with B20, the pump price could be reduced 20 cents. Right now they are selling their B20 for 30 cents a gallon more than conventional diesel so it would be about a 10 cent premium on what is considered premium diesel fuel—it works well, burns cleaner and the engines that use it run quieter. The state excise tax reduction would be repealed if the federal excise tax is approved.

Mr. Ebzery asked if there were any other startup businesses similar to theirs in Montana. Mr. Max said he has heard of proposals but right now they are the only one. He believes the numbers will scare people off if they are not very passionate about it.

Sen. McNutt asked if they were currently doing anything with Montola. Mr. Max said they helped develop a small market for them when they got the University of Montana switched to using their oil as a fryer oil. The university was using a partially hydrogenated soy canola which was not very healthy and was difficult for their company to recycle because it was like sludge and not

very easy to work with to turn into fuel. Sustainable Systems wanted to work directly with Montola, but the price of safflower from their facility would have resulted in $4 or $5 a gallon fuel and they sell their fuel for $2.25 a gallon untaxed. They decided to try some value adding by having an intermediary use the oil for frying the company's only cost for the oil would be picking it up. Once their facility is up and running they hope to market this oil to larger companies, like Food Service of America or Cisco, and then recycle it. The key to agriculture right now is value added products.

FUNDING OPTIONS FOR PROVIDING INCENTIVES FOR ALTERNATIVE ENERGY IN MONTANA

- **Mr. Carroll South, Board of Investments**

Portion of discussion is missing here.

Mr. South remarked that there is a way to direct lend to borrowers and that is through the infrastructure loan program where they lend money directly to local government entities who in turn provide infrastructure for businesses that are coming into their jurisdiction providing jobs. The law was amended in 1993 to preclude the Board from lending directly to borrowers because some bankers thought they might encroach on their business even though it was already in their rules that they would not direct lend.

- **Questions from the subcommittee**

Sen. McNutt wondered if the subcommittee should promote a program for alternative energy similar to what the Board does for local governments. He said he didn't see a stream of bankers lining up to lend to these businesses. He wondered how the Board would handle something like that. Mr. South said the overriding governing law for the Board of Investments is the prudent expert principle. Anything they do needs to be done in a prudent manner. As a lender, that means when they make a loan, they intend to be paid back. One of the benefits of working with banks is that they do the same due diligence. If a loan is not prudent from the bank's perspective they will not bring it to the Board. The Board did make a value added loan for a generating plant. It's not strictly an alternative energy facility but a biomass facility that burns waste wood products that are supplemented with coal when they do not have enough biomass. That loan was not in participation with a bank and the paramount factor was that before they would enter into an agreement, that entity had to have an agreement with the default supplier, which was Montana Power, now NorthWestern Energy. Even if the Board was to make a direct loan to a wind farm or any other alternative energy provider, in order for it to be prudent it would need an iron clad agreement with the default or some other provider that would be willing to take that power coming out of that project. That is essentially the only collateral that project would have since the facility itself is worthless if there's no market for the energy.

Sen. McNutt said he was aware that the Board had done some value added projects with banks and they provide some expertise in the due diligence process before the loan comes to them. He wondered if that expertise is available on the Board staff or if they needed additional staff to get into that arena.

Mr. South answered that the one plant they did participate with had, before coming to them, hired an internationally known consultant to crunch the numbers. So the bank and the Board were comfortable with that. They do not have the expertise internally to judge the financial integrity of a wind farm given the vagaries. Neither do most banks. In order to act as a lender they would probably have to require the borrower to crunch the numbers.

Sen. McNutt asked if the Board could hire that same expertise. Mr. South said they could within the constraints of their budget. The Legislature doesn't set their budget but they set the fees they are able to charge for the money they invest. To the extent that any kind of consulting would fit into their budget they could do it.

Sen. McNutt asked if the statutes would have to be modified if the fees were greater than what is allowed today. Mr. South said probably because $150,000 would take a significant amount out of their budget which they are planning on spending on other things.

Mr. Ebzery noted last session Sen. Gerald Pease had a bill that he thought had to do with the Board and capital construction of wind farms, Senate Bill 487 perhaps. Mr. South said he recollected a bill discussing wind generation on the reservation.

Mr. Everts said they discussed incentive legislation from 2003 this morning and SB 487, which did pass, raised the maximum amount of outstanding economic development bonds that the Board could issue from $75 million to $100 million and raised the per project amount the bonds could be issued for under the Economic Development Act from $10 to $50 million.

Mr. Ebzery asked if that was the impetus for the visits he received from wind generators. He wondered if that solved some of the economic issues and if there had been a response to that change. Mr. South answered that the people who had come in to see the Board about a loan had come in because of the commercial loan program and not because of the bond program. One person was from Germany and was involved in wind generation there. That person explained he was thinking of submitting a proposal to Montana Power Company. That was shortly after HB 474 passed, which was ultimately nullified. The Economic Development Program under which they sell bonds is authorized by both state and federal law and in order for them to issue bonds the project itself has to qualify under federal law. It may be tax exempt in some situations if it's for specific types or projects. They have issued $30 million worth of bonds for the Stillwater Mining Company for their environmental requirements when they were expanding.

Sen. McNutt said if the subcommittee elected to promote direct lending they would discuss it with him further to make it workable. Mr. South explained the subcommittee should give some thought to whether they wanted to pursue the bond program or an outright loan. The Board is only a conduit to the bond program and they rely on investors willing to buy the bonds.

Mr. South added the value added program is going quite well. They have about $11 million out and have committed $6.7 million to the malting barley plant in Great Falls. When that is funded they will have about $17 or $18 million out from the $50 million program.

Sen. McNutt asked if they have gotten more interest from banks as time goes on. Mr. South said yes.

- **Mr. John Tubbs, Department of Natural Resources and Conservation**

Mr. Everts introduced Mr. John Tubbs from the Department of Natural Resources and Conservation (DNRC). He explained Mr. Tubbs was at the meeting to explore utilizing the Coal Tax Trust Fund as security and evaluating the potential use of the Renewable Resource Grant and Loan (RRGL) Program for alternative energy projects. Mr. Everts added they were expecting a memorandum from the State Bond Counsel that didn't arrive but it would hopefully be available at the next meeting.

Mr. Tubbs mentioned the DNRC does administer several grant and loan programs. In terms of the coal severance tax bond program, as it's structured now, there's about $30 million worth of bond capacity they could issue. They only loan money for projects that are authorized through the legislative process under House Bill No. 8. The department seeks applications, due May 15, reviews the applications, and takes their recommendations to the Legislature in January.

If the DNRC does start including wind, solar and other alternative energy projects, it would be useful to change the law to explicitly include those projects to signal interested applicants. Though it broadly discusses renewable resources the focus has been on water projects. With that modification, the DNRC does have the ability to make loans. Though they don't operate under the same guidelines as the Board of Investments, the basic issue of getting repaid is still a concern. They have loaned money to small hydroelectric developments and have lost money on one and another was completely repaid. Mr. Tubbs noted that the RRGL and the coal severance tax bond programs' largest investment in energy is in the Toston Dam project. From their standpoint they got a very good contract. Since it was tax exempt the profitability was good for state government but would not have been as good for a private contractor because of the tax consequences. They have the next 20 years of profits that will be returned to state dams and water resources facilities.

He explained that one of the things to remember with the coal tax program is that when the DNRC sells a coal tax bond it is backed by the flow of revenue that goes back to the permanent trust, but there is always a borrower who has a revenue stream that can pay the department back. They may subsidize it on the interest, but they have yet to have a default in that program. In the energy market, there is a risk. Most of what they loan for is not a new business, and wind generation is new.

Mr. Tubbs said back in the 1980s there were a number of renewable energy programs in statute and they were eliminated, in part, because of the lost loans in the Renewable Resource Development Energy Program. Because the loans didn't get paid back the program lost its funding. There is risk and there will be some failures which can be a struggle in a publicly funded program.

He added for the RRGL Program the DNRC gets $4 million of RIT trust interest every year. The grants are for a maximum $100,000 and to date they are limited to governmental entities approved through the legislative process. Small hydro already qualifies and they would be more comfortable if the language was tweaked to include wind, etc. Though if they did receive a quality wind application this year they would take it. Last year they denied a couple grants for opening a new door kind of issue, and providing loans for wind grants would be a large door. So that is a policy issue for the Legislature to debate as they discuss renewable energy.

- **Questions from the subcommittee**

Mr. Ebzery asked if Mr. Tubbs could explain the process and how would they carry along a project that included some concerns, like wind projects that have problems with intermittency.

Mr. Tubbs said he would first explain the process. The process begins when an interested party fills out an application for the RRGL Program which gives the applicant access to the coal tax bond program as well as the $100,000 grants. There is also a category in the Reclamation and Development Grants Programs for projects deemed fulfilling a "crucial state need", that may apply to alternative energy resources. One of the issues with this program is that it is only available for government entities, which may affect its availability for wind farm projects unless they were initiated by a city or a coalition of communities.

The DNRC then evaluates the project on points including technical and financial feasibility and public need, ranks it through a prearranged scoring system, takes it to the DNRC director, then to the Governor and finally to the Legislature as House Bills 6 and 8. At the staff level they use a very objective system, but at the policy level changes can be made to fulfill a certain vision. If the Legislature decides to give alternative energy projects some momentum, it has the full ability to put a project anywhere in the ranking it wishes. There is only $4 million and about half of the projects get funded. So wind and alternative energy development would displace other projects.

For the loans, there is no competition, it is a judgment on whether the borrower is able to repay the debt, so oftentimes loans do receive a favorable ranking by the Legislature.

Mr. Ebzery asked what would happen with a wind project with the support of the Bond Counsel. Mr. Tubbs replied they would probably carry that proposal forward. Mr. Ebzery said if this was the case they could attach language that the intent of the Legislature is that wind is considered a renewable energy project.

Tape 4, side A.

Sen. Roush asked if a request for a grant or loan had to come through a governmental entity. Mr. Tubbs said, yes, except for one program, a private loan program for small hydro development.

Sen. Roush asked about individuals on farms who may be interested in generating their own power and selling the excess. Is it possible, aside from the small hydro program, for these projects to get grant money? Mr. Tubbs said there are two parts to the RRGL program, loans and grants to governmental entities and loans to private entities. Right now the loans to private entities are limited to water projects specifically, but a broader definition could be adopted by statute.

Sen. Roush said he would favor keeping it attached to a governmental entity even if it's a private development for security purposes. Mr. Tubbs added that most of their loans are for center pivot irrigation. They secure those against 150% of the value of the pivot against real property when it's irrigated. For example, if it's a $100,000 pivot, the DNRC takes a lien against real property of $150,000 so the loans do get paid back in those circumstances. He reiterated that they secure the investment against the property, not the pivot. In small investments, it may make sense to secure the loan on the equipment itself, but with large private investments, the risk on relying on the revenue and the equipment is quite high.

Sen. Toole asked, in the example Mr. Tubbs described about center pivots, what is the interest? Mr. Tubbs answered that for land that's never been irrigated before, the interest is 5.37% and has a taxable interest rate and a 15 year term.

Sen. Toole asked if that is less than prime financing? Mr. Tubbs said yes, in the case of the center pivot, banks won't loan to them—-banks will not carry long term debt for agricultural equipment.

Sen. Toole remarked that he had a hard time understanding why a bank wouldn't loan with an offer of separate security at 1.5 times the value of the loan unless it was just a policy decision on their part. Mr. Tubbs answered that nearly every agricultural bank got burned during the

1980s and learned a lesson about not carrying long term debt on ranch and farm operations. Secondly, banks make most their money from annual operating loans. The RRGL Program actually improves the security of the bank loans because a pivot decreases labor costs and water use and profitability increases because of higher yields. He believes that is the type of relationship that would be most healthy with renewable energy loans, where the RRGL Program adds value.

Sen. Toole said it does raise the question of risk. If private financiers won't back a loan, should that risk be transferred to the public sector? It may make sense if there is an overall public benefit but he's concerned.

Mr. Tubbs said he got his job about three years after the failure of the Washington Public Power system and anyone who sells public bonds for energy infrastructure should remember that failure. On the other hand, a strong policy position by the Legislature can be a guiding light to a loan program on where they should be and what risks they should be taking.

Sen. McNutt added he is the director of a bank and the bank doesn't make any long term fixed rate loans for real property or any improvements like sprinkler systems because of what has happened with the interest markets. These banks are not that large and could be wiped out in 15 years. That is the reason they are not making these types of loans.

Mr. Everts said they have been discussing bonds as high as $400 or $800 million and he asked if Mr. Tubbs could discuss the capability of the state in terms of general obligation bonds, not just from the coal tax trust.

Mr. Tubbs said in most of the cases with large numbers like $400 to $800 million those were revenue bonds sold with the sole repayment stream of the revenue of the projects that were financed. There was no direct connection to the coal severance tax or the general obligation authority of the state. It was strictly a revenue deal using the state as a conduit adding some credibility to the issuance, but it was the project itself that had to stand up as a good investment.

He said he is not an expert in the energy community, but it seems like a tough proposition to get bond holders to purchase $100s of millions worth of bonds for projects that may take a long time to develop. Last session it would have been a struggle with the Otter Creek coal wondering 10 years from now what the coal market will be. Another question to ask is if the state financially is that much stronger than the private investment capital market and should it take those kinds of risks. The state has a very good general obligation debt market because it has been conservative. It has a low amount of bonds issued in relation to the total taxes and a strong record of paying off debt. Having a balanced budget is also an advantage.

- **Kathi Montgomery, DEQ, Alternative Energy Loan Program**

Ms. Montgomery explained that the DEQ has a small loan program funded by penalties from federal and state air quality violations that come into a revolving loan program. The DEQ chose to use Gateway Economic Development Corp. as their financing mechanism because the department doesn't have that kind of expertise. Some of the things they have learned is how to secure the loans. It is legislated that the loans can not exceed $10,000 each so the DEQ has a much smaller pot to work with and have found it is ok to secure those loans with equipment. To date they have financed a couple of small, 10 kw and less, wind generators and some solar electric photovoltaic systems. They also try to ensure that the value of the equipment exceeds the amount of the loan. Ten thousand dollars has not been enough to purchase an entire system. The DEQ has only had loans out for a little over a year and so far they haven't had any defaults and a few have been paid off early.

Sen. Toole asked what the interest rate is. Ms. Montgomery said 5%. Sen. Toole asked if there are different qualifying criteria than in the private sector. Ms. Montgomery answered she did go to the financial community first to look for someone to administer the program and noone wanted it, so these projects are having trouble finding money to borrow.

Sen. Toole inquired how small a loan could get until transaction costs don't make it worthwhile. Ms. Montgomery said they have figured out a way to work with Gateway to provide start up costs and a quarterly payment to the company so the DEQ could have someone administer the program because no one was going to make any money off of it. Gateway is getting 4% and the DEQ is getting 1% to put back into the revolving loan program. Gateway is also able to charge a loan origination fee. When talking about small loans, the lender doesn't want to have to put the cost of an appraisal of real property onto the borrowers because it would be a deal breaker, in her opinion. That's one of the reasons the loan is secured with the equipment.

Sen. McNutt asked what the terms of the loan were generally. Ms. Montgomery said they were mandated to be for no longer than 5 years.

Mr. Everts asked how much money was in the account and how much had been loaned out. Ms. Montgomery said that they have loaned $80,000. A few years ago they received a $400,000 penalty payment from the Conoco refinery so the program has a large balance and is marketing the program. They have looked at loan programs in other states and were gratified to find out that it had taken those programs seven years to loan out all their money and now they have more applicants than money.

Ms. Moore added that they are currently looking at changing the statutes to allow approval for $40,000 loans.

Ms. Montgomery agreed and added they are looking at a few things, one is increasing the size of the loans since the cost for a small 10 kw system suitable for a small residence or farm is in the range of around $40,000 and another is expanding to loaning to nonprofits since they are now limited by the statute to loaning to residences and small businesses.

NEXT STEPS AND STAFF INSTRUCTIONS

Sen. McNutt explained he would go through the agenda items one at a time and see what the subcommittee thought the next steps should be. The first item on the agenda is barriers and opportunities for wind development.

Sen. Toole said he was hesitant about promoting financial incentives for wind because of the risks to the state and was encouraged that NorthWestern Energy had some wind in their portfolio. He did think the state could assist with making sure the rules for net metering were consistent across the state.

Sen. Ebzery asked for clarification on Sen. Toole's second suggestion.

Sen. Toole said he believed depending on where a person is located, in NorthWestern territory or co-operative territory, there are different rules and different amounts are made in net metering that may be inhibiting distributed systems.

Sen. McNutt asked if their were comments from the committee or the audience.

Mr. Gary Weins added the co-operatives are concerned given their different sizes and situations about having one set of rules across the state.

Mr. Everts noted in the subcommittee folders there are renewable energy incentive and policy categories that are available for alternative energy resources. There are a variety of tax incentives: direct cash incentives; low-cost capital programs; distributed resource policies, i.e., net metering; customer choice opportunities, etc. He said they have discussed some of them and some of them are already in statute.

Sen. Toole said it might be premature to discuss public subsidies for wind farms before discovering how NorthWestern Energy's proposal for a portfolio with a150 megawatt capacity wind farm proceeds.

Sen. McNutt summarized the subcommittee's thoughts as not wanting to take any action on wind farms at this time.

Sen. Toole agreed, except for clearing up the language in the RRGL Program to specify the availability of grants for all types of renewable energy projects.

Sen. McNutt opened up the subcommittee discussion on hydrogen development and referred to Dr. Williamson's Vision 2020 document.

Sen. Roush said he supported the idea of promoting hydrogen and other alternative energy resources but wondered if the subcommittee had enough time for definite proposals.

Sen. Toole added that he agreed with Dr. Williamson's comment that the state is lacking in energy management and planning, especially related to taking advantage of federal money available from the energy policy and farm bills.

Sen. McNutt remarked that he's not sure what they can bring to the EQC in the short amount of time left in the interim and he believed subcommittee members needed some time to digest the information and make proposals at the next meeting.

Mr. Everts offered to make an inventory of the relevant parties and energy policy development statutes to better orient the subcommittee and develop potential options.

Sen. McNutt said he believed finding other financing in light of the failure of the bonding proposal for hydrogen development last session was perhaps the best first step.

Mr. Ebzery said he continues to be interested in hydrogen but doesn't want to overwhelm staff or propose something very complicated this late in the interim.

Sen. McNutt asked Mr. Everts to bring the information he described to the next meeting and suggested the subcommittee create a white paper on what is involved in bonding—an explanation of revenue and general obligation bonds.

Sen. McNutt opened the discussion to ethanol development. He said he didn't get the sense from the discussion that there was anything the subcommittee needed to do legislatively to assist the industry.

Sen. Toole said he did think ethanol was different than wind or hydrogen in that the technology is established. He wondered if the subcommittee wanted to rerun Sen. Black's bill from last session with a lower mandate.

Sen. McNutt remembered the problem being that the mandate exceeded the production capabilities so it wasn't doable.

Mr. Ebzery believed supporting a mandate for ethanol was difficult unless it's done for all alternative energy sources. He said he believed ethanol should stand on it's own merits. He would like to know more about the stagnation in the existing ethanol incentive program and if the process is delaying more meritorious projects.

Sen. Toole agreed it would be helpful to look at the current incentive and maybe the example from Nebraska where it's a per gallon produced incentive so it's not cornered by one person in the market. He said putting a mandate in place when there is no production to meet it is ill advised. But he believed the technology is there for both ethanol and biodiesel so they should see what they can do that does make sense.

Sen. McNutt noted he was also interested in reviewing the ethanol incentive program and to look at providing an incentive for per-gallon-produced up to a cap to reignite the industry.

Mr. Haines offered that the current incentive is a per-gallon-produced incentive up to an annual cap of $3 million per year per entity. At the time the incentive was developed in about 1983 they were looking at plants sized at 10 million gallons per year which was considered an economically viable size for a plant. Since then it has been recognized that the environmental and labor costs of a plant of 1 or 3 million gallons are the same as 15 million gallon plants so most of the entities are building 15 to 30 million gallon plants if it is primarily an ethanol facility. There have been a couple other operations where the ethanol facility is combined with a feedlot or use anaerobic digestion which produces bio gas which in turn provides heat for the ethanol operation. A combination operation may work better financially than a few of the other projects on the list. Sen. Toole clarified that the incentive is cornered and it's the cap that makes that happen. Mr. Haines agreed that is correct.

Sen. Toole said he was curious about the actual capacity for ethanol production in Montana for 2005, 2006 and 2007. He wanted to sort out if the problem with the ethanol mandate bill was actual production capacity or that people don't want a mandate. He asked Mr. Haines if he could provide the information to the subcommittee for both ethanol and biodiesel.

Sen. Ebzery asked how that would be done.

Mr. Haines said there are several challenges to this. In the past they have looked at the amount of ethanol production they could reasonably assume in the state and where there are appropriate locations. Concerning demand, the growing markets are in Washington and California due to the banning or phase out of MTBE. It would be difficult to get an accurate assessment from fuel producers because their output would be different with a deadline or incentive. If the ethanol had to be produced from Montana products it would probably take longer.

Sen. Toole said Montana's capabilities must have been assessed when Sen. Black's bill was rejected. He advised looking at some other state's and what their production curve looked like after a mandate, though he realized there are problems because of food stocks and markets, etc.

Sen. McNutt cautioned also in Nebraska they are two phase plants that also feed livestock and have been strategically located for that purpose.

Mr. Haines said one of his points was that the subcommittee is not only evaluating ethanol or biodiesel, but the associated industries. Montola is evaluating replacing imported soy meal with Montana crushed soy. If the company uses their off spent oil it could supply some of the current markets for biodiesel. They are looking at ways to keep the plant operating. They can get more seed if there was a larger contract for the oil.

Sen. Story remarked that it sounds like noone has said they can produce ethanol without the incentive so the short answer for how much ethanol can be produced in the state is how much can be produced with the incentive.

Sen. Toole said his concern with ethanol and other alternative fuels is that the incentives are not working. It may be worthwhile looking at markets instead of production and see if something can be accomplished there.

Mr. Paul Cartwright, DEQ, noted that is important to also look at the refinery part of the equation. If ethanol is mandated, the refineries will have to change their product slate. Also, since half of Montana's product is shipped out of state it is important to pay attention to what states like Washington are doing. He said he agreed with Sen. Toole that the problem with incentives is that they don't enforce any market discipline on the producers and it might work better to mandate the use of this much ethanol or this much biodiesel and then leave it to the producers to find the most economical methods of meeting the targets.

Sen. McNutt concluded that the subcommittee was not ready to take action at this time on ethanol or biodiesel and asked Mr. Everts and Mr. Haines to bring the requested information to the next meeting.

Sen. McNutt asked if there was any discussion about bonding or direct lending. He noted after listening to the panel he believed if a project was too risky for other investors the state shouldn't support it with public money either. He thought it might be helpful to put together some information that explains bonding so interested persons know that these risky projects don't meet the Board of Investment's prudency standard. He thought the subcommittee could recap the information they got from the DNRC and the Board and put together a synopsis of what is and isn't practical.

Sen. Toole agreed and reminded the subcommittee about changing the language in the RRGL Program.

Mr. Ebzery asked if the DNRC had a clean up bill or something similar where the RRGL Program language could be changed. Mr. Tubbs answered that they could do it easily.

Mr. Everts said he would also utilize the State Bond Counsel to put together the information for the bonding pamphlet.

Mr. Tubbs reminded the subcommittee about the pamphlets created by the Legislative Finance Division on the Resource Indemnity Trust, coal taxes, etc., and that they could be a good resource.

Mr. Everts remarked that he had a draft outline of the subcommittee report, that it was informational in nature and that he needed the subcommittee's ok to proceed.

The subcommittee moved to approve the outline and continued work on the draft report. The motion carried.

Mr. Everts said he had two informational publications that were out of date, Understanding Energy in Montana and the Energy Law Handbook, and he asked for the subcommittee's approval to work with the DEQ to update the reports.

The subcommittee moved to approve the update of the two reports. The motion carried.

Mr. Cartwright commented that since some of the alternative energy projects being proposed are new, it may be hard for the Board to evaluate them, even though they may be good proposals. He thought there might be missed opportunities there.

Sen. McNutt said he had asked Mr. South what sort of in house expertise they had to evaluate proposals and he said they would have to hire it out and their budget was pretty limited. Sen. McNutt added that the subcommittee could talk to Mr. South and see what his cost projections would be for the Board to provide that expertise and to see if it was feasible. The subcommittee agreed.

Mr. Mark Lindbergh introduced himself and explained he was involved in agriculture, energy issues and economic development and is an advisor to the Governor. He has been pushing pilot projects so that the state gains visibility and experience. He wondered if the state could lead that effort. He said they currently have a pilot project with biodiesel with some of the motor pool trucks and part of the fleet uses ethanol. He thought the state could assist retail stations with infrastructure to help evaluate in Miles City or western Montana if consumers will buy ethanol if

it's available. He said there are fundamental changes in the agriculture industry and he agreed with Mr. Haines that it was important to look not only at ethanol but at the affiliated businesses. He added wind may take its own course but the state could pilot a wind mill in a state building. He concluded if the state can be the leader, eventually industry will be follow. He offered his assistance to the subcommittee.

Sen. McNutt asked about funding sources for those pilot projects and said he would be interested in Mr. Lindberg's ideas and the ideas of his working group.

Mr. Lindberg said one they have been discussing is using the coal tax trust fund. He believed it made sense to use a conventional resource to enhance the use of renewables.

Sen. McNutt asked if they were planning on using the fund or the inflows to the fund.

Mr. Lindberg said either and he believes in the case of renewable energy, government can be a driver since the state needs a diversified portfolio.

Sen. McNutt reminded the subcommittee that the Environmental Quality Council would convene at 4:00 pm.

ADJOURN

There being no further business, the meeting adjourned.