



Energy and Telecommunications Interim Committee

60th Montana Legislature

SENATE MEMBERS

GREG LIND--Vice Chair
JERRY BLACK
VERDELL JACKSON
DON RYAN

HOUSE MEMBERS

HARRY KLOCK--Chair
DUANE ANKNEY
ROBYN DRISCOLL
BRADY WISEMAN

COMMITTEE STAFF

SONJA NOWAKOWSKI, Lead Staff
TODD EVERTS, Staff Attorney
DAWN FIELD, Secretary

MINUTES

October 4 & 5, 2007

Isabelle Bulls Learning Center
Colstrip, Montana

Please note: These are summary minutes. Testimony and discussion are paraphrased and condensed. Committee tapes are on file in the offices of the Legislative Services Division.

Exhibits for this meeting are available upon request. Legislative Council policy requires a charge of 15 cents a page for copies of the document.

Please note: These minutes provide abbreviated information about committee discussion, public testimony, action taken, and other activities.

An electronic copy of these minutes may be accessed from the Legislative Branch home page at <http://leg.mt.gov>. On the left-side column of the home page, select *Committees*, then *Interim*, and then the appropriate committee. To view the minutes, locate the meeting date and click on minutes.

COMMITTEE MEMBERS PRESENT

REP. HARRY KLOCK, Chair

SEN. JERRY BLACK
SEN. VERDELL JACKSON

REP. DUANE ANKNEY
REP. ROBYN DRISCOLL
REP. BRADY WISEMAN

COMMITTEE MEMBERS EXCUSED/ABSENT

SEN. GREG LIND, Vice Chair
SEN. DON RYAN

STAFF PRESENT

SONJA NOWAKOWSKI, Lead Staff
DAWN FIELD, Secretary

AGENDA & VISITORS' LIST

Agenda, [Attachment #1](#).
Visitors' list, [Attachment #2](#).

COMMITTEE ACTION

The Energy and Telecommunications Interim Committee:

- approved the July 10, 2007, meeting minutes and the September 5, 2007, meeting minutes as written, and
- approved the committee work plan for the 2007-08 interim.

The Energy and Telecommunications Interim Committee members, staff, and interested persons toured the Colstrip Steam Electric Station and the Western Energy Company's Rosebud Mine for the morning portion of the meeting. The touring group met with Gordon Criswell, Environmental Manager for the Colstrip Steam Electric Station (**EXHIBIT #1**) and with Bob Montgomery, technical services manager, Rosebud Mine, (**EXHIBIT #2**) respectively, before each tour.

TAPE 1 - SIDE A DAY 1 - OCTOBER 4

CALL TO ORDER AND ROLL CALL

REP. KLOCK called the Energy and Telecommunications Committee meeting to order at 12:50 p.m. in the Community Room of the Isabell Bills Learning Center in Colstrip, Montana. The secretary noted the roll (**ATTACHMENT #3**), SEN. LIND and SEN. RYAN were excused.

REPORT FROM PUBLIC SERVICE COMMISSION

Greg Jergeson, Chair, Montana Public Service Commission (PSC) provided ETIC with an update of PSC activities. Commissioner Jergeson reported that on Tuesday, October 2, 2007, the PSC issued an order requesting comment on draft rules to be adopted to implement a portion of HB 25 (2007 regular session). He said ETIC has the responsibility to review the proposed rules, and that the Commission is hoping to eliminate potential conflict by taking comment on the proposed rules in advance of adoption. The draft rules have been sent to Todd Everts and will be distributed to the Committee members soon. Commissioner Jergeson said ETIC involvement and participation in this process is welcome.

Commissioner Jergeson also discussed the recent PSC decision rejecting the proposed acquisition of NorthWestern Energy (NWE) by Babcock and Brown Incorporated (BBI). As a preamble to his discussion of the PSC decision, Commissioner Jergeson said he had recently attended a national conference at which there was a great deal of discussion on the development of new resources to meet the growing energy demand, either with new production or increased conservation and demand side management. It was well understood by those in attendance that it will require vast amounts of capital to do either one and that there will be a need for great investment in property, plants, and equipment in order to expand infrastructure, he said. Commissioner Jergeson said he participated in a panel in which the topic was the amount of capital devoted to the cost of mergers and acquisitions, as opposed to capital spent on improvements and new infrastructure. Commissioner Jergeson said it was this issue that was the main sticking point for the PSC in the NWE acquisition. The Commissioners could not support the proposed \$700 million premium for the facilities and assets of NWE because the premium would have been paid out to stockholders, and none would have been devoted to infrastructure. The Montana PSC and others across the country have the responsibility to provide balance between a financially viable utility and just and reasonable rates for the rate payers. In these types of mergers, the question is how to balance the great cost of acquisitions with a reasonable rate of return for the investor and the potential impact on the consumer. Commissioner Jergeson said the decision of the PSC was not popular with all of the

stockholders but that the Commission has an obligation, not only to rate payers, but to the stockholders of any investor-owned utility, to make certain that the utility be financially viable. The Commission does understand the need for speculative investors in this process in order to create liquidity, but from the standpoint of an operating utility to provide services, the valuation ought to be based on the real value of the company and reasonable rates of return for the investor.

Commissioner Jergeson said the Montana Consumer Counsel (MCC) had requested that certain conditions be imposed on the acquisition in order to protect rate payers, but after careful consideration, the PSC decided against adopting conditions because of the potential for unforeseen problems in the future. He said that overall, the PSC decision was based on if the acquisition was in the public interest and for the good of the utility and rate payers. After careful consideration, the Commission decided the acquisition did not meet that criteria. Commissioner Jergeson said that any future proposal to purchase NWE will have to have a clear plan on how to manage an acquisition premium, and how it will impact Montana rate payers.

Commissioner Jergeson discussed several options that NWE can pursue, for example, the passage of HB 25 which will allow NWE to invest in its own generation assets. He said wind and other renewable resources, and conservation and demand side management all should be taken under consideration by NWE as it plans for its future.

REGIONAL OPPORTUNITIES FOR CARBON SEQUESTRATION

John Talbott, Project Manager, Montana Big Sky Carbon Sequestration Partnership (BSCSP), Montana State University, Bozeman, presented a power point presentation, "*THE ECONOMICS AND IMPACTS OF CARBON CAPTURE, TRANSPORT, AND SEQUESTRATION*" (**EXHIBIT #3**). Mr. Talbott discussed:

- the overview and structure of the project;
- the partnership goal to develop infrastructure to support and enable carbon sequestration field tests and deployment;
- two focal areas of geological and terrestrial sequestration opportunities;
- how GIS technology has been used to identify areas suitable for sequestration;
- an explanation of geological sequestration efforts and several demonstration projects;
- the conclusion that basalt provinces exist worldwide which are capable of sequestering 10,000 years of the world's CO₂ emissions;
- the reactive carbonate reservoir field validation test (the Madison Formation);
- the proposed Wyoming Phase II Pilot and objectives;
- the proposed Montana study at Kevin Dome and objectives; **TAPE 2 - SIDE A**
- terrestrial sequestration efforts, including carbon markets and terrestrial pilot projects planned for agricultural, forest, and range lands;
- the development of carbon market portfolios and C-lock and terrestrial carbon credits;
- monitoring and verification of carbon in crop land, range land, and forests and conclusions;
- the economic framework for geologic sequestration and modeling strategy
- the terrestrial economic modeling strategy;
- a regulatory compliance overview, which includes a regulatory and public involvement action plan;
- public outreach activities;
- the Big Sky carbon atlas and related information; and
- legal, regulatory, policy, environmental, and economic issues.

SEN. BLACK said he noticed that Phase III calls for 1 million tons of carbon to be sequestered as part of pilot project in Wyoming. Mr. Talbott said that was correct, that an injection well will be drilled in early 2009 and a minimum of 1 million tons per year will be injected for four years. Four monitoring wells will be drilled to track the movement of both the carbon and displaced water. He said a basalt injection project will be started in Washington at the same time.

SEN. BLACK said that because all geological formation are different, the results may not be applicable to all areas in the country. Mr. Talbott said that the test areas were chosen because of the similarity of sandstone formations, which exist all over the western region, so it would give a reasonable indication of what would occur in this western region.

SEN. BLACK asked how liability issues will be handled. Mr. Talbott explained that the company donating the CO₂ is putting a rider on its insurance policy to absolve BSCSP from liability. SEN. BLACK asked if the State of Wyoming is involved. Mr. Talbott said it is and is using state land for the project. He explained that in Wyoming, the "pore space" belongs to surface owner because the greatest potential for being impacted exists on the surface.

SEN. BLACK asked about terrestrial credits for agricultural land. Mr. Talbott explained how the credit amount is determined, which is based on the amount of carbon the land is capable of sequestering. **TAPE 2 - SIDE B** SEN. BLACK asked if the Forest Service could sell credits based on mitigating forest fires. Mr. Talbott said that many are of the opinion that forests are carbon neutral, and he could not say definitively one way or the other.

THE BIGGER PICTURE: RENEWABLES AND CONSERVATION

Dave Ryan, Energy Engineer, National Center for Appropriate Technology, said he based his presentation on information developed by the Governor's Committee on Climate Change, and that the data is based on Montana specific data. Mr. Ryan discussed his power point presentation, "*OPTIONS FOR CARBON SEQUESTRATION AND CLIMATE CHANGE MITIGATION*" (**EXHIBIT #4**):

- option costs and potential, as developed by the Center for Climate Strategies (CSS); including Montana numbers for 2007-2020, millions of metric tons of carbon dioxide equivalent, and work in progress;
- climate records from the Vostok ice core covering the last 420,000 years;
- a graph revealing that carbon dioxide levels today are higher than in the previous 650,000 years;
- the need for immediate and far-reaching solutions;
- four options for solutions: agriculture, forestry, and waste management; energy supply; reducing residential, commercial, institutional, and industrial impacts; and transportation and land use;
- benefits of each option;
- suggestions on how to prioritize actions; and
- a summary.

SENATOR JACKSON asked if it has been determined how much carbon was released due to the huge forest fire situation, and how it compares with human impact. Mr. Ryan said the carbon impact of the fires has not been determined and explained why it would be very difficult to do so.

SENATOR JACKSON said he is trying to develop the "big picture" of the carbon problem. He said that earlier in the day, it was said that only 3% of carbon can be attributed to humans and asked Mr. Ryan if he would agree with that statement. Mr. Ryan said that historically, there have been atmospheric carbon changes over time but in the last 100 years, there has been rapid industrialization and a rapid increase in carbon levels, so the assumption is that it has been human caused. He said the increased use of fossil fuels is thought to be the biggest cause of the increase. Mr. Ryan said preindustrial spikes did occur but can't compare to the spike of the last 100 years.

REP. KLOCK asked who created the graph (slide 6). Mr. Ryan said he thought the information came from the Natural Resources Defense Council, but that he would verify it.

REP. WISEMAN asked what is the first and most immediate action that should be taken in Montana to mitigate CO₂ emissions. Mr. Ryan said the actual measures are listed on the Center for Climate Strategies website, but that the best one to start with would be to improve emission standards for motor vehicles.

SURFACE RIGHTS AND STORAGE: A CARBON QUESTION

Clint McCrae, Northern Plains Resource Council (NPRC), said he is a multi-generational rancher on Rosebud Creek, and he would speak from the view point of a rancher, livestock producer, and a surface owner. He said the issue of carbon sequestration is new to him and that he started out looking at this as an opportunity for landowners but has questions and concerns that he would like to have cleared up. He said as he understands the issue, there are two directions that can be taken to deal with this issue, being either a traditional method or an innovative method.

Mr. McCrae said the premise of carbon sequestration is the reverse of the traditional method of natural resource extraction of removing a substance from the ground, versus putting it back in. Traditional natural resource extraction requires study through an environmental impact statement (EIS), permitting, and then construction. Mr. McCrae said if this process is followed to the letter of the law, there are not problems, but in his opinion, the EIS process is not being followed in many instances as the law outlines and that there are problems. **TAPE 3 - SIDE A**

Mr. McCrae said carbon sequestration presents several different problems, the first of which is transportation. Pipeline is the main method that would be used to transport the CO₂, which is very corrosive and would require at least some new pipeline. Not only is this very expensive, but it also raises the issue of eminent domain, which is of huge concern to ranchers and other landowners. He asked if this would fall under the definition of public need, and said this is a very important point that would need to be clarified. He said he heard a lot of discussion earlier in the meeting of how to inject the CO₂ into the ground but little of how to get the CO₂ to that point. Mr. McCrae said he doesn't have a problem with the concept of carbon sequestration or with landowners who wish to participate, but that he is greatly concerned with how it will be done. He emphasized that landowners must not be negatively affected through the use of eminent domain.

Mr. McCrae said another issue that must be worked out is ownership, who owns the surface and who owns the space beneath it. The split estate issue must be dealt with before going forward. Mr. McCrae said the issue of how "deep" the surface is also must be dealt with.

Mr. McCrae asked if allowing carbon sequestration would set a new precedent for allowing other materials to be injected into the ground. He asked what happens to the material after it is injected, and if it would appear in wells or migrate throughout the underground. He said this raises the question of liability and of public health and safety.

Regarding enforcement, Mr McCrae said not enough is being done in Montana, and that enforcement and regulation has to be 100%. Mr. McCrae said liability must also be established and provided examples of a landowner whose horses were killed by escaping methane gas and of uncapped wells that presented safety hazards.

Mr McCrae said the issue of trust is also of concern. He said in his opinion, the Department of Natural Resources and Conservation (DNRC) and the Department of Environmental Quality (DEQ) have ignored laws relating to methane development and water rights. He read an article recently published in *AGRI-NEWS* relating to water use and water rights in Montana and said that the agency responsible for looking out for his senior water right is more or less saying that his rights should be trumped for the sake of "beneficial use of water". Regarding the DEQ, Mr. McCrae said the agency is not enforcing standards of water quality, and that he fears that this lack of enforcement could affect water quality standards in regards to carbon sequestration. He said state agencies have to be directed to look out for the public trust, study their mission statements, abide by them, and enforce the laws. There is too much focus on permitting and not enough on dealing with impact, accountability, and enforcement.

Mr. McCrae said he is trying to be optimistic on how this can work and that the market based approach is the way to go. He said the first step would be to remove the issue of eminent domain, and that as a land owner, he would consider carbon sequestration only if eminent domain was not a part of the deal. He said that renewable energy sources should also be focused on and suggested wind power as the top choice. Enforcement and accountability for state agencies should also be focused on. There must be an effort to be innovative and create incentives for landowners by making them a stakeholder in the process, instead of treating them like an obstacle.

Mr. McCrae compared this situation to that of the state land access issue, saying that the three parties involved were forced to deal with one another until they agreed on a plan. All three entities gave a little and got a little and were able to craft a plan that is still in use. Mr. McCrae said solutions can be found if people are willing to listen to one another and work together. He thanked the Committee for its work on this issue and asked, as a landowner, that the Committee make the right decision, versus the easy decision.

REP. WISEMAN recalled a bill draft relating to eminent domain for carbon sequestration pipeline and asked what the status of the bill draft was. REP. KLOCK responded that he had carried such a bill, which was approved. However, due to a contingency clause attached to the bill, it was void.

PUBLIC COMMENT

Bruce Williams, Vice President of Operations, Fidelity Exploration and Production Company, said he is available for questions relating to coal bed natural gas production and that Fidelity is one of two companies currently producing coal bed natural gas in Montana.

Bonnie Lovelace, Chief, Water Protection Bureau, DEQ. said she has served on the advisory committee for the Bureau of Mines and Geology, which is doing work on a new state map, which will be valuable to the study of this issues. She said the Bureau of Mines and Geology would be glad to answer questions from the Committee, if needed.

REP. DRISCOLL asked Ms. Lovelace to respond to Mr. McCrae's statements that DEQ is not enforcing water quality and water rights in Montana. Ms. Lovelace said she strongly disagrees with such a statement, that monitoring reports are received on a monthly basis, and that if a violation does occur, action will be taken. REP. DRISCOLL asked if fines have been assessed. Ms. Lovelace said no.

SEN. BLACK asked Tim Gregori to present his views on carbon sequestration. **Tim Gregori, General Manager, Southern Montana Electric (SME),** said SME is developing a 250 megawatt coal powered facility east of Great Falls, and that he has spent a great deal of time on this issue because of national concerns about greenhouse gases. He said one goal is to have the Highwood Station become a demonstration facility for carbon capture and sequestration. He said the Great Falls location is a good choice for two reasons: there is a suitable location to sequester carbon for long term storage, and there is a good facility nearby for an enhanced oil recovery project. Mr. Gregori said there have been many complications along the way, but that Montana has great potential and that its resources can be used in an environmentally responsible way.

SEN. BLACK asked if the Highwood Station plans to sequester CO₂. Mr. Gregori said SME has met with the Undersecretary of Energy for the Department of Energy (DOE) to determine the most appropriate form of technology for the facility, but that SME would like to be able to capture at least half of the airstream but feasibility and economics will make the final determination.

Connie Morris, Citizens for Resource Development, shared her idea for terrestrial carbon sequestration, and the role of coal bed methane in this process. She said coal bed methane is available, affordable, abundant, and the cleanest burning fossil fuel, and the by-product is water. The use of this water would be a great boon to carbon sequestration, if the land owners who want to use it were allowed to do so. Ms. Morris discussed how plants produce oxygen and carbohydrates using carbon, and said if landowners were allowed to use coal bed methane water on their land, it would improve range forage four fold. She explained that the benefits and results of terrestrial sequestration would be visible and measurable, as opposed to underground carbon sequestration.

TAPE 3 - SIDE B

REP. KLOCK said he though that coal bed methane water could be used on range land now. Ms. Morris explained the factors that prevent landowners from using this water, such as law suits from preservation groups, language in water rights statute, and the effect of the Platt River Restoration Act.

ADMINISTRATIVE MATTERS

Ms. Nowakowski asked the Committee to look at the proposed Final Work Plan (**EXHIBIT #5**). She said the Work Plan included a calendar of future meeting dates, and that the Work Plan has be to approved. She noted that the plan and meeting dates can be changed if necessary. She reported that REP. KLOCK has appeared before Legislative Council to advise that ETIC may need additional funding. She said that SEN. LIND has said that two-day meetings can be

difficult for him to schedule due to work commitments and asked what the members' thoughts are regarding this issue.

REP. KLOCK said if the Committee has the work to do, it is less expensive to have two-day meetings. He said he did not anticipate having to ask for additional funding and didn't see a need to change the work plan. REP. KLOCK asked the members to check their calendars and that the meeting dates would be finalized at the next day's meeting.

Ms. Nowakowski reviewed the issues in the Work Plan that the Committee had identified as areas of interest for study. She said the Committee has set a rigorous schedule and if it adopts all of the study topics, it will need to adhere closely to the Work Plan schedule.

SEN. BLACK said if the Committee plans to propose legislation for carbon sequestration it may need more time for study and decisions. SEN. JACKSON thought that technology is not up to where it needs to be to consider legislation at this time. Ms. Nowakowski referred members to pages 3 and 4 of the work plan and discussed the carbon sequestration study points.

.REP. KLOCK asked the Committee for input. SEN. BLACK said he would like to adopt the Work Plan and can make changes later if necessary. SEN. JACKSON said he was concerned about other issues in the Work Plan, such as coal gasification and energy transmission and that the Work Plan would not balance out, if half of the time was devoted to carbon sequestration. He said that the issue of ethanol is not on list at all and thought it should be . He suggested allowing 25% of the Committee's time for sequestration.

REP. DRISCOLL suggested adopting the Work Plan as is. She said the issue of carbon sequestration is huge and that more should be done. She recalled that at the July meeting the Committee agreed to not spend much time on transmission. REP. KLOCK said that not much work could be done on coal gasification at this point either.

SEN. BLACK said carbon sequestration technology will improve as industries move forward but in the mean time, the Committee should try to address as many of the issues as it can under the current situation. He pointed out that Wyoming has already drafted legislation and that the Committee could review that for informational purposes. He said that the Interstate Oil and Gas Compact Commission has a report available also that could be of use in this issue. He said that the Committee can also consider drafting a study bill for the next interim if more work is needed.

REP. ANKNEY said it is the Committee's responsibility to address the issue of carbon sequestration, in light of the information presented, and concerns expressed at the meeting, particularly how carbon sequestration will be permitted, regulated, and who will enforce the regulations.

SEN. BLACK **moved** to adopt the Work Plan. REP. DRISCOLL seconded the motion. The motion passed on a voice vote, with SEN. JACKSON voting no.

REP. KLOCK asked that the minutes of the July 10 and September 5 meetings be approved. The minutes for both meetings were **approved** as written on a unanimous voice vote.

Ms. Nowakowski reviewed the agenda for the next day's meeting and the meeting materials provided to members in their meeting packets. She said the manilla envelope also includes an

expense report and agenda. She also asked for discussion on if the Committee wished to address the coal-to-liquids topic at its November 8, 2007, meeting. She reviewed a tentative agenda for the November meeting as well. She noted that the meeting would also include a discussion of the Universal Systems Benefits (USB) program and that she plans to set up the Committee website to be able to take public comment regarding USBs. REP. DRISCOLL and SEN. BLACK agreed that the website feature would increase public comment participation.

REP. KLOCK recessed the Energy and Telecommunication Interim Committee until 8 a.m. on Friday, October 5.

TAPE 4 - SIDE A DAY 2 - OCTOBER 5

REP. KLOCK reconvened the Energy and Telecommunications Interim Committee at 8:04 a.m.

ADMINISTRATIVE MATTERS

Marty Tuttle, Division Administrator, Energy Infrastructure Promotions and Development Division, Department of Commerce (DOC), introduced Tony Priete, Director, DOC. Director Priete thanked the Committee for its work in studying the important energy issues facing Montana. He said he is very happy to have the new energy division in DOC, and said the Division staff is available to the Committee to assist it in its work.

Mr. Tuttle updated ETIC on the newly formed Division, saying that the remaining staff positions have been filled by Tom Kaisierski as Program Manager and Chantel McCormick as Energy Development Officer, and that both will report to the Committee. Mr. Tuttle briefly discussed issues that the Division will be addressing, and said that transmission is the biggest obstacle facing the State at the moment because without transmission, generation is a moot issue.

Mr. Tuttle also discussed the Montana Alberta Tie Line, (MATL), and said it is a significant step for Montana. He said that a MATL working group has been established to facilitate the EIS process and noted that there are 300 megawatts of wind power waiting to come on the line.

Mr. Tuttle reported that the Northwest Power Planning Council has completed its Northwest Wind Integration Action Plan, which is intended to facilitate the development of wind energy in the Northwest. Mr. Tuttle said that:

- the plans detail what type of wind is essential for wind energy projects;
- transmission is key to the development;
- cost is a major barrier;
- Montana will soon be required to meet a 15% renewable energy requirement;
- discussions are underway in the region to plan ways to share power back and forth for firming power;
- Action Plan 10 in the Action Plan specifically addresses Montana and recommends that the 500 KV line from Colstrip be upgraded by adding one new transformer and two new substations.

Chantel McCormick, Energy Development Officer, Energy Infrastructure Promotions and Development Division, DOC, provided a Power point presentation detailing the responsibilities and activities of the Division (**EXHIBIT #6**):

- Montana Energy Mission II to further improve international relations and potential for energy development;

- wind energy update on wind energy projects in Montana;
- geothermal development prospects;
- coal to liquid project planned for Malmstrom Air Force Base;
- green energy development in Montana, and the need for additional transmission;
- details of the MATL project; and
- discussion of the Mountain States Transmission Intertie and Northern Lights projects.

Tom Kaiserski, Program Manager, Energy Infrastructure Promotions and Development Division, DOC, thanked ETIC for the opportunity to appear before the Committee and said as an economic developer for the State, energy has become his emphasis and that he is looking forward to working with ETIC on energy development for the State of Montana.

Mr. Kaiserski presented a Power point report from the Massachusetts Institute Technology (MIT) study called the "Future of Coal" ([EXHIBIT #7](#)). Mr. Kaiserski said the report is very pertinent to the issues before the Committee. He discussed:

- the real risks of global warming;
- the likelihood of limits being placed on CO₂ emissions in the near future;
- the important role that coal will continue to play in a greenhouse gas constrained world;
- a world energy profile of fossil fuel use, including information on the rapid construction of coal fired power plants in China;
- the role carbon-free technologies will play in the future;
- the challenge of scale for carbon capture;
- the major role coal will play in the world's energy future;
- MIT's conclusion that CO₂ capture and sequestration is the critical enabling technology that would reduce emissions, while allowing coal to meet the world's energy needs;
- details of Norway's carbon sequestration pilot project in the North Sea;
- costs related to carbon sequestration, and the projected increases for coal use in the future; and
- Governor Schweitzer's energy policy for international issues, national issues, and Montana issues.

Mr. Kaiserski provided contact information for Division staff and noted that the Division website will be online soon.

REP. WISEMAN asked, regarding the financing of new transmission projects, why none of the industrial players in the Montana energy scene are interested in investing in electrical transmission line, and asked who is interested. Mr. Kaiserski gave the example of the MATL project, and said it is a merchant based project financed through Morgan Stanley, and that the investors hope to take advantage of the tax credits passed in 2007 session and other opportunities.

REP. WISEMAN said Montana's main power supplier has no generation capacity and has to buy its power from nearby sources, and that half the power produced in the state can't leave because of transmission limitations. He asked Mr. Tuttle if it has been considered that the addition of transmission capacity could upset the power market in the state and end up being a detriment to Montana ratepayers through increased competition for the power and increased rates. Mr. Tuttle said it has been considered but at this point, the thought is that rates will not go up. He said he looks at this more as a jobs initiative, because many jobs would be created if new transmission lines are constructed. The tax base would be increased, and Montanans will

have additional income to deal with any increased energy costs. He said many Montanans are in favor of economic development to improve living conditions. He pointed out that the MATL line, for example, is a merchant line and will not interfere with the Montana consumer, and said that if need be, legislation could be drafted that would protect the Montana consumer while allowing the responsible development of resources. Mr. Tuttle said out-of-state transmission doesn't necessarily need to drive the Montana market, and that the Montana consumer will always be a consideration.

TAPE 5 - SIDE A

REP. ANKNEY asked if the Division has plans to provide any assistance to Valley County or Glasgow regarding the wind projects that were lost to North Dakota and Wyoming. Mr. Tuttle said the companies are still interested in pursuing wind projects in Montana, and that Mr. Kaiserski is working on a project for southcentral Montana. He said it is an exciting time for Montana and that Montana could be established as the wind capitol of the nation. Referring to the potential project at Glasgow, he said if Glasgow wants a wind farm, the opportunity is there but that it has to be supported at the local level.

SEN. BLACK said it seems to him that frivolous lawsuits slow down or derail potential energy projects. He asked if the new Division has the power to do anything about this. Mr. Tuttle said the regulatory framework and several laws have been changed to help with this problem and said that for instance, permits are now challenged in the county where the facility is located. He said it is the Legislature that has the statutory authority to make more changes in the law. He said the Montana Major Facility Siting Act is always changing, and that the Division will continue to work within the regulatory framework.

USING CARBON DIOXIDE FOR ENHANCED RECOVERY

Tom Richmond, Administrator, Montana Board of Oil and Gas Conservation, asked to respond to a statement made yesterday by Mr. McCrae. Mr. Richmond said Mr. McCrae misquoted him regarding "regulatory impediments to beneficial use of produced water" and explained that the statement read by Mr. McCrae was referring to produced water management in oil and gas operations in the entire United States and was not about just coal bed methane in Montana. He read from the report to clarify the meaning of the statement used by Mr. McCrae.

Mr. Richmond gave a Power point presentation on the practical treatment of produced water from onshore oil and gas operations (**EXHIBIT #8**). Mr. Richmond discussed:

- the statutory definition of enhanced recovery as contained in 82-11-101(6), MCA;
- the statutory definition of an enhanced recovery project as contained in 15-36-303(3), MCA;
- why enhanced oil recovery (EOR) should be done;
- where CO₂ flooding has been used, both nationally and internationally;
- a detailed explanation of how CO₂ flooding works to dislodge and force out oil remaining in the well;
- factors for a successful CO₂ project;
- a map of the current CO₂ sources and pipelines in the United States;
- specifics of the Anadarko pipeline in Wyoming (map);
- a graph showing the performance of the Salt Creek Fields in Wyoming, including a brief history and photos of the field;
- Beulah, North Dakota plant pipeline routed through the Williston Basin oil fields and production statistics, including a graphic showing improved production levels due to injection;

- the 14 Lurgi Mark IV gasifiers and a graphic of typical lignite analysis versus typical raw gas analysis;
- photos of CO₂ compressors and the compression process used to send CO₂ down the well;
- the CO₂ quality for enhanced recovery;
- a list of potential oil reserves in the United States that could be injected for additional oil recovery; **TAPE 5 - SIDE B**
- a historical timeline of the development and establishment of safe drinking water standards in the United States and of Environmental Protection Agency (EPA) activities;
- the EPA injection well classification standards for each well;
- a Class II program description, including the purpose, examples of fluids, protective requirements, monitoring and testing, recordkeeping and reporting, and regulatory citations;
- federal and state agencies responsible for implementing the Underground Injection Control (UIC) Program, including that Montana and the EPA share responsibility;
- UIC Program Guidance #83; and
- several closing points regarding CO₂ and EOR.

REP. WISEMAN said he would like additional information regarding Mr. Richmond's statement about financing EOR projects in Montana. Referring to the production facility in North Dakota, he asked if the financing of this operation was an impediment, if the petroleum industry is using this already. He said he understands that a problem is the question of whether the source of the CO₂ in Montana is in a quantity and quality that is suitable for this operation. Mr. Richmond said he thought that was true and that it is a two pronged problem of (1) finding a source of clean CO₂ and (2) transportation from the source. He said these types of projects have to be highly engineered and that designing an efficient system is the biggest step.

REP. WISEMAN asked, regarding Montana oil fields in secondary recovery, if the Board has a sense of which fields would do the best with EOR using CO₂. Mr. Richmond said yes, the Bell Creek field has been tested and that a number of fields in the Cedar Creek Anticline also have responded positively to compatibility tests.

REP. WISEMAN asked if there is a specific oil price that makes EOR profitable. Mr. Richmond said that the concern is the down side and what may happen when the price of oil crashes. It is economical now but may not always be.

Mr. Richmond distributed copies of a summary of Phase I recommendations for carbon capture and storage compiled by the Interstate Oil and Gas Compact Commission (IOGCC) (**EXHIBIT #9**). He said the IOGCC is an association of states that has worked to create model statutes and model rules for the states to use to base new legislation on for carbon sequestration. Mr. Richmond also distributed copies of a Power point presentation, "*OVERVIEW OF THE IOGCC PHASE II CARBON CAPTURE AND GEOLOGICAL STORAGE REGULATORY TASK FORCE*" (**EXHIBIT #10**), and explained:

- the purpose and objectives of the task force;
- a brief summary of the Phase I work and recommendations - green booklet **EXHIBIT 9**;
- Phase II Task Force participants;
- the CCS regulatory framework;
- the CO₂ capture transportation and geologic storage process;
- Task Force guiding principals;

- guidance document components;
- an analysis of the U.S. Safe Water Drinking Water Act relating to carbon capture and geologic storage;
- state administered "cradle to grave" CCS regulatory framework;
- an analysis of property rights issues related to underground storage;
- state administered "cradle to grave" CCS regulatory framework; **TAPE 6 - SIDE A**
- a risk timeline for leakage;
- a summary of Primary Phase II Task Force proposals;
- an overview of Phase II Task Force next steps; and
- a list of states currently developing regulations using draft versions of IOGCC model regulations.

CO2: REGULATION AND PERMITTING FRAMEWORK CONSIDERATIONS

Bonnie Lovelace, Chief, Water Protection Bureau, Department of Environmental Quality (DEQ), discussed current law and regulations that may be necessary if carbon sequestration goes forward. Ms. Lovelace distributed folders containing various documents relating to her presentation, including a copy of her Power Point presentation, "CO₂ - *REGULATION AND PERMITTING FRAMEWORK CONSIDERATIONS* (**EXHIBIT #11**). She noted that portions of the Montana Water Quality Act are in the packet that may be referenced during her presentation. Ms. Lovelace discussed:

- geological sites suitable for sequestration;
- the current regulatory framework and noted that there is no overarching authority designated to regulate this issue;
- the Resource Conservation and Recovery Act (RCRA), and said that it may be applied if a substance is found to be hazardous;
- that while the IOGCC may view CO₂ as more of a commodity, DEQ must view it as a waste product and consider all of the potential negative effects;
- groundwater discharge as addressed in the Montana Water Quality Act in 75-5-103, MCA, 75-5-301, MCA; 75-5-303, MCA, 75-5-401, MCA, and 75-5605, MCA;
- definitions of "high quality waters", "pollution", and "State waters";
- information specific to nondegradation requirements;
- insignificant activities in terms of degradation of state waters;
- exemptions from permitting;
- permits and prohibitions; and
- what is not known about sequestration.

REP. WISEMAN asked from a regulatory point of view, if DEQ is able to handle carbon sequestration. Ms. Lovelace said yes and no, that the groundwork has been laid but so much remains unknown, about issues that may be needed in the application process. She said it may be advisable to define, under MEPA, what analysis will be required, and that DEQ will research and do its very best.

REP. WISEMAN asked as a legislator, if the fact that DEQ doesn't have the regulatory framework needed to regulate carbon sequestration is a problem. Ms. Lovelace said yes, at this point in time, DEQ has only the Water Quality Act to use as a regulatory tool.

CARBON CAPTURE CONSIDERATIONS

Dave Klemp, Air Quality Permitting and Compliance Supervisor, DEQ, said his Bureau has no authority over carbon sequestration, and if it did have authority, it would be at the point of

capture and would potentially involve transportation. He said he would address the capture portion of the process and pointed out that there are no requirements for capture at this point in time. He said that CO₂, for example, meets state and federal requirements that designate it as a regulated air pollutant. This allows the State to implement certain regulations, and the ability to permit and monitor it.

Mr. Klemp stated that the reason the Bureau has no authority over CO₂ is because it is not considered a regulated air pollutant. There are no standards or regulations in place, **TAPE 6 - SIDE B** and the Bureau has no ability to examine control options, can't require any type of analysis, and serves basically as a consultant.

Mr. Klemp disclosed that DEQ is involved in a lawsuit that may result in changes that would affect regulation of CO₂ as it relates to permitting. He added there are additional activities in other state and federal courts that also may affect this issue. He said the Board of Environmental Review will hear the case first but predicted it will go on to District Court.

Mr. Klemp said that the EPA was sued by Massachusetts, and that the United States Supreme Court recently ruled that greenhouse gas emissions from mobile sources may be regulated by the EPA. He said that as he understands it, EPA plans to come forward with a mobile source greenhouse gas emission rule. He gave a brief explanation of mobile source versus ground source and predicted that the issue will be tested in various courts.

CASE STUDY FOR CARBON CAPTURE: BEULAH, NORTH DAKOTA

Paul Suket, Senior Vice President and Deputy General Manager, Basin Electric, said he was appearing on behalf of Ron Harper, who became ill and could not appear before the Committee as planned. He said he has been working full time on the sequestration project since 1991, and that in his opinion, it has been very successful. Mr. Sukut provided copies of his presentation, "*CASE STUDY FOR CARBON CAPTURE*" (**EXHIBIT #12**) and discussed:

- background on Basin Electric and its service area in Montana;
- power supply facilities in the Midwest, and the various natural resources used to produce the power at each plant;
- Basin Electric's great dependence on coal and its major coal facilities in Stanton, North Dakota, the Laramie River Station, the Antelope Valley Station, and the Neal IV plant;
- the wind / gas option;
- details of the Dakota Gasification Company located in Beulah, North Dakota;
- details regarding the CO₂ pipeline from Beulah to the Weyburn Field in Saskatchewan, Canada; and
- Basin Electric's partnership with Encana to build the 205 mile pipeline.

Mr. Sukut played a video produced by Encana which gave an overview of how the pipeline works.

TAPE 7 - SIDE A

Mr. Suket commented on infrastructure and said that because carbon is captured as a normal part of the coal gasification process at the plant, the capital costs were much less than Encanas were and that the only changes necessary at the Beulah plant were to install three compressors.

Mr. Suket then discussed plans to expand and extend the current system to make more room on the pipeline using the Antelope Valley Station (AVS) and noted that the cost to do this will be

much greater. He referred to the remaining slides in his presentation (**EXHIBIT #12**) to discuss details:

- the business plan has been completed;
- that the Dakota Gasification Company has established that there is a demand and market for CO₂;
- Request for Proposals (RFPs) were released on June 1, 2007, are due September 4, 2007, and a final decision will be made in early 2008;
- the ten entities interested in the project;
- a graphic of the carbon capture process;
- the final selection will be based on technological feasibility, commercial feasibility, financial strength/participation, a project business model, and environmental issues;
- the challenges of the project, such as risk, reliability, cost, and performance concerns;
- that EOR is the bridge for understanding future sequestration needs and possibilities, and that there is a need for this technology; and
- that public policy and regulations must be developed.

Mr. Suket provided information on wind facilities operating in North and South Dakota (**EXHIBIT #13**) and discussed peak months for wind power. He made the point that wind isn't always available but is still a very important resource.

SEN. JACKSON asked if there was enough CO₂, could the step using water be skipped. Mr. Sukut said no, use water is less expensive.

REP. WISEMAN said DEQ has indicated that there may be problems with injecting CO₂ into the ground and mixing it with groundwater. He said he did not know what Canadian regulations were and could not answer that question.

REP. WISEMAN asked if Basin Electric has members in Montana. Mr. Sukut said yes, that there are approximately 120 distribution cooperatives and that 14 or 15 of them are in Montana.

REP. DRISCOLL asked Mr. McCrae if his concerns regarding carbon sequestration had been alleviated after listening to the speakers. Mr. McCrae said that some of his questions had been answered but that other issues had been raised. He said that one concern in particular is the effect that carbon sequestration may have on springs.

REP. KLOCK thanked all presenters.

REP. ANKNEY said it was a pleasure to have everyone in Colstrip and thanked all for coming.

ADJOURN

With no further business before the Committee, a motion to adjourn was made by SEN. BLACK. The motion was accepted and the committee was adjourned. The next ETIC meeting will be November 8, 2007.

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