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ENVIRONMENTAL QUALITY COUNCIL
Energy Policy Subcommittee
February 7, 2002
FINAL MINUTES

COUNCIL MEMBERS PRESENT

REP. MONICA LINDEEN, Chair
REP. DOUG MOOD
REP. PAUL CLARK
SEN. WALTER McNUTT
REP. DON HEDGES
SEN. KEN TOOLE
MS. ELLEN PORTER

STAFF MEMBERS PRESENT

MR. TODD EVERTS

AGENDA

Attachment 1

SUBCOMMITTEE ACTION

- Approved December meeting minutes

I CALL TO ORDER

MOTION/VOTE: REP. HEDGES moved to accept the December minutes. Motion passed unanimously.

II ELECTRIC INDUSTRY RESTRUCTURING: A PRIMER, UPDATE, AND DISCUSSION OF OPTIONS

Matthew Brown, National Conference of State Legislatures (NCSL), referred to **Exhibit 1**. There are several options at both the state and the federal levels. The Federal Power Act was one of a host of federal actions that occurred in the 1930's to define the federal government's role in regulating the electric utility industry. There was later a series of court cases that defined

the states' role. The combination of these says that the federal government will have jurisdiction over wholesale transactions, which are by definition, interstate. The state will have jurisdiction over intrastate transactions. The debate right now is what is interstate and what is intrastate. Anything that is regulated by the federal government is regulated by the Federal Energy Regulatory Commission (FERC).

In the beginning, the utility industry was a small power plant in a city, serving a very small customer. More customers were added on and then a few more power plants were built. The power system grew up as islands, which later connected through waves. The utilities owned the generation, distribution, meters, etc. They would charge one bundled rate for all of this. That small definition fell under state jurisdiction, but it no longer exists. When they moved into interstate companies, they moved into federal jurisdiction. The rates are now unbundled.

The power system is one huge machine with three separate parts. The western interconnect, of which Montan sits on the eastern end. Texas, Hawaii, and Alaska operate their own grid, and therefore don't fall under federal jurisdiction. He offered the analogy that the transmission system is like a swimming pool in which you have to keep the level of water precisely at the top of the pool. It can't go over and it can't have a decrease. You are essentially dumping buckets of water into that pool and at the bottom of the pool there are multiple spigots that the customers are drawing water from. When you dump power into the system, you have no idea where it is going to go. When people talk about selling power, they are talking about contracts, not the actual electrons.

Any new generator will have to interconnect with the transmission system. The issue is of who will pay for the interconnection. There is talk of regional transmission organizations (RTO). Montana will be a part of an RTO, but the issue is still, how is the transmission going to get paid for.

The Public Utilities Regulatory Policies Act (PURPA) was passed in 1978. This was at a time when the country was facing high fuel prices. The federal government's response to this was to encourage small, renewable generation to diversify the nation's fuel sources. PURPA required that utilities buy power from certain small power generators. This turns out to be the beginning of one of the most significant changes in the power industry that has been seen. A lot of states, such as New York, took this idea and said that not only could the small generators sell their power, they could sell it for a minimum amount. That had the effect of encouraging a lot of small generation, but also at the effect of raising prices in most of those states. The plants tended to be a mixture of different types of generation. Co-generation was a part of this.

REP. MOOD asked if the utilities were required to buy the electricity at cost. **Mr. Brown** said that there was the federal PURPA and the state overlays. Usually, the generator would deal in high capital costs technologies, but not a lot of capital. Therefore, they would often front load the contracts. That cost was theoretically based on the utilities cost for generating its own power. **REP. MOOD** asked if the net effect was to raise the price of electricity. **Mr. Brown** said that the price of electricity was higher because of the way the contract was structured. Another way to look at it was that it subsidized the growth of a new non-utility industry.

Mr. Brown said that ultimately there was a situation where there was almost a complete switch-over. Utilities are hardly building any new generation themselves. Non-utilities are building most of the new generation.

SEN. TOOLE asked if non-utilities included companies that are affiliated with utilities. **Mr. Brown** said that the definition of non-utilities could include a holding company which has a bankrupt utility affiliate. Many of the non-utilities are holding companies of utilities. A non-utility is a company who is not a government entity. **SEN. TOOLE** asked if they are investor-owned. **Mr. Brown** said that they were, but that there could be a privately-owned company.

REP. HEDGES asked if the Black Feet tribe's wind generation would be a non-utility. **Mr. Brown** said that the developer is a non-utility.

Mr. Brown said that, if we move forward in time about 15 years, investor-owned utilities have now taken on a very different role, the cost of developing new power plants has gone down significantly. By the early 1990's, most power plants are natural gas. The cost of developing a natural gas plant is much cheaper. The argument becomes that deregulation is needed because those high costs don't exist anymore. However, independent companies now have to look at interconnecting to the transmission grid, which is still owned, operated, and priced by the utility. The argument was that utilities would then charge the independent companies more to use the power lines than the utility charged themselves. This took the cheaper price of generation from the independent company and added a transmission charge that resulted in a higher end price for the delivered electricity. The idea with the wholesale restructuring of the early 1990's and FERC Order 888 is that utility would have to charge the independent company what they would charge themselves for the use of the transmission. This is a federal jurisdiction issue. This was supposed to open up the markets to non-utility generators. There have been several subsequent FERC orders, such as the RTO order, that show that Order 888 wasn't enough.

SEN. TOOLE asked if any of the orders dealt with allocated capacity. **Mr. Brown** said that Order 888 supposedly would have dealt with that, but it didn't sufficiently deal with that. There remain significant questions. The utilities still own the power lines and are able to say that they either do or don't have the capacity on the line available. There have been cases that went in front of FERC where a non-utility will say that there was capacity on the line, but the utility is saying that there isn't. One of the things that RTO's will try to solve will be finding good ways to allocate that capacity.

REP. CLARK asked if the utility has a line and they anticipate that the power needs to grow over a period of time, so their line would have to have a greater capacity, then another company comes along and wants to use that additional capacity, how will that be dealt with, in terms of the investment that the utility has put into the transmission system. **Mr. Brown** said that there needs to be a system to allow non-utilities to have access to transmission on a firm basis. Getting to that point is difficult and is something that the RTO will have to deal with. There is physically enough transmission to get power out of Montana a good part of the time, but contractually, the rights to use that transmission are tied up. Another question for the RTO is planning for growth. Currently, the transmission system is built up enough to handle the power flows. **REP. CLARK** asked who pays for the initial construction of the lines. **Mr. Brown** said that existing transmission system is included in the utility rate base. There are different models that deal with who will pay for additional interconnections. One model is to socialize that cost allowing taxes to pay for it. Another model is to have the generators pay for it, but that is not an incentive to new generation. This will be a decision of the RTO's.

SEN. TOOLE said that there is another solution, which is generated load centers and distributed systems. **Mr. Brown** said that small scale generation near the load centers is something that is being looked at. There is going to be a need for a mix of these ideas. The question that will be dealt with is how to get that appropriate and efficient mix.

Mr. Brown said that the term “deregulation” is one that the tries not to use because there is a lot of regulation still left. The federal government still regulates transmission; the state regulates the distribution. The price to use the lines is a regulated price. The deregulated area is the generation system. This is a narrow part of the whole business. Even where there are power companies selling in power markets selling at a market rate, they have been given market-based rate authority by FERC. This is a level of regulation over the deregulated business. One of the arguments in California was that generators are not selling in a competitive market and therefore didn’t deserve market-based rate authority.

REP. MOOD asked if Mr. Brown is referring to the legal system under the 1992 Act.
Mr. Brown said that the Act and subsequent FERC orders is what he is referring to.

SEN. TOOLE asked if the fundamental change was deregulating supply in price. He thinks that is why people view it as a move to deregulate. **Mr. Brown** said that is right. **SEN. TOOLE** said that we should call it deregulation. **Mr. Brown** said that he can see that argument.

Mr. Brown said that federal jurisdiction includes the transmission system, the generation through market-based rate authority. State jurisdiction includes the rest. There is still a lot of power in state jurisdiction.

SEN. TOOLE asked what the federal jurisdiction over generation covers. **Mr. Brown** said that federal jurisdiction covers the market-based rate authority. This is the permission that is needed to charge a market-based rate. It is a loose regulation.

REP. CLARK asked what the standards are to qualify for market-based rates. **Mr. Brown** said that FERC will look at the market and determine if a generator has the ability to control or manipulate prices at a given time within that market. If FERC determines that there is that ability, that generator would not be allowed to charge market-based rates. There is a series of tests that FERC uses to determine that.

Mr. Brown said that states have control over retail electricity prices, retail electric use, oversight of the Public Service Commission (PSC), transmission siting, generation siting, tax policy, and renewable/efficiency policy. When we look at retail restructuring, a year ago there were approximately 25 states who had passed restructuring laws. As of August there are seven states that did some version of pulling back, largely as a result of what happened in California.

SEN. TOOLE asked where the states who started to deregulated were in terms of price nationally. **Mr. Brown** said that many of the states who were first to move toward restructuring were at the national average or above. There were a few exceptions, including Montana. The more industrial and more urban states tended to move first. At the time there was a lot of concern that the federal government was going to mandate deregulation; this didn’t happen and is not going to happen. **SEN. TOOLE** asked if Oregon’s model for deregulating went straight to retain the residential level or did the Oregon deregulation focus on industrial customers. **Mr.**

Brown said that Oregon set up a system whereby there was a deregulated price for industrial customers. Residential and small commercial customers had a choice as to what they could buy.

Mr. Brown said that there was a question of what happened in western states as a result of the California effect. Prices rose in those states, whether or not the state had gone to retail competition. Everything had to do with the contracts that either the utility or the customer had. For a customer in a state like Montana, the prices went up. If you were a utility, the supplies weren't adequate and their prices went up. This is true in both the regulated and deregulated markets.

SEN. TOOLE asked if any of the net exporters had prices to their retail customers go up.
Mr. Brown said that the lack of hydro resources forced utilities to go on the market. Another issue was contracts that were inadequate, which forced utilities to go to market.

Mr. Brown said that natural gas prices are back to where they were in the late 1990's. His concern is that there was a lot of drilling and exploration going on when prices were high. A lot of that is stopping. Storage of natural gas right now is good. He does have some concerns about the market signals because prices are so low that there is not exploring going on now.

REP. HEDGES asked if the storage for natural gas had been increased. **Mr. Brown** said that the capacity for storage wasn't increase, but the amount of storage has been increased.

REP. MOOD asked if by storage Mr. Brown was referring to actual tanks or capacity.
Mr. Brown said that it was a combination. The storage levels for natural gas were very low when prices were high. There are some people who are asserting that there was some manipulation of the storage limits. Some of the regulation governing the storage of natural gas had been removed. There was no buffer as gas prices started to go up.

SEN. TOOLE asked if the driver on use of gas is the generation of electricity. **Mr. Brown** said that 93% to 95% of every new power plant being constructed uses natural gas. There are questions long term as far as the domestic capacity for production of natural gas.

REP. MOOD asked what percentage of natural gas use is residential as opposed to commercial. **Mr. Brown** said that he could find that.

SEN. TOOLE said that the trend is clearly increasing. **Mr. Brown** said that trend for using natural gas in power plants is increasing, where natural gas usage for residential is staying pretty stable. This is because gas has been cheap and natural gas turbine technology has improved dramatically.

Mr. Brown said that with retail restructuring the markets were opened with the hope that people would switch in large numbers. Generally the trend has been that small customers have not switched. The larger customers have tended to switch. In state after state, it is the regulated price that determines the amount of competition. There are different prices for residential customers versus industrial customers. These played into who switched.

SEN. TOOLE said that nobody wanted to deregulate to get higher prices. The goal and promise was that prices will drop.

REP. CLARK asked if in Massachusetts every customer has the capacity to choose a different supplier. **Mr. Brown** said that was correct. In other states that is not true. **REP. CLARK** asked if residential changes are so small because customers didn't have the option to switch.
Mr. Brown said that didn't hold true in this case. In Massachusetts everybody had the option to switch. There wasn't much reason to switch. **REP. CLARK** asked in Massachusetts how many choices to people have. **Mr. Brown** said that because of the way the rules are set up, initially there were a number of marketers who signed up to market. It turns out that only one is actually marketing to residential customers. **REP. CLARK** asked if this created the potential for a middle marketer or broker to move in. **Mr. Brown** said that is usually the way that these things are structured. The trick is that the marketers weren't able to find a price that was better than the regulated price.

SEN. TOOLE asked if that was true in other areas because the transaction costs tended to be a problem. **Mr. Brown** said that isn't an issue to residential customers.

Mr. Brown said that Pennsylvania is the state with the most success. Significant numbers of customers, including small customers, have switched providers. There are some similar things happening in Maine. This is because of grouping of smaller customers and putting that load out to bid. What has happened in Pennsylvania is that people are actually switching back to their utility. The reason that is happening is natural gas prices went up causing electricity prices to go up. The regulated market didn't change, but the marketers prices went up.

SEN. TOOLE said that this could just be regulatory lag. **Mr. Brown** said that could be true to an extent, but it didn't really go up. **SEN. TOOLE** asked if that could be because they own generation as well. **Mr. Brown** said that generation assets had been sold.

Mr. Brown said that marketing to residential customers is not happening as was expected. About 60% of a residential bill is open to deregulation. Savings between 2 and 10 % of that doesn't amount to huge savings for the residential customers. This is one reason that residential customers are not switching. The margins of selling to residential customers is low.

REP. LINDEEN asked how many residential customers in Pennsylvania were grouped together for the bidding. **Mr. Brown** said that it was around 300,000. You don't need to have that level to have a successful aggregation.

Mr. Brown said that wholesale market prices are back down to where they were a few years ago. One of the reasons for that is new generation that has come online. Another reason is energy efficiency programs. The price for electricity goes up during high load periods. If you can reduce loads by small amounts, you can reduce prices by large amounts. States are finding that a portfolio that includes efficiency also seems to work best because efficiency is very effective in controlling the price spikes related to peak load. Emissions reductions from energy efficiency occur in different ways depending on what the efficiency measures put in place. A lot of states have put in place the systems benefit funds for energy efficiency. Montana is one of 14 states that have Universal Systems Benefits Programs (USBP).

SEN. TOOLE asked if most other states combine USBP with public welfare functions.

Mr. Brown said that there are some states that only do low income programs. There are also states that combine those programs with significant energy efficiency programs. He doesn't know of any states that only do energy efficiency programs.

REP. LINDEEN asked if an independent for profit manager of an RTO is only one scenario. **Mr. Brown** said that there are discussions of that idea in two or three parts of the country.
REP. LINDEEN asked if there is any idea when there would be a functional RTO in the west.
Mr. Brown said that FERC is pushing very hard to have this happen soon. They are talking about having the west divided into various RTO's. FERC is also suggesting that there may be ways to have states coordinating in ways such as interstate compacts on power transmission siting.

REP. MOOD asked, given the fact that the generation is deregulated and transmission is regulated, is it logical that companies would sell their generation facilities. **Mr. Brown** said that they were functionally separated by the 1992 act, but there was no requirement at the federal level that the generation facilities be sold. Some states did make that requirement. A lot of facilities decided that it was difficult to be in both the regulated and deregulated businesses, but it was a business decision. From a policy perspective, that separation seemed like a useful idea.
REP. MOOD said that it would appear to him that once the federal government said that everyone has to have equal access to transmission, it made less of an incentive to be integrated. **Mr. Brown** said that a great deal of the generation that has been sold off at this point. New generation is not being built by utilities. It also has to do with all the changes in the utility industry.

SEN. TOOLE asked, as new markets emerge and restructuring is moving forward, are we going to see a continued more frequent changing of ownership of generation. **Mr. Brown** thinks that we are. That has already been seen and he doesn't see why that trend would not continue. He also thinks that we will see a shake-up of some sort.

REP. MOOD said that 81% of generation is not owned by utilities, it would be interesting to see how that has changed. **Mr. Brown** said that what will be seen if you look throughout the past is almost complete utility ownership up until the 1980's. Then there is a very steep increase in non-utility ownership through sales and additions.

III A PRIMER ON POWER MARKETING

Joel Cook, PP&L Energy Plus, referred to **Exhibit 2**. He said that in the northwest most people participate in the Northwest Power Pool (NPP), which is designed to be a reserved sharing group. The Western States Coordinating Council (WSCC) has a rule that says you need to provide reserves equal to your single largest contingency. In other words, if one single event happened that could take down the power plant, the reserves need to be available to replace that plant. The idea was that if the generators combined into a pool, they would need fewer reserves than they would individually. In the NPP 5% of hydro and 7% of thermo is required for operating users.

FERC started through this with Orders 888 and 889. This is what started the change from how business was done historically to how it is done now. Historically, the transmission system would sit waiting for the owner of the transmission system to utilize it. FERC Orders 888 and

889 opened that transmission up to everybody. Order 889 provided for Open Access Same-time Information System (OASIS). This is a computer program that allows someone from their desk to get in and request a path to move power from point A to point B. This is to provide equal access. It is a first come, first serve system. Order 636 provided further clarification to those rules.

FERC is continuing now to promote the openness of the system through RTO's. There are still issues with transmission providers and control areas providing equal access fairly to all parties. If someone owns both generation and transmission, they have an incentive to make sure that their generation can use their transmission. Even though they are functionally unbundled, there are still not all the proper incentives to ensure that it is totally independent.

SEN. TOOLE asked if a company builds a plant, will they want transmission that goes with that plant for the life of the plant. **Mr. Cook** said that a company may build a plant and have transmission to a market hub, but others have transmission to move the power away from the hub. The generator may not have a requirement to have transmission to specific points all the time. It is also possible that the requirement may change. PP&L is constantly changing where they want to move surplus power to. **SEN. TOOLE** asked if you are building a plant, you shouldn't assume that the financier isn't going to want a clear path for transmission capability. **Mr. Cook** said that the financier will want to know that the generator has a path to get to a market.

SEN. TOOLE asked, if we are in a situation where older plants will get those contracts, how does a new developer get transmission. **Mr. Cook** said that is one of the reason that FERC is promoting the RTO's. They want the RTO's to be independently operated from people who own transmission and generation. FERC wanted one RTO for the west, but this was not a popular idea among the western states.

REP. CLARK asked if the authority of the RTO's has already been described and do they have the authority to look at a transmission system and say it needs to be redesigned. **Mr. Cook** said that is in progress. What authority RTO's should have, whether they should be able to promote generation expansion, transmission expansion, market mechanisms, etc. are the issues being looked at. FERC is trying to being as consistent across the nation as they can be, but there are too many significant differences. **REP. CLARK** asked, when there are three different RTO's, how do they make their regulations mesh so when you go from one RTO to another there are not problems that come up. **Mr. Cook** said that there is a committee that works on seams issues, which is what REP. CLARK is referring to. Power moves to where the market is. The industry tried to physically match through contracts what is actually happening on the ground. There are things such as a physical rights model versus a financial model that need to be looked at.

Mr. Cook said that FERC wants to give everybody access to the system and compensate those who have rights through some form of credit. You don't want to discourage or prohibit anybody from participating and adding transmission or generation to the market. In the end, those additions are a benefit.

REP. LINDEEN asked, if the goal is to have the system completely open, why not just have one open system across the nation. **Mr. Cook** said that all the regions operate differently. There are AC and DC systems. FERC divided them so that if something happens in one area of the

country, it doesn't affect the entire country. Within the WSCC, three areas are still needed because of differences in the market and different resources. The industry is struggling to get down to three regions. **REP. LINDEEN** asked, once there are three RTO's, will they then want one RTO. **Mr. Cook** said that FERC will keep pushing for one RTO. FERC wants one RTO per market and it can be argued that the west is one market. What happens in Montana may affect California. Prices in California affect prices in the northwest. The transmission was designed to move surplus power to other markets. You don't want to build more power plants than needed to only have them run part of the time.

Mr. Cook said that the four characteristics that FERC is promoting for RTO's are independence, scope and configuration, operational authority, and short-term reliability. The benefits that are hoped for is to eliminate rate pancaking, provide equal access to the grid by all participants, and simplify transactions.

There is congestion everywhere on the system, but it varies from hour to day to season. The reason it varies is that there are all kinds of variables that are moving all the time. Many transmission paths are congested due to transmission constraints. These are things that all the market participants deal with on a daily basis. This is a physical congestion power.

REP. HEDGES asked what safety factor is built into the lines. **Mr. Cook** said that there are some rules about how conservative people need to be on those lines. There is an operating committee in the WSCC that sets rules to allow transfer capability. The committee does huge power flow studies and then that information is included in rules that are designed to help the reliability of the system. The lines don't operate at their full capability the majority of the time.

Mr. Cook said that in the RTO congestion and existing firm transmission rights are two variable issues. Even though someone has the rights to the path, the path is not being used all the time. We need to promote the best use of the system, but not harm anyone's rights.

There are various things that play a part in Montana's generation. Nameplate is what the generator says they are capable of producing, but just because that is what they say, doesn't necessarily mean they can. There are some limitations to that such as maintenance. Nameplate ratings tend to be misleading. Another idea is station service; some of the electricity produced gets consumed at the site for operation. When you move power from point A to point B some energy is lost.

Hydro plants might have a different turbine capacity than the generator, so they might be undersized or oversized. A hydro unit can respond to increases in demand better than any other mechanical power plant. The capacity in Montana is 23,000 megawatts. The actual amount on an average water year is about 12,000 megawatts. Of that, it can only rely on about 10,000 megawatts on a consistent basis. During peak runoffs there may be as much as 19,000 megawatts.

The question was asked how does peak runoff coincide with peak loads. **Mr. Cook** said that they didn't coincide very well. The runoff is typically in April, May, and June, which is when the loads in this area are low.

REP. HEDGES asked if it was true on the major federal lands that you couldn't always adjust the flow. **Mr. Cook** said that he is more familiar with the Bonneville Power Administration (BPA)

system and less with the Western Area Power Administration (WAPA), which includes the federal lands asked about. There was an environmental push to not have much leeway. BPA has a lot of flexibility at those sites, but there are still limitations. It is something that the industry has to balance. Those hydro plants serve other purposes such as flood control, irrigation, etc.

Mr. Cook said that his group does everything from buy and sell to contract and more. They have some overhead management functions, but are self-contained. There are three distinct markets in the power business: real time, prescheduled, and term. For real time there are people there 24 hours a day, 7 days a week. Every hour they are looking at how much is being generated and how much is committed to sell and making sure those amounts are equal. If there is not enough, power is bought; if there is too much, power is sold. It is a balancing function. This is a challenging job. For prescheduled, people are looking about 3 months in advance. They are also trying to set up the same balance. Most business is done next day to next week. The term traders or wholesale marketers have all the time in the world relative to the other two functions. These people go out and meet with the customer, define what the customer needs, and try to put together a product that fits the customers needs. There are also resource coordinators. PP&L has a couple people that manage the hydro licenses.

SEN. TOOLE asked if when PP&L was selling to California during the peaks, were they making most of those sales on the very short term or mid term. **Mr. Cook** said that those sales were made on the very short term. PP&L's first obligation is to Montana through a wholesale transmission service agreement. All of the power that Montana's customers needed was going first to Montana Power Company (MPC). Anything left was being sold on the market. It depended on the load, resources available, transmission, etc.

Mr. Cook continued that risk management and pricing is a big part of what PP&L does. Each trader has a certain authority as to the number of megawatts they can sell on a given day. These strict internal rules are to prevent the company from having financial problems that are not anticipated. Contract administration is to manage the contracts and make sure that all contracts are represented in the activities. The accounting department bills and collects the money.

In the west, there are areas that have developed on their own into market hubs or trading locations. These are locations that have more people with rights to transmission or generation than other locations. The one closest to Montana is the Mid-Columbia. The Mid-Columbia is primarily five federal dams. There is multiple ownership there. When we reference pricing, this is one location that is referenced for people buying and selling power. The prices are historical prices from the previous day.

There are also spot prices, forward prices, and futures prices that are all different from the forecast price. A spot price is the price after the fact that designates a short-term deal. It is energy that was bought and sold yesterday. A forward price is what someone is willing to transact at for months or years in the future. A futures price is like in the stock market; there are regulated commodity exchanges that provide futures prices.

There are several factors that influence price. Production is a big factor. Availability of water is very important in our area. Other factors include fuel prices and availability, and plant availability and performance. Power plants are mechanical facilities that can break. Water levels for

eastern Montana are below average. Consumption, load shape, load growth, weather, and other things also play a part in the price.

We don't know all the answers. There is a lot, particularly with the RTO's and their impact, that is unknown. Retail competition is different in almost every state. The level of wholesale across the country is different in different parts of the country.

IV AN OVERVIEW ON HOW ELECTRIC COOPERATIVES FUNCTION IN MONTANA

Dave Wheelihan, Montana Electric Cooperatives Association, referred to **Exhibit 3**. The genesis for electric cooperatives nationwide was in a time where there was not adequate electric service in areas of rural America. The first cooperative was formed in 1914 in Granite Falls, Minnesota. In 1923, only 2% of all farms in America were electrified. In 1935, President Roosevelt created the Rural Electrification Administration (REA) to help move rural electrification along. By 1935 three companies held 40% of the entire industry. There was a growing mistrust of private utilities because of improper financial practices. As a result of this mistrust, the Public Utility Holding Company Act was passed. In 1936, Congress passed the Rural Electrification Act, which gave lending authority preference to non-profits which were to be cooperatives. The loans were to be made for the construction and operation of generation, transmission, distribution of electric energy to persons in rural areas that were not currently receiving service. These initial loans had 25-year terms. Between 1936 and 1963, nearly 1000 electric cooperatives were formed across the country. In 1939, the Montana legislature passed the Rural Electric and Telephone Act, which set forth powers and purposes of electric cooperatives.

Today there are over 9000 electric cooperatives in the nation. They serve about 34 million people in 46 states. They employ 60,000 people and have $70 billion in assets. Montana has 26 distribution cooperatives and 3 generation and transmission cooperatives. The co-ops in Montana own very little generation. The distribution co-ops range in size and serve 400,000 people in Montana.

An electric co-op is formed to provide electric energy. They are formed on a not-for-profit basis and are owned by those who receive the service. There is an elected board of directors that makes policy and rate decisions. The eastern third of the state, for transmission and generation, is primarily served by the WAPA and Basin Electric Cooperative. The central part of the state receives a mix of energy from Bonneville Power Administration (BPA), Basin Electric Cooperative, and WAPA. The western cooperatives are primarily BPA, with the exception of Flathead, which has contracts with Pacific Corps. This means that the price for power across the state is different. Added on to the wholesale power cost is the cost of delivery. This cost also fluctuates across the state. It is a function of the number of consumers per mile of line.

Co-ops are based on 1 person equals 1 vote. There was a bill passed in the 2001 session that allowed co-ops to establish classes of members. The rationale behind that was those co-ops that opened their system up to choice may have members that are only taking the poles and wires service. There was a need to have those different classes of membership because their interest in the cooperative would be different. The sole purpose of a co-op is to provide at-cost electric service to its members. Any profits would be returned to consumers based on their usage.

There are 7 basic principles of cooperatives: voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education, training and information, cooperation among cooperatives, and concern for community. Some of these have been further refined by Touchstone Energy to use their brand. The idea of a brand is to allow people to know that some cooperatives are similar in their service.

There are some the key policy issues and concerns that the co-ops are looking at. The 1997 restructuring bill had a separate section for cooperatives. There were some good things in that law that enabled the cooperatives to go at their own pace. Some of those things that they would like to see retained are the ability to control their own destiny, and the ability to recover stranded costs from departing consumers. They also will continue to monitor the USBP law, federal restructuring legislation, and FERC actions. They will know by the July meeting if the cooperatives will be bringing forth any legislation for the 2003 session.

REP. CLARK asked about retiring line and increasing density, does it go the other way. If a co-op puts in 10 miles of line, who pays for that? **Mr. Wheelihan** said that the contribution and aid to construction is in place, this allows that the customer who wants the line extended will have to provide a substantial portion of the cost. **REP. CLARK** asked if there are some limitations in the structure of the co-op that would limit who they could purchase power from and where that power could come from. **Mr. Wheelihan** said that there are contractual constraints, but probably not physical constraints. Most of the contracts that the cooperatives have go out to 2039. They provide that anything the cooperative consumes has to be purchased from that power supplier. **REP. CLARK** asked if there is any physical constraint within the grid that would disallow power coming from other areas. **Mr. Wheelihan** said that the cooperatives own very little transmission line. That would be more along the lines of transmission paths coming from other companies.

REP. MOOD asked how many long-term contracts were made after the restructuring act passed. **Mr. Wheelihan** said that the central Montana group had notified MPC before the restructuring law was passed that they were going to choose a different power supplier. It wasn't because of the restructuring act, it was something that they had to do anyway. The western cooperatives faced a similar situation where their existing power supply contracts had run out. Both groups negotiated with BPA for new power supply. In the eastern area, the power supply contract that was in place before restructuring began is still in place. **REP. MOOD** asked if there was any cause and effect in the negotiations. **Mr. Wheelihan** said that it was a timing function of when the contracts expired.

REP. HEDGES asked if the territory integrity law had come down to the poles and wires. **Mr. Wheelihan** said that was correct. Territorial integrity addresses where the poles and wires are and who will put them there.

SEN. TOOLE asked for clarification. **Mr. Wheelihan** said that a group of cooperatives did bring forward a bid to MPC distribution system.

REP. LINDEEN asked if the survival of the cooperatives and controlling their destiny meant maintaining the status quo or in the future trying to acquire other assets. **Mr. Wheelihan** said that the Montana cooperatives tend to take the long view. They want to continue to be in the communities that they are in. There are a lot of external factors that influence their ability to be there, so they are unified when it comes to state and federal issues. However, how they apply those rules and individual decisions is something that they want to maintain. When cooperatives

look at the system in Montana, it makes a certain amount of sense to them to take some of the less dense areas of the existing MPC system and integrate those into the cooperative system because it raises consumer density.

V UPDATE ON THE SETTLEMENT AGREEMENT AMONG INTERVENING PARTIES ON STRANDED COSTS AND THE SALE OF MPC'S DISTRIBUTION SYSTEM

Bob Anderson, Public Service Commission (PSC), said that MPC and Northwestern Corporation filed with the PSC for approval to transfer ownership of MPC's transmission and distribution systems in January 2001. In that filing the parties asserted that the only issue was the qualification of Northwestern to discharge the duties of a public utility under the law. Several parties filed comments in the matter. Among the comments were that there are other issues that needed to be considered. Some of those comments said there was a link between this case and the stranded costs case and the portfolio case. The PSC issued an order rejecting the filing and said that a new filing would be made that addressed those issues. The parties did that. At the same time they filed a motion for an expedited schedule. The PSC denied the request to expedite the matter because the other parties continued to assert that there was linkage between the sale docket and other cases. The parties agreed that a schedule that contemplated a decision by the end of January was appropriate. The intervening parties agreed to this reluctantly, but were concerned that it was too quick. That schedule called for intervening testimony to be filed on December 21. On that date they asked for an additional week, which was granted. On December 28, instead of filing a intervening testimony, all the parties came forward with a settlement agreement. That became the focal point. The PSC and the parties still wanted a decision by the end of January.

The technical hearing was on January 16. At that time it was argued that the settlement was in the public interest. They answered PSC questions. There were satellite hearings across the MPC service territory. There was a substantial block of the public that didn't like the deal. They felt that it was just another back-room deal by the big companies. There is some truth in that. The parties negotiated privately to reach a settlement. You can't get a good outcome for the public if you don't allow the parties to negotiate behind closed doors. The PSC understood their duty as to go beyond the appearance of the deal and get to the merit of the agreement. This is where they focused. The PSC concluded that the settlement was in the public interest. They looked at the central question of who would own the company. MPC didn't want to own it anymore. The customers interests are better served by a company that wants to be in business. The PSC accepted the settlement. The adoption of the settlement is looking forward. It settled the stranded cost part of the transition case, but there are some other competitive issues that remain.

The transition docket has not been closed. Northwestern is on notice that the PSC accepts that Northwestern will be the company with the legal obligation to service customers. The PSC accepts Northwestern's attitude on good faith.

Don Quander, Large Industrial Representative, said that this has been a very long exercise, particularly with regard to stranded costs. They have been looking at the stranded cost issue since the restructuring bill was passed in 1997. His group was among the parties that agreed that it was important to reach resolution on the stranded cost issues in conjunction with the sale, in order that the parties and the state might have confidence that whatever determination was made with respect to the sale, that the transition costs be known to Northwestern and

customers. This would allow for a basis for Northwestern to know what they were getting in terms of a revenue stream and responsibility. Customers would also know what those costs would be.

Ultimately the issues were worked on together and were able to reach an agreement on a package settlement. Many of the parties would have identified different parts to the package, but it was felt to be something that all the parties could live with and could recommend to the PSC as a reasonable resolution for the sale. They all recognized that many of the important issues remain to be resolved by the PSC, including the default portfolio. They felt that this settlement would provide a foundation for the PSC proceeding to address the other major issues.

The parties did feel that, in the end, the trade-offs did make sense for the individual parties, as well as the customers and the state as a whole. The large customers' priority was to achieve a reasonable and sound result on transition costs and assure that there was a long-term provider of utility services that they would have confidence in.

John Bushnell, Consumer Counsel, said that the number that came up the most was the $90 million reduction in rates. Of that $30 million is to flow in the first year, starting July 1, 2002, in the form of a competitive transition charge (CTC) credit. That will go to all customers on the distribution system for MPC. The remaining amount flows back in a reduction in a 28-year stream of stranded qualifying facility (QF) costs. Those QF costs arose from long-term contracts that were signed with QF's that came about as a result of PURPA. Those costs would need to be recovered even without restructuring. The stranded costs estimate was to figure out how much of those contracts over the next 28 years is out of market. The $60 million reduction is a reduction to what MPC filed for their QF stranded costs.

Another consumer benefit was the release of the choice customers to what were crude interim competitive transition charges in the amount of $23 million. That includes large industrials, hospitals, schools, and others that went to choice.

The power from the QF's is going to be used to serve default supply loads. As a term of the stipulation, Northwestern and MPC is going to guarantee those quantities at the price that was used to determine stranded costs. Those will run the life of the QF's.

There is a final release of ratepayers with regard to generation liabilities. The Consumer Counsel felt that they had that anyway from their interpretation of SB 390. It is now in stipulation, and will be served as the final release.

Northwestern Corp. or MPC will now come in and have a proceeding before the PSC to explore the use of transition bond financing as it was originally conceived in SB 390. This will be to provide further benefit for ratepayers. It will take that proceeding to determine if it makes sense to do that.

Dennis Lopach, Northwestern Corp., said that as they went around the state discussing these issues, it was interesting to see the public discussion. A good part of the public's response was that these are hard issues for them to understand. It was suggested that the parties might as well be speaking a foreign language. They haven't explored in detail the stranded cost issue, but what was clear through the stipulation was that the stranded costs were a fixed set of costs

that the distribution company will have to deal with in the future. From Northwestern's perspective, an important part of the stipulation had to do with the fixing and the determination of the future cash flow from the competitive transition charge. Northwestern was willing to consider a reduction of that amount, but they were interested in knowing what the future cash flow would be. From Northwestern's perspective, the Tier Two discussion was extremely important. An important advantage of the stipulation was the certainty that was provided.

Northwestern appreciated the process, which was agonizing and intense. The PSC approval process was also very intense. He believes that the result of those processes was a positive one.

John Alke, MPC, said that he was attained by MPC to litigate or settle the sale of the properties to Northwestern. From MPC's perspective there were four key elements to the settlement. The most important was that they secure the approval to sell the properties to Northwestern. The second was a $30 million settlement fund. The third was the $68 million reduction. The stranded costs numbers over the next 20 years is close to $2 billion. A portion of that is in market, but the out-of-market portion has to be accounted for in the Tier Two proceeding. The filing lifeline indicated a net stranded costs of $365 million. $305 million of that was to be recovered by the ratepayers. As a part of the settlement that number was reduced by $60 million. The last important figure was that roughly $23 million in stranded costs that were accrued under the PSC's prior accounting orders were written off.

MPC needed the proceeds from the sale to maintain the financial viability of Touch America. If that sale collapsed, the reasons for negotiating would have disappeared. The settlement process provided a forum where the consumer got things that would not have occurred had the litigation continued. The process was difficult and time-consuming. This is the end of a 4 ½ year process. The Tier Two litigation has been pending for 4 ½ year in the Montana Supreme Court. The amount of information produced is enormous. The process brought that information together, evaluated it, and arrived at an acceptable solution. He thinks that the state was well served by the PSC decision.

SEN. TOOLE asked if the $60 million is an offset against the $305 million, which was a projection of what the costs would be over the life of the contracts. **Mr. Alke** said that was correct. **SEN. TOOLE** asked if those are stranded costs, so long as those prices are above market. **Mr. Alke** said that the costs of the QF contracts for the next 28 years is a known. They are out-of-market now. It was anticipated that they will be out-of-market for the entire time. Those contracts are quite old and had generous escalation clauses in them. **SEN. TOOLE** asked if it was a projection over 28 years of what market prices are going to be. **Mr. Alke** said that the contract payment price isn't a projection. Price for the contracts at the time of settlement was approaching 60 mils. The price rises at 20 year out of 130 mils. The projections are what the market will be. **SEN. TOOLE** said, if market prices escalate dramatically beyond the projection, then this isn't such a good deal, but if market prices drop, this is a good deal. **Mr. Alke** said that was not true. If the market value drops, then we will have underestimated the stranded costs and the value to the consumers is better. **SEN. TOOLE** said that the benefit is not solid, it depends on how accurate the projections to market are. The response was given that this issue is subject to the supreme court case. It isn't part of the settlement, per se. The issue that went to the supreme court was that MPC asked for tracking. The PSC read the law and didn't feel that was permissible in the law. The supreme court agreed and said that the number has to be settled to issue a final order in the stranded cost case. The benefit to

consumers will depend on future market prices, but that would have been the case regardless of the settlement.

REP. CLARK asked if there is agreement within the parties of the settlement as to what the stranded costs would be and is there are agreement amongst the parties that reduction by $60 million is a valid reduction. **Mr. Bushnell** said that the Consumer Counsel's perspective is that the settlement is for $90 million in total. It was a lump sum amount that was a result of settlement negotiations. Through the negotiation process it was split into $30 million for a 1-year credit and $60 million for a 28-year credit. To say that it is attributable to stranded costs may be the view of some parties, but was never the view of his office. They felt that if the case had proceeded to the PSC, they could have represented a case that would have reduced the $305 million figure. The interpretation of the issues depends on the view of the party. **Mr. Lopach** said that Northwestern believed that $305 million was the correct number. They believe that the settlement results in under-collection of the stranded costs by $60 million.

REP. CLARK asked about the portfolio and purchases that have yet to be built. How much of the actual costs will be passed down to the consumer? What happens of the plants are not built and another contract will have to be made? **Mr. Anderson** said that state law requires that MPC, whether owned by current owners or new owners, has the duty to serve as the default electrical supplier. It is their duty to go to the market place and acquire contracts for that service. In the event that one of MPC's suppliers failed, MPC would have to go to the market place and figure out how to meet customers' needs. Also, the law provides that the company is entitled to recover its prudently incurred costs. The company has to come to the PSC for approval of those costs.

REP. MOOD asked if Northwestern has set up a situation where they are incurring future financial obligations for which there is no apparent method of repayment. **Mr. Lopach** said that at the PSC hearing they talked about a process in trying to manage these future obligations. The PSC's approach was that it is nice that the rates are lower because of this, but they need to know that they are not to low. The PSC needed to know that Northwestern wasn't accepting obligations that would become unmanageable. These obligations are looked at as a non-utility business in the future. They don't affect the transmission and distribution rates. Northwestern responded with a process. The first step is to look at the QF contracts and manage those in such a way that they are confident that the costs are consistent with the contract. They then expect to engage in discussions with the contract owners about the possibility of restructuring or buying down those contracts. The annual revenue associated with MPC transmission and distribution business is roughly $650 million.

REP. MOOD asked if over a 20-year period about $2 billion is spent in costs. **Mr. Alke** said that $2 billion in contract payments was spent.

SEN. TOOLE asked if we know the gain on the sale. **Mr. Alke** said that we won't know until the sale is closed. There are several things that are moving parts. An example would be the provision where MPC agrees to pay a minimum debt level to the company when it is transferred to Northwestern. This is a sale of an ongoing business and the parts of that business are always moving. Another part is that there are multiple businesses involved. Northwestern has a year to allocate the purchase price between the purchased companies. **SEN. TOOLE** asked if there was a determination of the gains for the sale of the assets. **Mr. Alke** said that there are because those were asset sales for a fixed purchase price. All that needed to be done in that case to

calculate the gain is subtract the book price. **SEN. TOOLE** asked if anyone knew what the gain is. **Mr. Alke** said that the gain will not be known until a year after the sale closes. **SEN. TOOLE** asked if there is a gain. **Mr. Alke** said that is not known. The projection in the proxy statement assumed with a March 31 closing there would be an after-tax gain of $32 million.

SEN. TOOLE asked, if we had gone through full testimony and cross examination, would there be a clearer picture about the projected gain. **Mr. Anderson** said that we would not know any better. The variable couldn't have been settle through a full contested case. **SEN. TOOLE** asked how transactions without a known gain could be done. No response was given.

REP. MOOD asked for the difference between a sale of assets and the sale of stock. **Mr. Alke** said that a sale of the assets is the sale of only physical property, with no liabilities against it. In the sale of a company, everything is sold, assets and liabilities. Under the IRS code, the buyer gets to allocate the purchase price. Knowing the book value of that company, and knowing the purchase price of the company, doesn't tell the gain until after the allocation. There is no effect on the rate basis that the PSC uses for rate-making purposes because of the unknown gain.

REP. LINDEEN asked about the hearings that Northwestern had with the PSC concerning bond financing. **Mr. Lopach** said that SB 390 authorizes the issuance of transition revenue bonds. This is a complicated issue that came up during the negotiations. Consumer Counsel suggested that it was deserving of further explanation. The parties recognized that it was too complex an issue to deal with in that time frame. They put a March 31 deadline on it, saying that if the sale closes Northwestern will buy all information with the PSC that will equal in valuation of the feasibility of using bonds to finance the transition costs. There are pros and cons associated with this. One of the major cons is that the term of the bonds is limited to 20 years. There will be a fair amount of information that will be explored and will be placed in front of the PSC at the end of March.

VI A REGIONAL PERSPECTIVE ON RENEWABLES AND CONSERVATION

Peter West, Renewables Northwest Project, referred to **Exhibit 4**. There are a lot of great things happening in Montana and the northwest as far as renewables. Currently, northwest customers are serviced by 6 commercial wind projects that are generating enough power to serve about 120 households each year. There are various combinations of over 24 utilities and an aluminum company participating in these projects. There are 10 wind companies operating in the northwest. That is up from 3 companies 2 years ago. There are 9 projects working their way through the permitting process. The majority of those projects are in Washington. The online date for those projects varies between mid 2003 to early 2004. All of those projects are contingent on the federal production tax credit being passed. This tax credit provides 1.7 cents per kilowatt hour subsidy. If this doesn't pass, those projects will most likely not get built.

Montana has the most potential in the northwest for major wind development. 15% of the entire nation's electricity use could be served by wind if it was fully developed in Montana. Today however, this is a very under-developed resource. There are no large projects on the commercial level. There has been a lot of focus in Montana on smaller scale development. Through the USBP, Montana has been doing some nationally acclaimed work on wind. Through MPC's default supply, an RFP was run successfully for 150 megawatts of wind to be included. This is a utility scale project that establishes a meaningful base from which other wind in

Montana could be developed. This is clearly a pioneering project that may get wind in Montana fully going.

There is tremendous price stability and resource diversity value in wind energy. These are values that the major players in wind have identified as reasons that they have chosen to bring wind into their resources. It diversifies their system and makes them less exposed to any one type of resource. This in turn brings in a measure of price stability. 90% of the costs for wind projects are up front. There is long-term savings. This is pollution-free generation.

One of the greatest values of wind in Montana is the rural economic development aspect. All of the wind projects are on farm and ranch land. Each megawatt uses, at most, one half acre of land. The rural farm value for land is about $300 per acre, but what they would get is $2000 to $3000 off that one half acre for wind development through a standard lease. This is a powerful way to provide a stable income to farm and ranch land. In total, the wind has added 45 to 50 full-time direct-operation jobs.

Another green market that is developing is the solar power market. BPA and others are building 40 kilowatt capacity solar panels next to the nuclear power plants on the Hanford Nuclear Reservation. In Oregon there is a $1,500 tax credit for solar systems. This has resulted in 300 systems being installed in 2000 and 400 to 500 systems in 2001. In Washington there is a solar buying cooperative among 10 utilities that banded together to create purchasing power. They buy solar panels on behalf of their customers. The Last Mile Cooperative has 19 small utilities that are trying to do the same this, but they are focusing on wind power.

In Montana there has been a focus on solar and wind as the most opportune of the renewables. This has helped take a small amount of money and make it go a long way. Montana has issued a successful large scale wind RFP. That RFP is what motivated MPC to do the 150 megawatt RFP. There has also been focus on some small scale demonstration projects. This has been replicated elsewhere. USBP has also supported the infrastructure to train the technical support, such as electricians learning to install solar power. There has also been education done for the public about renewables. USBP has directly financed solar systems.

In the region there are at least 20 utilities offering green power. Under legislation, MPC is required to offer a green power option. Total sales are over 40 million kilowatt hours. This is a step up, but it is still a relatively small part of the system.

There is significant regional activity. Key players are at the table. There are extremely competitive prices from green power. There are at least 10 wind companies operating. People value the price stability and diversity of wind power. The green power market, while significantly growing, is not large enough to support significant wind development. Montana's USBP is highly effective. Wind development will continue, but needs MPC to break the ice. MPC has done a significant job of figuring out the technical aspects of making wind work in Montana.

Nancy Hirsh, Northwest Energy Coalition, referred to **Exhibit 5**. They want efficiency and conservation to be associate with doing more with less rather than doing without. The benefits of energy efficiency include lower electric bills, a reduction in risks, a reduction of peak constraints, and the creation jobs. It is very important to install efficiency measures in low income to offset the income to bill ratios. Economic development is a major benefit of efficiency. There are 10,000 jobs in the region that are tied to energy efficiency. Energy efficiency

investments are targeted mostly with local contractors and local companies. Those dollars are kept in the region and in the state. The environmental benefits are similar to those from renewable projects. The bottom line is that energy efficiency is faster, cheaper, and cleaner. We are finding that efficient technologies can reduce use without reducing services by 50 to 75 percent.

The region has a long and proud history of investments in energy efficiency and conservation. The NPPC has done some analysis that showed that the region saved over 1,500 average megawatts. That is more than enough to supply MPC's peak load. Those savings come from utility programs, BPA programs, and government programs that are targeted at building codes and appliance and equipment standards. This is a very cheap resource.

In the mid 1990's there was confusion in the industry about what was going to evolve. During that time utilities began to cut back on their conservation investments. There were dramatic declines in investments. The USBP was what began to stabilize Montana's investment. The energy crisis hit the region hard. There was widespread curtailment and behavior modification. One of the reasons for that was the decline in efficiency programs over the past years. Had the utilities maintained their investments they would have saved about 365 average megawatts in conservation. $1.7 billion could have been saved in the year 2001.

There is a tremendous amount of energy efficiency available in the next two decades. The power counsel estimates that there is about 2400 average megawatts worth of energy efficiency potential over the next 20 years. One of the reasons for that is that energy efficiency is a dynamic resource. We are always building new buildings, replacing equipment, and putting in new technologies. There is always an opportunity to increase our efficiency. There are significant market barriers that prevent consumers from capturing cost effective energy resources. BPA is offering two conservation opportunities: the conservation and renewables stiff count, where BPA is putting out $40 million for conservation and renewable energy programs region wide; they are also in the market for energy conservation savings where they will buy the savings from consumers in order to reduce the load on the BPA system. Oregon has also developed a statewide system benefit charge. Of the 2400 average megawatts of savings available in the region, it is estimated that the economic benefit is about $2.3 billion in avoided electricity costs. The environmental benefits are also significant.

MPC has become a strong supporter of energy efficiency in Montana and the region. Their role in the Northwest Energy Efficiency Alliance is important in market transformation.

Over the last 24 year, investment levels in efficiency programs have gone up and down. This is difficult for the industries providing services, and for consumers. The real solution that seems to be the consensus is for establishing long-term stable investment mechanisms. The USBP is that. An extension of that is key. Long-term consistency is needed to capture the benefits. There are lost of benefits to statewide opportunities. Other things to think about are business and residential energy taxes for energy efficiency programs and investments. Current tax credits in Montana are modest and on the low end of the region. Continuing efforts to support the region market transformation programs is a vital way to capture potential savings. Updating building codes is another vital way of maintaining energy efficiency investments. Codes that aren't updated become outdated by new technologies.

REP. MOOD asked about the federal production tax credit, is there a similar tax credit in the existence for wind facilities. **Mr. West** said no. The federal tax credit for wind facilities has expired. The re-authorization of that is in front of congress now. **REP. MOOD** asked if the price of 3.2 cents for generation includes the 1.7 cent credit. **Mr. West** said that it did. The typical price of a wind project before a tax credit is near 4 ½ to 5 cents per kilowatt hour. It is the tax credit that makes wind competitive against other resources. **REP. MOOD** asked if 1.7 cents per kilowatt hour was about $17 per megawatt. **Mr. West** said that it was. **REP. MOOD** said that there are 8,700 hours in a year, if there are 100 facilities out in place, the federal government will reimburse the facilities from the general fund for about $13.6 million. Is that an expense to the taxpayers for wind generation? **Mr. West** said that it was probably a third of that. The tax credit is based on production. A wind project is about 30%. **REP. MOOD** said that if we get 450 megawatts of capacity in 3 states, about 100 megawatts comes out per year, there is about $13.6 million reimbursement to those facilities from the federal government. **Mr. West** said that it is a way of getting some money back into this region. It has been calculated to create a balance between the subsidies for wind that are also received for bio-gas and nuclear.

REP. MOOD asked if they are currently able to generate electricity by wind with a vertical shaft as opposed to a horizontal shaft. **Mr. West** said that vertical technology has not successfully advanced to the stage where it is common place. The maintenance cost to a vertical facility is extraordinarily high. **REP. MOOD** asked if there is difficulty with the turning of the wind facility on a horizontal axis. **Mr. West** said that the horizontal shaft has proven to be more reliable, effective, and lower cost.

MS. PORTER asked if the cost effective measures include consequential expenses that would go along with making modifications to existing facilities. **Ms. Hirsh** said that those numbers were not included in the figures that were given. One of the other benefits is that when you are offering energy tax credits, those can be used to offset additional expenses.

SEN. TOOLE asked if you install technology that decreases emissions, why would you have to make other investments. **MS. PORTER** said that whenever you make a modification to your facility you have to open the permit and go through a very lengthy and expensive analysis. Emissions increases aren't calculated actual to actual. Even if the emissions drop, they look at what will be emitted and what the potentials are. There is a chance that pollution control equipment could be required. **SEN. TOOLE** asked why an increase would be shown because of the efficiency installation. **MS. PORTER** said that it may modify the process. Any change in the process requires analysis. **Ms. Hirsh** said that most energy efficiency improvements actually reduce emissions. **MS. PORTER** said that actual emissions aren't really what is looked at in the permitting process. They have to look at potential emissions and past actual emissions. More often that not that is problematic.

VII STATUS OF THE MONTANA WIND HARNESS L.L.C. WIND PROJECT

Doug Barba, Ameresco Inc., said that Ameresco has two main lines of business. One is energy conservation. The other side of the business is electric generation. They concentrate as a niche player in projects less that 300 megawatts in size dealing in gas and wind. They are located in Massachusetts.

The Montana project is sized at 150 megawatts. It will be constructed at 3 sites, using large utility-size wind turbines. They will be using European technology because they feel that technology is more advanced and more proven than anything available in the states. They have a 20-year contract with MPC and $31.65 per megawatt hour. The commercial operation date is December 31, 2003. Currently they are installing anemometers at multiple sites in Montana. They have filed for an interconnection with MPC for several sites. They are preparing for a study that will begin in March for the sites. They are completing land leases on those sites. They are negotiating an equipment supply contract with a turbine manufacturer. They are tracking very closely the progress of the extension of the tax credit.

The general areas that they are concentrating on include a site at Cutbank, a site north of Helena, a site over in the Judith Gap area, a site at the Springdale area, and a site in the Whitehall area. There was an area in southern Montana, but they are not concentrating on that right now.

REP. HEDGES asked if the price or viability of the project changes if the tax credits are no longer available. **Mr. Barba** said that the project is not viable without the tax credit. The federal tax credit is an vital part of the projects in the wind industry. **REP. HEDGES** said that he had heard that the maintenance of wind generation can be quite costly. How often does maintenance have to happen and is that built into the price? **Mr. Barba** said that maintenance costs are built into the project economics. The rule of thumb is 33 to 35 percent efficiency for a wind facility. **REP. HEDGES** said that when they are on line, someone else doesn't have to be. How is it decided who will shut down? **Mr. Barba** said that it is the utility dispatcher's responsibility to make that selection.

SEN. McNUTT asked what notice they have when the wind starts and the turbines start. **Mr. Barba** said that MPC did a good job in requiring that the project be in three different locations. The turbines will start generating power at about 4 to 5 mile-per-hour wind speed. Then as the wind increases, more power is generated. At 25 mile winds, they are at peak production from the turbines. When the wind is blowing, the machines operate at different levels. It becomes the responsibility of MPC to use other generation if they need to.

SEN. TOOLE asked if Ameresco had done other wind projects. **Mr. Barba** said that he had been involved in a 21.5 megawatt wind project that was built in Germany using the same technology that they will be using here, but this is Ameresco's first project in the states. **SEN. TOOLE** asked how long the 1.3 megawatt turbines had been that size. **Mr. Barba** said that he believes that the European technology is better than that in the states. The machines ranges in commercial size from 750 kilowatts to 1.8 megawatts. Those are proven machines. There are machines coming on the market that are up to 2.5 megawatts in size.

REP. CLARK asked if this is the first opportunity to do a project in the United States. **Mr. Barba** said this is the first opportunity that they selected. **REP. CLARK** asked if they looked at this as a pilot project with opportunities in the future to expand wind power in Montana. **Mr. Barba** said that this is not viewed as a pilot project. **REP. CLARK** asked if this is an opportunity that they could expand upon in the future. **Mr. Barba** said that it was.
REP. CLARK asked if the turbines are made in Europe. **Mr. Barba** said that the turbines are made in Denmark and Germany. They are working with Nordex, whose parent company is Vorsig, a German company. **REP. CLARK** asked if there is any relationship between Ameresco

and the manufacturers. **Mr. Barba** said they have no relation with any of the turbine manufacturers. **REP. CLARK** asked where Ameresco is based. **Mr. Barba** said they are an American company based in Framingham, Massachusetts. They have 7 offices around the country with 75 employees.

REP. HEDGES asked what price would have to be charged to make a profit without the tax credit. **Mr. Barba** said it would be approximately $45 to $50 per megawatt.

REP. MOOD asked if the costs of electricity in Europe is higher. **Mr. Barba** said that he is not knowledgeable enough to say overall. There are regional differences in the United States. This same issue exists in Europe. **REP. MOOD** asked for the anticipated costs per megawatt hour of production. **Mr. Barba** said that it would cost about $1 million per megawatt hour to produce. This is because the technology has improved. The larger the project, the better the cost.

SEN. TOOLE asked if part of the reason that the price structures in Europe were different was because they tended to socialize ore of the costs. **Mr. Barba** said that there are several drivers. One of the drivers is to see that as a generation technology they want clean power to be developed.

REP. LINDEEN asked if they had collected all the data that was needed. **Mr. Barba** said that they are still collecting some data now. **REP. LINDEEN** asked if it was a year after the anemometers were put up that they would have sufficient data. **Mr. Barba** said that the ideal situation would be a year of data, but correlation from existing data can be done.

REP. LINDEEN asked if Ameresco had obtained all the necessary land leases. **Mr. Barba** said that they are in the process of doing that right now. **REP. LINDEEN** asked if the wind needed to blow at a certain rate on average in order to make the project profitable. **Mr. Barba** said that they do look for wind resources that have as high an average wind speed as possible, but they also look for the distribution of the wind resource.

REP. CLARK asked if the technology proves to work, have they examined the state in terms of how much could be generated if there was a shift toward wind generation. **Mr. Barba** said that only having one resources isn't the best way to go. To develop this resource more is good, but a balance in the portfolio is needed. There are limiting factors for Montana, such as transmission constraints.

VIII PUBLIC POWER IN OTHER STATES

REP. LINDEEN said that the agenda item VIII will be moved to the next meeting.

IX STATE OF THE STATE EQC ENERGY PUBLICATION

Paul Cartwright, DEQ, referred to **Exhibit 6**. DEQ envisions that the energy briefing book will be the type of book that can be used either right as you go into hearing or for research. This would be based in large part on the presentation that was made in December. There is an "et cetera" that the Subcommittee will get to fill in as far as other topics. They have also talked about a number of topics to be addressed just prior to the session because those topics will change between now and when the session starts. The energy emergency homeland security,

the portfolio and the RTO are all examples of these topics. This is primarily a briefing book for legislators. The more useful it is, the better.

REP. CLARK asked if the Subcommittee is delegating this to DEQ. **Mr. Cartwright** said that they have authorization under 94-401 that assigns DEQ energy policy authority. **REP. CLARK** asked if they are thinking about electricity and how it flows on the grid? Also, is this book something that the average Montanan will be able to read and understand? **Mr. Cartwright** said that they are going to try for that, but the intended audience is the legislature. They will try to bring out the points that are relevant to what the state can and can't do. **REP. CLARK** was wondering if the scope of the project should be expanded to something that is understandable by the average person. Is that something that can be done in the scope of this project?
Mr. Cartwright is afraid of oversimplification and having the reader miss a few of the important concepts that go on.

REP. HEDGES asked if there is a section that will cover the authority that Montana has versus the authority that the region has versus the authority that the federal government has.
Mr. Cartwright said that would be covered under the part that MR. EVERTS is doing that deals with energy law. DEQ will be dealing more with the technical aspects.

REP. LINDEEN asked what the deadline for input from the Subcommittee is. **Mr. Cartwright** said that is to the pleasure of the committee. The next couple weeks will be easiest for the DEQ to complete the draft. Late breaking requests will be included in the information in December.

SEN. TOOLE thought that a load or consumer profile might be helpful. It would be nice to know the residential consumption and some further breakdown of how power is used.
Mr. Cartwright said that is already included in table E-8. The breakdown doesn't go to irrigators because of the way the information is collected. **SEN. TOOLE** said that the table was hard to figure out. **Mr. Cartwright** said that some of that will show up in the narrative.

REP. CLARK asked if the overview of electricity sales and generation included new contracts that are in the process currently. **Mr. Cartwright** said that it doesn't. Until the PSC rules, those contracts don't exist. Things change really fast and they don't want to second guess the PSC.
REP. CLARK asked if there is a good indication that the project will happen, is there a way that it could be included at the last minute. **Mr. Cartwright** said that was the purpose of the updates before the session begins. What ever is real at that point will be written up. They are aiming for the next session as the market.

REP. LINDEEN asked if the draft will go out for review by the public. **MR. EVERTS** said that between June and July all publications or recommendations from any of the EQC Subcommittees have to out for a 30-day public comment period. The beauty of the update is that DEQ is willing to go back and fine tune the document to make it timely and reflect current events.

IX REVIEW OF THE SUBCOMMITTEE WORK PLAN AND DISCUSSION OF THE MAY SUBCOMMITTEE AGENDA

MR. EVERTS referred to the work plan, **Exhibit 7** . Page 3 lists the Subcommittee goals. The first goal of the Subcommittee was to develop an understanding of a variety of issues, a lot of

which have been heard at the last 2 meetings. Does the Subcommittee need to understand anything else?

The second goal was to develop an easy to understand handbook on energy law. He is behind on that, but will try to get the draft out in March, well in advance of the May meeting. The third goal is to develop the State of the State. DEQ staff has volunteered to do that. They have done it for the EQC in the past. The fourth Subcommittee goal needs to be looked at and the Subcommittee needs to decide if they want to do that. Today they received an understanding of the Montana rural electric cooperatives.

Four out of the five goals are either being worked on or have been done. They need to decide if there is anything else that needs to be looked at. They also need to decide if they want to determine the adequacy of the policy statement. Page 7 of the work plan shows the May meeting as having Subcommittee decision on draft options or proposals, if needed. Any final decisions on draft reports or legislative proposals, if desired. After May, the EQC work plan and the Subcommittee work plan, the documents go out for public comment. The Subcommittee will not be judged by the amount of the legislation that they generate. There isn't a historical expectation.

REP. LINDEEN said that if the Subcommittee decides that they do want to pursue the goal regarding whether or not the existing policy was adequate, one of the options was to have a panel discussion with all the different players. If they do that and if anything is to come of it for the May meeting, another meeting will need to be scheduled.

REP. MOOD asked if the energy policy statement is in the statute. **MR. EVERTS** said that it is. **REP. MOOD** asked if that came from ten years ago. **MR. EVERTS** said that 1993 or 1994. A working group came up with the policy statement. **REP. MOOD** said that it would be very difficult as far as recommendations for changes in energy policy because of the diversity in perspectives. They need to focus on understanding the information and making it available for the next legislature.

SEN. TOOLE said that he agreed. He wasn't aware that the statement of policy has ever been the focus of action anyway. Given the time constraints, the most valuable thing the Subcommittee can do is put out high quality information that can help people understand the issue.

SEN. McNUTT also agreed.

REP. CLARK also agreed. The purpose this interim is education and trying to pass that education on to others. A lot of questions will come up between now and next November, there are a lot of events that will occur. There is an initiative, and other issues coming along. It would be great to have something prepared in advance.

REP. HEDGES asked if they have enough to defend the policy that was developed in 1993 in terms of diversification, conservation, and low income projects. **MR. EVERTS** said that policy statements are very fuzzy. The energy policy statement that is in law is very broad and very inclusive. **REP. LINDEEN** said that she had spoken to the cooperatives. One of the things that she was asked was if there is a need to change the state's energy policy statement. She

couldn't find a reason to change it. The current policy is fine. There is the misconception that Montana doesn't have an energy policy.

MS. PORTER also agreed that the policy is very broad.

REP. HEDGES asked if in its broadness, does it create voids. **MR. EVERTS** said that gets to the implementation of many laws. At the last TAC meeting it was apparent that there was a lack of some centralized entity in the state that knew what was going on all the time.

REP. CLARK asked if we needed to think about legislation to create a new department.

SEN. TOOLE said that DEQ used to have a much bigger role in trying to keep a finger on what is going on. SB 390 is a very clear philosophical statement and path that we are moving on. If we look nationally, the whole area is in disarray and restructuring. The time to look at if we need some central monitoring would be when the area starts to settle down. We need to see if it works or doesn't work.

REP. LINDEEN said that the Subcommittee is agreement that the goal doesn't need to be addressed. She asked if the Subcommittee is in agreement that the rest of the goals have been met.

MR. EVERTS said that the next meeting in May would be reviewing the two publications. Is there anything else that the Subcommittee wants to hear about? The default supply issue will be tossed around.

MS. PORTER said that one area is the upcoming RTO's. She is curious what role the state will play in the forming of the RTO's.

MR. EVERTS said that he could provide more information on the RTO's.

REP. MOOD said that the RTO's are a bigger pool of electricity and they are going to measure it out on a regional size. Is that a fair statement? **MR. EVERTS** said that is correct. He is going to work on some graphics that will explain that concept.

REP. CLARK said that he would enjoy hearing SEN. TOOLE giving a presentation of his initiative.

REP. LINDEEN said that it is important to understand what the initiative is.

REP. CLARK said that if it has a remote chance of passing, he would like to know what is going on with it. He also wants to know what happens in the state of Montana if it passes.

REP. HEDGES said that it would be good to be informed in order to pass the information along to constituents.

REP. CLARK asked if there is someone else that could say what would happen.

SEN. TOOLE said that PPL or someone of that nature should come in. Perhaps the attorney general's office or someone who could do a straight forward presentation on it. He also would be comfortable if staff did an analysis of the initiative.

It was decided that would be included in the May meeting.

MR. EVERTS said that publications, RTO issues, default supply portfolio, and the initiative would be included in the next meeting.

MR. EVERTS said that TAC is meeting next week. They have established a transmission subcommittee. The Subcommittee made the request that BPA identify the opportunities in terms of congestion on the grid coming out of Montana and provide an assessment of those opportunities of potential new generation that is coming on line. The Transmission Subcommittee is designed to get a picture of the transmission situation. The other subcommittee that was established is a USBP Subcommittee. TAC is statutorily charged to make a recommendation to the next legislature about funding for USBP. There will be a learning curve that needs to be overcome for that subcommittee.

REP. MOOD asked if the Transmission Subcommittee will be making a report to the TAC.
MR. EVERTS said that they will report to the TAC the day following their next meeting.

XI ADJOURN

There being no further business, the meeting was adjourned.