

## **MINUTES**

### **MONTANA HOUSE OF REPRESENTATIVES 59th LEGISLATURE - REGULAR SESSION**

#### **COMMITTEE ON AGRICULTURE**

**Call to Order:** By **CHAIRMAN EDWARD B. BUTCHER**, on March 22, 2005  
at 3:30 P.M., in Room 472 Capitol.

#### **ROLL CALL**

##### **Members Present:**

Rep. Edward B. Butcher, Chairman (R)  
Rep. Carol Lambert, Vice Chairman (R)  
Rep. Jonathan Windy Boy, Vice Chairman (D)  
Rep. Joan Andersen (R)  
Rep. Bob Bergren (D)  
Rep. Gary Branae (D)  
Rep. Kevin T. Furey (D)  
Rep. Wanda Grinde (D)  
Rep. Ralph Heinert (R)  
Rep. Llew Jones (R)  
Rep. Jim Keane (D)  
Rep. Bruce Malcolm (R)  
Rep. Jim Peterson (R)  
Rep. Diane Rice (R)  
Rep. John (Jack) W. Ross (R)  
Rep. Veronica Small-Eastman (D)  
Rep. Jeanne Windham (D)  
Rep. Brady Wiseman (D)

**Members Excused:** Rep. Dan Villa (D)  
Rep. Karl Waitschies (R)

**Members Absent:** None.

**Staff Present:** Krista Lee Evans, Legislative Branch  
Linda Keim, Committee Secretary

**Please Note.** These are summary minutes. Testimony and discussion are paraphrased and condensed.

##### **Committee Business Summary:**

Hearing & Date Posted: SB 293, 3/8/2005  
Executive Action: None

**HEARING ON SB 293**

**SPONSOR:** SEN. JERRY BLACK, SD 14, SHELBY

**Opening Statement by Sponsor:**

**SEN. JERRY BLACK** opened the hearing on **SB 293**, a bill to revise the laws related to ethanol. A binder of information about Ethanol was given to the Committee. He said that the bill will create jobs, expand the tax base, promote a bigger feedlot industry, cut down on shipping costs, give a secondary market for low-quality grain, and reduce dependence on foreign oil. Ethanol is good for the environment and increases the octane on regular gasoline from 85.5 to 88. If this bill passes, then 12 months after they have 55 billion gallons of production, Montana gasoline standards would be upgraded to include 10% Ethanol in regular and mid-grade gasoline. The option is left open for high octane 91 that is not required to be blended. He said that this would be a beneficial mandate because of all the benefits.

**EXHIBIT**(agh63a01)

***{Tape: 1; Side: A; Approx. Time Counter: 0 - 14.3}***

**Proponents' Testimony:**

**John Bollinger, Lieutenant Governor**, said that the administration is a strong supporter of this bill because of the added value it will bring to Montana products.

***{Tape: 1; Side: A; Approx. Time Counter: 14.3 - 18}***

**Nancy K. Peterson, Director, Montana Department of Agriculture**, said that the production of Ethanol in Montana addresses the lack of rail competition and the lack of economic development.

**Scott Pierce, Biofield Solutions**, explained that a gasoline additive known as HEET is essentially Ethanol and passed a bottle around to the Committee. He handed out a sheet of information called "The Pricing of Ethanol Blended Gasoline" and explained it. He emphasized that a mandate is very important and is instrumental to the successful financing of the project. He stated that both a producer incentive and a contract to support that incentive are critical to the financing. He said that his company is one of the financing partners for the project.

**EXHIBIT**(agh63a02)

***{Tape: 1; Side: A; Approx. Time Counter: 18 - 23.8}***

**Clifford Bradley, Montana Microbiobial Products, Bozeman**, said that he worked on improving Ethanol production from barley and cellulose when they formed the company in the early 1980s and found that Ethanol is a low pollution oxygenator for gasoline.

He said that barley is cheaper than corn as a feed stock for Ethanol and distiller's grain has a superior protein content. This is an opportunity to develop a feed and/or dairy industry and there are markets for this in Idaho and Oregon.

**{Tape: 1; Side: A; Approx. Time Counter: 23.8 - 28.3}**

**Jane DeBruycker, Rocky Mountain Ethanol**, expressed strong support for the bill and for the mandate. She said, "Ethanol is a very competitive additive and if treated fairly by industry will actually help cap the price of fuel at the pump." She stated that Ethanol should be treated as an ally to the fuel industry because it will lessen pollution and extend the life of the world's fossil fuels. The price of corn is directly related to the price of barley; taking more corn off the market will create more demand for barley, and thus a higher price. There are more advancements in the field of Ethanol, some are inclusive of barley's ability to produce Ethanol. The fastest and best way to spur the expansion of an industry is for government to help with incentives and through a mandate. She said that every industry has had some form of help in its infancy. She said that Minnesota instituted a mandate for Ethanol in 1997 and it has been maintained without controversy since then.

**{Tape: 1; Side: A; Approx. Time Counter: 28.3 - 32.3}**

**Todd Potas, Environmental Engineer**, stated that he works for a company that has permitted over 40 Ethanol plants nationwide. He said that Minnesota is considering a 20% Ethanol legislation at this time and noted that is a very positive thing given the current fuel pricing.

**{Tape: 1; Side: B; Approx. Time Counter: 0 - 2.3}**

**Shirley Ball, Wheat Farmer, Nashua**, said that she has been promoting Ethanol since 1977, when the fuel embargo was on. Minnesota just completed a study that showed that for every dollar put into Ethanol, they get a return of \$14. If we put \$1 million into an Ethanol plant as an incentive, we would receive \$17 million back into our economy.

**EXHIBIT(agh63a03)**

**{Tape: 1; Side: B; Approx. Time Counter: 2.3 - 3.6}**

**Tom Livers, Deputy Director, Department of Environmental Quality**, said that they support the bill.

**Bruce Martin, Rancher, Conrad**, said that they need everything they can to help with the price of grain.

**Alan Walter, Automotive Emission Control Specialist**, said that he is certified in Engine Performance Testing and Engine Electronics and supports SB 293.

**Pat Torgerson, citizen,** said they had the first Ethanol still in Montana in 1978. It was built because of the 1977 oil embargo.

**SEN. KITZENBERG,** SD 18, said that he has been an Ethanol supporter for ten years and asked for support of SB 293.

**Nancy Schlepp, Montana Farm Bureau Federation,** said that they use 10% bulk Ethanol on their ranch and have used the byproducts.

**Gary Amestoy, Richland County Economic Development Corporation, the proposed Chester Tiber Dam Sprinkler Irrigation Project, and the proposed West Range Sprinkler Irrigation Project,** urged support. His expertise is in rural economic development.

**Jack Kane, Department of Labor and Industry, Bureau Chief, Bureau of Weights and Measures,** expressed support and said that they will be the ones responsible for enforcement. He stated that he would be available for questions.

**Mike Allen, Allen Oil Company, Ethanol Producers and Consumers (EPAC),** asked for support of SB 293.

**Barbara Broberg, Montana Women In Farm Economics (WIFE),** expressed support.

**John Stoner, Montana Grain Growers,** expressed support for SB 293.  
*{Tape: 1; Side: B; Approx. Time Counter: 3.6 - 8}*

**Opponents' Testimony:**

**Bruce Brodie, Manager Exxon-Mobil Refinery, Billings,** stated that the oil business is not a monopoly. He indicated they have used Ethanol in many of their markets for many years. He said, "If it makes economic sense for the consumer or if it makes sense for clean air, like in Missoula, it can and will be used." Missoula gasoline consumers are paying a premium of \$.03/gallon for Ethanol blended gasoline. He stated there is no need for the mandate, since only Missoula has air quality problems.

Mr. Brodie said that the price of Ethanol is market-driven and is independent of where the Ethanol comes from. He explained that it can come from Canada, South America, Iowa, or South Dakota. Under the proposed legislation, the refinery would competitively bid their Ethanol sourcing. International or interstate Ethanol prices and supply could be more competitive than those from a start-up industry in Montana due to established economies of scale, proven infrastructure and demonstrated production reliability. He stated that this may be the case even taking into account the cost of transportation.

Mr. Brodie noted that according to CEO Dan Hernandez of Midwest Grain Processors, a company that operates 50 million gallons of Ethanol production capacity in Iowa, "It is a \$15 million/year disadvantage to use wheat as a feed stock relative to corn for a 40 million gallon/year plant."

Mr. Brodie stated that mandating Ethanol would require the industry to invest in new Ethanol blending equipment at a cost of from \$2 million to \$4 million per terminal. Under the current \$.30/gallon tax incentive payment to Ethanol producers, the proposed Ethanol mandate would cost taxpayers at least \$14 million annually, assuming that all the required Ethanol is produced in Montana. A significant problem is that to plan, design, obtain permits, let contracts and build terminals for Ethanol blending would take Exxon-Mobil at least 18 months.

Mr. Brodie said they would like to have actual production volumes demonstrated over several months time prior to committing to build Ethanol facilities. He stated that the opportunity for supply disruptions arises wherever boutique fuels are mandated, and that leads to price and supply volatility.

He commented it was erroneously stated that blending Ethanol will increase octane, and said his refinery will produce a gasoline blend component that will meet current octane specifications when blended with Ethanol. He emphasized that there is no octane gain and no upgrade in octane by using Ethanol. He said that happens to take place in Missoula because it is not cost effective to make the blend stock component for the small volume used in Missoula. He stated, "If it is a statewide mandate, they will definitely make a gasoline blend component."

Mr. Brodie expressed concern that if Ethanol replaces a percentage of gasoline volume in Montana, it essentially replaces Montana refining capacity with Ethanol production capacity. Less skilled start-up Ethanol plant jobs could replace already established higher paying refining jobs. He said, "A Montana Ethanol mandate could use Montanans to subsidize non-Montana Ethanol." He stated that the legislature would be removing a portion of one industry's business and awarding it to another. He said that currently nothing prevents a Montana refiner or marketer from using Ethanol if they choose to.

Mr. Brodie stated that consumer demand is not there for Ethanol blended gasoline. He said that if Ethanol is not needed to clean Montana's air, they believe Ethanol plant economics should stand on their own. The legislature should allow the free market to work for Montana's gasoline consumers. He asked, "If Ethanol is so economically viable, why does it require a mandate?"

**{Tape: 1; Side: B; Approx. Time Counter: 8 - 15}**

**Roy Morris, owner of four gas stations in Butte,** noted that Ethanol will cost more to dispense and cause cost increases in transportation and storage. It will increase the cost by limiting imports into markets during times of short supply and this ends up being a higher cost to the consumer. He stated that the higher octane is of limited benefit. The majority of vehicles require only 85.5 octane at Montana elevations; only Missoula requires the environmental benefits that blending brings. He asked, "Why require the whole state to use oxygenated gasoline because only Missoula requires it?" He said petroleum markets are for Ethanol but they are against an Ethanol mandate.

**{Tape: 1; Side: B; Approx. Time Counter: 15 - 16.8}**

**Frank Flynn, Montana Pilots Association,** presented written testimony which he read to the Committee.

**EXHIBIT (agh63a04)**

**Robert Rapier, Chemical Engineer, Conoco-Philips, Billings,** handed out "The Cost of Grain-Derived Ethanol." He said that he worked on Bio-Mass to Ethanol in graduate school and believes that Montana has a lot of potential for producing alternative energy sources.

Mr. Rapier did not believe that corn Ethanol is a viable alternative. He referred to a 2002 United States Department of Agriculture (USDA) study that found there is a 34% energy gain when making corn-based Ethanol, which amounts to 21,000 BTUs gained for one gallon of Ethanol produced. There are 125,000 BTUs in a gallon of gasoline, and six gallons of Ethanol would have to be produced to displace a one gallon of gasoline. With a \$.51 Federal subsidy and a \$.20 proposed State subsidy, consumers would be paying \$4.25 to displace a single gallon of gasoline based on USDA studies and \$33.81 per million BTUs. Mr. Rapier stated that the cost of natural gas is \$7.00/million BTUs. The subsidy on wind power is \$5.00/million BTUs. He said that is what Montanans should be going after.

Mr. Rapier asked, "Do you think that constituents understand that bringing mandated Ethanol to Montana means that they will pay \$4.25 to displace a single gallon of gasoline?" He read the response from the USDA when he questioned the amount: "If we want to produce fuel Ethanol from bio mass and crop residues then Ethanol should compete with gasoline on the BTU bases. We do not have the technology yet, but in the future it is a possibility." He said that is what he concluded ten years ago. He said he will be available for questions and noted that the USDA report is referenced and goes into more detail in his handout.

**{Tape: 1; Side: B; Approx. Time Counter: 16.8 - 23.3}**

**EXHIBIT (agh63a05)**

**Doug Alexander, President, Story Distributors, Bozeman,** expressed opposition because the mid-grade and regular were to be an option and the premium would be 91 octane. They have blender pumps and would have to have regular at 20% Ethanol to make this work.

**Bill Nooney, Missoula Petroleum business,** said that they have 15-20 retail outlets and also sell wholesale throughout Montana, North Dakota and western Minnesota. He stressed that this bill is a mandate because less than 10% of the product they sell is the super premium. The other 80-90% is lower grade gasoline.

**Barry Moore, President, Moore Oil, Libby,** advised they have been in business for 29 years and have several dealers. Some buy their gasoline strictly out of Canada because it is cheaper. He said they have no Ethanol. He stated that if he can sell it and can make money he will buy it, he doesn't need a mandate.

**Bob Hamm, Helena citizen,** said his expertise is economic analysis and that he opposed the bill for economic reasons.

**Dexter Busby, Montana Refining, Great Falls,** said that they are in opposition to the bill.

[EXHIBIT](#)(agh63a06)

*{Tape: 1; Side: B; Approx. Time Counter: 23.3 - 26}*

**Mike Ferguson, Northwest Regional Representative, Aircraft Owners and Pilots Association,** said that if the amendment excluding 91 octane gasoline is approved, they will withdraw their opposition to the bill.

**Mike Hraban, District Director, Yellowstone Pipeline and Seminole Pipeline,** said that they move 12 million gallons of fossil fuels for various refiners and operate four terminals that distribute over one million gallons of gasoline to trucks. He is available for questions.

**Tom Wrobel, Experimental Aircraft Owners and Aviation Owners of Montana,** stated that they are opposed to the bill as written, but if the amendment exempting 91 octane passes they withdraw their opposition.

*{Tape: 1; Side: B; Approx. Time Counter: 26 - 27}*

**John Maxness, President Montana Aviation Trades Association,** said that they oppose the bill as written because of the economic concerns involved with their industry.

[EXHIBIT](#)(agh63a07)

**Jim Lewis, Montana Flying Farmers and Ranchers,** said that he raises grain and flies an airplane for parts, to check livestock

and to find lost items so would like to have the 91 octane that does not contain Ethanol.

**Gail Abercrombie, Executive Director, Montana Petroleum Association,** said that they oppose the mandate in this bill.

(Note: REP. WAITSCHIES entered the meeting.)

**Informational Testimony:** None.

**Questions from Committee Members and Responses:**

**REP. WINDY BOY** asked about a reference made during testimony to something that happened in 1977. **Ms. Ball** said that the oil embargo happened then and they did not know if they were going to have the fuel needed to harvest their crops. She stated that even more oil is being imported now and some of the dependency on foreign oil could be replaced. She said that could happen again. **{Tape: 1; Side: B; Approx. Time Counter: 27 - 30}**

**REP. RICE** asked Mr. Alexander about his statement concerning a 20% Ethanol blend for existing equipment. **Mr. Alexander** explained that many of their locations at convenience stores have blender pumps. They take a certain percentage of unleaded and a certain percentage of premium to make mid-grade. He said that under the mandate a certain percentage in the mid-grade product would be blended with the 91 octane that has no Ethanol. He noted that the unleaded must have double the Ethanol in order to come out with the 10% Ethanol for the mid-grade.

**REP. BERGREN** asked what the percentage would be with only 10% Ethanol in the 85 blend and zero in the 91 octane. **Mr. Alexander** said that if they were mixed together on a 50/50 basis, the blend for the mid-grade would be 5%. **{Tape: 2; Side: A; Approx. Time Counter: 0 - 1.5}**

**REP. BERGREN** asked Mr. Alexander if he would be a proponent if the bill was amended to make the 85 blend gasoline 10% Ethanol and the mid-grade gasoline a mixture of the 91 octane and the 85 blend. **Mr. Alexander** said that they would be more of a proponent than they are now and stated they would not be a proponent if they were mandated to do it. **{Tape: 2; Side: A; Approx. Time Counter: 1.5 - 2.9}**

**REP. PETERSON** noted that Mr. Rapier's research was done with corn. **Mr. Rapier** said that it was done with waste biomass. It does not have the fertilizer input, so the energy balance looks better.



**REP. PETERSON** referred to the analysis Mr. Rapier gave, that it takes \$4.25/gallon to replace a gallon of gasoline using corn as the base. He asked how that differs if the base was changed to wheat or barley. **Mr. Rapier** referred to an article in the Billings Gazette that quoted a person making Ethanol as saying it would add \$15 million/year to his plant, so that would make the price go up. He said corn is the most conservative estimate at \$4.25 and costs will be more if corn is not used.

**REP. FUREY** asked what would be a more stable fuel source, creating Ethanol or constantly relying on the global flux of the oil market. **Bruce Brodie, Exxon-Mobil Refining Manager, Billings**, said that anytime the supply chain is complicated more opportunity is introduced for supply disruptions and that creates price volatility. Mr. Brodie said that for a mandate in Montana, and for Montana economics, gasoline is more stable. He said that what **REP. FUREY** had proposed was a nationwide Ethanol mandate and he would have to think through that.

*{Tape: 2; Side: A; Approx. Time Counter: 2.9 - 8.5}*

**REP. FUREY** asked Scott Pierce for his opinion of the question. **Mr. Pierce** said this is a complicated question. He said that some of the numbers today are confusing the matter. For example, California required a conversion from Methyl Tertiary Butyl Ether (MTBE) of one billion gallons in one year. He stated there were many predictions that it would create instability and that the market wouldn't work. The conversion was made in one year and the Ethanol industry and the support from various midwest states rose to meet the challenge. He redirected to Larry Johnson for information about Minnesota.

*{Tape: 2; Side: A; Approx. Time Counter: 8.5 - 14.8}*

**REP. FUREY** asked Larry Johnson for his opinion. **Mr. Johnson** said that he did the business development work for DELTA T Corporation that designs and builds Ethanol plants. He stated that Ethanol might be more stable as an energy source in the future. He said they know that oil prices will be very erratic and subject to emotion and demand. He noted that they are expanding the Ethanol industry about 20%/year and have 15 plants currently under construction. He said that historically corn prices have been more stable than oil prices. Crops have been in surplus and have been low priced. He stated that he felt Ethanol is more stable and referred to Exhibit 2 for price scenarios.

**REP. FUREY** ask for a comparison of the price increases in corn and wheat over the past 30-40 years with the price increases in gasoline. **Mr. Johnson** said that he has that on his computer and he will get copies for everyone on the Committee. He said that there has been fluctuation on both. Minnesota has a legislative

mandate, but California, New York, and Connecticut and many other regions have environmental mandates. He stated that Ethanol is in 30% of all the gasoline sold in this country.

**CHAIRMAN BUTCHER** asked Clifford Bradley to comment. **Mr. Bradley** said that he has agriculture statistics back to 1946 on the price of grains in Montana. In the last 30 years, the commodity price of corn has ranged from \$1.70 to \$3.00 and the long run price is about \$2.50. The history for barley is very similar. The low was \$1.60 for total barley (including malt barley) and the high was \$3.00. He said that the price fluctuations are very predictable and have been solid for 30 years.

*{Tape: 2; Side: A; Approx. Time Counter: 11 - 14.8}*

**REP. ROSS** asked how much Ethanol can be derived from one bushel of corn. **Mr. Bradley** said that depending on the variety, 2.6 gallons of Ethanol for a 56 pound bushel of corn.

**REP. ROSS** asked how many BTUs it takes to produce 2.6 gallons. **Mr. Bradley** said that it depends on some processing issues and supply sources. He will get the information and make it available to the Committee.

**REP. ROSS** redirected the question to Scott Pierce, Biofield Solutions. **Mr. Pierce** said that most processing plants guarantee a range of 34,000 to 36,000 BTUs, which is down from 75,000 ten years ago. He commented that numbers in-between have been used in many studies on energy balances. He stated, "Plants that are predicted to come on line in the next 12 months are looking at guarantees closer to 28,000." He said that people are working to commercialize technology that is already available, and projections are as low as 20,000 BTUs.

**CHAIRMAN BUTCHER** asked what the BTUs were in a gallon of Ethanol that this 28,000 BTUs produces. **Mr. Pierce** noted that a different number, 12,000, was given earlier, and stated there are 76,000 BTUs in a gallon of Ethanol as compared to the hundred number that was talked about with gasoline.

**REP. HEINERT** asked Mr. Pierce why the mandate would be needed to secure his contract for the \$2 million incentive. **Mr. Pierce** said that a mandate would send the message that there is a market in Montana for the product. The producer incentive is separate from that; and it \$2 million or \$3 million/year. He stated that it is very important there is a contract or something associated with it when they go out to talk to financial partners. He said that there are states that have had the incentive in place and subsequently withdrawn it. He emphasized that the producer incentive with a contract is critical.

**REP. HEINERT** asked about not having the mandate and just the contract for the \$2 million incentive. **Mr. Pierce** said that going through the process of financing a \$100 million facility is not a precise science and that would make it harder. They do not believe it will adversely affect financing, but it is a question of how quickly the project will be up and running.

*{Tape: 2; Side: A; Approx. Time Counter: 14.8 - 20.2}*

**REP. HEINERT** asked Jim Lewis to share some additional information he had with the Committee. **Mr. Lewis** said that at the last hearing Mr. Gilbert made reference to an Ethanol plant in Terry that went out of business. Mr. Lewis stated that his brother-in-law designed and built that plant. He noted that the management was turned over to family and that did not work. He said, "At one point the tower plugged up with sand and sand was coming out of the well they drilled. All they would have had to do was put a sand filter on it."

*{Tape: 2; Side: A; Approx. Time Counter: 20.2 - 21.4}*

**REP. PETERSON** asked to clarify the BTUs per gallon of Ethanol with Mr. Rapier. **Mr. Rapier** stated there was a misunderstanding and the USDA study is the gain that is made. He said that a certain amount of energy is input to make a gallon of Ethanol. When the energy gained is subtracted from the input energy, the result is 21,000 BTUs. Ethanol has 76,000 BTUs, but 50,000-60,000 have to be input to get that so the energy balance is a net positive of 21,000/gallon.

**REP. PETERSON** noted that most of Mr. Rapier's optimism about Ethanol is built on cellulose-based products and asked for a status of that technology. **Mr. Rapier** referred to his handout (Exhibit 5) that makes reference to a Canadian company called Iogen. He said when he ended graduate school at Texas A&M he had decided that the only way cellulose would make it was if they genetically engineered tailor-made microorganisms to break down the cellulose. He said his research adviser was against genetic engineering and they did not pursue that. He said that Iogen is building a 3,200 ton/year wheat straw plant in Idaho, and Shell Oil has invested. He noted that if they do what they say they can do, they will make grain Ethanol obsolete. He said that their link can be found on his handout. He said he is in favor of Ethanol but does not believe grain Ethanol can make it.

*{Tape: 2; Side: A; Approx. Time Counter: 21.4 - 24}*

**REP. FUREY** noted an additional reason this bill was brought forth was that the by-product is good for finishing out cattle. He asked if the same was true of cellulose. **Mr. Rapier** said that they would not end up with that, but the energy balance of 21,105 BTUs includes that number of by-products.

**REP. HEINERT** asked what the net BTUs would be on one gallon of gasoline. **Mr. Rapier** said that extracting crude oil from the ground is 1,000% to 3,000% efficient. The estimates are that once you have a barrel of crude oil you end up with 85%, so there is an energy loss. He stated, "You start with a barrel of crude oil that has the BTUs in it and you have to input steam into the process to pull it out. That is where some of the Ethanol proponents present a misleading picture. Ethanol looks poor if calculated apples to apples."

**REP. HEINERT** asked Mr. Rapier if he was saying that a gallon of gasoline is about 85% efficient, as compared to 34% efficiency on Ethanol. **Mr. Rapier** said that was correct when comparing apples to apples. He stated that another way to compare it was through the entire life cycle. He said that it is at least 1,000% getting the oil out of the ground and 85% processing, so it is 850% efficient on making gasoline.

*{Tape: 2; Side: A; Approx. Time Counter: 24 - 26.7}*

**REP. KEANE** asked Mr. Busby how much his plant produces in millions of gallons of gasoline per year. **Mr. Busby** said that they produce over 50 million gallons of gasoline per year.

**REP. KEANE** noted that is about the same amount of Ethanol that is in this bill and asked how the mandate would affect the Great Falls plant. **Mr. Busby** said that it would take 10% off the top of their gasoline market. He noted that they are market limited. They have to transport gasoline out of the area in order to market all that they make.

**REP. KEANE** asked how that would affect the profitability of his plant. **Mr. Busby** said that much of the up-front investment covers the cost; profitability is usually the last increment that is produced. He expressed concern that it would take a chunk out of their profitability and potential profitability on gasoline.

**REP. KEANE** asked Mr. Busby what he thought would happen if they had a mandate in Montana. **Mr. Busby** said that it would make them much less competitive to their larger counterparts.

*{Tape: 2; Side: A; Approx. Time Counter: 26.7 - 29}*

**REP. HEINERT** asked if the number of employees could be reduced and if they would still be able to produce 45 million gallons of gasoline. **Mr. Busby** said, "Probably not, because gasoline is something you produce along with the other products you produce." He said that gasoline is about 45% of their production.

**REP. FUREY** asked how interconnected the gasoline distribution system in Montana is with the rest of the U.S. and Canada. **Mr.**

**Busby** said they are interconnected with Canada by truck only. He stated that there is a pipeline system east and west out of the Billings area, and there is a pipeline out of the Billings area that comes into Great Falls. He said that there are no pipelines out of Great Falls, so they have to market in that area.

**REP. FUREY** asked how much of the gasoline produced by all the refineries in Montana is able to be sold out of state. **Mr. Busby** said that 60% is the published number.

*{Tape: 2; Side: A; Approx. Time Counter: 29 - 31.9}*

**REP. FUREY** asked Mr. Busby how he would be able to sell gasoline at lower prices in other states. **Mr. Busby** said that their competitors out of Billings would have to move an additional 4% of their total production on pipelines out. He said there is no pipeline out of Great Falls, so they have direct competitiveness with him. He stated, "If we had to produce an extra 10% of gasoline as a result of having to blend Ethanol, we would have to expand our market area into areas where they are non-competitive due to transportation or reduce our production. It is cheaper to transport by pipeline than by truck."

**REP. BERGREN** noted that Mr. Johnson was instrumental in the work that went toward the mandate in Minnesota and asked how their fuel prices compare to surrounding areas. **Mr. Johnson** said there have been many studies done on prices. He said, "The state did an analysis that showed \$.03/gallon benefit to the consumer to having Ethanol in their gasoline. It is difficult to compare when looking at different supply channels and different margins depending on the price of crude oil and final products in various cities. Minnesota has Ethanol in all grades of gasoline and if it were not for the 10% increased volume of Ethanol, they would have to find 10% more gasoline to replace it. Higher demand would cause an increase in the cost of gasoline."

**REP. BERGREN** asked if all grades are blended. **Mr. Johnson** said that they blend all grades. He noted by having a required 91 octane free of Ethanol, and Ethanol being required in the 87, that the blending pump would not work unless allowance was made for the mid-range to be a lesser percentage. He said there is a 2 1/2 point octane boost by just adding Ethanol to 88 octane gasoline. He stated there is a huge profit margin in blending Ethanol for both the blender and the retailer that isn't always passed on to the consumer.

*{Tape: 2; Side: B; Approx. Time Counter: 0 - 4.8}*

**CHAIRMAN BUTCHER** asked how Minnesota handles the aviation fuel issue. **Mr. Johnson** said they have an exemption for airports and marinas, and they allow stations to sell 91 octane gasoline

without Ethanol, providing they put a sign on it saying that it is for off-road use only.

**REP. BERGREN** and Mr. Brodie discussed which city has the lowest gas price and which has a mandate for 10% Ethanol and determined that it was Missoula in both cases. **REP. BERGREN** asked Mr. Brodie to explain why that might be. **Mr. Brodie** noted it is more complicated to compare one city with another city. He said that his reference to an average of \$.03/gallon was for every month this winter during the Ethanol blend season for the past 3-4 years. He said that the reason that information takes out the smoke and mirrors is because that is a posted rack price in Missoula for non-oxygenated gasoline side by side with a posted rack price in Missoula for the oxygenated gasoline. The Ethanol blended gasoline was never cheaper than the "clear" gasoline. It varied from \$.05/gallon to a low of \$.015/gallon, always the premium for the Ethanol relative to the "clear" gasoline.

Mr. Brodie said the reason Missoula is priced differently than other cities may be due to local market dynamics with big box stores. It is a very competitive environment with CostCo. He stated that some marketers sell their gasoline at rock-bottom price because they make all their money on convenience stores, casinos or hotels. He stated that in the summer Missoula may be priced higher than other cities.

**REP. BERGREN** asked for comment on environmental effects. **Mr. Brodie** said that Ethanol and other ethers were brought into place many years ago because of air quality issues. He stated that Ethanol is required to be used in a lot of our most populated cities across the U.S. because of environmental legislation  
*{Tape: 2; Side: B; Approx. Time Counter: 4.8 - 10.7}*

**REP. KEANE** asked Mr. Brodie to finish his comments. **Mr. Brodie** asserted that using clear gasoline would be a cheaper option. He stated he would not choose to burden consumers and taxpayers with extra costs unless there were air quality issues to deal with.

**REP. FUREY** asked how much the demand for gasoline has increased per year. **Mr. Busby** said that he did not know and the question was redirected to Ms. Alexander. **Ronna Alexander, Petroleum Markets Convenience Store Association**, said the volume increase is about 1.8%/year.

**REP. FUREY** questioned how long it would take for there to be a 10% increase in the demand for gasoline in Montana if all production remains the same for the next ten years. **Ms. Alexander** said that it would take approximately 5-7 years.

**REP. FUREY** asked Mr. Busby if his refinery increases production every year. **Mr. Busby** said they did not. He said, "We have a capacity and we try to produce the maximum amount we can sell."

**REP. FUREY** asked Mr. Busby if he was going to increase production next year and grow by 1.8% the following year or if he will stay at 50 million gallons/year production for the next 6-10 years.

**Mr. Busby** said he could not speak to any expansion plans because it depends on the marketplace.

*{Tape: 2; Side: B; Approx. Time Counter: 10.7 - 15.2}*

**REP. HEINERT** referred to previous testimony and asked whether there is an octane boost when Ethanol is added to gasoline. **Mr. Rapier** stated there was a BTU decrease when Ethanol was added to gasoline and will worsen the miles per gallon (mpg). He said that having more octane doesn't have anything to do with mpg.

**REP. HEINERT** asked for an explanation of what determines octane rating. **Mr. Rapier** said that pure octane is 100% and an octane rating of 90 means that it is burning a 90% octane blend. He indicated that octane pertains to premature ignition and engine knocking, and has nothing to do with gas mileage.

*{Tape: 2; Side: B; Approx. Time Counter: 15.2 - 17.5}*

**REP. KEANE** asked whether the decrease in energy was figured into the numbers he quoted in his handout. **Mr. Rapier** said that the calculation is simply a displacement of gasoline with Ethanol; i.e., it will take six gallons to replace a gallon of gasoline. He said that is built into the number.

**REP. PETERSON** asked for an explanation of the predominant feed grain that is grown in Minnesota and the average yield per acre. **Mr. Johnson** said that the predominant grain is corn and it yielded 150-160 bushels/acre the last two years.

**REP. PETERSON** asked how much of the corn is irrigated. **Mr. Johnson** gave an estimate of 5%.

**REP. PETERSON** asked which grain drives the price of feed grain across the U.S. today. **Mr. Johnson** said that would also be corn.

**REP. ANDERSEN** asked Mr. Bradley how many gallons of Ethanol they can get from a bushel of barley. **Mr. Bradley** said that it depends on the variety; the average is 2.1 or 2.2 gallons per 48 pound bushel of barley. He stated that it is difficult to compare because a bushel of barley does not weigh the same as a bushel of corn. He said, "You have to compare starch to starch basically."

**REP. ANDERSEN** asked for clarification that the commodity price of barley ranged from \$1.60 to \$3.00/bushel, so it would cost a little more to make a gallon of Ethanol from barley than it does from a bushel of corn. **Mr. Bradley** said that the average price of barley quoted earlier included malt barley. Malt barley would not be used to make Ethanol; they would use feed barley which costs less. He said that feed barley averaged \$1.86/bushel over the last five years.

**REP. ANDERSEN** asked if sufficient feed barley is being raised in Montana to provide raw material for Ethanol plants and what the anticipated price would be. **Mr. Bradley** said that sufficient feed barley is being raised, and felt there would not be enough demand to drive the price up from its yearly average over the last few years. He stated, "What is crucial is that farmers actually own the alcohol plant so they are not just selling a commodity to somebody else. Farmers need to have the equity in the plant so they can realize the added value." He noted that it doesn't make any more sense to sell \$1.86 feed barley to an Ethanol plant than it makes economic sense to sell it to an out of state livestock operation.

**REP. ANDERSEN** asked Mr. Bradley if he thought that farmers would be buying these Ethanol plants. **Mr. Bradley** said that a role the State could play is to give legal aid and technical assistance in financing those facilities so they could raise the capitol to do that through private equities or cooperative farm organizations.  
*{Tape: 2; Side: B; Approx. Time Counter: 17.5 - 23.4}*

**REP. LAMBERT** asked whether the malt barley was all pre-contracted and whether it was feasible that the same thing would be done with the Ethanol grains. **Mr. Bradley** said that contracting was an option he would want to pursue if he owned an Ethanol plant because it would assure the Ethanol plant a ready supply of grain at a predictable price.

**REP. SMALL-EASTMAN** asked Mr. Vincent to explain why the mandate is needed. **Dick Vincent, Rocky Mountain Ethanol Plant**, said that a mandate is needed to crack the monopoly. The rack price on gasoline is \$.35/gallon higher than it is on Ethanol, but the 10% blend in Billings is selling for \$.09/gallon more than straight gasoline. He stated, "Ethanol is cheaper at the rack by a lot today, \$.35 or more, yet the oil companies are keeping the price on it higher than straight gas in the state."

**REP. SMALL-EASTMAN** asked if the mandate would basically be guaranteeing Ethanol plant buyers that there would be a market in Montana. **Mr. Vincent** replied, "Yes."



**REP. JONES** asked how much barley is grown in Montana. **Nancy Peterson** there were 50 million bushels of barley grown last year.

**REP. JONES** said that 50 million gallons of Ethanol would consume about 25 million bushels of barley and asked Ms. Peterson if she believed that would not increase the price of barley. **Ms.**

**Peterson** said, "Absolutely, it will." She stated that there is another component to this that is not being recognized; i.e., when the price of barley is quoted, whether per bushel or per hundredweight, those prices are obtained at the commodity warehouses. She explained that if she were to sell feed barley to REP. PETERSON they can agree on a price between the two of them and she might not have to pay the \$.20/hundredweight to get it to the terminal market. She noted that the prices being quoted include the rail rates, so if they can take \$1.10/bushel and split the difference; i.e., the Ethanol manufacturer keeps half and the producer gets half, it is a win-win situation.

*{Tape: 2; Side: B; Approx. Time Counter: 23.4 - 28.5}*

**REP. WAITSCHIES** asked if all feed lots pay \$1.60 plus the \$1 freight that it takes to get the barley to the terminal. **Ms.** **Peterson** said, "No. When a producer delivers the commodity to the terminal, the rail rates are already included."

**REP. WAITSCHIES** asked if he automatically got the freight rate built in if he delivered somewhere other than a terminal. **Ms.** **Peterson**, "Other than terminal, no, not necessarily." She said that is a contract agreement between two individuals.

*{Tape: 2; Side: B; Approx. Time Counter: 28.5 - 30}*

**Closing by Sponsor:**

**SEN. BLACK** asked Ms. Evans to address the amendments. **Ms. Evans** said that any amendments handed out previously will not be used. Amendment SB029301 and a new gray bill were handed out.

[\*\*EXHIBIT\*\*\(agh63a08\)](#)

[\*\*EXHIBIT\*\*\(agh63a09\)](#)

**CHAIRMAN BUTCHER** said they would not amend the gray bill; they would be amending off of the regular bill. He said that they were going to do amendments and were not going to close the bill out. He felt there are enough new amendments that they would open the bill and add the amendments but not pass it out under Executive Action because he wants everyone to have a chance to look at it.

**REP. BERGREN** questioned the legality of placing amendments without being in Executive Action. He asked Ms. Evans to speak.

**Ms. Evans** said that SEN. BLACK has lengthy and detailed amendments that he would like her to go through before he finishes closing on his bill. She stated that before the Committee makes any decisions on the bill, the Committee will have to go into Executive Action, move the bill, and discuss the amendments. She said that there are more amendments to hand out.

**REP. PETERSON** clarified they would allow SEN. BLACK to explain his amendments but they are not going to do Executive Action, and asked if that was correct.

**CHAIRMAN BUTCHER** said when this is all done they will start moving amendments onto the bill. They are being explained now, the bill will be moved and amendments will be put on it. He said he had talked to Greg Petesch on this procedure and it is proper to do it that way. When the amendments are on it, the final gray bill will be the un-official bill that the Committee can look at. The bill will be moved out at a later date.

**REP. SMALL-EASTMAN** asked if the amendments would be voted upon as they were discussed and at the end they will move the bill.

**CHAIRMAN BUTCHER** stated they would not move the bill at this meeting, they will only vote the amendments into place.

**REP. FUREY** requested that the Committee allow Ms. Evans to explain the amendments as planned and discuss the legality and other issues after SEN. BLACK closes.

**CHAIRMAN BUTCHER** said there isn't a legality problem, he is just giving the process so the Committee will have the opportunity to hear SEN. BLACK explain his amendments as he envisions them.

**Ms. Evans** began to speak to the amendments.

**REP. KEANE** objected to having the hearing remain open. He said they should close on the bill and SEN. BLACK could explain the amendments then.

**CHAIRMAN BUTCHER** asked the Committee for their input, and the consensus was to close on the bill.

**CHAIRMAN BUTCHER** stated that the Committee has objected to this procedure and asked SEN. BLACK to explain the amendments in his closing.

*{Tape: 3; Side: A; Approx. Time Counter: 0 - 6}*

**SEN. BLACK** thanked the Committee for a good hearing and addressed some of the issues that were raised. He referred to Mr. Brodie's statement that the price of Ethanol in Missoula is an average of

\$.03/gallon higher. SEN. BLACK said that earlier in the Session they got the prices at Shelby, Great Falls, Helena and Missoula and found that Missoula was \$.08/gallon less at that time. He stated that at the present time there is a good supply of Ethanol on the market and the price is down.

SEN. BLACK said they want to assure Montana plants that they can succeed by supplying an Ethanol market and they want to support agriculture. He felt that building new blending terminals should be considered to be the price of doing business in Montana. He stated that when they blend Ethanol they get 5.1 cents per gallon blenders credit, an exemption of the Federal tax. If they have 50 million gallons of Ethanol to blend, that Ethanol credit is actually \$.51/gallon, or \$2.5 million/year blenders credit to offset costs.

***{Tape: 3; Side: A; Approx. Time Counter: 6 - 9.4}***

He said that Mr. Brodie stated they would refine their gasoline at a lower level so when they blend Ethanol there will be no increase in the octane and noted that they export 60% of their gasoline out of state. He asked if that means they will send a product out of state that does not meet the octane standards. He said that he could not imagine them having different refining methods for in and out of state fuel.

SEN. BLACK stated that when 10% Ethanol is added, they are extending their product by another 10%. He said they heard today that gasoline supplies will increase about 2%/year which is 10 million gallons. They use 500,000 gallons gasoline/year and Ethanol extends their supply.

***{Tape: 3; Side: A; Approx. Time Counter: 9.4 - 11.6}***

He felt that gasoline is in high demand even with the increased price, and refiners will find a suitable market for all the gasoline they can produce. It can also provide refiners with a better margin on their product because of the blenders credit.

SEN. BLACK noted that a United States Department of Agriculture (USDA) report states there is a 1.67 positive energy return when Ethanol is produced. He said that is listed in the Department of Environmental Quality's (DEQ) report with references.

***{Tape: 3; Side: A; Approx. Time Counter: 11.6 - 13.1}***

SEN. BLACK addressed the question of blending 20% in the midgrade; i.e., 10% in the midgrade and 10% in regular. 1) They can deliver bulk 10% midgrade, 10% regular and plain supreme, 2) They could add another tank because neither supreme nor midgrade is a big seller, and 3) They could sell 10% regular in two pumps and have supreme Ethanol free.

***{Tape: 3; Side: A; Approx. Time Counter: 13.1 - 16.6}***

SEN. BLACK said it is true that the number of BTUs in gasoline are higher than those in Ethanol. He said, "It is not always a question of BTUs, but how much of the BTUs are burned and consumed? In Ethanol, you get a cleaner burn and more of the energy is burned than in regular gasoline." He stated that there would probably be a minimal difference in the mileage.

SEN. BLACK cited the DEQ report and said it states that 1% to 3% of Montana's grain is off market. He stated that in 1985 they had the lowest crop in 75 years and 1.5% of that off market grain would have supplied a 56 million gallon Ethanol plant. He said there is plenty of off market low quality grain every year that will have a secondary market. He stated that in almost every case across the country where they have Ethanol plants, it has increased the price of corn or other grains that were used.

***{Tape: 3; Side: A; Approx. Time Counter: 16.6 - 18.3}***

SEN. BLACK explained the amendments and discussed the gray bill. He stated that Montana needs to move forward and develop its own energy source and Ethanol is a good option. SEN. BLACK concluded by saying that there is no reason that an effective Ethanol industry cannot be developed in Montana and there is no better time than now.

**CHAIRMAN BUTCHER** closed the hearing on SB 293.

**Ms. Evans** asked for and was granted time to clarify the amendments. She emphasized that the gray bill can not be amended and said that the amendments will need to be segregated and voted upon separately if someone doesn't like certain parts.

**REP. KEANE** asked how his amendments would fit into SEN. BLACK's amendments and Ms. Evans explained that they were amending different things so they will work together. She handed out two more sets of amendments, SB029302 and SB029303.

[EXHIBIT \(agh63a10\)](#)

[EXHIBIT \(agh63a11\)](#)

***{Tape: 3; Side: A; Approx. Time Counter: 18.2 - 27}***

**CHAIRMAN BUTCHER** asked Ms. Evans to clarify the additional amendments.

**Ms. Evans** stated that one of the amendments is SEN. KEANE's and that SEN. BLACK has an amendment that is separate from the others. She said that all the amendments that are current have been handed out.

**CHAIRMAN BUTCHER** said that everyone should have three sets of amendments. He said that he wants the Committee to vote on any other amendments before the bill goes to the House floor.

**Ms. Evans** said that these three amendments work together and they can all be put on the bill if desired.

**REP. KEANE** made a motion to adjourn and the meeting was adjourned without objection.

***{Tape: 3; Side: B; Approx. Time Counter: 0 - 3.2}***

**ADJOURNMENT**

Adjournment: 6:05 P.M.

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REP. EDWARD B. BUTCHER, Chairman

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LINDA KEIM, Secretary

EB/lk

Additional Exhibits:

**EXHIBIT ([agh63aad0.PDF](#))**