Agenda Item A

July 7, 2010 Meeting Notes

Oregon Low Carbon Fuel Advisory Committee

State of Oregon Department of Environmental Quality

Attendance

Advisory committee members or alternates

Mark Reeve, Chair - Reeve Kearns, PC
Marie Dodds – AAA Oregon/Idaho
Marion Haynes – Oregon Business Association
Frank Holmes - Western States Petroleum Association
Brock Howell – Environment Oregon
Randy James – Portland and Western Railroad
Michael Johns - Lane County Dept. of Public Works
Jana Gastellum – Oregon Environmental Council
Tom Koehler – Pacific Ethanol
David N. Patterson - Mitsubishi Motors R&D of America
Harrison Pettit – ZeaChem
John Rakowitz – Association of General Contractors
Paul Romain - Oregon Petroleum Association
Bob Russell – Oregon Trucking Association
Jennifer Shmilker – Farm Bureau

Phone:
Ian Hill – SeQuential Biofuels
Marci Putnam - IBEW

Others in attendance

Chris Butler – Clean Energy
Carrie Ann Capp - ODEQ
Clark Cooney – Oregon Department of Agriculture
David Collier – ODEQ
Bill Drumheller – Oregon Department of Energy
Jackie Fahy – Chevron
Andy Ginsburg - ODEQ
Margi Lifsey - ODOT
Sue Langston – ODEQ
Dave Nordberg - ODEQ
Vijay Satyal – Oregon Department of Energy
Rick Wallace – Oregon Department of Energy
Cory Ann Wind – ODEQ

Phone:
Todd Campbell – Clean Energy
Gina Grey - WSPA

Note: Where responses to questions or comments came from persons other than DEQ staff, the source is noted in parentheses, for example, *Response (ODOE)*.

Chair Mark Reeve welcomed attendees and called the meeting to order.

Agenda Item A: Business As Usual assumptions for compliance scenarios and draft compliance scenario ideas

Jenny Pont, TIAX presented business as usual assumptions for compliance scenarios and draft compliance scenario ideas. Please refer to the discussion paper and presentation (posted on the LCFS website) for details.

Points raised during the discussion included:

- Two years ago, who knew that oil would peak at a $147 a barrel. Today it was $73 and it has been about $68 to $85 in the last several weeks. Nobody predicted $147 a barrel two years ago, or the plummet down to below $40 a barrel a few short months later. So it really is difficult to predict.
- It seems like part of the advantage of encouraging biofuel production is to give us a little more robust system and not be crippled by volatile fuel prices, and if the benefits of that are not incorporated in the economic analysis, then I think you are missing something.
- Will the prices be by the barrel or by the gallon, because the price at the pump doesn't track to barrel prices. For example, the $40 to the $140 is the same as what we felt at the pump. ***Response*** *(TIAX): These are pump prices. These are the retail price that the consumer pays.*
- There is a soft spot in your vehicle miles traveled (VMT) estimates for vehicles between 10,000 and 26,000 Your estimates of vehicles 10,000 or less are good, and a good estimate of vehicles 26,000 lbs and up.
- Regarding the 2022 horizon year: we don't have consensus with the committee. So 2022 is our analysis year and we are going to do our best to see if we can get any kind of comment about what we would expect to be different if it was 2020. We can't afford to do the analysis for both years, but I would like to make certain that we keep track of things that would make a difference. We can comment on that it would be substantially similar in 2010 and 2020 would be different. I know that Washington is analyzing 2023. So we will be able to know from their analysis what those kinds of assumptions might make. But to the extent we can bring any information in the final report, even qualitative, I think that committee members would appreciate seeing that affect of that horizon.
- I appreciate the comment and we will work to find a way to provide some sort of background analysis to explore what 2020 might look like. We can go back and compare other state analyses or just a review to show 2020. So I don't know if it is through this process, but through another process.
- So in our analysis, the percent reduction would be for 2020 at 6½%. To meet a 10% reduction in 2020 I presume would have some effect that we can at least qualitatively describe. ***Response****: After we finish this whole report, sometime next spring or summer we will be doing rule making and if at that point we propose the program that goes with a base year of 2010 to the horizon year of 2020 or a base year of 2013 and going to 2023 we are not precluding that decision by analysis on these years and I think committee members would like to see if there is any information that we could keep track of as we go that would help us know if we did that at that time is that going to make it significantly more expensive to implement the program or less expensive. So we may just be able to qualitatively say talk about how they might be affected by an earlier or later horizon year. If there is some way to qualitatively note that I think that is what the committee members were asking for.*
- An earlier completion date for the LCFS program would require a different compliance slope. ***Response****: Our original legislation talked about 2020 and DEQ is thinking 2022 just because of the time it takes to do the rule making and the advisory committee. So it's still a 10-year phase in and advisory committee members have asked what would it look like for 2020, which would be an 8-year phase in. We would have a different curve. So with that in mind, if you can keep track of any qualitative things you might say about the cost of the infrastructure and so forth, then we could at least get a sense of if we wait or were convinced to adopt it within 2020 horizon year, how that would affect the economic analysis.*

- I don't think the curve would necessarily be all that different for a number of reasons. One can just be that California's adopting their rule and we're producing biofuels that could be provided in this market. We may have sufficient capacity starting when we implement to start higher on the curve than we think and, therefore, our curve could stay the same. And the implementation rate could be the same as California.
- You might want to talk to Carl with EcoNorthwest. He's been analyzing DMV motor vehicle carrier data.
- TriMet announced that they are going to be using CNG, so there should be some additional CNG in the business as usual case. ***Response (TIAX****: We'll take at TriMet populations and se if we need an adjustment. We will also look at what is in the model for diesel hybrids.*
- Regarding biodiesel requirements: Although I think this is the right approach, I just want to make a point that the reason why we are not shifting to the 10% or 5% statewide is generally there has been a movement away from biodiesel and toward the low carbon fuel standard because of the problems associated with accounting for greenhouse gases or for a number of other factors in addition to some economic impacts. So there is an inherent political trait out that has been made to switch to this, but if we didn't pursue the low carbon fuel standard we would have had a 10% or 5% standard, although this is probably why I approach this for not pursuing the 10% or 5% I think the point should be noted that the low carbon fuel standard is here because we are not doing that.
    - Other committee members disagreed with this statement.
- The concern for me is the E15. For business as usual are we taking a stance that business as usual assumes no regulatory change between now and 2022?
- In the larger perspective, it seems like we are projecting this for no changes in fuel prices and no changes in this. We are projecting it for the one case that is not going to happen.
- Say here is a scenario without a change and then here it is with E15 or here it is with whatever. ***Response:*** *If you think about how it would affect the analysis if we assume that in the absence of the low carbon fuel standard most likely the legislature would do something else over the next ten years. If we assume those things it would be a baseline that would reduce the estimated cost of this program. And if we go the other direction and assume things are going to be repealed then we are going to overestimate the cost of the program. So it's just a point comparison that we say from business as usual today assuming no further action how would this program stack up. I think in the end when we look at the low carbon fuel standard as compared to the business as usual case, we will still be able to say that in the absence of low carbon fuel standard probably something else would have happened in that business as usual case too and maybe overestimating the impacts of the program. But we still have to compare to some fixed baseline, I think. The traditional map of this business is usual to assume what's on the books today. So we can have some qualitative context for it when we present the final report, but I think we need to compare it against the business as usual.*
- What is of concern to me is where this continuous downturn economy lies in all of the changes. When I look at numbers and I hear these percentages, those of us who have to lobby for the majority of our livelihoods, we know we are going to be in for a difficult session when it comes, because everybody is going to be looking at how the economy has not improved or changed. And when you were talking about the number, the EV project and those things, I think about if people still aren't working they are not going to be buying anything. Folks are holding on, businesses are holding on,

letting their fleets. And so as we continue to throw out these scenarios, I hope we don't lose sight of what the economy looks like and ultimately what businesses are looking like. Because all of these things can't happen if people don't have any money to drive that change.

- I know a lot of the things that we make decisions based on are projections, estimates and all that kind of stuff, but here we are building estimates based on estimates. We are analyzing what we absolutely know is not going to be correct. So where I'm having the problem is we know, for example, what fuel consumption was in 2010. We know how much biofuels and all that kind of stuff. Why don't we analyze historical data and then plug in what will happen with low carbon fuel standards and make that the basis for our economic analysis, because we know those numbers. We know that we have to reduce 10% low carbon per gallon and we know how much fuel was burned in any given year and we could then make the economic analysis based on that, instead of projecting to 2022 when we know that we are going to miss the bus for all the reasons that everybody has said.
    - So you want to compare 2022 with a low carbon fuel standard to 2010?
    - You can't compare consumer fuel expenditures in 2022 to consumer expenditures in 2010, so you have to make some kind of projection out to 2022 to make a comparison.
    - I don't understand why we have to make a projection or why we can't just use a base historical year and analyze that based on 10% reduction in carbon per unit on that same historical data. That's what is puzzling me. That to me is the baseline and then you can apply economic forecasts in and say if this happens, if the economy recovers or doesn't recover then you can do it just based on the economic projection, but you've got to solve it based on the projections. We can say we sold 10 gallons of gasoline in 2010 and now we are going to prepare than 9 gallons of gasoline and 1 gallon of something to get a 10% reduction. I know this is more complicated than I am making it, but my point is making it more an actual historical data instead of projecting 12 years in the future and using that as your baseline. Because that guarantees that whatever we say is going to be inaccurate. I guess that's my question.
    - I'm not sure if I quite understand the analysis that we would do. I assume what you are saying is that 2010 could be our horizon year and 2000 would be our start year because that would provide us historic data, because we would know the fuel used in each of those years and then we would implement…or for analysis sake, we would do an analysis of what if we had a low carbon fuel standard starting in 2000. The problem is that we have to use the type of fuel that we are using in 2010 for this analysis and so we can't just pick any random decade.
    - I understand I think where you are coming from, but I think Vijay explained it fairly well at the last meeting. He was talking about how all costs of compliance analysis that will fit in one kind of mold, which is really I think comparing the business without the regulation to the scenario with the regulation. So that is the only way you can get the cost differential and what is the regulation cost.
    - 2010 is in there. That's where we start with the vehicle maxes and that's where we start with the fuels, but you then have to project forward to 2022. Because, just to take the simplest of examples, the RFS2 is going to bring us a lot of biofuel that whether or not we have the low carbon fuel standard and we have to look at the differential cost of the low carbon fuel standard requires over and above that and what else is there. You know gasoline is going to

be affected by the changing Café standards, so you can't use 2010 by itself. You start with it and you project forward and say what would this look like in 2022 without this regulation. So I think we are doing what you are staying, starting with the actual 2010 data and then adjusting it for everything that is going to change between now and 2022.

- I just wanted to say that modeling approach using the baseline 2010 and then developing out the populations with different curves for fuel adoption rates of these different types and the vehicle adoption rates by technology and so forth is the right approach. That is the standard economic comparative analysis model. And I think having the economic data available for people to review on an annualized basis of the differential between what would be business as usual and the model that we are projecting that gets us on the curve to comply at 2022 is going to be quite sufficient. You see the same type of analysis no matter what type of project you are looking at. If you were going to be building a bridge across I-5, you would be looking at traffic line going to 2022 with and without grids. So you are going to have to forecast what business as usual cases in order to know what type of project you are looking at.
- I think part of what we are hung up on is this phrase business as usual - is the current context, the current regulatory and statutory construct at the moment that you are setting the baseline, which you assume is going to change. And there are some ways that you can predict that it is going to change and other ways that you can't. You know that it will change, but you are going to say during the next 12 years if that did not change this is what the baseline would look like. And the other thing that I hear Bob saying is why don't you start by, help me if I'm wrong, is starting with just the historical data, but then adjusting that historical data in 2010 to reflect what the fuel mix would be if you had a 10% reduction in 2010 in carbon intensity. So I think that is what you are saying, is use that then as the baseline. So starting with the 10% reduction and then calculating what affect the rule would have. And I'm not sure how you would get there, Bob. I'm having a hard time wrapping my head around the mechanics.

- If you have a monopoly and you add in some competitors then it gives you some resilience in your economy. right? So, does that come out of the REMI model? And the focus is 10%, which is probably pretty small, but is that considered?
- I think this came up last time, which is that we are essentially a price taker and low carbon fuel standard isn't likely to change that in a huge degree, although maybe if we huff it after 2020 or 2022, we might become more of a price maker.
- I always think of it as without regulation as opposed to with regulation.
- I definitely know if that is the case that where Exxon Mobile is going to be having to build out infrastructure and where there are economies of scale and how that matches up to fleets to make sure that a certain portion of our cars are going to be E85 ready, but maybe the economies of scale in California are different. I'm not sure anybody around this table has to be able to make those clear cut decisions. I think that is kind of a decision that needs to be made based on the best experience of the economist and that's that they can provide what generally has happened based on the historic trends, although this has never really happened, but based off the experience or theory of how this may play out or what we should do here.

- You have described for us the boundaries and you've indicated ones pretty conservative and the other is at the other end of the spectrum and my question is, is there a rational way to strike the middle? That you are familiar with and comfortable with and if so it, we'd like to see it. Otherwise, my judgment would be go with the conservative estimate and assign all the costs to the regulation. I mean people ought to know what these things are going to cost. That doesn't mean it's not going to happen, but that infrastructure is going to need to get built out and it's going to need to get built out because of our LCFS. So why wouldn't go with, in the absence of anything in the middle, why wouldn't you go with the conservative estimate.
- When WSPA made their presentation, their point was that RFS2 is going to bring us something comparable to the low carbon fuel standard. So the assumption was all centered in Oregon, but it's going to be out there in the country that we are going get this much ethanol produced if we have an E10 wall, there is going to be E85 infrastructure built somewhere in the country. So assigning all those costs to low carbon fuel standards really over-estimates the cost of that standard. If we didn't adopt the program, it was going to happen anyway somewhere in the country.
- One way we may want to approach this is that we are going to have different analyses and we can look at Washington, we can look at NESCAUSM, we can look at California, and we are going to do our analysis, but if they are all based on different assumptions we can still tie then together and say if you made this assumption these are what you would get and with assumption that is what you would get.
- There are two principle variables and one is that the RFS2 will drive the E85 infrastructure development because the market will have to take up more than the E10's blend wall will provide for. We can't attribute that all to the Oregon low carbon fuel standard. It's not practical and it is not a defensible case in and of itself. In addition, all the data research that has gone on at NREL and Argonne and actual real legacy fleet vehicle testing has proved that the E15 blend stock has got legs under it, politically potentially, and if not, at least, at E12. So we have to keep in mind that it is highly likely that standard will change during this term of our LCFS build out and we ought to at least address it. And if it is at the mid ground, is it? That's a good question, but I don't think we can attribute all ethanol above an E10 blend wall causing additional infrastructure costs to be LCFS dependent.
- That's why we're thinking that we should stay with the E10 blend wall. That's the current regulation. Washington is looking to do 15. So that will be good that we will get to see it both ways. Because, if we stick with E10 then the questions is whether we are going to get less than our proportionate share of ethanol in the base case or whether we are going to assume that there is going to be E85 infrastructure built to absorb our full proportionate share. And I guess the question I would ask is if Oregon's got the same proportion of flex fuel vehicles in our fleet out there as other states do, what would be the economic driver for the fuel distribution that oil industries provide less than the E85. That would be the questions. Is there some reason people can think of why Oregon would get less E85 infrastructure than other states would get if we have roughly the same proportion of flexibility? If we can't think of a reason, then we should just assume that we are going to get our share of E85 infrastructure.
- Doesn't Oregon have a historical evidence of early adoption of other fuels, so I think if anything I would say we would at least have our proportionate share of E85 vehicles here or more.

- I have no reason, based off my experience and knowledge, to think that we would have a different proportion of ethanol and biomass-based diesel than any other state. One factor is what the scale is for building infrastructure in other states to be able to meet the E85. And I think that question is a smaller, would probably have a small impact on what our proportion would be. And so, I would lean towards something closer or really close to where the proportionate share was. We may want to discount it by some factor. So if we do like a 5% reduction to proportion shares or something like that. We have to come up with something that makes the most sense, that represents what a regulatory environment would be if we don't have low carbon fuel standard. And it's likely closer to the proportionate share, but I don't have expertise to know exactly what that number is.
- Perhaps states that have higher volume gas stations might have a greater ability to put in a second tank.
- Yeah, I don't think we will hit our proportionate share, just based on ability to permit and do things, because the facilities that we have now much less expand, based on population size. I'm not saying that we won't get some of it, but I think there are a lot of other places where you could make heavy infrastructure investments and serve a far larger population for that capital.
- Another piece of data that would us decide is might be to look at the distribution for our gasoline stations, how many gallons they sell relative to say New York and see if we are average or below average or above average. And maybe use that somehow to factor us off of proportional case or something like that.
- I don't know if you have talked to any of the terminal folks? What kind of constraints are there in those terminals that serve basically the entire state.
- Probably every other state has similar problems, so we have to do a relative comparison. If you have this much volume to move, it's got to go somewhere and if we are significantly different, because let's say we are an average of so many gallons per month, then in the bigger state the typical gas station sells twice as many gallons. One they can probably afford to put a tank in, where we can't.
- With regard to ethanol staying in the Midwest; they already have a high proportion of E85 use. And then the question is, is what is their fleet capacity to take more E85. So, there are so many factors here. I think the approach of looking at gasoline station throughput is a good one.

There was no public comment.

- Assuming that other states are in the same boat there would be more blending facilities. There is no reason to think that biofuel and ethanol use wouldn't proportional here.
    - I don't think we are in the same situation, because states are unique.
    - Most states have refineries and this isn't a concern.
- We should find out what capacity the blending facilities are and factor that into the analysis.
- Before we go there, I'm unclear about where we left the discussion around ethanol. I would like to have seen maybe an option or two developed that our technical experts felt are defensible that we could then ask questions about and challenge and arrive at. But, to be just kind of given the option of two bounds, neither of which is acceptable, what do you think works? I'm ill-equipped to respond to that question. ***Response (DEQ):*** *Here is where we left it on the ethanol, we said it's*

going to be somewhere in between the two and we are going to look at the through-put average for a gasoline station in Oregon and compare that to the national average through-put and come up with some kind of a factor that would be applied to that difference. And that's sort of a technically justified cut, I think.

- For CNG light-duty vehicle projections, NGV Association might have numbers or studies. California is pursuing CNG. ***Response****: When we talked about fuels assessment, we decided to use EIA projections on the light duty CNG. That's why you don't see a higher light duty CNG, because of that conversation that the committee had.*
- If we could find defensible, rational numbers around light duty CNG projections, I would encourage that. Clearly, I'm dubious that those numbers exist with any depth, or that any robust numbers exist in that regard.

A discussion followed on including a "one pool" scenario.

- Commenter thought DEQ was still looking for input on how you would actually implement a single silo approach.
- Commenter heard that it should be one and I definitely heard that it should be 2, and there was a robust discussion about that.
- The approach of taking two silos is likely to increase the costs of compliance for within each of those silos. So it is almost a conservative approach to analyze it within two silos, because you can't have a tradeoff between the two different fuels.
    - I disagree. There is lot of things that are going to have to be tracked under a program like this.
- We are talking about scenarios and I think we need to have a scenario that shows one silo approach.
- Just so I understand what it might look like before we make any decisions. It would give some carbon intensity reduction by switching the light duty fleet from gas to diesel, I mean some portion of it. Is that where the benefit would come? So there has to be some assumption about how much of a switch would occur and what's the relative carbon intensity between those two.
- Washington is doing a single pool, and you are able to do an analysis of it. ***Response (TIAX):*** *Yes, we did two one pool analyses. We did an 8% reduction one and a 10% reduction.*
- So I don't see why we don't do the analysis and if compliance issue knows things we can also do it separately. I don't think we should borrow this, at least the questions that we have at this point, including in the analysis.
- Is the problem when you go to actually implement this, you don't know how much fuel switching is occurring. On the ground, how do you actually figure out the new amount of diesel that is substituting for gasoline.
- It is very possible to do that with more precision than what we are talking about. We know that diesel that is pumped into a car is charged tax. We know how much diesel is taxed and we know that diesel pumped into a heavy truck is not taxed.
- For medium duties you have to do an estimate.

- That's a small percentage, but it's the whole problem with the medium duties. It's a small percentage of the number of the vehicles. And we don't have good statistics anywhere, that I'm aware of, on the ones between what we consider light vehicles and heavy vehicles. And, in Oregon, it is between 10,000 and 26,000 pounds.
- So the presumption in that is that all future light duty diesel sales substitute for gasoline.
- No, above the business as usual.
- So does business in usual in Washington then project light duty diesel as increasing at some natural rate. ***Response (TIAX)****: We did not adjust the light duty diesel populations at all. It stays the same. It's just that it gets a credit in the one pool, and if it's separated it doesn't.*
- But there is no some sort of middle assumption that there would have been some Normal diesel sales that would happen absent a low carbon fuel standard anyways.
- And just the other projections that we are doing, we are going to project what the base case is and what would happen in 2022. Yes, there would be additional diesel sales that would happen.
- And I certainly don't expect you to take my word for it, but what I'm suggesting is that DEQ go talk to the people who run those programs to see what kind of data that they can produce. I mean I've been working with it for 30 years, so I have some idea of what it is, but you know there are the folks at the fuels tax branch and you would probably need somebody from DMV and, again, I would encourage you to touch base with (inaudible). He's sort of the guru of making estimates from all of this.
- So if I'm hearing it right, there could be in the base case a projection of diesel sales that would happen absent of low carbon fuel standard? Then there would be additional diesel sales and scenarios and the difference gets a low carbon credit, but then when you actually go out in the field and try to document how much volume of diesel fuel belongs in the low carbon fuel piece, not in the base case, how do you distinguish?
- Same way that you just did it, is you take here's the diesel that is doing into light vehicles, project that to 2022, here's the diesel that is actually sold in 2015 and if there is a difference then that diesel gets credited.
- A projection is fine for modeling, but it would be difficult to use for compliance, which needs to be based on actual data.
- If a guy is driving a gasoline vehicle and the next car that he buys is a CNG or diesel, which would be either way, then how would you differentiate that?
- Sounds like Washington's scenario assumes that all future light duty diesel sales substitute for gasoline. They didn't try to parse it between these would have been some increase in diesel fuel.
- There are two issues. One is how you measure compliance and the other is what are you modeling, two pools or one pool. So we kind of mixed those two things up here in this discussion. We don't have resolution on how you comply.
- Well what I was hoping was that we could still allow running the scenario or running numbers that would allow you to say you get some credit for the switch, without having to decide is it actually implementable.

- I'm wondering has Washington numbers been run already, or is this a draft of them. Is there a huge difference between one silo and two silos? ***Response (TIAX):*** *In the one pool approach, the diesel dominated. I can't remember the percentage of the reduction, because the focus of that compliance scenario was to use in-state production and there is a lot of projected canola biodiesel. Because they have a lot of biodiesel production capacity in Washington and a lot of potential canola production. Their one pool scenario was more or less a biodiesel heavy scenario.*
- So what this tells me is that even if there were not a big difference in cost that the likely difference in cost is that a one silo approach is less expensive if administrative details can be dealt with, in terms of a market transaction to the regulated parties the one silo approach may be cheaper, at least based off of how the Washington state set up their system. So if we are looking at very conservative analysis of what the impact of this program might be on regulated parties then a two silo approach may be the more conservative for us to take. So I don't see anything wrong with just, if you want a conservative analysis of what the impact might be the regulated parties to get forward with what we've had to give them.
- Each of these scenarios are going to feed into REMI, is that right? ***Response****: Right*
- Why are we afraid of getting the information on one vs. two baselines? We haven't chosen it, but at least we could make an informed decision.
- **Chair:** Certainly we are hearing some strong requests from some members to run a scenario with one pool. We hear a strong objection from other members that say, no, more conservative approach is appropriate. DEQ is saying they are concerned about implementation so they don't want to run scenarios that aren't likely to be possible. I think they don't have a strong opinion one way or another. I would like us to clear out the information and move this onto a decision-making body, because ultimately, as this committee, we aren't going to craft the rule. We are going to make recommendations about the rule, but we aren't going to decide about the rule. I liken us to be a clearinghouse for information and for opinion and then move it forward. So that tends not get us to closure, but I don't think we can get to closure on this one any ways. Do you at DEQ have a strong objection to running another scenario? Are you concerned about costs and resources and time?
- There are some real barriers to light-duty diesel that you are not taking into account. We have less light duty diesel models available than we do flex fuel vehicles. It's going to take a long time to get those out. Also, you have the same problems with diesel that you do with E85, because there are not enough diesel pumps available. They are going to have to start adding pumps. I think it is a more complex issue than you are probably really thinking about at this point.
- You are probably aware that legislature in February suspended the biodiesel mandate for next winter because of the problems we had last year. Once we get to renewable diesel, we won't have those problems.
- On heavy duty LNG – why is heavy duty LNG not considered? In California, we are seeing the natural gas favor the LNG engine compared to the CNG.

Agenda Item A

August 5th, 2010 Meeting Notes

Oregon Low Carbon Fuel Advisory Committee

State of Oregon Department of Environmental Quality

Attendance

Advisory committee members or alternates	**Others in attendance**
Mark Reeve, Chair - Reeve Kearns, PC	Chris Butler – Clean Energy
Robert Grott – Northwest Environmental Business Association	Todd Campbell – Clean Energy
Frank Holmes - Western States Petroleum Association	Carrie Ann Capp - ODEQ
Randy James – Portland and Western Railroad	David Collier – ODEQ
Jana Gastellum – Oregon Environmental Council	Brian Doherty – Miller Nash/WSPA
Christine Kelly - Oregon State	Bill Drumheller – Oregon Department of Energy
Matt Michel - Canby Utility	Jackie Fahy – Chevron
Harrison Pettit – ZeaChem	Andy Ginsburg - ODEQ
John Rakowitz – Association of General Contractors	Sue Langston – ODEQ
Paul Romain - Oregon Petroleum Association	Ralph Moran – BP
	Dave Nordberg - ODEQ
	Rick Wallace – Oregon Department of Energy
	Cory-Ann Wind – ODEQ
	Liz Hormann - ODOT
Phone:	Allison Koenker – AGC
	Phone:

Note: Where responses to questions or comments came from persons other than DEQ staff, the source is noted in parentheses, for example, *Response (ODOE)*.

Chair Mark Reeve welcomed attendees and called the meeting to order.

Agenda Item A: Review of June 23, 2010 LCFS meeting notes.

There were no comments.

Agenda Item B: Fuel Supply Deferrals

Carrie Capp of DEQ presented on Low Carbon Fuel Supply Deferrals. Please refer to the discussion paper and presentation (posted on the LCFS website) for details.

Points raised during the discussion included:

- For the forecasted significance threshold for investigation- Does the "25% more than the standard" refer the drop from the base line? *Response: If the percent change between the standard (CI) required in a specific year and the actual average CI achieved for all fuel types during a specific year is greater than 25%, the significance threshold would be triggered.*

- Compliance adjustment options is to give DEQ flexibility in being able to address a variety of fuel supply shortage scenarios and to be able to implement the appropriate type of deferral, based on a specific situation. If a disruption were so major, the compliance curve would need to be recalculated and the horizon year may need to be moved out.
- So far we've talked about supply disruptions of low carbon fuels, but what happens if there are more high carbon crudes that come into the market than anticipated? *Response: In a future meeting, DEQ will be discussing the topic of high carbon intensity crudes and this issue will be included.*
- How does the issuing of deferrals affect the market place and the signals of creating low carbon fuels? The more forgiving you are, you are diminishing the market incentives, the less forgiving you are you are creating a premium which is going to create market incentives for more market supply. *Response: We are aware that this is an issue and we will try to balance these factors in moving forward with a proposal.*
- Are you suggesting normalizing or using a metric? *Response: Since it's a monitoring threshold, you'd want it to be simple and able to be spot it easily because all it does is trigger an investigation. We want to avoid triggering an investigation every time a small disruption occurs.*
- With regard to monitoring, the only entity capable of knowing what's going on is DEQ, aside from an alert from a producer. With reporting mechanisms that will be in place, DEQ will have an ongoing data collection system, so (determining) when there is a red flag is a management decision, not an advisory committee decision. *Response: Agree.*
- If a regulated party opts not to comply, what is the enforcement and is the enforcement less onerous than complying? *Response: Different violations come with different penalties, but a key element of all penalties is that they would include economic benefit gained through noncompliance in addition to the penalty.*
- 25% is huge if you're talking about total CI weighted fuel. Even 5% is huge because you have to add in the amount you have to do better the next year. What would be a reasonable number?
- Determining the significance threshold for when a supply disruption should trigger a deferral depends on how far out we're looking. The purpose of program is to get more low carbon fuel on the market. So if we were to base our decisions on the amount of low carbon fuel that is currently available on the market, we won't be able to meet the standard. But we are assuming that there will be growth, and this rule will generate additional demand, so when looking out 10 years, we need to use a more appropriate threshold. The threshold for determining if a deferral is warranted really depends on how far into the future the program compliance schedule is being assessed in tandem with the magnitude and duration of a low carbon fuel supply disruption.
- With regard to wanting to build a (low carbon fuel) market, one way to address forecasted deficits is to penalize the low carbon fuel providers for not meeting the standard, because that incentivizes them to get those plants up and running in a timely fashion.
- The timing question never was addressed: what is the timing of this process? If a supply disruption happens, it happens quickly. This is in direct conflict with the CCSN component- so it isn't making a lot of sense right now.

- But (the disruption) is only going to be at that plant for those particular regulated parties that have a contract with that plant, so its' not going to fit into the question of the scenario that has been presented so far today, or that is written up in this document. *Response: It's a good point that can be argued either way with regard to whether a disruption affects every supplier or just those under long-term contract.*
- Because enforcement costs more than compliance, they (regulated parties) aren't going to wait for DEQ to conduct an analysis- they are going to have to be out there complying.
- In the normal language for fuel supply contracts, to cover a situation where that supplier went down, what would the fuel purchaser do as a "plan B"? *Response: All companies have a robust planning department, and want to comply with every regulation in place, and that's why an expensive, complicated program like this doesn't make sense. Each company will have its own supply agreements, but it's not going to be on a universal, industry basis.*
- The difference is what's in the control of the company. For a permitted facility, their control device is under their control. Under the LCFS program, a regulated party doesn't have control of a fuel producer elsewhere.
- Will DEQ issue a violation for being out of compliance before the department knows if the scenario comes true or not? *Response: For a short-term disruption, when a plant goes down say for example, for two months, the goal would be to have the deferral in place before the compliance reporting which happens as soon as possible in the following year (perhaps sooner). If it's a longer term deferral and we're projecting out into the future, and wouldn't be able to achieve the curve in the year after, that's less of a problem. So if a disruption happens within a short time frame, DEQ would investigate the nature of a disruption and potentially grant a deferral.*
- It is important to leave room for what happens in the best case scenario – a breakthrough in technology – we should build flexibility in to the system so if there is a deferral granted for a one-year disruption, and the new technology emerges, it could make up for the difference and the deferral may be revoked.
- Does it (the granting of a deferral) have to be a public process? Can it be an administrative process? *Response: It depends on how the rule is written. The Department needs to seek advice from DOJ on this topic.*
- Please consider meeting with a small group that represents the interests involved that can explain in greater detail to DEQ what is going on, because this is all going to be market disruption in a variety of ways, and to understand what is going on, DEQ needs to hear from those that are in that market.
- I hope that the fuel cost is connected to this. *Response: That will be addressed via the Consumer Cost Safety Net.*
- The system being proposed won't work in practice because (a disruption) is going to happen too quickly for the first component and the price impacts and the alternative backfilling is going to potentially affect price out there. So to wait until you see something happening and then try to analyze it and implement something a few months down the road isn't going to happen. For the forecasted deferral scenario, you're still going to have questions on compliance and meeting obligations under the rule.

- Equal to conversation about making sure prices stay low, is making sure the signals are right for the alternative fuels producers. Some of the deferrals (short-term) may just be on a portion of the market, and the entire market wouldn't go away, so forgiveness would only be on the portion that was affected, and not on the fuels that were not affected, correct? *Response: Right.*
- A ten percent reduction in ten years is a significant change and equates to a lot of low carbon fuel, and where we run the economic analysis, we'll see that we are going to be asking the industry to really reach to get a 10% reduction, and we think its achievable but not easy, and we need to have a process in place to track our progress, and that's what this discussion is about.
- If we step back a little bit and realize that today there is a 90% monopoly on fuel imported into this state, and the price of that (imported fuel) is affected by world events, from spills, from wars - things that we live with all the time. We've seen the price volatility occurring and what we're looking at in the infancy of, is activating a local supply that is additive to what we're dealing with on a monopoly basis…feedstocks that are not impacted by world affairs and sensitivities. Granted it is still early and hard to see what will be out there in the future, but because local or regional volumes of transportation fuels are less dependent upon the monopoly-imported fuels, you are creating a dynamic , long-term solution, in which volatility should be dramatically reduced. *Response: That was one of the conclusions that California came to, (which is) that diversity of supply is part of the reason they projected that the LCFS program would reduce fuel costs over time.*
- I would like to see us stick to the end point. I would use rulemaking to change the end point if it needs be to (so as not to discourage low carbon fuel production), but would prefer not to alter the end point for short-term deficits.
- The forecast scenario deferrals seem like something worth exploring because that gives you a sense of where you are on the (compliance) curve, and how you are tracking along that curve.
- The short-term deferral scenarios are unclear because DEQ will not be as fast as the market, and the market will get around DEQ. It's more of a forgive and understand that over a year or two, you want to shoot towards a recovery, but it's really the forecast approaches that I'm interested in looking at keeping an eye on preserving or re-calibrating that curve.
- The overall purpose of the LCFS is reducing carbon emissions because they matter climatically and to Oregonian's well being. We need to track the cumulative emissions and if there are deferrals and forgiveness of deferrals, we need to take that into consideration because greenhouse gases have a long residence time in the atmosphere, and any lost time makes any future reductions that much harder and more important. There needs to be flexibility in the system to make sure that compliance is achievable throughout out the program and there is success, but we need to think carefully about how we shift the curve.
- To me, success of the program means getting to the year 2022 and being able to achieve reductions on a consistent basis from there on forward, being able to carry the program into the future and maybe think about phase two of this program. We don't want to do anything in the short term that would jeopardize that. From my perspective, the most important thing is not to make up reductions lost in any given year, but getting back on the compliance curve the following year and move fuel technologies forward.

- The idea of banking credits is interesting so that some of the early actors can get the market moving, because in the early years it will be easier to meet the standard and if there are reductions happening that may build in a bit of a buffer moving forward.
- Submit any additional input by two weeks from now.

Agenda Item C: Low Carbon Fuels Standard Consumer Cost Safety Net

Sue Langston of DEQ presented on Low Carbon Fuels Consumer Cost Safety Net, which addresses the price of gasoline and diesel. Please refer to the discussion paper and presentation (posted on the LCFS website) for details.

Points raised during the discussion included:

- What about (the price of) electricity, CNG, hydrogen? *Response: The statute refers specifically to gas and diesel. The theory being that since gas and diesel is where the reduction is needed, and if there are cost increases in other fuels which are generating credits or used to reduce the carbon intensity of fuel , they would show up in the price of gas and diesel*
- If there is a spike in fuel prices in Oregon related to a particular low carbon fuel needed, it's going to take us over a year to get relief from that. What I hear DEQ saying is that whatever happens and our economic study beats your economic study, then regulated parties would have to wait a year to a year and a half for relief. *Response: Only for the short-term deferrals.*
- That's on supply, what if supply is there but price triggers (another monopoly develops). Is there a mechanism that should be put in place to enable a more immediate reaction to fuel price spikes? *Response: Part of it is the 12-month weighted average, so it's a balancing act. We also have price gouging legislation in the state that's based on an incident, and if something comes up than the Governor can respond immediately.*
- If it's a rolling average, we don't have to wait until the end of the year. *Response: If we had one really bad month because someone cornered the market on low carbon fuels for that month which caused a price spike, the previous months would dilute that.*
- (Paul R.) A mechanism is needed to act on a shorter time frame to address price spikes in the marketplace.
- It would trigger an investigation, not necessarily a deferral. *Response: DEQ could have a trigger threshold to determine when an investigation is warranted and whether a deferral would alleviate the disruption problem, but the agency could also trigger an investigation of its own volition before the threshold was triggered, based on the circumstances.*
- In a situation where electricity prices go up differential to other places and credits from that electricity are generated and get passed on to comply, are those going to be ignored? *Response: If credits would be needed, that would be reflected in the price of gasoline, which would be caught by the consumer cost safety net, which is why it all comes through the price of gasoline and diesel- if we aren't seeing that go above the consumer price safety net, then I don't think we need to worry about the other fuels.*
- Are we really after GHG reduction, or are we telling out of state producers what they have to produce in order to be able to sell it in Oregon? By doing this, aren't we saying to people that if

you want to sell fuel in Oregon, you need to comply with Oregon standards and make fuel that complies with what we require in Oregon? *Response: The idea of having Oregon establish GHG reduction targets is to achieve our share of the reductions needed to stabilize the global atmosphere. It would require every other state and every other nation to achieve those levels of reduction. The intent is to team up with everyone doing their share, ultimately helping the federal government and other countries to decide to do their share as well. This rule by itself isn't going to fix global climate change, but it is a step in achieving the overall reductions that Oregon needs.*

- *A*re we basically telling out of state producers that if they want to sell in Oregon, they have to meet certain standards? *Response: We do that with a lot of things.*

Agenda Item D: Flexible Implementation Approaches to Minimize Compliance Cost

Sue Langston of DEQ presented on Flexible Implementation Approaches to Minimize Compliance Cost. Please refer to the discussion paper and presentation (posted on the LCFS website) for details.

Points raised during the discussion included:

- No comments or questions were raised regarding flexible implementation approaches to minimize compliance cost.

Public Comment:

Todd Campbell, Clean Energy

For a long time we've been overly dependent on one fuel source and have seen price hikes as a result. A low carbon fuel strategy is not only about Greenhouse gas emission reduction, but also about fuel diversity. Historically, trend of oil compared to natural gas transportation fueling, BTU price to price per barrel (of oil) has been about six to eight times, today it is about twenty times (in terms of price). There are opportunities where low carbon fuels make sense in this market place, and that should be considered as (LCFS) policy moves forward. It is dangerous, as was suggested earlier, to look to the low carbon fuel industry to make sure the LCFS program is successful. It is more important to make sure the regulated parties that are producing fuel are invested in this program. As a private company investing (low carbon fuels) capital in Oregon, we are concerned about deferrals that are applied industry-wide, and the potential for (low carbon fuel deficit) forgiveness. We want companies to invest in low carbon fuels, and believe there will be multiple players. Consumers will recognize choice in the market and (a diversity of low carbon fuels) will drive competition, resulting in lower fuel prices. We are surprised by the carbon intensity assumptions of natural gas extraction from shale and the impacts on indirect land use associated with the ILUC impacts table from the CARB workgroup presented today. (Clean Energy) has not seen this table prior to today, as it was generated in a closed meeting, and ask the committee to reserve judgment on the information in the table, due to the proprietary nature of the processes that were analyzed.

Agenda Item E: Indirect Land Use Change and Other Indirect Effects

Cory Ann Wind of DEQ presented on Indirect Land Use Change and Other Indirect Effects. Please refer to the presentation (posted on the LCFS website) for details.

Points raised during the discussion included:

- CARB's ILUC numbers were used in all compliance scenarios, except for the scenario that does not include indirect land use change.
- The economic analysis will be looking at what would happen if we didn't use any ILUC number, and what would happen if we used the highest, to bound the possibilities. Preliminary results are scheduled to be presented in October with an opportunity for committee members to give input, and final results will be presented in November.
- Harrison: Since I unfortunately can't make any of the upcoming meeting dates, I would like to put a proposal on the table now. Since equity requires us to look at not only the numbers for biofuels but also look at petroleum and other factors that are not considered in petroleum. And as we know the science is in its infancy, and we are making guesses that do not do justice to our efforts, and keeping in mind that the real work (towards GHG emissions reductions) is back ended, it might be a legitimate approach to give ourselves two years before making a decision to see where the science advances, and use an ILUC number of zero for the time being. *Response: This is the approach that Canada took. Washington is taking the average of all available ILUC numbers currently in use.*
- If you took the ILUC number (30) out, should/would we adjust the baseline if we went to a zero ILUC value? *Response: Yes, when we look at the scenario without ILUC the baseline number will be different as a result.*
- Is (the difference) a lot? *Response: The carbon intensity would be calculated without the ILUC number.*
- Did someone from California say they did it both ways? *Response: Yes, California also ran their scenarios without indirect land use change, and the volumes of fuels only changes between either two or four percent. Our scenarios will be different from California's.*
- Intellectually, these other approaches offend me, because we're talking about trying to attribute conversion of land to soybean crops in Brazil to the LCFS, when it's just as likely that the conversion is due to the production of McDonald's hamburgers. We're trying to measure things we can't control and that are outside the bounds of our science.
- Clearly there are ILUC impacts, even though we may not agree on what the actual numbers should be. We need to incorporate the best number that we have today, so let's use the best numbers we have today, and review them in the future.
- We're using 2010 as the baseline going forward, but yet there has been a lot of investment in and biofuels used in Oregon from 2006 forward with the biofuels mandates, so we're not recognizing those investments and contributions to the (LCFS GHG emission reduction) target, so it might be more appropriate if we move forward to use a 2006 baseline instead of 2010. What does the statute say with regard to where to start from? *Response: I think we have flexibility in the statute. It does state 2010 to 2020, and the net effect of what you are saying is that we would be shooting for less than a ten percent reduction because we would already be counting some historical reduction so we would get less than 10% going forward. We could start with a 2006 baseline and go for a 12% reduction and get to the same effect, or go with an 8% reduction in 2010, just go with what we've got.*

- When you go from a (ILUC value of) hundred to fifteen in a matter of years looking at this complex issue, it highlights how challenging this is from a scientific/modeling point of view, and the sensitivities of the inputs and assumptions that are involved, so there is still a lot of work to be done. What is missing is a measure of the indirect effects of petroleum (production), so what we've got right now is an analysis that is being refined for quantifying the indirect effects focusing on biofuels, but there's not been an analysis on the indirect effects of petroleum, so that's another reason to wait until that is done more authoritatively.
- If we were to make a commitment to formally evaluate the science around ILUC numbers say in two years, would that work for you? It's an improvement over trying to make a guess as to what they are today, but I would like to ask the scientists in the room (if there are any) if we can expect something from the National Academy of Science or other entity? *Response (attendee): The National Academy is looking at the role of sustainability and environmental issues, so the modeling aspects aren't necessarily going in the direction you are proposing. But the EPA and CARB are working on this issue.*
- The CARB work plan is due in December.
- None of the scenarios include indirect land use change for conventional fuels.
- ODA would go on the record as having the position of favoring waiting until the science evolves. Foreign government laws, policies and incentives have a much bigger sway on what is happening in terms of their crops than do biofuels, that I think to take the best numbers available now would be taking a number that could use further refinement.
- CARB has done the analysis on the indirect land uses for petroleum and petroleum products. The question right now is that some folks have suggested other numbers that CARB does not agree with, and that is what is being debated currently.
- CARB may have done an analysis of indirect land use, but has not analyzed indirect effects, and there is a lot of contention around that.
- There is a lot of criticism of the oversimplification of the information used in the CARB process.
- Andy: I tend to think in terms of the practicality of programs and what the outcomes will be, and under any compliance scenario under the LCFS, biofuels will play a significant role. One of the big factors that we have to address is the current EPA limit of 10% ethanol in gasoline unless you go to an E85 vehicle, and the E85 infrastructure. If we don't have an indirect land use factor, what will probably end up happening is we will end up with more corn ethanol or cellulosic ethanol if it becomes available than we would have otherwise had. In either case (with more corn or cellulosic) ethanol, we're probably going to be creating an incentive to create that E85 infrastructure, and that is what is needed in the long run. From a practical standpoint, if we don't use an ILUC number, we are still going to get a lot of the benefit of building the E85 infrastructure that we will need later on if it turns out that there is an associate land use effect and we start shifting more towards cellulosic ethanol, so there is still an advantage to include ILUC at some point, even thought there is still uncertainty about what ILUC numbers should be used today.
- So if you don't assign one now but when the science is better to re-evaluate, in 2013, the regulated parties will need some sort of regulatory certainty as to what their compliance obligations are.

- I think that we need to acknowledge that it's a real phenomenon. Its one thing to say it's a zero number, and another thing to say it's a real phenomenon that we think need to be worked on, and we will include a number a certain future point in time.
- Another option to go forward could be to start with a low number (i.e. the Purdue number) and use it until we have a better number.
- From our perspective, (WSPA) thinks that land use should be included, and that is reflected in the written comments we submitted.
- Waiting until the science around ILUC numbers evolves is a good idea, but I'm hearing a discussion about a singular number, when reality will be a suite of ILUC numbers that will be assigned to each appropriate fuel, so it is important to recognize that value in waiting to assign ILUC numbers to any particular fuel until ILUC values are available to apply to all fuels in question. *Response: Yes, individual ILUC numbers will be assigned to different feedstocks. It may be that not all will be assigned at the same time.*
- Is seems like the scenario that would be the most sensitive to it would be the scenario with and without the ILUC number. *Response: The one that would be the most sensitive and includes the most conventional biofuels is the compliance scenario that will be modeled with and without ILUC.*

Agenda Item A

August 10, 2010 Meeting Notes

Oregon Low Carbon Fuel Advisory Committee

State of Oregon Department of Environmental Quality

Attendance

Advisory committee members or alternates

Mark Reeve, Chair - Reeve Kearns, PC
Sam Hartsfield - Port of Portland
Marion Haynes – Oregon Business Association
Frank Holmes - Western States Petroleum Association
Randy James – Portland and Western Railroad
Michael Johns - Lane County Dept. of Public Works
Jana Gastellum – Oregon Environmental Council
Christine Kelly - Oregon State University
Dan Kirschner – Northwest Gas Association
Geoff McPherson – Citizen
Matt Michel - Canby Utility
Harrison Pettit – ZeaChem
John Rakowitz – Association of General Contractors
Paul Romain - Oregon Petroleum Association

Phone:

Marci Putnam – IBEW
Ian Hill – SeQuential Biofuels

Others in attendance

Chris Butler – Clean Energy
Todd Campbell – Clean Energy
Carrie Ann Capp - ODEQ
David Collier – ODEQ
Calli Daly – Koch Industries
Brian Doherty – Miller Nash/WSPA
Jackie Fahy – Chevron
Andy Ginsburg - ODEQ
Sue Langston – ODEQ
Brendan McCarthy – PGE
Dave Nordberg - ODEQ
Matt Tracy – Metro
Cory Ann Wind – ODEQ
Jenny Pont – TIAX
Michael Lawrence - JFA

Phone:

Vijay Satyal – Oregon Department of Energ
Jeff Rosenfeld - TIAX
Allison Koenker – Association of General Contractors
Margi Lifsey – ODOT
Brian Gregor – ODOT
Paul Bernstein – Charles River Associates

Note: Where responses to questions or comments came from persons other than DEQ staff, the source is noted in parentheses, for example, *Response (ODOE)*.

Chair Mark Reeve welcomed attendees and called the meeting to order.

Agenda Item A: Economic Analysis Assumptions and Data

Michael Lawrence (ML) of Jack Faucett Associates presented assumptions and data used for the economic analysis. Please refer to the presentation (posted on the LCFS website) for details.

Points raised during the discussion included:

- Clarification – domestic production can mean in-state or in-county depending on the circumstance
- VISION is used to estimate on-road sources
- Does this model map changes in wages and prices for goods that are going to be driven by this increase in construction? *Response (ML): Yes, it does.*
- Will you be writing scenarios where the plant is in Boise, Idaho rather than Oregon? *Response (ML): Yes, but it's just a matter of whether it's in Oregon or outside of Oregon.*
- Are you trying to get to a net figure of economic activity statewide, or do you have it be more complicated than that? For example, under some forecast scenarios, I could see consumers in urban areas losing out on a higher gas price, but construction workers in eastern Oregon doing quite well – and on a net basis, very little change. *Response (ML): Geography is built into it, so it can be run for individual states, it can be run for individual counties, you can run it for a metropolitan area. However, we're not going to take the REMI model down to the county level for this purpose.*
- Results will be for 70 sectors.
- Have you been able to test the validity of these models? Have you been able to look back at where you projected trends, and then said, "Yeah, we were pretty good with this"? *Response (ML): REMI model is that it's been around for a good while. It is tested quite regularly, and changed quite regularly, by people developing new techniques and ideas about how you can model these relationships.*
- How does the model deal with technological issues? I'm sure there are a lot of things to work out with existing industries and new industries that emerge. How does one allow for that? *Response (ML): It's not able to predict; what it does is take a look at the rate of technological change, and it builds the same rate of change into the future.*
- Does this approach capture any of the implications on consumer welfare? *Response (ML): No, it doesn't.*

Public Comment Period

No public comments

Agenda Item B: Department of Justice Update

Paul Logan (PL) of the Oregon Department of Justice updated the committee on recent legal proceedings in the California LCFS. Please refer to the transcript for details.

Points raised during the discussion included:

- California adopted its low carbon fuel standard in its final version earlier this year, just before Christmas.
- It was quickly challenged by two Federal court lawsuits in U.S. District Court in California. Those lawsuits were brought by some ethanol producers, some petroleum interests, and farmers and other array of litigants.

- California very quickly filed motions to dismiss both of those lawsuits, and the court denied those motions to dismiss, allowing the cases to proceed.
- Oregon participated in that lawsuit by filing an amicus brief. We argued some reasons why California, or why any state, should be allowed under the Clean Air Act to proceed with the low carbon fuel standards.
- From the industry perspective, it's a little different take. The commerce clause, basically, is a judicial creation saying that unless the Feds have authorized you to do something, you can't really do it. You can't set up a barrier. It can affect pricing, it can affect anything, if you're somehow treating in state vs. out of state differently. It's used in a lot of different areas.
- Do states, Oregon or any other, have to have their own statutory authority when Federal law is put in place? *Response (PL): Even if a Federal law were to say, "Oregon may do X, Y, and Z", an Oregon agency like DEQ would have to have an Oregon law authorizing it to do the very same thing. That's the bill HB-2186.*
- What's an amicus capacity? *Response (PL): a "friend of the court" brief, saying that we've got some interest here, we're not directly affected, but we want the court to know our perspective.*
- What might be the direct or indirect effect on Oregon? *Response (PL): will not be binding on any Oregon Federal judge. But any Oregon judge would certainly read that decision, so there's a concern there about creating precedent. That could be persuasive, but it's not binding. Judges might be persuaded, or might not; they're fairly independent creatures.*
- [I have a separate question on the effect of the repeal of AB32, and what that's going to do. *Response (PL): 2186 in Oregon, is completely separate from AB32. However, if California doesn't implement their low carbon fuel standard, it will have a big impact on us in terms of technological development of the programs. California has many independent statutory authorities besides AB32, and not all their programs could be implemented without AB32, but many could.*

Agenda Item C: Compliance Scenario Results - Feasibility and implementation for compliance scenarios

Jenny Pont (JP) of TIAX presented on the Compliance Scenario Results. Please refer to the presentation (posted on the LCFS website) for details.

Points raised during the discussion included:

- Couldn't find a way to track logging trucks for their exemption. It's not really an issue. Number one, it's small. Number two, they're going to be using the same fuel as everybody else, because we're not going to have special gas stations for log trucks.
- There's a lot of policy discussion at the Federal level about promoting, especially heavy-duty, LNG vehicles, and that's actually very relevant in Oregon, because a lot of talk about establishing an I-5 corridor from Canada to Mexico based on LNG. *Response (JP): LNG populations are pretty low, the carbon intensities for LNG are pretty similar to CNG, and since we're increasing in all the scenarios the CNG population by 20%, we've decided that's a combination of CNG and LNG.*
- ODEQ will continue to work with ODOT on Green Step model.

- Separate out heavy fixed construction because we're already accounting for it in the off-road vehicles, through EIA data. There are no special exemptions for construction equipment.
- Do we see a natural shift from gasoline to diesel going on between 2010 and 2022? *Response (JP): Gasoline has declined in 2010 – not a lot, but it has declined at the expense of hybrids. And then diesel, it grows a little bit, but not really much at all.*
- How do you make that determination that the VMT projection was too low, and then how do you make the adjustment? *Response (JP): It was lower that the ODOT/VMT predictions and so we had to apply a factor to the light duty VMT based on the last three years, 2007, 08, and 09, so the VMT matched.*
- Based on comments from the last meeting, we looked at the gas station throughputs in Oregon, and compared it to the U.S. average throughput. It's quite a bit higher – 524 gallons per day, vs. 489 for the U.S. average. This justifies that comparatively speaking, the gas stations in Oregon have the economic ability to absorb the E85 infrastructure costs.
- I thought I saw something about the EPA now looking at E12 instead of E15 as an interim measure; do you know anything about that? *Response (JP): Need to track down that information. The problem with the E15 is that the vehicles from the years 2001 and older can't handle it. So perhaps the 2020 frame would be appropriate, because those vehicles will be retired.*
- Does that matter economically? However you get there with the RFS2 compliance? *Response (JP): Economically, if we have investment in E85 infrastructure in our business as usual case, then it's no increase for the low carbon fuel standard. So if there's no investment in E85 in the business as usual, then the low carbon fuel standard is more expensive,*
- Because the question of blend wall isn't settled, we're not putting in the BAU. But we are having to look at it as part of the various compliance scenarios. And we need to do it in 2016 when we look at reviewing the program.
- I didn't quite understand Scenario 2. Was the ethanol blend level up to 15%? *Response (JP): It started out being 10 percent, but the carbon intensities were fairly high, so we had to consume a wad of ethanol to get the 10% reduction. And we couldn't get there with the E10, so you'll see that.*
- I think you have to take into account the fact that there is no state barrier to ethanol production, and people will necessarily build wherever they can get the best transportation, best labor costs, best operating costs, and it's a very real possibility that you could have a lot of ethanol production in Washington or Idaho or some other place, with minimal transportation costs if it's just across the border. I'd almost do three of them: One where nothing is produced in the state of Oregon, everything is produced in the state of Oregon, and a split.
- The folks who are doing runs of the model, REMI Northwest, will only crank the model as many times as we tell them to. There's a cost involved in going through that process. We can do certain things with them that don't require a full set-up of the model, where the model is going to be run one way, and then we only have to change one variable. They might not charge us a full ring of the register for that, but that has to be negotiated with them.
- Are the CAFÉ standards incorporated? *Response (JP): They are.*

- What is the incentive that we're assuming we're going to get people who have flex fuel vehicles to use it? *Response (JP): The onus is on the fuel providers and the low carbon fuel standard to sell the required volumes of fuel to meet fuel standards.*
- If we do the E15, the VMT shares would have to be? *Response (Jeff): It cuts it in half. It goes to 30% FFV miles, as opposed to 60 with an E15 blend wall in 2022.*
- In Europe, the way they're reducing the carbon intensity is by shifting to diesel. I thought the idea of this one pool scenario was that you would have more light duty diesel vehicles, and increase the actual shifting from gasoline to diesel, and then see how that affects the overall scenario. *Response (JP): How would we estimate how much that shift would be? How about a 10% market share in 2022? It's just 6% in autos, so overall fleetwise, that's not a huge jump going to 10%. What if we just do a 15% increase each year on sales, for light duty autos and light duty trucks?*
- For the first time in the UK, in Britain, light duty diesel surpassed sales of light duty gasoline.
- What is DEQ's position on the NOx bump? CARB is convinced that biodiesel increases NOx even at the 5% level. I wondered if you agreed with that. It even plays into ethanol since even if it is not an ozone issue, the NOx might be. *Response: We don't have a position on it, but it is an issue. We haven't done that analysis.*
- There's also different refining configurations in Europe that are meant to produce larger quantities of diesel vs. gasoline. *Response (attendee): Some refineries can change configuration and others can't and the degree of complexity of the change will be different.*
- If you're looking at California having their (LCFS) program in place, are we going to see a lot of this (lower CI fuels) going to California that then won't be available to Oregon?
- Can we resolve the ethanol blend level question? *Response (JP): Use it in the mixed ethanol with and without indirect land use change.*
- If you have any other comments to offer, could you do it Monday?