CERTIFIED TRANSCRIPT

NATIONAL FEDERAL MILK MARKETING ORDER

PRICING FORMULA HEARING

DOCKET NO.: 23-J-0067; AMS-DA-23-0031

Before the Honorable Jill Clifton, Judge

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Carmel, Indiana

October 3, 2023

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Reported by:

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(Please note: Appearances for all parties are subject to change daily, and may not be reported or listed on subsequent days' transcripts.)

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M A S T E R I N D E X

SESSIONS

---o0o---

M A S T E R I N D E X

WITNESSES IN CHRONOLOGICAL ORDER

---o0o---

M A S T E R I N D E X

INDEX OF EXHIBITS

IN CHRONOLOGICAL ORDER:

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TUESDAY, OCTOBER 3, 2023 - - MORNING SESSION

THE COURT: Please come to order.

Let's go on record.

We're back on record at 8:20 in the morning on October 3, 2023.

I apologize to all for my being late. I have no interesting story. I have been in awe of the indestructibility of all of you, and I thought I was like that, but -- there's nothing unusual. All right.

All right. Good. We have a witness in the stand.

Dr. Bozic, would you again state your name?

DR. BOZIC: Marin Bozic, M-A-R-I-N, B-O-Z-I-C.

THE COURT: Thank you.

MARIN BOZIC,

Having been previously sworn, was examined and testified as follows:

THE COURT: And who will next question the witness?

Mr. Miltner?

CROSS-EXAMINATION

BY MR. MILTNER:

Q. I'm Ryan Miltner. I represent Select Milk Producers.

Good morning, Dr. Bozic.

A. Good morning, Ryan.

Q. I wanted to start with your first statement, Exhibit 289, and I'm looking at page 4, it's the first paragraph under your numbered paragraphs there, two-thirds of the way down. And you -- you say that: "Class III Plus includes provisions that both producers and processors don't like," which I like that characterization, I suppose.

And when it comes to the producer side, you testified that dairy producers may prefer the higher-of without advanced prices as their top choice, as it increases the odds of realtime maximal income from Class I sales.

I wondered if, in your opinion, there were any other benefits to the higher-of from the producer perspective that you think are meritorious or worthy of keeping in consideration?

A. Well, I hope you can help me with the cross-examination to tease that out.

But one thing that I believe we have heard from multiple witnesses, the one that comes to mind is Mr. Schlangen from AMPI, who said that, well, it seems to him that higher-of worked well.

And I think that in light of the last four years which maybe perceived as an experiment by dairy producers, trying out again something new may make them sensitive to, like, what is it that we don't know now? We didn't know about the asymmetric risk before; are we missing something new now? The Rumsfeld's famous unknown unknown.

Whereas, the higher-of with advanced pricing could be perceived as the -- you know, the devil you know, like the old system tried and tested for 20 years, which is --

whose -- whose behavior is well understood, both in its limitations as well. So that's not to be easily discarded.

I -- I don't mean to portray the world as black and white, my proposal good, everything else bad. In fact, Edge did come in with Proposal 17, which is the higher-of with a twist, just removal of advanced pricing, to recognize the producers' desire for -- for the higher-of approach.

But if you can maybe help me with some -- some questions, I can try to answer further on what you may have in mind.

Q. Yeah. I really didn't have anything in mind. I really was more interested in -- in your thoughts as someone who has dealt with these questions for your clients and with Edge about what you may have seen from producers or heard from producers about why the higher-of is appealing.

And, you know, if I had to characterize what I have heard, there is that issue of the devil you know versus the devil you don't.

A. Right.

Q. But I -- further, from an economic perspective, I wondered if there was anything that -- that producers might see or maybe not fully understand about a benefit to --

A. Oh, we can -- we can quickly analyze some of the other arguments that were put forward. One of them is the market signals, that it produced -- that it, like, provides for more timely market signals. I don't find that argument very compelling because there are other instruments that have been put in force over the last four years, three and a half years that serve to provide more pointed market signals. Those are base/excess plans.

So, you know, you can have higher-of increase the price of Class I in a particular month, but really, you know, we don't need more fluid milk that month, you know, the sales have not grown higher of fluid milk, we don't need more milk in general that month. And most producers can't even increase because they are at 99 or 100% of their base. So the market signals' argument I don't think is -- is very compelling here.

You know, when you want to send a signal, you send it at the margin, and margin is the excess pricing. Like the -- if you cross this threshold of, you know, say 100 units of your milk -- just standardizing now -- then we are going to pay you $3 less per hundredweight. That's a strong incentive. You know, higher-of versus average-of provides very diffused market signal, if we can even call it signal, to producers in the short-term, month-to-month changes.

The other argument we've heard was regarding the -- what I can maybe rephrase as maybe intergenerational equity. That, you know, if we have some variation of average-of, returning funds to producers after a year or two, that those same producers wouldn't be in business anymore.

And the exception I take to that argument is that it stands at odds with the practices of its proponents and the proposals put forward. For example, Make Allowances, according to National Milk, would hit the markets January 1, 2025, whereas the increase in standard milk composition would be delayed to 2026.

Well, what about producers that are likely to exit the business in 2025? Higher Make Allowances would presumably, according to its proponents, lead to better maintained plants and further investments in processing capacity. If you are going to exit the business in the next one or two years, you don't need more processing capacity, you just want your milk checks to be as high as possible right now.

So as I see that internal contradictions in what proponents are advocating for on one topic versus another, so I find the argument challenging from that perspective.

The third is regarding the impact on depooling, and I think we have covered that exhaustively yesterday. But to the extent that there may be some small, you know, third level down in terms of priorities effect on depooling, we have to keep in mind that, you know, arguing from principles, we have -- the key question to ask is, does the pricing system for Class I milk ensure sufficient availability of reserve supply for Class I needs? Any of those proposals do.

When you have less than a third of -- of milk pooled that goes to Class I, to talk in the shipping percentages that are ever declining, you know, to try to make an argument that, you know, in some periods, in some months, like in some circumstances, we will not have sufficient supply for fluid, I just find it very thin.

So, you know, all things considered, you know, I can understand why producers prefer higher-of, at least many of them, but that doesn't mean that it is the best long-term system for our industry, especially if we don't remove advanced pricing.

Q. So you -- there were three things in your answer there I'd like to ask a little more about.

So in terms of base/excess plans, your understanding is that they are implemented at the cooperative level, correct?

A. Cooperative and private handlers as well.

Q. And is your understanding that those base/excess plans allow a producer to market up to a certain quantity of milk at a price, and if they exceed that amount, they receive a much lower price for their milk?

A. That is a short-term aspect of those programs. The long-term aspect is that you are not even -- you are effectively precluded from increasing the size of your operation, even when such capital expenditure may be necessary in order to bring the next generation into the family business. If you don't have a letter from your milk buyer that they will be willing to buy milk for that additional 400 or 800 or 1,000 cows, lenders will be much

more hesitant to extend the credit needed to expand the barn and the parlor, etcetera. So that's a long-term effect of this, that we may -- we may in the short-term have stabilized milk prices somewhat, but in the long-term it may lead to more severe consolidation of the industry.
Q. So I want to talk about this in the context of a cooperative. If you have a cooperative with a base/excess plan that caps your base milk, you would assume that that was done so because that cooperative only has a market for a certain amount of milk produced, correct?
A. Yes.
Q. And so at a small economic scale, that's a matter of that cooperative balancing its supplies with its demands, correct?
A. Yeah. And I -- yes. And I do support that approach. I didn't -- if I came across as critical, I don't mean that as blanket criticism.
Q. No, it's not a criticism. I'm trying to lead up to my next question --
A. Sure.
Q. -- which is, while that may solve for the price signals that that cooperative needs, that doesn't necessarily transmit a price signal to producers that aligns with the national market, does it?
A. In the sense that there may be some other competitor who does not have base/excess plans.
Q. Well, in the sense that -- yes, that's part of it -- but also in the sense that perhaps the market is

telling producers to put milk into cheese manufacturing because there's an excess demand for that product, but a cooperative may not have a contract to supply a cheese manufacturer and may not need more milk for that --
A. Sure.
Q. -- for that outlet?
A. Yeah.
Q. And so in that sense, does a base/excess plan provide a market signal to producers about the general market?
A. Well, the base/excess plans are not the only way in which producers receive signals, right? They also receive signals through the announced prices from AMS. They also receive signals through the feed costs that they have to pay, labor costs that they face, fuel costs that they face. Those are all signals. Base/excess plan is just part of that information -- informational process that should guide their decision-making.
Q. So if you could set aside the base/excess plan for a moment, and acknowledging that USDA has, in the past, indicated that the higher-of does send a price signal to the market in its opinion, is that price signal a sufficient impetus to keep the higher-of over the other alternatives you have discussed?
A. So we have to go back and ask what is the purpose of the signal? What is the signal trying to, well, signal? And it's trying to signal that we may need, you know, more milk for Class I. You know, so then the

question can be rephrased as, does a particular pricing regime have -- induce a danger that there will be insufficient supply of reserve milk for Class I? And from that perspective, I don't think that higher-of provides that must-have signal that would -- such that it's the only way to achieve the objective.

I don't think that's a strong enough reason to go back to higher-of.

Q. Thank you.

As you were finishing your statement before about some reasons why producers might -- might still like the higher-of, you talked about depooling, and you said that that can be addressed, especially if we address advanced pricing.

In your opinion, if we do not address the issue of advanced pricing, can USDA effectively manage the problems caused by depooling?

A. Well, with grim -- I'm going to have to make an assumption regarding what you mean by problems caused by depooling. But, you know, to the extent that we have some shared understanding of that, the sad truth is that higher-of can barely help versus average-of. But it's also sad truth that removing advanced pricing would only do so much. It would help. It would not solve the problem fully.

The core problem, Mr. Miltner, is that we have a system designed for a world in which 60% or more of milk is Class I, and we live in a world in which less than

30% of pooled milk is Class I. And in the world in which we live, we are ever so -- ever more frequently asking the cheese makers to subsidize powder makers, or the other way around. And whenever they have that request come to them, they say, "I'm not going to be pooled that month."

Unless we solve for the cross-class subsidization that happens because of the uniform price provisions, we will not be able to solve depooling in any market in which the fluid milk utilization percentage is -- is a minority -- is a distinct minority. So think about Central, Mideast, Pacific Northwest, California, Southwest, Upper Midwest, all of these orders are problematic in terms of depooling.

Northeast still has sufficiently high Class I utilization that they can provide strong disincentives for depooling, and -- and I -- I envy them in some sense coming from Upper Midwest. And of course, Southeast, and Florida, and Arizona are predominantly Class I order, so they don't have those problems.

Q. You mentioned those high Class I utilization orders. For a -- an order that is either milk deficit or extremely high in Class I utilization, does your analysis about which mover is best differ when you are looking at an order with 70% Class I versus 20% Class I?

A. I think that the -- there are other topics in this hearing that are more appropriate for addressing the potential milk deficiencies in those orders. That would be Topic 1 on standard milk composition, and where Edge agrees with National Milk on the need to increase the standard components, and we just added butterfat for risk management purposes.

As well as Topic 5, Class I surface, that needs to provide for sufficient gradient between Class I differentials to induce the milk to move from surplus to deficit areas.

The Class I mover is not the top of the list there. I -- I don't want to say with 100% confidence that it bears absolutely no impact, but if there is any impact, it would be a third order impact. And we have yet to see quantitative evidence that would be convincing that the higher-of would perform any better than average-of in that respect -- average-of or Class III Plus.

Q. On page 6 of your statement at the very bottom --

A. Is that Exhibit 29?

Q. Yes, the same exhibit. Sorry.

A. Uh-huh.

Q. You stated: "In our opinion, CME Group hesitated to create a Class I futures contract in the past, as there would be no clear arbitrage relationship between Class I and Class III and IV futures contracts."

When you are saying "in our opinion," is that Edge's opinion or Dr. Bozic's opinion?

A. Sometimes I address myself in plural. I should have said "in my opinion." I apologize.

Q. I just wanted to make --

A. Sometimes I have multiple opinions, so --

Q. You are a good academic.
Now, when you say that CME Group hesitated to create a Class I futures contract, was that a hesitation based on pre-2019 or based on the current mover?
A. So I do want to stress, Mr. Miltner, I'm not privy to any internal discussions that may or may have not taken place within the CME Group. But what I do observe is that we are in 2023 and there is no Class I contract. So from that, I can only deduce that neither higher-of nor the average-of with advanced pricing met the standards that CME would consider as sufficient for creating a new contract.
Q. And there's been questions asked or statements made about the CME perhaps introducing a contract on Class I throughout the hearing.
Are you aware of any plans by the CME to develop or introduce such a contract?
A. No, I'm not at this point, I'm not aware. And in general, CME tends to be -- tends to keep their cards close to their chest until they have fully made the decision to pursue a particular course of action.
Q. In any of your research or projects, have you ever dug into what it would take to create that type of instrument?
A. I don't recall my full body of research at this point in time, I apologize. But in our recent -- in my recent thinking, as I was preparing for this hearing, it was my -- I was -- I arrived at a conclusion that removal

of advanced pricing would be the single biggest change needed to substantially increase the probability that CME would consider the introduction of such a contract.
Q. In your opinion, if there -- if advanced pricing were eliminated but the mover was the higher-of, could CME develop an effective Class I contract?
A. How would you define effective?
Q. Whatever a good economist would find to be effective.
A. It is possible. It is possible. But we should understand that there are risks to that. I mean, take a look at the block cheese contract. We had it for a few years now. It did not really rise to stardom. It's not heavily used. The volume is thin.
A lot of -- and it's not the only one. Like, in the pork cutout was another recent introduction among the agriculture futures. It was greeted with much enthusiasm. Does not really get used a lot. A lot of new introductions, a lot of new contracts.
And this is not just true of CME. It's not like they have bad product development team. This is true of all exchanges in all times throughout history. Most new futures contracts fail, and what we observe today are the survivors, like those contracts that have withstood the test of time and -- and have -- and if you just look at the changes in the dairy complex since the year 2000, at one point in time we had deliverable -- I think that we had deliverable nonfat dry milk powder and maybe butter as

well. I could be wrong about that. And then over time all of those contracts changed to cash-settled contracts.
So, yes, they may introduce it. Nobody can guarantee that the product would indeed succeed. And the history would warn us that there are -- that the odds would be against it, not in favor of it, that we should start with the premise that -- we should start with the assumption that it will fail, not that it will succeed.
Q. When such products fail, do they fail because of lack of demand or because of they failed to achieve their purpose?
A. Lack of demand, which, again, is related to lack of necessity for achieving the purpose.
Now, what would work really well in favor of such a contract is that if we do remove advanced pricing and go back to higher-of, the Class I handlers would really need that contract. The profit margins are not large in the HTST sector in particular, and they would need to engage in strategies to know with certainty their input costs before the start of the month in which they sell the milk. They would no longer be able to do that solely based on the AMS report, so they would have to combine whatever AMS does, such as the indicative Class I price report I introduced yesterday, with a hedging strategy.
Q. You stated that the margins are thin for HTST processors.
What do you consider thin?
A. I would prefer not to quantify. I would prefer

not to offer any numbers because I am not sufficiently familiar with the sector to, you know, opine as an expert on that topic.

Q. Now, you testified that an OTC swap to cover that risk would be about $0.30 per hundredweight.

How can you state that that is expensive if you can't quantify the margin?

A. I can quantify the margin to the extent that that would anticipate that $0.30 per hundredweight would be a large share of that margin. I would prefer not to insert into evidence one number that can be so easily abused later if -- if -- because people focus on the point estimate, not the variance around that -- around the estimate. So I'm just trying not to create noise by being more specific than is appropriate.

Q. So assuming that it is $0.30 hundredweight to create a swap --

A. Uh-huh.

Q. -- that's about $0.026 a gallon?

A. Yes.

Q. And I think the retail price averages two to three times the raw milk cost.

Do you still think that that price per gallon to lock in a fixed price and hedge your risk is still -- is still high?

A. I do, and here is why. You can have a very expensive final product, but if you don't have a differentiation strategy, if you don't have a way to separate yourself from competition, if we are only talking about a commodity product, then the profit margins will be thin.

Corn can be $7 per bushel, but if you're an elevator in an area in which local farmers have four other elevators that they can ship to, your profit margin on handling that grain can be just pennies per bushel.

Q. If you were to look at getting Dairy Revenue Protection in the state of Minnesota on class pricing covering 95% coverage for about three quarters out, what would be a reasonable premium for that coverage?

A. Can I use my laptop?

Q. I'm using mine. If you would like to, that's fine?

THE WITNESS: Would it be okay?

THE COURT: Certainly.

THE WITNESS: I don't need to guess then. I will just need a minute.

I need to go through a very extensive authentication process to access my system, so I apologize that it is taking a bit.

Okay. So you are looking at yesterday's quotes for the state of Minnesota, three quarters out, that would be -- at this point in time, that would be July through September 2024.

Did you want Class III or Class IV offers?

Let's go with Class III. That would be what Minnesotans would typically use.

BY MR. MILTNER:
Q. Okay.
A. Protection factor 10, coverage level 95%, and on the class side, after subsidies, we are looking at $0.36, $0.3655 per hundredweight.
Q. Good. Because I have $0.37 here, so that --
Now, what's Class IV?
A. Class IV is --
THE COURT: Hold on, Mr. Miltner.
MR. MILTNER: Same parameters.
THE COURT: How long did it take you to calculate that?
MR. MILTNER: Less than Dr. Bozic, but it's just a -- it's not a form. I didn't calculate anything, so -- I relied on software to do the work.
THE WITNESS: So the Class IV, same parameters yesterday for Minnesota, July/September 2024, is $0.52, $0.53.
BY MR. MILTNER:
Q. Okay. That's what I have.
A. That's what you have as well?
Q. Yes.
A. I'm glad my quarter is working.
THE COURT: Say again, Mr. Miltner?
MR. MILTNER: Yes, I found the same numbers.
BY MR. MILTNER:
Q. Now, when you described a Class I handler having to pay $0.30 to hedge their costs, you described that as

paying through the nose.
A. Yes.
Q. Producers, to cover the same type of risk, are going to pay more than a Class I handler?
A. We are comparing apples to pineapples, not even oranges.
Q. Please explain.
A. We are -- in the context of a swap, we are looking at a contract that removes all of the upside, as well as all of the downside, completely removes risk.
Dairy Revenue Protection is an option. It sets the floor but keeps the upside open. So this cost is not comparable with that. This cost is a cost of optionality, the cost of, like, you know, removing the downside pressure while keeping the upside open. If we were looking at a dairy producer's coverage that is an equivalent to a swap. That would be -- the closest would be a forward contract through their cooperative. And cooperatives, to my understanding, charge most $0.10 for that, $0.10 per hundredweight.
Q. Is that universally available?
A. Through major co-ops it is. It wouldn't be quarterly, it would be monthly typically.
Q. And they pay $0.10 per month?
A. $0.10 per hundredweight.
Q. Per hundredweight.
But they buy it on a monthly contract, not a quarterly contract?

A. That's my understanding. And I understand that Mr. Gallagher is somewhere in Carmel, so he may be available for further cross-examination later this week. And, you know, he runs these programs for Dairy Farmers of America.

Q. If they are paying $0.10, would you have to triple that premium to then correlate with the coverage that's available through DRP? Because you are covering a quarter's worth of milk under DRP.

A. No, no, you don't -- you don't need to -- in fact, you would probably -- this is going to sound counterintuitive -- you would probably reduce it a little bit.

The -- whenever -- this is one of the reasons why some producers actually do not like Dairy Revenue Protection. Dairy Revenue Protection is designed to cover against major crisis. If you have a price fall in one month and then recover in the next month, you can cover that through your liquid assets. You know, you don't need an insurance policy for that. There is no reason why taxpayers would need to subsidize that.

The -- because it's a $0.10 per hundredweight, if you were to create a quarterly price, and the quarterly price would only -- would manage the average of three months as opposed to a single month, you may actually have some savings there. Not actually sure in the case of contract that locks in a price -- in case of a forward contract, I'm not sure that's the case, but in case of an

option, that would definitely be the case.
The longer the period over which you are averaging, the less attractive the option is.
Q. And is the option you just described available through a cooperative?
A. So there are some cooperatives that have licensed livestock insurance agents that offer Dairy Revenue Protection, if that's an answer to your question.
They also -- I'm not sure whether they are also licensed introducing brokers, so I'm not sure whether they can offer regular puts and -- put and calls options that are normally traded on the Chicago Mercantile Exchange.
Q. Thank you.
On page 4 of your second statement --
A. That's 290?
Q. Yes.
A. Exhibit 290? Okay.
Q. And you have a table -- or a -- yeah, I guess it's a table, comparing various proposals. And you -- you identify that Proposal 16 addresses the three risks you have listed there.
Would it be correct that even though Proposals 14 and 15 do not, in and of themselves, eliminate the advanced prices risk, if they were adopted in combination with the elimination of advanced prices, that they would eliminate all the same risks as Proposal 16?
A. That is true. That is correct.
Q. In that instance, what makes Proposal 16 superior

to the others?
A. By "others," I assume you are referring to 14 and 15?
Q. Yes.
A. The -- one of the principal reasons why we wanted to offer an alternative to higher-of -- well, several reasons. One of them is so that the good people at AMS would have a larger choice to choose from as they are preparing the recommended decision.
Second, for the reasons that I have listed yesterday in my Exhibit 820 -- 289, I apologize. If you look at the page 4, the -- under the Class III Plus proposal, if there is a demand shock, Class III would -- I'm summarizing --
Q. Sure.
A. -- Class III would likely be higher than Class IV; therefore, Class III Plus proposal would mimic higher-of more faithfully than the average-of.
If there is an inversion, Class IV higher than Class III, it's likely that you are in a profitable year, so pricing it off of Class III would have the benefits to producers of moving some of that revenue to -- to a low income year, which, you know, means that they reduce their tax liability in the high profitable year and -- and the -- and it's easier to hedge.
If you look at the -- from a fluid milk processors' perspective, Class IV futures contracts are much less liquid than Class III contracts.

Now, if -- if processors were to come back and say, we don't really care about the liquidity of Class III being better than Class IV, we still want the average, then, you know, there's no reason for me to further push the point number three.

But from a producer's perspective, I still believe that, you know, that we are -- that producers would be better off with a Class III Plus than average-of.

Q. Okay. On page 6 of the same testimony --
A. 289 again?
Q. No, I'm sorry, 290.
A. Okay.
Q. Yep.

This is where you begin summarizing with -- with charts, the various impacts on the PPD.
A. Uh-huh.
Q. And if you said this during your testimony, I missed it, and I apologize.

What does the baseline PPD column represent, and how is that derived?
A. Thank you for your question. That is a model-based result where we -- by "we" I mean Professor Wolf and myself -- where we assumed utilization percentages by class as they were in 2010. We assumed the component tests, so protein tests, other solids tests, butterfat tests, as they were in -- I think it was either 2010 or the average 2009, 2010 -- and we assumed that the -- that the prices, the announced prices are at their

average, and I believe it was 2010 through 2019 average.

So that's like the closest we can get to a normal situation, as it -- as it existed ten years ago in terms of how much Class I sales we had in the order and what producers were -- you know, the composition of milk.

The reason to choose that as a baseline, Mr. Miltner, is to be able to quantify the impact of rising component tests and reduction in fluid sales on PPD before we even start talking about any month-to-month changes.

Q. Thank you. I appreciate that explanation.

Would it be fair to summarize your testimony on the impacts of the average-of on PPDs and, therefore, depooling, that while the average-of might not have caused depooling, it generally increased the magnitude of negative PPDs and, therefore, the economic impact of depooling when it occurred?

A. I'm not sure about the amplification of the depooling effect, but I think it is -- and when I say I'm not sure, I'm not trying to be nice and say I disagree. I just don't know. I would need to examine that.

But I think it's fair to say that the average-of in -- in months when -- because negative PPDs tended to happen in months when the spread between III and IV was large -- I'm talking now about 2020 -- those were the same months where the average-of would have resulted in a lower price than higher-of and, therefore, average-of did lower the PPD further. So the magnitude, the absolute value was higher and the sign tended to be negative.

Q. So it did increase the magnitude of the negative PPD.

A. Yes. Yes. It did increase the magnitude of negative PPDs. And we can count it in the months here. So if we look at just quickly through months.

In March, PPD's positive contribution -- in March, PPD's positive; contribution of the reform is positive.

In April, PPD is positive; contribution is still positive.

In May, the contribution is negative $0.06; PPD is still positive.

And then in June the contribution is still virtually zero. It's $0.12 positive.

Then in July we start having $0.84 negative, and the PPD is negative.

In August we have $1.57 per hundredweight negative of Class I reform, and the PPD is negative.

In September we have negative 1.52 for Class I reform, and the PPD remains negative.

In October, $0.36 negative for Class I reform; PPD is also negative.

November, negative 1.14 for Class I reform; PPD is also negative.

And December, Class I negative 1.72; actual PPD is positive in that respect.

So, you know, most of the months when PPD was negative, the Class I reform made it more negative.

Q. I'm curious if you did a similar analysis for any of the months in 2021 or 2022?
A. I did not at this time. I -- that would have been something that before I knew better about the rules of this hearing -- and thank you, Mrs. Hancock, on that -- that we are not supposed to introduce further evidence in post-hearing brief. But that would be something that I would need more time to calculate.
Q. I think this is my last question then.
Can -- can any combination of the proposals related to advanced pricing or the Class I mover in this hearing eliminate the risk of depooling caused by a large Class III and IV spread?
A. No.
MR. MILTNER: That's all. Thank you.
THE WITNESS: Thank you, Mr. Miltner.

CROSS-EXAMINATION

BY DR. CRYAN:
Q. Good morning.
A. Good morning.
Q. I'm Roger Cryan from the American Farm Bureau Federation. Nice to see you.
So your paper, the paper you did with Dr. Wolf, I think did a very nice job showing a striking variation in the PPDs, and then the very considerable variation in its elements.
Would -- would you describe in plain terms the impact that advanced pricing has on the differential, the

two different differentials, the differential between the uniform price and the Class III price, and the differential between the uniform price and the Class IV price?

A. In plain words, huh?

Q. Please.

A. The differential -- the difference between the uniform price and the Class III price is mathematically equal to producer price differential.

Advanced prices, over the long-term, if there is no upward or downward trend in announced prices, the advanced prices, then, would not tend to either increase or decrease that long-term, the PPDs. However, they would add to the PPD variability, or changes, month to month. Sometimes they will make producer price differential higher than it would be than in the -- in the case if the advanced prices were not used; sometimes it will make producer price differential more negative.

The impact on producers, however, is not symmetric and depends on the utilization rates in a particular order. If, for example, advanced prices make producer price differential more positive in the order, like Upper Midwest has mostly Class III and barely any Class IV, then the increase in the PPD will be small.

However, when advanced prices contribute to negative PPD, the moment you switch from positive to negative PPD, at least 20% of Class III milk will depool, and potentially much more than that depending on the

expected spread between uniform and Class III futures.
Q. I think that's the amplification that Mr. Miltner was getting at.
A. Okay.
Q. Yeah.
A. I -- I can't vouch for that, but I -- I accept your --
Q. That's my interpretation.
A. That's your interpretation, huh?
Yeah. So that -- that -- that would be the impact of advanced pricing on the spread between uniform price and the Class III price.
The impact on -- on the difference between uniform -- so first let's take a step back.
The reason why one would be interested in the difference between the uniform price and the Class IV price is to examine incentives of Class IV handlers to remain in the pool or to depool. And the effect is, we won't call it PPD, but otherwise, the mechanism is the same.
In some months, that spread can be amplified higher; in some months it can be amplified lower. And if you have an order in which Class IV is a substantial part of utilization mix and advanced prices makes the uniform price fall below the Class IV price, that will send the signals to Class IV handlers to depool. So it's trouble either way.
Q. So the issue with Class IV is analogous to the

issue with Class III, it just gets less attention because it doesn't show up in the published PPD every month, right?
A. That's right. Yes. Yes.
Q. So would you -- would you agree that those are the relationships that -- that generally lead to depooling? That is to say, you are describing relationships, price relationships, specific price relationships that incentivize or don't incentivize handlers to depool?
A. Yes. So the existence of advanced pricing amplifi- -- or introduces incentives to depool that would otherwise not exist, occasionally.
Q. Your -- in your analysis with Dr. Wolf you talked about some of those impacts that you separated out in your econometric estimation. They can be related, right? There are -- sometimes it's not that easy to tease out which -- when things are correlated, it's hard to tease it out. The statistical methods basically make a sort of decision for you, but that doesn't always mean that that's exactly the allocation of impact; is that correct?
A. Yeah, that is fair to say. And in some sense, the analysis suffers from the composition effect. If we analyze some other effects first, and then the spread, maybe the chart would show that they have a bigger effect than the spread.
But, you know, in -- we followed this composition -- and just to reiterate, we -- we decided on this composition before -- years before we knew that that

paper would be considered in a Federal Order hearing like this, so it's a strategic tactical move, if you will. But we thought it would be most appropriate to start with the trends, because those are, in some sense, hardest to address, especially the decline in Class I.

And then the Class III order -- the Class III versus IV spread we chose as the second effect, because even if you abolish the Class I reform, even if you abolish advanced prices, you can't abolish Class III/IV spread, so you are still stuck with that.

And then to the extent advanced prices preceded temporally, preceded the introduction of the Class I reform, it made sense to maybe introduce that before we add on that final change between the higher-of -- from higher-of to average-of.

Q. Okay. And in the econometric estimation, how you order the variables has an impact on which one has a bigger impact?

A. Dr. Cryan, that's actually -- only parts of this are econometric, the rest is just accounting exercise, if you will.

Q. I understand the monthly analyses were an accounting exercise -- not an exercise but a --

A. Yes. So the part that is an econometric analysis here is the estimation of utilization trends, so utilization percentages by class, and the estimation of the trends in component tests.

Q. Okay. Okay. Thank you.

Regarding the success or failure of futures and options markets, a Class I futures and options complex on the CME would presumably be cash settled.
Would you agree with that?
A. Most definitely.
Q. Would you also say that cash-settled contracts have a lower bar for success than the delivery-settled contracts?
A. I think that's fair to say. There is one -- one source of basis risk is removed. As long as the settlement price corresponds to the price at which people transact, which would be most definitely the case in the case of Class I futures contract.
Q. And you brought up the block contract.
Would you say that cheddar -- the cheddar block contract?
A. Yes.
Q. Would you say that in the case of a complex of contracts, like the CME's complex of cash-settled contracts would all relate to prices announced by USDA, that there is a value to maintaining certain things like the whey contract and the block contract that complete the complex for the benefit of customers?
A. No. That's absolutely the case. So before 2007 when the dry whey -- excuse me -- before 2010 when the cheese contract was introduced, we did not have the full non-arbitrage relationship between the components or the products and the milk on the other side.

Once the cheese contract was introduced, then an arbitrager could provide liquidity to a cheese buyer on one side, take a position in whey and butter contracts as well, and then provide a liquidity to a dairy producer on the other side who wants to sell a Class III futures contract. So that was a very important link between the markets.

Q. All right.

A. Which we may lose if we are not careful about Make Allowances and how we reform them.

Starting to sound as a broken record.

Q. So success -- there are other aspects -- there are other things that can define a contract as successful than the -- than the isolated volume of the contract, like, in the case of the whey contract, just like you described?

A. So -- so I think what you are trying to say, and correct me if I'm wrong, is that, you know, the Class I futures may be more likely to succeed because it is tied back -- it is in some sense a redundant contract, it can be replicated by Class III and Class IV contracts, at least on a, you know, short time period.

Is that where you are going with it?

Q. Or because as it relates -- because it would -- in the case, for example, if we went to the higher-of, that it would fill a need in the larger dairy complex.

A. Oh, yes. That would be hedging demand for it. The -- the challenge is that there would be no obvious hedging demand for the other side of that. You know, the -- that would, to a large extent, have to be met by the arbitragers who would take a short position on Class I futures and then a long position in either Class III or Class IV futures, whichever one was the higher for that day.

DR. CRYAN: That's it. Thank you very much.

THE WITNESS: Thank you, Dr. Cryan.

CROSS-EXAMINATION

BY MR. ROSENBAUM:

Q. Steve Rosenbaum for the International Dairy Foods Association.

Dr. Bozic, you, on page 13 of -- I guess this became part of the entire Hearing Exhibit 290, the various tables; is that right? So it's --

A. Yes.

Q. -- it's labeled as Edge-15B, page 13.

That's where you start to do your month-to-month PPD decomposition, correct?

A. That's correct.

Q. Which you talked about yesterday and then again today.

I just want to clarify perhaps a little bit for the record what you mean when you are discussing what you labeled as Class I reform, correct? Okay. And I'm going to ask you a question.

A. Sure.

Q. Which is, am I correct that in this context, Class I reform means the system under which, rather than

pricing on higher-of, the pricing is the average-of Advanced Class III and Class IV plus $0.74? Is that what you mean by that?
A. Just -- just the opposite. The change from higher-of as it existed prior to 2019 to the average-of plus $0.74.
Q. And -- and I think you implicitly answered this question, but I'll just make it explicit.
This is not attempting to capture the -- for example, the IDFA proposal, which would replace the average-of plus $0.74 with a system that instead was the average-of plus either $0.74 or a higher amount to the extent that farmers during the two-year lookback period would have received more under the higher-of versus the average-of plus $0.74, correct?
A. This chart was produced using an Excel file that was last modified on March 31st, 2021, so that would be almost two years -- or about two years -- more than two years before IDFA formulated their proposal for Class I mover.
Q. Certainly not suggesting this is a criticism. I'm only trying to --
A. Yeah. No, no --
Q. -- identify what it is you are saying --
A. Just trying to answer precisely.
Q. And the fact that the IDFA proposal has a $0.74 floor which it cannot go below, but it has an add-back that has no cap, is it fair to say that inherently the

impact of the IDFA proposal would be less on PPD decomposition than is shown in your -- in your tables, correct?

A. I think it would be more precise to say that the numbers provided here provide a lower pound. In other words, the effect of such reform as compared to the higher-of, could only be more positive, I guess. So if, for example, March says $0.10, it would be either $0.10 or better impact on PPD. And so even in months where the impact is negative, it would be, at most, as -- as negative, but it could be perhaps less negative.

MR. ROSENBAUM: Thank you very much.

THE WITNESS: You're welcome.

THE COURT: Does anyone else have questions before I turn to Agricultural Marketing Service for their questions?

No.

MS. TAYLOR: It may be a good idea to have a break.

THE COURT: I think a break is excellent. Would you like five minutes or ten?

MS. TAYLOR: Ten-minute morning break.

THE COURT: Ten-minute morning break. All right.

Let's come back at 9:30. We go off record at 9:18.

(Whereupon, a break was taken.)

THE COURT: Let's go back on record.

We're back on record. It's 9:30.

CROSS-EXAMINATION

BY MS. TAYLOR:

Q. Good morning.

A. Good morning.

Q. I'd like to start with your Exhibit 289, your statement in support of 16 and 17. And I first want to turn to page 4. And on that list of -- under the header "Proposal Number 16," your list of three reasons that you are advocating for Proposal 16. I think what I heard -- you clarified that a little bit with maybe Dr. Ryan -- Dr. Cryan's questions.

But number one, is what you are saying, if there's -- I just want to make sure we're clear -- if there's a demand shock, it will probably happen and Class III will be higher?

A. That's right.

Q. And so at least under your proposal, you think it would be better than if under any other proposals in that situation?

A. To the extent that we are looking for a solution that would mimic higher-of in a year like 2020, the Class III Plus is superior to average-of solutions.

Q. Okay. And then in the second bullet, I think what you clarified and what you are saying there, if there is an inversion, that typically indicates that it is actually a profitable year. Class IV is higher, Class III is probably high, too. So you would be moving some of that revenue from that high profitable year to a lower year, where a later year that was probably not going to be as profitable?

A. That is correct.

Q. And when you mentioned revenue shortfall in that second line of that bullet. We had a question on what you -- if you could clarify what you are talking about there.

A. In the context of this topic, revenue shortfall is a jargon often used to describe or to capture the -- denote the difference between the higher-of system as it existed before 2019, and the alternatives being contemplated, either average-of, or in this case -- in this case, the Class III Plus.

Q. Okay. And that's kind of playing out to the moving revenue layer on to a later year.

A. That is correct, yes.

Q. Okay. On page 5, that first paragraph when you are talking about advanced pricing, and my takeaway from that is, you all support getting rid of advanced pricing as a way to force -- and force might be the wrong word -- but encourage fluid plants to actually make the leap and do risk management.

Would that be correct?

A. That is one of the benefits that we see. The other benefit is that their profit margins would not be as easy to -- well, their cost of production would not be as easy to calculate by -- or estimate by the buyers of their products, and the opacity in the cost of production would give them the opportunity to increase their profit margins. So we hope that it would ultimately lead to invigoration of that sector, more innovation, more competition.

Q. And if I could make sure I'm clear on that.

When you say: "Their cost of production wouldn't be easily calculated to their buyers," if I'm getting that right, so what you are indicating is, then the buyer can't kind of try to eek out every penny from them as possible?

A. Exactly. Yes.

Q. Okay. And then on the second paragraph, I wonder if you could go into more detail kind of what you are talking about there. You have this, "We would publish an indicative Class I skim milk price."

So if you could just kind of explain that paragraph, what you think AMS would need to publish, and what it would be used for.

A. Sure. Would you like an example as well?

Q. Examples are always beneficial, yes.

A. Would anyone object to it?

The way I would do that is by pulling out my laptop, pulling the prices for -- pulling the October futures contract prices as they existed in mid-September, and showing exactly how the number would be calculated.

I'm happy to submit that file for the record later.

THE COURT: Okay. Let me start by when I asked you yesterday to close your laptop, that was a -- a peculiar situation.

THE WITNESS: Sure.

THE COURT: And I wanted you just to rely on your -- your own knowledge without looking at somebody else's statement. That's unusual. Normally I want you to use that laptop.

THE WITNESS: Sure.

THE COURT: And I don't think you have to identify -- I don't think you have to make an exhibit of everything that you use to inform us in your testimony. All you need to do is tell us during your testimony where you found it and how others can look at it. You do not have to reproduce it.

THE WITNESS: Okay.

BY MS. TAYLOR:

Q. Well, let me ask a few questions maybe, and lead us to where I hope we -- to get some clarity.

You talk about, "If there's a need for some form of coordination mechanism, that can be solved with this publish of this price."

So what do you mean there by "coordination mechanism"?

A. So as we will hear, I think, later today from Mr. Covington, that their exhibit is already published, you know, so I cannot speak on his behalf. But my understanding of what we are to expected to hear is that a rebuttal argument will center on, well, we have to know our costs before the month starts because we have to provide a price to our buyers before the month starts. And if AMS is not publishing any prices, then what prices do we give them?

And if there is an indicative Class I milk price, as described in this paragraph, that becomes the natural starting point for such discussions between Class I handlers and their buyers. Here is an indicative Class I milk price; would you like to pay at that price? No, I would prefer to pay at something else.

But that's a starting point to any discussion. It's not a binding price in any sense, but it's a focal point from which the discussions would further emanate.

Q. And so I think as I'm reading this, your indicative Class I skim milk price would be kind of like our advanced price now?

A. "Like" is a dangerous word there, because advanced price has enforcement mechanisms behind it that is -- becomes your handler obligation to the pool. Indicative Class I price would be more similar to Dairy Market News. Here is what we observe in the market. You know, here is what the Upper Midwest Class III basis is, or what the spot market price is, etcetera. It's a news rather than an enforced -- an enforced price.

Q. Sure.

And so how would one -- how would the Agency collect the information you would like published for that price?

A. The futures prices for our -- from CME are

publicly available at no cost, and they are used by your colleagues in risk management agency.
Q. You are talking about III/IV futures?
A. Yes.
Q. Okay.
A. In the context of Class III Plus, you would only need Class III futures. In the context of -- if you were to choose to implement average-of without advanced pricing, then you would also -- and if you were to choose to publish such report, you would also need Class IV futures prices.
Q. So if I'm a fluid HTST plant --
A. Uh-huh.
Q. -- and -- I guess I'm trying to figure out how this would work.
A. Sure.
Q. My buyer comes to me and says, this is the Class III futures price, or this is the indicative skim milk price. That would be, what, the Class III futures price for --
A. So you would publish the indicative base Class I skim milk price, just like you do today.
Q. So we would publish that.
Let's -- let's use an example. We're in October. We would have published that price at the end of September sometime --
A. Yes, that's correct.
Q. -- or after -- and we would use what -- we would

use what futures prices?
A. You would use the October contract month. In the context of Class III Plus, you would use only Class III milk futures.
Q. For October 2023.
A. For October 2023.
As they were settled on each of the calendar days that fall within the current two-week window that is used for measuring advanced prices.
Q. Okay.
A. That's a 14-day window.
You may be curious to know that a very similar mechanism is used by risk management agency to set the expected price for, for example, corn. They measure daily settlements of futures prices for corn for December contract. They measure it through the month of February. And then that becomes the price used for crop insurance contracts in corn that must be bound by March 15th. So this may be new to AMS, but it is not precedential for USDA overall.
Q. Okay. And so Class III futures are announced at 3.5; is that correct?
A. That's correct.
Q. So Class I milk is priced on skim fat?
A. That's correct.
Q. So how would one go about --
A. Yes. So every day, at the end of the day, you would observe the butter futures. From the butter

futures, you would derive an implied butterfat price. Once you have the Class III price and the butterfat price, you could back out what the skim, Class III skim price would be. And then you would average that over two weeks.

The full detail is included -- the full detail of a similar exercise in the context of evaluating hedge effectiveness is included in the Appendix to the Exhibit 290. If you -- let's see where that is. Oh, it didn't get printed. Oh, no, it did get printed. Okay.

If you look at the page 13 of the Exhibit 290 with the -- in the interest of time, we didn't go through this yesterday, but it is part of the record as I understand it.

So if you look at the step 3 on page 14, in the context of evaluating hedge effectiveness, we needed to calculate the futures implied expected base Class I milk price. So we take the butter futures, subtract the current Make Allowance, multiply the difference by the manufacturing yield. That results in the expected butterfat price. That's in the step 3.1.

Did you -- do you see that?

Q. Uh-huh.

A. And then, you know, I -- even in that summary, I provide a reference to a cell, H155 on tab "Analysis" of the Excel spreadsheet that is included for the record, so you can trace back and you can see the full calculations there.

So once we have the expected butterfat price, then knowing the composition of the Class III futures, currently it's 3.5 and -- but down the road it may be something different. As long as the market has full information as to the competition -- excuse me, not as to the -- as to the composition, you can use an equivalent formula to what is presented here in step 3.2.

So Class III milk futures minus 3.5 times the expected butterfat price, and then that difference must be divided by 0.965 to derive the expected Class III skim milk price.

And, again, the -- the appendix contains the reference to cell I155 for expected Class III skim milk price, and J155 for expected Class IV skim milk price.

You would do that for each of the trading days that -- that fall within the two-week window to derive essentially a 14-day average of the projected prices for skim for the month of October.

The reason I would recommend that you do it over the same two-week window is, first, that will be perceived as close to what we are doing currently; and second, to the extent that the Class I handlers want to hedge, they would probably want to place those hedges incrementally over a two-week period so as not to move the market now.

A valid objection, going back to what Ms. Hancock was asking me yesterday, could be that if we spread it over a two-week window, then we are essentially saying that in each of those days, you know, you have to have volume large enough to be able to buy at least one contract.

But that's where the, you know, industry input should come in as you -- that's why we have a difference between recommended and Final Decision, so that people can see what you are thinking and provide input on that.

I'm not saying that -- that -- that I have everything figured out here to the point that nobody else's input can improve it.

Q. So it leads me to another question.

You know, we have heard discussion about why it's important to have advanced pricing for HTST plants still. And I understand the desire to kind of push them to go into hedging.

But what about the small processors that don't have -- that already operate on small margins and might not have the financial capability to involve themselves in hedging?

A. So Mr. Turner, who was here two weeks ago, I believe you asked him whether he qualifies as a small business, and his answer was yes. So could we use him as an example as a small processor to that question?

Q. Well, I think the range of small varies, and he's just one example of that.

A. Yeah. So -- so in his example, you know, I don't believe that -- you know, he may not find it pleasant the first month, but, you know, give him a month or two, and I think that he can fully master this without any issues.

Not to steal Lucas' thunder, but, you know, we do have testimony coming up later today that tries to offer you more choices for you to consider as you -- as you make your recommended decision. That may be something that could make you more comfortable from that perspective that you just asked.

Q. Okay. On page 6, I was wondering if you could just --

A. I'm sorry, Ms. Taylor, page 6 of which exhibit?

Q. I'm sorry, of Exhibit 289.

I wonder if you could review again, what this graph is showing us.

A. This is really an eyesight test.

Q. It is. I would agree.

A. I apologize for that. It was a -- it was just an image transplant from a different paper.

So what we wanted to illustrate -- this is an excerpt from the Exhibit 76. You can find that larger version of that image on page 435 of the Exhibit 76.

Q. Okay.

A. So those are exactly the same images. It might be easier to look there.

So what we wanted to -- in real world you have many things moving all at once. The spread is changing, advanced prices are changing versus announced. The component tests are changing. There's -- utilization rates are changing because of depooling. So it's very hard to disentangle the impact of one force on, for example, PPD.

In this paper, co-authored with Dr. Wolf, we tried to do that. We tried to keep everything else constant, move one thing and see how that influences PPD. So that is -- that's what this chart is attempting to do. It is looking at the difference between the announced cheese price, so it's a final price, and the advanced cheese price, that would be used for advanced pricing.

So when -- on the horizontal axis, as you move to the right, that means that there was a rally after the prices, after the advanced prices have been released. As you move to the left on the horizontal axis, that means that the prices have dropped after the advanced prices have been released. So far so good.

Q. Yes.

A. Okay. So now on the vertical axis, what we wanted to do is we wanted to keep the utilization into the pool as we believe it would have been were it no depooling. So we tried to, you know, stipulate what the utilization by class would have been based on historical trends, and we tried to -- and we ignored the 2019 Class I reform. So this is under the higher-of system.

So under those two assumptions, which are modeling assumptions, we have to recognize, we can see a more -- a clearer relationship or clearer impact on rallies in the market after the advanced prices have been released on the PPD, on what we project the PPD would have been. We don't know for sure what the PPD would have been because this is a modeling exercise.

So if there was no depooling, if there was this Class I reform, what do we project, based on our understanding of trends in component tests and our understanding of trends in utilization rates, what would we project would be the PPD in this context in the Order 126, the Southwest order?

And as you can see, as the -- as market -- if markets rally, the PPDs drop. If markets -- if the prices go down after the advanced prices are released, then the PPD increases, tends to be higher. That is -- that was what explains this about 45-degree negative line there. There is some noise, but the relationship is fairly strong there.

In the real world, if you tried to plug this, if you were to take last ten years of data, or 15 years of data for Southwest Order, and you were to plot their PPD against the difference between the advanced and the announced -- excuse me -- announced and the advanced cheese price, it would be more hairy. It would be more dispersed around. And the reason that is the case is because, well, primarily we do have depooling.

So -- so that would perhaps make it more non-linear, if you will. I would expect that this line would have a deeper slope than 45 degrees negative, as the spread between the announced and the advanced cheese price rises.

Q. So -- so if I can summarize --

THE COURT: Let's go off record just a minute at

9:52. We need help with the battery for the Agricultural Marketing Service.

(An off-the-record discussion took place.)

THE COURT: All right. Let's go back on record.

We're back on record at 9:53.

BY MS. TAYLOR:

Q. So if I could summarize. What this graph is showing us is generally if -- if the time between the advanced and the announced, the market rallies, generally PPDs go down?

A. Yes.

Q. And the inverse is true?

A. That's correct.

Q. Okay.

A. And it is providing you some sense of magnitude.

Q. Correct.

A. In this case, in the Order 126.

Q. Okay. Got it.

I wanted to -- I want to talk just sticking on Proposal 16, and I wanted to talk order language, which is always a fun discussion. But since your exhibit didn't cover that, we want to make sure we understand how it is supposed to operate.

So I want to turn to Exhibit 13, which I will bring you up a copy, but it is USDA-13 on the website if anybody is wanting to look at that. And I want to turn to page -- well, 19 is where -- 20 is where Proposal 16 starts.

A. Yes, ma'am.
Q. All right. So we want to make sure we understand how this would work.
So in the first -- in Section 50, paragraph B, it's essentially saying the Class I skim milk price is the Class III price plus the adjustment computed in Q3.
A. That's correct.
Q. And so I want to -- that's simple enough.
I want to turn to Q3, which starts at the bottom of page 21.
So what we read here is -- I want to figure out -- I think I know the A -- you know, the adjustment is the difference between A and B, theoretically, and I want to define what A and B is.
A. Uh-huh.
Q. Okay. So A is the higher-of either the Advanced Class III and the Advanced Class IV, so whatever one is higher; and B is the Class III skim milk price, the announced Class III skim milk price.
A. That's correct. Yes.
Q. So you put those each in a column and you take the difference?
A. That's correct.
Q. And then you do that for every month?
A. That's correct.
Q. And then you take a 36-month average from August of the four years prior to July of the year prior, I guess?

A. That's correct.
Q. Okay. And round that to the nearest cent. That's the adjuster?
A. That's correct.
Q. The question is, when is that implemented?
A. September.
Q. For how long?
A. So -- so that would be implemented annually in September -- no. For example, you could publish that in September as a formal announcement that would be enforced from January of the forthcoming year.
Q. So let's take an example. In 2023, we would have gone back four years, computed the 36-month average up until July of this current year?
A. That's correct.
Q. Whatever that adjuster is, we would announce, let's say in September --
A. That's correct.
Q. -- and you would have it implemented in 2020- -- January 1 of 2024?
A. That's correct. Yes.
Q. Okay. So I think I'm off a year. When you are talking about hedging and you need to know these things in advance, that only gives you less than six months advance notice of that. I'm not sure how that works for you.
A. So as I said yesterday, you know, Edge did come to this hearing not just to -- for you to hear some foreign accents, but also to listen, learn from others, try to see

if we can find common ground where possible, provide common sense solutions. I think we owe it to the U.S. taxpayer to try to do that.

One of the learnings for me, personally, and for Edge, was the rolling nature of some of the institutional contracts and other, you know, commercial contracts, for example, that I think that's best exemplified by Mr. Doelman's testimony from Fairlife.

Having heard that, Edge would not object if you were to implement Class III Plus with the adjuster of the style that -- that MIG proposed.

Q. A rolling adjuster.

A. A rolling adjuster, yes.

We would also not -- the other assumption that we had when we were designing this proposal is that we have to stick to revenue neutrality, because that was the former deal between IDFA and National Milk.

We did not have the privilege of knowing what is now known as proposal, I believe, 15, the IDFA's proposal, with a floor of $0.74. We would not object if AMS were to set the floor to Class III Plus in a similar way. That's -- you know, that would be in line with the floor of $0.74.

So there -- we are not writing a Bible here, we are writing regulation. Regulation needs to be based on all of the evidence heard, not just what we all knew in mid-June of 2023 when we were putting these proposals in.

So we are quite flexible. Edge is quite flexible on those details in the -- in the regulation. The core principles are, let's get rid of advanced prices, we don't need them anymore; and then the choice is whether you would like to do it as an average-of or tie it just to Class III. But even that is a second order priority for Edge versus getting rid of advanced pricing.

Q. So but back to -- I'm trying to understand Edge's proposal.

A. Sure.

Q. And your, you know, testimony about the importance of hedging and the importance of knowing things in advance.

A. Yes.

Q. So for that purpose --

A. I guess --

Q. -- what kind of -- you know, you can -- we can think about the rolling, we can think about 36 months, or 24 months. You know, those are all -- the big picture, how much lag time is Edge seeking to implement whatever the adjuster is, however it's calculated should that be recommended, for you to meet your hedging objective in proposing this?

A. Yes. Ms. Taylor, I apologize, I didn't -- I just realized I didn't directly answer your question.

When we were designing this proposal, we worked off the assumption that folks don't really start hedging the next year until they set the budgets for the next year, and the budgets are set in September. So from that sense, some of the months have higher lag than others. January would have the smallest lag and the December would have the highest lag.

Having heard the testimonies, we revised our assumptions.

Q. Okay. I had another question. You know, you want to get rid of advanced pricing, but your proposal still has us using advanced pricing to calculate the adjuster. And I'm curious why that's being proposed, and if we're looking 36 months back and we know what the announced was, why not just use the announced? Why are we looking at the advanced at all?

A. The only reason why we drafted the language as we did is to come across as not trying to tilt the scale to producers or processors to maintain strict revenue neutrality. To the extent that we would be all happy with an approximate revenue neutrality, it would be perfectly fine to just use announced Class III skim and Class IV skim over the previous 36 months.

Q. Okay.

A. Certainly would mean less paperwork for you, one less report to track.

Q. Okay. I think I'm good with that.

I want to turn to your next exhibit, 290. And in preparation for that, I am going to have some questions looking at Exhibit 76 that we --

THE COURT: May I stop you?

MS. TAYLOR: Yes.

THE COURT: I have a record exhibit here --
MS. TAYLOR: Yeah, we'll get it back at the end.
THE COURT: I would like to give it --
MS. TAYLOR: Well, we can get it now, if you would like.
THE COURT: I would like you to take it away from me.
THE WITNESS: I might also lose it.
Ms. Taylor, which exhibit are we on?
MS. TAYLOR: 76, I'm going to reference that one.
And, Judge, I have a copy for you if you would like to look at it.
THE COURT: I do like to look at it during the testimony and then give it back immediately.
MS. TAYLOR: Okay.
BY MS. TAYLOR:
Q. I want to turn first to page 3.
A. And would it be -- are we talking about Exhibit 76?
Q. 290, I'm sorry.
A. Okay.
Q. So many papers. So many exhibits.
Okay. So on Exhibit 290, page 3, and this is where you are talking about the three risks, listing the three risks that you are trying to --
A. Sure. Basis risk, yeah?
Q. Yeah. This last one, bid-ask risk or risk premium. And I want you to, if you could, explain again

what that is. And when I first read it, I thought that this risk is assuming that there's a CME base Class I milk futures contract --
A. That is correct.
Q. -- in existence, which actually doesn't exist right now.
A. That is correct as it does not exist today. This contemplates a potential risk that would emerge were AMS to go with Proposal 17 or 18 and CME were to create a Class I contract either for Class I price or Class I skim price.
Q. Okay. So that's just if all those stars align, using that risk to do this?
A. Yes. I think if -- you know, given our experience with the asymmetric risk under average-of, I do think we need to contemplate such scenarios.
Q. Okay. And then I want to turn to page 6, and I then, at the same time, on page 76 want to turn to page -- Exhibit 76, turn to page 437, because I think what you -- what you put in this Exhibit 290 was kind of a summary of your paper in Exhibit 76.
A. It was, did you say page 437?
Q. Yes.
A. Okay. The table, I assume.
Q. Table 5. That's what I want to talk about.
A. Yes.
Q. Yep.
So we were trying to look at kind of the

categories you have in Exhibit 290 --
A. Oh, I see.
Q. -- and match them with the columns that you have in Exhibit 76, and they don't match identically.
And if I could just further explain. Trying to figure out, I mean, what goes into trends, in particular. And you said in some text yesterday, trends are the change in utilization rates between the classes, and there might be a different factor, I missed writing down when you were saying that. So I was trying to match these things up.
A. Sure. So the -- in the Exhibit 290, the bar that is named "trend" would be the sum of what in Table 5 is Step 1 and Step 2, utilization rates and component tests.
And I believe I -- I answered a question or two in today's cross-examination, that trends -- I think it was from Mr. Miltner -- that the trends capture changes in utilization trends and the growth in protein tests and other solids, butterfat -- well, butterfat wouldn't matter for PPD but --
THE COURT: Say that last part again.
THE WITNESS: Butterfat wouldn't matter for PPD so it would be the changes in protein and other solids test that would matter for this.
BY MS. TAYLOR:
Q. I think I had missed that second piece. That's where I was stuck.
A. And then the Step 3 in Table 5, actual announced prices, that would correspond to what we are calling in

the -- in the waterfall chart as a Class III/IV spread.

Q. Okay.

A. Step 4, advanced prices matches it one-to-one with the bar, with the legend advanced prices.

Step 5, Class I pricing reform matches with the bar with the label Class I reform.

And Step 6, depooling and structure changes matches what I was just referring as depooling here.

I did preface yesterday as I was introducing the waterfall charts, I did say that the depooling bar also captures any deviations -- any deviations in utilization rates from what we have modeled them to be. It's not necessary -- so, for example, if our model suggests that the order should have 40% utilization in Class IV, but even in the best of months when nobody depools they really have 37, or 43, then that would show up in this last residual column, depooling.

So depooling is everything that we cannot explain. Most of the time it really is truly depooling, but it does capture -- capture everything else that just the analysis did not properly address through linear trends in -- changes in utilization rates and component tests. Linear and seasonal in case of component tests. I think. Yeah.

Q. And where would -- or does your model take into account production increases, milk production increases?

A. Implicitly? The production increases without -- in the absence of higher Class I sales, higher milk production, which is pooled, would lead to increasing

utilization rates for manufacturing classes.
Q. And does your model account for limits in pooling provisions, whether they are, you know, the repooling limits that exist, for example, or in the Northeast, there are dairy farmers further markets provisions?
A. It doesn't need to. If the provisions are such that it's more difficult to depool, or that it's less lucrative to depool I should say, then the bar depooling would simply be smaller.
As you can see, for example, in the -- in the Northeast order, in the Table 5, page 437 of Exhibit 76, Table 5, Step 6, depooling and structure changes under Northeast, in 2020, depooling was only $0.05, and it was actually positive. That clearly means that there was -- maybe this was, you know, more yogurt made than we accounted for. Over years we did not maybe anticipate precisely the increase in Class II or -- or we anticipated that Class I would drop more than it really did, so -- but you can see that in that order where it is more difficult to depool, we have a smaller unexplained residual. We are right on the money almost.
It would be so much fun if academic conferences were organized this way, you present the paper and you were cross-examined on it.
Q. Let me see. In your proposal submission, back a long time ago, if I remember, you had something about how the adjuster couldn't be non-negative, something like that.

Does that ring a bell?
A. We were probably wrong about it. I believe that one of the other testifiers, it could have been Ms. Dorland, calculated in the amount of years it would have been some $0.20 negative or so. That is indeed correct.
Q. Okay.
A. But in -- just to add, in that particular year, where the adjuster was indeed negative, the Class III Plus result with a Class I price that is within $0.10 of what the higher-of system would result as well.
Q. Okay.
A. We would not object if AMS were to floor it at zero.
Q. I'll ask you a similar question I think I asked the IDFA witness.
If you are all about market price singles and not muting some of those, doesn't a floor do that?
A. I believe that it was the National Milk that complained about muting market signals. As I testified this morning in one of the cross-examinations, I think that the core principle here, core -- set of core principles here are:
Does the proposal provide for sufficient reserve supply of milk for fluid needs? Yes, it does.
Does the proposal allow the manufacturers of beverage milk to provide for stability to producers as is listed as objective 4 of the enabling legislation? Yes,

it does.
Does the proposal, over time, provide for a relationship that Class I milk is more valuable on average than manufacturing classes? Yes, it does.
So I think we check all the boxes of the core principles. The market signal is a -- is one of those terms, like, you know, social capitalist. Like, it doesn't -- it can mean a lot of things to different people. And I don't believe that dairy producers should be rushing to the barns and start playing Mozart to their cows just because the Class I, you know, price is a little bit higher so they need extra milk that afternoon.
Q. Okay. But from your perspective, you don't have a problem setting the floor -- or Edge -- you are speaking on behalf of Edge -- so Edge is not opposed to some floor?
A. We are not opposed to the floor.
MS. TAYLOR: I think Mr. Wilson has a few more questions.
CROSS-EXAMINATION
BY MR. WILSON:
Q. Good morning, Dr. Bozic.
A. Good morning, Mr. Wilson.
Q. On your -- continue on page 6 of the Exhibit 290, the baseline PPD, that, as I understand it, would be the average PPD for the year 2010 for Federal Order 33?
A. A little about bit more complicated. That would be the PPD in March 2020 had the prices in March 2020 been as they were on average between 2010 and 2019, the

announced prices, and the components in March 2020 were as they averaged in 2010, and utilization rates by class in March 2020 were as they were in 2010.
Q. So when I compare that PPD, that would be --
A. Uh-huh.
Q. -- to Exhibit 76 PPD for Federal Order 33, it's very different. Exhibit 76 has the Mideast Order at a $0.98 baseline positive, and you have it at 1.65.
A. That's a good question. I will need to do some research later this morning, and I'm happy to jump back on the stage for a few minutes to clarify. I don't have the answer for you this moment.
Q. So with that in mind, you used the same model parameters from Exhibit 76 over to Table 290, page 6.
A. I believe so, yes.
Q. So do the rest of the steps, do they correspond, do you --
A. I believe so. But I think that, you know, given the obvious discrepancy regarding the baseline, I think it would be prudent if we allow for an hour so I can do some forensics and I'll be happy to report back.
Q. So as I understand Exhibit 76, the Table 5, that's a yearlong look?
A. Yes.
Q. And all the graphs in Exhibit 290 is a month-to-month look?
A. That's correct.
Q. That's probably -- that's the difference probably

in some of them. Okay.

The bottom of page 12 -- well, Exhibit 290, it's actually the top of page 12.

A. Excuse me, page 12?

Q. Page 12.

You indicate the primary driver, you indicate that, and then you cite -- the next sentence you cite the second most important factor.

Are those -- is that description a quantitative description -- the primary driver, what would be -- what would we be looking at in our graphs that you provided us to understand your description of "primary driver"?

A. So in the context of -- thank you for your question -- the context of the spread between III and IV, if you were to look at, well, any month here, the parameter of depooling -- I think that we would have to consider that to be an expert opinion rather than just a reading of any chart.

Q. Yeah.

A. Because we -- we can logically conclude that the more negative the PPD before depooling, the stronger to -- the incentive to depool, but that does not follow arithmetically from these charts. That is a conclusion that requires prior knowledge of incentives with Federal Orders. So from -- for those reasons, I would submit that those sentences are my opinion rather than a number that you can read off a chart.

Q. Okay. So it's not like the sum of all of the

III/IV spread values, summing them together to get the biggest number?
A. If the sentence said the primary driver of negative PPDs prior to depooling, then we could do that. Right? But if we are making a claim about depooling, then we have to complement the numbers with the -- with the opinion about the numbers.
Q. I'm just trying to understand your sentence.
A. Yes. Yeah. So that's why I'm saying, like, if -- you know, you cannot just sum them up, no. I mean, in most conversations you could and it would be admissible, but here we are creating a formal record, so I want to be really precise about that.
Q. Okay. And then the last bucket that you have, you label as depooling. You have said that it's -- it's more than just that, it's things that the model can't predict and things like that.
Depooling's been a big topic in this hearing. Is there -- would you have an opinion about how much, as a -- as a -- as handlers make decisions about what to pool and what not to pool based on alignments and things, how much of that decision is related in your model for these graphs?
A. I would say all of the -- most of the relevant factors are. There could be some truly idiosyncratic local reasons that are not captured. Maybe someone needs to pool for -- I can't even provide you with a good example. But the spreads, advanced prices, are the main

drivers of the incentives to depool, like, just financial incentives to depool. In terms of, like, your equalization payments, that's driven by those two factors, first and foremost.

The third one driving is the -- you know, the difference between the higher-of and the average-of. The -- what is in question is the marginal effect on your decision to depool.

For example, as you well know, Mr. Wilson, in the Order 30 -- and I'm not an expert on depooling provisions in other orders -- but in Order 30, if you depool some amount of milk, you can pool again next month, I believe, 125% of what you pooled previous month. Which means that the moment we switch from positive to negative PPD, you would immediately want to depool at least 20% of your milk, because next month you can repool the entire milk that you have -- I'm ignoring seasonality and milk production and all that now.

So the small change from $0.01 positive to $0.01 negative -- and, again, I'm ignoring, I guess, the administrator fees here as well, the -- because presumably, if the -- if you are not pooled -- I don't know, I'm not actually sure how that works. I assume that they don't have to pay the administrative fees to the Market Administrator if they are not pooled -- or on the milk that's not pooled. So if the administrator -- if that's correct, if the administrative fees are $0.05, then as soon as your draws drop below $0.05, so you're net financially negative on milk pooled, maybe you would want to depool at least 20%. I'm thinking on the fly here. I apologize if there's an error in the logic. You would want to depool at least 20% because you can -- you preserve full optionality for potentially pooling all of your milk in the next month.

Now, if you -- if the -- if the negative PPDs are really large, let's say $4, now you must be think -- now you are thinking, okay, do I depool only 20% or do I take it one step further and depool another 20%? Do I really care that I won't be able to pool everything next month when I'm losing so much money in this month? Why would I want to preserve the option to maybe get $0.15 positive two months down the road if I'm losing $4 today? So from that perspective, you depool a lot if the current month PPD is negative.

And in that context, should my statement be understood that even if the Class I reform dampened or made the PPD more negative, it may have no effect on further depooling decisions. You would have done as much anyway. Once you get down to -- at one point we had, I think, like, single digits, you know, percentage of the total Class III milk that was typically pooled in the Upper Midwest Order. Once you're that low, you just don't go any lower.

Q. So on the first month that you have listed here, March '20, 2020, you have a minus $0.25 attributed to depooling.

Am I understanding your testimony to say that future -- future months, that you don't know how much it's going to be negative for however long, could impact your decision rather than just the immediate disparity of --
A. Yes.
Q. -- what their draw is --
A. Yes.
Q. -- today, and so there could be some future aspects to looking at one month of change, so to speak?
A. Yes. That's absolutely correct.
Q. All right.
A. So the -- so the -- again, the chart -- the chart describes the PPD, right? Like, the chart describes how did we arrive at the current month PPD, and the amount that is depooled will be a reflection of the previous three bars in that. Like, so the current month spread, advanced pricing, potentially Class I reform, but will have a strong lookout for up to -- in the context of Order 30 where you can bring back all your months after six months, as I understand it, you would look up -- up to six months out when making a depooling decision.

Which, actually -- and I didn't want to go too much into that yesterday because it's complicated enough anyway, that is even a stronger argument why Class I reform likely did not have a material impact in 2020.

In 2020, if you were looking at a term structure of the spread between Class III and IV for the next 12 months, it was deeply negative. It was deeply negative. People -- markets did not anticipate those two prices to converge for a long while. So from, you know, making such a dynamic programming, if you will, depooling decision, that would have been a strong influence, even in the absence of any reform.

MR. WILSON: Thank you, Dr. Bozic. That's all I have.

THE COURT: Mr. Wilson, do you want him to do any report-back after spending an hour analyzing?

MR. WILSON: No. Thank you. No, thank you.

THE WITNESS: But can I ask, Your Honor, is the validity of my evidence in any way reduced if I don't submit that correction? No? It's not? Okay.

THE COURT: How confident are you that the difference is, in fact, in comparing a year to a month?

THE WITNESS: I prefer not to answer before doing more forensic analysis on these numbers, but, you know, if the evidence will be considered just as strong, you know, without submitting further analysis, I'd rather sleep a little bit.

THE COURT: You know, I -- I would like to invite him to clarify, just because this is such an important issue.

THE WITNESS: Sure.

THE COURT: Okay.

THE WITNESS: Yeah. I -- I would be happy to.

THE COURT: You are invited to return to clarify that.

THE WITNESS: Yes. I mean, who cares about sleep?
THE COURT: And I would like to return my Exhibit 76, because it's the record copy. All right.
Redirect.
MR. SJOSTROM: Yes. Lucas Sjostrom for Edge Dairy Farmer Cooperative.
THE WITNESS: Your Honor, didn't we have to ask for any further cross-examination before redirect?
THE COURT: Well, I try to let Agricultural Marketing Service be the last, and sometimes they do prompt more questions, but I didn't see anyone squirming, so I'd like to keep moving.
MR. SJOSTROM: What more do you want? All right.

REDIRECT EXAMINATION

BY MR. SJOSTROM:
Q. First, Dr. Bozic, a couple of questions on OTC.
Well, really one question. In your past work, and I think you mentioned this yesterday, but I just wanted to clarify because I think it was maybe trailing off.
But in your past work, what data sources have you used to draw conclusions related to over-the-counter trading?
A. The only data source that I have relied upon to form my conclusions was the data source cited, I believe it was Footnote 6 in the 2019 paper co-authored with Matt Gould, that would have been the OTC report published by Rice Dairy.
Q. All right. And briefly, and I know that might be

difficult, but briefly, I don't know that we ever put into the record the difference between a -- like, what a cash-settled trade versus a delivery-settled trade was, and we had several questions about it this morning.
So depending on who is reading this, I just wanted you to be able to clarify what is the difference between those two objects?
A. Yes. In the -- so corn contract would be an example of a physically-settled contract. If you do not exit your hedge position on a corn futures, you will have to deliver some corn or you will have to accept delivery of some corn somewhere on the Illinois River. There is no -- there are no butter or cheese or dry whey trucks going around the country to settle anybody's position on dairy futures.
Dairy futures contracts are all cash settled, which means that your position, your gains or losses on your hedge position on the last day, are simply settled as a difference of the prior day of futures price and the announced price published by AMS.
Q. Thank you. I just thought we should get that in.
Next, so if we build a new structure -- and that's what we're here to do -- of the Federal Order, and as implausible as it is, we do all this and no one uses any hedging instruments, no one hedges anything in any of the classes in any phases, are we -- at the farmer level, cooperative level, processor level, retailer level, at least in price discovery, are -- are we any worse off in a

non-hedging environment than we are today as we think about price discovery?
A. Over the long-term, Class I prices would have been actually equivalent under any of the proposals currently on the table, from 13 to 18. So there will be no material difference to dairy producers.
Q. So, in other words, it would be fair to say that we do not need hedging as much as we have talked about it the past few weeks? We do not need hedging for these instruments to operate properly?
A. That question is rather vague. I don't know, you know, how to answer it. Like, people use hedging because they want to stabilize their revenue or they want to stabilize their input costs, and the purpose of these proposals is to facilitate effective use of hedging.
Q. Thank you. I'll move on to advanced pricing.
We have heard that HTST milk, or at least maybe milk that has no desire to be hedged, ranges from 70% to 90% of the market. Obviously, this is a perishable product sold often within 72 hours or less at retail of it being produced on the farm. Proponents say -- may say that we need to know these prices ahead of time.
And we have covered this, but just to go back, do you believe that's the case? Do we need to know these prices ahead of time?
A. If you'd first allow me to just slightly correct your question. Those products may not be sold to final consumer within 72 hours. They will be available for

purchase by final consumer within 72 hours. They will be available in the retail store.
Is that what you meant?
Q. Yes.
A. Now, could you please repeat your question?
Q. So they are highly perishable, as you restated.
A. Yeah.
Q. But talking about those products, and proponents may say, we need to know these prices ahead of time.
With that available delivery so quick after raw milk production, do you believe that that needs to be the case?
A. Four out of six proposals that were noticed on this hearing would allow that. The only proposals that -- well, actually, six out of six proposals out of -- on this -- on the notice for this hearing would allow that. Three of the proposals noticed for the hearing do that through advanced pricing; the other three proposals do that through the ability to lock in the input costs without basis risk, or at least without basis risk that is not due to the risk premium, the third potential effect in the Exhibit 290.
Q. Thank you.
As we're thinking about that, if you were a cooperative, as the fluid milk processor, would you have any advantages in a higher-of system with advanced pricing over a proprietary plant?
A. Yeah. So it's -- before I answer, I just want to

preface that I'm not implying or alleging that this is actually happening. We are just looking at the incentives or what may transpire.

If -- in a system in which the hedging is strongly -- is complicated by the pricing regulations, it is easier for a cooperatively-owned Class I handler to offer fixed price contracts to the buyers than it is for private handlers. The reason is that the private handler would have to pay to the producer and to the pool at least a minimum regulated price, whereas the cooperative can essentially reblend any materialized basis risk.

Q. Thank you.

I think in some of the testimony we talked about true-ups. For example, you might negotiate a January price in late December, and then not be paid for it until March.

Without advanced pricing, how would you see the market changing without true-ups? Would the market still be able to operate in that true-up environment?

A. To the extent that a buyer and a seller may agree to postpone the payment of the invoice for whichever reason they may be, perhaps related to tax liability, nothing in any of the proposals would really stop that.

Q. Do you believe it's bad for fluid milk processors to lose pre-knowledge of their prices versus dairy farmers who have none? Is there a distinct difference?

A. First of all, I would challenge the assumption that they are losing the knowledge of their input cost.

They would be given the choice to know their input costs before the start of the month in which the milk is marketed, or after the end of the month, that the choice is exercised by choosing whether to hedge or not, but if they choose to hedge, they would know their costs.

Second, you know, as I have noticed -- as I have written in my testimonies, dairy producers in general must take on risk in order to operate their dairy farms. They have to know their -- you know, their situation is inverse. Like, in the case of Class I handler, they know their revenue, and we are talking about should they know their input cost and how. In the case of a dairy farmer, they know their input cost, sometimes not very far in advance, in the case of feed, but they wouldn't know their revenue.

So -- so it's really not uncommon for market participants to face risk. You know, it is really -- it really is uncommon to be, you know, as insulated from risk as Class I handlers have been over the previous two decades.

Q. Thank you.

So since this proposal -- or since your submission, our submission, of the regulatory language this spring, would you personally consider or entertain studying modifications of Proposal 16? Is there anything you have considered through the course of this hearing or through the summer that haven't been even reviewed by our Board of Directors that may get at some of the biggest

criticisms you have heard here?
A. I just want to preface my answer. I'm not answering on behalf of Edge. To your question now, I'm answering on behalf of just myself. Correct?
Q. Wonderful.
A. Yes. So things that we have learned in this hearing: First, we have learned that revenue -- strict revenue neutrality is not a requirement requested by IDFA. If that's the case, then we have more degrees of freedom of how to design these programs to properly compensate dairy producers for the asymmetric risk that has been well-established by National Milk. One way to do that is to set the floor on the mover.
Second, to the extent that one may not need to follow the strict revenue neutrality, we can further simplify the day-to-day work by Ms. Taylor and her team. There is no reason to use advanced pricing in calculation of moving adjuster for Class III Plus.
Third learning was the -- what we have heard from MIG's witnesses about the rolling nature of school milk contracts and other sales. From that perspective, some sort of rolling adjuster might make more sense than an annual adjuster, which was designed anticipating that folks like to set the budgets before they initiate hedging strategies for the forthcoming calendar year.
And then, finally, to the extent that we learned that HTST -- that a lot of HTST grocery sales really don't care about hedging as much as preserving their natural

hedge that they have currently through the advanced pricing, I think it behooves all of us to look at some hybrid solutions that allow the growing part of the Class I sector, the ESL, the aseptic, some of the innovative HTST products, institutional sales, to pursue hedging strategies while letting the old traditional HTST perhaps function in a way that it does today, or maybe even return back to what producers have been looking for. We discussed that over the last few days, and my understanding is that you will actually be formalizing those thoughts into an analogous proposal that we will hear soon today.

Q. Thank you.

Anything I missed or comments you would like to share?

A. Oh, plenty, but I've been here a day and a half, so let's wrap it up.

MR. SJOSTROM: Your Honor, I would like to move Exhibits 289 and 290 into the record. I believe USDA is going to continue to object to 244. We have no attachment to any extra paper, so --

THE WITNESS: Or 291, right? Like, this was -- this is still marked as 291, the Stephenson/Novakovic? Yes.

THE COURT: That's Mr. English's project. I'll hear from him later.

MR. SJOSTROM: We'll move 289 and 290, please, Your Honor.

THE COURT: All right. Now, I have lost track. Okay -- good.

Is there any objection to the admission into evidence of Exhibit 289?

There is none. Exhibit 289 is admitted into evidence.

(Exhibit Number 289 was received into evidence.)

THE COURT: Is there any objection to the admission into evidence of Exhibit 290, which includes the online versions of Edge-15, Edge-15A, and Edge-15B?

There is no objection. Exhibit 290 and all its forms, as mentioned, is admitted into evidence.

(Exhibit Number 290 was received into evidence.)

MR. SJOSTROM: Thank you, Your Honor.

MR. ENGLISH: Your Honor, Chip English for the Milk Innovation Group.

So I am not Edge's attorney, and so since they themselves do not want to put Exhibit 244 into evidence, I'm not going to speak to it, although I have strong arguments under the rules.

As to 291, we did pre-submit it -- well, not pre-submit it -- we submitted it yesterday as you requested.

In an attempt to move the hearing along, while I -- you know, I'm not going to stand on principle today. The reason I'm not is because Dr. Stephenson's going to come, and that should resolve the objections of OGC, I hope, once he identifies them.

THE COURT: May I mention?

MR. ENGLISH: Yes.

THE COURT: I love the way you solve problems, and I appreciate it.

MR. ENGLISH: So I just want for the record to state that given the fact that Edge is not going to move admission of 244, I had a statement on that, I won't give it.

And given the fact that Dr. Stephenson will be here at some point in the future after October 11th, while I think 291 could be admitted, I'm going to stand down for today and just note for the record that I think it could be admitted. But I'm not going to push the point, so we can move along today.

THE COURT: On behalf of all of us, I thank you. All right.

I believe we can let this witness stand down, and I encourage you to ask to be invited back to clarify that one point when you are ready.

THE WITNESS: Thank you, Your Honor. I will probably need a few minutes just to take all my stuff here. Maybe it's a good time for a little break?

MS. TAYLOR: Yeah.

THE COURT: Oh, good. All right. Let's see. This is a ten-minute break, right?

Please be back and ready to go at 10:55.

We go off record at 10:42.

(Whereupon, a break was taken.)

THE COURT: Let's go back on record.

We're back on record. It's 10:55.

I would like the witness to identify himself, please.

DR. CRYAN: All right. Beg your pardon. Did you just ask me to identify myself?

THE COURT: I did.

DR. CRYAN: In case no one knows it, I am Roger Cryan with the American Farm Bureau Federation, and I have been sworn. It's up to you whether you want to do it again.

THE COURT: No, once is enough. But I want you to spell your name into the record.

DR. CRYAN: The first name is Roger, R-O-G-E-R. The last name is Cryan, C-R-Y-A-N, just like Ryan with a C in front of it.

ROGER CRYAN,

Having been previously sworn, was examined and testified as follows:

THE COURT: And if I might inquire, what kind of doctorate do you hold?

THE WITNESS: I hold a Ph.D. in food and resource economics from the University of Florida. I have been recog- -- go Gators -- I have been recognized previously in this proceeding and in previous proceedings as an expert on Federal Milk Marketing Orders and dairy economics.

THE COURT: Thank you.

You do remain sworn, and you may proceed.

Oh, wait, I don't have a copy of --

USDA REPRESENTATIVE: I have it. I was just waiting for the numbers.

THE COURT: Oh, all right.

Let's -- you have distributed your statement; is that correct?

THE WITNESS: I have distributed a statement, distributed copies to the public and -- that was here, and I provided 15 copies to the -- to the -- I guess the clerk, the -- officially the clerk of the hearing proceeding, to Emily, otherwise known as Emily. She has 15 copies single-sided, as requested by USDA, of three documents. The first one is marked AFBF-4.

THE COURT: All right. Let's deal with that one. Let's call that one Exhibit 292.

(Exhibit Number 292 was marked for identification.)

THE WITNESS: I have another document identified as AFBF-4A.

THE COURT: We will call that one 293.

(Exhibit Number 293 was marked for identification.)

THE WITNESS: Finally, an exhibit marked AFBF-4B.

THE COURT: We will call that 294.

(Exhibit Number 294 was marked for

identification.)

THE WITNESS: Thank you, Your Honor.

THE COURT: All right. And now you may proceed.

THE WITNESS: Thank you.

I thank you, Your Honor, and I thank USDA and -- for the opportunity to be here to testify. Everything I present here has been presented -- has been prepared by Danny Munch or myself as joint -- joint product from the -- by the AFBF economics team. And all of it is based on the policy of our members.

The American Farm Bureau Federation has nearly 6 million members in all 50 states and Puerto Rico, including many thousands of cooperative and independent dairy farmers. Most of these dairy farmers are directly affected by the pricing provisions of the Federal Milk Marketing Orders. These dairy farmers play a crucial role in the development of AFBF dairy policy. Every Farm Bureau position and proposal is based explicitly on that policy developed through a grassroots process in which farmers make the decisions every step of the way.

AFBF submitted nine proposals for consideration in this hearing, and appreciates the opportunity to address the four that were accepted by USDA, as well as the clear direction on what may be needed to advance the rest.

The fundamental focus of AFBF's proposals is the reduction or elimination of negative producer price differentials and the depooling that they cause. We believe that an orderly pool is the key to orderly marketing and ensuring Federal Milk Marketing Orders continue to benefit farmers, cooperatives, processors, and consumers. The key to an orderly pool, in turn, is above all, the proper alignment of the four class prices.

In addition to our own proposals, AFBF largely supports four of the five proposals submitted by the National Milk Producers Federation. These are Proposals 1, 3, 13, and 19.

And I'll move on from the procedural stuff.

AFBF also supports Edge Dairy Farmer Cooperative Proposal 17 in principal, which basically combines NMPF's Proposal 13, the switchback to the higher-of, and the AFBF Proposal 18, using announced prices instead of advanced, which we will be testifying on today.

This statement covers AFBF Proposal 18 under Category 4.

Proposal 18: AFBF proposes to end the advanced pricing of Class II skim milk and components and Class I milk and components.

In AFBF Proposal 18, the Class II skim milk price would be equal to the Class IV skim milk price plus the Class II differential. The Class II nonfat solids price would be equal to the Class IV nonfat solids price, plus 1/100th of the Class I -- II differential. The Class I skim milk price would be the higher-of the Class III or Class IV skim milk price plus the Class I differential. And the Class I butterfat price would be equal to the butterfat price plus 1/100th of the Class I differential.

Under classified pricing, handlers participating in an order have an obligation to the pooling function of Federal Orders based on how the milk is used in class price. In seven of the 11 Federal Orders, dairy farmers are paid based on the component content of their milk by multiple component pricing.

In this process, the producer value of milk is determined monthly based on the cheese milk (Class III) component levels of fat, protein, and other solids. The difference between the total pooled value of what handlers pay for their allocated class price values and the component value worth of producers' milk is denoted as the producer price differential.

When the component value of milk in the pool is higher than the revenue pooled from paid class prices, deductions are applied to farmers' checks in the form of a negative producer price differential to represent the gap in pool value. Dairy farmers suffered negative PPDs during 2020 and 2021, with average all-market PPDs reaching below negative $7 per hundredweight, showing up as a massive reduction on milk checks.

According to the Journal of Dairy Science peer-reviewed article titled "Negative Producer Price Differentials in Federal Milk Marketing Orders: Explanations, Implications, and Policy Options," the most common factors that contribute to the existence of negative PPDs are Class II milk value rising above the butter powder, changes in utilization rates of milk due to production changes in an order, the advanced prices for Class II skim and Class I milk lagging behind rising Class III component values, and changes in utilization due to depooling by handlers deciding to not pool milk in order for one or more months -- in an order, I'm sorry -- in an order for one or more months by which depooling leads to more depooling.

AFBF's proposals and support for proposals from other stakeholders are intended to reduce the prevalence of PPDs -- of negative PPDs that should say -- by reducing the frequency of the previously-listed occurrences, which in many cases have been found to contribute to disorderly marketing.

I'll make a note there that, on the record, this should say negative PPDs.

THE COURT: When you say "make a note," you want to change it at the end of your testimony on this exhibit?

THE WITNESS: However Your Honor believes we best clean up the record is fine with me.

THE COURT: All right. Let's do it now.

THE WITNESS: Okay.

THE COURT: Call our attention to exactly what you want to change on page 2 of Exhibit 292.

THE WITNESS: In the first full paragraph, in the second to last line it says, "prevalence of PPDs." That should say "prevalence of negative PPDs." There's always a PPD, but we want fewer negative PPDs.

THE COURT: We'll take a moment to make that change on the record copy. We're inserting one word, "negative," before the "PPDs" that is found in the next to the last sentence of the first full paragraph. Done.

Thank you.

THE WITNESS: Thank you, Your Honor.

Currently, the classified prices for each month are announced at two different times. First, the advanced prices are announced by the 23rd day of the preceding month. For example, September's advanced prices are announced on or before August 23rd. Advanced minimum prices are announced for Class I, Class I skim, Class I butterfat, and Class II skim.

By the fifth day of the following month, the Class II, Class II butterfat, Class III, Class III skim, Class III butterfat, Class IV, Class IV skim, and Class IV butterfat prices are announced. These prices for September are announced on or before October 5th.

This arrangement creates a long lag between when the advanced prices and current prices are announced for that month. That means that the advanced prices, Class II skim and components, and Class I skim milk and butterfat, can be based on weekly data that is 25 to 40 days older on average than the basis for the current prices, the Class II butterfat and all Class III and IV prices.

This means when market prices rally announced -- that is, final prices -- can be much higher than the advanced prices leading to low and negative PPDs. This creates an incentive to depool milk from the order, to benefit the non-pooled -- to benefit from the non-pooled value of the recently-elevated prices without sharing that value with the pool, which further depresses the PPD and undermines the FMMO principle of uniform pricing.

The impact of advanced pricing on orderly marketing of milk is not new to the Federal Milk Marketing Order discussions -- to Federal Milk Marketing discussions. In fact, USDA has acknowledged the impact of lagged fluid in manufacturing class pricing on orderly marketing of milk.

I would like to present several quotes from the proposed rule published in Federal Register Volume 64, Number 63, released on April 2nd, 1999.

On page 16,102, USDA states:

"Since Class I handlers must compete with manufacturing plants for supply of milk, the Class I price must be related to the price of milk used for manufacturing.

"It is apparent from the price patterns of a large part of 1998, that the current two-month lag between manufacturing and fluid pricing does not establish as close a relationship between the two price levels as is desirable. Indeed, from an analysis of the differences between prices generated by a six-month declining average and the current pricing system, it is clear that the current two-month lag does not accomplish any closer relationship between manufacturing and fluid prices than would the six-month declining average.

"When manufactured dairy product prices are relatively stable, the advanced pricing of Class I milk works quite well. However, since 1988, the volatility in the manufactured dairy product market has caused problems with the advanced pricing of Class I milk.

"The first problem is readily evident in class price relationships during the latter part of 1998. The frequent occurrence of price inversions during that period indicates that some alteration to both proposed and current methods of computing and announcing Class I prices may be necessary. Class price inversion occurs when a market's regulated price for milk used in manufacturing exceeds the Class I fluid milk price in a given month and causes serious competitive inequities among dairy farmers and regulated handlers. Advanced pricing of Class I milk actually causes this situation when manufactured product prices are increasing rapidly.

"Since the Class I price is announced in advance, in a rapidly changing market, the Class I price may not reflect the value needed to compete for the necessary raw milk supply, or the Class I price may be overvalued relative to the raw milk price. Undervaluing class milk is a particular problem since it reduces producer pay prices at a time when producers should be receiving a positive price signal."

And I would --

THE COURT: Dr. Cryan, just read that last sentence again, please.

THE WITNESS: "Undervaluing Class I milk is a particular problem since it reduces producer pay prices at a time when the producers should be receiving a positive price signal."

That's the end of the quote from the USDA's decision in order reform. And I would note here -- this is not in the text -- I would note that this is a USDA decision. The US- -- this is -- this was the basis for USDA choosing the higher-of 20 years ago. The markets have only gotten more volatile.

The conditions -- back to my text -- the conditions USDA refers to from over 20 years ago related to price inversions, rapidly changing markets, and resulting competitive inequalities among dairy farmers have continued. A range in a price series provides insights on how volatile a price is. Larger ranges in price indicate high volatility, while a smaller range would indicate lower volatility.

As displayed in Figure 1, the range in class prices within a year has exceeded $4 per hundredweight frequently since 2012. For example, the annual range in Class I prices has exceeded $4 per hundredweight in six of the past 12 years. The annual range in Class II prices has exceeded $4 per hundredweight in five of the past 12 years. The annual range in Class III prices has exceeded $4 per hundredweight in seven of the past 12 years. And the average range in Class IV prices has exceeded $4 per hundredweight in four of the past 12 years.

The average annual range of prices has exceeded 20% of the annual final class price for all classes in milk, with Class III ranges exceeding 28% of the average final Class III price since 2012. Dairy farmers have had to deal with wide and rapid spreads in prices that have contributed to income uncertainty and disruptions in their ability to manage risk.

THE COURT: I need to stop you. I should have stopped you a little sooner, but you -- you are rolling.

I want you to go to the middle of that paragraph and begin with the sentence "the annual range in Class II prices" and just read from there, more slowly, please.

THE WITNESS: The annual range in Class II prices has exceeded $4 per hundredweight in five of the past 12 years. The annual range in Class III prices has exceeded $4 per hundredweight in seven of the past 12 years. And the annual range in Class IV prices has exceeded $4 per hundredweight in four of the past 12 years. The average annual range in prices has exceeded 20% of the average final class price for all classes of milk, with Class III ranges exceeding 20% of the average final Class III price since 2012.

THE COURT: Now, what percent is that?

THE WITNESS: 28%.

THE COURT: Okay. Just read that part with Class III ranges, pick it up from there.

THE WITNESS: With Class III ranges exceeding 28% of the average final Class III price since 2012.

THE COURT: Thank you.

THE WITNESS: You're welcome.

Dairy farmers have had to deal with wide and rapid spreads in prices that have contributed to income uncertainty and disruptions in their ability to manage risk.

USDA continues in the same -- well, there's -- and there's a graph that demonstrates the phenomena I just read out in the text about the range and how the range in -- in class prices has been very substantial. It's an indicator of the volatility. The volatility is what has made the current advanced class pricing -- Class I and Class II skim pricing problematic.

USDA continues in the same section on the issue of depooling. And remember, this is from 1999. This is from USDA in 1999:

"Milk used in Class I in Federal Order Markets must be pooled, but milk for manufacturing is pooled voluntarily and will not be pooled if the returns for manufacturing exceed the blend price of the marketwide pool. Thus, an inequitable situation has developed where milk from manufacturing is pooled only when associating it with a marketwide pool increase in returns. Illustrative of the worsening class price inversion problem are the growing volumes of milk that, while normally associated with Federal Milk Orders, are not being pooled due to price inversion problems."

Over the past 20 years, the percentage of depooled milk has increased. Based on data from USDA Exhibit 30, between -- between 2007 and 2012, the average monthly price -- the average monthly percent of eligible milk that was depooled across all orders was 5.7%; between 2013 and 2018, this percentage increased to 9.5%; between 2018 and 2023, this figure nearly doubled to an average of 18.9% of eligible milk being depooled each month. Handlers are depooling milk at higher volumes more frequently.

And Figure 2 demonstrates that. You can see the trend towards greater depooling.

The increase in depooling has been correlated with the volatility in class prices at varying levels, with a highly positive correlation between wider Class I and Class III ranges and higher rates of depooling. More frequent depooling has also been positively correlated with lower and negative producer price differentials. These interactions are displayed on Table 1 -- in Table 1.

Based on AMS' final class pricing data from May 2012 to July 2023, the range of class prices -- calculated by subtracting minimum class price -- the lowest class price from the highest class price -- for each year was compared to the average monthly percentage of milk depooled that year using Excel's correlation function -- CORREL is the -- is the term, the abbreviation that's used in the formula, in the Excel function, but it's a correlation function -- which determines the correlation coefficient between two variables.

The same was done comparing month-to-month percentages of pooled milk with the average all-order producer price differential. A positive correlation between zero and 1 indicates varying strengths of positive linear relationships between the two variables, while a negative correlation is reflected in the value between zero and negative 1.

For instance -- for instance, the correlation coefficient of the annual range in Class I prices compared to range -- to rates of average annual rates of depooling is 0.62, indicating as the range of Class I prices was higher, the rate of depooling was higher.

Similarly -- similarly, the correlation coefficient of the monthly all-market combined PPD and monthly percent of pooled milk was also 0.62, indicating as the PPD increased, the percent of monthly pooled milk also increased.

The inequitable situation -- and there's a table there that demonstrates the substantial correlation between essentially the price volatility and the depooling of milk, and a relationship between the volatility of all four classes and the depooling of milk, which of course there's a correlation among those prices and the volatility of those prices, but they are -- they all are related.

The inequitable situation that USDA described over 20 years ago has become increasingly present in today's dairy markets. Eligible processors pool milk when marketwide pool returns are expected to be positive compared to current manufacturing class prices, but are likely to depool milk otherwise. This causes serious competitive inequities among dairy farmers, contrary to the Federal Order principle of uniform prices.

This Figure 3 is a -- sort of a simplified way of demonstrating the relationship between large changes in Class III prices and depooling by showing the average percent of eligible milk depooled on a monthly basis related to the positive change in Class III. Month to month, as the Class III price has a big increase, there's more depooling because it incentivizes depooling. On the other end, when there's a large negative change, there's less depooling, and when it's in between, it's in between.

Figure 4 -- I will go back to the text in between -- but Figure 4 I would note should say -- is -- should -- is a similar demonstration of the relationship between class price changes and -- the manufacturing class price change and depooling.

In this case, there is a typo, there is a duplicate typo on this. The -- the labels -- the labels at the bottom of each column should talk about the change in Class IV month to month, and those -- instead they say change in Class I, they should say change in Class IV. Both of those should say change in Class IV.

THE COURT: All right. Let me stop you, Dr. Cryan. We'll make those changes now.

THE WITNESS: Okay.

There's another change. There's -- in the third column it says "change" twice. The second "change" should be deleted.

THE COURT: Okay. That last thing you just told me, direct me to where I find that again on page 5 of --

THE WITNESS: In Figure 4.

THE COURT: In Exhibit 292.

THE WITNESS: In the third set of columns where it says "Below 5% Change in Class IV Change Month to Month," it should just say, "Below 5% Change in Class IV Month to Month."

THE COURT: So all we have to do there in Table -- Figure 4 is strike the word "change," the second word "change"?

THE WITNESS: That's for that correction.

But the same table, the same figure, Figure 4 is where "Class I" should be changed to read "Class IV" in two places, under each of the first two sets of the columns.

THE COURT: All right. So in Figure 4, and I look at the words below the columns, we need to change "Class I," all we have to change is the Roman numeral "I" to a Roman numeral "IV"?

THE WITNESS: Correct.

THE COURT: We're doing that, showing the "Above 5% Positive Change," and then next to that, the two columns, we're doing the same thing with the "Above 5% Negative Change," all we're changing is the Roman numeral "I" to the Roman numeral "IV" so that that accurately reflects the title of the graph, which is talking about the magnitude of change in Class IV.

THE WITNESS: That's correct. Thank you, Your Honor.

THE COURT: Those changes have been made, Dr. Cryan. Thank you.

THE WITNESS: Thank you. So I'll read the text then in between the two figures.

Large ranges and rapid increases in class prices contribute to, or at least are associated with, higher rates of depooling. Figures 2 and 3 compare the average percent of milk depooled across all markets within three different identified timeframes. The timeframe isolates months in which the Class III price for Figure 3 and the Class IV price for Figure 4 rose positively more than 5%. The second timeframe, or set of months, isolates months in which the corresponding class price declined more than 5% -- declined more than 5%. The third timeframe isolates months in which the corresponding class price -- the change in the corresponding class price, was below 5%.

Both the average and --

THE COURT: Do we need to insert a word there?

THE WITNESS: That would probably be -- be clarifying. The third timeframe isolates months in which the change in -- change in the corresponding class price was below 5%.

THE COURT: All right. And that is in line 5 of the paragraph between the two charts.

THE WITNESS: That's correct.
THE COURT: And we're adding two words before the word "corresponding."
THE WITNESS: Three words.
THE COURT: Okay. And tell me again?
THE WITNESS: Between "which" and "the" where we're changing "the change in." So it reads, "The third timeframe isolates months in which the change in the corresponding class price was below 5%."
THE COURT: So adding the words "change in the" before the word "corresponding"?
THE WITNESS: That works also.
THE COURT: All right. Thank you.
You may proceed, Dr. Ryan -- Cryan.
THE WITNESS: Thank you. I put that in your mind when I said Cryan is spelled like Ryan with a C in front of it. I have been addressed as Ryan by so many people, I can't even count it.
THE COURT: You are being confused with the other Ryan. People have begun to call him Dr. Ryan.
Anyway, go ahead.
THE WITNESS: Thank you.
Both the average and median percent of eligible milk depooled are displayed for the three different timeframes. For months where Class III prices increase more than 5%, the amount of depooled milk from the market averages 19.9%, while the percentage of milk depooled in months with -- with more than a 5% decline or lower --

than or lower than a 5% change averaged 13% and 13.3%, respectively.

Likewise, for months where Class IV prices increased more than 5%, the average amount of depooled milk from the market averaged 19.5%, while the percent of milk depooled in months with more than a 5% decline or lower than a 5% change averaged 13% and 13.9%, respectively.

It is important to note that these values are averages across orders. The impact of stricter pooling rules in certain orders is not accounted for since existing pooling rules limit the rate at which milk could be repooled it is likely the full magnitude of price changes on depooling is more extreme than presented.

As mentioned previously, when market prices rally, announced or final prices can be much higher than advanced prices, leading to low and negative PPDs. This creates an opportunity to depool milk from the order to benefit from the non-pooled value of the recently elevated prices reflected in available market information, further depressing the PPD.

Producers who incur the additional costs of consistently servicing the Class I needs of the market receive a lower return than they would otherwise have received if they did not continue to service the Class I market. Prices received by dairy farmers who supplied the other milk needs of the market are not known. However, as USDA affirmed, it is reasonable to conclude that prices received by dairy farmers were not equitable or uniform.

In their in-depth discussion, USDA ultimately decided to reduce the time lag between advanced and announced prices by 18 days, with the intention that price inversions and associated depooling behavior would be avoided. USDA defended their decision with several important points.

Firstly, the NDPSR -- which is the National Dairy Product Sales Report, the survey by which dairy product prices are collected and used for the purposes of Federal Milk Marketing Orders prices -- the NDPSR, which includes statistics and pricing information used in the first step of establishing a minimum pay price, are announced publicly every week. Therefore, as USDA puts it, "handlers can update formulas on a weekly basis to estimate what the Class I price will be before the price is announced."

Let's read through a quick example.

Announced in late May, the Class I price for June 20th was $14.24 --

THE COURT: I'm sorry, stop. The Class I price for?

THE WITNESS: June 2020.

THE COURT: Thank you.

THE WITNESS: Did I not say that?

THE COURT: You probably did, but I just want to make sure.

THE WITNESS: Okay.

-- was $14.24 per hundredweight. During June there were five NDPSR releases: June 4th, June 10th, June 17th, and June 23rd -- 24th, which is actually four.

Per these reports, the prices of the following products changed by the corresponding amounts between the first report and the last report:

40-pound cheddar blocks increased from $1.17 to $1.37, which was a 17% increase;

500-pound cheddar barrels increased from $1.13 to $1.45, a 28% increase;

Butter increased from $1.13 to $1.43, which is another 28% increase;

Whey increased from $0.378 per pound to $0.384 per pound, which is a small 1.7% increase;

And the nonfat dry milk price decreased from $0.86 per pound to $0.859 per pound, is a 0.2% decrease.

Announced in early July, the Class III price for June 2020 was $21.04. There were five releases of the NDPSR in July: July 1st, July 8th, July 15th, July 22nd, and July 29th.

Per these reports, the prices of the following products changed by the corresponding amounts between the first report and the last report:

The 40-pound cheddar blocks increased from $1.61 to $2.53. That's a 57% increase --

(Court Reporter clarification.)

THE WITNESS: Certainly.

500-pound cheddar barrels increased from $1.74 per pound to $2.50 per pound, which is a 44% increase;

Butter increased from $1.56 per pound to $1.82 per pound, a 17% increase;

Whey decreased from $0.382 per pound to $0.365 per pound, a 4.4% decrease;

Nonfat dry milk increased from $0.846 per pound to $0.959 per pound, which is a 13% increase.

The Class IV price formula does not include the commodity values of cheese in its calculation, instead relying on nonfat dry milk prices and butter prices in its formula. Given the above per pound values, the spread between the Class III and IV price could be inferred before the announcement of monthly prices pooled manufacturers would have to pay are reported. This differs from the advanced price announced for Class I and II, which are based on different previous values.

This available information means that processors have enough information and enough time to depool milk when prices change -- when prices -- price changes are clear and rapid. The presence and frequency of published commodity pricing data allow handlers to estimate price changes regardless of when a price is announced. Additionally, as more products are offered on the Chicago Mercantile Exchange, handlers will continue to have access to the information needed to hedge and manage risk.

USDA agreed on this matter in their 1999 decisions, stating:

"Also, as more NASS product price survey observations become available, basis differences from earlier traded/issued product price surveys such as those from the Chicago Mercantile Exchange or Dairy Market News will be more predictable and, therefore, should provide for more accurate predictions of future price levels. In addition, futures markets have been established for the four dairy products in the NASS price surveys. While trading to date in these contracts has not been large, interest in these markets may increase as the industry learns to use them as effective hedges to the component values to determined under this Final Decision. These markets also will assist handlers in estimating the Class I price."

Additionally, AFBF is supportive of and engaged in the development of a Class I futures and options complex that's at the CME Group to further assist fluid handlers in managing risk.

In conclusion, AFBF believes that disorderly marketing conditions are present when producers do not receive uniform prices because of frequent depooling. AFBF also believes the current system of advanced pricing contributes to the frequency and magnitude of depooling. Given the growing number of resources for data and market information, AFBF proposes a structure of announcing class prices -- all class prices at the same time.

And below is the language that would implement that. It is simple as I stated in the first paragraph.

That is our original proposal testimony submitted according to the September 8th deadline. I would -- you know, in the interest of moving things along, I would offer our rebuttal testimony which includes a few additional notes, and then -- and then move on to some analysis I did for this.

So reading from Exhibit 293, the first -- the first section is essentially -- repeats what I said at the beginning of the previous statement. And this -- again, this context, I'll briefly summarize AFBF's Proposal 18, including some comments based on the hearing record to date, in addition to offering our response to proposals -- to the other proposals, 13 through 17.

Regarding Proposal 18: AFBF proposes to end the advanced pricing of Class I skim milk and components --

(Court Reporter clarification.)

THE WITNESS: Sorry. I'll slow down.

AFBF proposes to end the advanced pricing of Class II skim milk and components and Class II milk and components.

THE COURT: Read the heading again, please.

THE WITNESS: Proposal 18: AFBF proposes to end the advanced pricing of Class II skim milk and components and Class I milk and components.

THE COURT: Thank you.

THE WITNESS: You're very welcome.

In AFBF Proposal 18, the Class II skim milk price would be equal to the Class IV skim milk price plus the Class II differential. The Class II nonfat solids price would be equal to the Class IV nonfat solids price, plus 1/100th of the Class II differential. The Class I skim milk price would be the higher-of the Class III or Class IV skim milk price, plus the Class I differential. And the Class I butterfat price would be equal to the butterfat price plus 1/100th of the Class I differential.

Advanced pricing and the average-of Class I price formula are two of the largest contributors to class price misalignments in Federal Order markets leading to negative producer price differentials (PPDs) and milk being depooled when a manufacturer faces Class III or IV prices that are higher than the market's uniform price.

The lag between the announcement of Class I skim milk and butterfat prices and Class II skim milk prices for a month being announced just after the middle of the previous month, and the announcement of the other class prices for a month -- for the same month at the beginning of the following month, can create wild divergence between advanced and announced prices in today's volatile dairy markets, as rapid upper swings of Class III or IV prices can put them far above the Class I price.

Numerous witnesses have acknowledged that eliminating advanced pricing would help realign class prices and have opposed it just because the industry is accustomed to the practice.

Class II advanced pricing serves no purpose today. Eliminating advanced pricing of Class II skim milk would create a perfect hedge with zero basis risk for Class II buyers and sellers using Class IV and butterfat contracts. Class II milk buyers are "used" to advanced pricing, as we have heard many times during this proceeding, but many are as capable of handling end-of-the-month pricing as Class III handlers, as they have been, regarding butterfat pricing for the last 23 years.

This proposal is, fundamentally, a simplification of the system to better preserve the system. Bringing Class I and II prices into temporal alignment with Class III and IV prices will go hand in hand with the return to the higher-of formula to eliminate most class price misalignments.

Testimony by multiple witnesses, including from the CME Group, suggests that the exchange would be likely to institute Class I futures and options once a need and likely volume is made clear, as the adoption of the higher-of proposal alone would do.

This is one more reason that this is an appropriate time to eliminate advanced pricing in connection with other changes to Class I pricing. AFBF is supportive of and engaged in the development of Class I futures and options -- of a Class I futures and options complex at the CME Group to further assist fluid handlers in managing risk. This would be the most convenient outcome for dairy market participants. However, other exchanges could offer these contracts, as CME does not have a monopoly on agricultural derivatives clearing.

I would note in connection with the elimination of advanced pricing that the introduction of class -- of a Class III/IV spread options contracts in combination with Class III or Class IV futures would also provide a means for hedging Class I milk. That's a technical note that is of -- of probably, you know, significant but minor interest for this proceeding.

AFBF believes that disorderly marketing conditions are present when producers do not receive uniform prices because of frequent depooling. The current system of advanced pricing continues to the frequent -- contributes to the frequency and magnitude of depooling. Given the information and risk management resources available today, AFBF supports announcing prices for all four classes of milk at the end of the month for which they apply.

The American Farm Bureau Federation response to Proposals 13 through 17.

Regarding Proposal 13: AFBF supports NMPF's proposal to return Class I base pricing to the higher-of the Class III and Class IV pricing formulas.

As NMPF has outlined, the Class I mover based on the average-of Class III or IV has had terrible impacts on dairy farmers and dairy markets when the Class I -- I'm sorry -- when the Class III and Class IV prices have substantially diverged, leading to inverted Class I, Class III price relationships and resulting in large negative producer price differentials (PPDs) and heavy depooling.

We believe that changes in the market could lead to similar price misalignments between Class I and Class IV in the near future, as cheese capacity grows and cheese prices fall. For these reasons, we believe that a return to the higher-of formula will be important to maintaining reasonable price alignments and avoiding the chaos of negative draws for Class III and Class IV milk and subsequent depooling the future.

However reasonable it seemed at the time, the mandate to change Class I pricing from the higher-of Class III and Class IV formulas pricing formulas has turned out to be:

1) bad for producer revenue, generating Class I prices that were substantially lower than they would have been without the change; and

2) bad for the stability of Federal Order pooling, increasing the incidence of Class III and IV prices getting out of line with the Class I and uniform prices and leading to unpredictable relationships among class and uniform prices, depooling, and an undermining of the principle of uniform pricing.

We believe the Class I futures and options contracts will be instituted by CME Group or another exchange, if necessary, providing the hedging opportunities which processor representatives have insisted make the continuation of the average-of formula necessary.

We also believe that NMPF has demonstrated the degree to which the average-of formula has put the greater downside risk on the farmer side of price pooling, and another critical reason to return -- another critical reason to return to the higher-of.

THE COURT: Dr. Cryan, please re-read that last paragraph.

THE WITNESS: We also believe that NMPF has demonstrated the degree to which the average-of formula has put the greater downside price risk on the farmer side of milk pricing, another critical reason to return to the higher-of.

THE COURT: Thank you.

THE WITNESS: You're very welcome.

Regarding Proposals 14 and 15: AFBF opposes IDFA and MIG's proposals to retain average-of class price -- Class I pricing with a complicated formula to adjust for losses relative to the higher-of.

Both of these proposals are unnecessary -- both of these proposals are unnecessarily complicated and do nothing to address the issue of class price misalignment, which is so important to solve. They are so complicated that they almost seem designed to put the Federal Order system itself into an absurd light.

The focus of testimony by the proprietary processor groups was on the importance of hedging for which they justified these Rube Goldberg proposals. Again, we believe that Class I futures and options (or, again, a Class III/IV spread option) would be available in reasonably short order, especially if the industry united in urging CME Group to offer such proposals.

THE COURT: To offer such?

THE WITNESS: Products. I apologize. To offer such products.

Proposal -- regarding Proposal 16: AFBF opposes the Edge proposal to use the Class III price plus an adjuster as the Class I price mover.

This is another proposal designed to maintain the opportunity to hedge Class I using existing contracts. It is well-intended and seemed to make sense a few years ago when Class III promised to be the higher milk price for the indefinite future, as it has been for many years, and as the four-class system anticipated it to be.

However, the supposedly inadequate current cheese Make Allowances have not apparently discouraged cheese plant construction, as has been clear from prior testimony. As a result, there appears to be sufficient American cheese, which has limited export opportunities -- that is to say the cheese has limited export opp- -- there are limited export opportunities for cheese on the market so that Class IV, which has an easier export outlet for its products, may tend to be the higher price for quite some time.

In that case, a Class I price tied to the Class III price could operate like a lower-of formula.

The adjuster, which would provide future compensation to the pool for current losses relative to the higher-of formula, is another Rube Goldberg design that delays payment to farmers and does not contribute to proper alignment of class prices.

We believe, as Dr. Bozic himself has testified, that the class -- that the CME Group will introduce Class I futures and options if advanced pricing has ended, and we believe they will also be responsive to the industry's desire to hedge Class I.

Regarding Proposal 17: AFBF supports the Edge proposal to both return the Class I mover to the use of the higher-of in the Class III and IV price formulas and to eliminate advanced pricing.

AFBF fully supports Proposal 17, which is effectively identical to AFBF's Proposal 18, in combination with NMPF's Proposal 13, which AFBF also supports, excepting that the -- I don't believe they make any note of eliminating advanced pricing for Class II.

Okay. That's -- that's my -- that concludes Exhibit 293. And I would now go into -- whoops, go to the slides.

Thank you very much.

I had hoped through the entire proceeding that someone would do an analysis along these lines, that -- that has been suggested by few people they would, and -- and there has not been any sort of analysis of the -- of the elimination of advanced pricing of the sort of simple historical comparison that I had in mind.

I appreciate that Dr. Bozic's paper with Dr. Wolf indicates -- does indicate the problems with advanced pricing to some degree, but I thought another approach would perhaps simplify the demonstration of that.

So -- so I'll start with -- with some graphs, which are essentially graphs that Danny Munch created. I have perhaps simplified these or laid these out a little differently than he has.

But this -- in each case, each of these will show the four class prices under different scenarios. In this case, I have added -- in all of these cases, as Dr. Brown -- as Mr. Brown did in his analysis, I have added $1.60, which is the minimum Class I differential to the Class I mover in order to provide a more accurate context for this.

And so in this case --

THE COURT: Dr. Cryan, would you spell Danny Munch?

THE WITNESS: Danny Munch is D-A-N-N-Y, and Munch is M-U-N-C-H.

THE COURT: Thank you.

THE WITNESS: Mr. Munch appeared to present our testimony on a previous proposal, so he's -- he's on the -- he's been here. But I appreciate the benefit to the audience of getting the clarity again.

So the first graph, Table 1, which is really Figure 1, says -- shows the current price formulas. And you can see the extent to which the Class I price is not consistently the highest price as was intended by the orders in their original design. And to the extent to which volatility in the Class III price, in particular in 2020, created difficulties, and you can also see the extent to which, at times, Class II has become the higher price, and there's been even higher than the Class I with the $1.60 minimum differential. So these price misalignments, I think it -- it -- looking at those, it may -- it ought to be clear from the discussions from previous witnesses that these price misalignments tend to create chaotic situations.

This is Proposal 13, the return to the higher-of presented by National Milk. This demonstrates the extent to which the Class I price tends to be higher than -- than the other classes, but it also demonstrates the misalignment associated with the advanced pricing.

You can see the times, especially in 2020, which is a very clear, in-your-face example of how these things line up. You can see the ups and down of the Class III price were trailed by the ups and downs of the Class I price, so that there were months where the Class III price was substantially above even -- even the Class I mover with the $1.60 minimum Class I differential.

The Table 13 is the --

THE COURT: Wait. Table 3?

THE WITNESS: I'm sorry, Table 3 represents Proposal 17, which is --

THE COURT: Wait. I'm sorry. I -- I maybe didn't catch up with you. Okay.

So what we have done --

THE WITNESS: No, you were right. You were right. I said Table 13 because I was already -- I was still looking at the thing that said Proposal 13. You are correct. Table 3.

We have gone over Table 2, and Table 3 now is -- reflects Proposal 17, the Edge proposal, which is very similar to Farm Bureau's proposals, to eliminate the higher-of and to eliminate -- or to return to the higher-of -- I apologize -- to return to the higher-of and to eliminate advanced pricing. And you can see how the elimination of advanced pricing ensures that the Class I price does stay above the Class III and IV prices.

And, again, it is my understanding that the Edge proposal did not address advanced pricing of Class II, so I have left the advanced pricing of Class II in this graph. And you can see the Class II is the highest price under the scenario in -- in the summer of 2022, as it was in the current regime.

Table 4 combines AFBF Proposal 18 and 21, just for clarification. That table -- Proposal 21, which we will present when we get to Category 5, is to -- is for the Class II differential to be $1.56 rather than $0.70. Lowering that green line by the difference would -- would represent the same thing, with simply eliminating advanced pricing of Class II.

This incorporates the return to the higher-of, the elimination of advanced pricing, eliminating the advanced pricing of Class II, and a Class II differential of $1.56.

It does not account for changes in composition, which we support. It does not account for a number of other things that would have an impact on this. But it does address some of the changes, most relevant, I think, to Category 4.

And you can see that there is a more -- much more consistent alignment. You can see that the Class IV is al- -- Class I price is always the highest price at the minimum Class I differential, which is slightly above the $1.56 that we are proposing for the Class II differential.

And then lastly, I will offer -- I went -- I did a very basic analysis of the pools under three scenarios, one using a status quo, and this uses data from USDA from April 2012, which is when the NDPSR began to be used in class pricing, through April 2023, because that was the spreadsheet I had.

And I looked at the four class prices under each of these scenarios. I used the utilization rates, the class utilization rates for the -- for the ten orders -- the nine orders that existed in June 2018. June 2018 was a month with -- it's the second lowest depooling. Since that time, the lowest was the following month, July, but I -- I -- my sense is that USDA tends to think of -- I'm sorry -- USDA tends -- I didn't show you that one either, but y'all had enough paper in front of you, so -- USDA tends to think of spring months as more representative than summer months, so I used June instead of July.

I used those -- those class utilization percents for all nine markets that existed at that point, or ten -- ten markets that existed at that point, and applied those utilization rates to the class prices. I looked at the gap between that estimate and the actual uniform prices in June 2018, and applied that difference to all months, and found that it was a relatively good match. As I spot-checked it through some months, it was a relatively good match, but I recognize it was somewhat crude.

I would -- the results I found, though, was that the status quo -- under the status quo, the Class III price rose above the crudely estimated uniform price 104 times out of the 1320 order months that I had. 1320 is the number of orders times the number of months I looked at. And out of 1320 order months, there were 104 times, or 7.9% percent of the time, the Class III price rose above the uniform price. 4% of the time, 53 times, which was 4% of the time, the Class IV price rose above the uniform price.

And this, again, is a uniform price -- a sort of hypothetical uniform price, with full pooling, without depooling. That's the -- the idea is once you go negative, then -- then things tail off, but it is a kind of a benchmark. A full pooling uniform price is sort of a benchmark of what -- what -- you know, what the price relationship is. We have had a lot of depooling because of these relationships. And going back and using the utilization rates from those months that are depooled, where the things are depooled, it makes it complicated.

The uniform prices are also further changed. So this is an assessment of -- of what a normal pool compared to the Class III and Class IV prices would look like.

Under Proposal 13, which is strictly the return to the higher-of, the number of times that the Class III price is higher than the uniform price is reduced to 88, or 6.7%, and the number of times the Class IV price is higher than the uniform price is reduced to 46, or 3.5%.

And under Proposal 18, it is reduced to 61 times, or 4.6%, for the Class III price being above the uniform price, and 38 times or 2.9% for the Class IV price to be above the uniform price.

And for the purpose of this, I would ask that notice be taken of -- of -- in addition to USDA exhibits, which this data is -- all came from USDA, the June 2018 information that I -- that I tied this to was based on the market -- Dairy Market News from July 20th to 27th, 2018, and I ask that notice be taken of that USDA publication.

THE COURT: Now, you said July 20. Your explanation says July 23?

THE WITNESS: July --

THE COURT: For Dairy Market News?

THE WITNESS: July -- July 23rd through 27th, 2018.

THE COURT: Thank you.

THE WITNESS: Certainly.

There is a -- that's -- I don't have a page number. I think it's page 12. There's a table that showed both the uniform prices in each market for June, as well as the utilization percentages -- estimated utilization percentages -- the final utilization percentages for each market.

I would also point out -- make a note -- I would like to point out that USDA, in their analysis of the California Federal Order, did some modeling of depooling, which I thought was very useful, and it turned out to be very predictive of manufacturers depooling once the California order was implemented, and I would encourage the department to take a look at that.

It just went -- tell me now at zero. I'm doing rebuttal. I'm slowing down at request. I'm done.

THE COURT: Well done, sir.

THE WITNESS: Thank you. I mean, I -- if I understand correctly, I could have done rebuttal later and started all over again.

THE COURT: I know, and had an hour for it.

THE WITNESS: I was trying to -- trying to put things all together.

THE COURT: Do we need a break before we begin cross-examination?

MS. TAYLOR: We need lunch.

THE COURT: Oh, really? Oh, you know, when you come late --

MR. HILL: You are telling on yourself. Don't do that.

THE COURT: All right. Please be back and ready to go at 1:05 p.m. We go off record at 12:01.

(Whereupon, the lunch recess was taken.)

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TUESDAY, OCTOBER 3, 2023 - - AFTERNOON SESSION
THE COURT: Let's go back on record.
We're back on record at 1:06 p.m.
DR. CRYAN: Your Honor, I would like to thank the gentleman helping us with audio/visual stuff, Sean. He's been doing a really wonderful job. He is -- (applause).
Yeah. Thank you.
As well as -- I would like to add my voice to the chorus praising our court reporter as well. So, thank you.
THE COURT: She is amazing, and you almost stopped amusing her.
DR. CRYAN: I'm trying.
THE COURT: It's so hard to slow down. These things are so familiar to you.
DR. CRYAN: And when the clock's running, Mr. Wilson's ready to jump on you as soon as --
DR. BOZIC: Marin Bozic for --
DR. CRYAN: I offer myself for cross-examination.
CROSS-EXAMINATION
BY DR. BOZIC:
Q. Marin Bozic for Edge Dairy Farmer Cooperative.
Dr. Cryan, are you a Farm Bureau member?
A. I am.
Are you?
Q. If you can help me figure out how to become one, I would love to.
A. Just call the Minnesota Farm Bureau, send them a

check.
Q. Okay. I thought I had to own land or something.
A. That'll work, too.
Q. Thank you for your presentation this morning. I don't have a lot of questions, but one issue that keeps coming up with the removal of advanced pricing is that handlers will not know what price to quote to their buyers.
In your opinion, how should that problem be resolved?
A. It's -- I would not presume to tell folks how to do that, but there are a wide range of ways that things are priced in the market for things that don't have official government prices added to them. And with opportunities to hedge, they can -- they can -- they could potentially become a practice.
And I don't -- I don't represent any handlers, so I can say things like this, they could all kind of coalesce around issuing prices based on the futures as of the 23rd of the previous month.
Q. And you said that there are other examples from other commodities that don't have government prices.
Do you find any of those examples particularly useful that -- you know, anything that you would like to add to the record that -- as a useful analogy or --
A. Could you repeat the question?
Q. As I understood you, you mentioned that in some other commodities where advanced prices are not published

by the government, there were other arrangements made in order to provide for appropriate timing of prices to the buyers. So I was wondering if you have any examples that you would like to add to the record.
A. I -- I don't really have firsthand knowledge of a lot of that. I know a lot of large -- I believe a lot of large retailers get companies to lock in prices for months at a time. I -- it's my general understanding. But I don't have any specific knowledge, so I won't go into detail.
Q. And following up with the example, illustration you did provide where the futures prices on the 23rd of the prior month is used. I note that we are a little bit belaboring the point here, but maybe in a minute or two, could you describe how that solves the problem for both the buyer and the handler and pool integrity?
Pool integrity from the perspective that they will get the full payment that is due; buyer from the perspective of knowing the price before the start of the month; and the Class I handler from the perspective of having their margins presumably stable as they have today.
A. Well, if they have the opportunity to go to the -- to an exchange and hedge on the -- with a Class I contract, then they could -- they can lock that it in.
I mean, you -- you went through -- somebody -- some witness went through great detail on how a hedge works. I mean, they can hedge -- they can offer their customer a fixed price, and -- and the pool can be kept

whole. I mean, that's all been gone over by other witnesses. I think it's relatively straightforward.
Q. Thank you for your answer.
In the Exhibit 294, which is your PowerPoint, on the last page -- and I don't see that there is a number on this page -- on the last page of that exhibit with the title "Manufacturing - Uniform Price Misalignments," you compare the status quo, Proposal 13, and Proposal 18.
Is there a reason why you did not also tabulate the percentages for Proposals 14 through 17?
A. I think Mr. Brown did a lot of the calculations on those. It's not exactly the same thing but -- and they're a little more complicated to manage. I was really hoping he would have done an analysis like he did for the other scenarios on Proposal 18, 17/18, and he did not.
So I felt like I had to do something to compare this at least to the -- the status quo and the -- and the simple higher-of with advanced pricing.
Q. And to make sure that I understand, you are not providing for the record any evidence that Proposal 16, which is the Class III Plus, has higher percentages of misalignment in either of these two columns than Proposal 18; is that correct?
A. I did not look at it, so I'm not making an assertion about it one way or the other.
Q. Okay. Thank you very much. That's all I have.
A. Although, I would say, as I said in the testimony, that there's -- if -- if the markets are moving the way

they seem to be, which is for Class IV to be a dominant class, you know, we have got so much cheese production capacity now that the Class III price may be the lower price for quite some time. And if that's the case, then the Class III, by extension of the class -- looking forward rather than backwards, the Class III Plus could end up being problematic and depending very heavily on your adjuster calculation.

Q.   Okay. Thank you for that clarification.

Also, you have not provided the Excel spreadsheet that accompanies the Exhibit 294; is that correct?

A.   It doesn't accompany it, but as a courtesy, at your request, I can send it out to everybody and we can -- I'm not offering it as an exhibit, but if somebody else wants to, they can.

Q.   I don't believe anybody else has the privilege to offer that as an exhibit because you created it.

DR. BOZIC: Is that correct, Your Honor?

THE COURT: I don't know. Now, this Excel spreadsheet --

THE WITNESS: It's not a spreadsheet, it's a workbook. But it's four spreadsheets, and it -- it basically is a calculation of how I got to this page. And it also is the -- it's the -- the -- it doesn't have each of these graphs in it -- oh, it does have each of these graphs in it. So there's a sheet with each of these graphs.

So it's just a verification of how the numbers

were put together without really asserting anything new.
THE COURT: So that is in addition to the electronic version of 294 that you have also submitted?
THE WITNESS: Right.
THE COURT: I would have to agree that no one else really has the foundation to offer that into evidence, because you didn't do the work. Unless you want to take that spreadsheet and prove it to yourself and then say it's valid.
BY DR. BOZIC:
Q. Dr. Cryan, would you please consider submitting the Excel spreadsheet for the evidence so that we can cross-examine based on that?
A. I don't want to spend three hours going through spreadsheet cell by cell, so, no, I won't.
I provided it so anybody can check it, verify it. If there's a problem with it, they can bring it up.
Q. Dr. Cryan, do you understand that we cannot provide any claims for the record on any errors we may find unless you submit that spreadsheet for the record?
A. As the judge said, you can. If you find some issue, if there's something you want to bring up, you can --
Q. In order for me to do that, Dr. Cryan, I have to vouch for your work.
A. I -- I'm not going to sit here with a spreadsheet in front of me and spend hours going through cell by cell what it all means. I have provided it as a courtesy so

anybody that wants to check that it -- that what I -- what I said I did here is what I did, can check it. But it's not -- it's not worth the time. It's a very simple, relatively crude analysis, and all -- I only provided it to help folks be assured that there's no -- no tricks, that it's just what it is. It is what it is.

Q. Dr. Cryan, the part that I don't understand here, is that your list that you are using actual June 2018 uniform prices is just one month, and then you list these various percentages, and you are calling it simulated uniform prices.

So what is simulated if you are using actual June 2018 uniform prices? The questions can multiply on and on. They can be very quickly resolved if we had the ability to offer questions on that spreadsheet in the -- on the record.

I'm not sure -- I can -- I can commit that I will not ask you to go cell by cell and spend hours on the stand. I would think we broke enough records on that earlier this week.

A. Yeah. I decline to offer it as an exhibit.

Q. Can you please explain how can you have the actual 2018 uniform prices and still calculate some percentages on this page?

THE COURT: Which page?

DR. BOZIC: The pages are not numbered.

MR. HILL: Title?

THE COURT: The last page of 294?

DR. BOZIC: That's correct.

THE WITNESS: Sure. I'm happy to explain again what I did.

What I -- what I -- I had was -- and Danny did a bunch of this work to basically establish calculations of what the Class I movers would be under the various scenarios. We also offered a -- we calculated, without much difficulty, what the Class II price would be under our Proposal 21. We lined those all up.

Looked at the -- as I said in the earlier testimony, I looked at the months -- the depooling by month over the last five or six years, and had to kind of go back to June and July of 2018 to find kind of the first time going back that -- the most recent months going back that the pooling was relatively small. And, again, choosing June instead of July, because, you know, May, June are typically seen as more representative than July.

I took -- I looked at the actual utilization percentages in the, I think, ten existing markets at the time, so California was not in there.

And I -- and I used those utilization percentages, and the class prices under each of three scenarios to roughly calculate a blend price, and I compared that blend price -- the price that was generated in June of 2018 to the actual uniform price, in June of 2018, I used the difference as an -- as an additional factor, as an add-on, as a truing up factor in the entire spreadsheet.

It's crude, but it's a way to kind of line things up together. And if it's crude, it's crude. I just thought it was important that something be -- some analysis be offered to at least introduce the concept of looking at how these -- how these different scenarios affect the number of months that are depooling.

And, again, I would have been very happy if Mr. Brown had included Proposal 17 or 18 in his analysis. He did not, so I felt I had to do something along those lines.

BY DR. BOZIC:

Q. I must admit, I still don't understand the last page of this exhibit. I'm going to try again.

When you say that Class III is higher than uniform, does that refer to the simulated uniform price?

A. Yes.

Q. Okay. So that table -- or the middle part of the page that resembles a table, none of those numbers there in any way use the actual June 2018 uniform prices?

A. Except in the way that I described, that's right.

Q. The way you described I didn't previously understand. That's why I was asking for clarifications.

A. I used the difference between the blended calculation and the -- and the actual uniform prices for each market as a way to true up the simulated results to better resemble actual results.

It's not -- it's not sophisticated, and you can -- anybody can say whatever they want about it. But I wanted to put something on the record that reflected the -- the difference, you know, in negative -- in the changes -- in the price relationships that incentivize depooling, both by Class III and Class IV handlers.

And these -- again, these simulated uniform prices are designed to represent what a uniform price would look like with full pooling, without -- you know, without -- with minimal depooling so that you can say this is -- this is essentially what the handlers are considering when they are deciding to depool.

Now, there's been so much depooling in the last five years that it's hard to say what normal is, but that was an effort to define a fully-pooled normal. And if the prices are better aligned, then potentially we will get back to that, we'll have more pooling, we'll have more milk in the pool, and more consistent relationships.

Q. Thank you, Dr. Cryan. There's only so much that we can do with this last page without seeing the spreadsheet.

DR. BOZIC: So I have no further questions.

THE COURT: Thank you, Dr. Bozic.

Next? Who has questions for Dr. Cryan?

CROSS-EXAMINATION

BY MR. ENGLISH:

Q. Chip English with the Milk Innovation Group. So I really don't want to dwell on it much longer, since my head already hurts.

But Exhibit 294, the last page, when you say based on utilization rates and 2018 actual uniform prices, first

I think I heard you say that you excluded California; is that correct?
A. I -- I didn't exclude California. California did not have an order --
Q. Right.
A. -- in June of 2018, so --
Q. I --
(Court Reporter clarification.)
THE COURT: Mr. English, ask your question again.
BY MR. ENGLISH:
Q. So the question was, as I understand it, because you used June 2018, which was several months before the California Federal Order came into effect, California is not included in this analysis; is that correct?
A. That's correct.
Q. Okay. So what kind of -- how did you average utilization rates across the orders that existed at that time?
A. I applied the utilization rate to each of the -- each of the orders that was there. I calculated a -- a simulated -- essentially a crudely simulated uniform price based on full pooling, what I assumed to be approximating full pooling as represented by the utilization rates in June of 2018. Because depooling was very limited in June of 2018, I -- I used the utilization rates, the four class utilization rates, to -- to essentially calculate a crudely estimated uniform price for each -- each of the ten markets before California. And then I -- and then I

compared those prices to the Class III and Class IV prices on a month-by-month basis and counted the number of times that the -- that the Class III or Class IV prices were higher than the fully-pooled uniform price.

So it does not -- it is not comparable to the actual results of depooling.

Q. I understand that.

But, for instance, let me try to simplify it greatly. If in a given month five of the orders the Class III price was above the uniform, and five of the orders it wasn't, did that count for five, say, for the column of number?

A. It essentially counted for five out of ten. Yeah.

Q. Okay. But if it's five out often, how does that -- is that reflected in the column that is "number"?

A. It's the number of order months. So each month -- each month that each order had a negative relationship counts as one. So the month -- the example you give of a month where five markets, it's a negative relationship, that counts for five. It -- it -- out of ten that month, and there were -- as I said in the earlier testimony, there were 1320 order months, which was ten markets times 132 months.

Q. Okay. All right. I really have no further questions on that.

So a number of times, but in particular on page 7 of 7 of AFBF-4, which is, I believe 292 -- do I have that right?

MR. HILL: Yes.
BY MR. ENGLISH:
Q. You discuss the Chicago Mercantile Exchange.
What precisely has the American Farm Bureau done with the respect to the Chicago Mercantile Exchange to create or urge them to create a Class I hedge product?
A. We have -- we have had a phone call or two. And we have -- it's -- this may overstate a little bit how far we have taken that, but we have explored it. It's -- there's been a lot of turnover over there and -- but we have gotten in touch with folks and expressed the interest.
But we also understand that they have -- at one time they had a dairy advisory committee that was pretty diverse from across the industry. At the moment, I understand they have an advisory committee that is -- as I understand it, this is what I was told -- is that they're dealing with an advisory committee that's essentially provided to them by IDFA.
So I don't know how -- how amenable that committee is at the moment to -- to positioning the CME to -- to make unnecessary some of the -- the average-of. So I -- I -- we concluded that we'd keep going, but that's where we're at right now.
Q. So two things from that.
First, you don't have any reason to -- you have no knowledge about whether IDFA is or is not trying to push that, correct?

A. No, I don't know.
Q. So on page 3 of 3 of page 293, in the second paragraph, where you say, "We believe the Class I futures and option contracts will be instituted by the CME Group or another exchange, if necessary," you know, I happen to believe every morning I wake up here that the hearing is going to move faster than it does, okay, and I have no evidence to show that.
What evidence do you have beyond a hope or belief that that's what will happen?
A. What I have is the -- is the experience that the CME has taken steps to, for example, add the whey contract to fill out the complex of products and prices that the Federal Orders rely on. The fact that they responded to cheese makers' concerns by implementing a block contract in order to provide for that -- that spread to allow the industry to do the risk management that they wanted to do. And I believe if the Federal Order -- if USDA moves ahead with going back to the higher-of, I believe that the industry will see a clear need and the CME will respond.
Q. But other than that belief, you don't have any evidence, you know, actual evidence -- you, yourself, said in the very -- to answer the first question, you may have overstated what Farm Bureau has done.
A. I believe -- I overstated -- it seems to overstate how far we have gone with things, but I -- I don't believe I'm overstating my faith in the CME as an institution to serve the needs of their customers.

Q. Has American Farm Bureau discussed this proposal change to eliminate advanced pricing with any customers of fluid milk processors, like retailers?
A. No. Maybe I have talked with -- no. I mean, I might have talked with Mike Brown before he went from Kroger to IDFA. But other than that, no.
Q. Has National Milk -- I'm sorry. I apologize. Typo in my thing.
Has American Farm Bureau done any study of whether removing advanced pricing will make it easier for fluid milk processors to sell HTST milk?
A. We have not.
Q. Has American Farm Bureau done any study of whether removing advanced pricing will make it harder for fluid milk processors to sell HTST milk?
A. We have not done a study in the way that you mean a study by peer-reviewed research and so forth.
Q. Okay. That doesn't have to be peer-reviewed research.
Have you done any research into whether it will either help or hurt the sales of HTST milk?
A. We have not explored with anyone outside of the organization.
Q. So in the weeks now that we have been on Issue 4, have you heard the testimony, both of National Milk and Milk Innovation Group witnesses selling HTST milk, that their customers demand advanced pricing?
A. I don't know if I have heard anybody say "demand."

No, I don't think I have heard that word. I think expect it a reasonable description of what I have heard.
Q. I will -- I will accept your clarification and correction, you have heard that --
THE COURT: So ask the question with "expect" in it, please.
MR. ENGLISH: Okay.
BY MR. ENGLISH:
Q. Have you heard the testimony by both National Milk Producers Federation and Milk Innovation Group witnesses selling HTST milk, that their customers expect advanced pricing?
A. Yes. But that's because the regime has provided for it automatically for years.
Q. Given declining Class I utilization and retailer market power, doesn't your proposal further risk reducing Class I sales?
A. I don't believe so.
Q. Or reduce the likelihood of fluid milk processors being able to recover fluid increases for the marketplace?
A. No. I don't have any reason to believe that.
Q. So if there was a rapid price increase that was announced on the 4th of the month following that sold the milk, how are HTST processors going to recover that from their retailers?
A. They will have used risk management tools like futures and -- and hedge that price ahead of time so that they can recover that.

Q. Did you hear the testimony last week from at least one fluid milk processor that even if they sell milk on long-term contracts, if they need to raise prices, those are "very difficult conversations to have with customers"?
A. I think that's true in any industry. Yes. I heard that, and I think that's true in any industry.
Q. So as opposed to a hope or a belief, given what you know about the dairy industry, do you have evidence to offer this record that elimination of advanced pricing will not harm fluid milk processors financially?
A. Do I have evidence that something won't happen? No.
Q. With respect to Class II, has American Farm Bureau Federation done any analysis of whether removing advanced pricing on Class II skim could lead to additional depooling of Class II milk?
A. No. There was some potential for that for those handlers that are -- that are exclusively Class II, but an awful lot of Class II is undertaken at Class I plants.
Q. And wouldn't that, then, put those plants that are standalone Class II plants at an advantage over Class II plants that are part of Class I?
A. Say that again? Oh, I see what you are saying.
Potentially. But if the prices are aligned and if we eliminate advanced pricing, that would reduce that.
Q. Wouldn't it also, with respect to Class II, further risk the use of solids in lieu of fluid skim milk in order to avoid that price risk when products are sold?

A. Let me back up. The eliminating advanced pricing of Class II will actually reduce the likelihood of Class II plants depooling, because things will line up better. We see in the -- in Exhibit 294, you can see the extent -- you can see that Class II has become the highest price under our current -- it's become higher than the Class I at 1.60 -- the 1.60 differential. And it's the elimination of advanced pricing that prevents Class II from becoming higher than -- than the Class I price.

So I think that while there would continue to be the risk of Class II depooling as there is today, I think it would be reduced by the elimination of advanced pricing for Class II.

Q. I was asking a different question, which is the actual loss of advanced, so Class II sellers of product would not know what the price of their product was at the time they sell it?

A. That was a follow-up question you asked. So go ahead and ask me that again so I can understand it.

Q. Okay. Given the fact that Class II handlers, especially those who are -- well, only those who are standalone in operations, would no longer know what the price of their product was of milk before they sold it as Class II products, wouldn't that incentivize them to say, since I don't know what it is under the pool, I think I'm better off not pooling it?

A. I think the Class II handlers being -- with the elimination of advanced pricing for Class II, Class II

handlers are in a better position to hedge that price because they are -- the Class I -- the Class II prices would line up perfectly with the Class IV prices. They would have a perfect hedge against the Class IV contract. They could lock in whatever price they want. They could lock in the price on the market whenever they want: In the middle of the month, before the month, a month far ahead of time. I think they actually are advantaged by that.
Q. Have you talked to Class II processors about that?
A. I have not.
Q. Have you heard any Class II processor who wants that?
A. What I heard repeatedly during this proceeding was Class II processors said they want it because they are used to it. I did not really hear any good arguments through six weeks or seven weeks of testimony that -- that there's a fundamental reason for Class II advanced pricing to continue. And I appreciate you bringing it up.
Q. So let me turn to Figure 2 on page 4 of 7 of 292.
So let me start --
A. You are on page 4?
Q. Page 4, yes. It's Figure 2, your average percent of monthly milk depooled.
A. Okay.
Q. So am I correct that for Table 1 you started with May 2012 and ran through July 2023 in order to create Table 1? Is that what you did?

A. Right.
Q. So you -- you excluded the time period before that.
Let me go back for a moment to 2003 and 2004, a time period shortly after Federal Order reform, correct?
A. 2003, shortly after Federal Order reform.
Q. Yes.
A. I thought you said before.
Q. No. Shortly after.
A. Yes.
Q. And you agree that it was, you know, within three years or four years of order reform, correct?
A. Yes.
Q. And you note that the percentages from 2002 into 2003 went up, and the percentages from 2003 to 2004 went up, correct? Of depooled milk, correct?
A. Sure. Yeah. Yeah.
Q. And then it drops down significantly in 2005, correct?
A. Uh-huh. Yes.
Q. Where were you back in 2003 and 2004?
A. I was working for National Milk.
Q. Okay. And did members of National Milk, along with members of IDFA, back in the 2002 to 2004 timeframe, seek regulatory changes from USDA post-Federal Order reform to tighten performance standards?
A. I don't -- I don't really recall. That was an issue that was generally considered a market-specific

issue, and I don't believe National Milk got involved in -- in pooling standards because it wasn't considered a national issue.
Q. I'll agree it was not national.
My question was, are you aware that members of National Milk and members of International Dairy Foods Association submitted requests to tighten performance standards and have hearings at that time?
A. I remember requests of that sort for over -- over many years. I don't remember that specifically.
Q. Okay.
A. But if you -- if you say so, I'll -- I'll accept it.
Q. Do you know for a fact that USDA did adopt, after a series of hearings, a number of changes that tightened pooling performance standards?
A. I know over the years that they have done that. I don't -- I don't recall that being specifically associated with 2003 and 2004. But if the record says so, I'll accept that.
Q. Would you agree with me that -- that it -- that we haven't had such a hearing since 2010?
A. We have not had a hearing since 2010, that's correct.
Q. And whether regional or federal, other than the California hearing, correct?
A. There have been a few -- there have been a few hearings on some --

Q. Southeast --
A. -- issues --
Q. -- issues, but not performance standards, correct?
(Court Reporter clarification.)
MR. ENGLISH: The Southeast issues, not performance standards.
THE COURT: Let's first hear the witness's answer.
And you are talking about hearings other than the California one, and you began to describe what might have happened.
THE WITNESS: There have been a few hearings on things like the Class I differentials in the Southeast, and some -- some other plant qualification standards, a handful of things. But there have been a -- there have been few, and this is, I think, the first national hearing since -- in at least -- at least 15 years, I think.
MR. ENGLISH: I asked before I started for a couple of exhibits -- or one exhibit. This is Exhibit 39.
Your Honor, may I approach and hand --
THE COURT: If you have enough --
MR. ENGLISH: Well, everybody else has it already, 39. There's one for you and one for the witness.
THE COURT: Excellent. Thank you.
These are record copies; we give them back.
THE WITNESS: Yes, ma'am.
MR. ENGLISH: It is USDA Exhibit 39 on the website. It was also admitted as Exhibit 39.
MS. TAYLOR: Right.

BY MR. ENGLISH:
Q. This hearing -- this exhibit was admitted either the first or second day of the hearing. I no longer recall. This is entitled "Adjustments to Federal Order Performance Standards: Shipping Requirements and Diversion Limits, 2010 to Current."
Did you review this when USDA put it in, Dr. Cryan?
A. I noted that they did, but I didn't pay particular attention to it.
Q. Did you hear any of the discussion about this issue back in week one or two when we were talking about Issue 1?
A. I don't recall discussion about shipping requirements and diversion limits, no.
Q. From this document one would conclude that since 2010, in a number of orders, there have either been no adjustments or adjustments to performance standards have been lowered, correct?
A. I see a number of them have been lowered seasonally, which is provided for in the orders. And a few that have been lowered until further notice. But that's the request. The request is to reduce them, right? This -- this -- this shows the request to reduce --
Q. These are actual adjustments. These are not requests. These are actually adjustments that the Market Administrator granted.
A. Right. But when they revert, they don't show up.

Q. Do you see any that have reverted?
A. Well, it shows the reduction from April -- for Order 30, from April 2017 to April 2019, from 8 -- from 10 to 8, and then -- I see, then it continues.
Q. So -- so it continues. So August 2022 to the current time has -- has been even lower, correct?
A. I see that. I see that, yep.
Q. So when you did your correlation analysis on the bottom the page 4 --
A. Uh-huh.
Q. -- did you take into consideration these kinds of reductions in performance standards as they may have affected depooling?
A. No, that wasn't really the point of the analysis. The point of the analysis was to see what the blends would look like in a -- in what we presumed to be -- what I presumed to be a fully-pooled market.
Q. But wouldn't that affect, as a variable, your annual range in Class I prices versus the annual percentage of depooled milk?
A. It would. I didn't use any actual -- I didn't use the actual uniform prices. I used uniform prices simulated for a fully-pooled market.
Q. Okay. So I'm sorry, I misunderstood.
So the Table 1 on 292 is also a simulated market; is that correct?
A. 292?
Q. I'm looking at 292, Table 1. I did not understand

that to be a simulated market.
A. No, no, that's not.
Q. And so --
A. So what's the question?
Q. Yeah. So the question is, did you consider as a variable, the differences in performance standards as an impact on depooling?
A. I did not.
Q. So you already testified with respect to 294 that you -- by using June 2018, you excluded California, because by definition California had not become a Federal Order, correct?
A. And now you are going back to the other -- the other analysis?
Q. No, I'm staying on page 4. I was merely predicating by saying that we earlier discussed 294, and you said that you used June 2018, which is before there was a Federal Order, California Federal Order, correct?
A. Right.
Q. So looking back at Figure 2, did you, in looking at your correlation coefficient, include California in those average percents of monthly milk depooled from when you look at the end of 2018, 2019, 2020, 2021, 2022, and 2023?
A. I believe so.
Q. You included California, correct?
A. For the months -- for the months that it existed. For the months that there was a Federal Order in

California.
Q. So when you did your analysis and correlation, we have six years and ten months where California wasn't there, and the remainder California was there, correct?
A. Yes.
MR. ENGLISH: Before I forget, I would like to get Exhibit 39 back to USDA, if I may.
THE COURT: Agreed. Thank you.
THE WITNESS: I would -- I would refer USDA to look at the details of their own depooling data in order to evaluate whether or not the addition of California to the system sufficiently -- substantially affects those results or not. I -- I don't propose to do that sitting here right now.
MR. ENGLISH: So just a couple more questions -- maybe just one.
THE COURT: You're --
MR. ENGLISH: I'm sorry, a couple more questions, maybe just one.
BY MR. ENGLISH:
Q. When you, on page 2 of 7 of Exhibit 292, at the top of the page you used the word "deductions are applied to farmers' checks in the form of a negative producer price differential."
Do you see that?
A. Yeah. That is certainly the perception that farmers have. That was -- the point of that paragraph is that the extent to which these negative PPDs are perceived

by farmers as a loss.
Q. And I just want to be clear, because you used the word "deductions."
And you have worked at USDA AMS, correct?
A. I have.
Q. Isn't the term "deductions" for pooled milk a term -- not just of art, but a defined term in each order under Section 73(a), authorized deductions, in writing?
A. Tell me the citation?
Q. So pick any order. I'm on 1032. So order Order 32, 73, under (a)(1), for instance?
A. So you are on 1032.73(a)(1)?
Q. (a)(1).
A. Uh-huh.
Q. The last part, very last phrase: "Less proper deductions authorized in writing by the producer."
Do you see that language?
A. I see that, but that doesn't mean that's the only way that "deduction" can be used in the English language.
Q. Okay. But I want it to be clear for the record --
A. Uh-huh.
Q. -- that when you are using it, you are not using it as used by the order --
A. As a deduction by the handler? No.
Q. Yes.
A. No. But it does appear to farmers as a deduction in their check, when they are told that their milk has the value of those components, and then there's a subtraction

for negative PPD.
Q. But you know, in fact, that's not what it is, correct?
A. Mathematically, that's exactly what it is.
Q. But that's not how USDA explains it, is it?
A. USDA presents a component value that can -- that farmers take as meaning that their components have that full value, and then the -- then there's a deduction based on how the uniform price works out. It's a problem.
Q. Is it a problem in how handlers have explained it to their farmers, or is it a problem?
A. It is -- it is a problem that the accounting for their milk check is -- is presented in a way that they appear to be losing money because of the Federal Order. There are too -- a lot of farmers believe that the Federal Orders are taking money away from them because of the way the accounting is done.
A system that lines things up so there's less of these negative PPDs would be very helpful in maintaining the integrity and support for the system.
Q. We're back to talking about belief.
Is it the case, sir, especially since you worked at USDA shortly after Federal Order reform, that producer price differentials are, in fact, a deduction as opposed to a representation of the value of the milk compared to uniform price and Class III?
A. The negative PPD is a deduction from the Class III component value to reflect the gap between the Class III

value and the actual value in the pool. So I mean, how you -- how you say that as a matter of semantics, we don't disagree on the facts, we only disagree on the semantics.

MR. ENGLISH: I have no further questions, and thank you.

THE WITNESS: Thank you.

CROSS-EXAMINATION

BY MR. ROSENBAUM:

Q. Steve Rosenbaum for the International Dairy Foods Association.

Dr. Cryan, you spend some of your written testimony and some of your oral testimony relating certain materials from the 1999 USDA decision in order reform, correct?

A. That's correct.

Q. And specifically, some of them relating to the question of advanced pricing, correct?

A. That's correct.

Q. I would like to just talk about that for a minute.

So at the time of order reform, the Class I price in a given month was based upon the manufacturing price two months earlier, correct?

A. That's correct.

Q. So just to give a specific example, since we're in the month of October right now, under the system as it existed then, the October Class I price was the August manufacturing price plus the Class I differential, correct?

A. Before order reform, that's correct. Before order reform, that's correct, that's how it was done. The BFP --
Q. And --
A. -- plus two months.
Q. And so every time that you're commenting or -- strike that.
Every time that you are quoting from USDA regarding their views about advanced pricing and whether that should be changed, that's the system they were commenting upon, correct?
A. That's correct.
Q. And ultimately what they adopted was the system that's now in effect and has been since 2000, which is that the Class I price is based upon the manufacturing price during the two-week period closest to the 24th day of the prior month, correct?
A. State that question again, please.
Q. Yes.
Now, the Class I price is based upon the manufacturing price as reported in the two most recent price surveys, weekly price surveys, prior to the 24th of the prior month, correct?
A. Yeah. They have gone essentially from two months before to the little less than a month and a half before.
Q. Well, no, they have gone to two weeks before, haven't they?
A. No. No. If the August price has been used to

price October, and that's a two-month gap, then using the first two weeks of September to price October is the essentially a month-and-a-half gap, a month and a week.
Q. You are using -- the data that sets the price that goes into effect October 1 is September data, correct?
A. It's essentially the first two weeks of September.
Q. Well, it's whatever two weeks has most -- has been reported prior to --
A. No, the surveys -- the surveys are reported on a Wednesday for the week ending the previous Saturday. So the latest that that data is relevant to is -- that that data is reporting is for the 19th.
Q. Right. And -- okay. And that's -- that takes you to the two weeks -- you are describing the two weeks of data that's closest -- reported data that's closest to the 24th of the previous month, correct?
A. I'm describing what are essentially the first two weeks -- or almost the first two weeks of the previous month. So instead of a two-month lag, you have an over-a-month lag, because if you are using the September price, the full September price for October, that will be a one-month lag. If you are using the first half of September, then it's a month-and-a-week lag on average.
Q. I mean, previously you went back all the way to data from August 1st.
A. Through August 30th.
Q. Correct?
A. 31st.

Q. And now you're using data that is more than a month fresher, right?

A. No, it's not more than a month fresher. On average, it's about three weeks fresher. You are going from essentially a nine-week lag to a six-and-a-half-week lag.

Q. And you are calculating that six weeks by looking at what the last --

A. The midpoint.

Q. -- date -- the last date --

A. The midpoint. The midpoint.

THE COURT: Let him ask his question.

THE WITNESS: Okay. Go ahead and ask your question.

THE COURT: Ask your question again.

BY MR. ROSENBAUM:

Q. How are you calculating that, six weeks?

A. The midpoint of the two-month lag is -- is you're using September, the middle of September is the middle of September, back to the -- to -- well, October. If you are using -- pricing October, to use your example, August -- the August BFP would -- the midpoint of that would have been the middle of August, right, using to price October. The middle of October is the middle of October. So it's a two-month lag.

If you are using the new pricing, the -- you are using the first two weeks of the month, so you're basically looking at about September 8th or 9th or 10th is the midpoint, to October 15th or so is the midpoint for the next one. So you are -- you are talking about a six-week -- six-week lag.

Q. And didn't USDA explicitly address whether that provided a proper balance between getting current pricing and the need for processors to have advanced pricing? Didn't they address that specifically?

A. They hoped that the use of technology to accelerate the collection -- the process of collecting the data was -- was going to provide a closer relationship between the advanced pricing and the current pricing, and what -- you know, and I think they were reluctant to overturn the thing all at once to see how far they could take it.

But the fact is that dairy prices have become more volatile over time, and as a result, that gap becomes more -- more problematic with respect to keeping advanced prices and current prices in some reasonable alignment. And, therefore, we believe it's time to cut the Gordian Knot and just get rid of advanced pricing, let the -- let technology and -- including financial technology -- the opportunity to hedge and use risk management tools that are out there, and that should be out there, to -- to allow that to -- advanced price. If you want advanced price, do it in the market, not by government dictate.

Q. So let me quote to you from page 16,102 of the decision that you quoted other things from.

Quote -- this is USDA, of course -- quote,

"Marketers of Class I products support some degree of forward pricing requiring processors of Class I products to know the Class I price in advance," end quote.
Are you familiar with that conclusion that USDA reached at that time?
A. I think that's what I just said, yeah. They didn't want to turn it over. They didn't want to upset things all at once. They tried to tighten it up. It didn't go far enough.
Q. Well, I think what they were saying was that the customers, grocery stores, for example, the marketers of Class I products, supported some degree of forward pricing requiring processors of Class I products to know the Class I price in advance.
Is that the way you interpret that sentence?
A. And they asked for it because they could, because the system provided for it. There's all kinds of things we get stuck in ruts, because the system is provided for it and people are upset about overturning it. Sometimes you have got to break a few legs.
Q. And under your approach, there would be no advanced pricing at all, correct?
A. That's correct.
Q. And there would be --
A. Except through the market. Except for the use of the futures and other forward -- forward pricing mechanisms.
Q. Well, there would -- I'm using the term advanced

pricing in the sense that it currently exists under the orders, namely, there would no longer be a system in which USDA announced in advance of the month, what the Class I price was going to be for that month?
A. That's what our proposal states, that's correct.
Q. Your proposal would do away with that obviously, correct?
A. It would. For Class I and Class II.
Q. And then in addition to doing that, your proposal would do away with using the average-of to set the Class I mover, correct?
A. That's right. That we adopt that -- we accept -- we support the National Milk proposal to do that, and we adopt that in our presentation of other elements.
Q. But National Milk does not support you on doing both, correct?
A. That's correct.
Q. Okay. Because, I mean, you -- you have heard testimony from Nestle, for example, about how they couldn't engage in hedging until the average-of system went in place, correct? Were you here for that testimony?
A. I did. I heard that.
Q. Okay. And others have opined on this subject, you -- and -- but you would obviously -- I mean, to the extent that any of those people are right, that you can't hedge absent an average-of Class I mover, you -- your proposals leave processors naked, don't they? They can't know in advance what the Class I price is going to be, as

they can now, and they can't, if the Nestles of the world are right, engage in affordable Class I hedging. You have just, if you will, kicked all the supports out from underneath my clients, haven't you?

A. They can go to the CME and work to get a Class I futures contract, then they get the same hedging forward pricing opportunities that other manufacturers have.

Q. Well, you have now moved on to my next topic. I mean, what you seem to offer up as consolation for my clients is the theoretical possibility that the CME may adopt one of two hedging opportunities, namely a Class I hedge or a Class III versus Class IV hedge, whatever you call that, that don't exist today, correct?

A. They do not exist today.

Q. And you were obviously here this morning when Dr. Bozic told us that most new futures offerings fail, correct?

A. I heard him say that.

Q. And when we don't even know whether CME would be willing to offer this, correct?

A. CME came here and testified they are open to considering it. They have also shown a commitment to their dairy customers over the years that, I believe, would be manifested into a Class I futures contract if USDA made the decision to eliminate advanced pricing and adopt the higher-of.

Q. I mean, don't you -- I mean, right now Class I handlers can hedge using the combination of Class III and

Class IV futures, correct?
A. Who can?
Q. Class I handlers.
A. I don't know whether they can do that under the -- to some degree they can.
Q. That's what Nestle is doing for 100% of its Class I milk supply, correct?
A. Well, right now with the current formula, yes.
Q. That's what I'm talking about.
A. Right.
Q. Yes. Okay. And, you know, one -- one benefit of that, perhaps to farmers, is that farmers themselves use Class III and Class IV hedging, not for Class I milk necessarily, but for -- because that's what most of their milk ends up being used for, correct?
A. Most of the milk ends up --
Q. Let me just ask you point blank rather than my speculating as to what exactly their motivation is.
Do dairy farmers or their cooperatives use Class III and Class IV futures as part of their --
A. I believe so. I believe we have heard that testimony in this hearing.
Q. Right.
And so -- and we have also heard that liquidity is really important to the success of futures in general?
A. Yes, liquidity is very important. And as was suggested by my questions of Dr. Bozic earlier, the nice -- one of the very nice things about the dairy

contracts is that they are cash settled against prices, regulated prices, in fact, prices that are typically used as benchmarks in the dairy industry.

So whether or not there's a big liquid market, which is kind of necessary to settle out a delivery-settled contract like cattle or corn, you know, in the -- in the cash -- in these cash-settled contracts, the CME does not require step downs. They allow anybody to hold these contracts to settlement because there's no reason to make them -- to reduce their positions ahead of time like is required for -- for delivery-based contracts. There's a wide range of reasons why the Federal Milk Marketing Orders and the pricing systems in the Federal Milk Marketing Orders has provided an almost ideal scenario for the establishment of cash-settled contracts on a range of dairy products and milk types for the relatively low risk.

And I -- and I do believe that the CME is responsive to its customers, and I do believe that they will institute a Class I futures contract if -- if the regulations change in such a way that that becomes necessary.

Q. The current participation by Class I handlers in the Class III and IV futures markets under the average-of approach, which is now in effect, I mean, that would -- that would disappear from those futures if, in fact, we went back to higher-of, right?

A. Is the question whether Class I handlers would

stop using III and IV futures?
Q. If -- well if -- if it -- I mean, according to Nestle the answer is yes.
So I'm asking you is that your view as well?
A. We -- we heard testimony from a lot of -- from a very small number of Class I handlers that they are -- that they are forward pricing their milk. What we heard from more was we would like to, some day we will, but we haven't yet. That seemed to be the result -- that seemed to be the result of the move towards the average-of, that there was a lot of expectation that this would become widespread, the use would become widespread among Class I handlers. And the evidence from this proceeding seems to be that it is been rather limited. It has, perhaps, been large enough to spur enough folks to go back to the CME and say we want to keep doing this, so let's get a Class I contract on the board. That would be the hope. That would be the expectation.
Q. You are saying that's actually happened?
A. No, I'm saying if there's an appropriate regulatory change, then I believe some of those customers who have become accustomed to using Class III and IV contracts will go to the CME and say, we would like a Class I contract.
One of your witnesses, or perhaps one of Mr. English's witnesses, when I asked him, would you like to see a Class I futures contract, said that would be very interesting. I think a lot of those folks doing risk

management on Class I would just as soon see a Class I contract as a III and IV contract. I think they would be just as satisfied with that.
Q. Didn't that witness say something like, some time in the distant future that would make sense?
A. He said he would like to see the market, he would like to know that it's a liquid market.
Q. But --
A. I don't think he said in the distant future. If he -- perhaps he did, but I don't -- I don't recall that.
Q. But right now they have a liquid market, right? The Class III and IV futures contract --
A. They do.
Q. -- correct?
A. And they are facing basis risk because of advanced pricing. If you eliminate advanced pricing, then their basis risk goes away. I think that would be very good for the risk management of -- by -- of Class I handlers.
Q. Okay. And I'm addressing here whether you are killing the futures market for those people?
A. I don't believe so.
Q. Because you hope that something new might be put in place?
A. I don't believe that they are that large a share of the market that they are -- that they are contributing that much to the liquidity of the Class III and IV futures markets.
MR. ROSENBAUM: That's all I have. Thank you.

THE WITNESS: You're welcome.

CROSS-EXAMINATION

BY MR. MILTNER:

Q. Good afternoon, Dr. Cryan.

A. Good afternoon.

Q. Ryan Miltner representing Select Milk.

So in your cross-examination you talked a lot about the PPD and whether it's a deduction or not a deduction, or what you meant by deduction.

Would you agree with me that the PPD is simply an accounting measure that -- that relates the uniform price to the price that a producer receives?

A. Yeah. It is an accounting measure, but it's not that simple because it's not -- because of the -- because of the perception, it has -- it has substantial ramifications. The way it's presented is -- becomes problematic at times.

But I think what's more important is recognizing that when that goes negative, it means that something's out of whack. It means that the system is not operating the way it was designed to operate at its origin, and that it's -- that it -- that the result is -- well, the -- that means that it's -- it behooves us to find ways to avoid negative PPDs.

Q. In my experience, when a producer has asked who is taking the money out of my check because there's a negative PPD, I have suggested that if you sell your corn for $4 minus a local adjustment of $0.10, that doesn't mean someone is taking money out of your corn. I've found that doesn't always resonate.

Have you had a similar experience in trying to explain this to producers?

A. I have -- I have had the conversations with National Milk, at USDA, at Farm Bureau. It's a -- it's a -- it's -- you know, you want to explain the accounting, but at the same time, when that PPD is negative, it raises some real questions about whether some -- what's working and what isn't working.

And I do often -- you know, and the fact is at times depooling means -- to those producers that are in the pool, it means somebody is taking their money, that somebody is taking the -- the -- what would otherwise be a pooled value and -- and redistributing it.

So the principle of uniform pricing is compromised by -- by those types of outcomes.

Q. I wanted to ask a couple of questions about Exhibit 294 on the last page. And I hope I'm not repeating what's already been asked, but there's a risk I will do so.

Where you state in the third line on there, "uniform prices under various regimes."

By "various regimes," you mean you're comparing the status quo, Proposal 13, and Proposal 18; is that correct?

A. Yeah. And by "status quo," I mean the current, the current regulation applied to the entire history.

Q. Okay. Now, when I looked into your courtesy spreadsheet, it appears to me that you have taken this period of 13 years, April 2012 to April '23 --
A. Well, 11 years I guess, yeah.
Q. Yes, thank you, 11 years -- for each of the orders, and you have, whatever that multiplies out to be, I think 1320 observations or so?
A. Correct. 1320.
Q. You have a monthly observation for each individual order?
A. Right.
Q. And so where you now have a count under your number column, that is the number of individual observations where Class III was greater than the uniform price as you calculated it, correct?
A. Right.
Q. And so if I look at Class III, the "number" column, and the Proposal 18 row, there are 61 instances where that occurs.
And so it could be that of those 61 observations, I mean, theoretically 10 of them could be in one particular calendar month, but it happened in every order, correct?
A. 10 of them, yeah, could -- right. It could be, yeah.
Q. Right. Okay.
A. And I should say that these -- these numbers were higher than I expected. The -- the advanced --

eliminating advanced pricing has a significant impact, but not as large as I expected.
Q. Okay.
A. It's -- I think it still is important to squaring up the system and making it work better. And I think, in combination with some of the other things, it would also help. And perhaps a more detailed analysis would show more but --
Q. And so this -- this particular depooling trigger that you have analyzed is the one that results primarily when the delta between Class III and Class IV is particularly large, correct?
A. This is when the -- when the Class III or Class IV price is above what a fully-pooled uniform price would look like.
So, for example, if you think about the uniform price in the terms of the way California's state system operated, where everybody has to participate, or everybody who normally participates, participates, then you have a fully pooled uniform price.
If the class -- if the Class III or IV price stays below that, they don't -- they are not -- they don't really have an incentive to depool. If it goes above that, then they -- then they can have an incentive to depool. And then -- and then there's a downward slide as depooling leads to lower uniform prices, which leads to lower sort of equilibrium of depooling.
Q. So if you were to eliminate advanced pricing,

would that -- would that occur when the gap between III and IV gets particularly large?
A. Ask the question again, please?
Q. Sure.
Proposal 18 assumes the elimination of advanced pricing, correct?
A. Uh-huh.
Q. Okay. So that eliminates depooling when you would have an -- otherwise have a class inversion, correct?
A. Right.
Q. So where you identify these instances, is that -- would that have to be triggered by a large gap between Class III and Class IV?
A. I think, generally speaking, yeah. I mean, if you have precluded price inversions of Class I and other classes, then necessarily it's something else bringing down the uniform price to the point where the -- there's now an incentive to depool.
So, yes, a big spread between III and IV in either direction can -- can lead to a uniform price low enough that III or IV exceeds that.
Q. And I think Dr. Bozic suggested that there is no combination of proposals in this hearing that would avoid that type of depooling incentive.
Would you agree with that?
A. I think -- I think the higher-of reduces it. There are months when the higher-of and the advanced would -- would stop specific instances, but it does not --

it does not make it impossible to continue to happen.

And I think your assessment is correct that probably most of these, most of these scenarios in here where the -- the manufacturing price rises above the uniform price are scenarios where there's a big gap between III and IV.

Q. Thank you.

Okay. Mr. English asked you some questions about the CME's Class I futures and options and the status of development of that. I don't want to repeat those questions, but there is one that I don't believe he asked.

Have you, in your role with Farm Bureau or otherwise, attempted to figure out what the mechanism for such an instrument might look like under a higher-of mover?

A. What the mechanism would look like?

Q. Yes.

A. I -- I can only expect it to be a cash settled set of futures and options contract like those for the Class III and Class IV. Is that -- does that answer the question? I'm not sure I --

Q. Maybe but -- but maybe not.

We have heard testimony that using the higher-of, it's much more difficult to hedge the price risk for a Class I handler.

A. Uh-huh.

Q. Correct?

A. Right.

Q. We have heard testimony that it can be done with over-the-counter products.
A. Right.
Q. And I think it was also suggested that some sort of creative combination of existing futures and options could construct something that would work.
Would you agree with that?
A. I -- I don't believe there are -- there's a combination of -- I have tried to figure it out, and I think probably other folks who know much more about this than I do have tried to figure it out, how to -- how to construct a hedge using futures and options on the -- that exist. And I -- I haven't seen it in my -- I think either of Class I futures contract or a Class III/IV spread option which doesn't exist, neither one of those exists, could -- could accomplish that. You know, the option -- the spread option in combination with the Class III or Class IV contract could accomplish that, but it doesn't exist. So I don't believe there's any combination of current instruments that -- that -- on the exchange, that can do that. But -- right? Swaps and over-the-counter trading can do it.
And there are other exchanges other than the CME. I think it would be -- as I said -- as I attempted to say, I don't know if it was presented very clearly, it would be much more convenient for the industry if the CME had -- had the Class I futures contracts, but others could as well. I mean, another clearing -- clearing body could do

that as well.
Q. If the CME were to offer an instrument like that, do you imagine that it would have to be some sort of complex derivative of existing tools that is packaged as a Class I offset, or would it be a completely unique product where someone else is voluntarily accepting the risk that is being shifted?
A. Right. Just a brand new contract. It would look just like -- I think it would look just like the Class III and Class IV contracts.
Q. Okay. And in your discussions with the CME, has -- has that -- have the discussions advanced to any level like that?
A. No. I mean beyond I think the basic discussion of the assumption that the contract would look like other contracts.
Q. Okay. So have you heard the testimony from -- from -- yeah, from HTST processors, and that they -- those that have testified, they have almost uniformly asked for the average-of mover to be maintained for the purposes of their own risk management?
A. No. I mean, we have had co-ops come and present, who are HTST processors, and they have asked -- that they have supported National Milk's position.
Q. That's a very good clarification.
Those proprietary HTST handlers that have testified?
A. Those people who came here to support the IDFA and

MIG proposals, yes, they have asked to keep the average-of. They have asked to avoid going to the higher-of.

Q. Okay. So if counsel for those processors asked you if you agreed that those same handlers said their customers absolutely would not accept a fixed price, did you -- do you recall that question?

A. The fixed price?

Q. Yes.

A. I heard a lot of folks talk about their customers' expectation that they get the price ahead of the month, but I'm not sure what you mean about the fixed price.

Q. Well, I assume that's -- yes. That's a more accurate statement, that they need to have the price in advance.

A. And actually, I think I understand a lot of retailers -- I think I did hear at least one of the witnesses say that they would like to have fixed prices instead of having to adjust it every month. So, you know, that's all a matter of -- of using -- using hedging in the market to be able to do that, to lock something in over a longer period of time. That's what the -- the ESL processors were talking about, using those tools in order to lock prices in over time. If there's a Class I futures contract, they can do the same thing.

Q. I think that's -- that's what I was going to drive at next, was if a -- to your understanding, if an HTST processor can actually hedge their costs, wouldn't they

necessarily be able to know those costs to communicate to their customers before the month occurs?
A. Say it again?
Q. Sure.
If an HTST processor is able to adequately hedge their raw milk costs, wouldn't that necessarily mean they could provide their price to their customers in advance?
A. Sure.
Q. Just one last couple of questions.
What is -- for Farm Bureau's members, what's the main reason for them supporting a return to the higher-of over all their options?
A. The higher-of. There was a lot of lost Class I revenue in the -- during the COVID years and since. There was a lot of -- there's -- there was a lot of negative PPDs, partly because of that. It's felt like there was a lot of chaos, and that the processors benefitted at the expense of farmers, that -- that they want to go back to what they had before. They felt like it was -- it was -- it turned out to be a bad deal. I think there's a general agreement on the -- on the producers' side that it turned out to be a bad deal.
Q. Am I correct that the process for AFBF to establish a policy position is that each individual local Farm Bureau group is solicited their opinions, and those opinions are fed up to a county, and then a state level, and eventually to the national level where it's voted on at the national convention?

A. That's close. They are not -- nobody's soliciting the county farm bureaus to come up with something. Nobody goes and stirs them up and says, give us your opinion about this. They make the -- you know, AFBF and the State Farm Bureaus and the local farm bureaus in some states, they have staff and offices in some states. They are much more shoestring.

They -- they react. They respond to farmers offering resolutions. A farmer comes to a county farm bureau meeting and says, I think this ought to change, and the voting -- voting membership of the farm bureau is generally tied to being a farmer, or very closely tied to agriculture. So farmers vote at a county level. They look at a resolution at the county level, and if it's approved, it gets -- it gets passed on to the state, and then there's a resolution process at the state.

So everything is initiated by -- by farmers -- farmer members at the local level, occasionally through a state committee. But when a -- state committees are reluctant to submit formal resolutions. More typically they will -- they will refer it back to -- to somebody at the county level, where there's a discussion at that grassroots unit, and things move up through the process. And at every step of the way, it's a farmer decision. It's farmer-initiated, farmer-driven, and farmer-decided.

Q. And so the proposals from Farm Bureau here are exactly that: Farmer-driven, farmer-voted on, farmer-approved?

A. Right. They are all -- they are all either -- they are all either -- they all either represent a specific farmer-driven policy or they are founded on a farmer-driven policy.

Q. And I'm not asking you to agree that this is, in fact, the case, but hypothetically, if at this hearing, you, as an expert dairy economist, said, "I think there's another combination of options that would work as well or better to address farmer income, the impacts of depooling, and better risk management for the producer," am I correct that you personally would not be able to change the position that Farm Bureau has on that?

A. There's -- there's two parts to that. Two parts to my answer.

Part one is that, you know, there are -- some of our policies are -- are -- some of the policies are more -- some of the policies are more specific and other policies are more sort of aspirational, they say this is the outcome we want. And when it's about the outcome, if there is a -- if there is a better way to achieve the outcome, then we can talk -- we can talk about it.

The second part of the answer is that the thing that's -- that has really struck me about going to work at Farm Bureau is the extent to which our policy process generates sound coherent policy. I came into it kind of expecting to be a little more -- to have the policy book to be a little more chaotic, and I am struck by how -- how coherent the policies generated by that kind of grassroots, bit-by-bit development, turns out to be. And I think our dairy policies are -- are very sound and very coherent.

Q. If there were a combination of proposals that would better address, in your opinion, the concerns of Farm Bureau members, how would you be able to change Farm Bureau's position, or -- or how would Farm Bureau, then, be able to get to a point where it may endorse something different?

A. Our members are -- are reasonable and open minded, and there's been a lot of evolution of some of the policy. We have a dairy working group that -- that went through some iterations and arrived at some recommendations, some of which became policy through the grassroots process and some of which didn't. We have an ongoing discussion about these things. We are more involved in Federal Order policy through the involvement of our members than we have been really ever before. In the last four or five years we have been more involved than we ever have been, and our members are appreciative of it, and they are involved and there's an ongoing discussion.

They -- they are interested in good policy. They -- we had the forum in Kansas City last October where there was a very good discussion, and a lot of members listened to folks like Chris Herlache and Mike Brown to understand the balancing that has to be done between the interest of processors and producers. And we -- you know, that's how we came to the position that we accept that

Make Allowances may need to be changed, but that they should be based on the audited mandatory data. I mean, there's -- our members are -- are more engaged than ever, and they are actively engaged in the discussion.

Nothing -- if something we have -- something in our policy book is not sound, they will figure it out and it will be -- it will be improved upon.

Q. And --

A. And I haven't really heard anything that I think is more sound than what we are offering.

Q. You will get my question anyway on it.

A. Okay.

Q. And Select, for the record, doesn't have a set position on the mover yet, either. We're trying to weigh all of the evidence and testimony.

But would the IDFA, despite your statement that it's Rube Goldbergian, would the IDFA proposal, over time, return as much money to producers as the higher-of?

A. I haven't looked at it in detail, but if it returns it over time and not now, it could -- it's not necessarily helping everybody. And I -- and I -- I guess -- I guess I would say that, you know, to refer to -- to both -- to some of these things as Rube Goldberg devices is -- is perhaps harsh, but it's -- and it's -- I also believe there's a -- there's good intention and there's adjustments.

But there comes a time -- and I learned that when I was at USDA, as folks would say, "Well, how do we fix this?" And I would say, "Oh, let's do this, that, and the other thing, let's build this." And they would say, "No, that's not really going to fly."

And there's a time when you just have to kind of simplify things, because the -- the layer after layer of complication really raises questions. It causes problems, like people not -- not understanding why they have a negative PPD that's a deduction from their check. It -- you know, whether it is or it isn't, it certainly looks like it. And it's, I think, you know, simplification.

Farmers are always talking about, how do we simplify the orders? How can I understand how this thing works? That's what they -- over and over again they talk about simplifying the orders, and -- and -- and we got to start somewhere. So that's -- that's what our proposals are about.

MR. MILTNER: I'll stop my questioning there. Thank you.

THE WITNESS: Okay. You're welcome.

MR. HILL: Your Honor, I think this might be a good time to take our first break for the afternoon.

THE COURT: I think so, too. Please be back and ready to go at 2:50. That's 2:50.

We go off record at 2:38.

(Whereupon, a break was taken.)

THE COURT: Let's go back on record.

We're back on record. It is 2:50.

How would you like to proceed?

MR. SJOSTROM: Your Honor, I would like to ask this witness a question.

THE COURT: Excellent.

CROSS-EXAMINATION

BY MR. SJOSTROM:

Q. Lucas Sjostrom, Edge Dairy Farmer Cooperative.

Good afternoon, Roger.

A. Good afternoon, Lucas.

Q. As you were providing your written testimony, Exhibit 293, the bottom of page 3, Edge believes you wrote correctly how we wanted Proposal 17 and 18 portrayed, that they're -- I think in meaning identical of each other. You did -- you did add verbally that you believe they are different in terms of Class II.

So as you were giving testimony, we were scrambling to figure out where we screwed up. As we looked through it, we do not believe we screwed up, and they are identical. So I would ask that you withdraw Table 3, Proposal 17, on Exhibit AFBF-4B which is 294, if that's the case.

If it's not the case, we'll look -- keep looking for that error. But we do believe that Proposals 17 and 18 are indeed identical in intent and in purpose, so I would ask that you make that --

A. I -- I'm not going to withdraw the table, but I'm happy to correct on the record that my understanding based on the summary that was in the -- in the Federal Register was incomplete, that, in fact, you guys didn't remember, because I -- when I said that, I looked to see -- to get a signal from you guys whether you had it in or not, and you weren't sure.

So I -- I acknowledge that the proposal from Edge, Proposal 17, does include the elimination of advanced pricing for Class II, and I think that's a very sound policy choice. And again, I'm happy to acknowledge that. And I don't think we're -- withdrawing the table accomplishes anything. But it's on the record, and I appreciate that. I appreciate you letting me know.

Q. Thank you, Dr. Cryan.

MR. SJOSTROM: Thank you, Your Honor.

THE WITNESS: Thank you.

THE COURT: Are there other questions of Dr. Cryan before I ask to hear from the Agricultural Marketing Service?

There are not. The Agricultural Marketing Service may proceed.

CROSS-EXAMINATION

BY MS. TAYLOR:

Q. Good afternoon.

A. Good afternoon.

Q. I have a couple of questions. You talked a few times, it's in your testimony, you talked a few times about how Class I contracts, the CME could do something with that, or it could be found on other exchanges.

Just wondering for the record if you could elaborate on what other exchanges could do that, because

basically all the testimony has been around the CME.
A. Yeah, I think that it's important to recognize that there are other exchanges. There's the ICE --
Q. Don't use acronyms.
A. I think that may be their name now.
Q. Okay.
A. I forget what it used to stand for, but there's quite a few other agricultural commodity exchanges. There's been a lot of consolidation, and I don't have a list of them. But there are several other substantial agricultural commodity exchanges that could -- if, you know, so induced to offer something like this. Cash-settled contracts are much simpler to implement than delivery-based contracts.
And the -- under the Dodd-Frank rules, there's such a demand for clearing organizations, that I think there's been some proliferation of those, so --
Q. Okay. I want to turn to your Exhibit 292, on page 3.
A. I'm sort of making a note, and I'm thinking that the next -- that the next time I testify I should have more information for you about other exchanges. Okay.
What are we looking at?
Q. Exhibit 292.
A. Yes, ma'am.
Q. Page 3.
A. Page 3.
Q. Figure 1. There's a footnote for 2012 that's only

May through December. I'm curious what happened to January through April.

A. This was -- a lot of this stuff was -- was developed using the data from AMS. The data from AMS, based on the DPS -- the NDPSR, sorry -- I should know that. Of all people, I should know that.

Q. You should definitely know that.

A. Yeah. The NDPSR was implemented in April of 2012. And of course, if you are looking at year-over-year changes, then you need to start with May. So that's -- that's what it is based on the data.

Q. Okay.

A. The light was better.

Q. That's helpful.

A. That's not where I lost my keys, but the light was better over here.

Q. Okay. If we can turn to page 5, and I want to talk Figure 3. So most -- most of our questions, I think, have been answered. I won't -- I'm trying not to be repetitive.

But as I read through and listened to you read through the text on that page, and tried to follow that on the graphs, the figures on that page, I got a little lost on the middle set of -- the middle figures where it says above 5% negative. It seems like a double something.

A. Yeah. I think the idea is -- and probably these columns should be reversed, the last two. The last column should be the one in the middle, because it really represents the middle. Yeah, it represents the limited change, and the negative -- the larger negative change is the more extreme in the other direction. So they are a little under -- you know, they are a little disordered, but the basic concept is actually, I thought -- this was Danny's concept, and it's a pretty good way to kind of break it out in a way that makes it relatively easy to understand, we had hoped. That the rising Class III and rising Class IV prices had a big impact on depooling, and that that is pretty specifically associated with advanced pricing.

Q. And I -- I'm kind of clear on that concept. But since this is -- this is our only opportunity to understand the figure with you here and ask questions, so --

A. Sure.

Q. -- I understand that the columns on the left are depooling when there's a positive change in the Class III price greater than 5%.

A. Right. And the one in the middle -- I understand. You want to clarify for the record what this is actually saying. So --

Q. That would be helpful.

A. Yes. So what the one in the middle is saying, it's a larger -- larger than 5% decline in the Class III price, that middle one. And the last, the third column is less than 5% change in either direction from month to month in Class III.

Does that clarify it? And then the same thing with the lower, with the Figure 4 for Class IV.

I appreciate that. I understand that you are just trying to understand. You are trying to make the record clear.

Q. Right. We don't get to call you later and ask, so this is it.

A. I'm reading too much into it. I apologize.

THE COURT: If I could just ask, just now noticed, Dr. Cryan, that the blue are showing us an average and the orange are showing us a median. Is that correct on every one of these columns in Figure 3 and in Figure 4?

THE WITNESS: Right.

THE COURT: And I'm surprised they are so close to each other. I thought there would be a bigger difference between average and median. Could you explain that, what those are?

THE WITNESS: I mean, the median is just if you take those months, the average is the -- the mean is the -- the average is the mean average. When you add them all up and then divide them by the number, and that's the average, so that's the average size of the depooling volume.

And the median is, you line them all up in order, and the one in the middle of the line is the median. So that's what -- you know, sometimes they are both -- I mean, mathematicians refer to both of them as types of average, a median average and a mean average. In popular vernacular, we typically think of the mean average as the average, and the median has to be defined specifically.

Sometimes they are -- sometimes those can be different, but in this case they are -- they are similar. It's not that unusual for medians to end up similar if you have got a relatively straight line -- straight line distribution.

THE COURT: Thank you.

THE WITNESS: You're welcome.

MS. TAYLOR: Okay.

BY MS. TAYLOR:

Q. If we can turn to 294, and this might have gone to Mr. Sjostrom's point, but I was reading, so I might not have caught all of what he was talking about earlier.

Table 3 on Proposal 17, which is the Class III Plus proposal. And you say that the red line shows basically what the Class I price would be under their proposal, which would be the announced higher -- well, no. That doesn't make any sense.

Can you tell me what this is showing me?

A. That is more or less --

Q. I should state that the thought in my head didn't make any sense. I was not commenting.

A. Right. This was my understanding, and I identified it as Proposal 17 because I had understood from the summary of Edge's Proposal Number 17 that they did not address advanced pricing on Class II, so I had simply left that as is with that, with the advanced pricing.

Marin and Lucas clarified for me that, well, when they went back to look, they clarified -- they confirmed that they did, in fact, propose the elimination, so that in effect, Proposal 17 and Proposal 18 are identical.

So Class II in this table should look like Class II -- well, it shouldn't look like Class II in Table 4. Table 4 we have also added the $1.56 instead of the $0.70 on the differential.

I'm sorry, I forgot the question.

Q. Well, I think I made my own mistake since there's two Edge proposals on the subject, that 16 is a Class III price plus --

A. Right.

Q. -- and 17 is their higher-of, and I had confused it in my head. Because I was wondering why the red line said announced higher-of, and that didn't make sense to me, but I was thinking about the wrong proposal.

A. 17, as clarified by the folks from Edge, 17 is completely consistent with Farm Bureau policy, but it's -- but the Class II on this graph does not reflect that.

Q. Got it. Thank you.

One last question. I know you had some back and forth with Mr. Rosenbaum on the impact to some Class I handlers who currently are able to hedge but, you know, wouldn't under your proposal, and he brought up a few of his members.

But I'm curious your thoughts on the impact to smaller Class I processors, not the big guys, but the smaller guys who don't have that ability to just -- and the resources to do hedging.

A. Uh-huh.

Q. If you get rid of announced pricing, kind of, the impact to them and how should we be thinking about that as we make a decision?

A. I mean, okay. Farmers -- a large farmer is really a small business for the most part. Most farmers -- the cutoffs for agriculture, you know, for the small business definition are ridiculously small, and -- and farmers go out and they manage their risk. Farmers use all kinds of risk management tools to manage their crop risks and their monthly delivery price risks for delivery of milk.

I don't think there's -- I don't think it's beyond the small processor to make use of these tools as they develop. Farm -- I mean, farmers are -- farmers are constantly doing this kind of thing, and so I -- I believe that processors are capable as well.

MS. TAYLOR: I think that's it for AMS. Thank you.

THE COURT: Mr. Rosenbaum.

CROSS-EXAMINATION

BY MR. ROSENBAUM:

Q. Mr. Cryan, is it correct that the only exchange in the United States currently handling any dairy futures of any kind is the CME?

A. Today, yes.

MR. ROSENBAUM: That's all I have.

THE COURT: Dr. Cryan, do you want to --
THE WITNESS: I'd like to move, yes, I would like to move -- I would like to -- I have no other redirect. I think I have said my piece.
I would like to move the -- whatever the term is.
THE COURT: Into evidence.
THE WITNESS: The admission of these three exhibits into evidence, please.
THE COURT: Is there any objection to Exhibit 292 being admitted into evidence?
There is none. Exhibit 292 is admitted into evidence.
(Exhibit Number 292 was received into evidence.)
THE COURT: Is there any objection to Exhibit 293 being admitted into evidence?
There is none. Exhibit 293 is admitted into evidence.
(Exhibit Number 293 was received into evidence.)
THE COURT: Is there any objection to the Exhibit 294 being admitted into evidence?
There is none. Exhibit 294 is admitted into evidence, with our thanks.
(Exhibit Number 294 was received into evidence.)
THE COURT: Thank you, Dr. Cryan.
I'd like to go off record at 3:07 while a

statement is being distributed.

(An off-the-record discussion took place.)

THE COURT: We're back on record at 3:08 p.m.

Ms. Hancock.

MS. HANCOCK: Your Honor, Mr. Sjostrom is intending to present some testimony on Edge-14, and National Milk has an objection to this testimony being outside the scope of this hearing.

I don't know if it's something you would like to take up before he reads his testimony in or if after, and so I guess I'm just alerting you so that we can maybe make the decision before we get too far down the road.

THE COURT: All right. You are willing to have him read it so that I'll know what to do with the objection. Is that partly it, since I have no idea?

MS. HANCOCK: I think it's fair to say that everyone would stipulate that this is a compromise -- or an offer by Edge of being a proposal that is different than the proposals that were originally articulated by the Hearing Notice.

DR. BOZIC: May I speak, Your Honor?

THE COURT: Yes.

DR. BOZIC: Your Honor, this is --

THE COURT: Go ahead and say who you are.

DR. BOZIC: Marin Bozic, Edge Dairy Farmer Cooperative.

The testimony that Mr. Sjostrom was about to read, or is about to read depending on your decision, is a simple combination of Proposals 13 and Proposal 16. And the reason for this testimony is to offer a choice to AMS that incorporates all of the evidence that has been heard on this topic over the previous two weeks.

We are not introducing anything new. We are just saying you don't have to choose between the proposals, you can adopt multiple proposals as one proposal.

MR. HILL: Your Honor? Brian Hill, OGC.

Yeah, Ms. Hancock beat me to the punch. So I was having the same conversation here as to whether I should say something before or after this was introduced.

It seems the -- well, first, the Hearing Notice mentions that -- let me see if I can find this real quickly.

The summary is: A national public hearing is being held to consider and take evidence on proposals to amend the pricing formulas in the 11 Federal Milk Marketing Orders. And that's essentially 7 CFR 1000.50. And also -- let me find this real quickly -- 1052, the Class I differentials.

It appears that this proposal would instead be looking at changing the classification of uti- -- classes of utilization, which is in 1000.40, which would make this outside of the scope of this hearing. And so I'm not sure what you want to do with that, but the Secretary has already determined that anything outside of 1000.50 or 1000.52 will not be considered in any decision.

THE COURT: Give me the cite for the section that this would fall in that is not noticed.

MR. HILL: 1000.40, classes of utilization. That's what it appears. If they tell me something different, I would like to hear it.

THE COURT: Dr. Bozic -- oh, let me hear from Mr. English first.

MR. ENGLISH: So I think before we get into the weeds on this, whether it's an offer of proof or otherwise, I think unless Your Honor has read the statement or wants to take a break and read the statement and then rule, which I think is -- would be faster to allow the witness to put it in.

I have a rather complex comment to make, partly because Your Honor has been maybe fortunate enough not to have been here for the entire hearing, and may or may not be aware that there was an objection made on Day 1 -- not an objection but a -- well, yeah, it was an objection -- objection made on Day 1 by both National All-Jersey and the Milk Innovation Group about the scope of the hearing.

I'd rather -- I think, from my perspective, we can -- I think you need to know what the statement is before you can make a decision anyway. So the question is, do you let him make an offer of proof and then rule? Do you take the time to read it and rule without his doing that? It seems to me we save more time by letting him do it. I think the objection can still stand. I think it would be reserved, and I just think that we can move more quickly trying to do that today.

If we allow him to make the statement with the recognition that you may rule ultimately that it's not evidence, but give you an opportunity to listen to it to be able to make your ruling. And I think you are going to hear a fair amount of argument afterwards about what happened back on Day 1 and how it might relate to this and everything else.

So I think that would be an efficient way to move, recognizing that both OGC and National Milk can reserve their objection, so if that's okay with people -- the alternative is to let the Judge read it while we take a break.

THE COURT: No.

MS. HANCOCK: I can present another alternative. We have Mr. Covington prepared to go on the stand today, and so we could let you consider this overnight -- not to use up your evening time -- but we could let you consider this overnight by reading it.

My concern is, is how do we unring the bell if we put it into the record? I mean, obviously, we have preserved our objection by making it, but, you know, in an effort to try and save time, it would be great not to have to even use record time for it.

THE COURT: Now, we have plenty of time to do both Mr. Sjostrom and Mr. Covington before 5:00.

MS. HANCOCK: We do, but we have other witnesses that are prepared to go today as well, like Dr. Vitaliano, if we had -- if we were going to be able to save us one

witness slot.
THE COURT: Well, let me ask about that. I'd like to get Mr. Covington in if he wants to go back to his farm and bring in his hay. And so he would actually be my preferred next witness. And perhaps if we did that -- take a five-minute break, change the order of things, let Mr. Covington testify, we could finish him today, and then we can decide what to do next.
DR. BOZIC: Your Honor, I'm not sure whether Mr. Covington is planning to be here tomorrow. I do know that Mr. Sjostrom needs to leave tonight.
THE COURT: You have to leave tonight? I thought this was your life.
MR. SJOSTROM: No. I have a few hats, as you may have remembered.
THE COURT: Then, that's important. Yes. Okay.
Let's keep going. I'm going to need a break soon, but let's get started with how we're going to proceed.
I'm going to mark this document as an exhibit so we know what to call it. This is going to be 295. And I note that the name of it is "Testimony in Support of Logical Outgrowth of Proposals Number 13, Number 14, Number 15, Number 16, Number 17, and Number 18."
Now, up at the top it's called Edge-14.
(Exhibit Number 295 was marked for identification.)
THE COURT: The reason I'm intrigued by this document is we have already told Dr. Bozic that the

hearing is where you present evidence, and if you fail to present it at the hearing, you cannot expect that if you mention brilliant things, even if supported by documentation in a brief, they are not evidence, they are argument.

So if, in fact, people have a proposal that takes into account the dynamics of what's been happening here in the hearing, I think that's a wonderful thing. So I love that this was going to combine all those proposals. But if it's really about Edge-14, which has been objected to from the beginning, that's different.

So the only way I can decide what to do is to look at Exhibit 295 and accept Mr. Sjostrom's testimony that I'm about to take as an offer of proof as to why what he's going to tell me and why Exhibit 295 should be admitted into evidence. And if I reject that, reject that offer of proof, the fact that I gave it a number does not mean that it's evidence. However, it would be part of the record of rejected documents, as is done. Things that are offered but either accepted -- I'm sorry -- offered and either accepted or rejected are part of the record.

So that's what I would propose to do.

Let me ask Dr. Bozic, is that something you want me to go forward with, and if not, why?

DR. BOZIC: Your Honor, I fully agree with your approach. I share Mr. Hill's concern that this hearing needs to stay within the bounds of what was originally noticed for a hearing. But unless we are going to tear the baby apart to decide that each alleged mother, you know, should have it, we need to find a Solomonian solution, and this is what Mr. Sjostrom is here to present.

THE COURT: So is he King Solomon or am I?

DR. BOZIC: You would be Queen Solomona, I guess.

THE COURT: All right. Very good. Thank you. We will proceed on that basis.

Would you state and spell your name, please?

MR. SJOSTROM: Lucas Sjostrom, L-U-C-A-S, S-J-O-S-T-R-O-M.

THE COURT: Have you previously testified in this proceeding?

MR. SJOSTROM: Yes.

THE COURT: You remain sworn.

MR. SJOSTROM: Thank you.

LUCAS SJOSTROM,

Having been previously sworn, was examined and testified as follows:

THE COURT: You may -- you may read Exhibit 295, you may testify apart from what is in 295, in whatever order you would like.

THE WITNESS: Thank you, Your Honor. And my counsel has left me, but I did prepare this myself, so -- I have given an introduction to myself, but I'm just going to read this into the record.

Edge participates -- and as fast and as slow as I can.

Edge participates in this proceeding, not just to advocate for the proposals we have filed, but also to learn from other participants, challenge, and draw the best out of all witnesses, and contribute to finding a solution that will work well for producers, processors, and consumers of dairy products. In that spirit, we previously suggested slight modifications to National Milk Producers Federation's Proposal Number 1 on standard milk composition, and a proposal that would reduce, but not eliminate, the role of barrel cheese in determining the value of protein.

This week the topic before us is base Class I skim milk price. In various testimonies this week and weeks before, we heard the need for hedging raw milk input costs by manufacturers of extended shelf life, or ESL, and aseptic milk products, who typically offer their buyers a fixed price, for example, a price that does not change from month to month.

In contrast, most manufacturers of the traditional high temperature short time products have no need to hedge, as they simply pass through any month-to-month changes in Class I milk price to buyers of their products. Exceptions to this would be sales to schools, government, and foodservice.

The difference in marketing practices among Class I handlers creates a situation where a subset of fluid milk product manufacturers is pleading with the USDA not to take away their ability to hedge so that they may continue to provide a flat price to their customers and effectively manage their Class I price risk. Others in the HTST space are protesting any proposals under which they would need to start hedging if advanced prices were abandoned.

Having heard all the evidence presented so far, Edge would like to invite all participants at this hearing, trade associations, producers and processors, and particularly USDA, to think "outside the box." We believe it is possible to find a pricing method for base Class I skim milk price that would meet everyone's needs -- there's an "S" for correction there on the paper -- in line with the policy objective set in the Section 2, Part 4, of the Agricultural Marketing Agreement Act, to look for solutions that avoid unreasonable fluctuations in price.

To that end, Edge would like to introduce a logical outgrowth proposal based on submitted proposals and evidence heard thus far. Our objective is to preserve the ability to hedge by those Class I companies that do hedge, while at the same time, return to the higher-of approach of pricing fluid milk where hedging is not used or needed.

Essentially, this proposal combines Proposal Number 13 by the National Milk Producers Federation and Proposal Number 16 by Edge Dairy Farmer Cooperative. It also combines discussions found in testimonies and cross-examination from proponents of all six proposals noted -- noticed -- excuse me -- for this section.

Proposal 13 stipulates a reversal to higher-of as existed prior to 2019, which would decimate nascent hedging programs by Class I handlers. In contrast, Proposal 16 abolishes advanced prices and pushes the sector further towards hedging, even beyond the current average-of regime.

How can these two be reconciled? We propose that AMS consider splitting Class I milk into two subclasses: Traditional Class I available to HTST manufacturers, and utilizing the National Milk Producers Federation's Proposal 13 to price the Class I milk.

A new subclass, I-H -- H for "hedgeable" -- all milk processed as extended shelf life or aseptic would automatically be classified to Class I-H, and others can elect it if they can demonstrate to the Market Administrator's satisfaction that they are regularly offering their product on a forward price basis and are currently hedging, or wish to start utilizing hedging tools to manage their price exposure.

The milk in Class I-H would be priced per Proposal 16, Class III Plus with no advanced prices. To prevent adverse selection, the switch between subclasses should be difficult to make, with a very long lead time. We suggest a lead time of at least 24 months.

We anticipate that providing specific targeted pricing incentives that facilitate hedging could spur further growth of the extended shelf life and aseptic fluid milk sector, adding innovation into the fluid milk category. Extended shelf life and aseptic milk continues to be a growth area for dairy. Since 2019, nearly 30 HTST plants have been shuttered and 11 new ESL/A plants have been opened. This trend, if continued, would imply an ever rising share of Class I milk that is priced on Class III Plus, both a gradual transition towards our Edge's preferred solution.

At the present time, we anticipate that -- and this is a correction we have made in listening to testimony -- we anticipate that 10 to 30% of Class I milk is hedged or offered on flat price basis and would qualify for sub-Class I-H.

THE COURT: Let me stop you --

THE WITNESS: Yes.

THE COURT: -- and we'll make that correction.

So on the record copy, I'm looking at page 2 of this, we'll call it proffered Exhibit 295, and the next to the last full paragraph, fourth line down, currently shows "10-20%." The witness has just said the "20" should be "30."

Can you find that on this document?

So if you would strike -- now, am I correct, Mr. Sjostrom?

THE WITNESS: Yes. And, Your Honor, by doing math, two lines down the "80" will become "70."

THE COURT: Ah, all right.

THE WITNESS: Thank you.

THE COURT: So we will just strike "20" and insert "30," and two lines below that we will strike "80" and insert "70." Done. Thank you.

THE WITNESS: Thank you.

I'll re-read at the beginning of that sentence.

At the present time, we anticipate that 10 to 30% of Class I milk is hedged or offered on a flat price basis and would qualify for sub-Class I-H. Those dairy producers anxious to return to higher-of pricing would see 70 to 90% of Class I milk priced, again, using the formula they understand and trust.

Edge members, and all U.S. dairy farmers, have repeatedly asked for more innovation in the fluid milk sector. One way to lower risk and allow more opportunity for innovation is to lengthen the shelf life of the product and manage the risk associated with the flat price contracts for inventory value.

Finally, dairy farmers want to see the best price discovery possible. While the regular Class I and the sub-Class I-H are both fluid products with mandatory pooling, they do deserve separate pricing solutions and the accompanying risk management tools to go along with them.

Per Proposal Number 22, AMS is authorized to make such changes as may be necessary to make the respective Marketing Orders confirm with any amendments thereto that may result from this hearing. We strongly believe that the proposal we are submitting today is a logical outgrowth of the discussion heard so far, and respectfully request that USDA rule before the end of the in-person hearing proceedings whether they would find this proposal and other outgrowth proposals submitted by Edge thus far as admissible.

Such ruling is not pre-judicial, i.e., does not indicate that USDA prefers those proposals over others, but would provide incentive to all parties to offer their substantive comments in post-hearing briefs in favor or against such outgrowth proposals, or deepen the ideas presented thus far with detailed suggestions for implementation. These changes create a pathway towards solution by utilizing the combined wisdom shared throughout this important process.

THE COURT: Do you have anything to add to that before you are asked any questions?

THE WITNESS: No.

THE COURT: All right.

Dr. Bozic, you may come to the witness stand. I'm about to rule. What were you about to do?

DR. BOZIC: Just be at your availability.

THE COURT: Thank you. Good.

I remember, Dr. Bozic, when you had a brilliant answer, Mr. Miltner asked you your opinion on something, I believe it was Mr. Miltner, and your opinion was, "It's worth considering."

And this is worth considering, but you can't do it as this hearing's been noticed. You know, it's a great idea to have USDA decide to change horses midstream, but they can't. Legally they can't.

So I'm going to reject Exhibit 295 as evidence in the case. It will be part of the record. It is thought provoking, and there are pieces of it that can be utilized without getting into classes of utilization. There are pieces of it that are ideas that people will benefit from having found here.

But I'll agree with Mr. Hill that we -- we cannot, in this hearing -- which can't do all things, and I hope there's another Federal Order hearing soon -- but this one will have to stay between the lines and be consistent. It would be unfair to everyone who's already been here -- well, to everyone who's already submitted a proposal under the rules to change the rules now.

DR. BOZIC: Thank you, Your Honor.

THE COURT: Thank you both.

Now, is Mr. Sjostrom free to leave knowing that he won't be here tomorrow? Is everyone in agreement with there's nothing left over that you want him to stay for or be around for later today?

All right. I'm going to take that as a yes, because no one leaped up.

All right. So I am marking my copy that I'm using that I have rejected, Exhibit 295, for the reason that the proposal that we create an additional classification was not noticed, that category of classes of utilization was not noticed. And as Mr. Hill provided, that's in

Section 1000.40.
All right. Mr. Covington, you may approach and be seated in the witness stand, and I would like to take a five-minute break while his documents are being distributed. So please be back and ready to go at 3:40.
It's now 15:34. We're going off record.
(An off-the-record discussion took place.)
THE COURT: Let's go back on record.
We're back on record at 3:41.
First I would like the witness to state and spell his name.
MR. COVINGTON: Calvin Covington. That's C-A-L-V-I-N; Covington, C-O-V-I-N-G-T-O-N.
THE COURT: Thank you.
I'm being handed your statement, and it's already marked as 296.
(Exhibit Number 296 was marked for identification.)
THE COURT: 296.
And, Mr. Covington, you have previously testified?
MR. COVINGTON: Yes, ma'am.
THE COURT: You remain sworn.
MR. COVINGTON: Yes, ma'am.
CALVIN COVINGTON,
Having been previously sworn, was examined and testified as follows:
THE COURT: Ms. Hancock, you may identify yourself and proceed.

MS. HANCOCK: Thank you, Your Honor.

DIRECT EXAMINATION

BY MS. HANCOCK:

Q. Good afternoon, Mr. Covington. Welcome back to the stand.

Did you prepare Exhibit NMPF-104 in support of your testimony today?

A. Yes, ma'am, I did.

Q. And we have marked that as Exhibit 296. If you would proceed with your testimony, please.

A. All right. Thank you.

This testimony is presented in opposition to the portions of Proposals 16, 17, and 18, which eliminate advanced pricing. This testimony is presented on behalf of Southeast Milk, Incorporated, with the support of National Milk Producers Federation.

And, Your Honor, I'm going to skip over the rest of the first page since it's been presented before and start with page 2.

My testimony will provide seven reasons for opposing the elimination of advanced pricing.

Number 1: The nature of packaged fluid milk. I estimate about 90% of packaged fluid milk sales is considered conventional and processed using high temperature-short time (HTST) pasteurization. Conventional packaged fluid milk is the most perishable dairy product in the dairy case. In practical terms, packaged fluid milk is marketed using just-in-time strategies. Most buyers of packaged fluid milk, especially large retail grocers, receive fluid milk deliveries multiple times per week. It is common for retail grocers to refresh their dairy cases with packaged fluid milk frequently throughout the day. There's no practical method to store HTST packaged fluid milk for more than what would represent a few days of a retailer's needs. This is unlike many Class III and Class IV retail products, such as butter and cheese, which can be stored for longer periods.

Grade A farm milk delivered to pool distributing plants marketing conventional HTST packaged fluid milk is processed, packaged, distributed, and sold in a relatively short time period. It just makes good economic and business sense to know at the time of purchase, the price of the product with a relatively short shelf life, especially compared to other dairy products. Federal Milk Marketing Order advanced pricing in Class I milk provides this price. Without advanced pricing, this pricing goes away. Waiting until most of the product is already distributed, and much of it consumed before knowing the price, is not a prudent business practice.

Reason number 2: Pricing of packaged fluid milk. Most HTST packaged fluid milk, especially private label sales and institutional sales (schools), is priced by fluid processors to its customers monthly based on some type of pricing formula. In simple terms, the formula has as its base the raw milk cost. The raw milk cost is significant and the highest single item cost of the total expense to process and package a unit of conventional HTST fluid milk.

The monthly Federal Milk Marketing Order Class I price is used to determine the base raw milk cost in the pricing formula. Most dairy plants manufacturing cheese or butter base their selling price, generally, off Chicago Mercantile Exchange (CME) daily cash prices. Fluid milk plants marketing excess cream use the CME butter price to establish the base selling price. A buyer of cheddar cheese or even cream can look at CME prices and know the base price they will expect to pay for a truckload of block cheddar cheese or a load of cream. Fluid milk has no daily price basis such as the CME. The base price is the announced Federal Milk Marketing Order Class I price.

To further explain packaged fluid milk pricing and the need for advanced pricing, I provide the following example:

Assume I own a group of grocery stores. I contract with a fluid milk processor for gallon jugs of private label packaged conventional white fluid milk for my stores. My monthly price for the packaged fluid milk is based on the formula negotiated with the fluid milk processor. The formula is the monthly Federal Milk Marketing Order Class I price at the location of the fluid plant, packaging costs, the resin used to make the jug, the cap and label, and any added ingredient cost, plus a tolling fee. In this formula, assume the cost of raw milk represents 75% or more of my total cost of a gallon of whole milk at the fluid milk's plant dock.

Using the month of September 2023 as an example, I knew on August 23 of the prior month the price for the packaged milk I would purchase from the fluid processor during the month of September. How did I know the price? Federal Milk Marketing Orders announced the September Class I price in advance on August 23. This advanced price notice enabled me to set my retail store milk prices in September, prior to the beginning of the month.

Knowing my package milk cost in advance allowed me to consider any milk promotion plans. Announced Federal Milk Marketing Order Class I pricing allowed me as a retailer to know the packaged milk price in advance. Advanced pricing allowed the fluid milk processor to know the price the plant would receive for the packaged fluid milk prior to the raw milk being processed, packaged, and sold.

Now, look at my situation as a retail grocer under Proposals 16, 17, and 18, which eliminate advanced pricing. For the packaged fluid milk I purchased in September, I will not know the cost until the afternoon of October 4. Why? Without advanced Class I pricing, it would be October 4 before the September Class I price is announced. Again, the price of the raw milk represents at least 75% of my packaged milk cost. Most of the packaged fluid milk I purchase in September has been sold before the price I paid for the product is known. From a retail grocer's perspective, this is not orderly marketing of fluid milk.

History tells us there can be significant month-to-month price increases in the Class I milk price. Advanced pricing telling us what the next month's milk price will be and plans can be made accordingly. Without advanced pricing, the actual announced Federal Milk Marketing Order Class I price would not be known until the following month, after most of the product has already been distributed and sold.

When there is a significant monthly increase in the Class I price, I see the possibility of retailers going back to their fluid milk processor, and the fluid milk processor going back to the dairy farmer cooperatives supplying them with milk seeking price relief when there's a large month-to-month price increase. This is not orderly marketing. It opens the potential of fluid milk processors in the same marketing area not having equitable raw milk cost and the potential producers in the same marketing area not having uniform pricing.

Reason number 3: Additional burden on fluid milk processors and cooperatives. If the sections of Proposals 16, 17, and 18, which eliminate advanced pricing were adopted, it would be unrealistic to think many retail grocers would not seek some type of continued advanced pricing on Class I products. This due to the example just given and the tradition of advanced Class I pricing, fluid milk processors and cooperatives that supply raw milk to fluid processors would be asked to respond to that request.

To meet the request, fluid processors and/or cooperatives would need to calculate an estimated advance Class I milk price. An estimated Advanced Class I price would require later true-ups to the final announced Federal Milk Marketing Order Class I price. Doing this would require additional accounting and recordkeeping, plus there is the potential true-ups could be upside limited. This means fluid milk processors and/or their milk suppliers take the hit when prices rise faster than forecast as indicated above.

On past occasions cooperatives were asked by fluid processors to develop Class I price estimates in advance of the Federal Milk Marketing Order Class I price announcement with a promise to true-up later. Let me share with you an actual example.

It was December, and the January Class I price announcement date was just a few days before Christmas that year. Some fluid milk processors and their customers want to get a jump start on Christmas. They wanted to have their January milk price announcements out of the way several days before Christmas. Fluid processors asked their supplying milk cooperatives to estimate the January Class I mover and announce the cooperatives' Class I price several days before the actual Class I announcement.

Desirous to meet the request of its customers, the cooperatives agreed, including a future true-up. The true-up is the difference between the estimated Class I price and final Class I price, up or down. The true-up is carried over to the February price announcement. The cooperative does not receive the final settlement for February milk until March. The true-up would not be reflected in the dairy farmers milk check until the check received in March for February milk.

If all of this sounds complicated, it was. Personally, I can tell you when this was done, it was one big mess. It met the definition of disorderly marketing. I regretted agreeing to do it and departing from the Federal Milk Marketing Order advanced price schedule. It was not done again. The scenario just described is for a one-off pricing date accommodation. Imagine how complex this could get if these estimations and true-ups occur monthly.

Adding to the market disorder created by true-ups there is a possibility of notably different Class I raw milk costs across competing Class I milk buyers. These would not be due to differences in prices based on plant location, but rather variations in effective prices due purely to differences in the forecast of Class I prices. Unequal pricing for the same product is disorderly and should be avoided.

Reason number 4: Institutional buyers of fluid milk products. School systems and other public institutions such as military bases and prisons are large buyers of packaged fluid milk. Most schools and public institutions purchase packaged fluid milk based on a pricing formula similar to what I used in my earlier example. These pricing formulas are known for their being rigid and strict, with the only change being monthly changes in the raw milk cost.

Advanced Class I prices allow schools and other public institutions to know in advance their monthly milk cost and plan accordingly. It would be a challenge to have a true-up program with a school, a military commissary, and explain to them why they could not know the milk price prior to purchase and why they needed to true-up beyond what they already pay for milk.

Reason 5: The Class I price. Fluid milk processors pay the highest regulated raw milk price. The Class I price is higher than Class II, III, or IV. Eliminating Class I advanced pricing creates a one-sided change. Dairy farmers retain the economic benefits of a higher Class I price, but fluid milk processors lose the pre-knowledge of their raw product cost.

Reason 6: Dairy farmer benefits. Advanced pricing benefits dairy farmers by providing a mild buffer to blend price fluctuations. When Class III and IV milk prices are falling, advanced class prices are the last to be impacted. This buffers the inevitable declines in the blend price. Depending upon Class I utilization, this buffering can be a little or a lot, but it is nonetheless present and important.

The one place in Federal Milk Marketing Order pricing where the industry, and in particular dairy farmers, get a peek over the fence at what prices may be coming at them are advanced class prices. Advanced prices provide a realtime look forward for milk pricing trends. They are the first regulated prices to signal what is coming. Elimination of advanced pricing removes this market signal.

With advanced pricing, there is no doubt when dairy product prices increase, there is a lag period before the Class I price increases. On the other hand, when dairy product prices decline, there's a lag period before the Class I price declines. Over the years, dairy farmers have regularly expressed to me that they want to know as far in advance as possible the direction milk prices are moving. Advanced pricing helps provide a look forward for the milk price direction.

Reason number 7: Little benefit. Reducing the potential of price inversions is the justification provided for eliminating advanced pricing. There's no argument eliminating advanced pricing helps reduce price inversions. NMPF, and its member cooperatives, recognize the need to reduce price inversions. Adoption of NMPF Proposals 1, 13, and 19 would help do so.

The marginal benefit from eliminating advanced pricing does not exceed the marginal cost. As the old saying goes, do not let the cure be worse than the disease. Advanced pricing provides benefits to all involved in the fluid milk food chain from dairy farmers to consumers. Advanced pricing should not be eliminated just in order to help solve a single challenge.

Federal Milk Marketing Orders do not establish or regulate the retail price of packaged fluid milk. However, some acknowledgement of Federal Milk Marketing Orders and its impacts on retail marketing of Class I fluid milk is appropriate. It is helpful to retail grocers and institutional buyers to know the cost of packaged fluid milk in advance. The current system of Federal Milk Marketing Order advanced Class I pricing addresses this need. Advanced pricing allows retailers to better implement their marketing strategies and allows institutional buyers easier budgeting.

Advanced pricing has served the fluid dairy industry well for many years. This hearing shows there are Federal Milk Marketing Order provisions where processors and producers have differences of opinion. Advanced pricing is one Federal Milk Marketing Order provision that most fluid milk processors, and those cooperatives who supply fluid milk to these processors, largely agree on.

We strongly encourage the Secretary of Agriculture to retain the advanced pricing provisions in all Federal Milk Marketing Orders.

Respectfully submitted.

Q. Thank you, Mr. Covington. Just a couple of questions I want to follow up on.

We have heard various lines of questions arounding -- around depooling and -- and how advanced pricing also will help either eliminate or reduce the instances of depooling. And I'm wondering what your thoughts are with respect to that.

A. Well, as I mentioned in my testimony, you know, other proposals of National Milk Producers Federation have been proposed, does address that to some extent. But I'm just going to give you my personal opinion. This is not opinion of Southeast Milk, and this is not opinion of National Milk Producers Federation, and it is outside the scope of this hearing.

Each Federal Milk Marketing Order, each Federal Milk Marketing Order has pooling standards, or what I call performance standards. And those standards are standards in regards to what we call touch-day provisions, the number of days that producer milk must be delivered to a pool or supply distributing plant, how much milk that could be diverted and still receive the -- be a part of the pool and still receive the uniform price, and also some Federal Orders have requirements about once you get depooled, a percent or how long you have got to stay out before you can get back in. But all those performance standards are -- each one is different for each individual order.

And so my personal opinion, that progress could be made on trying to slow down eliminating depooling if each individual order would look about what changes they could make to their individual order performance standards to tighten them up. To tighten them up. Again, that's outside the scope of this hearing, and it's on a regional basis or each order basis.

But there's such a variation in performance standards for pooling standards from order to order. The order that I represent, the Florida order, has the tightest standards of any Federal Milk Marketing Order. And, again, there's no supply plants in that order, only pool distributing plants. But for a producer's milk to be pooled on that order, it has to be -- one-day's production has to be delivered ten days each month to be a part of that Federal Order, and the diversion limit -- diversion requirements are very tight. They vary seasonally.

From June to November only 10% of the milk can be diverted to a non-pool plant and still participate in that order. Then it goes up to 15%. Then we get March, April and May, it kicks up to 20%. But if you go to some other orders -- and again, I'm not as familiar with those without looking them up -- diversion requirements could be 70, 80, 90%, and maybe only 10% has to be delivered, and touch base might only be once a month or not that frequently.

But personally, my opinion is to look -- for each order to look at individual performance standards in their orders if they want to make more progress on the issue of price inversions.

Q. And you participated on the task force for National Milk and spent a considerable amount of time getting ready for this hearing, and then even for the amount of effort that you put into this hearing, why not have it at a national hearing and have the decision made once and for all right here for everyone across the country?

A. There's a reason we have 11 different milk marketing orders, not one big one. There's such a wide variation in the way milk is utilized in this country, and those performance standards need to recognize that. What's good for Florida might not be good for California, or Washington, or Wisconsin.

And so that's the reason it needs to be looked at on a local basis, or an order basis, not on a national basis. One shoe doesn't fit all sizes when it comes to performance standards.

Q. So it's fair to say that -- that some of the decisions or some of the factors that go into the decision about what -- when there should be limits placed on depooling, those are regional in nature?

A. In my opinion, they should be left up to each individual order.

Q. And what kind of factors go into making a decision that are more regional in nature?

A. Well, I'll go back and give the example from the Florida order. Okay. And, in fact, I can't remember the exact year, I know there's been questions here at this hearing and been information presented, has there ever been any time when pooling standards were tightened?

Well, it was 2004, '05, '06 -- don't hold me to that -- that the Southeast Milk actually made a request in the Florida order to the Market Administrator to tighten them.

The Market Administrator in some orders has got a leeway. So we did request they were tightened, there was no opposition, and the Market Administrator granted that.

In making that decision, we tried to look at what was most economical for that order for the producers supplying that market and do what was the best to make sure that we -- that the pool distributing plants were supplied with the adequate volume of Class I.

So in other orders, I'm not quite as familiar with those. You got to look at the Class I needs, the producer milk volume, what you need for reserve is several factors. And those decisions, in my opinion, can best be made at the individual order level.

Q. Thank you, Mr. Covington.

MS. HANCOCK: Your Honor, we'd make him available for cross-examination at this time.

CROSS-EXAMINATION

BY DR. BOZIC:

Q. Marin Bozic for Edge Dairy Farmer Cooperative.

Good afternoon, Cal.

A. Good afternoon.

Q. On page 4 of the -- did we assign the exhibit number for the --

THE COURT: Yes, this is 296.

///

BY DR. BOZIC:
Q. On page 4 of the Exhibit 296, last paragraph, last sentence of the last paragraph, you state: "Unequal pricing for the same product is disorderly and should be avoided."
I would like you to imagine Mr. Michael Dykes saying this sentence in his chairman's lecture of the Dairy Forum in 2023. Michael -- I'm not going to try to mimic his accent. His accent would be similar to yours.
But do you think that if a government official would be in the room, that they could find his statements that unequal pricing for the same product is disorderly and should be avoided, in violation of the Sherman Act?
A. Well, I can't tell Michael Dykes what to say or not to say. I'm assuming -- well, there's an IDFA lawyer here, and I'm assuming -- I don't know, you need to ask the IDFA lawyer, you know, what advice he would give him. I am not going to tell somebody else what to say or what not to say.
Q. Can you see how this sentence in any other setting other than this quite unique world of Federal Milk Marketing Order regulation could be seen as anti-competitive, that unequal pricing for the same product is disorderly and should be avoided?
A. Well, this testimony was written for this hearing. And there's two purposes of Federal Milk Marketing Orders: That is to ensure that we supply the Class I market and promote orderly marketing of milk. And this is the third

testimony that I have presented so far at this hearing. I have got one more to come. And I have tried to write all of them trying to keep those two things in mind.

And we -- and, again, one of the reasons why I wrote what I wrote, and opposing the elimination of advanced pricing, because there is the potential if we eliminate advanced pricing, as I have testified to, it could create disorderly marketing. And one of the things that causes disorderly marketing is not having equal raw product cost for Class I milk.

Again, if you go back and read the Agricultural Marketing Agreement Act of 1937, it talks about ensuring equal raw product cost for handlers within the same marketing area.

Q. Thank you.

On page 5 of the Exhibit 296 under point 6, dairy farmer benefits, you elaborate how advanced pricing tends to stabilize mailbox prices.

Would it be a fair restatement of your paragraph that advanced pricing tends to stabilize milk mailbox prices from month to month?

A. No. I -- I would -- I would disagree with that statement, because there's other things that impact the mailbox price.

Q. No, I'm not saying that it's the only factor. But you are saying that advanced pricing benefits dairy farmers by providing a mild buffer to blend price fluctuations. So whether we call it mailbox price or strawberry fields, the fact is that dairy farmers take home some amount of money that is more stable from one month to the next because of advanced pricing.

Is that a fair statement, according to you?

A. Well, I'm going to answer that by -- by -- it might help, if I'm getting your question right, for me to explain what I mean by what I wrote there, especially with buffering.

Q. Sure.

A. We only have advanced pricing on Class I and Class II skim. In even in a Federal Milk Marketing Order like Florida, we still got some Class II fat and Class III and Class IV. Those prices are going to be announced later after the end of the month. And what I mean by buffering is that, you know, as -- again, as you testified, those prices react quicker to what's happening in the marketplace.

So if Class III -- butter and cheese are going down, Class III and IV is going down, Class II is going down, producers still have a little -- have some advantage from the higher Class I when prices were up. And what I mean by that paragraph and that buffering, they don't get the full blunt as that price goes down. Yeah, they are going to get part of it based upon the utilization of how much Class II butterfat and III and IV of that month.

Q. So the month-to-month changes in the producer pay prices would not be as steep when the market is in a nosedive because they receive part of their income from

the previous months' advanced prices?
A. Again, that's what I meant there by buffer. Because you are going to have one price calculated based upon what dairy product prices were during in one period of time and the other classes on a different period of time.
Q. Right.
So, therefore, their pay prices would be higher with the advanced pricing than without advanced pricing when the market starts going down. That shouldn't be controversial. I'm just trying to --
A. That is correct. And then the same thing, the opposite when prices go back up. And, again, I think I have that included in my testimony, yes.
Q. So would it also then imply that given that this is a national policy, not a regional issue, advanced pricing is applied throughout the nation, that because of the advanced pricing, when the markets are falling, the all-milk price will not drop as much, National all-milk price?
A. Boy, I got to think about that one a little bit. You talk about the national all-milk price. Well, first thing that comes to my mind, if you take an individual state like Florida with a high Class I utilization, yes, that all-milk price is not going to drop as quick as somewhere like in your state in Minnesota. You probably need to ask somebody from -- because I know this has come up before -- ask somebody from the Agriculture Statistic

Service who does all that, you know, about the weight they give.

But, you know, I have to admit, Florida is a small volume of milk. So even if those doesn't drop, I would say -- and you're a lot more -- a whole lot more about statistics than I'll ever know -- I'm sure if you did the calculation on that, probably by Florida's not falling that month, it's probably not going to make a whole lot of difference in the all-milk, national all-milk price.

Q. Can we agree it's going to make a little bit of difference?

A. Oh, yeah, it would be a little bit of difference, but I can't see how it can make a significant difference.

Q. And, no, I understand that. But -- but we would have to have a debate on what significant means.

But Florida is not the only Class I market. In fact, three-quarters of all Class I milk is in the multiple-component orders, Northeast, Central, Midwest. In fact, the Midwest order has, in some months this year, higher Class I utilization than Florida.

So could we agree that the national all-milk price would not drop as much? We can disagree on the magnitude, but at least in a direction, could we agree that the national all-milk price will not drop as much if we keep advanced prices as opposed to if we eliminate it?

A. What I would agree with you on is that, yes, advanced pricing would have some impact on the all-milk price going down or going back up.

Q. Right, right, right. I wasn't -- I wasn't implying anything about the long-term average, just in a particular month when the markets are on the -- on the downslide, right?
So if we can agree that in a -- in a downward market the all-milk price drops less precipitously because of advanced pricing, then let's examine the full consequence on the dairy farming.
Are you familiar with the program called Dairy Margin Coverage?
A. I am.
Q. And are you familiar with, at least conceptually, with the formula used by Dairy Margin Coverage to determine the monthly payments?
A. I know the main components that go in it.
Q. And you are familiar that one of the main components is the national all-milk price?
A. Yes.
Q. And, therefore, the further the all-milk price drops, the bigger would be the payments to the farmers, correct?
A. It depends upon what the feed cost is, too. You have to have both of them.
Q. Thank you for your correction. I was being a little sloppy in my question.
If the margin is already at or below $9.50, then keeping feed costs constant, any reduction in the all-milk price would one-for-one translate to the indemnity or

payment to the dairy producers on their eligible enrolled hundredweight?
A. If the feed cost stays the same, you know, the change in all-milk price up our down is going to -- going to impact.
Again, what I would say, you know, the impact of the advanced pricing, I know you presented testimony here and you have done a whole lot of calculations. I'm sure you could calculate that and come up with exact cents per hundredweight that advanced pricing impacts it. But, again, a layman like me, over time it would average out.
Q. No, no. I understand that the national all-milk -- and I agree with you that the national all-milk price over time would be about the same whether we use advanced prices or not.
However, I assert -- and please tell me whether you agree or disagree -- that over time, the volatility, standard deviation, of the national all-milk price is going to be bigger if we remove advance prices. If we keep the advanced prices, then the volatility of the national milk price would be smaller.
Would that be a statement that you would agree or disagree with?
A. I want to make sure I understood you there, first.
So what you are saying, that if we keep advanced pricing, if I heard you say, the volatility would be less?
Q. Yes.
A. If we keep advanced pricing -- if we keep advanced

pricing, we're going to keep doing it the way we have been doing it ever since Dairy Margin --
Q. That's correct.
A. -- Coverage Program's been in place.
Q. That's correct. Yes.
So under that scenario would the -- maybe I can ask the question a more intuitive way.
If we remove advanced pricing because the status quo says that we have that, if we remove advanced pricing, would you anticipate that volatility of the all-milk price would increase?
A. I'm just not enough statistician to answer that question. You -- you need to talk to somebody that's -- it's been years since I took statistics and --
Q. Okay. Maybe --
A. I'm just going to be honest with you.
Q. Sure. But I don't -- I don't think it's that hard.
If -- if the advanced pricing provides buffer to blend price fluctuations, then advanced pricing provides buffer to month-to-month changes in all-milk prices. If there is no buffer, then the all-milk price is more volatile.
Anything you see wrong so far in that reasoning?
A. That's not what my testimony was.
Q. But, sir, your testimony is regarding dairy farmer benefits.
What I'm driving with this is that in the presence

of subsidized safety net, some of those benefits are lost because they reduce the potential payments that the farmers would otherwise receive from the government-provided safety net, in this context, Dairy Margin Coverage.

A. Well, I could tell you for the dairy farmers that I represent, since the Dairy Margin Coverage Program covers a relatively small volume of milk, it's not going to make a whole lot of difference because they are so far over that cap.

And I want to go back, because I didn't finish answering the question before you started with another question, the question before.

Q. I apologize.

A. But what I mean by -- by buffering here is that especially in a high Class I market of the dairy farmers that I represent, if milk prices are falling, and since advanced pricing use dairy product prices from a different time period than what you do for Class II fat, Class III, and IV, they don't get all that loss at the same time. They know it's coming, but it slows it down a little. Likewise, when it goes back up, we have the opposite occur.

Q. Just in the interest of time, I propose that we move on to the next point.

On the same Exhibit 296, page 5, point 7, and the little benefit. You mention price inversions.

Could you please define precisely what do you mean

by price inversion? What is inverted --
A. My definition -- and I probably use a little different terms because I'm probably a little older school than some people -- what I mean by a price inversion would be when the Class II price, Class III price, or Class IV price is higher than the particular Federal Order's uniform price.
Q. And to -- in your opinion, there is no argument -- there's no argument, so you agree, that eliminating advanced pricing helps reduce price inversions, just to make sure I understand that?
A. That's what I wrote there, yes, sir.
Q. Okay. So -- but then in your direct questioning by Ms. Hancock, you also followed up that addressing depooling should be done regionally.
Would you venture a guess why a market order such as Order 30 in the Upper Midwest, which has single-digit utilization percentage of Class I, why they have depooling provisions that are less strict or more permissive, if you will, than, for example, Order 1 in the Northeast?
A. You would need to go to ask the dairy farmers or their cooperatives in their particular order, because it's dairy farmers who have the final vote on provisions. Somewhere if you go back in time, you probably could read a reco- -- a Final Decision, would give you the reasons why they wanted those particular performance standards.
It's -- again, it is -- as I was emphasizing before, it's the decision of the people in that particular

marketing area.
Q. But you wouldn't venture your own guess as to why that is the case?
A. No, I wouldn't want to guess. I'll go back, you know, as I answered earlier to Ms. Hancock, and I just gave my own personal opinion about performance standards. And I do strongly believe, you know, if you tighten performance standards, you make it harder to get in and out of the pool. That eliminates some of it.
Q. Could it follow that if you eliminate in and out of the pool, that you just create a whole class of processors that are just out of the pool for good?
A. And, again, those are the type of things that when you have a Federal Order Hearing, you would hear both sides of it and debate it.
Q. But to the extent that the inversion happens for a reasons not -- to -- also happens for reasons other than the advanced pricing, eliminating advanced pricing does not eliminate price inversions, correct?
A. You know, again, I said just reduce it. That was the word I used, reduce.
Q. Okay. I think we agree on that. I just wanted to make sure that we are on the same page there.
So if the price inversions would still potentially be present even if we eliminate advanced pricing, then tightening pooling requirements could result in the benefits from remaining pooled being lower than the cost of an occasional price inversion.

Would you agree with that?
A. You're going to have to repeat that again and just a little slower for me, if you don't mind.
Q. It's 2020, Order 30. Even if advanced pricing does not contribute to price inversion, we have Class III skyrocket relative to Class IV, suddenly we have a price inversion as you define it.
Even if the pooling requirements are much tighter and you have to stay in a pool for -- you have to wait to come back to the pool for 12 months, or even 24 months. If your current -- if your present period negative PPD is $4 and your expected benefit per month is $0.15, that's a lot of months over which you would have to have positive benefit in order to compensate for a single month cost of participating in such pool.
I know this is barely a question, let alone, you know, a short one.
So do you understand that under such circumstances, tightening pooling requirements would not be able -- would not be an instrument that can result in a uniform price paid to all producers in an order because some producers would be permanently depooled from the order?
A. Again, go back to when I responded to the question initially. I didn't say that, you know, strengthening pooling requirements would eliminate it.
And we got to think about also -- and I don't want to get into what's already been talked about so many times

here at this hearing, but if we've got a period of time when cheese prices are rapidly going up, and I don't know how many times I have stood before producer meetings when I have got some questions about negative producer price differentials. I said, Well, you're going to get negative producer price differentials when prices are rapidly going up, and that's not necessarily bad.

Q. I would like you to come give a speech in Minnesota, see how that goes with that statement. Joking aside.

I just want to -- and I won't take much of the hearing's time here. It's 4:25. You don't use the word hedging anywhere in your testimony, and there's a six-page testimony. I don't believe that hedging was used there. If it is, I apologize for not reading it that closely.

Why is that?

A. There was no need for me to put the word "hedging" in there. I didn't see why I needed to put it in there. I didn't -- you know, I didn't think this hearing was a hearing about hedging. That's one of the reasons I didn't include it in there. And I don't consider myself any risk management, you know, expert.

Q. Would you say that you have no familiarity with hedging?

A. No, I wouldn't say that.

Q. Based on your current familiarity with hedging, do you believe that it would be possible, through some proactive actions, of a buyer of fluid milk product to

lock in their input costs before the start of the month in which they are going to receive milk?
A. If I understand your question correctly, you are saying that a milk buyer can lock in all its milk costs, all of its milk cost prior to receiving it by using hedging. Is that what you are saying?
Q. The world "all" can be a got-you there, so I want to be careful how I answer.
But can either cover all or vast majority of its input costs before the start of the month?
A. Well, just like you said the word "all," I would say also the word "vast" can have a wide definition.
Let me answer it this way. Again, I told you I'm no expert in hedging. There's other -- other experts here. But, yes, a buyer of milk could use the futures market to lock in a portion of their anticipated milk cost, or to hedge a portion of their milk cost.
Q. Which portion can they not hedge?
A. Well, now you are getting deeper more than probably what I know about risk management, starting to get a little dangerous here now with me.
Q. Don't worry. It's only going on the record.
But you used a phrase "only a portion," so something led you to the conclusion that a portion cannot be locked in, so --
A. Well, again, I'm a layman when it comes to risk management, but I know the futures market just has Class III and IV, and it's at 3.5% fat. And it's also --

I go back to my testimony on Proposal 1 -- at a -- you know, a lower component level.

Well, if I'm a cheese maker and I am buying Jersey milk that's 5% fat and 4% protein, if you're just buying Class III, the higher cost of my butterfat, the higher cost of my protein, I don't know of a futures market where I can lock that in at.

Q. Well, Mr. Covington, we are in the Class I discussion. Like, I don't know that a Jersey example helps with this.

If you are a Class I buyer, could we please -- please -- I apologize for interrupting, but --

THE COURT: He's talking about a Class I.

DR. BOZIC: No, ma'am, he was talking about a cheese maker, which is Class III.

THE COURT: All right.

THE WITNESS: Okay. I'll talk about a Class I. But, again, you know, Class I can still buy Jersey milk. There have been a number of Class I buyers I have helped over the years to buy Jersey milk.

But anyhow, if I'm a Class I buyer and if I'm buying milk from a cooperative, again, I'm probably going to get milk that's above that 3.5, so I can't buy that. It depends upon what I have negotiated with my cooperative. There could be an over-order premium that I have to pay, and I can't lock -- lock that in.

And, again, from my limited knowledge of using the futures market, you buy the contracts in so many pounds of milk, and I'm guessing the pounds of milk won't exactly equal the milk I need for that particular period of time, so if I got to buy more than that, I cannot lock that in.

And there are times running the fluid milk plant that I just don't take in the same volume of milk every day, seven days a week, or the same month. Something could happen or whatever, and I have to call my cooperative up, and if I have an agreement with them for just so much milk, if I have to buy extra milk, I can't lock that in.

BY DR. BOZIC:

Q. You just described basis risk. And I will not contest it because, you know, that is true.

The question is, how high is the basis risk relative to the profit margin of either the seller of Class I or the buyer of Class I milk in that area?

THE COURT: Was there -- is that true? Or do you agree? Or is there any kind of a question? Or just --

DR. BOZIC: I think in the interest of the hearing, I think it's best if I stop here and give others a chance. Thank you very much.

Thank you, Mr. Covington.

THE WITNESS: Yes, sir.

THE COURT: Dr. Bozic is the ultimate teacher. Did you notice?

THE WITNESS: And he's probably got a tough student to deal with, too.

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CROSS-EXAMINATION
BY MR. MILTNER:
Q. I can't do it even nonchalantly anymore.
Ryan Miltner representing Select Milk.
Good afternoon, Mr. Covington.
A. Good afternoon, sir.
Q. Okay. So on page 3, I'm going to -- let's do this a little differently. Here's the issue that I'm going to ask questions about.
I'm really trying to figure out, for my client, whether reverting to the higher-of or maintaining some average-of is the most beneficial outcome for them, and where the elimination of advanced pricing plays into that, and the goals are to try to figure out what's the best way to allow producers to fully manage their risks, including those that result from depooling, as well as preserving some risk management for Class I handlers. And so my questions are aimed at those issues. Okay?
A. Yes, sir.
Q. So on page 3 of your testimony, you're -- in the second paragraph, you're explaining how advanced pricing allows a Class I handler to know the cost of their raw milk before they have to sell it, correct?
A. Yes, sir.
Q. Okay. So if a Class I handler were able to adequately hedge their raw milk costs and fix a price, they would have that same result, wouldn't they? They would be able to know their raw milk cost before they sell

it, correct?
A. No, sir, not -- not entirely. And I'm going to go back a little bit to the previous person questioning, and he ended up talking about basis. And again, I'll tell you, when it comes to hedging, whatever, I probably know enough to be dangerous.
Q. That makes two of us.
A. There's no instrument out there I know where a Class I handler can hedge the exact price they are going to pay for the milk. We only have III and -- Class III and Class IV that they can use. And again, that's at 3.5 butterfat. Maybe they could use butterfat to hedge or whatever, but, you know, generally you're going to buy milk higher than that 3.5 butterfat. And generally, if you are buying from a cooperative, you can have some handling fees or whatever to pay over that.
And, again, as I understand using the futures market -- again, I'm no expert, I got to be careful, I don't want to go more than what I know -- they're fixed volumes, and all the fluid plants I have ever dealt with, that volume fluctuates from month to month. So you are not going to be able to hedge 100% of it.
Q. Okay. Acknowledge you will not be able to hit exactly the pounds and components for any particular plant.
But for butterfat over 3.5, they could look to the butter market for any overage, correct?
A. Again, just what I have heard here, there are

futures contracts out there for butter.
Q. Okay. And your cooperative handling fees are independent of the milk price usually, correct?
A. The cooperative fees, anything they charge above the Class I price, that's between the buyer and the seller. It's not mandated by the Federal Order.
Q. Okay. It's usually amount per hundredweight, correct.
A. Yes, sir, it's on a per hundredweight basis.
Q. And as far as the volumes, I believe that the CME contracts are 100,000-pound contracts, I could be wrong on that, but that's -- and in-plant terms, two loads of milk, right?
A. Yes, sir.
Q. And so a plant generally has an idea how many loads of milk it's going to take in a month, with certain fluctuations for seasonality, correct?
A. In my experience, when I was full-time in Florida, and we did some of this, and we were handling quite a bit of milk, from what a plant anticipated on the first day of the month to what they ended up taking, it was always off. Things changed.
Q. They do. I would agree. I would agree with that.
Did Southeast Milk own an ESL plant at one point?
A. Yes, sir.
Q. And am I correct that they no longer own that plant?
A. No longer own it.

Q. Was that a plant that they owned while you were the CEO of that cooperative?

A. When I was CEO, it was a conventional milk plant.

Q. Okay. That eliminates my need to ask a few more questions then on that point.

We have heard some testimony from ESL manufacturers about their use of risk management tool hedging to fix their price, and they have asserted that that is a benefit to their customers.

Southeast Milk is a significant supplier of raw milk to HTST plants. I wonder if, in your experience, you have an opinion about whether SMI's customers would find a value in obtaining milk at a more stable price?

A. It's been approximately a year now since I had regular contact with Southeast Milk customers, the pool distributing plants. In those contacts I had, there never was an interest. Never was an interest. One of the Southeast Milk's major customers is a retail grocer, and retail grocers have their -- this retail grocer had its own fluid processing plant, and a high percent of the milk in the Southeast is processed by retail grocers who have their own plants.

And conversations I have had with one we supplied, and also good friends with the buyer of another one, there just was no -- wasn't any interest there. They looked at things a little different. So they can control a little more from their plant to the end user there, or the consumer on the shelf.

We also supplied other plants. And, again, conversations I had was no interest. They always -- the biggest thing was, "Calvin, you just make sure we don't have to pay any more for milk than what our competitor is paying." That was their big interest. And most those others, non-retailers, were private label, and formulas just like what I mentioned here in my example.

Then we have had one processor who was big on schools. And, again, because of some history of legal issues with schools in Florida, I can't tell you how rigid and strict it is, and they just adhered to that monthly price change. It had to come from our office.

In anticipation of a question like yours at this hearing, I talked with the people at Southeast Milk over the last -- since this hearing started, who have regular contact with customers, and I says, in your conversations, has it changed? And they told me it has not changed.

Q. So the stories you are hearing from those HTST processors are different than the stories we have heard from some of the other HTST processors who testified here, that they maintain an interest in -- in hedging their raw milk costs?

A. Yes, sir. I was not here for all of them. I don't know what volumes those other processors had. Just on personal knowledge -- I don't mean this in a negative way -- but they are with not some real, real large -- large processors. The ones I'm talking -- you know, what I have talked with, the SMI customers, other than ones --

you know, we got a couple small ones, take a pretty significant amount of milk in in a monthly basis.
Q. And my understanding would be that if -- if Class I were easily hedgeable, those processors that wanted to know that they were paying the same price as their competitors could still purchase on a regulated price, but they would also have the ability to try to hedge that risk.
Would that be your understanding as well?
A. It's my understanding, if they wanted to hedge, under the Federal Order, they are still required to pay that minimum Federal Order price. And whatever they might gain, plus or minus, by using the futures market, that is their own thing on gain or loss.
Q. That actually takes me to another question I had, so I'm going to jump ahead to that, because it seems to make sense here.
On the next page under item 3, you're describing an example about truing up milk. And you say it was January -- or December into January when this occurred.
Was this -- well, let me rephrase my question.
How does that work when you have a regulated minimum price?
A. Again, that was one of the reasons why it was a mess. At that time, again, we did have an over-order premium, and the plant's still going to be responsible to the order for that federal minimum over-order price.
And so, again, I'm going back on history, this

happened 15 to 20 years ago, but some things still stick out in your mind. And so we had to estimate on both butterfat and -- and skim of what we thought the price was going to be. And as you expect, we were off. We were off. But the amount we were off, if I remember, was significant, but it still fell within the range where they're still going to pay the over-order premium -- I mean, excuse me -- still going to pay the minimum price.

But, again, trying to explain, we -- it -- they had to explain to their customers about why -- especially on schools, what happened to a carton of 2% milk, why that being off was as much as a whole milk carton. We got involved with military bases on the same thing. And then we got involved, some customers, when we had to true up, put it on the February price announcement, some wanted to include it with the over-order premium, some wanted a separate line item. It -- and I think we might have been on through almost summer before we ever got it cleaned up.

Q. So it was -- that true-up was a true-up against the over-order premium, not against the regulated price?

A. Well, that's what we had to work with because the plant, regardless, still had to pay the minimum price.

Q. Okay. Very good.

Okay. Now, on to page 5 of your testimony, and item 5, and you state that eliminating Class I advanced pricing creates a one-sided change. Dairy farmers retain the economic benefits of the higher Class I price, but fluid milk processors lose the pre-knowledge of their raw

product cost.
Wouldn't the elimination of advanced pricing, when coupled with the ability to manage risk, provide some benefit to some Class I handlers at least?
A. Well, again, as I understand this hearing, we're just dealing with Federal Order provisions. And no Federal Order provisions I know of have anything to -- you know, any provisions related to risk management.
And the statement I am making here, Class I price is the highest, we recognize that. And, again, the product they are making as Class I processors, you know, the raw milk cost, that's the highest single cost. The number I used was 75%. Back when I was at Southeast Milk, some of our -- it was -- it was greater -- greater than that.
So in my opinion, that's a fair -- you know, fair tradeoff on advanced pricing if we can have the highest classified price.
Q. Even if doing so creates more opportunities for some farmers to be hurt by opportunistic depooling?
A. Well, again, in the market I am, there's no depooling. I mean, if you are depooling, you are off -- you have messed up big time, and so forth, nobody would take your milk.
And, again, I go back, you know, I use the term price inversions instead of depooling. I'll go back to my question from Ms. Hancock -- again, this is personally -- I think there's other things we can look at, too, also to

help slow down or reduce the risk of price inversions.
Q. In your next paragraph when you talked about the buffering effect when prices are falling. I would think that the flip side would be that you also buffer the benefits of rising markets on the upside, correct?
A. Yes. But you know what's coming.
Q. I don't think I have any other questions.
MR. MILTNER: Thank you very much, Mr. Covington.
THE WITNESS: Thank you, sir.

CROSS-EXAMINATION

BY DR. CRYAN:
Q. Hello, Calvin.
A. Good afternoon.
Q. I already know you're a Farm Bureau member, so I won't ask that question.
A. I was hoping you would.
Q. Well, would you? Would you like me to ask?
Are you a Farm Bureau member, Calvin?
A. Yes, sir, I am a Farm Bureau member.
Q. Yes, sir. I appreciate that. And you are pretty active down there in North Carolina.
A. Since you ask, I'm on the County Farm Bureau -- Board of Directors of our County Farm Bureau. And, in fact, to be here at this hearing, I'm missing our annual meeting tonight.
Q. Oh, okay.
A. So I won't be able to participate in that process that you talked about of giving resolutions and so forth

that work their way up.
And then also, I'm on the State -- North Carolina State Farm Bureau Dairy Committee.
Q. Fantastic.
And I saw you last year at the North Carolina annual meeting.
A. Where I was a delegate.
Q. Fantastic. Well, I'm sorry you are missing that. I'm sorry that we couldn't do something different. But here you are, and thank you.
So I think I only have one question.
Would you -- would you propose advanced pricing for all the classes?
A. Personally, I wouldn't. But I'm just giving you my personal opinion.
Q. Personally you would?
A. I said personally I would not, but I'm just giving you my personal opinion.
Q. Okay.
A. I would -- again, what I testified, is to keep advanced pricing for what we have now.
Q. And you think that those are different -- those are substantially different from the -- from the classes that are -- that are --
A. Well, again, I go back to my testimony. You know, Class I is a different product than Class III and IV.
Q. Okay. What about Class II?
A. Well, the Class II is mixed. We have advanced

pricing for Class II skim, but we do not have advanced pricing for Class II butterfat.

Q. That's true. Thank you, Calvin. Have a great day.

DR. CRYAN: Thank you very much.

THE COURT: Are there are questions before I ask the Agricultural Marketing Service?

I see none. The Agricultural Marketing Service may proceed.

CROSS-EXAMINATION

BY MS. TAYLOR:

Q. Good afternoon.

A. Good afternoon.

Q. I think most of our questions have been asked and answered already, so I only have a couple.

I was wondering if you might -- what your response is to some of the arguments we have heard about if we got rid of advanced, then that would just push the HTST plants to start hedging.

A. Well, it -- I guess, you know, I hate to put the cart in front of the horse. Okay? I know there's been testimony here about, well, if we don't have advanced pricing, CME will come up with something and so forth. But I guess I'm one that wants to go with what we have, what we are sure of.

The current system has worked. Again, the processors that I work with, they are comfortable with advanced pricing. As I have answered questions before, there has not been a whole lot of interest in it. And I just would have a challenge of making it mandatory to push them in to use the futures market. If they want to do it, they can do it now, voluntary basis.

But I'm just hesitant, and that's the reason I'm a strong supporter of keeping what we have now on advanced pricing.

Q. Okay. You use a term in your statement that I don't think's been used yet in this six and a half weeks, so if you could define for the record what a tolling fee is.

A. Okay. A tolling fee -- again, this was when I was at Southeast Milk, and we had processing plants, and most of the milk that our processing plants -- packaged milk, was private label.

So -- so basically, you know, I say -- the price of raw milk, the packaging, and so forth, and then we would negotiate with our customer -- think of a tolling fee similar to a Make Allowance. We had to have a fee that covers our cost of running that plant, paying the labor, paying the light bill, our return on investment. And, again, we would negotiate that. You know, if you were doing all gallon jugs, that would be lower than if you were doing pints or half-pints. You know, somebody that was taking several truckloads of milk a day is different than somebody only taking a half a truckload.

Q. Okay. On your page 5, top of -- top of the page, you are talking about -- this is your -- the institutional buyers of fluid milk products. There's schools, prisons, etcetera. And we have heard an earlier testimony that schools set their budgets for the year, and so some people argue they would prefer to have some kind of set price so they could budget better.

But from the paragraph I read of what you have written, your opinion is slightly different that -- if I can summarize, basically, they know how to deal with the monthly milk price fluctuation, so they are just fine.

And I just want to see if you can expand on that a little bit more since it is different than what we have heard from others.

A. Yes. One of the Southeast Milk's customer is a major provider of school milk, not only in Florida, but goes out of Florida. And so I get a lot of feedback from him with schools. And also, as I have mentioned earlier, because of what happened back in the late '80s with school milk and the big federal issue down there, legal issue, everybody's real careful when it comes to school milk in Florida, both the processor and the people buying -- the school people buying it.

And so they have become very, very comfortable. The formula is very strict. In fact, had a number of school systems that Southeast Milk had to send our pricing announcement directly to them. And so they -- they understand the monthly fluctuations. And also had some of that same thing with military bases, large military bases in Florida. So they were comfortable with that, with that change.

And I think it would be a challenge just to -- with some of them, to explain it to them to go back. It's working.

Q. Okay. My last question is just kind of a step-back question. And there's been a lot of talk about various changes in the base Class I skim price formula to allow for hedging and facilitating price risk management. So I want to give you the opportunity to respond to what you think big picture-wise, because risk management, hedging is not in the -- in the Agricultural Marketing Agreement Act.

So how do you think Federal Orders should prioritize that versus the other provisions in the Act that is explicit that they should provide for?

A. It's obvious that just in my -- think about the last ten years, the use of risk management, hedging, futures market by dairy farmers has grown quite a bit. In fact, if you look at USDA programs, Dairy Revenue Program, Livestock Gross Margin, you know, even USDA's involved in it.

But in my -- this is just giving my opinion, so far all these programs have been voluntary. A dairy farmer can choose if he wants to be involved in it. If a plant wants to use it, they can be involved in it. And I would prefer to see it remain on a voluntary basis, that the Federal Milk Marketing Orders continue to do what they have done, in my opinion, so well for a number of years, set minimum prices, enforce payment, pool, and so forth.

MS. TAYLOR: I think that's it from AMS. Thank you.

MS. HANCOCK: Your Honor, I think that's all we have at this time. We would move for admission of Exhibit 296.

THE COURT: Is there any objection to Exhibit 296 being admitted into evidence?

There is none. Exhibit 296 is admitted into evidence.

(Exhibit Number 296 was received into evidence.)

THE COURT: I love listening to Mr. Covington. I'm glad he's coming back.

THE WITNESS: Well, thank you, ma'am.

THE COURT: You're welcome.

Dr. Bozic is ready to come to the podium. Let me see what he's got on his mind.

DR. BOZIC: Marin Bozic for Edge Dairy Farmer Cooperative.

Your Honor, upon your urging, I did the forensics on the Exhibit 290 to reconcile. I have the results, and will submit them overnight. And just out of abundance of caution so that nobody can say that the evidence should somehow be discounted later, I would like to make myself available for examination tomorrow, hoping that nobody has any questions.

THE COURT: Wonderful. Good for you.

DR. BOZIC: Thank you, Your Honor.

THE COURT: Thank you.

MS. TAYLOR: I just wanted to say, the only person I have left on my list that had something to go up is Sally Keefe, I think with a short -- and I don't know what short means anymore -- statement.

MR. ENGLISH: Well, I know it's a couple of minutes before 5:00. It is the submission of an exhibit in response to Mr. Wilson's questions back from the second week on 5B, and a very short statement about MIG's position on advanced pricing.

Now, my view of the world is, in a normal world, that could be done in four minutes.

MS. TAYLOR: We don't live there anymore.

MR. ENGLISH: If the view is that we can't do it tonight because it's couple minutes to 5:00, Ms. Hancock was nice enough, if it was going today, to agree. If it's going to interfere with tomorrow, she can with -- we would like to just kind of clean it up.

And if you want to do it tomorrow because it's close enough to 5:00 and you don't believe me that it can be done in four minutes --

MS. TAYLOR: We don't. On the record, I do not believe you.

MR. ENGLISH: I said in a normal world, so I will stand down.

MS. TAYLOR: As long as Ms. Keefe had already planned to be here tomorrow, I don't want her staying overnight for just this.

MR. ENGLISH: Unfortunately for Ms. Keefe, I think that that's -- the reality is that she's here for longer than she wishes.

MS. TAYLOR: Okay. So I would think we could start with her in the morning.

And then I'm not sure who is on National Milk's list.

THE COURT: Yeah, let's find out if that's fine with whomever she's replacing.

Ms. Hancock, what's your lineup?

MS. HANCOCK: And, Your Honor, that's completely fine for us if Ms. Keefe wants to go first.

MR. ENGLISH: She doesn't have to.

MS. HANCOCK: We have Dr. Peter Vitaliano, then we have Dr. Chuck Nicholson, and then we have Jeff Sims, and we believe that would take us through the end of the day.

Just to give a little bit of advance, we have Dr. Stephen Koontz, who will need to go on on Thursday. And then -- K-O-O-N-T-Z -- and then we have a dairy farmer who will be appearing in person on Friday, in addition to what we will have -- whoever signs up online.

THE COURT: Say that last part. Your voice dropped off.

MS. HANCOCK: Oh. Just in addition to whoever signs up online, the dairy farmers who will appear by Zoom.

MS. TAYLOR: And, Dr. Bozic, are you going to be here all week or are you going to leave tomorrow?

DR. BOZIC: I am leaving tomorrow afternoon, 4:39 flight, and I'm probably not coming back until the --

MS. TAYLOR: Maybe I would propose we do Ms. Keefe and then Dr. Bozic and then --

MR. ENGLISH: And just to be clear, as short as it is, we are prepared Ms. Keefe to go another time, because we understand where the thing is. So if people don't think it's going to be that short, Ms. Keefe is flexible.

I say that. Part of the context that I talk about looking ahead, I talked to Ms. Hancock earlier this week, that there is a witness on the earlier issue, 3, about butterfat recovery, an expert named Dean Sommer, who will be here Thursday. It's a relatively short statement. We will get it posted as soon as we can.

I'll also share it with Mr. Miltner as soon as I can. My understanding is we can try to get him on Thursday.

And therefore, since Ms. Keefe is flexible, and since no one believes we're in a normal world, if that means not -- maybe if a slot opens up tomorrow at some point, we can do it. She can be flexible. I want to emphasize that because I'm trying to move this along, too.

MS. HANCOCK: So all of that sounds fine with me. Dr. Vitaliano does have to finish tomorrow, so that's my only asterisk on the witnesses.

I felt reasonably confident, but given how things have gone, I thought I'd better say it out loud.

THE COURT: So is the thought that we would take Dr. Bozic first? Is everyone fine with that? We'll take Dr. Bozic first, and then is the next thing Dr. Vitaliano, or is it Sally Keefe?

MS. TAYLOR: I would propose Dr. Vitaliano so he can be done tomorrow for sure.

THE COURT: Okay. Yep, that's fine with me. I know the first two, and then there's lunch.

Thank you all. I know how hard you worked, and I really appreciate it.

For those who are leaving, you will be missed. You have contributed greatly. I thank you.

We go off record at 5:03.

(Whereupon, the proceedings concluded.)

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STATE OF CALIFORNIA)
) ss
COUNTY OF FRESNO)

I, MYRA A. PISH, Certified Shorthand Reporter, do hereby certify that the foregoing pages comprise a full, true and correct transcript of my shorthand notes, and a full, true and correct statement of the proceedings held at the time and place heretofore stated.

DATED: November 21, 2023
FRESNO, CALIFORNIA

MYRA A. PISH, RPR CSR
Certificate No. 11613

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