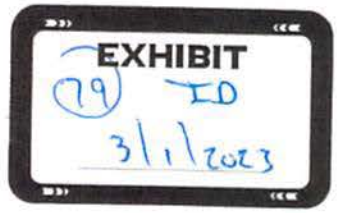
BEFORE THE UNITED STATES DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE

IN RE:	:	**7 CFR Parts 1005, 1006, and 1007**
	:	
Milk in the Appalachian,	:	**Docket No. 23-J-0019**
Southeast, and Florida	:	
Marketing Areas	:	**AMS-DA-23-0003**

Franklin, Tennessee

February 28, 2003



Testimony of Sarah Vanadia

On behalf of the Dairy Cooperative Marketing Association

Proposed Amendments to the Orders Regulating the Handling of Milk in the Appalachian, Southeast and Florida Marketing Areas

Testimony before the United States Department of Agriculture

Agriculture Marketing Service

In the Matter of Proposed Amendments to the Appalachian, Southeast, and Florida Federal Milk Marketing Orders

Franklin, TN, February 28, 2023

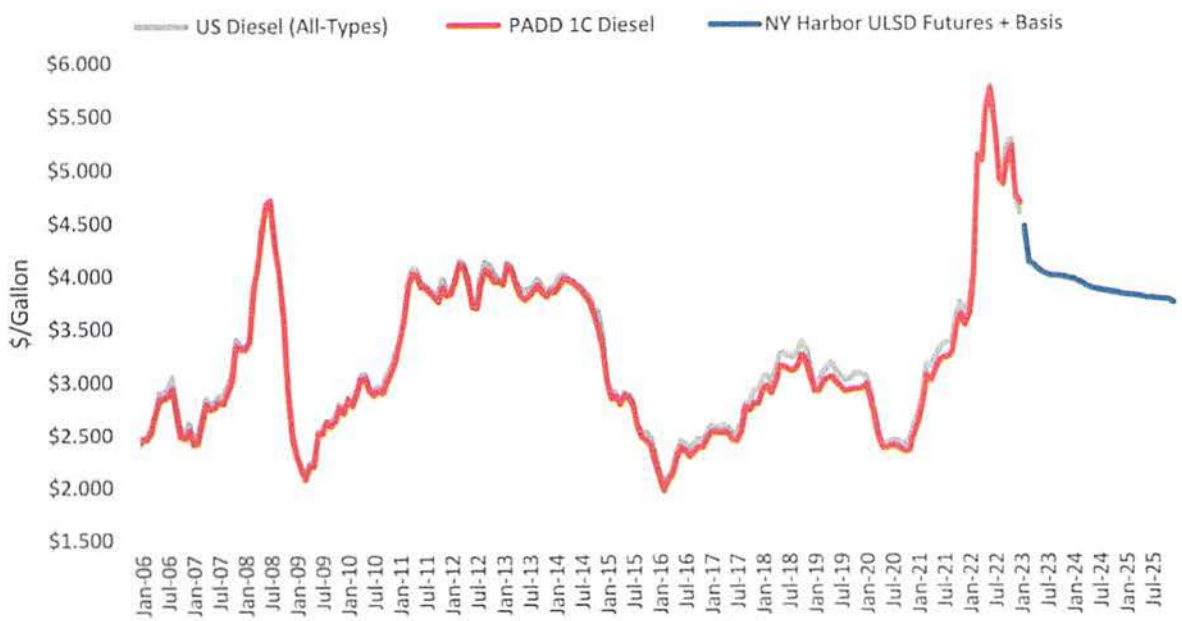
My name is Sarah Vanadia. I am a Commodity Risk Management Analyst for Dairy Farmers of America's (DFA) division – DFA Risk Management. My business address is 1405 North 98th Street, Kansas City, Kansas.

I started as an intern with DFA in 2019, working in fluid milk marketing and logistics out of the Mideast area office in Medina, Ohio. After receiving a bachelors in agricultural economics from Virginia Tech and my Master of applied economics from the Ohio State University, I started full time working on the DFA Risk Management team in Kansas City. I work with farmer-owners, customers, and internal business units utilizing tools to manage price risk across agricultural and energy commodities. My focus is on educating and informing stakeholders, strategy development, execution, position management, and market research. As a part of my work, I support DFA's Areas and other business units in hedging future diesel fuel prices.

I appear here today to provide perspective on historical diesel fuel prices and by using futures markets, a view of the marketplace's expectations for diesel fuel prices through 2025.

Diesel fuel market fundamentals and outlook:

Exhibit ___ Monthly Retail On-Highway Diesel Fuel Price



Source: U.S. Energy Information Administration & NYMEX Futures as of 2/15/2023

The U.S. Energy Information Administration which I will refer to as the EIA releases a retail gasoline and diesel price report, broken down by Petroleum Administration for Defense District which I will refer to ad PADD. For this analysis we will specifically be using the on-highway diesel fuel prices for the whole U.S. and PADD 1C as benchmarks. PADD 1C includes Georgia, Florida, North Carolina, South Carolina, Virginia, and West Virginia.

In Exhibit ____ "Monthly Retail On-Highway Diesel Fuel Price", both the U.S. diesel and PADD 1C price history are charted since January 2006 alongside a projection for the February – December 2025 PADD 1C retail on-highway diesel fuel price. The projection is a calculation based on New York Mercantile Exchange (NYMEX) NY Harbor ultra-low sulfur diesel (ULSD) fuel futures as of 2/15/2023 plus the two-year average historical basis between the NY Harbor ULSD futures contract settlements and the PADD 1C monthly retail diesel price. Over the last 24 months the basis has fluctuated from $1.00 to $1.73, averaging $1.27 per gallon. Based on the NYMEX futures market and historical basis, an average diesel fuel price can be projected around $4.05 for the remainder of 2023, $3.87 for 2024 and $3.77 for 2025.

The most recent five-year average (February 2018 – January 2023) retail diesel price for PADD 1C was $3.35 per gallon. Within that time frame the range of prices was $3.40, with the lowest price experienced being $2.32 per gallon and the highest being $5.73 per gallon. The most recent five-year average retail diesel price for all the U.S. was $3.44 per gallon. Within that time frame the range of prices was $3.36 with the lowest price experienced being $2.39 per gallon and the highest being $5.75 per gallon. Since Jan. 1, 2006, the average retail diesel price for PADD 1C was $3.19 per gallon and within that time frame the range of prices was $3.77 with the lowest price experienced in Febuary 2016 being $1.96 per gallon and the highest price being the $5.73 per gallon experienced in June 2022. Diesel fuel prices have demonstrated volatility and experience a large range due to multiple factors.

First factor to consider is the current supply environment. The EIA releases a weekly petroleum status report which indicates U.S. inventories for crude oil and distillate fuel oil. Distillate fuel oil is defined by the EIA as a general classification for one of the petroleum fractions produced in conventional distillation operations. It includes diesel fuels and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agriculture machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and electric power generation. For the week ending February 11, U.S. distillate fuel inventories are about 15 percent below the five-year average for this time of year. The U.S. is currently experiencing one of the lowest supply periods in history; in May 2022, the U.S. stock of distillate fuel oils were at their lowest point since May 2005.

Highlighting current production volatility, considering data back to 2010, U.S. production of distillate fuel oils peaked in January of 2019 and bottomed out in March of 2021. Since 2020, approximately one million barrels per day of refining capacity have been removed from the U.S. as around eight refineries have either closed their doors or are being converted to a renewable fuel production facility. Also, in March 2022, the U.S. announced a ban on the import of Russian crude oil and certain petroleum products, in 2021 the U.S. imported nearly 700,000 barrels per day of Russian petroleum products (FACT SHEET: United States Bans Imports of Russian Oil, Liquefied Natural Gas, and Coal, March 8, 2022). The U.S. also imports crude oil and refined products from a total of 72 other countries. Record low inventories along with uncertain

production and current geopolitical events have provided price support to diesel fuel over the last couple years and will most likely do so moving forward.

On the other side of supply is demand. The EIA releases how much production is supplied to the U.S. market, and therefore is used as a proxy for consumption. The components of petroleum supply are field production, refinery production, imports, and net receipts when calculated on a PADD basis. Distillate fuel oil supplied, reached its highest level in February 2022 since March 2007, and has backed off since. Currently distillate fuel product supplied is down 15.6 percent from the same time last year. Domestic demand for distillate fuel is highly correlated with the health of the U.S. economy as it's the main fuel source for trucks, tractors, trains, and much more that keep our country moving and manufacturing. Demand decreased in 2022 as the U.S. economy struggled and experienced negative GDP growth rates in the first half of the year. As the economy rebounds and manufacturing, freight and services that utilize mobility fuels picks up, we can easily find ourselves in a shortage situation, supporting prices. On the other hand, we must consider an economic downturn in the U.S. that would decrease the demand for diesel fuel, potentially pressuring prices. Another factor to consider is how China rebounds from COVID19, as they relax policies and increase activities, the United States export demand to China can quickly pick up; in 2021 China was in the top 3 destination countries of U.S. petroleum exports, behind only Mexico and Canada.

In summary, supply and demand are currently close to being in balance, but prices for fuel are already elevated when compared to historical values. With stocks, production, and imports at their current levels there is significant risk of upward price risk. Meanwhile the U.S. and global demand is still uncertain, but at this time demand is down and partially offsetting the record low inventories. With the fragile nature of the current supply and demand balance, we anticipate greater pricing volatility as the markets react to various supply and demand changes and indicators of such change.