

**Keynote Remarks at 2025 Global Ethanol Summit**  
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Good morning. Welcome to Washington, and welcome to the 2025 Global Ethanol Summit!

I want to thank the U.S. Grains and Bioproducts Council for again organizing this important event and I am honored to help kick things off this morning.

I'm going to start by saying I'm a big history buff. I love history. In fact, if I wasn't an ethanol lobbyist, I'd probably be a high school history teacher. So, it's a real privilege for me to start today's program by sharing the U.S. ethanol industry's history, our story, and our experience. Our industry has a long and rich history and lots of colorful stories—and so for the next 20 minutes, I hope to share our perspective on where we've been, where we are today, how we got here, and a few thoughts on where we're going.

I want to begin with a few words about the Renewable Fuels Association, or RFA. Our organization started in 1981 when a small group of pioneering ethanol producers came together to create the nation's first ethanol-focused trade association.

So, RFA is as old and as experienced as the ethanol industry itself. This year we are celebrating our 45th year as "The Voice of the Ethanol Industry." Our members are primarily ethanol producers, but also vendors, marketers, suppliers, service providers, and other participants in the marketplace. We work with all those stakeholders to advocate for sound public policy, a supportive regulatory environment, and we also focus on technical issues, public awareness efforts, and market development initiatives.

And our mission is simple. It is to "Drive growth in sustainable renewable fuels and bioproducts for a better future."

Before I get into our historical experience, I want to begin with a look at today's U.S. ethanol industry. This is what the ethanol footprint looks like today in the United States.

Today, there are 199 ethanol biorefineries spread across 24 states. The industry has the installed capacity to produce 18.3 billion gallons of ethanol annually. In recent years, we've been utilizing about 90% of that capacity and have a proven production rate of 17.1 billion gallons annualized. We also have a highly developed infrastructure system nationwide for the transportation, storage, and distribution of ethanol and our co-products.

Here's a quick look at historical ethanol production in the U.S. A handful of small ethanol facilities produced just 80 million gallons in 1981, and that volume has grown significantly over the past four decades. The industry produces a record 16.2 billion gallons in 2024, and we are on pace for another record of 16.4 billion gallons in 2025.

The production of ethanol and co-products like distillers grains and distillers corn oil comes with substantial economic benefits for rural communities across the nation.

In 2024, U.S. ethanol biorefineries purchased about 5.5 billion bushels of corn worth \$23 billion. The industry generated \$53 billion economic activity, as measured by Gross Domestic Product. The industry boosted household income by \$28 billion, paid \$10 billion taxes, and supported more than 300,000 jobs across all sectors of the economy.

How and where is all of that ethanol being used? This chart shows a simplified summary of 2024 U.S. ethanol consumption. Most of the ethanol we produced last year—about 84%—was used domestically in 10% ethanol blends. About 4%—a little over 600 million gallons—was consumed in higher blends like E15 and flex fuels like E85. We expect that volume will be closer to 800 million gallons this year. And then about 12% of what we produced last year was exported. We had record exports of 1.9 billion gallons last year, and we expect to set another export record of around 2.1 billion gallons in 2025.

So, how did we get here? How did the U.S. become the world leader in ethanol production and consumption? How did ethanol evolve into a crucial driver of energy security and rural prosperity in the United States?

Well, there are lots of reasons, but I think we can boil it down to three main driving factors.

And the first is smart public policy. Throughout our industry's history, we have been fortunate to have legislators—at both the state and federal level—along with presidents and governors, who have clearly understood the many benefits of renewable fuels. We've also been lucky to have so many highly effective advocates from our industry and strong partnerships with the nation's leading farm organizations. For over 40 years, our advocacy efforts and our partnerships have led to the creation of smart public policies that drove investment and supported expansion in the ethanol industry.

And in every case, the policies that have driven growth in ethanol production and use are policies that were explicitly designed to solve the problems and challenges facing American families across the country.

The second reason for our success is the remarkable innovation and continuous improvement that has occurred in the industry. Today's ethanol biorefinery is truly a technological marvel. The

advances in efficiency and new technology adoption that we've seen in the industry are absolutely amazing.

Finally, ethanol itself is a wonderful product. It lowers gas prices; it reduces greenhouse emissions; it cuts tailpipe pollution; its high octane rating increases efficiency; and it boosts energy security by decreasing reliance on fossil fuels.

If we truly operated in a free market, ethanol would sell itself because of these benefits. But energy markets aren't free and they aren't open. And that's where policy interventions come in. When smart public policy has been used to create market access for ethanol, the fuel has proven its worth and thrived in the marketplace.

So now I want to walk through a brief history of major renewable fuel policy developments in the U.S. And I want to go back to the beginning. And again, each of the policies that helped ethanol grow was a reaction to a major problem or challenge or problem that policymakers were trying to solve.

In the late 1970s, we had a serious energy crisis in this country. We were heavily reliant on imported oil, mostly from the Middle East. In the mid-1970s, OPEC imposed an embargo on oil exports to the U.S., and the result was short supplies and very high fuel prices for American consumers. And in the late 1970s, the U.S. imposed an embargo on exports of American agricultural commodities to Russia, which was one of our largest markets. That resulted in a huge surplus of grain in the domestic market with nowhere to go.

So, in response, Jimmy Carter and leaders in Congress created the gasohol program as a way to both boost domestic demand for grain and reduce the need for imported petroleum. And that's really when the modern ethanol industry was born.

In addition to allowing 10% ethanol, the U.S. government created a tax credit for blending ethanol and offered low-cost government loans for the construction of farm-scale ethanol facilities.

As we moved further into the 1980s, the U.S. farm economy entered an unprecedented economic crisis. Farmers were facing record-high interest rates at the same time commodity values plummeted to extremely low levels and surplus grain stocks reached new highs.

Meanwhile, the nation's largest cities were experiencing an air quality crisis, with dangerously high smog levels and increasing pollution.

In response, policymakers adopted the Clean Air Act Amendments of 1990, which created the first ever requirement to clean up our nation's fuel. Fuel producers were required to increase oxygen levels in gasoline to help the fuel burn cleaner and cut down on smog. And because the ethanol

molecule is 35% oxygen, this program created new demand for the fuel and the crops it is made from. Congress also extended and expanded the tax credit available for blending ethanol into gasoline, and we saw several states adopt policies that supported the development of farmer-owned ethanol plants at this time as well.

The most active and most consequential period for U.S. ethanol policy was the first decade of the new millennium. This really was the golden age for renewable fuel policy development.

U.S. oil production declined dramatically and dependence on imported crude oil surged to record highs. By 2005, roughly two-thirds of U.S. oil demand was being met with imports. Gas prices rose to record levels in 2008, then the housing bubble burst and the global economy entered financial crisis.

Meanwhile, farmers were again struggling with low commodity prices and burdensome grain supplies that were overwhelming demand.

We also began to see concerns being raised about the effects of global climate change and the dramatic increase in carbon emissions from the energy sector. Concerns about the effects of fossil fuels on air and water quality also remained top of mind.

In response to these dynamics, policymakers took several important actions. At the state level, many states began to ban the oxygen booster MTBE because of water contamination concerns.

And in a move to reduce dependence on foreign oil, Congress adopted the most important policy in the industry's history in 2005—the Renewable Fuel Standard, or RFS. For the first time ever, the RFS gave ethanol guaranteed access to a marketplace that had been closed to competition and dominated by petroleum.

The RFS was greatly expanded and extended just two years later in 2007, and greenhouse gas reduction requirements were added to the program.

We also saw incentives designed to boost the production of flex fuel vehicles, and the ethanol blender's tax credit remained in place until 2011.

At the state level, California adopted the world's first low carbon fuel standard, specifically designed to reduce the carbon intensity of fuels used in the state.

And finally, we saw EPA approve the use of E15 for light-duty vehicles built in 2001 and later years. However—and this important—in most the country, EPA made E15 a seasonal fuel that could not be sold during the summer months.

So that brings us into the 2020s—the very recent past. And in recent years, we’ve seen some familiar challenges and problems in the energy sector. Concerns about climate change and carbon emissions came to the forefront, with a growing recognition that we must do more to decarbonize our transportation systems. We again saw high—and often volatile—energy prices, with U.S. gas prices hitting a record high of over \$5/gallon in 2022. And geopolitical tensions and conflict have emerged around the world.

And once again, American farmers are facing crisis – unlike anything we’ve seen since the 1980s. Farmers are currently harvesting record large corn and soybean crops, but the demand picture is grim, as trade wars have shut down key export markets and domestic demand is being constrained by regulatory and policy barriers.

So, in response to climate concerns, Congress adopted a suite of tax credits in 2022 designed to reduce carbon emissions from the industrial sector and boost the use of clean fuels in the transportation sector. These credits are known as 45Z and 45Q. Congress also adopted the first ever sustainable aviation fuel tax credit—40B—which has since transitioned into the 45Z program. The Biden administration also adopted the SAF Grand Challenge, which was meant to stimulate investment and innovation in cleaner aviation fuels.

Meanwhile, EPA continues to implement the RFS program, and we were pleased to see the agency propose the highest-ever RFS volumes for 2026 and 2027 and we are anxiously awaiting finalization of those volumes.

And finally, securing the ability to sell E15 year-round remains a work in progress. We continue to push as hard as possible for passage of legislation that allows nationwide , year-round E15 and we are hopeful that gets done before the end of the year.

So, you’ve already seen this slide, but I wanted to show it again just to illustrate the effects that each of these policy developments had on production.

And again, I think this chart really underscores just how important the RFS was in driving growth in the industry. Adoption of the RFS finally gave investors the certainty and market stability they needed to build out the U.S. ethanol industry.

As we look to the future and the ethanol industry’s next chapter, we see many opportunities to continue growing.

Our top priority is E15 expansion, as I mentioned. Moving to E15 nationwide would boost U.S. ethanol demand by roughly 6 billion gallons and increase corn demand for farmers by more than 2 billion bushels.

But we need legislation from Congress and we are working hard to secure that.

Carbon capture/utilization and storage also offer enormous promise for our industry. In fact, one of our member companies in Nebraska just began capturing CO<sub>2</sub> from fermentation and shipping it via pipeline to a geological sequestration site in Wyoming. Many more will follow.

CCUS significantly reduces the carbon intensity of ethanol and allows our product to access new markets worldwide that reward or require lower-carbon fuels.

One of those markets where low carbon intensity and CCUS will be key is the global SAF market. As you probably know, aviation fuel is a 90 BGY market worldwide, and we believe ethanol can make a significant contribution to that.

Similarly, oceangoing ships consume 70-80 BGY of fuel worldwide and the marine sector has recognized the need to decarbonize those fuels. Effort hit a snag last week when the International Maritime Organization's vote to adopt its Net-Zero framework was delayed by a year. But this remains a high priority area.

Longer term, we see mid-level ethanol blends (like E20-E30) as a huge opportunity for U.S. ethanol. We are inspired by what is happening in India with E20 and what is happening in Brazil with E30 and see no reason why we shouldn't be doing the same thing here in the U.S. Of course it will take durable, long-term policy to drive higher blends—and that is often easier said than done.

Lastly, we see a growing number of applications for ethanol in the chemical market—again because of ethanol's low-carbon intensity and cleanliness as a chemical building block.

So, I will end with this thought this morning. Throughout the ethanol industry's history, our biggest policy wins and successes have come when we join forces to position ethanol and agriculture as a solution to important societal challenges.

Ethanol solves problems. Whether it is cleaning up the air, reducing carbon emissions, boosting energy security, lowering costs for consumers, or building new markets for farmers, we must continue to make a credible, compelling, scientific case for the expanded production and use of ethanol—just as we've done for the past 45 years.

Thank you!