

2017 State of the Industry

When Bill Belichick was asked about the Patriots' recent Super Bowl win, he growled, "As great as today feels, we're five weeks behind the other teams in preparing for the 2017 season."

Are you kidding me? His team had just won its fifth Super Bowl in the most improbable fashion. He had just become the winningest coach in Super Bowl history with a win for the ages, coming from 25 points down late in the third quarter, and he's already thinking about next season and the work ahead! Whether you like him or not, that's what separates him from the rest. That's what makes him a champion.

The RFA and the U.S. ethanol industry share Belichick's singular focus and dedication to the mission. You never bask in past success. You don't pause to celebrate legislative or commercial victories. You're always moving forward, planning for future growth, looking for new technologies and building new markets, protecting profitability for sure, but always with an eye toward what your success means for consumers, for energy security, for the environment, and for rural economic stability. You're not competing for a trophy. You're working to enhance national and economic security for the country. That's what makes you unique. That's what separates you from the rest. And, in my mind, that's what makes each and every one of you a champion.

2016 may not have been the Super Bowl year for the ethanol industry that 2014 was. But it was the fourth straight year of profitability after the 2012 drought. It was a record year for production, a record year for net exports, a record year for domestic demand, and a record year for E15 sales and infrastructure build-out. It was, in short, a pretty darn good year.

In response to surprisingly strong gasoline demand and increased exports, 200 ethanol plants across 28 states produced a record 15.3 billion gallons of clean-burning, high octane ethanol.

The production of 15.3 billion gallons of ethanol supported 74,420 direct jobs and 264,756 indirect and induced jobs across the country.

With \$25 billion spent on raw materials, other inputs, goods and services, the ethanol industry added:

- \$42 billion in gross domestic product (GDP),
- \$23 billion in household income, and
- \$9 billion in tax revenue.

The industry also produced a record 47 million short tons of animal feed like DDGS, and together with 3.2 billion pounds of corn distiller's oil, our industry's co-products had an aggregate market value of \$7.2 billion.

Finally, with octane and protein demand growing across the globe, we exported more than a billion gallons of ethanol and 11.5 mmt of DDGS. Exports alone supported:

- 14,940 direct, indirect and induced jobs,
- Added \$3 billion to GDP, and
- Reduced the U.S. trade deficit by more than \$4 billion.

All of this adds up to another solid performance for the U.S. ethanol industry. One report placed average net profit for a typical 100 million gallon dry mill at \$13 million in 2016, and pre-tax profits across the entire industry of \$1.9 billion. According to this study, average returns for the industry from 2007 through 2016 have averaged 9.8 percent with a standard deviation, a measure of risk, of 14.5%. That compares to an average return for the stock market over this period, as measured by the S&P 500, of 8.3% with a standard deviation of 19.7%.

Thus, I can once again say with great confidence and respect for what you have been able to accomplish that the state of the U.S. ethanol industry is strong, poised for continued growth, steeled for the challenges we know will persist, but resolute in our commitment to consumers seeking relief and choice at the pump, farmers in need of value-added markets for their commodities, and Americans all across the country concerned about the air we breathe and the national security threat posed by our stubborn dependence on imported energy.

Still, there is a sense of unease spreading across rural America. Net farm income fell to a seven-year low in 2016 and the aggregate value of crops hit its lowest point since 2010. Record corn crops in three of the last four years have pushed stocks to 2.4 billion bushels—a 30-year high. And even with a 7% increase in demand, average corn prices are expected to hit a 10-year low in this marketing year. USDA recently projected that net farm income will drop to just \$62 billion in 2017, roughly half the \$123 billion farmers earned in 2013.

It's probably no consolation to the farmers in the audience...but things could be worse. Indeed, they have been worse. Imagine what the farm economy would look like without 5.3 billion bushels of demand coming from the ethanol industry! Imagine the state of our rural communities if we didn't have more than 200 ethanol plants providing thousands of jobs, offering investment opportunities, and creating value-added markets for local farmers. It is no exaggeration to say that the recent downturn in the farm economy would have been far worse without the ethanol industry's stabilizing effects.

We hear the frustration and concern about growth prospects from our friends in agriculture and from those within our own industry. We hear some say that ethanol demand—and thus the amount of corn going to ethanol—has “flat-lined”. We certainly

understand that frustration. The RFA's entire Strategic Plan is geared toward sustainably growing demand for our products.

But a little perspective may be in order.

In 2013—just over three years ago—we used 4.75 billion bushels of corn to produce 13.3 billion gallons of ethanol and about 37 million metric tons of co-product animal feed. Production has steadily increased and in 2016 as noted, we processed 5.45 billion bushels of corn into 15.3 billion gallons of ethanol and 42 million metric tons of co-products. In other words, ethanol production grew by 2 billion gallons in three years' time, meaning corn demand for ethanol increased some 700 million bushels—or 15%. Clearly this isn't the kind of growth we saw during the boom years, but there are many industries that would be quite pleased with that kind of steady growth.

So far this year, we are producing at an annualized rate of 16.1 billion gallons, meaning a fifth straight year of growth is in the offing. I highlight these statistics not to minimize the demand challenges currently facing our industries, but rather to point out that we are indeed continuing to grow and mature, and that we remain fixated on growing demand.

But we have much work to do. We must expand existing markets and open new markets for ethanol here and abroad. We must continue adding value to our plants and pursuing technologies that will make us more efficient and profitable. We've seen how ethanol can lift the ag economy out of the doldrums of massive surpluses, acute supply-demand imbalances, and market prices below the cost of production. We've seen how ethanol can transform local markets and invigorate rural economies. It's no coincidence that the most profitable 10-year run in the history of U.S. agriculture began the same year the Renewable Fuel Standard was adopted. We've seen ethanol revitalize agriculture. We know it works. And we will work together to ensure ethanol continues to serve the critical role of stabilizing and strengthening the farm economy.

Of course, we will be doing this with a new President, new leadership throughout the government, and a political climate less than welcoming to expanded corn ethanol. Success will depend on our ability to build partnerships with new allies and a coalition reflecting today's political reality.

Thankfully, we begin from a position of strength. Not only do we have a strong base of support throughout the Congress, but we have a resident at 1600 Pennsylvania Avenue who understands the value of ethanol and who is committed to an America First energy policy.

President Trump spoke favorably about ethanol generally and the RFS specifically throughout the campaign. It is no coincidence then that rural America voted overwhelmingly for Donald Trump on November 8th. It is the reason he won the election. Perhaps not surprisingly, the same political pundits who so badly predicted the election results have also badly assessed the post-election analysis. Their conventional wisdom suggests it was disaffected voters in the rust belt hurt by trade pacts that swung

the election to Trump. Wrong. Of the 218 counties switching from “blue” to “red” in November, 133 or more than 60% were counties where more than a million bushels of corn are grown. The counties switching in Pennsylvania, Ohio, Michigan, and Wisconsin were NOT the industrial base, but farm country. Indeed, 93% of the ethanol produced last year was produced in a county voting for Trump, and 91% of the corn grown last year was from Trump country.

Consequently, President Trump’s support for ethanol and the RFS is unwavering. When some questioned whether his appointment of Scott Pruitt to be EPA Administrator or Rick Perry to be DOE Secretary signaled a weakening of his resolve on the RFS, their anxiety was relieved throughout the confirmation process when Mr. Pruitt repeatedly affirmed his commitment to uphold the law as Congress had written it. Both Pruitt and Perry understands that their perspective has changed, that they will now represent the nation, not the parochial interests of their home states, and each is acutely aware that the boss is solidly in support of American energy, including homegrown, renewable ethanol.

There is understandable angst around the President’s disdain for multilateral trade pacts. Trade is critically important to agriculture and ethanol. But Trump, the businessman, most certainly appreciates the importance of trade. His antipathy is toward trade deals he believes have put U.S. companies at a disadvantage, not toward trade itself. Frankly, it will be refreshing to have a leader willing to stand up for American business in trade disputes. Over the past several years, when the U.S. ethanol industry has faced unfair and ultimately illegal trade barriers limiting our ability to build export demand, the government was frustratingly tepid in its assistance, refusing, for example, to file a WTO complaint when the Europeans imposed blatantly illegal anti-dumping duties in contravention of 100 years of international trade law. The failure to act against the EU certainly did little to discourage others, like China, from taking equally unjustified steps to thwart U.S. exports.

I am confident that a Trump Administration will stand up for American trade.

Consider the importance of trade to the people in this room.

Last year, the industry exported 1.05 billion gallons to nearly 60 countries across the globe. That’s the second highest export volume on record, and because imports were a scant 34 million gallons, the NET trade balance for U.S. ethanol was a record 1.01 billion gallons. Top markets for U.S. ethanol were Brazil (26%), Canada (25%), and China (17%). Indeed, China was our fastest growing export market by volume, importing 106 million more gallons than a year ago. The value of those exports exceeded \$2 billion, up 13% from 2015.

Co-product exports were also strong. The U.S. exported 11.5 million metric tons of DDGS to 51 countries, with China, Mexico and Vietnam receiving about half of that total. But China’s implementation of trade distorting tariffs has significantly slowed those imports from about 1 mmt/month in the summer of ’15 to almost nothing today.

China's recent actions have been a major factor driving ethanol and DDGS prices lower in recent months. In fact, DDGS prices are currently 40% lower than in June 2016. The industry's growing concern over China's anti-U.S. and anti-consumer trade barriers led the RFA, Growth Energy and the U.S. Grains Council to write President Trump a few weeks ago imploring the new Administration to put China's recent actions near the top of the Administration's China trade agenda. With our friend Iowa Governor Terry Branstad soon to become the U.S. Ambassador to China, I am confident it will be.

So, how do we build demand? That is the central question facing the U.S. ethanol industry today, and the challenge the RFA Board of Directors has wrestled with over the past several strategic planning discussions. Clearly, there are near-term opportunities focused on growing the marketplace for E15. Progress is being made. USDA's Biofuels Infrastructure Partnership and the industry-funded Prime the Pump program have been highly successful in encouraging marketers to offer E15 to consumers. Major marketers like Thornton's, Kum & Go, Sheetz, and RaceTrac have provided tremendous leadership by offering higher octane, lower priced E15 to those consumers who can use it. And more and more vehicles on the road today can indeed utilize E15 knowing the fuel is fully covered by their vehicle's warranty. Indeed, an RFA report recently released showed that more than 80% of model year 2017 vehicles provide full warranty coverage for E15, including Hyundai and KIA for the first time. Moreover, 90% of the vehicles on the road today have been legally approved for E15 use by EPA.

The market is there. But there are still only about 400-500 stations offering E15 today. A big reason, of course, is related to EPA's nonsensical disparate treatment of E10 and E15 with regard to volatility regulations. In fact, until EPA provides volatility parity for E10 and higher ethanol blends, growth in these fuel options will continue to be incremental. That's why the top priority of the RFA is to secure RVP parity for all ethanol blends.

While RVP parity could be assured through legislation, regulatory options also exist and would likely be more easily secured. One of President Trump's priorities is an overhaul of the regulatory code that has needlessly burdened American businesses, stymied growth, and increased cost with little or no environmental or consumer benefit. EPA's treatment of volatility for ethanol blended gasoline is a perfect example. The RFA has provided the Agency with reams of data from DOE and other independent labs proving that extending the RVP tolerance currently provided only to E10 would have NO detrimental impact on ozone or other air quality standards. In fact, because of the increased oxygen content of higher ethanol blends, there would actually be an air quality improvement. The regulation is a relic of a bygone era when E10 was the only ethanol blend in the market and little was known about the air quality benefits of higher blends. It needs to be revised, and the RFA will not rest until it is.

The President's commitment to regulatory reform provides a perfect opportunity to finally bring fuel regulations into the 21st century, assuring they reflect the fuels being sold today. The President issued an Executive Order requiring that for every new regulation, two must be eliminated. So, while RVP parity is our top regulatory priority,

we have a list of others that will also help to expand the marketplace for ethanol without sacrificing any air, safety or health standard.

Let's simplify the petition process for new certification fuels and eliminate unreasonable criteria for approval. In its Tier 3 regulation, EPA took our advice and included provisions allowing automakers to petition the Agency to use alternative certification fuels—such as a high-octane low carbon blend like E25 or E30. But then the Agency put incredibly rigid and unrealistic requirements around the petition process, ultimately discouraging any automakers from submitting a new certification fuel petition.

Then there's the absolutely absurd fuel registration process. Tens of millions of dollars were spent to test and register E15. There were emissions tests, subjective driveability tests, materials compatibility tests, soil contamination tests, and health effects tests. Is all that testing really necessary? We've been using ethanol for decades in this country and there is tons of research and data already available about its impacts on emissions, vehicle performance, and human health. As the nation's transportation fuel system gravitates toward higher octane fuel, let's not waste time and money proving things we already know. The registration process today is costly, cumbersome, time consuming, and redundant. It needs to be reformed so that fuels we know will work – like E25 or E30 – can be broadly and efficiently commercialized.

Let's reform CAFE rules in a way that provides a level playing field for alternative fuels and does not create incentives for certain technologies over others that consumers might prefer. Right now, the nation's fuel economy regime provides a host of hidden but powerful incentives for electric vehicles, even if the source of the electricity is coal. Add to that a myriad of state and local incentives for electric vehicle infrastructure that are built into the rate base, and it becomes painfully apparent that government policy is putting a thumb on the scale for EV's at the expense of liquid transportation fuels that might be as clean or cleaner. Meanwhile, the Agency is rapidly phasing down CAFE credits for ethanol flex fuel vehicle production and it is already resulting in dramatically curtailed FFV production.

The bottom line is EPA should be fair and equitable in how it provides incentives for alternative fuel vehicle production.

Yes, all of these regulatory barriers are in the weeds. But they can all be eliminated through rational regulatory reform efforts and each will have an immediate impact in stimulating additional ethanol demand.

But there's more.

Let's revise the modeling used by the states to demonstrate attainment of federal air quality standards such that they fully recognize the benefits of ethanol. The current MOVES2014 model simply cannot be used to generate reasonable emissions estimates for ethanol blends higher than E10. The Agency has to start over, and this time prevent

manipulation in the emissions testing programs to distort ethanol's environmental benefits.

And while I'm talking about EPA modeling, let's finally update the Agency's lifecycle GHG analysis for corn ethanol. When it promulgated the RFS2 final rule in 2010, EPA committed to review and update its carbon analysis as new data and better science became available. . Seven years later? Nothing.

In the meanwhile, study after study has concluded EPA's carbon analysis for ethanol was poisoned by false assumptions about indirect land use change and out-of-date information regarding energy inputs at both the plant and on the farm. A comprehensive study just completed by ICF International for USDA and released in January concludes ethanol produced from corn using average practices today is 43% better than 2005-era gasoline and will be about 50% better than gasoline by 2022. EPA's failure to update its modeling has been more than a public relations hassle; it has impugned corn ethanol's standing as a weapon against climate change around the globe and undermined international trade opportunities.

Let's eliminate burdensome fuel survey requirements. EPA has instituted an RFG survey, an E15 survey, a ULSD survey, and now it intends to implement a new Flex Fuel Survey. Enough. EPA should do its own enforcement, or at least streamline and combine these efforts with the participation of ALL stakeholders and reduced cost for everyone.

Looking toward the future, EPA should revise existing fuel regulations that are focused exclusively on criteria pollutants and establish a national minimum octane rating for "regular grade" gasoline. Sub-octane gasoline is currently being sold in many parts of the country, despite the fact vehicles are not designed or warranted for lower octane fuels, and it affects both performance and emissions.

More importantly, the Agency needs to lead and provide the regulatory framework to accommodate higher octane fuels. As automakers move toward higher compression ratio engines to meet tighter fuel economy standards, the Agency should be paving the way to assure that the right fuels are in place to enable those technologies. In its recent Midterm Review of the more stringent 2022-2025 CAFE requirements, the Agency talked a lot about emerging engine technologies like higher-compression ratio, downsizing, and turbo-charging—but they steadfastly avoided any discussion about fuels. Why? If the environmental goals assumed with these engine technologies are to be realized, the higher octane fuels needed for those vehicles will have to be available. That is less likely to happen without an appropriate regulatory structure.

There are certainly others. Is it time, for example, to reconsider the regulatory justification for poisoning every gallon of ethanol with hydrocarbon denaturants? Does anyone really believe a unit train full of fuel ethanol might somehow end up in alcoholic beverages and skirting beverage taxes if it isn't denatured? Today's requirement simply adds cost, creates environmental and tax issues, and imposes unnecessary record keeping,

permitting and safety burdens on the industry. Not to mention, these denaturants add things like sulfur and benzene to what is otherwise a truly clean fuel. Every gallon we produce is already tracked by an elaborate compliance mechanism through EPA; perhaps, the denaturant requirement is outdated.

Successfully addressing these regulatory issues will have an enormous impact on the future demand for U.S. produced ethanol. None of them mandate anything. But removing these regulatory shackles will reinvigorate the innovative spirit that built this industry while empowering consumers to make the fuel choices appropriate for their vehicles and their pocketbooks.

We spoke at length at this event a year ago about the potential for ethanol demand to grow as the demand for higher octane fuels intensifies. That is most certainly still true today. Demand for higher octane gasoline is already growing as automakers introduce more vehicles that require or recommend the use of premium. A high octane, mid-level ethanol blends like E20, E25, or E30 can deliver the same or better fuel economy as gasoline when paired with an optimized engine, but with less energy expended per mile and far fewer emissions. But while many automakers today acknowledge the potential benefit of pairing higher ethanol blends with higher compression ratio engines, they have been far less willing to engage in a meaningful dialogue about how to create the regulatory and marketplace environment to make it happen. We need to build upon the partnership we already have with the autos, and get this dialogue moving. Time's wasting.

While the regulatory agenda moves forward, hopefully with the urgency and efficiency of the blizzard of Executives Orders marking the first month of the Trump Administration, congressional oversight of the RFS and legislative attacks on renewable fuels will continue. Our "friends" in the oil industry continue to target the RFS with ads designed to vilify ethanol even as many oil companies produce ethanol themselves and all of them have recognized ethanol has benefits and is here to stay. We will continue to fight those attacks, and defend both the molecule and the policy with passion and prejudice. But we should recognize that the oil industry is no longer monolithic with regard to renewable fuels, and we can best succeed by building new partnerships with those refiners who share our vision of a growing ethanol market.

The debate on Capitol Hill is shifting – away from repealing the RFS to reforming it after 2022, when the congressionally mandated volumes proscribed in the law are removed and replaced with largely unfettered discretion by EPA to set future standards for all renewable fuels. We need to be active and constructive participants in that debate. I don't know about you, but I'm not necessarily comfortable leaving the industry's fate in the hands of what has been an unaccountable bureaucracy that has not always appreciated the importance or benefits of corn ethanol.

Again, building new partnerships and strengthening old ones will be critical to successfully navigating the post-2022 discussion. New alliances are forming as some refiners realize their interests may no longer align with oil producers, as automakers face

the daunting challenge of meeting increasingly stringent fuel economy standards with vehicles consumers actually want to buy, as farmers run up against the RFS cap on how much corn ethanol can qualify for the program, and as biofuel producers look to grow demand and stimulate investment in new technologies in the face of an increasingly hostile political environment. Our destiny is in our hands and will be promising if we have the courage to move beyond recent acrimony and forge a new paradigm.

We must remember that our most important partnership is with each other. The surest path to failure is with a house divided. I am committed to presenting a united and unbreakable front so there is no ambiguity as to where the entire ethanol industry stands. And I am confident others share my commitment and will work with us toward a common purpose – growing demand and making this industry the success it must be if we are to achieve the energy, environmental, rural economic, and consumer goals that define our mission.

Together, we will make E15 as ubiquitous as E10 is today;

Together, we will make higher octane fuels a necessity for the clean vehicles of the future;

Together, we will create new demand in all corners of the globe, meeting the octane and carbon reduction needs of the world;

Together, we will create a market environment that will drive investments in new technologies so that cellulose and advanced biofuels realize their potential; and

Together, we will march on, Building Partnerships and Growing Markets, and securing a more sustainable future for our children.

Thank you for everything you do to make America safer, cleaner, and economically strong. Thank you for allowing me to be a part of this journey. I remain enthusiastic about this industry's future, and I can't wait for next season! Let's get to work.

Thank you.