

MEMBERSHIP IN ACE IS A PARTNERSHIP

ACCELERATE



2021

ANNUAL MEMBER REPORT

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**Letter from ACE CEO,
Brian Jennings**

reducing greenhouse gas emissions.

Some are concerned this means the end for liquid fuels, but ACE is confident ethanol is the *best* low carbon option to replace petroleum and provide meaningful GHG reductions. In other words, we refuse to concede the climate conversation to electric vehicles.

That is why we have been highlighting how climate-smart farming practices, efficiencies at ethanol plants, and the capture and sequestration of biogenic CO₂ from facilities puts ethanol on a trajectory to reach *both* net-zero *and* net-negative emissions, a trajectory that is unique to ethanol.

It is also why we have helped mobilize diverse coalitions, comprised of some environmental groups and electric vehicle

As the new year begins, I am marking my 18th year with ACE, and during this entire time, I can say some of the most rewarding and important work has been our effort to highlight ethanol's carbon value.

We have been working to position corn ethanol as part of the climate solution because policymakers around the globe are focused on

Letters from ACE LEADERSHIP



advocates, to pursue new technology-neutral clean fuel policies at the state and federal level that will ensure a growing market for low carbon ethanol *even as overall petroleum use declines*.

If we have an opportunity to expand ethanol's market share by helping decarbonize liquid fuels, why would we spend time and resources to protect the status-quo which limits ethanol to 10 percent of the market?

We need to get elected leaders to realize increasing the use of ethanol today will *immediately* benefit the climate, that meeting a goal of net-zero emissions by 2050 will be more attainable if we start making progress *right now* with low carbon ethanol.

That's a message ACE will continue to deliver, and while we're at it, we intend to hold elected leaders accountable; do they really want to reduce GHGs, or do they just want to talk about it?

Thanks for your continued support and best wishes in 2022.



**Letter from ACE
Board President,
Dave Sovereign**

the Tonight Show, Rodney is describing one instance of how he gets no respect: "The house was on fire and the kids came screaming into the bedroom and my wife said, 'Shhh, you'll wake daddy.' Let me tell ya, I get no respect."

Somehow, a similar scenario has occurred with ethanol. We heard President Biden call for "zero emission vehicles" and the quick assumption was made that these had to be electric, or battery powered vehicles. Auto manufacturers hastily jumped on board, leapfrogging over biofuels and ethanol,

This past year for ethanol production and promotion in at least my own eyes can be best described by comedian Rodney Dangerfield with his line: "Let me tell ya, I get no respect."

I'm likely dating myself here a bit but if you aren't familiar with this energetic comedian, please Google Rodney or search YouTube for videos of Rodney performing. In a video on

claiming there was no opportunity for liquid fuel vehicles in their future.

How did we lose respect? What happened to ethanol reducing greenhouse gas emissions by up to 46 percent in transportation fuels? What about the amount of carbon sequestered in corn production, as our ethanol feedstock, combined with process and technology improvements in ethanol production, can achieve a net zero carbon footprint?

We don't seem to be getting respect. Could this be some sort of "New Kid on the Block" syndrome? I believe most of us realize the obstacles that must be overcome; replacing all internal combustion engines is a daunting and expensive endeavor and simply unpractical. As the reality of this transition sets in, maybe we, as ethanol producers and supporters, will begin to regain the respect we deserve. We must stay vigilant and engaged in energy policy discussions. I wish we could bring back the energetic Rodney Dangerfield to help highlight how we don't get the respect we deserve.



ACCELERATE



KEY ACE ACTIONS and Industry Happenings

ACCELERATING Ethanol Demand

ACE began executing on a strategic plan over the course of 2021; a plan we call Accelerate – ACE’s roadmap for sparking new demand for ethanol. *Accelerate* is built upon three pillars.

1. Increasing demand and value for ethanol through new clean fuel policies
2. Protecting and supporting existing policy-driven markets
3. Developing domestic and international markets

By elevating ethanol’s low carbon attributes, our industry can drive higher ethanol blends into the market, reduce greenhouse gas (GHG) emissions, and revitalize the economy. ACE will continue building upon important progress made in 2021 to enact new clean fuel policies at the state and federal level to increase ethanol use far beyond 10 percent and return real economic value to ethanol producers and farmers.

While the Renewable Fuel Standard started out as a success story, over the past several years EPA has sabotaged the program on behalf of refiners. If we can get the RFS back on track, it can still foster innovation and market growth. *Accelerate* includes both offensive and defensive approaches to protect the RFS and overcome regulatory barriers to higher ethanol blends.

ACE’s market development program has the experience and expertise to equip the domestic and international supply chain with the information they need to make higher blends available in the retail marketplace.

ACE was founded on the idea that a coalition of grassroots support can yield influence and change. Through *Accelerate*, we’re continuing this important tradition. Read on to see some highlights on how this plan was put into action in 2021 and what’s ahead for 2022!

ACE in Action

FIRST QUARTER (JANUARY – MARCH)

1. Increasing Demand and Value through New Clean Fuel Policies

- ✓ Future Fuels Act introduced in Minnesota, the first clean fuel standard policy in the Midwest
- ✓ ACE's 2018 White Paper, *The Case for Properly Valuing the Low Carbon Benefits of Corn Ethanol*, cited in a Harvard/Tufts study showing corn ethanol reduces carbon emissions by nearly 50%

2. Protecting and Supporting Existing Policy-Driven Markets

- ✓ Argonne National Lab announced its intention to implement GREET model update requests from ACE, and South Dakota and Kansas Corn associations
- ✓ Sent letter to EPA Inspector General on legality of last-minute Trump EPA waivers

3. Developing Domestic and International Markets

- ✓ Marketed ACE's new "Flex Check" E15 equipment compatibility tool for fuel retailers
- ✓ Assisted retailers in a second round of grant applications for USDA's Higher Blends Infrastructure Incentive Program (HBIIP)

SECOND QUARTER (APRIL – JUNE)

1. Increasing Demand and Value through New Clean Fuel Policies

- ✓ Helped initiate and advise clean fuel policy stakeholder discussions in Nebraska
- ✓ Joined a diverse national coalition in sending a letter to House Energy and Commerce and Senate Environment and Public Works committees in support of developing technology-neutral national clean fuel legislation

2. Protecting and Supporting Existing Policy-Driven Markets

- ✓ Coordinated with industry partners in reaction to the Supreme Court overturning one of the three restraints the Tenth Circuit Court placed on EPA's approach to RFS waivers for small refiners
- ✓ Encouraged and supported the introduction of legislation in Congress to increase ethanol use

3. Developing Domestic and International Markets

- ✓ Recommended USDA develop a commonsense framework to measure, monitor, and verify practices that sequester carbon in the soil so farmers and ethanol producers can reap the reward in future low carbon fuel standard markets as part of its climate strategy
- ✓ Submitted comments to USDA as they determined how to designate \$700 million to biofuel producers as part of its Pandemic Assistance for Producers initiatives, now called the Biofuel Producer Program

THIRD QUARTER (JULY-SEPTEMBER)

1. Increasing Demand and Value through New Clean Fuel Policies

- ✓ Launched for testing our Carbon Intensity Calculator, a simplified GREET model tool, to equip farmers and ethanol producers with the ability to use their unique data to better understand their current carbon score
- ✓ Called for a legislative hearing to highlight how the Next Generation Fuels Act would remove ethanol market barriers and could be improved to reward efficient ethanol producers

2. Protecting and Supporting Existing Policy-Driven Markets

- ✓ Called on President Biden to set the maximum statutory conventional renewable fuel volumes under the RFS in the 2021, 2022 RVO proposal
- ✓ Urged for bipartisan legislation in Congress to approve E15 use year-round immediately following DC Circuit Court's reversal of EPA's 2019 regulation; encouraged industry stakeholders to urge their congressional leadership to cosponsor the legislation

3. Developing Domestic and International Markets

- ✓ USDA announced a \$7.5-million investment in an ACE-led first-of-its-kind Regional Conservation Partnership Program (RCP) project to secure farmers premier access to low carbon fuel standard markets based on their adoption of USDA climate-smart agricultural practices
- ✓ Connected corn grower groups with Pearson Fuels for an over \$1 million investment in expanding E85 availability in California, and began documenting data for a hybrid electric flex fuel vehicle demonstration project

FOURTH QUARTER (OCTOBER – DECEMBER)

1. Increasing Demand and Value through New Clean Fuel Policies

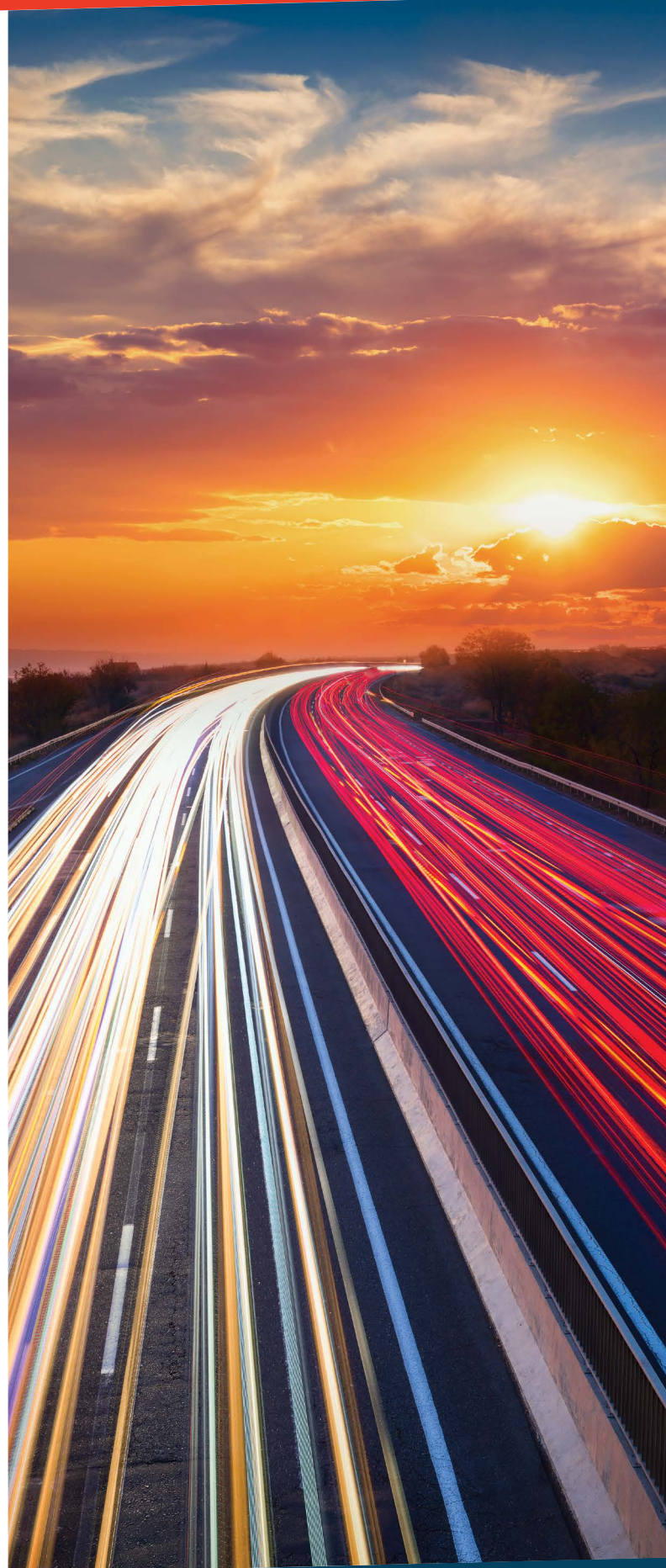
- ✓ Building upon ACE's clean fuel policy engagement in Minnesota, Gov. Walz announced directive to help inform a new clean fuel standard in the state
- ✓ Continued building momentum for the Minnesota Future Fuels Act for the 2022 legislative period

2. Protecting and Supporting Existing Policy-Driven Markets

- ✓ Argonne National Lab included ACE requests to account for 4R nitrogen management methods and enhanced efficiency nitrogen fertilizer use in 2021 GREET Model update
- ✓ Reviewed EPA's package of actions, including its proposed renewable fuel blending targets for 2021 and 2022 and retrospective volumes for 2020, prepared testimony and comments and informed members on how they can engage in the process

3. Developing Domestic and International Markets

- ✓ Submitted feedback to USDA on how its Climate-Smart Agriculture and Forestry Partnership Program can be used to scale ACE's RCP) project to additional sites, allowing participating ethanol facilities to collect localized data required to secure access to LCFS markets and include on-farm contributions
- ✓ Began outreach to ethanol facilities to gauge interest in participating in a LCFS Ethanol Feedstock Initiative to provide farmer access to LCFS markets through the establishment of validated, non-proprietary verification protocols





MARKET DEVELOPMENT

Flex Check Tool and Flexfuelforward.com

While petroleum marketer trade shows remained on hold for the first half of 2021, ACE’s market development team was able to bring the program to a handful of shows during the late summer and fall. ACE launched its Flex Check E15 compatibility tool in September of 2020 and began marketing the tool to fuel retailers, ramping up efforts in early 2021, which coincided with the Trump Administration EPA’s proposed rule to either modify the E15 label or remove the label requirement entirely, as well as to modify the underground storage tank (UST) regulations which offer paths that would make it easier for station owners to demonstrate compatibility with E15 and possibly higher ethanol blends in the future. EPA’s proposed changes provide recognition that equipment is already compatible with E15, citing ACE’s Flex Check E15 compatibility tool, which could save fuel marketers billions of dollars compared to fictional estimated costs from ethanol opponents. EPA also listed Flex Check as a resource on its UST website. The Biden Administration EPA did not take any actions on these proposed changes in 2021.

Tools like Flex Check arm retailers with information to give them confidence they can offer higher ethanol blends without breaking the bank, and to be better prepared to work with equipment providers. Keeping compatibility at the forefront, ACE is shifting its messaging to marketers in 2022 to align with the coalition’s carbon strategy. Retailers could offer low carbon fuels like E15 and E85 right now, and the equipment could quite possibly already be right under their canopy. Look for the new messaging through our paid advertising on fuel marketer websites and our very own flexfuelforward.com. The website shares information from ACE’s broad base of marketer partners with other prospective high-blend retailers to help them succeed when they make the change. Contact ACE to learn how you can help let fuel retailers in your area know about this tool.

Ethanol Market & Infrastructure Update

In July 2021, the industry received the disappointing news that the D.C. Circuit Court of Appeals reversed EPA’s 2019 regulation, which allowed year-round E15 availability. Given the sense of urgency to ensure uninterrupted availability of E15 in all parts of the country, ACE has been working with our industry partners, as well as administrative and legislative officials, to make sure this ruling doesn’t set back the important growth of E15. Bipartisan, bicameral legislation was introduced in

KEY Industry Issues



2021 to clarify E15 should be allowed for sale year-round by extending the 1-psi Reid vapor pressure (RVP) waiver to fuel blends containing gasoline and ‘over 10 percent ethanol.’ Following its introduction, ACE has been fostering bipartisan support for the legislation while exploring other options.

Gasoline sales were up in 2021 compared to the pandemic-induced drop experienced in 2020. U.S. fuel ethanol production increased in 2021 by over 861 million gallons versus 2020 and consumption increased by over 1.14 billion gallons. Ethanol’s share of finished gasoline consumption increased by 0.01 percent to 10.25 percent in 2021 versus 2020, according to The ProExporter Network using the Energy Information Agency’s Short Term Energy Outlook data.

In September, a few state corn grower groups invested over \$1 million to help San Diego-based fuel marketer Pearson Fuels expand availability of E85 in California. ACE Chief Marketing Officer Ron Lamberty helped make the connection and explain that Pearson offers retailers turn-key entry into the market, taking care of the regulatory challenges of adding E85 in California. Even more importantly to some retailers, Pearson handles all the RINs [Renewable Identification Numbers] and CARB [California Air Resources Board] credits to supply very competitively priced E85, which has driven huge increases in volume over the past several years. Thanks to the funding support, Pearson can do a lot more, hopefully a lot sooner, and if the low prices and greater visibility get the attention of California regulators and elected officials, it could make it easier to make the case for E85 as a low- to net-zero carbon fuel right now and into the future.

Infrastructure Funding

In 2020 and early 2021, ACE fielded information requests for USDA's fuel infrastructure grant program (HBIIP) from fuel marketers from Connecticut to California and promoted the program via paid advertising. This program helps expand the availability of low carbon fuel blends at the pump. In most of the country, E85 is a lower carbon option than even plug-in electric vehicles. Over the course of 2021, legislation was introduced which would enable USDA to continue making investments in biofuel infrastructure, and a historic nearly \$1 billion was included in the House-passed Build Back Better Act. In December 2021, USDA also announced it would make available an additional \$100 million in biofuel infrastructure support in early 2022. Thanks to programs like HBIIP, more locations will be added.



ACE Chief Marketing Officer Ron Lamberty's 2019 Ford Fusion Hybrid. He is documenting the performance of the hybrid electric flex fuel vehicle, including the estimated greenhouse gas reduction, over the next three years.



Hybrid Electric Flex-Fuel Vehicle Demonstration

With the push to net-zero vehicles over the next 10 to 30 years, and with "net zero" being understood as electric vehicles (EVs), ACE unveiled a vehicle demonstration project at its conference in August to disrupt this narrative and timeline by showing low to net-zero-carbon vehicles powered by ethanol already have cleaner lifecycle GHG emissions than plug-in electrics and could reach net-zero long before EVs on the market today.

Lamberty drove a Hybrid Electric Ford Fusion he purchased in 2021 to California to meet with E85 wholesaler Pearson Fuels and the owners of eFlexFuel Technology to install their flex fuel conversion kit on Lamberty's hybrid. Now a Hybrid Electric Flex Fuel Ford Fusion, the front-wheel-drive midsize sedan starts up on electricity and is powered by a 2.0-liter, four-cylinder engine capable of using up to E85 matched to an electric motor for a combined 188 horsepower. According to Lamberty, from a total GHG reduction standpoint, it makes sense for a hybrid to use the cleanest liquid fuel available when charging and not running on electricity, and that's E85. Lamberty calculated a hybrid electric vehicle running on low-CI E85 could obtain a total GHG score as low as 20 to 25 grams of CO₂ per mile, which is lower than current EPA total GHG emissions calculations for PHEVs or full EVs. Yet, no major automakers offer a flex-fuel hybrid vehicle. ACE will document the vehicle data over the coming years to demonstrate real-world performance of the hybrid electric vehicle fueled with E85, as well as estimated GHG reduction using the CI scores of various ethanol producers. Read more in the September/October issue of *Ethanol Today* and stay tuned for updates.

GOVERNMENT AFFAIRS

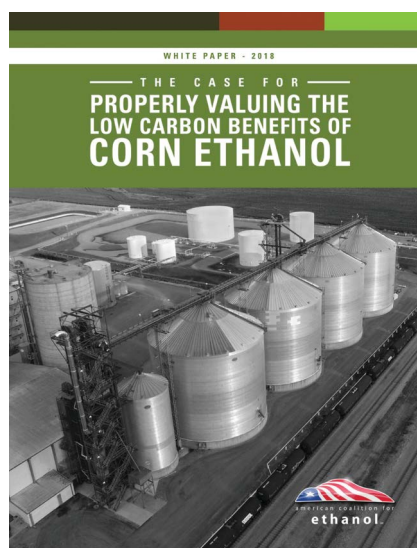
RFS Developments

As we transitioned to a new Administration in 2021, we also gained new leadership at EPA. EPA Administrator Michael Regan inherited a long list of unfinished business with respect to the RFS, including reining-in Small Refinery Exemptions (SREs), restoring 500 million gallons remanded to EPA by the D.C. Circuit Court from the 2017 Americans for Clean Energy Inc. decision, and promptly moving forward on the 2021 and 2022 Renewable Volume Obligations. In addition to these actions, ACE also has been pushing EPA to update lifecycle science showing corn ethanol can and should be part of the climate solution, to move forward with EPA's E15 labeling and UST compatibility proposed rulemaking, and ensure a role for mid-level ethanol blends in new fuel economy and emissions standards. We waited all year for action from EPA, and finally mid-December, EPA rolled out several actions in one proposed package. EPA intends to deny all 65 SREs that were pending at the time of the proposal, set the 2022 RVO at the statutory volume of 15 billion gallons for conventional biofuel, and restore the 500-million-gallon remand. However, EPA also proposes to retroactively cut the already finalized 2020 RVO and lower the 2021 RVO below what's called for in the RFS. ACE encourages advocates to participate in the public hearing and comment period following EPA's proposal to ensure the RFS gets back on track.

On the litigation front, in June 2021, the Supreme Court overturned the Tenth Circuit's holding that EPA may only 'extend' continuously pre-existing exemptions. Nevertheless, EPA still has two other restraints established by the Tenth Circuit that were not challenged in court that it must adhere to. There was also activity regarding our case on the unprecedented 31 SREs the Trump Administration's EPA approved in August 2019 for the 2018 RFS compliance year. ACE, along with a coalition of biofuel and ag groups, filed a petition in the D.C. Circuit Court challenging EPA's decision. In August 2021, the Biden Administration's EPA filed a motion to remand the SREs without vacatur, and in December 2021, that motion was granted. The court's order presents an important opportunity for EPA to restore integrity to the RFS. Approval of these SREs in 2019 exceeded the EPA authority under the RFS. While defending the RFS remains an important priority for ACE moving into 2022, we're making important headway in our strategic direction to promote increasing the use of ethanol as a solution to policies designed to tackle GHG emissions.

ACE's Carbon Strategy

ACE has methodically and strategically worked to expand opportunities for the production and use of low carbon biofuels at scale for the past several years. In 2014, ACE began consulting with the Department of Energy's Argonne National Laboratory on improvements to its GREET model to ensure the climate contributions made by farmers are properly credited in the lifecycle modeling tool. ACE's engagement has resulted in several refinements that better account for farmers' evolving practices and more accurately quantify corn ethanol's ever-shrinking carbon footprint, including improvements to the 2021 GREET model. In 2018, ACE published the White Paper "The Case for Properly Valuing the Low Carbon Benefits of Corn Ethanol," which emphasizes new scientific understandings surrounding on-farm carbon reductions and identified policies that could drive low-carbon biofuels into the future. The White Paper launched a multi-year stakeholder process, which culminated in a January 2020 framework encouraging new low carbon fuel markets in the Midwest that reward farmers for practices that reduce GHG emissions from biofuels. This framework helped create momentum for new clean fuel policies in several states over the past year, including bipartisan legislation which was approved by the Minnesota House of Representatives in 2021. ACE looks forward to continuing to engage with leadership at the state and national level on the need for new clean fuel policy built on top of the RFS that can further expand the domestic marketplace.



ACE published their 2018 white paper "Properly Valuing the Low Carbon Benefits of Corn Ethanol."

It can be downloaded here:
[ethanol.org/ethanol-essentials/
low-carbon-benefits-of-corn-ethanol](https://ethanol.org/ethanol-essentials/low-carbon-benefits-of-corn-ethanol)

USDA RCPP and New Opportunities



All this work informed ACE's collaboration on the \$7.5 million Regional Conservation Partnership Program (RCPP) project. ACE, together with RCPP partners South Dakota Corn Growers Association, Dakota Ethanol, South Dakota State University, Cultivating Conservation, and collaborator Sandia National Labs, will use this USDA financial assistance to compensate farmers for adopting climate-smart practices that sequester carbon, reduce GHG emissions, and improve soil health. The partnership will pair USDA technical assistance with significant partner financial and in-kind contributions to quantify the resulting soil health and GHG benefits, correlate them with existing models, and develop a non-proprietary verification system. This data will then be used to secure farmer access to clean fuel or LCFS markets for the first time

based on the GHG benefits of USDA climate-smart practices. In the South Dakota project area, this access could mean upwards of \$10 million in additional revenue annually because of the GHG contributions from on-farm conservation practices.

The new ACE-USDA project answers the question of "how" for one ethanol facility corn draw. Beyond that, it also illuminates the path forward for the industry. Our goal is to scale-up farmer adoption of climate smart agriculture practices in strategic grain-sheds beyond South Dakota that will help facilitate widespread acceptance of agro-ecosystem models to accurately predict changes in crop productivity, soil organic carbon, and GHG emissions. This can be the first of several projects designed to gather the necessary localized data to certify non-proprietary soil carbon models that can be used to access LCFS markets.

ACE is confident ethanol is the *best* low carbon option to replace petroleum and provide meaningful GHG reductions. We need to get elected leaders to realize increasing the use of ethanol *today* will *immediately* benefit the climate, that meeting a goal of net-zero emissions by 2050 will be more attainable if we continue making progress *right now* with low carbon ethanol. That is why we have been highlighting climate-smart farming practices through this new USDA project, and we will keep taking proactive steps to ensure corn ethanol is part of the climate solution. Learn more about this project at ethanol.org/usda-rcpp.





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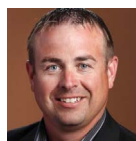
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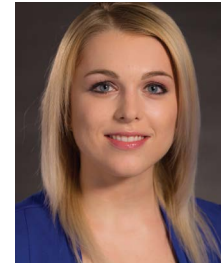
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After five years as ACE's Communications Director, Katie Muckenhirn has taken on the new role of Vice President of Public Affairs. Katie will continue to oversee the organization's communications, while assuming a larger role in ACE's public policy efforts and planning of ACE's Washington, D.C. fly-in and annual conference. As part of this transition, ACE has hired Ashley Borchert to serve as Communications Manager on the ACE staff. Minnesota native Ashley will bring her digital marketing and social media experience from working at Midco to enhance ACE's communication strategy.



2022
Looking Ahead

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