CoBANK®
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2025 The Year Ahead

FORCES THAT WILL SHAPE THE U.S. RURAL ECONOMY

DECEMBER 2024

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Forces That Will Shape the U.S. Rural Economy

CoBANK
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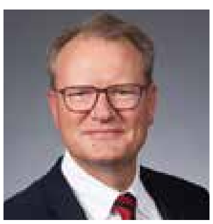
To Our Customers and Business Partners

By Tom Halverson



A YEAR AGO I wrote in the 2024 edition of this report that the U.S. economy was "the envy of the developed world." Today, with 2024 largely behind us, that characterization generally remains apt. The United States continues to benefit from solid economic growth, low unemployment, buoyant equity markets and inflation more or less under control *(Exhibits 1,2,3).* From today's vantage point, our economy seems likely to continue on that trajectory for 2025 — barring an unexpected tail event. Though we are not without challenges, Americans can be extremely thankful for our economy's proven ability to adapt, innovate and grow in a constantly changing world.

However, when we shift our focus to the state of the U.S. rural economy, the picture looks decidedly more volatile and more uncertain. Rural industries are disproportionately exposed to federal policy, and the outcome of the 2024 presidential and congressional election promises to bring huge changes in the government's approach to everything from international trade and immigration to climate change, energy exploration and rural economic development. American agriculture is already experiencing some of the most challenging conditions it has seen in recent years, including the brutal combination of low commodity prices and stubbornly high input costs *(Exhibit 4).* Rural electric utilities, meanwhile, are struggling with an emerging supply-demand imbalance in that industry driven by the explosive growth of data centers, artificial intelligence and other large scale electricity consumers. The unprecedented level of policy uncertainty now facing these sectors only adds to their already long list of headwinds and challenges.

Against that backdrop, it is our privilege to present CoBank's year-ahead report for 2025. Our Knowledge Exchange team of economists and industry analysts has once again assembled a collection of essays about key trends in the sectors led by our customers. Readers will notice a common thread throughout many of these essays — the cloud of policy uncertainty that hangs over many rural sectors.

As CEO of CoBank, I am personally thinking a great deal about the policy environment and the long list of unknowns that rural industries are grappling with right now. The bell curve of possible outcomes in the coming year looks significantly different than it did just a few months ago, with a much broader range of downside risks. From my perspective, the biggest risks include the following:

- The prospect of tariffs and collateral damage to American farmers. The incoming administration has made clear its willingness to impose tariffs on imported goods in order to create leverage over and drive outcomes among our largest and most important trading partners. I worry a great deal about reciprocal tariffs on U.S. agricultural products and long-term structural damage to America's position as a world-leading agricultural exporter.

EXHIBIT 1: GDP

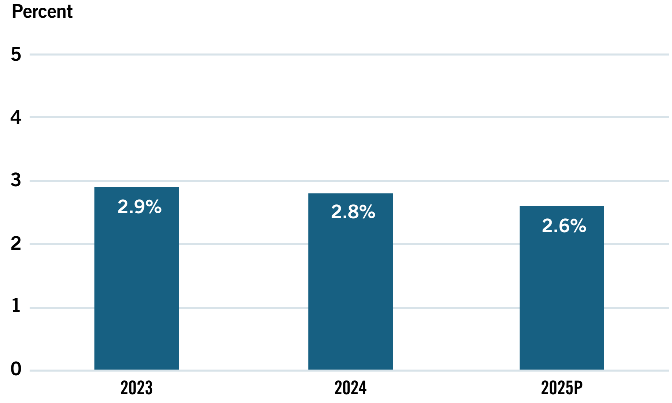


EXHIBIT 2: Unemployment

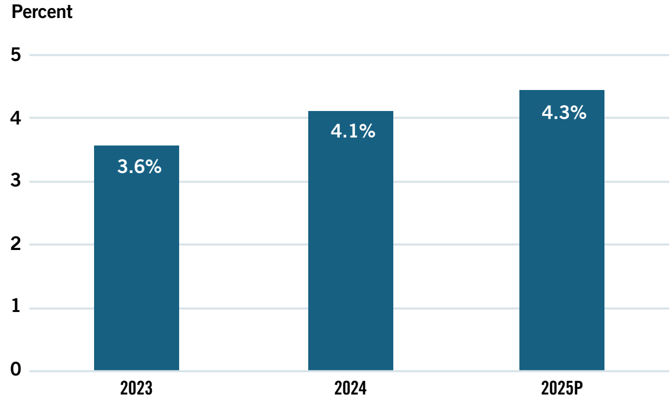
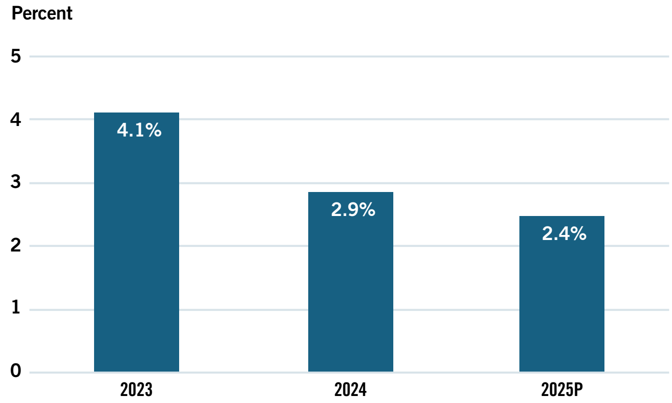


EXHIBIT 3: Inflation

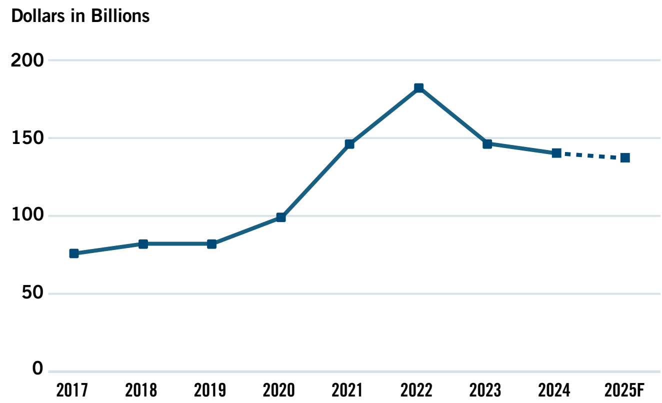


Source: Oxford Economics

- Immigration reform and its impact on the rural labor force. It is a fact that American agriculture relies heavily on immigrant labor — close to a third of workers involved in U.S. crop production are foreign-born. Many other industries prevalent in rural areas depend on immigrant labor as well, including animal processing, manufacturing, hospitality and construction. Though many of these workers are here legally, a crackdown on illegal immigration will inevitably drive up labor costs for rural employers.

- Farm Bill renewal. The Farm Bill is the single most important policy platform for rural America and American agriculture, serving as a vital safety net for an industry that feeds the world and that undergirds our national security. The last version of the Farm Bill expired in September 2024 (though its programs continue to operate through year-end). Although lawmakers can extend the legislation and will need to do so before the end of the year, it would be far better to reauthorize a new five-year Farm Bill that incorporates current marketplace conditions for agriculture. It is impossible to overstate the importance of this legislation to the well-being of farmers and rural communities.

EXHIBIT 4: U.S. Net Farm Income



Source: USDA

Whatever transpires in 2025, our customers can rest assured that CoBank will stand by them to fulfill their needs for dependable credit and financial services. Our customers will continue to feed people; generate and distribute power; deliver clean water; and provide vital connectivity to rural communities. It is a privilege for us to support them as they carry on that vital work.

With best wishes for the year ahead,

Tom Halverson

Tom Halverson
President and Chief Executive Officer

U.S. ECONOMY:

A new economic era begins

By Rob Fox

THE WORLD HAS NOW CLOSED THE DOOR on the "neo-liberal" political-economic era that began in roughly 1980, characterized by deregulation and free market ideology. The global financial crisis of 2007-2008 delivered the fatal, but slow acting, blow. The environment we enter in 2025 hasn't fully defined itself yet, but we do have some idea of what it will look like: international competition characterized by increased government involvement in the economy via tariffs, taxes, subsidies, and controls designed to maximize domestic production rather than rely on imports.

In many ways, the neo-liberal era achieved what it was intended to do: drive efficient economic growth. Since 1980, real global per-capita GDP has nearly doubled. Surprisingly, the United States has done even better, with 214% growth in the same timeframe. But most people are not "average," and many have not done so well, particularly the younger asset-poor generations. Consider the cost of what might be considered the pinnacle of the American Dream: earning a college education and buying a home. Over the past 30 years, average wages have risen by 150%, but the price of college and a home have risen by 230% and 270% respectively *(Exhibit 5).* Politically this is not a sustainable situation, which has opened the door for the incoming Trump administration to disrupt the status quo.

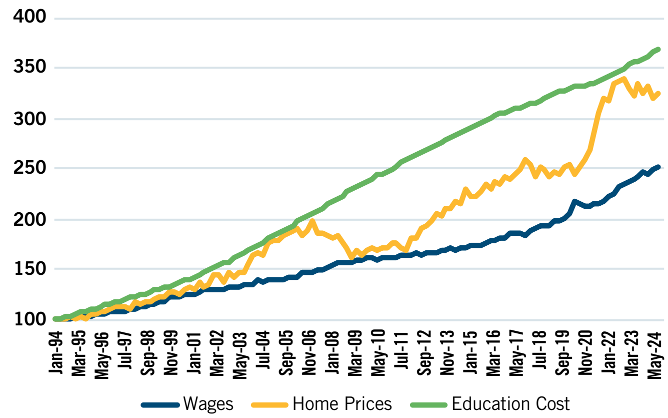
President-elect Donald Trump campaigned and won on a domestic agenda of tariffs, deportation and tax cuts. Most economists are currently rather sanguine about the ultimate impact of these policies and are forecasting 2025 GDP growth around 2.5%-3.0% – essentially the same as today. Those forecasts are based on a set of similar assumptions and very little concrete information of what policies will look like: something in the range of 10%-20% tariffs on China (10% on all other countries), a modest but delayed fiscal stimulus from tax cuts, and only a decline in the rate of immigration rather than mass expulsions of undocumented immigrants that were proposed during the campaign.

But Trump's campaign backers and voters are not expecting essentially "more of the same." Most (but not all) of his cabinet picks seem to be disrupters rather than experienced technicians and managers. The second Trump administration is already showing it will be much more assertive in wielding executive power in D.C. than during its first term. There is a good chance that tariffs will be higher and the crackdown on undocumented immigrants will be more disruptive than markets have already priced in – particularly in industries that rely heavily on immigrants like construction and agriculture.

All things being equal (which is never the case), all of Trump's proposed policies are inflationary: tax cuts, decreased labor supply, and tariffs on imported goods. In recognition of this, since early October the market has downshifted expectations for further rate lowering by the Fed in 2025, the yield on the 10-year Treasury note has risen from 3.75% to 4.30%, and the dollar has surged 7% higher.

But the Fed also has to worry about the labor market which continues to show definite signs of weakening when you look beneath the headline unemployment rate: The ratio of job openings to job seekers continues to drop and is now below pre-pandemic levels, quits are the lowest since 2015, unemployment among recent graduates is rising

EXHIBIT 5: Wages, Housing, Education Indexes (1994=100)



Source: FRED Federal Reserve Bank of St. Louis

(now at 5.5%), and small business hiring intentions are at their lowest non-COVID levels since 2016. History is quite clear that unemployment, like going broke, starts a little at a time and then all at once.

So hopefully the economic consensus is right for a change. Maybe Trump's campaign proposals were mostly for show and a negotiating tactic. If not, there's a good chance that we could see both rising prices and weaker employment in 2025. That would put Fed Chairman Powell in a real bind – focus on inflation or jobs? This will be interesting to watch as Powell's term ends in May 2026 and the president-elect comments on his every move. ■

U.S. GOVERNMENT:

Trump administration, Congress set for bustling January start

By Lauren Sturgeon Bailey

CONGRESS IS EXPECTED TO WRAP UP THE LAME DUCK SESSION of the 118th Congress by Dec. 19, hopefully addressing the important items of unfinished business. The White House has requested over $100 billion in supplemental assistance to address natural disasters that impacted much of the United States over the last several months. Further, the fiscal year 2025 appropriations must be passed, or another continuing resolution must be agreed upon to fund the government. The National Defense Authorization Act will need to be passed, and a one-year extension of the 2018 Farm Bill is increasingly likely. The agenda for the incoming administration and newly elected Congress continues to grow as inaction on important legislative items drags on.

President-elect Donald Trump delivered a decisive victory, as voting results from key battleground states were tabulated more quickly than originally expected. In contrast with the first Trump administration, the president-elect's team has already started organizing and announcing nominees for consideration as members return to Washington in January to begin the 119th Congress. Committee assignments will not be finalized until January, but leadership positions for the 119th Congress are being elected now.

Sen. John Boozman, R-Ark., will chair the Senate Agriculture Committee and Sen. Amy Klobuchar, D-Minn., will lead the Democratic side of the Senate Agriculture Committee, following the retirement of Chairwoman Debbie Stabenow, D-Mich., at the end of 2024. Rep. Glenn "GT" Thompson, R-Pa., will resume his role as chairman of the House Agriculture Committee and Rep. David Scott, D-Ga., is expected to return as ranking member. However, in an unexpected turn of events, several Democratic members are challenging the ranking member for his position. Several have cited Rep. David Scott's health and vigor as their primary concern for the well-being of the conference and their efforts to shape farm bill negotiations in the Committee.

The president-elect nominated Brooke Rollins to serve as the U. S. Department of Agriculture Secretary. Rollins served in several roles during the first Trump administration, most notably as the director of the Domestic Policy Council. She grew up on a farm in Texas, earned a bachelor's degree in agricultural development at Texas A&M University and a law degree from the University of Texas. Many in the agricultural industry hope Rollins holds on to her rural roots as she works to gain support for her confirmation to serve as the secretary of agriculture.

The 119th Congress will have a long and challenging to-do list when members return to Washington on Jan. 3, 2025. Senate committees will hold nomination hearings for the 24 cabinet-level positions, each of which will need a vote by the full Senate. The federal debt limit will be reached early in January and the Treasury Department must implement extraordinary measures to pay the federal government's debt using cash on hand until Congress can act to raise the debt ceiling. Just as in years past, we expect this effort to be lumped into the greater debate on government spending and funding levels. If important legislative duties are not completed in the lame duck session, they will flow to the list of must-pass items for the beginning of the year. As in the first Trump administration, the unified Congress is being pushed to use budget reconciliation to reconsider domestic tax policy, like extending and making improvements to the Tax Cuts and Jobs Act of 2017.

We expect President-elect Donald Trump to pursue an ambitious first-100 days of executive orders and other legislative activity that will likely include many of the campaign promises he made across the countryside. These may include significant deportation efforts and immigration reform, implementation of tariffs, extending other tax proposals and providing regulatory relief to roll back the Biden administration's initiatives. It should be a very busy start to the congressional year. ■

U.S. AGRICULTURAL ECONOMY:

Trade war could send ag economy from bad to worse

By Rob Fox

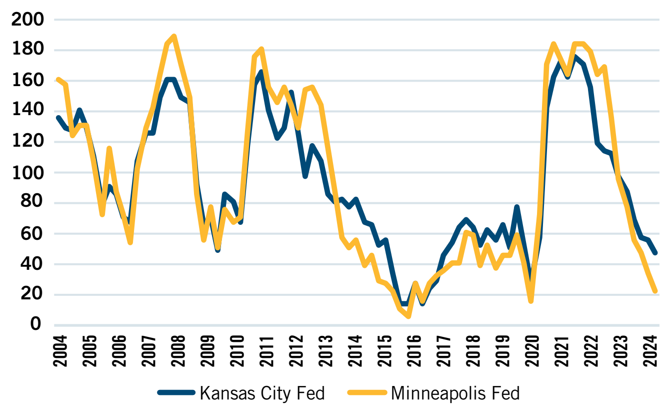
IN A RECENT SENATE APPROPRIATIONS COMMITTEE MEETING, Sen. Cindy Hyde-Smith, R-Miss., declared, “Today, the American farmers and ranchers are experiencing literally unprecedented market conditions.” Politicians are prone to exaggeration at times, but she may not be far off, at least for row crop farmers. The short-lived commodity boom caused by global droughts, the Russia-Ukraine war, and COVID supply issues are over, and commodity prices are down nearly 50% from 2022 highs. But crop production costs, particularly land rent, have remained elevated, and profitability has plunged to decade-plus lows. Recent Federal Reserve banker surveys show how quickly the outlook has turned *(Exhibit 6).* The silver lining to this dark cloud is that dairy and livestock producers are generally profitable as they take advantage of the low feed costs and resilient consumer demand.

However, more headwinds may be forthcoming for both the crop and livestock sectors. President-elect Donald Trump rode to victory on two main economic policy proposals: enact significant import tariffs and reduce immigration while deporting undocumented residents. In theory, these policies could achieve some limited objectives (i.e. protection for industries key to national security and higher wages for low-skill workers), but it is very hard to paint them as anything but negative for the U.S. farm economy. The U.S. exported $184 billion in agricultural products in 2023, which was already down from the year prior, and a trade war will put these directly in the line of retaliatory fire *(Exhibit 7).* Agriculture and construction are the two domestic industries that are most reliant on immigrant labor. Depending on how deportation efforts play out, the dairy, meatpacking, and produce industries could be severely impacted by intermittent labor shortages.

The trade war with China five years ago was costly to U.S. agriculture. A recent joint study by the national corn and soybean associations estimates that the 2018-19 trade war cost the U.S. a total of $27 billion in agricultural sales to China over those two years. But that doesn't include that value of lost market share over time or the additional cost to the American taxpayer from the federal government as a direct payment to cover those losses. Since then, China has turned to other suppliers for its food needs, primarily Brazil. China and Brazil recently signed an array of new trade deals, including import access for Brazilian sorghum and pork offal, two sectors that up until now have been dominated by U.S. products.

U.S. exporters have looked south of the border to fill in lost sales to China, and Mexico has become our largest export market in 2024. But President-elect Trump has recently targeted Mexico and Canada, threatening 25% tariffs on day one of his administration. Mexico, Canada, and China combined account for over half of the value of all U.S. agricultural exports. A full-blown global trade war would have devastating impacts on U.S. agriculture. Brazil, Russia, Australia, Argentina and others are gearing up to supply our global agricultural customer base — and this is no exaggeration. ■

EXHIBIT 6: Federal Reserve Farm Income Indices



Source: Federal Reserve

EXHIBIT 7: U.S. Agricultural Exports 2023

Product	Billion Dollars
Oilseeds and Products	40.8
Horticultural Products	38.3
Grains and Feeds	37.6
Livestock and Meats	23.6
Forest Products	9.2
Dairy and Products	8.0
Sugar and Sweeteners	6.7
Poultry and Products	6.6
Cotton and Byproducts	6.0
Ethanol	3.8
Planting Seeds	1.7
Biodiesel and Blends	1.5
Tobacco and Products	1.2
Grand Total	184.9

Source: U.S. Census Bureau Trade Data

GRAIN AND OILSEEDS:

Strong dollar, trade policy and South American crops to hobble U.S. exports

By Tanner Ehmke

A STRENGTHENING U.S. DOLLAR, the likelihood of trade wars, and the potential for record-large South American crops weigh on the outlook for grain and oilseed prices in 2025. After harvesting the second-largest corn and soybean crops last fall and the largest wheat crop in eight years, the U.S. has enjoyed a healthy export program with strong domestic usage helping draw down ample inventories. The return of carries in the futures market has also improved the profit outlook for commercial storage.

Domestically, biofuel's demand for corn and soybeans has been robust. Low corn and soybean prices are buffering processor margins and driving record demand from ethanol plants and soybean crushers. Renewable diesel demand continues to grow but is maturing. The outlook for weaker energy prices diminishes the demand outlook for ethanol, biodiesel and renewable diesel, implying an easing of biofuel demand growth. Uncertainty over the incoming administration's biofuel policy also overhangs the demand outlook. The potential for tariffs to slow imports of used cooking oil (UCO) that compete with soybean oil in renewable diesel, though, could be a positive for U.S. soybean demand. Livestock demand for feed grains will remain positive as end users enjoy profitable feeding margins.

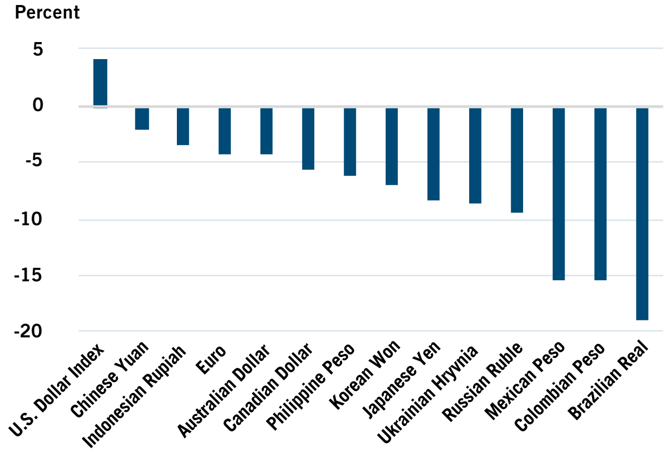
Abroad, economic woes in the U.S.'s top grain and oilseed export markets – Mexico and China – raise concern over their ability to import grains and oilseeds as their currencies weaken against the U.S. dollar *(Exhibit 8).* Foreign customers that front loaded grain and oilseed purchases from the U.S. ahead of a potential trade war under the new administration are also carrying greater inventories, thereby implying fewer imports in the future.

Export competition is also growing. A weakening of Russia's currency, the ruble, is expected to anchor global wheat prices as Russian wheat offers become more competitive. However, persistent drought conditions in the key wheat-producing regions in Ukraine and Russia offer potential for market volatility in wheat prices with the global wheat stocks/use ratio historically low.

In Brazil — the U.S.'s top export competitor for corn and soybeans — the expected continued weakening of the Brazilian real will make exports from Brazil cheaper versus U.S. origin. Assuming normal weather through the growing season, South America is expected to produce record corn and soybean crops and record exports. Growing crush capacity in South America also implies more export competition for soybean meal and oil.

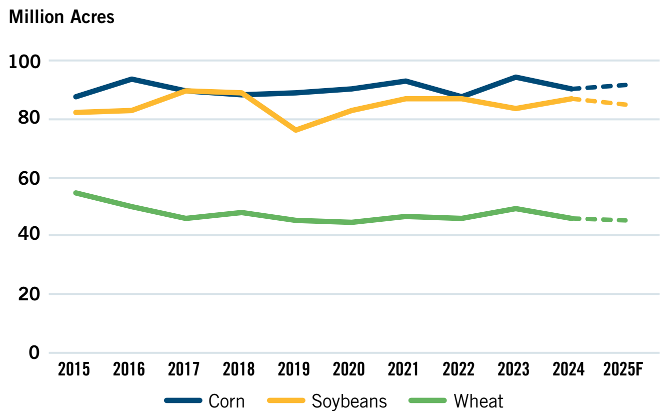
The global abundance of soybeans is weighing on soybean values relative to corn, which will likely incentivize U.S. farmers to shift some acres to corn. The USDA's Agricultural Projections report released in November called for U.S. corn planted acres in 2025 to increase 1.4% YoY to 92 million while soybean acres were seen falling 2.4% YoY to 85 million *(Exhibit 9).* U.S. all-wheat acres are expected to see a marginal decline to 46 million, down 0.2% YoY. U.S. farmers across the grain and oilseed spectrum are widely expected to struggle with further margin compression as weaker commodity prices test farmers' abilities to lower production costs. ■

EXHIBIT 8: **Change in Currency Values of Major Grain-Trading Countries (YTD)**



Source: Barchart.com

EXHIBIT 9: **U.S. Planted Acreage**



Source: USDA-ERS

FARM SUPPLY:

Squeezed margins force innovative approaches to managing inputs

By Jacqui Fatka

AS FARMERS FEEL THE PRESSURE of a depressed commodity cycle, they are looking for ways to manage anticipated continued tight margins by reducing inputs. Input decisions will be evaluated on the greatest return on investment, mostly driven by yield output as margins compress. Without significant new demand for U.S. commodities or a major world weather event in the years ahead, commodity prices may fall short of covering all the input costs for many crops and add additional stress to the ag economy.

Farm real estate values remain firm, although increases have moderated or turned slightly lower in certain regions. Farmland collateral has helped soften the blow of higher operating lines needed to offset the continued high input cost environment. Farmers' debt-to-asset ratio remains strong, but likely to continue slowly deteriorating heading into 2025.

Many key input categories will remain mostly steady into 2025, estimates the U.S. Department of Agriculture *(Exhibit 10).* New machinery sales have already pulled back to extremely low levels with the ag economy downturn and the most opportune way to lower input costs. Farmers will be seeking out opportunities to save on chemicals by shifting to generics, especially as the number of active ingredient patents have soared in recent years and now account for over 80% of the agrichemical market share. S&P Global estimated from 2023 to 2028, 19 active ingredients would come off patent, with 11 in 2024 alone.

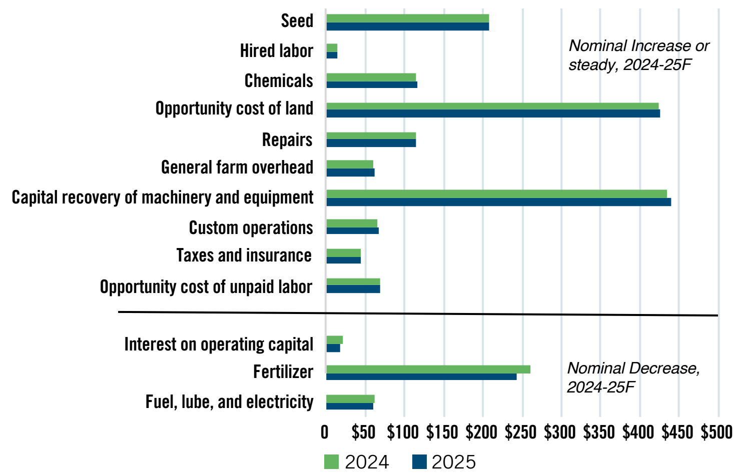
Regulatory rollbacks and cutbacks in agency staffing and oversight driven by the Trump administration could impact the Environmental Protection Agency's ability to approve new pesticides and herbicides. Maintaining science-based decisions is crucial for allowing U.S.

producers to remain globally competitive. In 2024, EPA released workplans to help streamline the approvals of pesticides and herbicides to limit negative environmental impact on endangered species. Some rollbacks may be on the horizon in this area, but court actions will limit completely abandoning previously proposed workplans.

Soil sampling and spoon-feeding fertilizer for specific needs can also help boost utilization of crop nutrients. Fall anhydrous applications were lower with sub-optimal moisture levels in some regions, bringing potentially more spring applications. USDA projects a 7% decrease in fertilizer expenses, mostly due to overall decreased fertilizer prices.

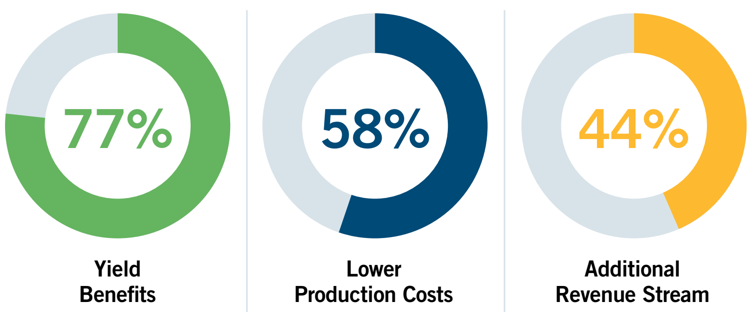
Many grain cooperatives saw a decrease in agronomic sales and will need new innovative approaches to meet the future needs of farmers that provide both economic and environmental sustainability. Ag retailer operations that can effectively deliver tailored agronomic advice and technical assistance can help farmers improve their management decisions, economics and environmental benefits. Partnerships between non-government organizations, environmental, food and consumer groups and ag retailers can help move the needle on expanding adoption of sustainability-oriented practices by educating farmers on the positive yield impact or trade-offs of climate-smart agricultural practices *(Exhibit 11).* ■

EXHIBIT 10: Total Corn, Soybeans and Wheat Production Expenses



Source: USDA

EXHIBIT 11: Adoption of Sustainability-Oriented Practices Driven by Yield



Source: McKinsey & Company

BIOFUELS:

Biofuels production to slow as policy uncertainty looms

By Jacqui Fatka

THE BIOFUELS SECTOR EMBARKS ON 2025 FACING SEVERAL HEADWINDS from political and regulatory uncertainty. But the sector could continue to see tailwinds from strong exports and higher biofuel mandates from countries around the world.

The Energy Information Administration projects a modest increase in biofuel production next year, although ethanol supplies will maintain 2024 production levels of 1.05 million barrels per day. Biodiesel supplies will drop nominally, while renewable diesel will increase from 210,000 b/d to 230,000 b/d *(Exhibit 12).* Renewable naphtha and renewable propane are by-products of a growing RD industry, helping double production of “other biofuels.”

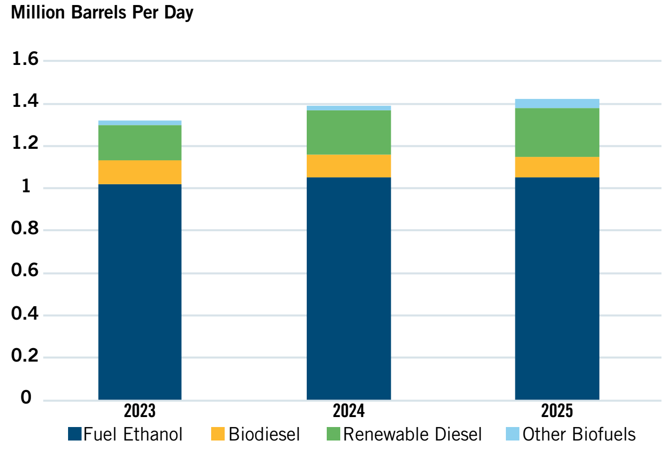
The Trump administration is not apt to quickly propose new 2026-29 renewable volume obligations in the Renewable Fuels Standard but instead wait for actions on pending small refinery exemptions (SREs). During the previous Trump term, the Environmental Protection Agency granted 34 SREs from the 2017 compliance year. Under the Biden administration, the EPA did not approve any SREs, and instead denied 79 requests. Now the EPA will need to look at those earlier denials and more, totaling 129 exemption petitions from 2018 and later.

Another issue that has hindered expansion was EPA’s underestimation of biomass-based diesel production capacity in the 2023-25 “set rule.” The oilseed industry has criticized EPA for setting the blend levels too low, despite the $6 billion in investment to build out domestic crush capacity. In 2023, domestic and imported feedstocks supported the production of 4.3 billion gallons of BBD, which surpassed the yearly renewable volume targets for 2023, 2024 and 2025. In 2024, additional blending of soy oil and imported tallow and used cooking oil pushed levels above mandated volumes. Tariffs or regulatory action could limit the imports of UCO and tallow, as well as the domestic build out of renewable fuels in China and Brazil where these imported oils originate.

Renewable diesel production capacity will grow just 100 million gallons from 2024 to 2025 to a total of 5.2 billion and remain steady through 2026, according to an updated analysis from University of Illinois. Despite the recent boom in RD production and a predicted expansion of 20% or more per year, the latest outlook reveals the industry has been stalled: The renewable identification number cliff has capped the nameplate capacity of RD plants at a little above 5 billion gallons.

Federal and state tax incentives and low carbon fuel policies will drive the future viability of sustainable aviation fuel as many HEFA (hydrotreated esters and fatty acids) plants today can produce either RD or SAF based on market economics. Alcohol-to-jet sustainable aviation fuel has the potential to expand in the longer term, but small pilot and pre-pilot projects will provide minimal supplies in 2025. Potential benefits are being limited by a short tax credit runway for the Inflation Reduction Act's 45Z Clean Fuel Production Credit (designed to encourage the production of domestic fuels) as well as delayed regulatory guidance and uncertain political

EXHIBIT 12: Total Biofuel Supply, 2023-2025



Source: EIA

actions. California's 20% limit on vegetable oil feedstocks in its low carbon fuel standard puts downward pressure on the use of soy and canola oil in RD production.

EIA projects SAF production to expand to nearly 50,000 b/d in 2025 if all announced capacity additions come on line. The SAF use today represents a drop in the bucket of the total aviation fuel market, which uses roughly 35 billion gallons per year.

Expanded renewable blending requirements around the world are helping build global demand. U.S. ethanol exports set new records in 2024 with Canada taking over as the top destination. The impact of potential tariffs on world trading partners and retaliatory tariffs on U.S. agricultural products, including ethanol and DDGs, could limit ethanol export growth. Brazil's increasing corn production supported Brazil's own domestic growth of corn ethanol facilities, which may increase ethanol competition in the world market. ■

ANIMAL PROTEIN:

Rising margins fuel livestock growth

By Brian Earnest and Abbi Prins

THE LIVESTOCK SECTOR IS BOOMING. Feed, which accounts for roughly half of livestock expenses, has tumbled from record-high levels over the last two years. This has helped renew interest in animal protein production growth. However, labor, construction, equipment, land and cost of funds remain elevated, complicating expectations.

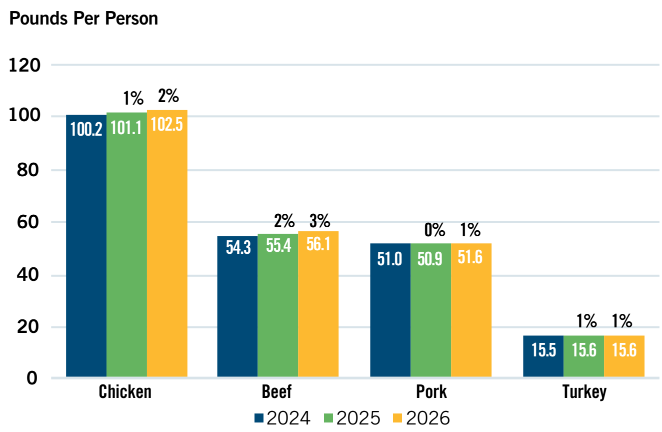
As a result of a volatile market and poor pasture conditions, U.S. beef cow herd expansion is not expected to start until 2026 or 2027. The shrinking herd will further support higher feeder and fed cattle values, and it would not be surprising to see fed cattle values eclipse $200/cwt. in the coming year. Tight feeder supplies, low feed costs and excellent beef demand have yielded heavier carcass weights, which rose nearly 30 pounds or 3% in 2024. This is up from a trendline of just 5 pounds over the last 20 years. Low corn prices and tight cattle supplies mean days on feed will remain higher. With consumer beef prices already near historic highs, packer margins will remain under pressure — and likely negative — for a good portion of 2025 as retail and food service struggle to pass higher costs on to consumers.

While expansion might not yet be taking place on the livestock front, beef and chicken slaughter weights this year were the heaviest they've ever been. Heavier weights are especially important for meeting consumer demand, which remains resilient despite inflationary pressures. The USDA Economic Research Service projects per capita consumption of chicken, beef, pork and turkey to remain stable or grow up to 2% from 2024 to 2025 *(Exhibit 13).* As more consumers across the globe enter the middle class, the demand for animal proteins remains positive.

Mexico is a top destination for U.S. poultry and pork and is a source of cattle for U.S. feedlots as pasture conditions worsen in country. A good working trade relationship with Mexico remains vital on many fronts. Over the past 30 years, U.S. pork exports to Mexico grew 1560% to 2.6 billion pounds, and chicken exports grew 624% to 1.6 billion pounds *(Exhibit 14).* However, while Mexico is the top destination for U.S. pork and poultry, these segments have grown by diversifying export markets as U.S. reliance on China's markets has waned.

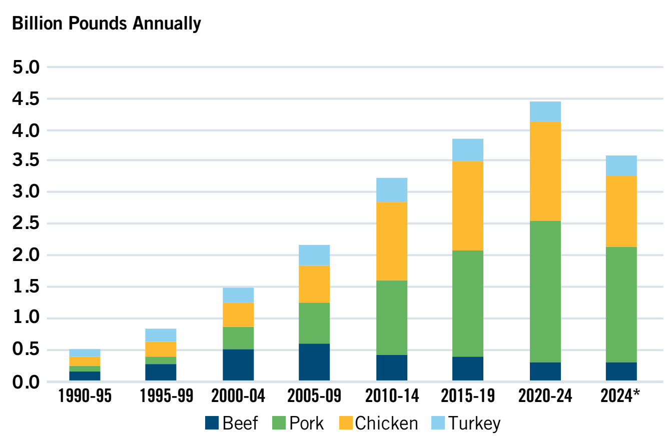
Falling feed costs are being passed on to the consumer, which will position chicken well in 2025 both on restaurant menus and at home. In the past, lower feed prices have led to a jump in production, but thus far the supply response has been more muted. Some metrics, however, do seem to be improving. Broiler chick hatchings were up about 6% YoY through much of 2024. Heavy investment in automation in the U.S. broiler industry should help dampen any upcoming disruption to foreign workforce availability. ■

EXHIBIT 13: Per Capita Meat Consumption, Retail Weight



Source: USDA-ERS

EXHIBIT 14: U.S. Animal Protein Exports to Mexico



Source: LMIC, USDA, CoBank Calculations

**Forecast*

DAIRY:

Record investment in dairy will continue to grow the category

By Corey Geiger

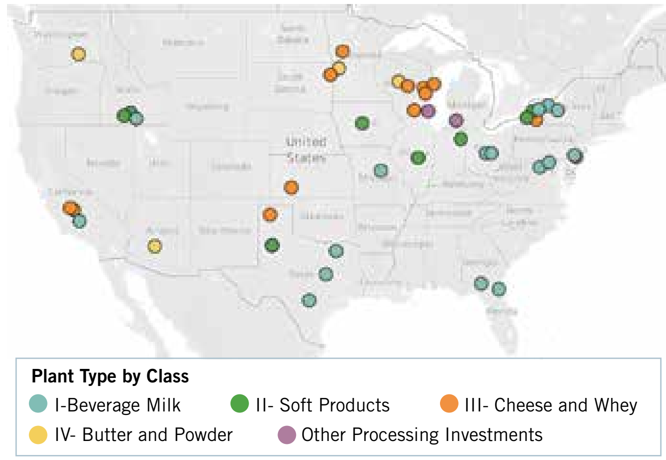
JUST ONE GENERATION AGO, the U.S. dairy industry produced products essentially only for domestic consumers. That all began to change in the 1990s with the signing of the North American Free Trade Agreement (NAFTA) and the creation of the U.S. Dairy Export Council. Fast forward to the present day and 1 in 7 tanker loads of U.S. milk is processed into dairy products and ingredients destined for export markets. The U.S. now ranks third globally among dairy product exporters, right behind the European Union and New Zealand.

While these two competitors have long been juggernauts on the global dairy export scene, the growth prospects for the EU and New Zealand have dimmed in recent years. Efforts to curb climate change and impacts from methane and carbon production are limiting dairy herd growth in the EU and New Zealand. And to some degree, New Zealand's limited land availability is constraining its ability to grow its milk output.

As a result, domestic and international dairy processors have turned to the U.S. for future dairy growth opportunities. The U.S. will see an unprecedented $8 billion in new dairy processing investment through 2026 *(Exhibit 15).* Some of those plants are poised to come online in 2025 with about half of the generational investment in the cheese category. Three major new cheese plants located in the Central Plains and Texas Panhandle will require nearly 20 million pounds of new milk per day by mid-2025. As cheese production ramps up, so will whey production. Demand for dairy proteins is running strong in the U.S. and around the world as consumers seek out higher-quality proteins.

With new cheese and whey products coming online in large quantities, the surge in output most likely will place downward pressure on dairy product prices in the second half of the year as these new products find markets and inverted Class III (cheese

EXHIBIT 15: Dairy Plant Expansions Through 2026



Source: CoBank calculations

and whey) to Class IV (butter and milk powders) prices persist. A confounding factor would be any retaliation from potential tariffs placed on major dairy export customers such as Mexico and China. Presently Mexico buys 4.5% of all U.S. dairy product and ingredient production, while China is closer to 1%.

Where new milk will come from to fill all the plant expansions is a looming question as 2023 and 2024 will go down as the first back-to-back years since the late 1960s that U.S. milk production took a downturn. On the flip side, higher component levels in farmgate milk, largely butterfat and protein, have lifted product yields. Cheese and butterfat yields improved by 11% and 13%, respectively, over the past decade.

With a dearth of dairy replacement heifers across the country, some of the new milk needed to fill these plants will come at the expense of dryer utilization, limiting nonfat dry milk and skim milk powder production. Replacement heifer counts stand at a 20-year low, which caps the dairy industry's ability to expand milk production. In the past six years, dairy replacements expected to enter the dairy herd have shrunk by almost 15%, or nearly 710,000 head. Dairy replacement prices jumped from $1,600 per head during the summer of 2023 to well over $3,000 per head in late 2024, with auction reports of prices touching $4,000 per head. While U.S. dairy farmers bought 7.9 million units of beef semen in 2023 to use on dairy animals, at least two to three years will pass before the tide turns on replacement numbers.

As for margins to make milk, given the lower cost of grain and feedstuffs in over five years, U.S. dairy farmers have a great opportunity for solid returns. Solid margins and the higher price forecast for milk provide dairy farmers an incentive to buy feed additives to produce more milk per cow. ■

FOOD AND BEVERAGE:

Health and nutrition take center stage in 2025

By Billy Roberts

THE HEADLINE NEWS FOR FOOD, BEVERAGE AND CONSUMER PACKAGED GOODS IN 2025 is President-elect Trump's selection of Robert F. Kennedy Jr. to lead the U.S. Department of Health and Human Services. Aiming to "Make America Healthy Again," RFK's stated goals include eliminating ingredients banned in other countries and "getting the chemicals out" of America's food supply.

In his new role, the former presidential candidate will be involved in the federal *Dietary Guidelines* that will underpin the next edition of recommendations that influence a range of nutrition policy and programs. The 2025 Dietary Guidelines Advisory Committee of 20 nationally recognized nutrition and public health experts is expected to submit its scientific report by mid-December to HHS and the U.S. Department of Agriculture. The report and public comments will be used to inform the next edition of the *Dietary Guidelines.*

Consumers' focus on their health is showing signs of impacting food manufacturers, specifically the popularity of weight-loss drugs. Glucagon-like peptide-1 drugs, commonly known as GLP-1, have been a game changer. A PwC report in October estimated that 8%-10% of Americans are taking GLP-1 drugs, with another 30%-35% interested in doing so, suggesting adoption of the drug is poised to accelerate.

GLP-1 users purchase around 8% less food – including snacks, soft drinks and high-carb products – compared with the average consumer, according to a J.P. Morgan Research report last year based on data from Numerator. GLP-1 drugs work by changing what patients crave – and don't. The International Journal of Obesity found that GLP-1 study participants reported an aversion to dairy, starchy, salty and spicy foods and a reduced appetite for high-fat, non-sweet foods.

One company has noted the effect: The Hershey Company's president and chief executive officer Michele Buck noted a "mild impact" from GLP-1 drugs affecting the company's third quarter results.

As such, food and beverage manufacturers' ongoing concerns about volume attrition are likely to continue in 2025. Companies including ConAgra, Unilever, Danone and others have targeted recovering volume loss as an overall goal in the coming year. In the meantime, private label volume growth remains relatively steady and has consistently outpaced that of national brands. COVID-era shortages and the more recent inflationary environment both prompted consumer trial of private label products. Dollar sales of private label products have grown more than a third since 2019, likely surpassing $250 billion in 2024 and representing roughly 20% of basket share, per Nielsen.

Consequently, food and beverage manufacturers have shown a willingness to increase their merger and acquisition activity to sharpen their focus, boost their category presence and regain volumes.

In fact, per PitchBook, the third quarter saw the largest number of food and beverage CPG deals in a quarter since 2017, with private equity managers increasingly targeting the sector, focusing on smaller deals.

It is unclear how open the second Trump administration will be to M&A activity, however. The Biden administration has been quite discriminating on consolidation in the food and agriculture sector. Though the previous Trump administration took a relatively laissez-faire approach toward M&A activity, the president-elect indicated throughout the campaign that his approach to the economy in the second term would be very hands-on. Therefore, it is unclear exactly what the approach to M&A will be in the coming years, even as a pair of large mergers (Kroger-Albertson's and Mars-Kellanova) remain in the offing and M&A activity has picked up considerably in the wake of interest rate reductions. ■

POWER AND ENERGY:

What an IRA rollback might look like

By Teri Viswanath

THE ENERGY INDUSTRY IS RIFE WITH OPINIONS on how the incoming Republican trifecta of control in the House, Senate and White House will shape the nation's energy and environmental policies. Historically, single-party control is more common than not, though it is often short-lived and marked by a flurry of legislative productivity, as seen under the past five presidents. So, what might we expect as President-elect Donald Trump returns to the White House?

The contours of Trump's broader energy agenda might be found in his wide-ranging address in September, when he predicted that a policy of energy abundance would lead to the country's economic revival. He specifically noted that the nation will require "twice the electricity that we currently have right now for everything in order to be dominant." He again promised to eliminate scores of environmental regulations, remove bureaucratic stumbling blocks for building infrastructure and to end the Inflation Reduction Act. The point being that Trump's return to the White House in January will signal a significant shift in U.S. energy policy – however, slowing or stalling the Biden administration's IRA clean energy momentum may be the first major obstacle to that shift.

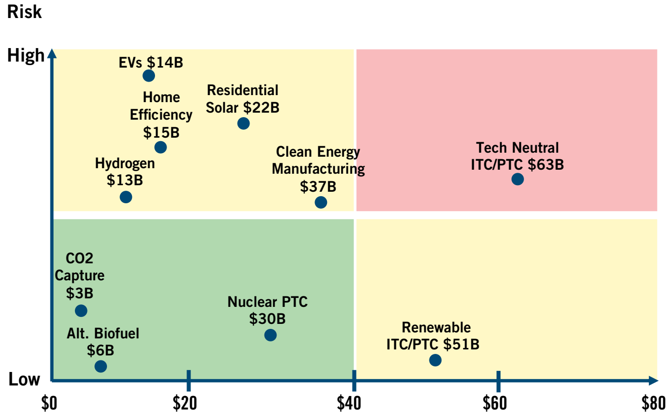
Any legislative rollback would require near-unanimous support from the caucus – a challenge for most pieces of comprehensive legislation. While Republicans hold the majority in both the House and the Senate, it's by just a narrow margin. Popular programs in the IRA have directed significant investments to many rural and economically distressed communities. Even before the election, more than a dozen House Republicans had already voiced concern that repealing the IRA could jeopardize ongoing development in their districts. As the administration weighs the political dynamics, it may ultimately propose a more prescriptive approach to rolling back provisions of the IRA. With 458 pages of Congressional text and accompanying White House Guidebook, spending guidelines from 15 individual agencies and two years of implementation, a more "surgical approach" to unwinding this legislative behemoth could conceivably exhaust finite congressional resources. Yet, we think that a partial walk-back is certainly probable and may be attempted by the administration and the Republican-controlled Congress as a viable means to funding other tax break priorities.

The IRA can be organized into two large buckets of government financing: more than $200 billion in tax incentives and about $145 billion in grants. About two-thirds of the grants, or slightly over $90 billion of IRA funding, has already been allocated according to the White House website, Invest.gov. Admittedly, it is hard to tell which of the identified projects could be rescinded, but clawing back these funds would be very difficult for members of Congress to defend to voters. An alternate path would simply be for individual agencies to allow the nearly one-third of unallocated funding (or roughly $52 billion, according to a POLITICO analysis) to expire, which seems the most feasible course of action.

Lawmakers will also evaluate which IRA tax incentives might be ripe for repeal. In our assessment, the tax incentives will be evaluated by three criteria: the overall cost of the tax break (including the duration the incentive will remain in place), whether the incentive is at odds with the new administration's goals and the ease of rolling back the tax-incentives. Because the IRA tax credits are uncapped, pinpointing the cost of these incentives is a moving target — as affirmed by the non-partisan Congressional Budget Office, which doubled its original assessment of the resulting deficit from the IRA by the end of the decade. There is also the rub that the more popular the program, the greater overall savings. This reality will make repeal more difficult and politically painful.

For purposes of assessing costs of these tax breaks, we utilized the original Congressional Research Service's summary of the modifications to the tax treatment of the energy sector that would generally reduce revenues — that is, the provisions in Subtitle D of the report, Energy Security. We then evaluated the length of the program, with longer and more administratively complex programs such as the Tech Neutral ITC/PTC, Hydrogen Hubs and Clean Energy Manufacturing tax breaks rising higher on the risk profile for evaluation, despite having broad support. We then evaluated public statements and proposed legislative efforts by Republican lawmakers to assign risk *(Exhibit 16)*. Admittedly, this was mostly a qualitative evaluation on our part but what emerged

EXHIBIT 16: IRA Tax Credit Risk Profile (Dollars in Billions, 2022-2031)



Source: CoBank

is the possibility that many of the consumer-facing programs, such as tax breaks for purchasing an electric vehicle, installing a heat-pump or putting rooftop solar on a home, are likely the most vulnerable.

That said, many of the larger, more complex business-facing tax-incentive programs – where the Treasury has only recently finalized regulations – might ultimately prove easier to reverse under the Congressional Review Act (CRA). It bears mentioning that repealing or modifying the IRA tax credits would require new legislation and the votes to pass it. But CRA is a tool Congress can use to overturn agency regulations finalized within the last 60 legislative days of the 2024 session. Consequently, a greater array of tax breaks could feasibly be rejected by the newly elected 119th Congress when it opens session in 2025 and based on the "ease of rollback" might be considered on the chopping block.

All said, there is a need to stay attentive to those parts of the IRA that might be subject to claw back or repeal and raise awareness of the importance of funding to critical community infrastructure projects. ■

DIGITAL INFRASTRUCTURE:

Rural connectivity faces challenges in a shifting political landscape

By Jeff Johnston

IN THE YEAR AHEAD, deep political uncertainty and low operator participation in the Broadband, Equity, Access and Deployment funding program raises big questions for bridging the broadband divide in underserved and unserved areas.

The $42.5 billion BEAD program, created by the Infrastructure Investment and Jobs Act, includes an unprecedented level of government support that is about 10x greater than any other government broadband program. And while on the surface this is great news for rural America, the level of operator participation over the next several years could blunt the impact of this well-intended program.

At the federal level, the BEAD program is being administered by the National Telecommunications and Information Administration. NTIA is working closely with the state broadband offices that will ultimately be responsible for awarding the grants. This local approach makes sense given state-specific broadband needs and requirements, but it introduces administrative headaches for operators in multiple states as each state has its own set of requirements. Furthermore, there are other requirements such as reporting and tracking, prevailing wage minimums, "Build America, Buy America" and letters of credit, etc. that are problematic for small operators. Many don't have the expertise and experience to meet all the BEAD requirements, and to do so would add costs to a business that isn't able to absorb them.

As a result, conventional wisdom is that over 50% of operators who are located near eligible BEAD locations may not participate in the program. The situation is somewhat fluid, and some operators are figuring out ways to make it work, so perhaps over time operator participation rates will rise. Despite these headwinds, it is important for rural operators to take a hard look at BEAD. The reality is this is a once-in-a-lifetime opportunity to build broadband coverage in unserved and underserved areas with an unprecedented amount of government support. Operators who dismiss it risk opening the door to new competition that will deploy networks with BEAD money and use them as a beachhead to expand into neighboring towns and cities.

Lasty, there is some uncertainty around potential changes to the BEAD program under the Trump administration. The program was designed to prioritize fiber networks over fixed wireless and satellites. Use of non-fiber networks were limited to high-cost or extremely high-cost areas where the economics of deploying fiber did not pencil out.

However, given Elon Musk's support of candidate Trump during the election – and the new role he has in the administration – it's conceivable that BEAD adopts more satellite-friendly policies. Recall that Elon Musk owns SpaceX, which offers satellite internet service under the Starlink brand. Starlink had previously applied for government support via the FCC's Rural Digital Opportunity Fund but was ultimately denied due to technical and financial capabilities. President-elect Trump has also been a vocal critic of deploying fiber into sparsely populated parts of the country. Alternatively, it is possible the new administration streamlines the BEAD process and accelerates its deployment by eliminating government red tape, one of President-elect Trump's campaign promises. ■

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KNOWLEDGE EXCHANGE is an innovative knowledge-sharing initiative that is designed to provide strategic insights about trends, structural change, and policy directives within the key rural industries served by CoBank. It draws upon the expertise within CoBank and the rest of the Farm Credit System, the broad perspective of outside consultants and academics, and the first-hand knowledge and experience of our customers to enhance our collective understanding of emerging business opportunities and risks.

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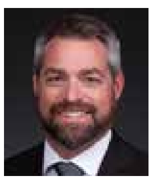

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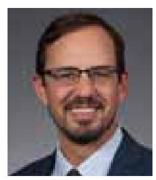

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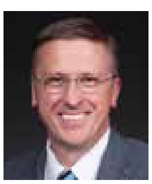

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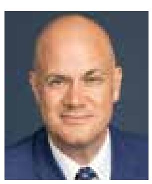

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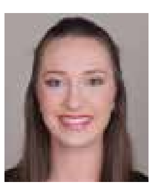

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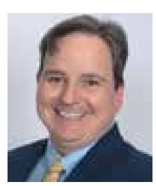

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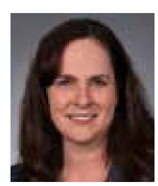

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About CoBank

COBANK IS a cooperative bank serving vital industries across rural America. The bank provides loans, leases, export financing and other financial services to agribusinesses and rural power, water and communications providers in all 50 states. The bank also provides wholesale loans and other financial services to affiliated Farm Credit associations serving more than 76,000 farmers, ranchers and other rural borrowers in 23 states around the country.

CoBank is a member of the Farm Credit System, a nationwide network of banks and retail lending associations chartered to support the borrowing needs of U.S. agriculture, rural infrastructure and rural communities. Headquartered outside Denver, Colorado, CoBank serves customers from regional banking centers across the U.S. and also maintains an international representative office in Singapore.

CoBank's Knowledge Exchange Division welcomes readers' comments and suggestions. Please send them to KEDRESEARCH@cobank.com.

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