

1. Executive Summary

Ameren Missouri's Generation Transformation

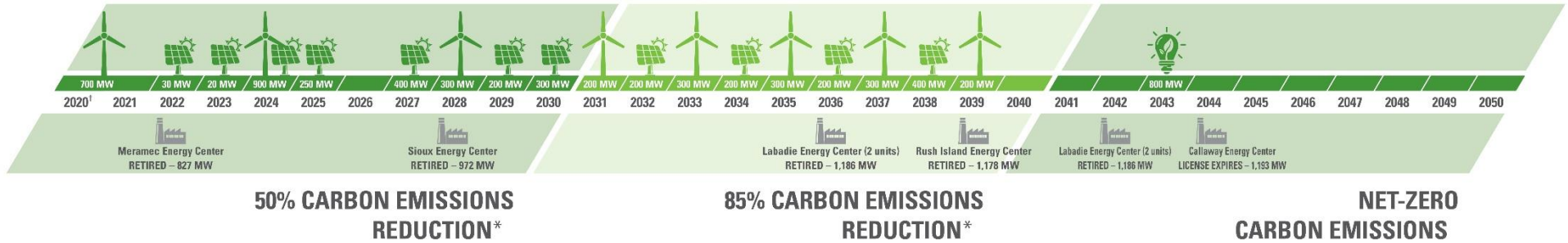
Transformation – this is the driving force behind Ameren Missouri's plan for meeting our customers' future energy needs, significantly increasing investment in renewable wind and solar generation, advancing the retirement of our coal-fired energy centers, and putting us on a path to net-zero carbon dioxide ("CO₂") emissions by 2050. Our 2020 Integrated Resource Plan ("IRP") represents a step change in the execution and realization of the generation strategy that has guided our resource planning for most of the last decade, with its stated objectives being to:

- 1) Operate our energy centers safely, economically, and in an environmentally responsible fashion while transitioning the generation fleet
- 2) Create and capitalize on investment opportunities that are beneficial to customers, investors, our communities, and the environment
- 3) Maintain financial, technical, regulatory, and environmental flexibility

Three years ago, we announced an evolution in our plan to execute our generation strategy and further these objectives, including being among the first in our industry to establish commitments to significant long-term reductions in CO₂ emissions. That plan included the addition of 700 megawatts ("MW") of new wind generation in Missouri, and by early next year that wind generation will be in operation and providing clean energy to our customers. Ameren Missouri's innovative new plan goes significantly further, setting forth a transformation of our generation portfolio that is expected to include 5,400 MW of wind and solar generation by 2040, see the retirement of all of our remaining coal-fired generation by 2042, and achieve net-zero CO₂ emissions by 2050. In doing so, we will also support the decarbonization of our region's economy through efficient electrification of transportation and other sectors that currently require fossil fuels. The timeline on page 2 highlights the key elements of our plan.¹

¹ In-service dates are approximate and could change based on a number of factors. Assumes the addition of 800 MW of unspecified carbon-free generation in 2043 and extension of Callaway operating license beyond 2050.

Ameren Missouri's Generation Transformation Timeline



* Reductions are presented as of the end of the period indicated and based off of 2005 levels. Wind and solar additions, energy center retirements by end of indicated year.
 † Projects expected to be substantially complete in 2020, fully in service in early 2021.

Our plan represents a carefully considered balance of customer affordability, reliability, and environmental stewardship. It relies on the significant investments we are making to modernize our electric grid through our Smart Energy Plan to enhance reliability and unlock opportunities for customer energy efficiency, as well as greater levels of renewable energy and other distributed energy resources. Our goal of achieving net-zero CO₂ emissions also means that we will be actively supporting increased public and private investment in research and development of new energy technologies, such as hydrogen fuel and improved battery technologies, as well as constructive energy policies that support investment and allow us to continue to appropriately balance affordability, reliability, and environmental stewardship. Our plan will allow us to meet our customers' long-term energy needs in a way that is consistent with the objectives of the Paris Agreement and limiting global temperature rise to 1.5 degrees Celsius and do so at the least cost to customers.

Embarking on this transformation now is particularly important. Not only does it begin to provide customers with even more energy from cleaner generation sources, it also mitigates risks associated with the kinds of clean energy policies we expect to be implemented in the next five years. At the same time, our plan allows us to maximize the value of our existing generating assets and ensure reliable service to our customers. Our current fleet of low-cost coal, gas, hydroelectric, and nuclear generators is foundational to our ability to provide reliable and affordable energy as we add greater and greater levels of renewable generation resources to our portfolio, with coal serving as a bridge to cleaner energy sources. Through our investments in grid modernization, clean renewable energy and the focused management of our existing portfolio, our plan delivers cleaner energy to our customers while ensuring continued reliability, and it does so at the least cost of any of the alternative pathways assessed.

The transformation of our generation portfolio will be achieved not only through actions Ameren Missouri takes, but through actions our customers take as well. Customers and communities have increasingly expressed interest in service options that allow them to manage their energy use, save money, and achieve their own clean energy goals. Experience with Commission-approved renewable subscription programs combined with our latest market research indicate significant customer demand exists for near-term access to renewable energy. Moreover, advancing investments in renewables to meet customer interest can reduce costs for all customers. To that end, our plan includes customer offerings of renewable energy, which will enable communities and customers to meet all or a portion of their energy needs with renewable energy resources. We will also continue to offer and expand on the popular energy efficiency programs that our customers have been using for years to save money and better manage their energy needs while enjoying the comfort and convenience they desire.

Integrated Resource Plan Highlights

- Ameren Missouri is transforming its generation fleet to a cleaner and more diverse portfolio in a responsible fashion, with a plan that best balances affordability, reliability, and environmental stewardship while addressing future risks.
- By 2030, Ameren Missouri plans to add 3,100 MW of wind and solar generation, representing an investment of approximately \$4.5 billion.² Wind and solar generation additions after 2030 will bring that total to 5,400 MW. These renewable resources will displace fossil-fueled generation across the region even as our own efficient and low-cost generation continues to provide reliable and affordable energy.
- The 2020 IRP includes the planned retirement of all of Ameren Missouri's coal-fired generating capacity by 2042. This includes retirement of the Meramec Energy Center by the end of 2022, the Sioux Energy Center by the end of 2028, two units at the Labadie Energy Center by the end of 2036, both units at the Rush Island Energy Center by the end of 2039, and the remaining two units at the Labadie Energy Center by the end of 2042. The collective result of these changes in retirements is a methodical drawdown of fossil fueled generation that ensures a stable transition to a cleaner energy future.
- The plan reflects our assumption that the operating license for our Callaway nuclear facility is extended beyond 2050, ensuring its ability to continue providing carbon-free electric energy around the clock.
- Ameren Missouri is targeting reductions in CO₂ emissions of 50 percent by 2030 and 85 percent by 2040 (based on 2005 levels), with a goal of achieving net-zero CO₂ emission by 2050. This represents a significant acceleration from the 2017 IRP, in which carbon dioxide emission reduction plans were 35 percent by 2030, 50 percent by 2040, and 80 percent by 2050, and more significantly mitigates near-to intermediate-term carbon regulation risks. Even as we achieve these more aggressive reductions in carbon emissions across our own fleet, our planned renewable resource additions will result in significant additional carbon emission reductions across the region.
- Ameren Missouri believes the cleanest and cheapest form of energy is the energy you do not have to produce in the first place. This is why the plan continues to include robust and cost-effective customer energy efficiency and demand response programs to help customers better control consumption and reduce their electric bills. By 2040, these programs are expected to result in nearly 2,000 MW of peak demand savings.

² Includes 700 MW of wind generation projects expected to be substantially complete in 2020 and fully in service in early 2021.

- Ameren Missouri has also included in its plan electrification of transportation and other sectors. This is expected to result in significant reductions in CO₂ emissions in transportation and other sectors of our region's economy in addition to the emission reductions we will achieve with the transformation of our generation fleet.
- The plan provides for the continued development and deployment of smart grid, communications and other advanced technologies through our Smart Energy Plan, along with investments in transmission infrastructure, to enhance grid reliability, enable new products and services, and achieve greater operational efficiencies and greater access to cleaner sources of energy.
- The plan drives the creation of thousands of clean energy jobs in our region.

Ameren Missouri will continue to ensure that customers' long-term electric energy needs are met in a safe, reliable, affordable, and environmentally responsible manner. The company's IRP, filed every three years with the Missouri Public Service Commission, provides an assessment of the future electric energy needs of customers for the coming 20 years and the preferred plan for meeting those needs. Ameren Missouri's 2020 IRP represents a step change from the plan published three years ago, focusing on the transformation of our generation fleet to a cleaner and more fuel diverse portfolio in a responsible fashion, supporting customers' wants and needs.

Transformation Benefits

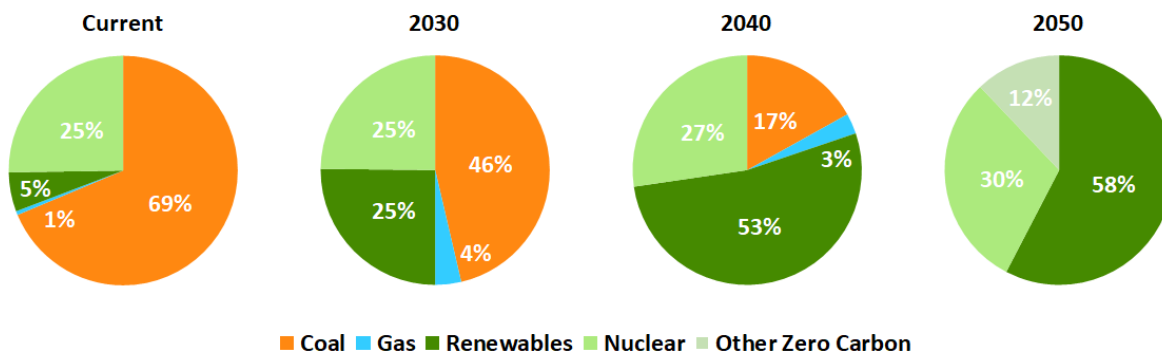
We have created this transformation plan through careful consideration of several key objectives we want to achieve on behalf of our customers, communities, investors, and the environment. Specifically, we evaluate each of a number of alternative resource plans based on:

- **Minimizing Long-term Customer Costs** – We measure the long-term costs to customers based on the present value of revenue requirements ("PVRP"), or the costs to be included in determining customer rates in the future expressed in today's dollars. Focusing on long-term costs helps us to ensure long-term affordability for customers.
- **Ensuring Customer Satisfaction** – This includes a number of factors such as rates, reliability, availability of energy efficiency programs, and access to cleaner energy sources.
- **Spurring Economic Development** – We assess economic development benefits based on the direct impact of our resource decisions on jobs in our region. To be sure, these are not the only benefits of our plan to economic development – thousands of indirect jobs are expected to be created as well – but they provide a strong indication of the relative benefits of our various alternatives.

- **Addressing Financial and Regulatory Risks** – Our ability to deliver benefits to customers is dependent in large measure on our access to low-cost sources of capital for investment. Therefore, we assess potential risks to our ability to access low-cost sources of capital.
- **Driving Portfolio Transition** – Assessing the relative benefits to our environment as we transition our generation portfolio includes consideration of air emissions, deployment of clean energy sources such as wind and solar, and other environmental factors.

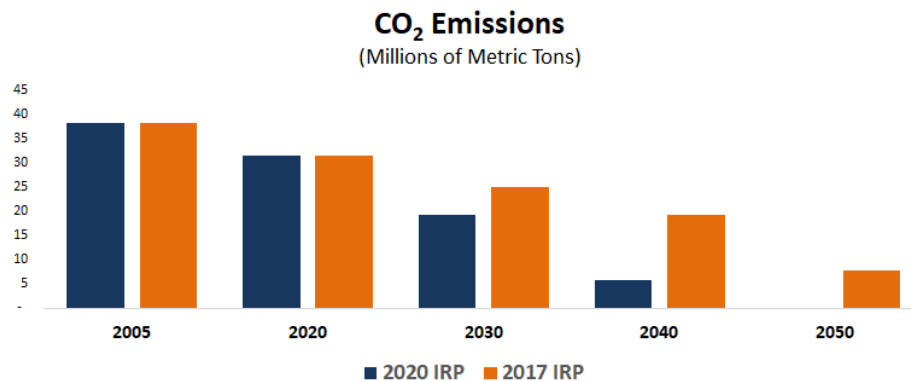
As one might imagine, achieving such objectives requires careful balancing. Ameren Missouri uses a scorecard approach in selecting its preferred resource plan, evaluating each option based on its expected performance in achieving these objectives. Our transformation plan ensures reliable and affordable energy for our customers today, tomorrow and for decades to come.

The deployment of new wind and solar resources allows us to take advantage of the continuously improving costs and efficiencies of these zero emission technologies. We are also able to take advantage of the availability of federal tax credits. At the same time, our existing fleet of generation resources continues to provide affordable energy to customers and ensure reliable energy is available around the clock as we add the renewable resources that will satisfy more and more of our customers' energy needs. Recent events in California, where a shortage of reliable capacity resulted in disruptions in service to customers, serve to highlight the need to be thoughtful about how we ensure the reliability of our generation fleet for our customers as we execute on our transformation plan. While an integrated resource plan typically focuses on the next twenty years, we are looking beyond that to ensure the plans we pursue will support our goal of achieving net-zero emissions by 2050. The figure below illustrates the transition of our portfolio over the next 30 years, with half the energy we generate coming from zero carbon sources by 2030.



As the figure above illustrates, we are executing on a transformation that will steadily replace fossil fuels with cleaner sources of energy. Beyond the obvious benefits to our

environment, this also allows us to manage the costs and risks associated with expected future climate policy. Climate policy may take any number of forms, whether it be through a federal Clean Energy Standard, caps on CO₂ emissions, or a price on CO₂ emissions (e.g., a "carbon tax"). We expect that some form of climate policy will be enacted in the next five years. While we cannot know the exact timing or form of such a policy today, our transformation plan positions us to address potential costs and risks associated with potential policies that may be enacted. The figure below shows the reductions in CO₂ emissions achieved by our current plan compared to those achieved by our 2017 IRP.³



It is important to recognize that even as we manage the drawdown of coal-fired generators in our portfolio, these very assets, along with our existing gas, hydroelectric and nuclear generation, provide the foundation of reliable energy supply that allows us to expand our portfolio of renewable wind and solar generation. In that respect, our coal-fired generators serve as a bridge to the other technologies we will depend on in the future to ensure reliable and affordable energy supply.

Adding significant levels of wind and solar resources over the next decade provides significant benefits as the challenges for traditional generation sources increase. We also add flexibility to our portfolio, yielding options for how we manage the continued operation of our existing coal-fired energy centers to the benefit of our customers. This added flexibility not only helps to mitigate the risk of future climate policy, but also the risk of other factors that affect the economic performance of our generators, such as fuel prices and environmental regulations.

Near-term Implementation

As mentioned previously, the transformation of our portfolio will involve actions taken by Ameren Missouri and its customers. For example, Ameren Missouri has already initiated a request for proposal ("RFP") to solicit bids for new wind and solar energy. This RFP process will help us to identify wind and solar resources to produce energy for both

³ Plan emissions compared to 2005 Ameren baseline.

program subscribers and for all of Ameren Missouri's customers. Another way we will accomplish this transformation is by offering our customers and communities options to satisfy more of their energy needs with specifically renewable energy. A new renewable subscription program will build on the success of our subscriber and community solar programs and offer more options to customers and communities seeking to achieve their own clean energy goals.

In addition, Ameren Missouri recently received approval to extend its popular energy efficiency and demand response programs through 2022. That extension continues many existing programs for residential and business customers, while also expanding program offerings that address financial barriers to participation and ensure a more equitable distribution of demand side resources. This includes the launch in 2021 of a new Pay-As-You-Save ("PAYS") program, which will provide immediate access to holistic energy efficiency measures funded through on-bill payments, greatly reducing financing or capital constraints for customers. Through 2022, these programs are expected to save customers more than 3.6 million net MWh and create more than \$1.9 billion in benefits.

As Ameren Missouri's coal-fired energy centers approach the end of their useful lives, a key step in retiring the units is the assessment of resultant transmission infrastructure needs and the construction of that infrastructure. Our Meramec Energy Center will be retired by the end of 2022, and the process of putting new transmission system infrastructure in place to support grid reliability needs is underway. With the acceleration of the retirement of our Sioux Energy Center, we will now begin a similar process to support its retirement by the end of 2028. Continued expansion of transmission infrastructure will also be key to integrating renewable wind and solar generation as we transform our portfolio over the next thirty years.

As we implement these key steps in our portfolio transformation, we will also continue to monitor conditions that may affect our longer-term plans. This includes continually assessing the power market conditions that affect the economics of our planned generation portfolio, such as prices for coal, natural gas, nuclear fuel, and electric power. Similarly, it also includes monitoring expected customer demand and the adequacy and reliability of our portfolio resources to meet our customers' needs. It also includes advocating for constructive energy policies, including those that address investment in energy infrastructure, climate change, incentives for clean energy technologies, and environmental regulations. New technologies will be critical to achieving our goal of net-zero CO₂ emission by 2050, so we will be actively participating in efforts to help advance the development of technologies such as carbon capture and sequestration ("CCS"), the use of hydrogen fuel for electric production and energy storage, next generation nuclear, and large-scale long-cycle battery energy storage.

Key Considerations That Influence Our Planning

The development of our transformation plan was influenced by a host of factors and other considerations, with significant input from a broad and diverse group of stakeholders representing our customers, industry, and advocates for environmental justice, among others. Customer and investor interest in cleaner energy sources and reductions in CO₂ emission has continued to increase. Customers have expressed interest in cleaner energy options, with some seeking to achieve their own clean energy targets. At the same time, there is an increasing focus by energy investors on Environmental, Social, and Governance ("ESG") investing. This places additional focus and priority on transitioning to cleaner forms of energy in a responsible fashion, ensuring reliability, affordability, sustainability and environmental justice, and establishing supportive corporate governance mechanisms.

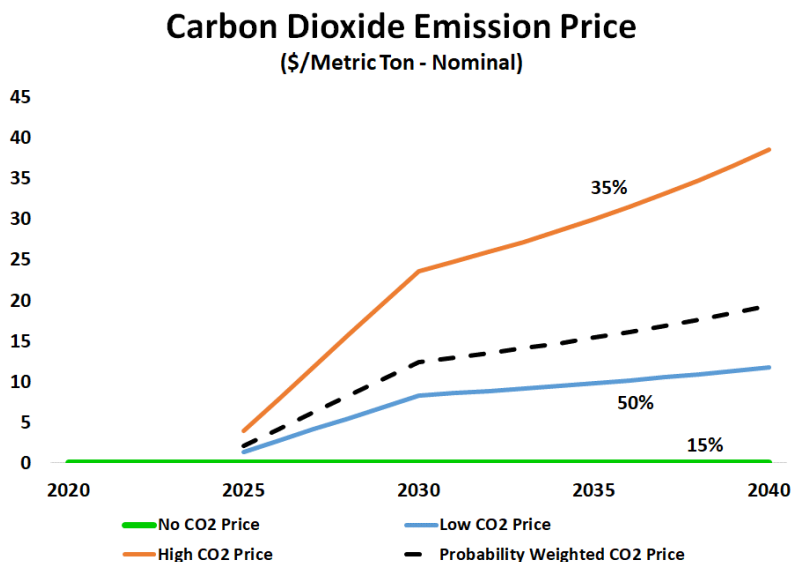
An increasing focus on cleaner energy also extends to sectors outside the power sector. Clean electrification has begun to transform the transportation sector, with more and more electric vehicle models to choose from and conversions of industrial forklifts and other off-road vehicles to electric options. Uses of fossil fuel in other sectors of the economy will see the potential for electrification as well, including cooking, space heating, and industrial processes. The electric utility industry will play an indispensable role in the decarbonization of a number of sectors of the economy through electrification and electric customers will benefit from a larger base of sales to support current and future investments needed to serve our customers for the next twenty years and beyond.

Cleaner energy technologies will clearly play a pivotal role in supporting these trends in customer and investor needs. We have witnessed a rapid decline in the cost of wind and solar technologies, and we expect the costs of those technologies will continue to decline in real terms. We are also seeing rapidly improving costs for battery storage technologies and improvements in efficiency and performance. While battery storage technologies are still relatively costly today, we expect they will increasingly play a role in the integration of intermittent renewable energy resources as wind and solar are added to the grid and older fossil-fired generation is retired.

Trends in customer demand will continue to drive our outlook for the need for generation resources. This includes the electrification trends mentioned earlier along with continuing improvements in energy efficiency. Underlying economic trends are expected to produce modest increases in demand, and while the current pandemic is expected to continue to have significant short-term impacts on customer demand, the longer term impacts are not known.

In addition to the trends in customer and investor attitudes and preferences, we must also consider the potential for changes in energy policy. One of the areas of great potential impact related to energy policy is that of addressing the risks of climate change. While we

do not know what form climate policy will ultimately take, we can represent the expected economic impacts using a price on CO₂ emissions. The CO₂ prices shown in the chart below are those we have utilized in our planning analysis to represent the effects of potential future climate policy, including our assumption for the probability of each of three price scenarios and the probability-weighted price represented by the dashed line.

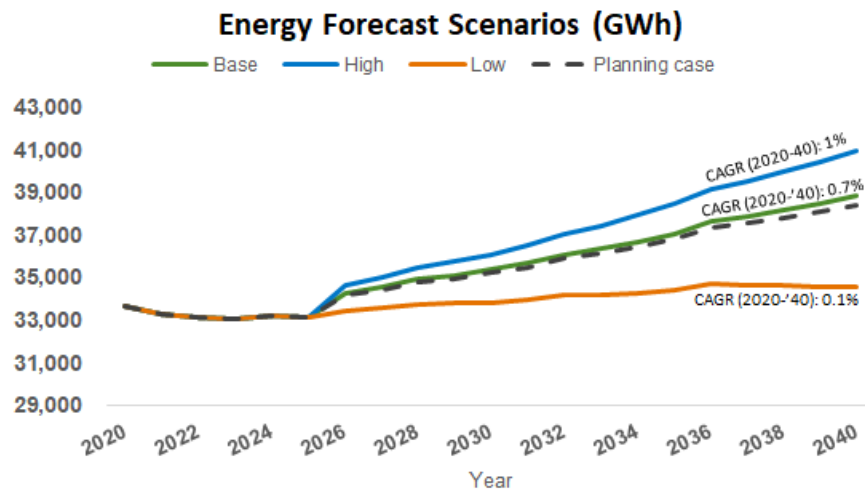


Other policies that could affect our planning include more stringent regulation of hydraulic fracking used to extract natural gas and policies promoting electrification of transportation and other uses of fossil fuels. They also include policies to incentivize the deployment of clean energy, such as production tax credits, investment tax credits, and potential changes in regulation of power plant emissions, water use and waste handling. We also consider potential changes to Missouri's renewable energy standard ("RES"), which was passed in 2008 and called for utilities to generate or acquire renewable energy equal to 15% of its customer usage by 2021. With the completion of the 700 MW of wind generation called for in our 2017 IRP, we will achieve this goal. With the continued reductions in the cost of renewable energy sources and increasing demand for cleaner energy sources, there is potential for a change in the RES to achieve even higher levels of renewable energy.

A number of future market conditions also have an influence on our planning, and we have examined ranges of possibilities for such factors to test their potential to impact our planning decisions. These factors include prices for natural gas, electric power, and the cost for debt and equity capital to fund necessary electric infrastructure investments. The cost and reliability of our existing fleet of generation resources is also important as we consider the specific actions necessary to implement our transformation. We will also continue to evaluate the potential need for, and cost of, transmission infrastructure necessary to deliver greater and greater amounts of renewable energy to our customers.

Our Customers' Future Energy Needs

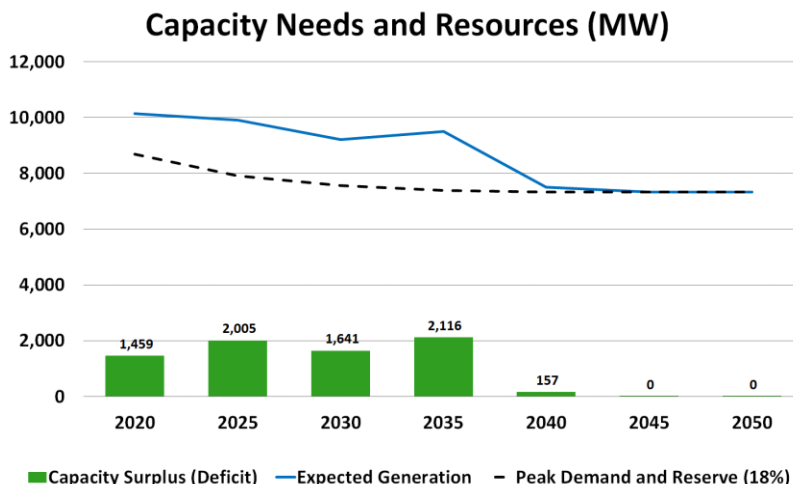
We expect base customer demand to grow over the next twenty years at an annual growth rate of 0.1 percent to 1 percent, before the inclusion of savings from our energy efficiency programs. This includes consideration of customer-owned distributed energy resources ("DER") like rooftop solar, growth in electric vehicles, and other efficient electrification. We have examined future demand under three different scenarios representing different assumptions for economic conditions, electrification, and customer adoption of DER. The chart below shows the range of customer demand we have analyzed in assessing future resource needs and costs.⁴



To ensure reliability, we must have sufficient resource capacity to meet our customers' peak demand, generally on the hottest day of the year, plus a reserve margin to account for uncertainty. The figure below shows our planned generation capacity, load, and reserve margin requirement.⁵ It includes peak demand savings from energy efficiency and demand response programs. Any capacity beyond our load and reserve margin is assumed to be sold, with the revenues offsetting costs on customer bills. Our capacity length throughout most of the next twenty years provides us with significant and important flexibility to respond to emerging trends, changes in market conditions and changes in energy policy. This flexibility allows us to carefully consider all options and execute on those that are most beneficial to our customers. Without that flexibility, our options at any given time will be more limited. In the future, we will also assess the need to add capacity in 2040 and beyond should greater flexibility be needed.

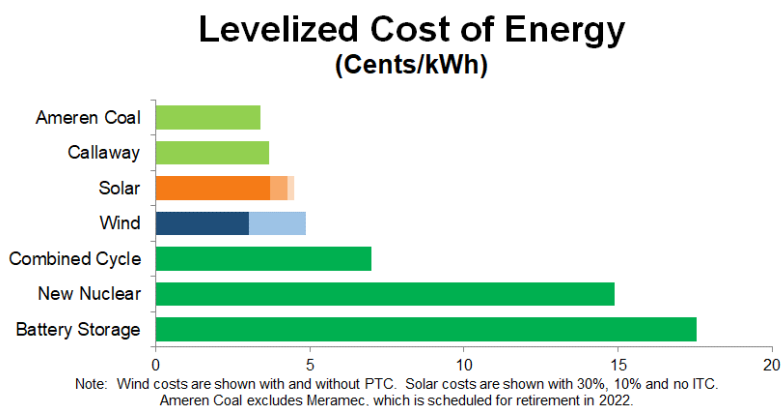
⁴ For each customer demand scenario the compound annual growth rate ("CAGR") is shown.

⁵ Reflects market purchases of capacity in 2045 and 2050, each less than 300 MW.



Options for Meeting Our Customers' Needs

We examine a number of options for meeting customer's future needs as existing resources are retired. These include renewable wind and solar, energy storage, gas-fired, and nuclear resources. One measure of the long-term cost of various generation resources is the levelized cost of energy ("LCOE"). The LCOE for the key resource options we have considered is shown in the chart below as compared to the cost of our existing coal and nuclear generation resources.



The LCOE includes all the costs of ownership and operation of a particular resource over its expected operating life per unit of energy produced. While LCOE does not capture all of the relative strengths of each generating technology, it provides a useful indication of the relative cost of energy. We test each of these options through more rigorous analysis that captures all of the costs and benefits of each resource type. We do this by evaluating various alternative resource plans that rely on different combinations of these resources. Using those results and our plan selection scorecard, we are able to consider each of the plans based on its performance against the objectives in our scorecard.

Conclusion

Our plan meets our customers' needs reliably and affordably, maximizing the value of our existing resources as we incorporate cleaner renewable energy aggressively to transform our portfolio in a forward-thinking manner. Our plan to transform our portfolio over the next thirty years will drive significant investment in renewable energy, significantly reducing carbon emissions until ultimately reaching net-zero CO₂ emission by 2050, and create thousands of good-paying jobs while continuing to ensure that the energy we deliver is reliable and affordable for our customers. It is an innovative plan that looks to deploy cutting edge clean energy technologies in the future. In addition, the plan provides much needed flexibility to address changes in the energy marketplace. Further, our plan also positions us to help drive the decarbonization of the broader economy in our region, adding clean renewable resources that can replace the fossil fuels currently used for transportation, and other applications. The utility industry will play a vital role in transforming how energy is used, and Ameren Missouri is taking action to make that a reality for our customers, our shareholders, the communities we serve, and the environment.