



RENEW MISSOURI'S GUIDE TO ALL THINGS RENEWABLE & ENERGY EFFICIENCY IN THE SHOW-ME STATE

WRITTEN AND DESIGNED BY THE RENEW MISSOURI TEAM



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MAKING AN INTRODUCTION: WHAT WE HOPE YOU'LL LEARN

Saying you're a supporter of renewable energy and energy efficiency is easy. This sounds really good. Clean energy is becoming cheaper and more accessible by the day. But the laws and policies that create a framework that makes renewable energy and energy efficiency a reality is much tougher.

This requires navigating a labyrinth of stakeholders who have competing and sometimes contradictory interests as well as regulations that have been in place for over 106 years overseen by regulators who can only operate under the laws that govern them.

Not to mention there are multiple types of utility companies in Missouri that distribute power differently and each way requires a different approach. A utility like Union Electric Company d/b/a Missouri ("Ameren Missouri") is operated and governed much differently than are Independence Power and Light or Ozark Electric Cooperative, as examples. Each has unique challenges that require different approaches and solutions.

Even with this complexity, Missouri has made steady, incremental progress over the past several years in creating a marketplace for renewable energy as well as a favorable regulatory environment to encourage utilities to engage in energy efficiency. Previously at the bottom of the barrel in state rankings, Missouri now ranks 25th in renewable energy production and consumption as well as 30th in most recent rankings of energy efficiency measures - right in the middle! This shows that progress has been made, but also that so much more is required in order for Missouri to be a

leader around the country.

Thanks to previous advocacy efforts, renewable energy standards exist in Missouri along with laws that allow individuals to take advantage of solar energy as well as finance clean energy improvements. Utilities like Ameren were once some of the most coal-reliant utilities of its scale in the nation; now they are leaders in the development of wind generation, and use solar and storage to modernize their grid.

In addition, most utilities engage in integrated resource planning ("IRP"), or long-term planning that maps out where they plan to be in the next 20 years. Utilities regulated by the state are required to do this; many other utilities do this as a course of good practices. These planning documents reveal to the public what utilities are doing now and how that will be built upon.

In Missouri, all of these plans point to a future where renewable energy and energy efficiency are primary tools for providing power. But nothing is guaranteed. New innovations and policies must always be sought out. What keeps these utilities from straying from these plans? Nothing, except for advocacy efforts to make renewable energy and energy efficiency the paramount resources for clean, affordable energy. That's what Renew Missouri has done for the past 15 years and plans to do in the future. This document provides a snapshot of how energy policy works in Missouri and how renewable energy and energy efficiency can transform our State.

ABOUT RENEW MISSOURI

Renew Missouri is a not-for-profit corporation organized under IRS code 501(c)(3). Renew Missouri was co-founded as a project of Missouri Coalition for the Environment (“MCE”) in 2006 by PJ Wilson and Erin Noble as an advocacy group for wind, solar, distributive energy resources, and energy efficiency before lawmakers and policy makers all over the state.

Our mission is to make Missouri a leading state for renewable energy and energy efficiency policy in the nation. Our plan to accomplish this includes working with utility companies, customers, low-income housing advocates, regulators, and our vast network of advocates and supporters to encourage a transformation of laws and policies to take advantage of renewable energy, resources to cut down on the production of power in general, and to embrace technology that offers more consumer control. We work with regulated entities, municipal owned utilities throughout the state, and the member-owners of all 43 rural electric cooperatives.

While we are based in Columbia (due to its close proximity to the State Capitol and to the state’s flagship university), we have offices in St. Louis and Kansas City to work with those areas in more detail. Moreover, our staff has significant contacts with Southwest Missouri and maintains a continual presence in Springfield and Joplin. In addition to the work we do for Renew

Missouri, we are also closely affiliated with other organizations. Our St. Louis Regional Director Andrew Linhares is also the State Director for Energy Efficiency for All (“EEFA”) – a national organization committed to providing safe, healthy, and affordable living conditions for low-income ratepayers throughout the country. Andrew also serves as Counsel for the National Housing Trust (“NHT”), a not-for-profit in Washington DC that not only advocates for safe, affordable housing but also provides such housing services throughout the country.

Renew Missouri also has formal relationships with the National Resource Defense Council (“NRDC”) and the Missouri Foundation for Health (“MFFH”). These relationships not only drive our work but show what issues are of importance to the public. We also have thousands of individual donors who give annually as much as \$10,000 and as little as \$5. All are crucial to keeping our advocacy efforts moving forward.

You can learn more by subscribing to our weekly email Re-News as well as our podcast, Renew Gurus. All of this is on our website at www.renewmo.org and we maintain a continuous social media presence on Facebook, Twitter, and Instagram that keeps the public up-to-date on all things Missouri.

ENERGY 101: AN ENERGY POLICY PRIMER

State energy markets can be complicated, and Missouri is no exception. There are many different approaches to energy in America. Understanding how Missouri operates its utilities is an important task when understanding the appropriate steps to make clean energy more prominent.

First, when we think about energy, we must think about it in three separate categories:

1. GENERATION OF POWER
2. TRANSMISSION OF POWER
3. DISTRIBUTION OF POWER

Each category presents unique challenges. Plus, the majority of municipal utilities and rural electric cooperatives are only in the business of distributing power to their customers and rely on contracts with larger utilities, or other third-parties, who have the capital and facilities to generate power. These contracts are often referred to as Purchase Power Agreements (PPA's).

Missouri is a **regulated utility market**, or a vertically integrated market. This means investor-owned monopoly utilities (that will often be referred to as "IOUs" in this document) own and operate most (if not all) aspects of power generation and consumption within a geographic territory. **These monopolies are subject to regulatory and statutory oversight.**

IOUs in Missouri are regulated by the Public Service Commission ("PSC"). Once a utility is granted the ability to provide power in a specific area, that is an exclusive right. **Consumers within a monopoly's territory cannot choose their electric provider.**

The PSC regulates all IOUs that provide electric, natural gas, water, and sewer utilities to the public. This agency was created by statute in 1913 when the Legislature became dismayed by the chaotic nature of energy production and delivery; particularly in the state's urban

centers. Historically, Renew Missouri only works on electric IOU cases but has recently begun delving into gas cases, specifically for encouraging their energy efficiency efforts.

The PSC is comprised of five commissioners appointed by the governor and confirmed by the Missouri Senate. This body authorizes utility rates and rates of return on prudent investments. It should be noted that municipal utilities and co-ops comply with state and federal standards, but their boards make decisions on rates and resource portfolios.

Of further distinction, the PSC also has a separate staff of regulators and technical experts that handle the day-to-day regulation of the IOUs as well as appearing before the PSC as a neutral party charged with "balancing the interests of the public as well as the utilities." This body is commonly referred to as the "PSC Staff" or simply "Staff".

Missouri's regulated marketplace is contrasted by deregulated utility markets or restructured markets like ones seen in California and Illinois. In this approach, **markets allow additional participants to freely own and operate power plants alongside traditional utilities.** These various producers sell generated electricity into wholesale energy markets. Retail electricity suppliers purchase power and then sell it to consumers. Transmission companies own and maintain the energy grid. Ultimately, consumers have a greater degree of choice in who provides their electricity. It should also be noted that the distribution of power is still regulated by the state and not subject to competitive forces.

Within Missouri, there are three types of utility companies. A partial list of examples can be found at the end of this section in Table 1, or a full list can be found in Appendix A.

Most predominantly is the Rural Electric Cooperative, or “co-op.” **Co-ops are not-for-profit utilities governed by a member-elected board.** Co-ops are regulated by Board of member-owners as well as the Federal Energy Regulatory Commission (“FERC”). They are not regulated by the PSC. The 43 co-ops around the state are responsible only for the distribution of power.

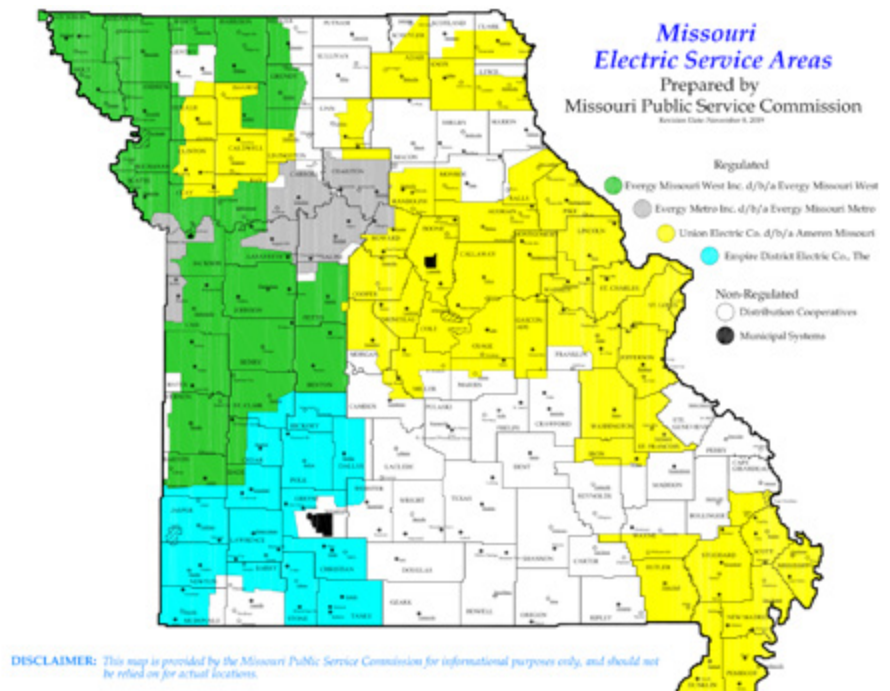
The Associated Electric Cooperative Incorporated (“AECI”) provides the wholesale supply of power to six separate generation and transmission cooperatives in Missouri that serve the various distributive co-ops around the state. A full list of electric co-ops provided Appendix A, Table 2.

Municipal utilities (“munis”) are the second form of utility companies. **Missouri’s 86 munis are publicly owned and are governed by their respective city council** (see Appendix A, Table 1 for a full list). They are regulated by city councils, advisory boards, and FERC. Similar to co-ops, munis have no interaction with the PSC. Columbia Water & Light and City Utilities of Springfield are examples of municipally-governed utilities. Some larger munis have generation and transmission abilities, but most rely primarily on PPA’s for the generation and transmission of power.

The last utility type is called the IOU, which we’ve already discussed to some length. These are privately owned and operated at a profit. The PSC is designed to regulate these entities. Ameren is the largest of the four electric IOUs in the state, serving 1.2 million customers primarily in the eastern side of the state – mainly the St. Louis Metropolitan Area. Ameren also operates a gas utility (called Ameren Gas) that serves primarily the middle part of the state.

Energy, only recently known as Kansas City Power & Light (KCP&L), serves nearly 800,000 customers in the western side of the state. In the past few years, KCP&L received permission to merge with Westar Electric in eastern Kansas to create Energy. This is now one of the largest electric utilities in the country. It’s important to note Energy technically operates as two separate utilities: Energy Metro and Energy West. Energy Metro and Energy West once were KCP&L and KCP&L – Greater Missouri Operations (“GMO”), respectively. GMO, now Energy West, once was Aquila Energy but that utility was acquired by KCPL in 2007 and the rate structures of the previously separate utilities were never reconciled. So often this document will refer to Energy as both utilities and only address Energy Metro or Energy West when addressing specific aspects of that utility.

Empire Electric (“Empire”), under the umbrella of Liberty Utilities as the result of a merger finalized in 2017, serves approximately 180,000 customers in the southwest part of the state – primarily rural and low-income areas.



INVESTOR-OWNED UTILITIES	MUNICIPAL UTILITIES	RURAL ELECTRIC CO-OPERATIVES
Ameren Missouri	Columbia Water & Light	Boone Electric
Every Metro	Independence Power & Light	Callaway Electric
Every West	City Utilities of Springfield	Northeast Missouri Electric
Empire Electric	Kirkwood Electric Department	Tri County Ele

***See Appendix A for a full list of Missouri's 86 municipal utilities and 47 electric utilities**

Historically, Ameren Missouri is considered one of the most coal-reliant utilities of its size in the country, with 69% of its generating power powered by coal fired plants. In 2017, this began to change as the utility announced plans to significantly increase their production of wind and solar as well as offering a litany of programs to customers that offered said customers' greater access to renewable energy.

Empire is also a late adapter to renewable energy. Prior to its 2017 acquisition, Empire had a significant aversion to renewable energy. That is, until 2016, when the PSC approved Empire's acquisition by the Toronto-based Algonquin Power. This new management is transforming Empire into a leader for renewable energy. It is not out of the realm of possibility that Liberty's southwest Missouri territory will be 100% clean energy by the end of the next decade.

Finally, Eversource has an impressive portfolio of wind in its generation mix. On some days, the utility is getting 50-60% of its power from wind. This is in large part due to the company's investment of wind farms in Kansas. Now that KCP&L has merged with Westar, their wind production only looks to increase. Chuck Caisley, Eversource's Senior VP on Governmental Affairs, declared the company will be operating on 100% renewable energy in Kansas by 2050. This has all sorts of possibilities for Missouri.

How utilities operate is only part of this story. Power generated by a utility is sometimes bought and sold

on a wholesale power market that is regulated by FERC. These power markets have only been authorized by federal law since 1992, so they are relatively new players in the energy market. **Transmission system operators manage distribution and transmission of various resources.** Missouri is unique in that it has two energy markets – the Southwest Power Pool (SPP) and Midcontinent Independent System Operator ("MISO") – that operate in different geographic areas of the state.

Electric generators, either utilities or independent producers, sell power to the wholesale market. SPP and MISO then sell power to utilities – often in a process resembling a reverse auction. Many factors go into the price of power. Facility operating costs are reflected in auction price. **Lowest-cost resources sell first, and once power supply sold on the wholesale market meets demand, the cost of the last resource to sell becomes the wholesale price of power.** Utilities sell that power to retail, residential, and commercial customers at rates that reflect the wholesale price.

There are many challenges to renewable energy development while operating in a regulated utility market. With monopoly statuses, powerful utilities lobby for regulation of the market. Costly capital investment in generating plants or renewable resources may be prohibitive to public utilities and rural co-ops. Additionally, many utilities are committed to contracts with coal plants. These contracts can be costly to break (or lead to expensive and unwinnable litigation), or have many years remaining before expiration.

MISSOURI'S CLEAN ENERGY HISTORY

Over the past 15 years, Missouri's energy landscape has changed substantially, thanks to changes in the laws that help stimulate, develop, and sustain renewable energy production and energy efficiency programs. The development of Missouri's Net Metering Standard in 2007 was the first significant step to providing access to cheap, clean energy to residential and small business customers. In 2008, Missouri voters approved a Renewable Energy Standard ("RES") for IOUs. Other developments include the promotion of clean energy financing programs such as Property Assessed Clean Energy ("PACE"), fostering energy efficiency programs for residential and commercial customers of Missouri's IOUs through the Missouri Energy Efficiency Investment Act ("MEEIA"), the inclusion of renewable energy measures in the "Grid Modernization Act of 2018," and most recently the Missouri Legislature passed the a securitization law. The following is a summary of transformative energy policy in the State.

2007 NET METERING STANDARD & EASY CONNECTION ACT

The "[Net Metering and Easy Connection Act](#)" requires all utilities in Missouri to offer true net metering and free grid interconnection to any Missouri customer with solar, wind, or a small hydroelectric system of less than 100 kW on their home or business. When a renewable energy system is connected to the grid, the customer receives full retail credit for their generation to offset their electricity bill. Any excess generation beyond their monthly usage is credited on the customers next bill at its avoided cost-rate or wholesale rate.

The Net Metering Standard and Easy Connection Act has been in place for over a decade. Renew Missouri has advocated to make the law more robust to incentivize greater solar adoption in Missouri. Improvements to the law may include the following:

- » Raising the generation cap to 2MW,
- » Requiring utilities to reimburse residential and commercial customers for excess solar generation at the retail rate, rather than at wholesale
- » Credits should be changed to an annual level in order to provide benefit to customers for generating more solar power during summer months.

A voluntary Renewable Portfolio Standard ("RPS") was attached to the Easy Connections Act, although it

didn't wind up in the final bill. However, it did pave the way for a mandatory renewable energy standard to be presented in the next election, which would become a significant milestone for Missouri's electricity sector.

2008 VOTER-APPROVED RENEWABLE ENERGY STANDARD

Since the Legislature opted not to pass a voluntary renewable energy standard, proponents of clean energy turned to the ballot initiative process. [Proposition C](#) was placed on the November 2008 ballot and passed with 66% voter approval.

Existing voluntary renewable energy and energy efficiency objectives were replaced with the mandatory RES requiring IOUs to use eligible renewable energy technologies to meet a minimum of 15% of annual retail sales by 2021. Proposition C made Missouri the third state in the country to pass a RES through the ballot initiative process.

In 2010, pro-utility lawmakers removed the requirement that Renewable Energy Credits ("RECs") used for compliance with the RES come from Missouri and therefore allowed for out-of-state renewable production to count towards their RES goals. This standard was problematic for wind developers, who had hoped that the RES would require utilities to develop renewable energy projects in Missouri. However, the law maintains some incentive for in-state generation

because each kilowatt-hour of eligible energy generated in Missouri shall count as 1.25 kilowatthours for purposes of compliance. In addition, the RES still requires all electric IOUs to offer their customers rebates for solar systems under net metering standards.

According to the most recent Compliance Reporting, each IOU has reached or has exceeded its requirements. Raising the RES requirement after 2021 is a policy goal for Renew Missouri and options are currently being explored to this point. It should be noted that the RES is below 20% and does not apply to municipal utilities or electric co-operatives.

2009 MISSOURI ENERGY EFFICIENCY INVESTMENT ACT

In 2009, the [Missouri Energy Efficiency Investment Act](#) (“MEEIA”) was signed into law. **MEEIA allows utilities to earn a profit on the electricity saved as a result of voluntary energy efficiency programs and incentives they offer to their customers.** Utilities can both recover the costs of their efficiency programs and the lost revenue from customer energy savings through rate adjustments. Utilities also have the opportunity to earn a profit if their programs are successful, just as they earn a profit on traditional investments. **The law increases investments in energy efficiency, decreases Missourians’ energy bills, avoids or delays the need for constructing future power plants, and reduces our state’s reliance on coal and other fossil fuels.**

MEEIA requires energy efficiency programs be cost-effective, although the law makes an exception for programs targeted to low-income residents. This allows for utilities to create programs with higher incentives to motivate customers with less resources to invest in efficiency.

Programs can also be designed to help owners of affordable housing create more efficient and affordable units for tenants. In the early years of MEEIA, there were no utility-sponsored energy efficiency programs available for low-income Missourians. The only

energy savings available to them were through the weatherization program, which unfortunately does not serve multifamily properties with more than five units. **Over the course of several filings under this law, utilities have grown their low-income portfolios significantly, and the programs enjoy support from utilities, regulators, and efficiency advocates alike.**

MEEIA is not without issue. Currently, industrial and commercial-class customers are exempt from paying MEEIA surcharges. Further, the law is written with enough ambiguity that regulators have challenged energy efficiency programs and restricted the size of investment made by participating utilities. Even with these problems, **MEEIA can account for reducing the amount of power produced by utilities to the tune of the entire output of 1.5 power plants over the past nine years and led to lower energy bills as well as safer and healthier living spaces for ratepayers.**

Currently, only Ameren Missouri and Evergy take advantage of MEEIA. Empire has announced their plans to file a MEEIA petition at the beginning of 2020. Ameren is currently in its third iteration of MEEIA programs. Evergy submitted its third petition last year and as of December 2019 is still awaiting the final decision from the PSC. Renew Missouri is aware of efforts in the 2020 Legislative session to allow gas utilities to take advantage of this law as well as to create energy efficiency standards that would make MEEIA mandatory and, therefore, less susceptible to regulatory interference.

Renew Missouri continues to address additional barriers to investment in energy efficiency upgrades, including limited financing options. Renew Missouri has been active in encouraging energy efficiency programs before the PSC, and also seeks to address easier ways for people to finance said improvements as well as for energy efficiency measures that contribute to broader goals such as urban heat island mitigation.

2010 PROPERTY ASSESSED CLEAN ENERGY (PACE) - [67.2800-67.2835 RSMo](#)

PACE is a financing tool that allows both commercial and residential property owners to retrofit their properties with energy efficiency and renewable energy improvements, at no upfront cost. **PACE involves the local government's tax authority, which issues special bonds to finance the energy upgrades and then collects repayment through a special assessment on the building's property taxes.** In essence, the PACE board is no different than a fire district or school district in terms of local oversight and collecting revenue through the county.

In most recent attempts in 2021, bankers tried to kill PACE by introducing legislation that would over regulate PACE out of existence. In the end, concessions were and some common-sense reform was passed that essentially codified existing consumer protections.

2015 SUPREME COURT RULING ON SOLAR REBATES - [393.1050 RSMo](#)

In the 2008 ballot initiative, the language circulated for signature contained a solar carveout requiring electric IOUs to generate or purchase renewable energy resources, of which 2% had to come from solar energy. This also contained a solar rebate requiring utilities to provide its retail customers a rebate offer for new or expanded solar electric systems located on the customer's premises.

After the initiative was circulated, but before the voters had the opportunity to vote, the Missouri Legislature passed Section 393.1050 RSMo, which provided electric utilities an exemption from the solar carve-out and solar rebate requirements if the company achieved an amount of eligible renewable energy capacity equal or greater than 15% of its fossil-fired generating capacity. In doing so, the Legislature attempted to preemptively repeal portions of Proposition C before its passage.

Empire was the only electric utility that claimed eligibility for the solar carve-out or rebate exemption.

Renew Missouri brought a complaint to the PSC, which ruled in favor of Empire. However, in a 2015 case, the Missouri Supreme Court held that the Legislature may not pass a statute that repeals all or a portion of an initiative in advance of its passage.

The portions of Section 393.1050 RSMo, which were in conflict with Proposition C, were repealed by this decision. The Court held that the Legislature could amend initiatives once they were passed, just as with any enacted statute, but could not preemptively repeal a ballot-initiative between its circulation and passage.

FIGHT AGAINST NET METERING CHARGES

Utility companies do not like rooftop solar because this is power they do not produce and, therefore, cannot earn a profit from selling. In 2017, a bill was introduced by pro co-op lawmakers that would allow utilities to add a fee to any bill of a customer with a rooftop solar system. This fee would make any economic benefit of rooftop solar evaporate and would, in essence, destroy the rooftop solar industry in Missouri. Renew Missouri led the charge against this effort and, while the bill received a favorable vote in the House, was stonewalled in the Senate.

Attempts to weaken or disrupt net metering has been a recurring effort in the Missouri Legislature over the past decade, each time without success. Most recently, in 2021 rural electric cooperatives pushed for laws that add unnecessary demand fees to solar customers. Once again, we rallied supporters and fought against it and the legislations died in committee.

We don't anticipate this issue going away as the rural electric cooperatives have vowed to return next year.

2018 GRID MODERNIZATION ACT

Senate Bill 564 was proposed by lawmakers to provide regulatory tools to electric IOUs in order to make improvements to the grid. While the public waits to see if this legislation indeed modernizes the grid, **this legislation gives electric IOUs the ability to**

separate revenue from conservation efforts as well as fluctuations in unforeseen weather events. This is more commonly referred to as “decoupling” and enables a utility to true up its revenues to account for fluctuations in weather and/or conservation efforts. Decoupling was previously used by gas IOUs and led to more robust energy efficiency efforts. Now, electric IOUs get the same opportunity.

SB 564 also allows the PSC to approve utility investments in pilot programs such as renewable generation, microgrids, or energy storage if the project is designed to advance the IOUs operational knowledge of implementing such technologies, for example, to gain efficiencies that result in customer savings and benefits.

This law also requires electric IOUs to invest in utility-scale solar facilities located in Missouri or adjacent states before the end of 2023. The bill specifies the various amounts each utility should invest in the facilities. Finally, SB 564 addresses solar rebates the utilities must make available to customers, specifying various amounts for each specific utility. Size limits are put in place for residential customers at 25 kW and 150 kW for nonresidential customers.

2016-2018 EVERGY & AMEREN GREEN TARIFFS & COMMUNITY SOLAR

In 2016, the PSC approved two different requests by Ameren to build up to 2.8 MW of solar arrays. 1 MW of solar was specifically targeted towards Ameren’s Community Solar pilot, a solar subscription program where Ameren customers can have up to 40% of their power come from solar. Community solar has proven successful however, because customers who subscribe are paying a premium for solar, low-income customers do not benefit from this program. As of December 2021, regulators approved construction plans for 5 MW solar power farm in Montgomery County and will be the second community solar project for Ameren Missouri.

Ameren Missouri also operates a “Neighborhood Solar”

program in which local businesses or building owners can host Ameren Missouri-owned solar resources on their premises, while not receiving any of the system’s electricity or experiencing any change in billing. Ameren has installed 1.8 MW of solar on Barnes Jewish Hospital near Forest Park, and is processing several other projects.

In 2018, the PSC also approved Evergy’s solar subscription program. It is similar to Ameren’s pilot, although larger. Currently, Evergy’s subscription program is in the very early stages (as of December 2019) and has yet to sign up the amount of customers needed to build this new facility.

Both utilities received approval to pursue “green tariff” programs. Targeted to large businesses and governmental entities, this allows bigger customers to enter into long-term contracts with the utilities to purchase the majority of their power from renewable sources, specifically wind. These programs are still new but Missouri has seen several, particularly municipalities with clean energy goals sign up under these contracts. There are efforts to include solar into these programs but that is yet to be determined as of the writing of this document.

2014-2021 GRAIN BELT EXPRESS CASE & LEGISLATION BLOCKING PROJECT

In 2014, the Grain Belt Express project first attempted to receive a certificate of convenience and necessity (“CCN”) from the PSC to construct, own, manage, control, maintain, and operate a transmission line and related facilities (“the Project”) within and over eight Missouri counties. Grain Belt promised to deliver wind power from western states to marketplaces where the power would then be transmitted to the East Coast.

The PSC determined that Grain Belt did not adequately demonstrate this project met needs or adequately advanced the interests of Missourians. At the time of the hearing, there were no commitments from purchasers for capacity and the four major utilities in

Missouri were not lacking any renewable energy credits which would have prompted them to purchase wind energy from Grain Belt.

Grain Belt submitted another application to the PSC on August 30, 2016. This time, the Commission found the project advanced the public interest, but denied the CCN due to a separate court decision that required a different transmission line developer to provide county assents before a CCN could be granted.

On appeal, the Missouri Supreme Court held the PSC erred in its finding that it could not grant a CCN and remanded the case back to the PSC. On March 20, 2019, the PSC granted Grain Belt's CCN finding that it would allow hundreds of thousands of Missouri customers to see the benefits from low cost wind, create thousands of construction jobs, and generate millions of dollars in tax revenue. The opponents of the Grain Belt appealed the decision and the Eastern District Court of Appeal held oral arguments on December 4, 2019.

During this time, the Missouri Legislature – with backing from the Missouri Farm Bureau – considered a bill in the 2019 session to prevent private transmission companies from using eminent domain. While there was a litany of issues with this legislation (e.g., retroactive lawmaking, legislation targeting one party), this passed the Missouri House but stalled in the Senate.

In the last three legislative sessions up until 2021, special interest groups have been trying to undo the PSC's decision that bestows utility status on the Grain Belt Expressway. These efforts were struck down and Ivenery has purchased nearly half of the land it needs in northern Missouri for the construction project that will begin in 2023.

2018-2019 EMPIRE & AMEREN MISSOURI WIND PROJECTS

In addition to providing wind power to other states, the Grain Belt Express entered into contracts with several

Missouri municipalities, that would save these utilities an expected \$11 million per year on power. Project developers are in the process of negotiating with landowners for easements, and there is no publicly-available timeline for when this will be constructed.

In the past 18 months, there's been a flurry of activity at the PSC over IOU's seeking permission to construct wind farms in Missouri. Empire received approval to construct three separate wind farms throughout Southwest Missouri and eastern Kansas (totaling 600 MW of power). Ameren Missouri received permission to build three wind farms in Northern Missouri (approximately 750 MW of power). These facilities will provide electricity to hundreds of thousands of homes and businesses. Moreover, these wind farms were approved by the PSC to contain specific protections for wildlife and birds that go beyond federal protections.

In 2020 Ameren acquired The High Prairie Renewable ENergy Center, their first owned and operated wind generation facility. This 400 MW wind farm is the first of many renewable energy additions coming down the pipeline through 2040.

In 2021, the Atchison Renewable Energy Center was also acquired by Ameren, a 300 MF project located in northwest Missouri, construction will be complete by the end of 2021.

2021 SECURITIZATION - 393.1700RSMo

IOUs fear that retiring coal plants early is uneconomic, particularly when debts incurred by construction of the plant remain. **When a plant is retired early, ratepayers are theoretically required to reimburse the utility for the capital it had invested but not yet recovered, as well as pay for a return on that capital investment.**

Impacts of early plant retirements include displacement of workers with consequent impacts on local economies as well as reduced earnings prospects for IOUs. However, a potential solution to this problem is **securitization, a financing mechanism that is**

comparable to refinancing a homeowner's mortgage.

Given the proper regulatory oversight, a utility company can refinance its remaining debts to lower interest rates. Securitization allows the utility to cover remaining debt with a low-interest loan (typically 15-20 years with 3% interest) from bondholders. By allowing IOU's to issue ratepayer-backed bonds and raise money from shareholders, securitization keeps prices for consumers' low and incentivizes IOUs to retire coal plants by solving the problem of the utility's return on investment.

Clean energy advocates have been working on getting securitization passed in the legislature for years, and in 2021 this was achieved through HB 743. Securitization will allow IOUs to rid themselves of debt on decades-old coal plants, allowing opportunities to invest in new projects. This legislation is beneficial for consumers, utilities, and the environment.

PAY AS YOU SAVE - PAYS

PAYS is an on-bill tariff program that allows utility customers to finance energy efficiency improvements by paying for the measures through their monthly utility bills. PAYS is unique among other so-called "on-bill financing" mechanisms because it is not technically a loan product.

Instead, the **customer agrees to a monthly assessment on their bill in exchange for the utility paying the costs of the energy efficiency measures.**

The crucial element that makes PAYS work is that the savings from EE measures must outpace the monthly payments owed, such that the customer comes out ahead without having to contribute any upfront funds.

Because the program does not involve any customer debt, the financial qualification process is simplified: there is little to no need to collect customers' credit ratings, income, or any other information to assess the customers' ability to pay.

PAYS program is primarily for single-family owner but can also be utilities by MF tenants/renters. PAYS is only available to the Residential (1M) customer class. Ameren selected [EETility](#) to design and run its PAYS program. The program is currently being offered as of summer 2021.

Spire Gas and Evergy are also working on developing their own on-bill financing programs.



WHERE MISSOURI IS GOING: UTILITY INTEGRATED RESOURCES PLANNING

Every three years, each of the IOUs in Missouri files an “Integrated Resource Plan” or “IRP”. Essentially, it is an inventory of current and predicted energy resources that will be called on by the utility over a period of 20 years. These IRPs are filed with the PSC. The PSC makes public versions of each document available online, and organizations such as Renew Missouri, Sierra Club, The Nature Conservancy, and consumer advocacy groups are able to review and comment on each IRP. The PSC takes submitted comments into account, and ultimately recommends changes by the utility to its IRP. In addition to triennial IRP filings, each utility also files an annual update or compliance report with the PSC. Just as it does with the IRP, the PSC makes a public version available online and accepts comment from interested advocacy groups and other parties.

Each IRP – as well as each compliance report – provides details regarding the environmental regulations that influence utility planning (e.g., a state Renewable Energy Standard, state and federal policies), the utility supply-side portfolio (e.g., coal, gas, nuclear, hydro facilities, solar, and wind power plants), the demand side portfolio (e.g., energy efficiency measures, residential net-metered solar), a review of the transmission and distribution system, and energy and peak capacity forecasting models that take into account various uncertain factors (e.g., price fluctuations, weather events, resource availability, environmental regulations). The following summaries will show what each utility set out to do in its 2020-2021 IRP as well as offer commentary about the IOU proceedings, as determined through an exploration of the 2019 Compliance Reports.



AMEREN MISSOURI

Ameren Missouri operates throughout eastern Missouri, with service territory extending north and south of the St. Louis region.¹ Roughly 95% of the utility's electric generation comes from fossil-fuel resources (e.g., coal, nuclear, and oil/natural gas). In 2017, Ameren Missouri reported total generation of 10,231 MW of supply-side resources.

2020 Integrated Resource Plan

Ameren lays out three broad objectives for their 2020 Integrated Resource Plan ("IRP"):

1. Operate 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, communities, and the environments, and

3. Maintain financial, technical, regulatory, and environmental flexibility. The 2020 IRP intends to address customers' long-term energy needs in a way that is consistent with the objectives of the Paris Agreement: limiting global temperature rise to 1.5 degrees Celsius and doing so at the least cost to customers.

Ameren's 2020 IRP sets out ambitious carbon emission reduction goals. Ameren Missouri is aiming for a reduction in CO₂ emission of 50 percent by 2030, 85 percent by 2040, and a goal of net-zero CO₂ emissions by 2050. This is a significant acceleration from the 2017 IRP, in which CO₂ emissions reduction rates targeted 35% by 2030, 50% by 2040, and 80% by 2050.

Figure 1.

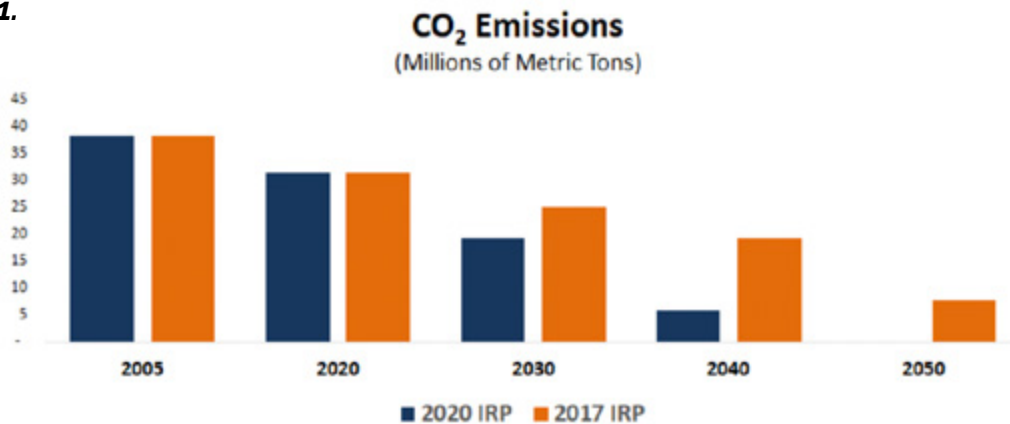
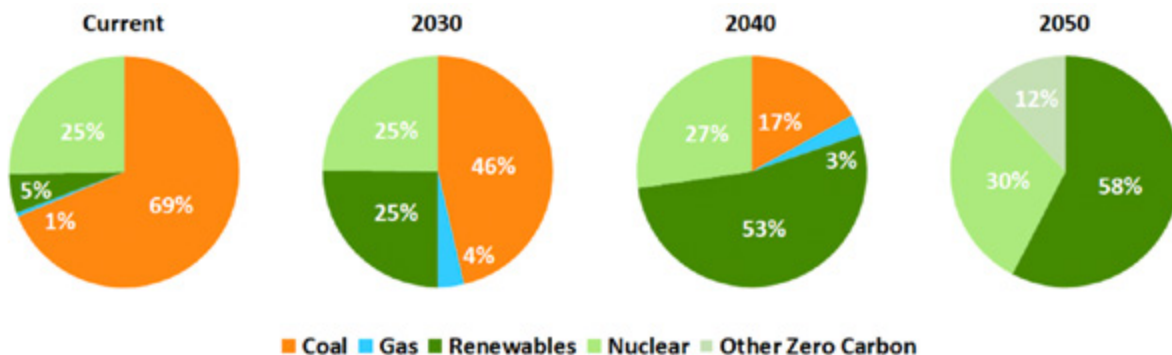


Figure 2.



Ameren also sets forth a plan to transform their generation portfolio with the addition of 3,100 MW of wind and solar which would be added by 2030, representing an investment of \$4.5 billion. Ameren expects generation additions to bring that total to 5,400 MW by 2040. The addition of new wind and solar will further enable Ameren to take advantage of federal tax credits and provide affordable energy to customers. However, the IRP stresses the need for increased public and private investment in renewable technology and implementation in order for these transitions to be feasible. This transformation also relies on the extension of the operating license for the Callaway nuclear facility beyond 2050. Figure 2 highlights the potential transition of Ameren's portfolio over a thirty year span, with half the energy coming from net-zero carbon sources in the next ten years.

The 2020 IRP plans to retire all of Ameren Missouri's coal fired generating capacity by 2042. Specifically, this includes the retirement of the Meramec Energy Center by the end of 2022, the retirement of Sioux Energy Center by the end of 2028, the retirement of two units of the Labadie Energy Center by the end of 2036, the retirement of both units of the Rush Island Energy Center by the end of 2039, and the retirement of the remaining two units of the Labadie Energy Center by the end of 2042. Figure 3, at the end of this document, displays a timeline of the retirement of these facilities as well as the integration of other forms of energy generation.

Ameren's 2020 IRP also prioritizes cost-effective customer energy efficiency and demand response programs which will help customers control their energy consumption and reduce their electric bills. In their words, "the cleanest and cheapest form of energy is the energy you do not have to produce in the first place." This includes the extension of existing programs for both residential and business customers and the addition through 2022 and the implementation of the 2021 Pay-As-You-Save ("PAYS") program. Through 2022, these plans are expected to save customers more than 3.6 million net MWh and create more than \$1.9 million in benefits.

Additional efforts the IRP alludes to the electrification of transportation and other sectors, the advancement of carbon capture and sequestration technologies, and the creation of clean energy jobs.

New Supply Side Resources

The supply side screening analysis of various coal, gas, and renewable power generation technologies for the 2020 IRP. The 2020 IRP focuses on solar, wind, battery-storage, and natural gas as potential new supply-side resources.

Ameren is exploring new methods to incorporate and deploy more renewable generation throughout its service territory. Amongst these methods are the Community Solar Pilot Project; the Neighborhood Solar Program, which would site utility-owned generation on customer property; and the Green Tariff Program; the Solar + Storage Project.

Demand-Side Resources

In 2018, Ameren's Missouri Energy Efficiency Investment Act ("MEEIA") was approved for the 2019-2021 cycle. The plan targets 794 GWh of cumulative portfolio energy savings and 361 MW of cumulative demand savings, with a total budget of \$195.5 million. The plan is forecast to generate \$324 million in lifetime net benefits. Ameren's plan also includes a six year commitment to significantly grow and expand low income programs, with \$50 million targeted specifically to these customers.

On August 5, 2020, Ameren approved a unanimous agreement and stipulation in File No. EO-2018-0211 to extend its 2019-2021 cycle into 2022. Notable changes in the extensions included:

1. On-bill financing for PAYS residential customers, with \$5 million and \$10 million in new financing available in 2021 and 2022 respectively;
2. An increase in the proportion of dollars allocated to low income programs from 10% to 18% of the portfolio;
3. The elimination in PY 2022 of several cost-effective customer offerings, including the Residential Home

Energy Report, school kits, appliance recycling, education programs, and the Business new construction program.

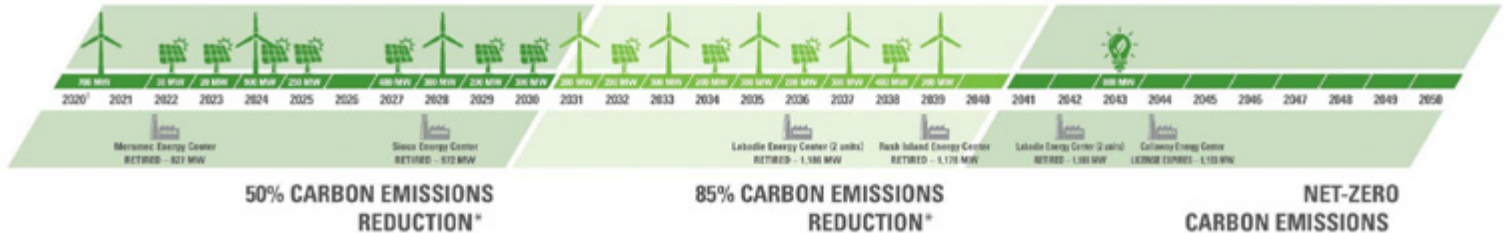
In the 2020 IRP, Ameren examines four potential Demand Side Management (“DSM”) portfolios. The two portfolios of note are the Maximum Achievable Potential (“MAP”) portfolio, which represents the maximum amount of cost-effective DSM that would be expected, assuming incentives cover the full incremental cost qualifying measures; and the Realistic Achievable Potential (“RAP”) portfolio, which represents all cost-effective DSM that would be expected, based on forecast incentive levels and customer willingness to participate. The RAP plan shows the lowest PVRR compared to plans with different levels of DSM.

Additional Alternative Resource Plans

Additional alternative resource plans were identified to evaluate additional specific paths for the addition of renewable energy resources in the context of the retirement of Ameren coal plants. One potential resource is the Grain Belt Express, which could deliver renewable energy from western Kansas to Missouri using a high voltage direct current (“HVDC”) transmission line. The Grain Belt Express (“GBX”) transmission project could deliver 1,000 MW of renewable energy to Ameren’s service territory.

Figure 3.

Ameren Missouri's Generation Transformation Timeline



EVERGY UTILITIES

Evergy Metro operates throughout western Missouri, with service territory extending north, west, and south of the Kansas City region. Roughly 75% of the utility's electric generation comes from fossil-fuel resources (e.g., coal, nuclear, and oil/natural gas; see the chart below).

2021 Integrated Resource Plan

In April 2021, Evergy filed its most recent IRP. The utility aims to reduce carbon emissions by 70% through 2030 (relative to 2005 levels). Building on this trajectory, Evergy's goal is to achieve zero carbon emissions by 2045, assuming key technology, policy, and regulator enablers are in place. The plan includes the following:

- » About 1,200 MWs of fossil retirements and 3,200 MW of renewable generation additions including both solar and wind over the next 10 years.
- » Retirement of nearly all remaining coal generation by 2040 with nearly 4,500 MWs of renewable and zero-carbon emitting firm, dispatchable resources added over the second decade of the plan.

As of year-end 2020, Evergy has retired about 2,200 MW of fossil generation, compiled a wind portfolio of more than 4,200 MW, reduced carbon emissions by 51% from 2005 levels, and is providing more than half of retail customers' energy needs through emission-free sources.

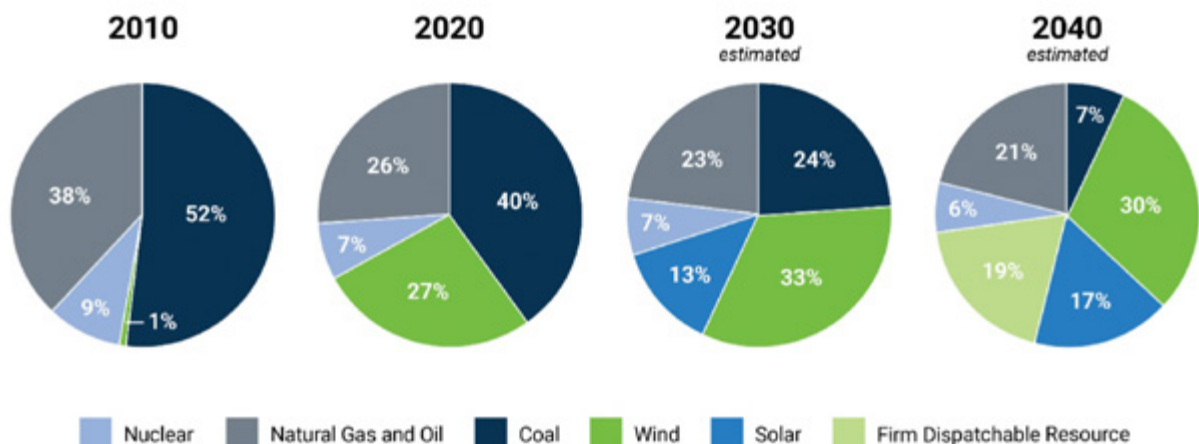
Through 2030, Evergy plans to add 3,200 MWs of renewable generation. This is an increase of 2,700 MWs over their 2020 annual IRP update, based on a new all-source request for proposal (RFP) and comprehensive analysis of the costs and risks associated with available generation sources.

The renewable additions will be a combination of solar and wind resources. Solar offers clean energy that more closely aligns with their customers' load demand, with peak generation available around the same time of day when load needs are highest. It also adds a new fuel source to our existing portfolio at meaningful levels, increasing diversity.

Wind additions continue to take advantage of the tremendous resource in the region. These additions of both solar and wind allow Evergy to continue taking advantage of federal tax credits, increasing affordability for Evergy customers.

Below is a timetable of how Evergy plans to divest from fossil fuels and move towards renewables, cutting its coal usage by half in the next decade.

Figure 4. Generation Capacity by Fuel Type (year end)



Our goal is to achieve net-zero carbon emissions by 2045.

LIBERTY - EMPIRE UTILITIES

Empire operates widely throughout southwest Missouri, with service territory extending throughout the Springfield and Joplin, MO, regions. In 2018, Empire generated 1,573 MW of electricity and produced 4,321,595 MWh of power for its customers.

2020 Integrated Resource Plan Update

Liberty -Empire filed its last IRP in June 2019. The plan included the retirement of the Asbury coal-fired power plant, investment in solar and storage as near-term capacity and energy options that can take advantage of federal tax credits, investment and distributed energy resources including community solar and distribution substation projects, and investment in demand-side management.

Since filing the 2019 IRP, Liberty-Empire has taken the following steps in executing their plan:

- » The Company took steps to retire the Asbury plant in 2020.
- » The Company proceeded with the development of three wind projects: Neosho Ridge Project, Kinds Point, and North Fork Ridge. These projects are expected to be one by the end of 2020.
- » The Company remains on track with its Community Solar Pilot Program, developing 10 MW of solar by 2021.
- » The Company is considering a MEEIA filing in 2020 for approval of a new energy efficiency program and demand-side investment mechanisms in Missouri.
- » The Company is in the process of implementing its advanced metering infrastructure (AMI) initiative. The Company has executed contracts with the major vendors and expects all the meters to be installed by 2021.

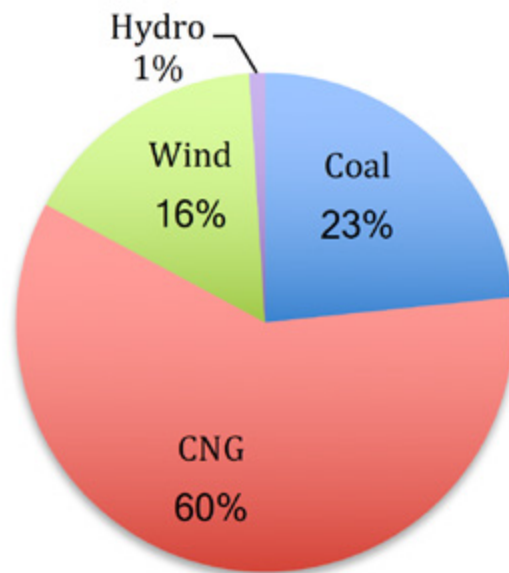


Figure 5. Liberty-Empire 2018 Resource Portfolio

MUNICIPAL UTILITIES & IRP'S

Municipal utilities (“munis”) are not required by the state of Missouri to file IRPs. However, some munis do develop their own strategic plan. In Missouri, Columbia Water & Light, City Utilities of Springfield, and Independence Power & Light are among those that do. As with the IOUs, these municipal reports provide details regarding the environmental regulations that influence utility planning (e.g., the MO Renewable Energy Standard or local renewable goals, state and federal policies), the utility supply side portfolio (e.g., coal, gas, nuclear, solar, and wind power plants; PPAs), the demand side portfolio (e.g., energy efficiency measures, residential net-metered solar), a review of the transmission and distribution system, and energy and peak capacity forecasting models that take into account various uncertain factors (e.g., price fluctuations, weather events, resource availability, environmental regulations). The following summaries will show what each utility set out to do in its latest available report. Each of these utilities currently meets advanced renewable energy goals that are at least as stringent as those met by the IOUs.

City Utilities of Springfield

City Utilities (“CU”) is a municipal utility that operates in Springfield, Missouri. In 2018, City Utilities generated 2,367 MW of supply-side power. Roughly 30% of the utility’s electric generation comes from renewable resources (e.g., landfill gas & wind). Specifically, CU generated power from 503 MW of coal; 1,190 MW of nuclear; 524 MW of natural gas/combustion turbines; 310 MW from long-term PPAs; and 1,030 MW of renewables/storage. This electric service (4,409,771 kWh in sales) provided 64.5% of the total revenue of City Utilities.

In its 2013 Strategic Plan, City Utilities emphasized reliability, affordability, and responsibility as among its long term goals. Notable aspects of the Plan include:

- » Planned growth to 40% renewable energy by 2020, which will be provided by market (e.g., wind PPAs);
- » City Utilities gained 187 net-metered customers in 2018;
- » City Utilities offered rates to customers that are 80% of the national average and 91% of the state average and private generation;
- » City Utilities will complete its Advanced Metering Infrastructure (AMI) installation by 2023; in 2018, more than 72,000 advanced electric meters were installed.

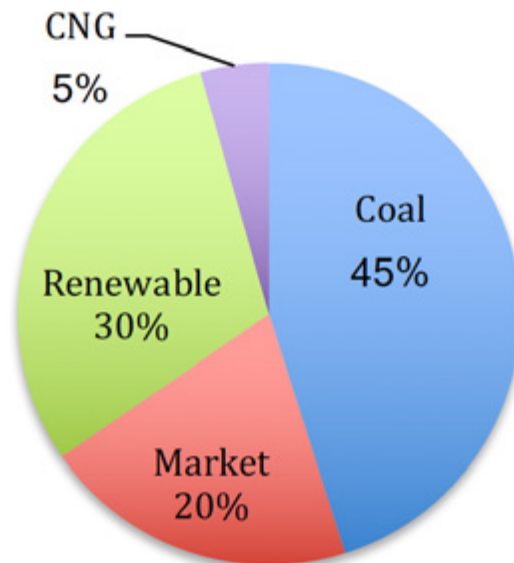


Figure 6. City of Utilities Springfield 2018 Resource Portfolio

Columbia Water & Light

Columbia Water & Light (CWL) is a municipal utility that operates in Columbia, Missouri. CWL adheres to a municipal renewable energy ordinance, which states that, “the city shall generate or purchase electricity generated from eligible renewable energy sources at the following levels: according the current standard

- » 15% of electric retail usage by December 31, 2020
- » 25% of electric retail usage by December 31, 2022
- » 30% of electric retail usage by December 31, 2028

Currently, CWL is on track to meet RE targets. Also of note: CWL purchased 777 MWh of solar from 181 net-metering customers in 2018.

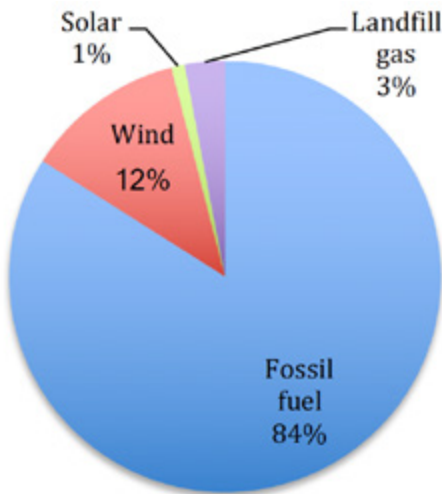


Figure 7. Columbia Water & Light 2018 Resource Portfolio

Independence Power & Light

Independence Power & Light (IPL) is a municipal utility that operates in Independence, Missouri. In 2018, IPL served more than 57,000 customers and generated nearly 1,100,000 MWh of electricity.

Roughly 12% of IPL’s electric generation comes from renewable resources (e.g., wind & solar). Specifically, IPL generated power from

- » 191 MW of natural gas/oil,
- » 109 MW of coal,
- » 35 MW of wind, and
- » 11.5 MW of solar

IPL is among the largest 100 public utilities in the country for its residential customers and total revenues.

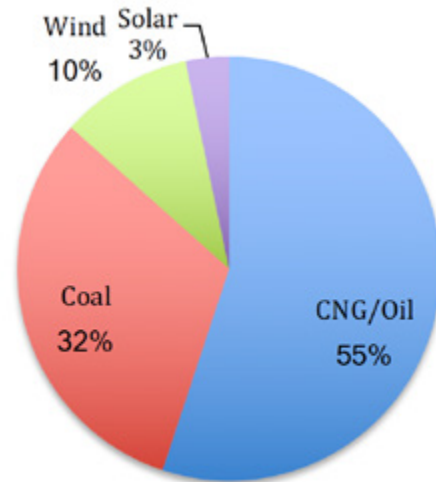


Figure 8. Independence Power & Light 2018 Resource Portfolio

WHAT'S IN STORE FOR THE FUTURE

Our report has detailed the past and present of renewable energy in Missouri to date. Much has been done but there is a lot left to do. While the future may be limitless, the laws and policies in place in Missouri do put a hindrance on progress and where our state will be over the next several decades. In order to achieve a renewable revolution in Missouri, continued effort and boundless imagination are required on the part of advocacy groups, policymakers, and others.

See Table 1 below for an overview of policy opportunities, some of which are explored in more detail to sum up this renewable energy report.

Stage of Renewable Energy Market in MO	Renewable Energy Opportunities in MO		
	<i>no policy in progress</i>	<i>some policy in progress</i>	<i>policy in place</i>
MARKET PREPARATION	<ul style="list-style-type: none"> » EV charging infrastructure & advanced EV charging rates; » Modernized utility business model; » Modernized, real-time customer data access. 	<ul style="list-style-type: none"> » Interconnection & netmetering; » Green power; » EE cost-benefit analysis; » EE performance incentives. » EV Charging Rebates from Electric Utilities 	<ul style="list-style-type: none"> » Decoupling & Demand-Side Management incentives.
MARKET CREATION	<ul style="list-style-type: none"> » Mandatory state emissions standard. 	<ul style="list-style-type: none"> » Energy Efficiency Resource Standard; » Distributed generation & solar carve-out. 	<ul style="list-style-type: none"> » Renewable Energy Standard
MARKET EXPANSION	<ul style="list-style-type: none"> » 3rd Party PPAs; 	<ul style="list-style-type: none"> On-bill RE financing; » Community solar; » CHP & distributed generation incentives; » Solar rebates. » Energy infrastructure bank 	<ul style="list-style-type: none"> » Residential & commercial Property Assessed Clean Energy (PACE) financing; » On-Bill Financing » Securitization

Distributed Energy Resources

Distributed energy resources (“DER”) are defined as any and all services and technologies deployed or operating at distribution level in the electric grid. DER includes all manner of demandside management (“DSM”), energy efficiency, and conservation technologies and services operating at the customer level or distribution level of the grid, distributed generation, energy storage devices, smart grid technologies or operating at the distribution level, modern electrical devices and equipment (such as electric vehicles), along with other systems which can be operated to consume, inject, or manage the consumption or generation of energy at the distribution level.

In order for DER to be fully utilized, Renew Missouri believes a model pricing schedule – or tariff – should be designed by state regulators. This tariff should be built upon marginal emissions rate studies, marginal cost of service studies, benefit-cost analysis framework, standardized distributed system planning, hosting capacity studies, customer data acquisition and sharing issues, non-wire solutions projects, pilots and demonstration projects, and interconnection procedure improvements. The IRP process can also accommodate increased use of DERs in two different ways: distribution system planning and distribution grid operations. Under distribution system planning, the improved IRP should address forecasts of demand and energy growth, available DER resources, delivery infrastructure capital investment plans, beneficial locations for DER deployment, and hosting capacity. Improved distribution grid operation IRPs should address system operations, volt/VAR optimization, interconnection processes, advanced metering, customer data, and probabilistic modeling and load flow analysis.

Utilities should be tasked by regulators with developing comprehensive plans addressing grid modernization efforts, with a special focus on how grid modernization will support increased DER deployment and operation.

Electrification

Electrification of transportation infrastructure is another important component of the energy transition. Private vehicles and public fleets provide substantial opportunities for electrification, a process which must be facilitated by (a) deployment of statewide EV infrastructure (e.g, charging stations); and (b) incentivization of EV adoption and EV infrastructure investment. Missouri municipalities, including Kansas City, Maplewood, and St. Louis City, are increasingly interested in electrifying city buses. Renew Missouri has proposed that a Pay-As-You-Save® (“PAYS®”) model be implemented to finance the transition.

Resiliency

Resiliency refers to the ability of critical energy infrastructure to weather disturbances, such as those caused by severe storms, that may lead to power outages. The concept of resiliency has been a key framing message used by Renew to advocate for a number of RE and grid modernization issues before the Legislature and the PSC. For example, there is a strong argument case for emphasizing the ability of DER to diversify and distribute the generation and reliability of power production. DER enables communities to better respond to potential power disruptions by contributing to a more resilient grid. Micro-grids and battery storage facilities each contribute to resiliency by locating power production nearer to consumption and reducing a community’s reliance on fuel transportation infrastructure, enabling the powering of critical facilities, such as hospitals, in the face of power outages. Policymakers can incentivize resiliency by requiring that it be incorporated into IRPs and require utilities to complete regular resiliency analyses, including assessments of DER capacity and disaster resource planning.

CONCLUSION: WHAT WE HOPED YOU LEARNED

Renewable energy and energy efficiency in Missouri have made noticeable and incremental steps in our state's energy laws and policies over the past 15 years. This is thanks for increased advocacy and customer demand but as much about how regional energy markets have driven down the costs of generating and distributing clean energy. While progress was made in the Legislature in the middle-to-late parts of the last decade, most of the progress in the past ten years has been seen in front of the PSC where regulators have opened pathways for utilities who have only recently discovered the positive benefits of renewable energy as well as energy efficiency. Laws are slow to change and cannot be relied upon for significant changes at the state level. Change will be done case by case and by making strong, economic-based arguments to regulators. TNC's SPOT includes additional policy opportunities that will push Missouri's energy portfolio forward, such as by implementing mandatory green power options.

Thanks to integrated resource planning, we have a glimpse into the current mix of energy relied upon by our utilities and where they see such resources coming in the future. As wind and solar become cheaper and more accessible, more reliance will be placed on those resources. But natural gas is also cheap and reliable. Expensive coal and nuclear facilities will see their value fully depreciate and they will retire. In fact, if other states are an indication, utility companies will begin to see early retirements combined with wind and solar costs as cheaper than standard operations and maintenance for coal and nuclear plants.

Yet, the continued use of natural gas poses a threat to seeing utilities entirely wean themselves off of fossil fuels even as states show it, too, will be more expensive than wind or solar by 2035. The one way to continue to see trends moving towards clean energy, energy efficiency, and the technology that facilitates both is to push for an increase in the RES as well as policies that support coal plant closures, resiliency of the grid, increase the electrification of vehicles and of our general infrastructure, and provide distributive resources that harness clean energy and increase customers' overall knowledge of where their power comes from as well as how to use it more effectively. Inevitably, these policy changes will lead to an energy future where the grid is completely decentralized and utility companies could use "virtual power plants" where energy is harnessed from customers' roofs and storage units in order to power entire cities. The future is limitless but certainly our understanding of the future must be informed by progress made in the past and efforts being taken currently.

If you would like to know more about what's happening at an ongoing basis, we encourage you to sign-up for our mailing list at www.renewmo.org where you will receive our bi-weekly "Re-News" update as well as our bi-weekly "Renew Gurus" podcast. Thanks again for the opportunity to provide this valuable information to The Nature Conservancy.



Table 2. Municipal Utilities in Missouri

City of Alba	Independence Power & Light	Osceola Municipal Utilities
City of Ave	City of Jackson	City of Palmyra Board of Public Works
City of Bethany	City of Kahoka	City of Paris
City of Butler	Kennett City Light, Gas, & Water	City of Perry
City of Cabool	Kirkwood Electric Department	Poplar Bluff Municipal Utilities & City Cable
City of California	City of La Plata	City of Rich Hill
City of Carrollton	City of Lamar	City of Richland
Carthage Water & Electric Plant	City of Lebanon	City of Rockport
City of Centralia	City of Liberal	Rolla Municipal Utilities
City of Chillicothe	City of Linneus	City of Salem
Columbia Water & Light	Lockwood Water & Light Co.	City of Salisbury
City of Crane	Macon Municipal Utilities	City of Seymour
City of Cuba	City of Malden Board of Public Works	City of Shelbina
City of Easton	City of Mansfeld	Sikeston Board of Municipal Utilities
City of El Dorado Springs	City of Marceline	City of Slater
City of Farmington	Marshall Municipal Utilities	City of Utilities of Springfield
City of Fayette	City of Meadville	City of St. James
City of Fredericktown	City of Memphis	City of St. Robert
City of Fulton	City of Milan	City of Stanberry
City of Gallatin	City of Mindenmines	City of Steelville
City of Galt	City of Monett	City of Thayer
City of Gillman City	City of Monroe City Municipal Utilities	Trenton Municipal Utilities
City of Hannibal	City of Mount Vernon	City of Unionville
City of Harrisonville	City of Mountain View	City of Vandalia
Hermann Municipal Utilities	City of New Madrid	City of Waynesville
City of Higginsville	City of Newburg	City of West Plains
City of Houston	City of Nixa	City of Willow Springs
City of Hunnewell	City of Odessa	City of Winona

Table 3. Rural Electric Cooperatives in Missouri

Atchison-Holt	Intercounty	Tri-County
Barry	Laclede	United
Barton County	Lewis County Rural	Webster
Black River	Macon	West Central
Boone	Missouri Rural	White River Valley
Callaway	New-Mac	Central Electric Power
Central Missouri	North Central Missouri	KAMO Power
Citizens	Ozark Border	M&A Electric Power
Co-MO	Ozark	Northwest Missouri Electric
Consolidated	Pemiscot-Dunklin	N.W. Electric
Crawford	Platte-Clay	Sho-ME Power
Cuivre River	Ralls County	Associated Electric
Farmers'	SAC OSage	
Gascosage	Se-Ma-No	
Grundy	SEMO	
Howard	Southwest	
Howell-Oregon	Three Rivers	

Note: Electric co-ops that generate and transmit power to the other 40 coops are bolded.

Map. Map of Rural Electric Cooperatives in Missouri

