

THE DIRTY TRUTH

About Utility Climate Pledges

VERSION 2

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In loving memory of John Romankiewicz.

EXECUTIVE SUMMARY

For the sake of our communities and planet, we must do everything in our power to create a clean, renewable electric grid by 2030. Utilities must lead this transition, but our research shows they are wholly unprepared to do their part. Clean energy is reliable and affordable; electric utilities have no excuse to delay and no time left to waste.

Rapidly cleaning up the electric sector is key to achieving our climate goals. We need electric utilities to retire coal plants, cancel plans to build new gas plants, and accelerate clean energy deployment to achieve 80 percent clean electricity by 2030 and 100 percent clean electricity by 2035. This is in line with the United States' climate commitments and scientific consensus of what is needed for a livable planet.

Many utilities have pledged to clean up their electricity production, but our research shows these promises often amount to little more than greenwashing. In our 2021 report, released a year and a half ago, we analyzed the plans of 77 utilities owned by the 50 parent companies most invested in fossil fuel generation. We found that despite pledges to reduce emissions from many of these companies, most utilities did not have plans that would actually achieve the necessary emissions reductions by 2030.^{1,2} This updated report investigates what progress, if any, these utilities made over the last year and a half to turn their pledges into real action. We want to know: have utilities stepped up to meet the challenge and make the changes needed to save lives, reduce costs, and address climate change by transforming our power system?

STUDY SCOPE

50 parent companies most invested in fossil fuel generation, comprised of **77 operating companies**, that **own half of all remaining coal and gas generation in the US.**³

We analyzed their plans, as of July 1st, 2022, to

- 1. Retire coal**
- 2. Not build new gas plants**
- 3. Build clean energy** from 2022 through 2030.

Our approach in the second edition of this report is consistent with that of the first. We score utilities based on their plans to retire coal, not build new gas plants, and build clean energy by 2030. Utilities are graded on a scale of 0 to 100, earning points by committing to retire

coal and add clean energy and losing points by adding new gas. The original report evaluated electric utility companies' plans and actions as of December 2020.⁴ This edition considers their plans and actions as of July 1, 2022.⁵

We evaluated integrated resource plans (IRPs) and major announcements from the 50 dirtiest parent companies and 77 operating companies included in our original study (see appendices for details).⁶ These include investor-owned utilities, public utilities (such as the Tennessee Valley Authority), generation and transmission co-ops, and large municipal utilities. These companies provide roughly 40 percent of total US generation.⁷

Our analysis found that over the last year and a half, utilities have made little progress. Most are still not on the path to achieve 80 percent clean electricity by 2030. Of the 77 utilities we studied, nearly half of them (44 percent) made no progress or received a lower score than in our previous report. Overall, the aggregate score for all utilities in our analysis was 21.1, up just 4 points from the previous aggregate score of 17.2.⁸ This disappointing inaction occurred despite a tumultuous 18 months of grid reliability crises, blackouts, energy price spikes, and extreme weather events; many of these trace their roots in large part to utilities' stubborn reliance on expensive and unreliable fossil fuels.^{9,10}

Number (%) of companies with scores that ____ since the last report:

Improved	Made No Progress	Worsened
43 (56%)	7 (9%)	27 (35%)

Although utilities have dawdled over the year and a half since our inaugural report, calls for a rapid transition to clean energy have only grown louder. These calls recently culminated in the passage of the historic Inflation Reduction Act (IRA), investing nearly \$370 billion in energy and programs to address climate change, making clean energy an easier choice for utilities.¹¹ Utilities themselves have acknowledged that the IRA will make it easier for them to deploy clean energy and increase energy affordability for customers.¹²

Every day utilities delay progress, people across the country are at risk from pollution and increasingly severe climate-driven weather events. These delays will be even more outrageous if a year from now, utilities have failed to embrace the billions of dollars in opportunities

provided by the IRA to speed their clean energy transition. We need more than lip service to combat the climate crisis—electric utilities need to make progress towards a clean energy future.

KEY FINDINGS:

- While electric utilities have pledged to reduce their greenhouse gas emissions, they have made little progress since our first report and still fall far short of what is needed to protect people and the planet.
- We assigned a score to each utility based on its plans to retire coal, build new clean energy, and not build new gas plants. The aggregate score for all companies studied this year was 21 out of 100 — or a D — up just 4 points from the previous study.
- For parent companies with a climate pledge, the aggregate score in our analysis was 23 out of 100, only 2 points higher than the overall aggregate score. This suggests that most utilities' corporate pledges are not translating into action.
- The companies studied account for 69 percent of remaining coal generation in the US. They have committed to retire just 28 percent of their coal generation by 2030.
- About half of the operating companies included in this study, 37 companies, are planning to build new gas plants, totaling nearly 38 GW through 2030. These utilities have actually increased their plans for new gas plants since our last report. This accounts for over half of the total planned gas in the US through 2030.
- The companies in this study plan to add 308 million megawatt hours (MWh) of new wind and solar energy to the grid between 2022 and 2030. This is equivalent to only 24 percent of their current coal and gas generation and is wholly inadequate for a swift transition to a clean grid.
- Of the 77 operating companies studied, 27 received worse scores (35 percent); 43 improved their scores (56 percent); and 7 made no progress (9 percent).



PHOTO: PHOTOGRAPH BY BENJAMIN LOWY/GETTY IMAGES

A CLEAN ELECTRIC SECTOR REMAINS CRITICAL

KEY FACTS:

- Rapidly cleaning up the electricity sector is key to achieving national climate goals.
- To put us on a pathway consistent with a 1.5°C future and avoid the worst effects of climate change, by 2030 US utilities need to phase out coal and slash emissions by at least 80 percent from 2005 levels.
- We can transition to clean energy. Multiple pathways exist to cost-effectively achieve 100 percent zero-carbon electricity by 2035.
- A rapid transition to clean energy has the potential to have the greatest positive impact on vulnerable and marginalized communities bearing the brunt of the monetary, health, and environmental costs of our reliance on fossil fuels.

The Need for a Clean Energy Future

Human-induced climate change has already adversely impacted people, ecosystems, and infrastructure—with vulnerable and historically marginalized communities hit first and worst. The comprehensive Sixth Assessment Report (AR6) from the Intergovernmental Panel on Climate Change (IPCC) makes it clear that we have the tools to switch to clean energy and slash greenhouse gas (GHG) emissions, but time is running out fast.¹³

The scientific consensus is beyond doubt: in order to avoid the worst impacts of the climate crisis, we must cut global greenhouse gas emissions in half by 2030 or we will fail to limit global warming to 1.5°C (2.7°F).¹⁴ Every tenth of a degree of warming profoundly increases harm to people, non-human species, and ecosystems — for example, causing more frequent and severe extreme weather events and increasing species extinction — with disproportionate exposure and impacts to the most vulnerable.¹⁵ To achieve the necessary greenhouse gas reductions, we need a major transition in our energy sector. This includes moving as fast as possible towards 100 percent clean electricity — away from dirty fuels like coal and gas and towards renewables — and using that clean power for widespread electrification. This assessment is echoed by the International Energy Agency’s (IEA) landmark net-zero report. In IEA’s analysis, developed countries like the US must immediately phase out coal and cancel any planned build out of fossil fuel infrastructure.¹⁶ Additional research found that even using the oil and gas from already developed fields would take us past 1.5°C of warming.^{17,18} A meta analysis of clean energy models looked across 11 studies published since 2020 that “collectively affirm that achieving 80 percent clean electricity by 2030 is feasible, affordable, critical to meeting national climate goals, and deeply beneficial to the economy and public health — all without

compromising power system reliability.”¹⁹ This adds to a pile of reports looking at the need for a transition to a clean electric sector.^{20,21,22} If we are to achieve our climate goals, it is imperative that we not expand fossil fuel infrastructure of any kind and that we keep fossil fuels in the ground.

Support for a Clean Energy Future

The case for a clean energy future continues to build among all sectors. Clean energy remains popular among the public and utilities’ largest commercial customers.^{23,24,25,26} Market economics increasingly favor renewables over fossil fuels, and the financial sector is calling for more climate transparency.^{27,28,29} President Biden has responded to strong public support and committed the US to achieving 100 percent clean electricity by 2035, with an important milestone of 80 percent clean electricity by 2030.^{30,31}

States have also strengthened commitments to the clean energy transition since our first report, putting further pressure on electric utilities to deliver emissions cuts.³² For example, a 2021 bill in North Carolina instructed the state Utilities Commission to “take all reasonable steps” by 2030 to achieve a 70 percent carbon emissions reduction from 2005 levels from Duke’s two electric utilities in the state, which serve roughly two thirds of the state’s customers.^{33,34} Similarly, at the end of 2021, Nebraska committed to 100 percent clean power.³⁵ Twenty-one states are now committed to 100 percent clean electricity goals.³⁶

“We are at a crossroads. The decisions we make now can secure a liveable future. We have the tools and know-how required to limit warming.”

— HOESUNG LEE, IPCC Chair ³⁷

Unlocking the Clean Energy Future

Achieving 100 percent clean electricity will not only cut US greenhouse gas emissions by a quarter, it will also unlock emissions reductions in other key sectors.^{38,39} As part of the Paris Agreement, the US has an emissions target, known as a nationally determined contribution (NDC), of reducing economy-wide net greenhouse gas pollution by 50 to 52 percent from 2005 levels in 2030.⁴⁰ Studies agree the electric sector is key to unlocking ambitious cross-sector emissions reductions. Across an array of research, there is broad agreement that coal must be retired by 2030 and renewables must be deployed at record speed.⁴¹ Models examining pathways to 50 percent economy-wide GHG reduction by 2030 typically rely on the electric sector for 48 to 66 percent of total direct carbon (CO₂) reductions.⁴²

Clean electricity will deliver enormous benefits beyond cutting GHG pollution and fossil fuel use.⁴³ Fossil fuel plants are often located in overburdened and historically redlined communities, placing the majority of the health and pollution burden from emissions on low-income communities and communities of color.^{44,45,46} Clean Air Task Force found that retiring all the coal plants in the US would save an estimated 3,000 lives per year due to reduced air pollution.⁴⁷ In addition, renewables such as wind and solar, especially when combined with storage and demand response measures, can increase resiliency and reduce the risk of summer blackouts and other energy shortages due to extreme weather, both of which are more likely to occur in Black and Latinx

communities.^{48,49} As was recently seen in California, solar, battery back ups, and demand response work to keep the grid stable during extreme weather.⁵⁰ Meanwhile, gas plants are struggling to operate under extreme hot temperatures, which are becoming more and more common with climate change.⁵¹

The recently passed Inflation Reduction Act will help our efforts to transition to a cleaner future, with a lineup of provisions aiming to reduce GHG emissions in the electric sector.⁵² Based on current modeling, the IRA's provisions put us on a path to up to 81 percent clean power by 2030 and an economy-wide net GHG emissions reduction of about 40 percent.^{53,54,55} This represents most of the reductions we need to achieve the country's NDC goal of 50 to 52 percent GHG emissions reduction by 2030 relative to 2005 levels. The power sector accounts for the largest share of these potential emissions reductions, highlighting the crucial role of utilities.⁵⁶ The IRA and its clean energy provisions will also create millions of jobs, avoid thousands of deaths, and reduce energy costs.^{57,58,59}

Achieving a 100 percent renewable electricity sector — and obtaining all of its accompanying benefits — will require deploying massive amounts of existing clean energy technologies like wind and solar. Of course, technology on its own will not be enough. We need to overcome political barriers, and electric utilities need ambitious, binding clean energy commitments.

Have utilities in the US stepped up to the plate?



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UTILITIES HAVE MADE LITTLE PROGRESS

KEY FINDINGS:

- The aggregate utility score has increased only 4 points from a 17 to a 21, a very low D.
- These companies are planning to build massive amounts of new gas plants and not nearly enough clean energy.
- These companies are hanging on to their dirty coal plants, with plans to retire only 28 percent by 2030.

	2021 Report	2022 Report
Coal generation committed to retire by 2030	25%	28%
New gas capacity planned through 2030	36 GW	38 GW
% of total US planned gas capacity through 2030 planned by these companies	40%	53%
Planned new wind and solar energy through 2030	250 million MWh	308 million MWh ⁶⁰
Planned new wind and solar energy through 2030 as a percentage of current coal and gas generation	19%	24%
Aggregate Score	17 (F)	21 (D)
Number of Companies with “A” Scores	3	4
Number of Companies with “F” Scores	41	36

We assigned each utility a score based on its plans in three areas: **1)** commitments to retire coal by 2030; **2)** plans to build gas by 2030; **3)** plans to build or purchase clean energy by 2030. The score is on a scale of 0 to 100, with a utility earning points by committing to retire coal and adding clean energy and losing points by adding new gas. The numeric score determines a company’s grade of A to F, shown in the distribution below. A complete methodology can be found in Appendix A.



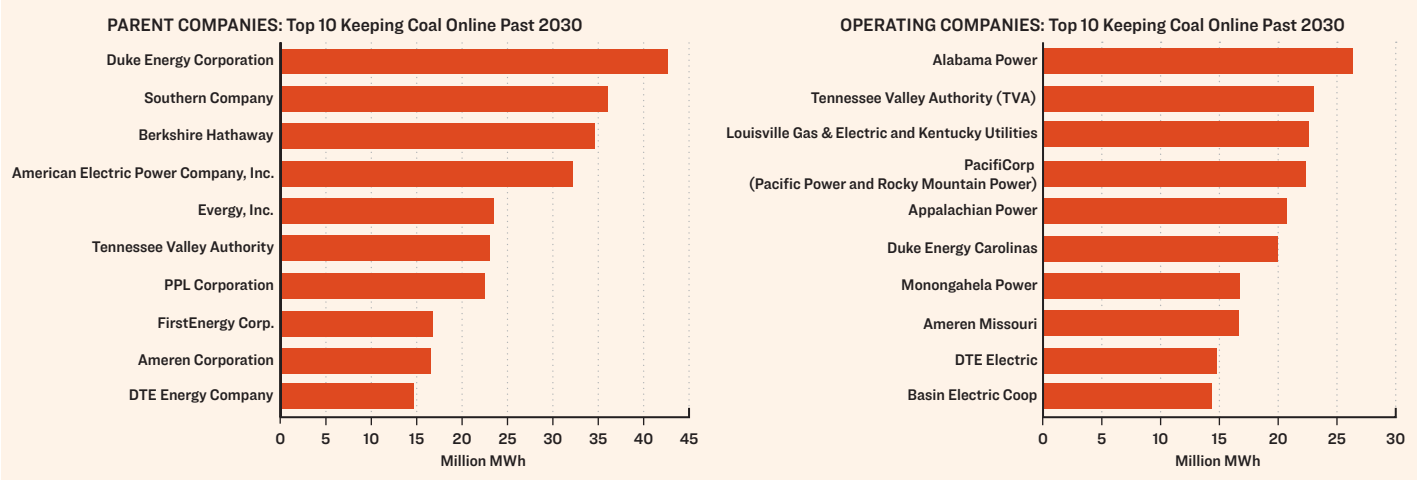
This report is forward looking. It examines the progress that still needs to be made from this point forward to be on track for 80 percent clean electricity by 2030. One way to think about this approach is like a student’s academic grade for a particular class versus their overall grade point average (GPA). Each of our reports is a snapshot of performance, like a semester-long grade. Other analyses, such as a 2020 report released by the Energy and Policy Institute, provide a historical overview, like a GPA.⁶¹ While historical action is important to get us to our goals, what matters most now is that we have plans to achieve our goals from this point forward. This report focuses on the progress utilities still need to achieve to tackle the climate crisis.

Unfortunately, utilities have made very little progress since our first report. The aggregate utility score has increased only 4 points from a 17 to a 21, which translates to a very low D.

Forty-three operating companies, about half of the sample, improved in their score by planning to retire more coal, build fewer new gas plants, and/or build more clean energy. On average, however, these companies increased their scores by only 14 points. Of the remaining companies, 27 scored worse than in the first report. The scores for the remaining seven utilities saw no change; these are all utilities that scored 0 points in the first version of the report and made no progress since. At a time when every company needs to make rapid progress for us to meet our shared goals, this is extremely disappointing.

On the whole, the utilities in this report have plans to retire barely over a quarter of their coal generation, 28 percent, by the end of 2030. Despite having a year and a half to make plans to retire dirty and polluting coal plants, this is only three percentage points higher than the anticipated 25 percent retirement of coal generation found in the first report. Ultimately, this is a far cry from the necessary commitment to retire 100 percent of coal generation by 2030.

Figure 1: The Worst Utilities Keeping Coal Online Past 2030



In total, the utilities we studied are planning to build more than 130 gigawatts (GW) of clean energy capacity through 2030. That capacity is capable of generating more than 308 million MWh of clean energy, 23 percent more than they had planned a year and a half ago, and enough to power nearly 30 million households. This increase is even more notable because some of the clean energy planned in the first report, which included plans for 2020 and 2021, has since been built. The current slate of plans propose more clean energy over a shorter time period. While this is an encouraging increase, the generation from the clean energy resources planned by these utilities are only enough to replace 24 percent of their current owned fossil fuel generation, let alone the increased load likely to come from electrification and non-fossil retirements.⁶² Utilities must continue to expand their clean energy resources if we are to meet our climate targets and stay below 1.5°C of warming.

Unfortunately, utilities are still moving in the wrong direction by planning new gas capacity. These utilities now have more gas planned to come online through 2030, 38 GW, than a year and a half ago when they had

36 GW planned. If these gas plants come online, they would emit an estimated 86 million metric tons of carbon dioxide equivalent (MMT CO₂e) each year, equivalent to the annual emissions from over 18.5 million cars — more than all the cars in Texas, Florida, and New Jersey combined.^{63, 64} After 2030, when utilities should be well along their path to emissions reductions, 12 of these companies are instead planning to lock themselves into additional emissions by building 14 GW of further gas plants. These plans for gas both before and after 2030 are completely contrary to the progress needed to expand clean energy rather than double down on fossil fuels. Building new clean energy is also a cheaper option than building new gas plants; if these gas plants are foolishly built, they are very likely to become stranded costs before the end of their intended life as the cost of building and operating clean energy becomes cheaper than simply operating these gas plants.⁶⁵ As a result, ratepayers will once again pick up the tab for utilities foolish fossil fuel investments, as has already happened with coal plants. Utilities can not continue to make poor decisions for our health and future and stick us with the bill.

Figure 2: Planned Clean Energy Vs. Existing Fossil Generation Across All Utilities Studied

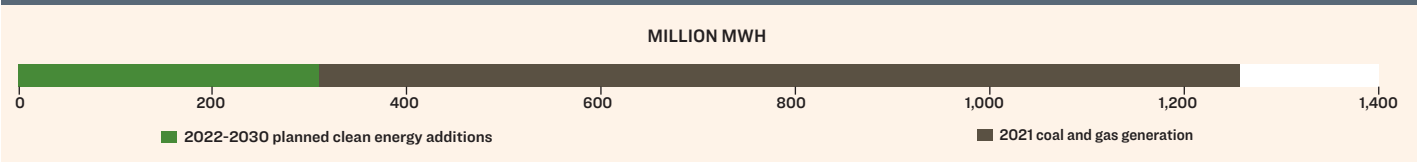
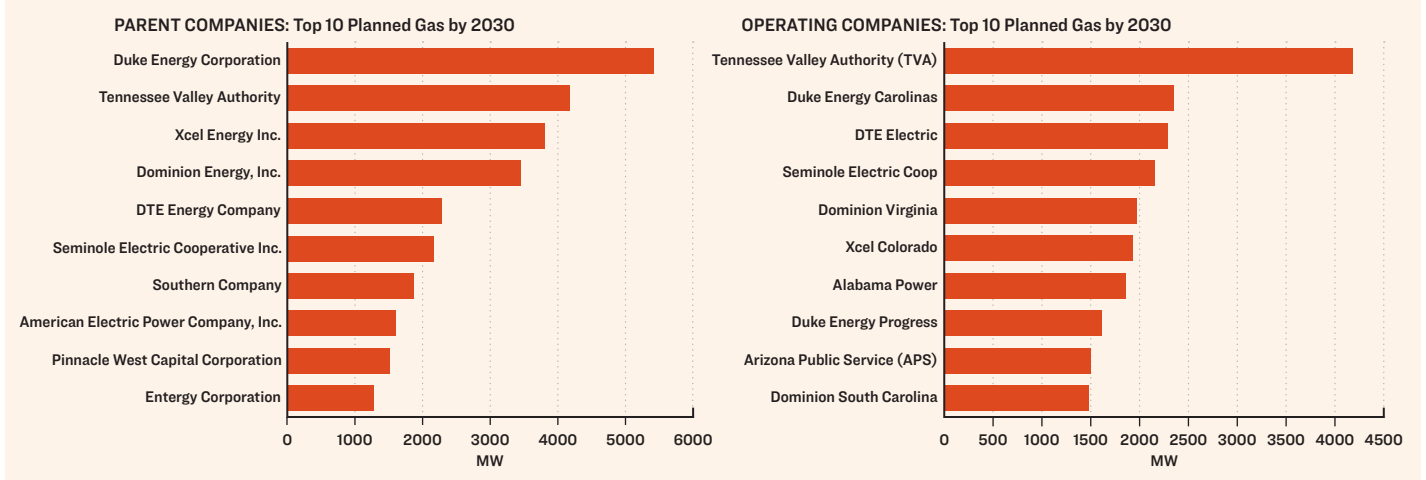


Figure 3: The Worst Utilities by Planned Gas Capacity



Still, since the release of our first report, which was based on the existing operations of these utilities in 2019 and their plans for change starting in 2020, there has been some positive progress. Over the course of 2020 and 2021, the companies in this study built more than 11 GW of clean energy and retired more than 9 GW of coal generation, eliminating pollution that was warming our planet and sickening our communities.⁶⁶ While those steps move us in the right direction, the overall results of this study show that they are far from what we need to achieve our goals.

Utilities must transition to clean energy, and it is crucial for that transition to happen in ways that reduce harm on communities that are overly burdened. Unfortunately, rural-urban and racial disparities persist in renewable energy adoption and “communities most in need of economic development and employment opportunities often see lower levels of renewable energy deployment.”⁶⁷ In retiring coal plants and building clean energy, companies must prioritize overburdened

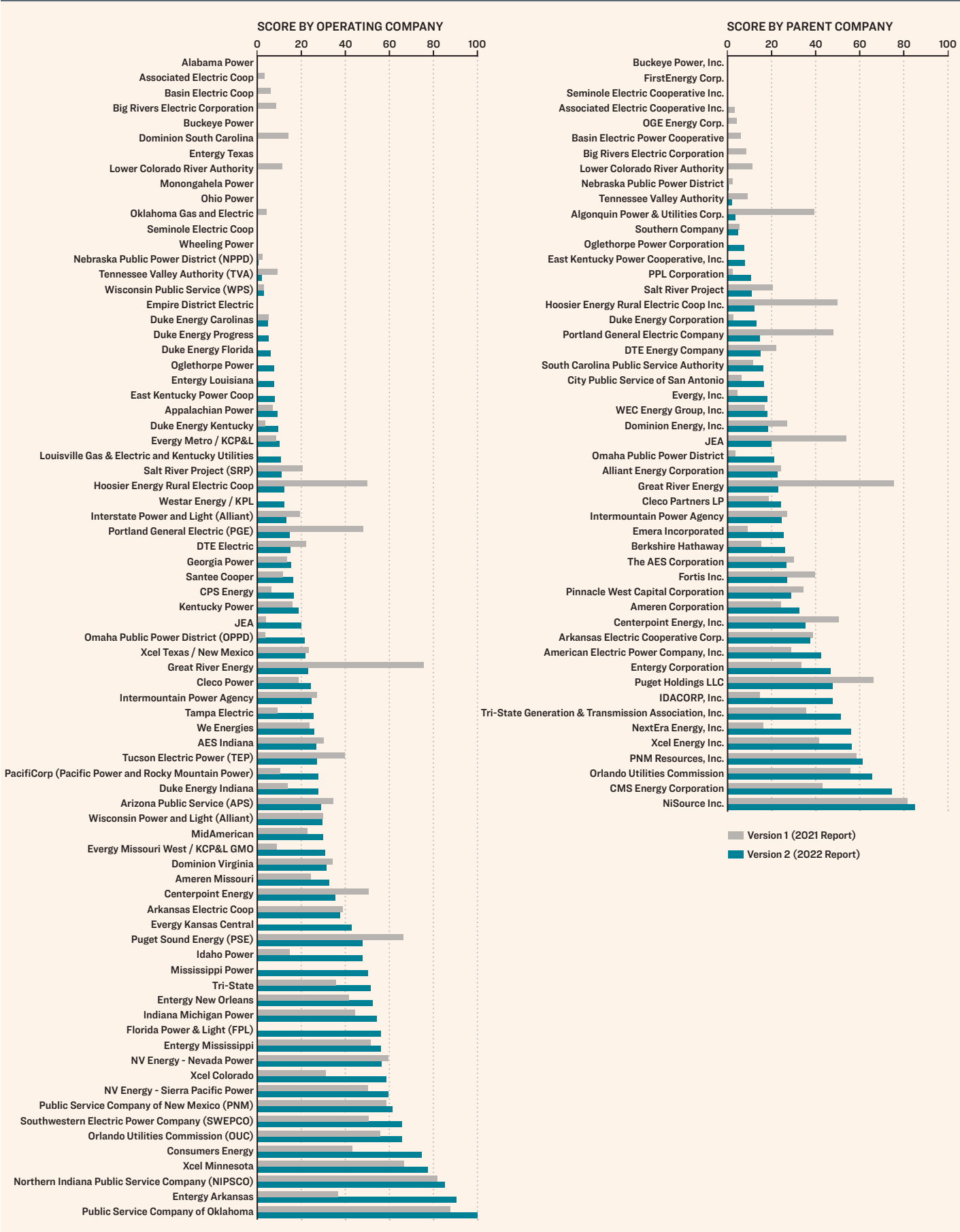
communities. Without this prioritization, transition plans miss the mark.

It is also important to note that the scores only reflect planned coal retirements, clean energy buildout, and new gas plant development. Other areas where utilities must improve are outside the scope of our analysis, such as phasing out existing gas power plants, addressing energy burden and inequitable rate structures, reducing disconnections including dangerous utility shut-offs during extreme weather events, cleaning up legacy pollution such as coal ash, providing real financial support for demand response and energy efficiency, and reducing harmful air and water pollution. The score also does not factor in attempts by utilities to obstruct customer-owned resources that support the clean energy transition, such as distributed solar and storage. Finally, many of these companies also include gas distribution subsidiaries; the efforts of those gas utility subsidiaries to obstruct the transition to clean energy are not evaluated here, but these are clearly shown in other work.⁶⁸



PHOTO: ISTOCK/ MIMADEO

Figure 4: Utility Scores by Operating Company and Parent Company



UTILITIES CONTINUE TO GREENWASH

KEY FINDINGS:

- While many electric utilities have pledged to reduce their GHG emissions, their goals fall far short of what is necessary to protect people and the planet.
- Over half of the parent companies we studied either have no climate goal or only have a goal for after 2030.
- Forty of the 50 parent companies in the study had some form of climate pledge, target, or aspirational goal. Of those 40 companies with a climate pledge of some kind, 23 had goals with milestones within this critical decade (2030 or earlier), but only 7 had goals ambitious enough to meet the scale of change we need, at least 80 percent clean energy by 2030.
- Utilities lacking climate goals are significantly underperforming, with an aggregate score of just 6 points.

	2021 Report	2022 Report
Number of parent companies with no goal	17	10
Number of parent companies with a climate goal	33	40
Number of parent companies with a climate goal for 2030 or earlier	23	23
Number of parent companies aiming for at least 80 percent emissions reduction by 2030	4	7

After the release of the first version of this report, many utilities responded by touting their clean energy or emissions reductions plans. While this is common practice — companies with climate goals like to point to the targets as evidence of their good, “clean”, or “green” practices — many of these goals appear to have no real impact on the actual behaviors of the utilities in our study. For example, while Southern Company has a climate pledge to be carbon neutral by 2050, its subsidiaries including Georgia Power, Mississippi Power, and Alabama Power have stated that this goal does not apply to their planning.⁶⁹ This is simply greenwashing while companies delay meaningful action.

In order for a utility to have a meaningful climate goal, the goal must meet the following criteria:

1. Apply to all subsidiary companies;
2. Include regular interim targets, including at least 80 percent emissions reductions by 2030, not just long-term 2050 goals; and
3. Provide regular updates and a comprehensive plan for how the target will be achieved, backed by concrete IRP commitments.

Additionally, meaningful goals should include details on how those emissions reductions will target marginalized and overburdened communities. Current climate commitments lack consideration of this crucial aspect. Companies must prioritize the retirement of polluting plants and the addition of clean energy where it will mitigate harm in historically excluded communities. Importantly, the IRA supports this goal by giving additional funding to clean energy projects built in certain low-income communities and “energy communities,” defined as those living close to a retired coal mine or plant or who were historically dependent on fossil fuel employment.⁷⁰

Of the parent companies with a climate goal of any kind, only one (NiSource, parent of Northern Indiana Public Service Company) received an A.⁷¹ The vast majority received a D (35 percent) or an F (35 percent). Without substantiated actions to reduce current emissions by retiring existing coal plants and eliminating plans to build future gas plants, rhetorical climate goals only serve to mislead customers and investors. Seven companies listed weak climate goals targeting net-zero emissions by 2050, with no intermediate targets. 2050 climate goals entirely miss what utilities can and must deliver in the

AGGREGATE SCORE OF:				
All companies	Parent companies with no goal	Parent companies with a climate goal	Parent companies with a climate goal for 2030 or earlier	Parent companies aiming for at least 80% emissions reduction by 2030
21	6	23	21	43

near term, and these companies are likely attempting to use 2050 climate goals purely for greenwashing.

Although climate goals are not leading to sufficient action, parent companies with no climate goal perform even worse. These companies have an aggregate score of just six points, and nearly all receive an F. On the other hand, parent companies with goals specifying emissions reductions of at least 80 percent by 2030 perform well above average in our analysis, with an aggregate score of 43 points. Companies that set strong, near-term goals are also taking more action to transition to clean energy, while companies that are not taking action try to hide behind general, long-term climate pledges.

Table 1, below, shows the worst greenwashers in our study. These parent companies boast aggressive emissions reduction goals, but lack action plans to achieve those goals. We define the worst greenwashers as those parent companies claiming to target emissions reductions by 2030 or earlier that get a D or an F for their actual plans. Among this group, 8 companies receive an F and 8 companies receive a D. Many also frame their climate goals as “aspirational” goals, further undermining actual commitments to meaningful change.



SOUTHERN COMPANY (Grade: F) is greenwashing — promoting their climate goals without backing it up with action.



WEC (Grade: F) boasts about their “leadership in the decarbonization effort” without an action plan that backs it up — WEC is greenwashing.

Table 1: Greenwashing's Worst Offenders		
PARENT COMPANY	GRADE	CLIMATE GOAL
Alliant Energy Corporation	D	50% CO ₂ reduction by 2030 (2005 baseline); Net-Zero by 2050 (aspirational)
Ameren Corporation	D	60% CO ₂ reduction by 2030, 85% reduction by 2040 (2005 baseline); Net-Zero by 2050
Cleco Partners LP	D	60% CO ₂ reduction by 2030; Net-Zero by 2050 (aspirational)
Duke Energy Corporation	F	50% CO ₂ reduction by 2030; Net-Zero by 2050 (aspirational)
East Kentucky Power Cooperative, Inc.	F	35% CO ₂ reduction by 2035, 70% reduction by 2050 (2010 baseline); 10% renewable by 2030, 15% renewable by 2035
Emera Incorporated (Tampa Electric)	D	55% CO ₂ reduction by 2025, 80% reduction by 2040 (2005 baseline); Net-Zero 2050
Energy, Inc.	D	70% CO ₂ reduction by 2030 (2005 baseline); Net-Zero by 2045
FirstEnergy Corp. (Monongahela Power)	F	30% CO ₂ reduction by 2030 (2019 baseline); Net-Zero by 2050
JEA	D	30% carbon neutral energy supply by 2030
OGE Energy Corp.	F	50% CO ₂ reduction by 2030 (2005 baseline)
Pinnacle West Capital Corporation (Arizona Public Service)	D	65% clean energy by 2030; 100% clean by 2050 (aspirational)
Portland General Electric Company	F	80% CO ₂ reduction by 2030 (2010 baseline); No CO ₂ emissions in customer power by 2040; Net-Zero company operations by 2040
South Carolina Public Service Authority (Santee Cooper)	F	50% CO ₂ reduction by 2030 (2005 baseline)
Southern Company	F	50% CO ₂ reduction by 2030 (2007 baseline); Net-Zero by 2050
Tennessee Valley Authority	F	70% CO ₂ reduction by 2030, 80% reduction by 2035 (2005 baseline); Net-Zero by 2050 (aspirational)
WEC Energy Group, Inc.	D	60% CO ₂ reduction by 2025; 80% reduction by 2030 (2005 baseline); Net-Zero by 2050

Utility companies should be taking immediate steps to significantly reduce carbon emissions and actively support state legislative efforts and Public Utility Commission (PUC) processes to implement binding, aggressive clean electricity targets. Sadly, the opposite is true. Despite making public commitments to address climate change, most utility companies are failing to take action to reduce their own emissions. Even worse, many utilities have worked to promote climate denial, doubt, and delay over many decades. Like oil and gas companies, utilities knew about the dangers of climate change as early as the 1960s and 1970s, but still spread disinformation. A strong correlation exists between the dirtiest utilities included in this report and those that historically delayed progress and promoted

climate denial, including Southern Company, Ameren Corporation, Duke Energy Corporation, FirstEnergy Corp., and Pinnacle West Capital Corporation (Arizona Public Service).^{72, 73}

However, unlike fossil fuel companies, electric utilities do not produce fossil fuels.⁷⁴ Clean energy, coupled with widespread electrification, offers utilities a major business opportunity. Utilities that choose to slow climate progress or greenwash the public with weak commitments are ignoring a chance for economic growth and failing in their responsibility to reduce harm on overburdened communities and maintain a livable future.

FACT CHECKING UTILITY RESPONSES

KEY FACTS:

- Past emissions reductions do not negate the need for transformational action in the next decade.
- Studies show rapidly transitioning to clean energy is affordable and reliable.
- Retiring coal and building clean energy by 2030 is not an arbitrary timeline, but is based on scientific consensus and necessity.

When our inaugural study was released in January 2021, some investor-owned utilities and the utility trade association Edison Electric Institute (EEI), primarily responded by claiming that:

1. Utilities had already achieved significant carbon emissions reductions.
2. Moving rapidly to clean energy would compromise reliability and/or affordability.
3. The 2030 timeframe of our study was arbitrary.

However, multiple studies have shown that there is much more to do to reduce emissions. It's also clear that clean energy can grow rapidly without compromising on cost or reliability — in fact, clean energy can save customers money. Furthermore, we must transition the power sector by 2030 if we are to avoid the most catastrophic effects of climate change.

1. PAST EMISSIONS REDUCTIONS DO NOT NEGATE THE NEED FOR FUTURE ACTION

Some utilities responded to our forward looking analysis by pointing to past actions or emissions reductions.⁷⁵ While we applaud past actions where they have occurred, utilities have not gone far enough, and we must look to the future for what still needs to be done. Regardless of past actions, the mandate for the next decade is clear: plan for the rest of the steps needed to achieve 80 percent clean energy in 2030. The electric sector has to move to a clean electric grid as rapidly as possible to enable us to reduce GHG pollution across the rest of the economy.

2. RAPIDLY TRANSITIONING TO CLEAN ENERGY IS AFFORDABLE AND RELIABLE

EEI claimed that our first report did not look at utility transitions “holistically” or consider affordability.⁷⁶ However, even before publication of the first report, there was already a wealth of studies showing a clean electric

grid can maintain both affordability and reliability. These studies only continue to multiply. UC Berkeley's 2030 Report modeled an 80 percent clean electric system by 2030 and found that wholesale electricity costs would be the same in 2030 as in 2020. This study was detailed in its assessment and tested the grid in every hour of multiple weather-years using the PLEXOS model.⁷⁷ A meta analysis of 11 clean energy models affirmed that achieving 80 percent clean electricity by 2030 is feasible, affordable, and does not compromise reliability.⁷⁸ In fact, replacing coal plants with renewables could save ratepayers anywhere from \$3 to \$8 billion a year.⁷⁹ Mounting research shows the falsehood of the claim that clean energy is not reliable or affordable, and the IRA will only make the transition more economically advantageous for customers and utilities alike.

3. 2030 IS NOT AN ARBITRARY TIMELINE

Some utilities suggested the 2030 timeline in the report for a coal-free electric grid was chosen arbitrarily.⁸⁰ The 2030 timeline for a coal-free electric grid is driven by climate science and economics; it is not arbitrary. An analysis of global and regional coal phase-out requirements based on the Paris Agreement and the IPCC's 1.5°C report found that developed countries must end their coal use entirely by 2030.⁸¹ This finding was recently echoed by the United Nations Secretary General António Guterres.⁸² Princeton's Net-Zero Energy America study found that across five cost-minimized energy supply pathways, “coal use is essentially eliminated completely by 2030”.⁸³ A separate study found that while carbon-neutral pathways diverge in strategy after 2035, they are consistent in emphasizing coal retirement. Coal accounted for less than one percent of total generation by 2030 in their modeling.⁸⁴ As discussed earlier in this report (see “Electric Sector Remains Critical”), a multitude of studies show the need for a clean energy transition on this timeline.

CONCLUSION

Utilities continue to drag their feet on the clean energy transition. In order to avoid the worst impacts of climate change, utilities must transition to at least 80 percent clean energy by 2030. With fewer than 10 years to go, utilities claim that they are working towards significant emissions reductions, but their actions do not support their words. These companies have not used the past year and a half to plan for this necessary transition. Every year utilities delay makes the problem worse and increases the need for even faster clean energy growth in the future. We do not have any time left to waste.

In this report, we looked at 77 companies that make up roughly 40 percent of total US power generation.⁸⁵ The aggregate score for these companies was 21 out of 100, only four points higher than the aggregate a year and a half ago. These companies' supposed climate commitments are mostly greenwashing. A large number of utilities with climate goals continue to fail to do what is necessary to reduce emissions. Of the parent companies

with climate goals, 70 percent received a D or F, while only one received an A. Despite more utilities adopting climate goals in the last year and a half, the aggregate score showed little improvement, demonstrating once again that utilities are not following up on their climate goals with sufficiently ambitious action plans. Utilities can and must be leaders in a transition to a clean energy economy that preserves a livable planet.



PHOTO: ISTOCK/YANGNA

CASE STUDY:

NextEra / Florida Power and Light Make Progress

In June 2022, NextEra Energy announced plans to get to “Real Zero™” by 2045.⁸⁶ This plan would eliminate all of the company’s carbon emissions by 2045, partly by growing the solar and energy storage capacity of their subsidiary, Florida Power and Light (FPL), to 90,000 MW and 50,000 MW, respectively.⁸⁷ Although the announcement did not include details on any additional clean energy projects beyond what was specified in FPL’s plans filed in 2022, FPL still achieved a B based on plans it made prior to this announcement.

FPL has plans to retire all of its coal by 2030, which is the key driver earning points for its score. This is a huge improvement from our last report, where FPL did not yet have plans to retire any of its coal by 2030 and earned an F.⁸⁸ Unfortunately, FPL just finished a massive gas plant in Dania Beach and is increasing generating capacity at other existing gas plants, committing to burn more fossil fuels into the future. FPL’s available clean energy plans include enough clean energy to replace only 16 percent of its existing fossil generation, making it an area for improvement for the utility. In addition, FPL is coming under increased scrutiny due to its involvement in a series of election scandals in the state, funneling millions of dollars in a complex scheme to help elect candidates friendly to the utility and thwart the development of distributed generation in Florida.⁸⁹

With NextEra’s Real Zero commitment, we hope to see FPL make good on its promises and make decisions in the best interest of its customers. In a statement, NextEra acknowledged that FPL can reach the Real Zero™ goal without increasing its customers’ bills because renewable energy is often less expensive than existing and new fossil-fueled generation.⁹⁰ An increased investment in renewables, as well as customer-sited resources like distributed solar and storage, will help reduce energy costs in the sunshine state.

NextEra’s announcement is also significant because other utilities in Florida are in various stages of their planning and can take cues from this major announcement.

1. JEA, Jacksonville’s municipal utility, has old and uneconomic coal units and is currently developing its Integrated Resource Plan (IRP) that can and should chart a course to a clean, renewable energy future for Jacksonville. JEA receives a D with plans to retire only a third of its coal by 2030 and barely any plans for clean energy replacements in that timeframe. However, JEA has not planned to build any new gas through 2030, giving them a blank canvas to use their upcoming IRP to plan for more clean energy rather than fossil fuels. Sierra Club recently released a report showing that a move away from coal to

clean energy will save customers between \$15 million and \$60 million per year, while cutting climate pollution and local air pollution emissions by more than half.⁹¹

2. Tampa Electric (TECO) has started building a massive gas power plant on the low-lying foundation of its old coal-fired power plant at Big Bend Power Station on the shores of Tampa Bay and has plans to build two additional gas power plants before 2030. Due to its plans to retire less than half its coal by 2030 and build little clean energy to replace it, TECO also receives a D. In 2021, the City of Tampa voted for 100 percent renewable energy by 2035, but they have been prevented from moving on the non-binding resolution due to state law.^{92, 93}

3. Duke Florida is lagging even further behind, without plans to retire its only coal plant by 2030. Duke is also planning to add a new gas plant before 2030 and only has plans to build enough clean energy to replace less than 15 percent of its fossil generation. Stuck in a fossil fuel rut, Duke receives an F.

4. On the other hand, Orlando Utilities Commission (OUC) receives a B, with plans to retire all of its coal-fired power plants by 2030 and plans to build enough clean energy to replace half of its fossil generation. OUC can improve by planning more clean energy, cutting plans for new gas capacity at the Stanton power plant, and making good on the board’s promise to achieve an energy efficiency goal of 1 percent of retail sales.

Table 2: Scores of Select Florida Utilities

Florida Power and Light	B (56)
JEA	D (20)
Tampa Electric	D (25)
Duke Energy Florida	F (6)
Orlando Utilities Commission	B (65)

NextEra and OUC demonstrate that in Florida, it is possible to transition to a clean energy future. The rest of the Florida utilities need to follow that example and catch up with clean energy plans of their own.

CASE STUDY:

Greenwashing from Tennessee Valley Authority

The Tennessee Valley Authority (TVA) is the nation's largest federal utility and serves seven southeastern states. TVA professes a goal for 70 percent carbon reductions by 2030 from a 2005 baseline, 80 percent reductions by 2035, and an aspiration to be net-zero by 2050.⁹⁴

TVA has fallen behind on clean, renewable energy investment, contradicting clear climate science and the Biden Administration's calls for carbon-free electricity. In our first report, TVA received a nine out of 100. Even with that terrible starting point, TVA managed to do worse over the last year and a half and received a two in this year's analysis. TVA has firm plans to retire only three percent of its remaining coal generation by 2030, even though it acknowledges that under least-cost planning assumptions all of its coal will retire by 2035.⁹⁵ It is also planning to build over four gigawatts of new gas through 2030. These new gas plant proposals also require additional fossil fuel infrastructure; new gas pipelines would need to be built across communities throughout Tennessee to feed these proposed dirty power plants. Those four gigawatts of new gas account for more than half of TVA's existing coal capacity. Even if TVA did retire some of its coal, it would be replacing it with another fossil fuel.

Replacing coal with a different fossil fuel will not achieve the emissions reduction needed — coal must be replaced by clean energy. TVA is lagging in clean energy plans by not increasing its plans for clean energy since the last report, planning enough to replace less than 20 percent of its existing coal and gas generation. Not only is clean energy the clear choice for emissions reductions, clean energy could bring far more jobs to TVA's region than new gas plants.⁹⁶ EPA and the City of Nashville have urged TVA to reconsider renewable energy instead of a 1,500 MW combined cycle gas plant to replace the Cumberland coal plant.^{97, 98} Replacing coal with clean energy would also save TVA's customers as much as \$9 billion

compared to gas replacements.⁹⁹ Those savings will be even higher with the passage of the Inflation Reduction Act, which includes clean energy tax credits and loans, and specifically names TVA as an entity that can take advantage of them.¹⁰⁰ If TVA does foolishly move forward with gas plans, those gas plants are also likely to become stranded costs well before the end of their lifetime, as clean energy is cheaper to build and run.¹⁰¹ TVA's customers would bear the costs of those stranded plants.

TVA likes to claim it is a "clean-energy leader and is committed to partnering with others to go further and faster to achieve its carbon-reduction initiatives", but the facts show this is far from the truth.¹⁰² Of any parent company in our analysis, TVA has the fifth largest coal fleet, the second highest planned gas buildout through 2030, and the eighth largest planned clean energy buildout through 2030.¹⁰³ TVA is responsible for more premature deaths from air pollution from coal plants than even the worst private power company or their parent company.¹⁰⁴ TVA executives' compensation is even in part tied to gas and coal use.¹⁰⁵

TVA could be at the forefront of the transition off fossil fuels and pioneer the clean and just energy future we desperately need. Instead, it is actively pursuing risky gas infrastructure that threatens to lock its 10 million customers into more decades of price volatility, pollution, and energy insecurity. Professing climate goals without plans to back them up is textbook greenwashing. TVA needs to ditch its gas plant and pipeline plans, commit to retire its coal, and plan to build more clean, renewable energy.

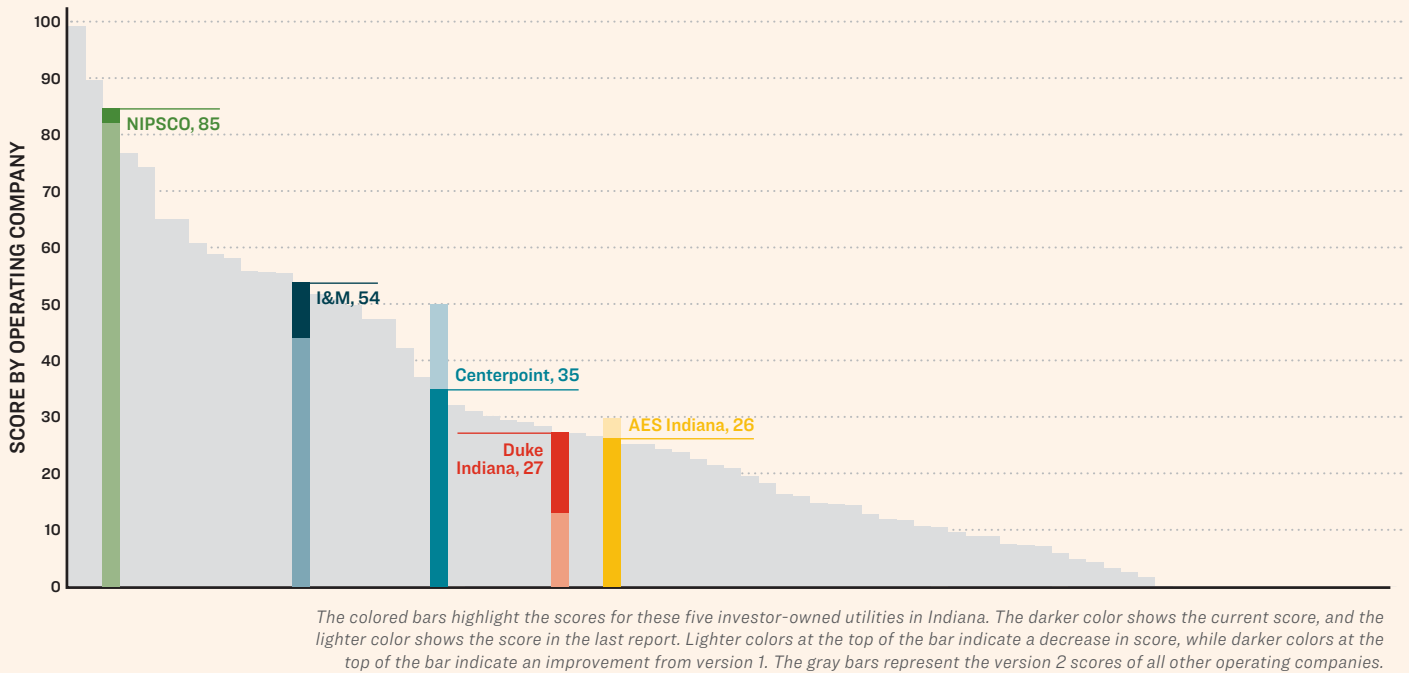
CASE STUDY: Checking in on Indiana Utilities

In our first report, we highlighted the stark contrast between the five largest utilities in Indiana, some of which are moving rapidly toward a clean energy future while others remain stuck in the fossil fuel past.

This contrast remains, and we can now also see how some of these utilities have used the past year and a half to make progress, while others have fallen even farther behind. The scores of the five Indiana utilities included in the report ranged from an 85 all the way down to a 26. Northern Indiana Public Service Company (NIPSCO), already a leader in Indiana, saw little change since the previous report. Duke Energy Indiana and Indiana Michigan Power (I&M) both improved their score, but CenterPoint Energy (formerly Vectren) and AES Indiana (formerly IPL) both regressed and are receiving lower scores. NIPSCO and I&M are earning an A and a B

respectively, with plans to retire most or all of their coal plants by 2030 and build significant amounts of clean energy. However, they are both still planning new gas additions incompatible with a clean energy future. Duke Indiana, Centerpoint, and AES Indiana score far lower, failing to retire their coal by 2030, lacking plans for the clean energy buildout necessary to replace their fossil generation, and doubling down on gas instead (see Figure 5 for the full distribution of utilities and scores). Each of these utilities needs to make further commitments to retire existing coal plants and build clean energy instead of gas.

Figure 5: Scores for Five Investor-Owned Utilities in Indiana



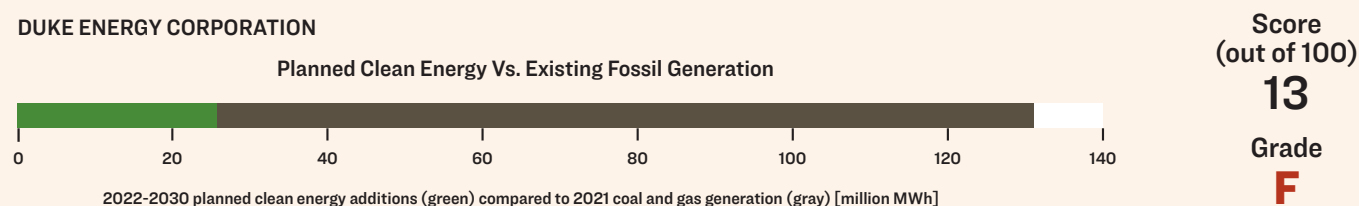
CASE STUDY: Duke Continues to Lag

Duke Energy Corporation’s non-merchant subsidiaries include five investor-owned utilities: Duke Florida, Duke Indiana, Duke Kentucky, Duke Carolinas, and Duke Progress (which also operates in the Carolinas).¹⁰⁶ Combined, these utilities received an F in the previous report and have seen little improvement since. At an operating company level, we find that with the exception of Duke Indiana, all of the operating companies — Duke Carolinas, Duke Progress, Duke Florida, and Duke Kentucky — score under 10.

The five Duke subsidiaries included in the report generated 125 million MWh of electricity from coal and gas in 2021, a minor reduction from the 131 million MWh of electricity they generated from coal and gas in 2019. The companies are planning to add 26 million MWh of clean energy between 2022 and 2030, compared to 17 million MWh of clean energy planned between 2020 and 2030 at the time of the first report. Duke has only firmly

committed to retire 18 percent of its coal generation by 2030 and intends to build over 5,400 MW of new gas by 2030. Unfortunately, Duke has remained committed to coal generation and this gas buildout since our last report, instead of shifting its focus in a meaningful way to a much larger clean energy buildout.

Figure 6: Duke Energy Score and Coal, Gas, and Clean Energy Metrics



Company coal and gas metrics		Company clean energy metrics	
2021 Coal generation (million MWh)	52	2022-2030 planned clean energy additions (million MWh)	26
2021 Gas generation (million MWh)	73	Solar capacity planned (MW)	10,604
2021 Coal and Gas capacity (MW)	41,270	Wind capacity planned (MW)	1,080
Coal committed to retire by 2030 (million MWh)	9	Residential efficiency	1.2%
Coal not committed to retire by 2030 (million MWh)	43	Commercial efficiency	0.7%
Percentage of coal committed to retire by 2030 (%)	18%	Industrial efficiency	0.0%
Planned new gas capacity by 2030 (MW)	5,414	TOTAL EFFICIENCY	0.8%

While Duke’s 5,400 MW of new gas by 2030 is a significant drop from its plans in the last report for 7,800 MW of new gas by 2030, Duke is still the parent company with the most planned gas of any in the country. Nearly 75 percent of Duke’s planned gas currently sits within its Carolinas and Progress subsidiaries, which both operate in North and South Carolina. If all of Duke’s planned gas plants are built and operate similarly to how gas plants in these states have historically operated, they would generate an estimated 24 million MWh each year.¹⁰⁷ This new gas capacity could generate nearly as much power as half of Duke’s existing coal fleet and

emit an estimated 19 million metric tons of carbon dioxide equivalent each year, equivalent to the annual emissions from over 4 million cars — more than all the cars in North Carolina.^{108, 109} Beyond 2030, Duke plans to build an additional 1,700 MW of gas capacity. In other words, Duke is planning for an energy future centered on gas — not clean energy. If Duke committed to retire all of its existing coal by 2030 and stopped all plans to build new gas, its score would improve to a B (60). To score 100, Duke would need to make plans to build nearly five times as much clean energy as it is currently planning in order to replace its fossil generation.

CASE STUDY: Duke Continues to Lag, cont.

A recent study from Synapse Energy Economics found that the least-cost pathway for Duke Energy Carolinas and Duke Energy Progress to meet North Carolina’s emissions goals would be to add no new gas through 2030.¹¹⁰ Yet, Duke Carolinas and Duke Progress have

proposed a more costly plan that includes adding nearly 4,000 MW of new gas capacity in that timeframe, saddling ratepayers with higher bills and opening them up further to volatile gas prices.¹¹¹

Table 3: Detailed Scoring for Duke’s Five Operating Companies Included in the Study

	Duke Energy Carolinas	Duke Energy Florida	Duke Energy Indiana	Duke Energy Kentucky	Duke Energy Progress
Utility Score	4.3	5.9	27.4	9	4.9
2021 coal generation (million MWh)	20.8	5.0	16.9	2.5	6.8
2021 gas generation (million MWh)	14.6	34.3	2.3	0.1	22
2021 coal and gas capacity (MW)	12,803.5	10,308.7	7,374.3	1,343.8	9439.4
Coal committed to retire by 2030 (million MWh)	0.9	0	8.5	0	0
Coal not committed to retire by 2030 (million MWh)	19.9	5.0	8.3	2.5	6.8
Percentage of coal committed to retire by 2030 (%)	4%	0%	51%	0%	0%
Planned new gas capacity by 2030 (MW)	2,345	233	1,221	0	1,615
2022-2030 planned clean energy additions (million MWh)	8.0	5.5	4.0	0.5	7.8
Solar capacity planned (MW)	3,029.9	2,846.2	1,725	90	2,912.6
Wind capacity planned (MW)	440	0	100	100	440

Given its weak coal-retirement commitments and its supersized planned gas buildout over this next decade, Duke’s plans remain entirely incompatible with limiting warming to 1.5°C. While Duke is planning to build some solar capacity, the size and pace of its commitment is inadequate, especially for a company with its resources. Unfortunately, Duke continues to rely on unproven technologies in its planning, including new nuclear technologies and zero-carbon hydrogen, harkening back to the made-up “zero-emitting load-following resources” or “ZELFRs” from Duke’s 2020 Climate Report.^{112, 113} Duke plans to continue to operate a fossil-heavy grid while waiting for unproven technology. In 2020, we knew we did not need to wait on “ZELFRs,” and our evidence has only gotten stronger that Duke can reduce emissions with

the technologies already available; there is no reason for Duke to wait to stop emitting greenhouse gas pollution until new and unproven technologies come into existence.

Duke is aiming for only a 50 percent carbon reduction by 2030 (from 2005 levels) and net-zero emissions 30 years in the future. This decade is the one that really matters if we are to have any hope of avoiding the most damaging climate change scenarios. Duke must increase its climate commitment and set a goal of at least 80 percent emissions reductions by 2030. More importantly, Duke must back this goal up by releasing plans to retire all of its remaining coal plants by 2030, canceling new gas plants, and building out wind and solar resources to take the place of these dirty fossil fuels.

APPENDIX A: METHODS UPDATE

We analyzed investor-owned utilities, public power utilities (such as Tennessee Valley Authority), generation and transmission cooperatives, and large municipal utilities. These utilities all seek some form of rate recovery for their generation resources. They are all responsible for the resource adequacy of their generation supply, which means that when they plan retirements of coal and gas plants, they are responsible for building or sourcing replacement energy and capacity to comply with their resource adequacy requirements. We did not study any purely merchant generating companies.

We limited our study to the top 50 parent companies as ranked by remaining coal and gas under ownership. As of 2021, these companies accounted for roughly 50 percent of all remaining coal and gas generation in the country.¹¹⁴ ¹¹⁵ These 50 parent companies have 77 operating companies and 93 unique owners, as listed in Appendix C. Some parent companies had only one relevant non-merchant operating company, whereas others had multiple operating companies (for example, American Electric Power had seven operating companies). We only looked at coal and gas plants under direct ownership by these utilities and did not study power purchase agreements with coal and gas plants or other wholesale contracts or purchases of unspecified power. Using S&P Global Market Intelligence’s database, we aggregated coal and gas generation by owner, operating company, and parent company for the calendar year 2021.¹¹⁶ The Coal Creek and Merom coal plants were included in the sample as operating plants without a retirement date prior to the end of 2030 because the previous owners sold these plants, despite having announced retirement plans prior to the sale, and the new owners have not announced plans to shutter these plants prior to 2030. Going back on retirement commitments by selling coal plants that will then continue running does not count as a retirement.

To quantify clean energy plans, we tracked integrated resource plans for those utilities that file them publicly as well as corporate announcements of clean energy projects. We included planned renewables regardless of whether the utility plans to build the project itself or buy renewable energy via a power purchase agreement. We aggregated the amount of wind and solar capacity planned by each utility in 2022 through 2030. To convert capacity into generation, we used a set of state-specific capacity factors for onshore wind, offshore wind, utility solar, and distributed solar from sources including the Energy Information Administration (EIA) and National Renewable Energy Laboratory. We assumed that a utility operating in a given state would build its projects in that state unless otherwise specified. This may not be the case in the end, but generally technology-specific capacity factors do not vary greatly between neighboring states.

Planned gas data included any new gas capacity that had been proposed by a utility in an IRP or other publicly available source. Planned gas included new gas capacity in any stage before operation (i.e., included under construction). This also included coal-to-gas conversions where planned, but does not include capacity increases at existing gas plants where a new turbine is not being added.

The overall utility score was calculated using the following equation:

$$\text{Score} = \frac{\frac{\text{Clean planned [MWh] (2022-2030)}}{\text{Existing coal + gas [MWh] (2021)}} + \frac{\text{Coal committed to retire by 2030 [MWh]}}{\text{Existing coal [MWh] (2021)}} - \frac{\text{Planned gas by 2030 [MW]}}{\text{Existing coal + gas [MW] (2021)}}}{2} * 100$$

All data is up to date as of July 1, 2022.

Points are earned by retiring coal and building clean energy through 2030, while points are lost by building new gas in that timeframe. The scores are divided by two to keep it on a scale of 0 to 100. If a score is below 0 due to high gas penalties, then the company receives a 0. While the clean energy and coal components of the score are in terms of generation (megawatt hours), the gas component of the score is in terms of capacity (megawatts), as it is unclear how much each new gas plant would run (i.e., its capacity factor). A perfect 100 is achieved if a company commits 1)

to retiring all of its coal, 2) to not building any new gas, and 3) to building an amount of new clean energy commensurate with its existing fossil fuel generation by 2030. Finally, companies are assigned letter grades according to where their score lies on the following scale:

A ≥ 75 **50 ≤ B < 75** **35 ≤ C < 50** **17.5 ≤ D < 35** **F < 17.5**

The cutoff for a failing grade (17.5) is slightly above the aggregate score of all companies studied from the inaugural version of this report (17.2).¹¹⁷

APPENDIX B: PARENT COMPANY CLIMATE GOALS

Parent Company	Climate Goal
Algonquin Power & Utilities Corp.	Net-Zero by 2050
Alliant Energy Corporation	50% CO ₂ reduction by 2030 (2005 baseline); Net-Zero by 2050 (aspirational)
Ameren Corporation	60% CO ₂ reduction by 2030, 85% reduction by 2040 (2005 baseline); Net-Zero by 2050
American Electric Power Company, Inc.	80% CO ₂ reduction by 2030 (2000 baseline); Net-Zero by 2050
Arkansas Electric Cooperative Corp.	No goal
Associated Electric Cooperative Inc.	No goal
Basin Electric Power Cooperative	No goal
Berkshire Hathaway	Net-Zero by 2050 (aspirational)
Big Rivers Electric Corporation	No goal
Buckeye Power, Inc.	No goal
Centerpoint Energy, Inc.	Net-Zero by 2035
City Public Service of San Antonio	Carbon Neutral by 2050
Cleco Partners LP	60% CO ₂ reduction by 2030 (2011 baseline); Net-Zero by 2050 (aspirational)
CMS Energy Corporation	Net-Zero by 2040
Dominion Energy, Inc.	Net-Zero by 2050
DTE Energy Company	80% CO ₂ reduction by 2040 (2005 baseline); Net-Zero by 2050
Duke Energy Corporation	50% CO ₂ reduction by 2030 (2005 baseline); Net-Zero by 2050 (aspirational)
East Kentucky Power Cooperative, Inc.	35% CO ₂ reduction by 2035, 70% reduction by 2050 (2010 baseline); 10% renewable by 2030, 15% renewable by 2035
Emera Incorporated	55% CO ₂ reduction by 2025, 80% reduction by 2040 (2005 baseline); Net-Zero 2050
Entergy Corporation	Net-Zero by 2050
Eversource, Inc.	70% CO ₂ reduction by 2030 (2005 baseline); Net-Zero by 2045
FirstEnergy Corp.	30% CO ₂ reduction by 2030 (2019 baseline); Net-Zero by 2050
Fortis Inc.	75% CO ₂ reduction by 2035 (2019 baseline); Net-Zero by 2050
Great River Energy	80% CO ₂ reduction by 2032 (2005 baseline)
Hoosier Energy Rural Electric Coop Inc.	No goal
IDACORP, Inc.	100% clean energy for Idaho Power by 2045
Intermountain Power Agency	No goal
JEA	30% carbon neutral energy supply by 2030
Lower Colorado River Authority	No goal
Nebraska Public Power District	Net-Zero by 2050
NextEra Energy, Inc.	67% reduction in CO ₂ emissions rate by 2025 (2005 baseline), equivalent to ~40% CO ₂ reduction by 2025
NiSource Inc.	90% CO ₂ reduction by 2030, 50% methane reduction from pipelines by 2025 (2005 baseline)
OGE Energy Corp.	50% CO ₂ reduction by 2030 (2005 baseline)
Oglethorpe Power Corporation	No goal
Omaha Public Power District	Net-Zero by 2050
Orlando Utilities Commission	50% CO ₂ reduction by 2030 (2005 baseline); Net-Zero by 2050
Pinnacle West Capital Corporation	65% clean energy by 2030 (2005 baseline); 100% clean by 2050 (aspirational)
PNM Resources, Inc.	100% emissions-free generation by 2040 (voluntary); 100% zero-carbon resources by 2045 (mandatory)

APPENDIX B: PARENT COMPANY CLIMATE GOALS, cont.

Parent Company	Climate Goal
Portland General Electric Company	80% CO ₂ reduction by 2030 (2010 baseline); No CO ₂ emissions in customer power by 2040; Net-Zero company operations by 2040
PPL Corporation	70% CO ₂ reduction by 2035, 80% reduction by 2040 (2010 baseline); Net-Zero by 2050
Puget Holdings LLC	Net-Zero by 2030; 100% carbon-free electric supply for Puget Sound Energy by 2045
Salt River Project	65% reduction in CO ₂ intensity by 2035, 90% reduction by 2050 (2005 baseline)
Seminole Electric Cooperative Inc.	No goal
South Carolina Public Service Authority	50% CO ₂ reduction by 2030 (2005 baseline)
Southern Company	50% CO ₂ reduction by 2030 (2007 baseline); Net-Zero by 2050
Tennessee Valley Authority	70% CO ₂ reduction by 2030, 80% reduction by 2035 (2005 baseline); Net-Zero by 2050 (aspirational)
The AES Corporation	Net-Zero electricity production by 2040; Net-Zero company-wide by 2050
Tri-State Generation & Transmission Association, Inc.	90% CO ₂ reduction for Colorado generation by 2030, 80% CO ₂ reduction for Colorado wholesale electricity by 2030 (2005 baseline)
WEC Energy Group, Inc.	60% CO ₂ reduction by 2025, 80% reduction by 2030 (2005 baseline); Net-Zero by 2050
Xcel Energy Inc.	80% CO ₂ reduction by 2030 (2005 baseline); 100% carbon free by 2050 (electricity only)

APPENDIX C: PARENT AND OPERATING COMPANIES

The following table outlines the 50 parent companies, 77 affiliated operating companies, and 93 unique owners studied in the report. In some cases, an operating company had more than one unique owner. For example, Buckeye Power Generating LLC and Buckeye Power, Inc. are two unique owners serving one operating company. Of the 50 parent companies, 29 are investor-owned utilities; 12 are generation and transmission cooperatives; six are public power utilities; three are municipal utilities.

Parent Company	Operating Company	Owner (per S&P Global)
Algonquin Power & Utilities Corp.	Empire District Electric	Empire District Electric Company
Alliant Energy Corporation	Interstate Power and Light (Alliant)	Interstate Power and Light Company
	Wisconsin Power and Light (Alliant)	Wisconsin Power and Light Company
Ameren Corporation	Ameren Missouri	Union Electric Company
American Electric Power Company, Inc.	Appalachian Power	Appalachian Power Company
	Indiana Michigan Power	Indiana Michigan Power Company
	Kentucky Power	Kentucky Power Company
	Ohio Power	Ohio Power Company
	Public Service Company of Oklahoma	Public Service Company of Oklahoma
	Southwestern Electric Power Company (SWEPCO)	Southwestern Electric Power Company
	Wheeling Power	Wheeling Power Company
Arkansas Electric Cooperative Corp.	Arkansas Electric Coop	Arkansas Electric Cooperative Corp.
Associated Electric Cooperative Inc.	Associated Electric Coop	Associated Electric Cooperative Inc.
Basin Electric Power Cooperative	Basin Electric Coop	Basin Electric Power Cooperative

APPENDIX C: PARENT AND OPERATING COMPANIES , cont.

Parent Company	Operating Company	Owner (per S&P Global)
Berkshire Hathaway	MidAmerican	MidAmerican Energy Company
	NV Energy - Nevada Power	Nevada Power Company
	NV Energy - Sierra Pacific Power	Sierra Pacific Power Company
	PacifiCorp (Pacific Power and Rocky Mountain Power)	PacifiCorp
Big Rivers Electric Corporation	Big Rivers Electric Corporation	Big Rivers Electric Corporation
Buckeye Power, Inc.	Buckeye Power	Buckeye Power Generating LLC
		Buckeye Power, Inc.
Centerpoint Energy, Inc.	Centerpoint Energy	Southern Indiana Gas and Electric Company
City Public Service of San Antonio	CPS Energy	City Public Service of San Antonio
Cleco Partners LP	Cleco Power	Cleco Cajun LLC
		Cleco Power LLC
CMS Energy Corporation	Consumers Energy	Consumers Energy Company
Dominion Energy, Inc.	Dominion South Carolina	Dominion Energy South Carolina, Inc.
		South Carolina Generating Company, Inc.
	Dominion Virginia	Virginia Electric and Power Company
DTE Energy Company	DTE Electric	DTE Electric Company
		DTE Energy Services, Inc.
Duke Energy Corporation	Duke Energy Carolinas	Duke Energy Carolinas, LLC
	Duke Energy Florida	Duke Energy Florida, LLC
	Duke Energy Indiana	Duke Energy Indiana, LLC
	Duke Energy Kentucky	Duke Energy Kentucky, Inc.
	Duke Energy Progress	Duke Energy Progress, LLC
East Kentucky Power Cooperative, Inc.	East Kentucky Power Coop	East Kentucky Power Cooperative, Inc.
Emera Incorporated	Tampa Electric	Tampa Electric Company
Entergy Corporation	Entergy Arkansas	Entergy Arkansas, LLC
		Entergy Power, LLC
	Entergy Louisiana	Entergy Louisiana, LLC
		Entergy Power Gas Operations
	Entergy Mississippi	Entergy Mississippi, LLC
	Entergy New Orleans	Entergy New Orleans, LLC
	Entergy Texas	Entergy Texas, Inc.
Eversource Energy, Inc.	Eversource Kansas Central	Eversource Kansas Central, Inc.
		Eversource Kansas South, Inc.
	Eversource Metro / KCP&L	Eversource Metro, Inc.
	Eversource Missouri West / KCP&L GMO	Eversource Missouri West, Inc.
	Westar Energy / KPL	Westar Energy (KPL)
Westar Generating, Inc.		
FirstEnergy Corp.	Monongahela Power	Monongahela Power Company
Fortis Inc.	Tucson Electric Power (TEP)	San Carlos Resources Inc.
		Tucson Electric Power Company

APPENDIX C: PARENT AND OPERATING COMPANIES , cont.

Parent Company	Operating Company	Owner (per S&P Global)
Fortis Inc., cont.		UNS Electric, Inc.
Great River Energy	Great River Energy	Great River Energy
		Rainbow Gas Company
Hoosier Energy Rural Electric Coop Inc.	Hoosier Energy Rural Electric Coop	Hoosier Energy Rural Electric Coop Inc.
IDACORP, Inc.	Idaho Power	Idaho Power Company
Intermountain Power Agency	Intermountain Power Agency	Intermountain Power Agency
JEA	JEA	JEA
Lower Colorado River Authority	Lower Colorado River Authority	GenTex Power Corporation
		Lower Colorado River Authority
Nebraska Public Power District	Nebraska Public Power District (NPPD)	Nebraska Public Power District
NextEra Energy, Inc.	Florida Power & Light (FPL)	Florida Power & Light Company
		Gulf Power Company
NiSource Inc.	Northern Indiana Public Service Company (NIPSCO)	Northern Indiana Public Service Company
OGE Energy Corp.	Oklahoma Gas and Electric	Oklahoma Gas and Electric Company
Oglethorpe Power Corporation	Oglethorpe Power	Oglethorpe Power Corporation
Omaha Public Power District	Omaha Public Power District (OPPD)	Omaha Public Power District
Orlando Utilities Commission	Orlando Utilities Commission	Orlando Utilities Commission
Pinnacle West Capital Corporation	Arizona Public Service (APS)	Arizona Public Service Company
PNM Resources, Inc.	Public Service Company of New Mexico (PNM)	Public Service Company of New Mexico
Portland General Electric Company	Portland General Electric (PGE)	Portland General Electric Company
PPL Corporation	Louisville Gas & Electric and Kentucky Utilities	Kentucky Utilities Company
		Louisville Gas and Electric Company
Puget Holdings LLC	Puget Sound Energy (PSE)	Puget Sound Energy, Inc.
Salt River Project	Salt River Project (SRP)	Salt River Project Agricultural Improvement and Power District, Arizona
Seminole Electric Cooperative Inc.	Seminole Electric Coop	Seminole Electric Cooperative Inc.
South Carolina Public Service Authority	Santee Cooper	South Carolina Public Service Authority
Southern Company	Alabama Power	Alabama Power Company
	Georgia Power	Georgia Power Company
	Mississippi Power	Mississippi Power Company
Tennessee Valley Authority	Tennessee Valley Authority (TVA)	Tennessee Valley Authority
The AES Corporation	AES Indiana	AES Indiana
		Caisse de dépôt et placement du Québec
		The AES Corporation
Tri-State Generation & Transmission Association, Inc.	Tri-State	Tri-State Generation & Transmission Association, Inc.
WEC Energy Group, Inc.	We Energies	Wisconsin Electric Power Company
	Wisconsin Public Service (WPS)	Wisconsin Public Service Corporation
Xcel Energy Inc.	Xcel Colorado	Public Service Company of Colorado
	Xcel Minnesota	Northern States Power Company
	Xcel Texas / New Mexico	Southwestern Public Service Company

APPENDIX D: GLOSSARY

AGGREGATE SCORE: The aggregate score is calculated based on the sum of the coal, gas, and clean generation or capacity across all relevant companies, calculated using the methodology outlined in Appendix A.

CARBON DIOXIDE EQUIVALENT (CO₂e): A metric calculated by converting the global warming potential of non-carbon greenhouse gases, such as methane, to the amount of carbon dioxide that would have an equivalent warming impact over a given timeframe.

CARBON EMISSION: A greenhouse gas emitted by the combustion of fossil fuels like coal and gas among other sources.

CLEAN ENERGY (OR RENEWABLE ENERGY): Energy generated from renewable sources that do not create emissions when used to generate electricity. For the purposes of this report, only wind and solar were considered clean, renewable power generation sources.

CLIMATE PLEDGE: A commitment by a corporation or utility to some form of climate action. These typically take the form of carbon reduction targets, carbon-free energy goals, or net-zero targets. Pledges can be binding, but are typically voluntary or aspirational.

COAL RETIREMENT: The complete cessation of coal-burning operations at a coal-powered plant or generating unit. A full transition of a plant from burning coal to gas was considered to be a retirement, but sales of coal plants or units previously planned for retirement to another party (as seen at Coal Creek and Merom plants) were not.

DISTRIBUTED GENERATION: Energy generation (and/or storage) at a small, localized scale, typically residential rooftops.

ENERGY BURDEN: The proportion of income spent by a household on energy costs.

FOSSIL FUEL: Hydrocarbon based fuels which produce carbon dioxide when burned. For the purposes of this report, these included coal and gas power generation, which constitute the vast majority of fossil fuel power generation in the United States.

GENERATION AND TRANSMISSION COOPERATIVE (CO-OP): Utilities (generally in rural areas) that provide power to distribution cooperatives through their own electric generation facilities or by purchasing power on behalf of the distribution members.

GREENHOUSE GASES (GHG): Climate-warming gases such as carbon dioxide and methane released from burning fossil fuels among other sources.

GREENWASHING: Efforts by utility companies to portray themselves as environmentally friendly (or “green”) in order to improve their public image, when in reality their claims are not supported by actions to be environmentally friendly.

INTEGRATED RESOURCE PLAN (IRP): Periodic reports released by utility companies outlining their planned course of action over a prescribed planning period.

INVESTOR-OWNED UTILITIES (IOU): A privately-owned electric utility that issues stock owned by shareholders. It is rate regulated and authorized to achieve an allowed rate of return.

MUNICIPAL UTILITY (MUNI): A public utility owned and operated by the local government or municipality.

MEGAWATT (MW): Unit of measurement of electrical power.

MEGAWATT HOUR (MWH): Unit of measurement of electrical energy. Equal to one megawatt of generation over an hour. Used to calculate how much electricity a power plant generates or how much electricity a particular area consumes.

NATIONALLY DETERMINED CONTRIBUTION (NDC): A climate action plan to cut emissions and adapt to climate impacts required of each party to the Paris Agreement. For the United States, this is the climate action plan agreed to in 2021 after rejoining the 2015 Paris Climate Agreement, in the form of percentage of carbon emissions reductions relative to 2005 levels.

NET-ZERO: The mitigation of all carbon emissions through direct emissions reductions, the purchase of credits or carbon offsets, carbon capture and sequestration, or some combination of these options.

OPERATING COMPANY: The regulated utility company that owns the power plants and sells energy to customers.

OVERBURDENED COMMUNITY: Minority, low-income, tribal, or indigenous populations or geographic locations in the United States that potentially experience disproportionate environmental harms and risks. The term describes situations where multiple factors, including both environmental and socio-economic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities.¹¹⁸

PARENT COMPANY: The ultimate owner of an operating company.

PUBLIC POWER UTILITY: Community-owned, not-for-profit electric utility. These are often a division of local government.

PUBLIC UTILITY COMMISSION (PUC): Governing body that regulates the rates and services of utility companies in its jurisdiction.

RELIABILITY: The ability of the electric system to deliver electricity to consumers within accepted standards and in the amount desired.

DEMAND RESPONSE MEASURES: Energy or demand reduction strategies employed to level energy use and reduce energy load during times of high demand. Typically employed hand-in-hand with clean energy to improve grid reliability.

STRANDED COST: Costs of resources that turn out to be worth less than expected as a result of situational changes. Here this refers to a power plant for which the cost of continuing to own, operate, and maintain the plant exceeds the cost of building a new power plant able to provide equivalent services.

ENDNOTES

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- 2 The 79 operating companies in our original study are now represented by 77 operating companies due to Florida Power & Light's acquisition of Gulf Power Company and the merger of Louisville Gas & Electric and Kentucky Utilities, which had previously been represented as separate entities.
- 3 Based on S&P Market Intelligence, as of 2021 the companies in this report own approximately 1.3 billion MWh of the approximately 2.4 billion MWh of coal and gas generation in the US.
- 4 Using a 2019 baseline for operating data.
- 5 Using a 2021 baseline for operating data.
- 6 Throughout this report when we refer to "companies" or "utilities" we are referring to operating companies. Data referencing parent companies is labeled as such. See Appendix D for a glossary of terms used throughout the report.
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