







Climate Report

Data in this report is current through the end of 2024, unless otherwise specified.

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Forward-looking Statements

This material includes forward-looking statements. These statements can be identified because they include words such as "expects," "expected," "plans," "will," "outlook," "estimate," "target," "goal," "potential," "projected," "projection," "may," "believe," or other words or expressions of similar import. Similarly, statements that describe future plans or strategies, our environmental stewardship goals, transitioning our energy resources, planned resource additions, scenarios and scenario results and future emissions reductions are forward-looking statements. These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those expressed in, or implied by, the statements. Actual results could be materially affected by the following factors, among others: The ability to obtain regulatory approval for construction projects with acceptable conditions; federal and state regulatory or governmental actions, including the impact of legislation, regulatory agency orders and executive orders, and changes in public policy, including potential repeal of or modifications to the Inflation Reduction Act of 2022; the ability to complete construction of generation and energy storage projects by planned in-service dates and within the cost targets set by regulators due to cost increases of and access to materials, equipment and commodities, which could result from tariffs, duties or other assessments, inflation, labor issues or supply shortages, the ability to successfully resolve warranty issues or contract disputes and the ability to obtain adequate generator interconnection agreements to connect the new projects to the Midcontinent Independent System Operator, Inc. (MISO) in a timely manner; the ability of potential large load growth customers to timely construct new facilities, as well as the resulting higher system load demand by expected levels and timeframes; the ability to achieve the expected level of tax benefits based on tax guidelines, timely in-service dates, compliance with prevailing wage and apprenticeship requirements, project costs and the level of electricity output generated by qualifying generating facilities, and the ability to efficiently utilize the renewable generation and energy storage project tax benefits to achieve IPL's authorized rate of return and for the benefit of IPL's and WPL's customers; the ability to utilize tax credits generated to date, and those that may be generated in the future, before they expire, as well as the ability to transfer tax credits that may be generated in the future at adequate pricing; disruptions to ongoing operations and the supply of materials, services, equipment and commodities needed to continue to operate and maintain existing assets and to construct capital projects, which may result from geopolitical issues, tariffs, supplier manufacturing constraints, regulatory requirements, labor issues or transportation issues, and thus affect the ability to meet capacity requirements and result in increased capacity expense; the ability and cost to provide sufficient generation and the availability of sufficient transmission capacity for potential load growth, including significant new commercial or industrial customers, such as data centers; the future development of technologies related to electrification, and the ability to reliably store and manage electricity; changes to the MISO resource adequacy process establishing capacity planning reserve margin and capacity accreditation requirements that may impact how and when new and existing generating facilities, including Interstate Power and Light (IPL) Company's and Wisconsin Power and Light (WPL) Company's additional solar generation, may be accredited with energy capacity, and may require IPL and WPL to adjust their current resource plans, to add resources to meet the requirements of MISO's process, or procure capacity in the market; economic conditions and the impact of business or facility closures in Alliant Energy Corporation's (Alliant Energy's) service territory; continued access to the capital markets on competitive terms and rates, and the actions of credit rating agencies; inflation and higher interest rates; issues associated with environmental remediation and environmental compliance, including compliance with all current environmental and emissions laws, regulations and permits and future changes in environmental laws and regulations, including the Coal Combustion Residuals Rule, the Cross-State Air Pollution Rule and federal, state or local regulations for emissions reductions, including greenhouse gases (GHG), from new and existing fossil-fueled electric generating units under the Clean Air Act, and litigation associated with environmental requirements; increased pressure from customers, investors and other stakeholders to more rapidly reduce GHG emissions; the timely development of technologies, innovations and advancements to provide cost effective alternatives to traditional energy sources; the ability to defend against environmental claims brought by state and federal agencies, such as the U.S. Environmental Protection Agency and state natural resources agencies, or third parties, such as the Sierra Club, and the impact on operating expenses of defending and resolving such claims; the direct or indirect effects resulting from breakdown or failure of equipment in the operation of electric and gas distribution systems, such as mechanical problems, disruptions in telecommunications, technological problems, and explosions or fires, and compliance with electric and gas transmission and distribution safety regulations, including regulations promulgated by the Pipeline and Hazardous Materials Safety Administration; issues related to the availability and operations of electric generating units, including start-up risks, breakdown or failure of equipment, availability of warranty coverage and successful resolution of warranty issues or contract disputes for equipment breakdowns or failures, performance below expected or contracted levels of output or efficiency, operator error, employee safety, transmission constraints, compliance with mandatory reliability standards; impacts that excessive heat, excessive cold, storms, wildfires or natural disasters may have on operations or construction activities; changes in technology that alter the channels through which customers buy or utilize Alliant Energy's products and services; current or future litigation, regulatory investigations, proceedings or inquiries; reputational damage from negative publicity, protests, fines, penalties and other negative consequences resulting in regulatory and/or legal actions; employee workforce factors, including the ability to hire and retain employees with specialized skills, impacts from employee retirements, changes in key executives, ability to create desired corporate culture, collective bargaining agreements and negotiations, work stoppages or

restructurings; changes to the creditworthiness of, or performance of obligations by, counterparties with which Alliant Energy has contractual arrangements, including large load growth customers, participants in the energy markets and fuel suppliers and transporters; the direct or indirect effects resulting from pandemics; and other risk factors discussed in Alliant Energy's most recent Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (SEC), including the section therein titled "Risk Factors," and its other filings with the SEC. All statements included herein are made as of the publication date hereof and Alliant Energy undertakes no obligation to update publicly such statements to reflect subsequent events or circumstances.

This report identifies certain climate-related issues that are of interest for a variety of reasons to various stakeholders including employees, customers, communities, government/agency officials, investors, suppliers, consultants, business partners, environmental groups and other nonprofit organizations and the media. The issues discussed in this report are not necessarily material for financial reporting or strategic planning purposes. Performance data in this report is as of year-end 2024, unless otherwise specified. Information provided reflects results of operations based on available resource records, data collection processes, monitoring and technology systems at the time of publication. Methodologies for reporting data may be updated and previously reported data may be adjusted to reflect improvement in availability and quality of data, changing assumptions, changes in the nature and scope of our operations and other changes in circumstances. Due to rounding, some numerical totals may not correspond with the sum of the separate figures. Information provided in this document supersedes values previously published in Alliant Energy's Climate Report. Alliant Energy undertakes no obligation to update information related to performance, goals, or other topics published in this report to reflect subsequent events, obligations or other changes. Website links to related documents within the text of this report are ancillary and not intended to be an incorporation by reference.

Executive Summary

Alliant Energy recognizes our stakeholders' interest in understanding our company's approach and initiatives related to addressing climate change. In response, we have prepared the following Climate Report to provide an update on our progress to manage and reduce greenhouse gas emissions. We will continue to assess our company's approach and role in supporting the transition to a low-carbon economy through our broader strategy.

Addressing climate change impacts and reducing greenhouse gas emissions is considered in our strategic plans to provide affordable, safe, reliable and sustainable energy to the customers and communities that we have the privilege to serve. We share information on our strategic plans in Alliant Energy's <u>Annual Report to Shareowners</u> and in our annual <u>Form 10-K report</u> and updates filed with the U.S. Securities and Exchange Commission.

Alliant Energy has elected to organize our Climate Report based on the <u>Task Force on Climate-related</u> <u>Financial Disclosures (TCFD) framework</u>. This report also shares outcomes from a 2022 study completed by the <u>Electric Power Research Institute</u> (EPRI) that included transition scenario analysis and a review of physical climate risk. The EPRI study results support the conclusion that Alliant Energy's strategies and goals are consistent with the objectives of the Paris Agreement under the United Nations Framework Convention on Climate Change (Paris Agreement).

Moving forward, Alliant Energy is participating in the EPRI <u>SMARTargets™</u> project to advance technical methodologies that evaluate greenhouse gas reduction targets grounded in relevant climate science and aligned with the global goals of limiting temperature rise to well below 2 degrees Celsius (°C), and pursuing efforts to limit below to 1.5°C, as stated in the Paris Agreement.

Alliant Energy also shares information through our <u>Corporate Responsibility Report</u> website. As sustainability reporting practices continue to evolve, we will provide future updates to our Climate Report and Corporate Responsibility Report, considering both voluntary frameworks and mandatory disclosure requirements.

Introduction

Who we are

Alliant Energy Corporation (NASDAQ: LNT) is a Midwest U.S. energy company headquartered in Madison, Wisconsin, with annual operating revenues of approximately \$4 billion. Our company is primarily engaged in electric generation and the distribution of electricity and natural gas. We serve approximately 1,000,000 electric and 430,000 natural gas customers through our two public utility subsidiaries, Interstate Power and Light Company (IPL) and Wisconsin Power and Light Company (WPL). IPL provides retail electric and gas service in Iowa, and sells electricity to wholesale customers in Minnesota, Illinois and Iowa. WPL provides retail and wholesale electric and retail gas service in Wisconsin.

Alliant Energy's mission is to deliver affordable energy solutions and exceptional service that its customers and the communities it serves count on - affordably, safely, reliably, and sustainably. This mission aligns with our purpose - to serve customers and build stronger communities - which guides us through the ever-changing dynamics of the economy and the energy industry. We take our responsibility as a corporate citizen seriously and remain a careful steward of the environment and support the communities in our service territory. Our mission and purpose are supported by a strategy focused on meeting evolving customer expectations, providing an attractive return for investors, and advancing emerging technologies with safe, secure energy production.

Our values

Six values shape everything we do. To live our Values, all of our employees are trained on and expected to adhere to our company's Code of Conduct.

Our Values



Do the right thing.

We keep our promises and conduct our business openly and honestly.



Care for others.

Together we create a workplace where people feel like they belong and can use their unique backgrounds, talents and perspectives to their fullest potential.



Make things better.

We partner with our customers and communities to solve problems, create opportunities and help make life better.



Act for tomorrow.

We use resources wisely, care for the environment and continuously improve ourselves and our company.



Think beyond. Be bold.

We create and embrace change, innovate beyond current practices and use our curiosity to find new solutions.

Our environmental stewardship goals

Alliant Energy's strategic priorities include making significant customer-focused investments toward more reliable, resilient, and sustainable customer energy solutions. These priorities are reflected in our business plans and voluntary environmental stewardship goals.



By establishing goals, our company can measure performance and track progress in managing greenhouse gas emissions reductions. To effectively meet the growing energy needs and evolving customer preferences in the communities we serve, maintaining flexibility to adapt our voluntary goals is essential. We periodically review and update our environmental stewardship goals to reflect these changes, along with other factors that influence our company's dynamic role in advancing the transition to a low-carbon economy.

Addressing climate change is a complex global issue and considerable uncertainties remain in evaluating the future pathway to net-zero carbon emissions. We are participating in the EPRI <u>SMARTargets</u>[™] initiative. This project is developing a publicly reviewed science-based methodology to assess and verify the alignment of corporate greenhouse gas reduction goals with the objectives of the Paris Agreement under the United Nations Framework Convention on Climate Change.

This multi-stakeholder project is developing a science-based methodology that considers the unique opportunities and characteristics of individual companies that are essential for a viable and successful energy transition. Importantly, it will recognize the broader role and potential trade-offs that electric utilities will need to address in setting goals to support the broader decarbonization of other market sectors. In addition, it will take into account the diverse conditions and differences in regional decarbonization opportunities^{i,ii}. The insights gained will inform future efforts to review greenhouse gas emissions reduction goals and conduct technical analysis relative to modeled global temperature

scenarios limiting temperature rise to well below 2 degrees Celsius (°C), and pursuing efforts to limit below to 1.5°C, as stated in the Paris Agreement.

Net-zero carbon outlook

Alliant Energy aspires to achieve net-zero greenhouse gas emissions from our utility operations by 2050. There are many perspectives on the impacts of climate change and the best path to decarbonization of the energy system. Our <u>Energy Blueprint</u> is shaped by broader shifts in the energy sector that affect our purpose-driven strategy. Our energy transition plans may be adjusted to serve our customers as we strive toward our aspirational goal. As we make progress to advance our plans, our company will consider future uncertainties and potential opportunities including:

- Public policies and support by our regulators and other stakeholders
- Enhancing energy efficiency through monitoring, automation, and optimization
- Effective two-way flow of energy using decentralized and distributed energy resources
- Broad adoption of electric end-use technologies, including transportation
- Increased use of renewable energy and energy storage systems
- Leveraging integrated grid energy solutions to improve infrastructure resiliency
- Commercialization of emerging low-carbon and carbon-free energy resource technology

Our greenhouse gas reduction goals are based on science and align with the climate objectives to limit temperature rise under the Paris Agreement. We will continue to seek solutions to the challenges ahead to achieve net-zero global carbon. To continue progress, our environmental stewardship goals will be flexible to reflect changes in our strategy and our company's dynamic role in supporting the transition to a low-carbon economy.

At Alliant Energy, our customers are at the heart of everything we do. Building stronger communities is what drives and inspires our optimism for the future. How we deliver on our Purpose reflects our broader responsibility to our customers, employees and shareowners. As we move forward, we will maintain sight of the fact that the energy we generate must remain affordable, safe, reliable and sustainable.

Task Force on Climate-Related Financial Disclosures Summary

The Task Force on Climate-Related Financial Disclosures (TCFD) was established in 2015 by the Financial Stability Board to develop voluntary, consistent climate-related disclosures for use by companies. The table below summarizes our company's energy and climate-related actions based on the <u>TCFD</u> <u>framework</u>: **Governance, Strategy, Risk Management, Metrics and Targets**ⁱⁱⁱ. We share information on our strategic plans in Alliant Energy's <u>Annual Report to Shareowners</u> and in our annual <u>Form 10-K</u> <u>report</u> and updates filed with the U.S. Securities and Exchange Commission.

Core Elements of Recommended Climate-Related Financial Disclosures



Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Key takeaways in response to TCFD recommendations

Governance – Describe the Board's oversight of climate-related risks and opportunities.

- Oversight of climate-related matters is provided by appropriate Board of Directors (BOD) committees (Figure 1).
- Governance systems are in-place to anticipate, plan for and manage climate-related risks and opportunities as part of our broader company strategy. Oversight of the company strategy is provided by the BOD.
- The Nominating and Governance Committee is responsible for general oversight of corporate responsibility and sustainability issues; reviews and approves the issuance of the Corporate Responsibility Report; and works with other BOD Committees to provide oversight of various sustainability issues, including climate change matters.
- The Operations Committee is responsible for reviewing climate change risks and greenhouse gas emissions including voluntary environmental stewardship goals and progress toward goal achievement.
- The Compensation and Personnel Committee reviews adoption of environmental-related goals as part of the company's incentive compensation plans.

 Alliant Energy's President and Chief Executive Officer (CEO), along with other company executives, have overarching responsibility for company strategy, compliance, and operations – including climate change and carbon emissions – and provide regular updates to the BOD and its Committees.

Governance – Describe management's role in assessing and managing climate-related risks and opportunities.

- Alliant Energy's President and CEO is responsible for the advancement of the company's purposedriven strategy.
- The executive leadership team and management are responsible for updating and implementing the company strategy that considers climate change and carbon emissions.
- Executive leadership and management discuss with the BOD how our strategic plan addresses the risks and opportunities related to climate change. Our voluntary environmental stewardship goals are based on the successful execution of our strategic plan.
- Alliant Energy's incentive compensation plans include operational targets that reflect our company's Purpose and Values.
- To drive leadership accountability, these performance targets are applicable company-wide, including executive leadership, directors, managers, supervisors and all non-bargaining company employees.
- The incentive compensation plans emphasize our commitment to clean energy. Additional details are reported in our annual <u>Proxy Statement</u>.

Strategy – Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long-term.

- The energy industry is undergoing a rapid dynamic evolution driven by many factors including
 renewable energy integration, technological advancements, and changing consumer behavior.
 Affordable energy services are essential to the health and welfare of the customers and
 communities in our service territory. We also recognize the role our company plays to help shape
 an energy transition to a low-carbon economy.
- Our <u>Energy Blueprint</u> focuses on powering homes and businesses today while remaining mindful of energy needs for future generations. We are responsibly powering growth to meet increasing energy demand by modernizing our infrastructure and advancing a balanced resource portfolio. Our Energy Blueprint is strategically paced and incorporates flexibility to adjust to changing

conditions over the short, medium and long-term while keeping our focus on affordability, safety, reliability, and sustainability. As we update our strategy, we have processes in-place to help identify risks due to uncertainties and look for opportunities to proactively address challenges in our business plans.

- Alliant Energy's Strategy and business plans consider climate change as one of several factors driving transformation of the energy industry. As an electric utility company, we must also consider additional factors as part of our strategic and business planning, including but not limited to:
 - Customer options and affordability
 - Legislation and regulatory policy
 - Technology advancement
 - Asset retirements
 - Infrastructure replacement
 - Energy market requirements
 - Electrification expansion
 - Evolving load growth
 - Economic development
- We continue to make significant progress in reducing our carbon footprint. In 2024, approximately 47% of our generation capacity (Figure 2) and 36% of our overall energy mix was provided by renewables (Figure 3).
- We have been a leader in transitioning to low-carbon generation by:
 - Retiring almost 1.5 gigawatts (GW) of coal generation
 - Placing in service 1.5 GW of solar generation
 - Placing in service 1.8 GW of wind generation
 - Fortifying our hydroelectric generation facilities
- We meet and exceed our state renewable portfolio standards (RPS) by implementing our <u>Energy</u>
 <u>Blueprint</u> plans in Iowa and Wisconsin. In 2024, the annual average portfolio of renewable
 resources delivered to retail electric customers by Alliant Energy's regulated utilities was 50% for
 IPL and 36% for WPL.
- Our energy efficiency portfolio includes programs targeted at reducing total energy usage as well as managing peak periods by reducing or shifting energy use through demand response. These are implemented through IPL's Energy Efficiency Plan in Iowa and WPL's participation in the state-managed Focus on Energy (FoE) program in Wisconsin. In 2024, the lifetime electric savings and natural gas energy savings were approximately 2.75 million megawatt-hours and 54 million therms, respectively.

- We support renewable growth in our service territory by enabling non-utility owned renewable energy resources to connect to our electric distribution systems. This includes interconnecting customer-owned distributed renewables (Figure 4) and Independent Power Producers to the extent required by law under the Public Utility Regulatory Policies Act (PURPA) (Figure 5).
- We offer various voluntary renewable energy options and green tariffs for our customers to help support their renewable energy and sustainability goals. During 2024, these programs included: <u>Second Nature®</u>, <u>Customer-Hosted Renewables®</u>, <u>Community Solar®</u>, and <u>Renewable Energy</u> <u>Partner®</u>.
- We support electrification initiatives as an opportunity to enable broader, economy-wide carbon reductions including encouraging business adoption of various <u>electrification</u> options such as electric forklifts, electric truck refrigeration units and electric cars and trucks. We also support residential adoption by sponsoring educational events.

Strategy – Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

- Alliant Energy's mission and purpose are supported by a strategy focused on meeting evolving customer expectations affordably, providing an attractive return for investors, and advancing emerging technologies with safe, secure energy production. Our strategy drives our financial planning and considers many factors affecting transformation of the energy industry as we transition our generation portfolio and upgrade our electric and gas distribution systems.
- Our electric utility subsidiaries, IPL and WPL, are market participants in the Midcontinent
 Independent System Operator, Inc. (MISO) Regional Transmission Organization. By participating in
 MISO's wholesale electricity markets, we provide customers in our service territory with reliable
 and affordable power. Through technical analysis, MISO establishes requirements for long-term
 efficiency and reliability of the electrical system. Adequate generation supply, including a reserve
 margin, is a key component to planning a reliable electric network, and we are obligated to satisfy
 those supply requirements. The timing of our plans to retire generation assets as well as construct
 newer energy resources is also subject to careful review and approval by our regulators including
 the lowa Utilities Commission (IUC) and Public Service Commission of Wisconsin (PSCW).
- Our company's approach to assessing strategic initiatives for our low-carbon transition is supported by an integrated resource planning process. Integrated resource planning is a technical process that uses energy system modeling to examine the potential impacts of different operational decisions. The models assess the performance of various energy resource alternatives over a planning horizon that typically covers 20 years.
 - The planning process includes evaluation of how energy and capacity needs balance with supply. This evaluation includes using a year-by-year load forecast of both the energy

required at the time of maximum consumption and the total amount of energy consumed over time. We utilize economic projections for model inputs including fuel prices, capacity prices, and consider potential environmental policies or regulations that could affect carbon emissions by applying various sensitivities. Energy supply options are then modeled using expected performance characteristics, operating costs and capital costs.

- We use energy-market modeling to consider forecasts over both the short and medium term. Regional energy resource characteristics and transmission-constraints are factored into simulations that assess economic dispatch of electric generation into the energy markets. This supports portfolio optimization and risk analyses across planning alternatives.
- Ultimately, the results from the integrated resource planning process are further assessed by considering our strategy and non-quantifiable risks that cannot be adequately considered in a resource planning computer model. This guides our decisions on the best future energy resources to meet our customers' electricity needs. Using this process supports Alliant Energy's focus on managing energy costs for customers, meeting reliability requirements and preparing our company for a low-carbon future.
- Our capital expenditures forecast is updated in our U.S. Securities and Exchange Commission
 <u>Form 10-K</u> and 10-Q filings (<u>Figure 6</u>). We have also issued \$2.6 billion in <u>green bonds</u> to finance
 several environmentally beneficial projects.
 - Over the next six years, Alliant Energy currently plans to develop and/or acquire new generation investments to add flexibility with evolving load growth, including approximately 1,500 megawatts (MW) of new natural gas resources, approximately 1,200 MW of new wind generation, approximately 800 MW of new energy storage, refurbishments at approximately 500 MW of existing wind farms, improvements of approximately 280 MW at existing natural gas-fired electric generating units (EGUs), and the conversion of existing coal-fired EGUs to natural gas.
 - Alliant Energy is currently evaluating the impact of potential additional large load growth customers and MISO's seasonal resource adequacy requirements on its resource plans and will update these generation investment plans as needed in the future.
- As a regulated utility company, key components of our revenue requirement are the authorized rate of return on equity and rate base. Rate base consists of the value of assets used to provide service.
 - At year-end 2024, 32% of Alliant Energy's rate base was renewable generation and energy storage — almost twice our combined coal and gas generation rate-base of 18% (Figure 7).
 - Alliant Energy's coal rate base continues to decline as these electric generation facilities are retired or converted to natural gas and at year-end 2024 this was 8%. The corresponding calculated 2024 coal revenue was 7.9% excluding depreciation and amortization (Figure 8).

Alliant Energy's natural gas rate base at year-end 2024 was 10%. The corresponding calculated 2024 natural gas revenue was 11.3% (<u>Figure 9</u>).

Strategy – Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

- Alliant Energy hired EPRI to assess our strategy in 2022 to consider how it aligns with the carbon reductions and climate goals relative to the international Paris Agreement. The Paris Agreement's central aim is to substantially reduce greenhouse gas emissions to limit global temperature rise and lessen the effects of anthropogenic (human-induced) climate change.
- EPRI is an independent, nonprofit, scientific research organization with a public benefit mandate¹.
 In addition to expertise in energy systems and climate analyses, EPRI staff contribute as lead authors for the <u>Intergovernmental Panel on Climate Change</u> reports assessing the state of knowledge of climate change.
- EPRI's completed study provided a long-term perspective on the possible effects of climate change on Alliant Energy's regulated electric utility operations, IPL and WPL. The study objective was to assess the potential impacts of low-carbon transition on Alliant Energy's voluntary environmental stewardship goals. The EPRI study² modeled carbon dioxide (CO₂) emissions, which are the primary source of greenhouse gases from Alliant Energy's utility subsidiaries. In addition, the study considered the physical aspects of changing climate in Alliant Energy's service territory and potential adaptation responses.
- The key outcomes from the EPRI study are summarized below:
 - Alliant Energy's voluntary CO₂ emission reduction goals are consistent with the Paris Agreement's objective to limit global average temperature rise to well below 2 degrees Celsius (2°C) above pre-industrial levels and to pursue efforts to limit global average temperature increase even further to 1.5°C.
 - Scenario modeling for Iowa and Wisconsin of a range of potential state-level pathways to net-zero electric sector CO₂ emissions in 2050 are also aligned with limiting warming to 1.5°C and 2°C.
 - The company's energy resource plans are consistent with a low-carbon transition under various scenario outcomes that consider different policy, market, technology, social, and economic contexts.

¹ The Company does not have any controlling relationship with or significant influence on EPRI, nor did EPRI assist the Company in setting the emissions reduction goals that were evaluated in the EPRI Study. All relevant connections between the Company and EPRI are disclosed, and none create a conflict of interest, result in EPRI evaluating its own work, or cause EPRI to be an advocate for the Company. The President and CEO of Alliant Energy was elected for four-year term in April 2025 as one of 38 members of the EPRI Board of Directors. This is an advisory role and not considered to be a controlling position that can influence Alliant Energy's participation in EPRI programs or project.

² The EPRI study was based on Alliant Energy's strategy and energy resource plans at the time of the 2022 study which could change based on factors unrelated to this study.

- Significant wind and solar resources, energy storage, expanded electrification, and natural gas units all play a role in the least cost mix at net-zero in 2050 unless explicitly prohibited by policy.
- To reach its net-zero aspirational goal, Alliant Energy will ultimately have to make investments in zero-carbon emission technologies that are not commercially available or cost-effective today.
- The climate has changed in the Midwest since 1900 and current trends are likely to continue

 with changes in temperature, humidity, precipitation, and severe weather conditions
 observed.
 - Climate change can potentially impact many system components of Alliant Energy's business (generation, distribution, and demand) and potential adaptation responses are specific to each combination of climate hazard and system component.
 - Physical climate risk assessment is much more than simply knowing that severe weather or climate trends are changing or could change. A sequence of assessments—hazard, exposure, and vulnerability/response assessments—is required.

The appendices to this report provide further details on how our company assessed climate-related futures and insights gained from the scenario analysis.

- Appendix A Climate transition scenario analysis results
- Appendix B Physical risk review of historical and projected climate change in the Midwest

Risk Management – Describe the organization's processes for identifying and assessing climate-related risks.

- Our process applies an enterprise risk management (ERM) program to assess, communicate and manage companywide risks (including potential climate-related risks) in a structured framework.
- We identify, evaluate and report on material risks that may be climate-related in the Risk Factors section of our annual Form 10-K report to the U.S. Securities and Exchange Commission.
- These may include transition risks related to laws and regulations, evolving technology development and deployment, or changing economic and market conditions, as well as physical risks associated with adapting to climate change and severe weather events.
- These risks may be associated with ongoing business operations and the broader transformation
 of the energy industry. To the extent that such risks also support the energy transition toward a
 low-carbon economy they may be climate-related however, these are not necessarily
 attributable to climate change.

Risk Management – Describe the organization's processes for managing climate-related risks.

• Responses to potential climate-related risks are implemented as part of the company's broader strategy that is described in the management discussion and analysis (MD&A) section of the annual <u>Form 10-K report</u>.

Risk Management – Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

- Oversight of Alliant Energy's overall risk profile is provided by the Board of Directors (BOD).
- Oversight of the enterprise risk management program is provided by the BOD Audit Committee.
- An Executive Review and Risk Committee (ERRC) provides overarching risk governance and oversight for Alliant Energy, as delegated by the BOD.
- The ERRC reviews business, financial, reputational, and operational risks that may be material to the Company, as well as processes to control, mitigate and monitor the risks, including risks identified through the ERM program.

Metrics and Targets – Disclose the metrics used by the organization to assess climaterelated risks and opportunities in line with its strategy and risk management process.

- Climate-related risks and opportunities are considered through our broader strategic planning process. To inform this process, we participate in climate change and clean energy discussions by working directly with our customers and local communities to advance implementation of our <u>Energy Blueprint</u>. In addition, our company monitors policy, technology, market, economic and social developments that may affect implementation of our plans. The insights gained are used to assess our company's approach and role in supporting the transition to a low-carbon economy through our broader strategy. We establish various metrics in our operational plans and act through regulatory advocacy, collaborative technology investment, and research and development (R&D) projects.
- Regulatory advocacy on clean energy and climate-related policies at both the federal and state levels is a critical aspect of our company's efforts to support the transition to a low-carbon economy. Our company advocacy also entails membership in national trade associations including the Edison Electric Institute, American Clean Power Association, and American Gas Association, all of which are active in climate change policy discussions. Our collaborative partnership with regulators, policymakers, and local communities enables us to deliver meaningful outcomes for all

our stakeholders. To provide transparency, we disclose our company's **political engagement** guidelines, spending and lobbying activities online.

- Since 2017, our company has been a partner in the Energy Impact Partners (EIP) collaborative strategic investment firm. The EIP portfolio of funds covers four target sectors (customer solutions, deep decarbonization, digital foundations, intelligent operations) that align with our strategic priorities. Insights gained will guide advancement of our energy transition towards a more sustainable future. Additional information is available in <u>EIP's 2025 Impact Report</u>.
- We support R&D projects to better understand long-term planning to implement our strategy. R&D investments provide valuable insights on our plans related to clean energy and reducing greenhouse gas emissions.
- In 2020, Alliant Energy joined a multi-year program addressing the need to accelerate development and demonstration of low- and zero-carbon energy technologies. The Low-Carbon Resources Initiative (LCRI) is spearheaded by the Electric Power Research Institute (EPRI) and the Gas Technology Institute (GTI). EPRI and GTI have created LCRI to evaluate pathways for deployment of alternative energy carriers in support of decarbonization across the energy economy by mid-century. The focus of LCRI is on advancing promising technologies such as clean hydrogen, bioenergy, energy storage, end-use electrification, and renewable natural gas to assess large-scale feasibility and performance. The goal is to develop affordable integrated approaches across all industries to reduce carbon emissions associated with climate change.
- In 2022, Alliant Energy joined an EPRI initiative called <u>Climate READi™</u>: Power (<u>RE</u>silience and <u>AD</u>aptation initiative) to develop a comprehensive approach to physical climate risk assessment. Climate READi brought together stakeholders to create a consistent integrated framework for analyzing and applying climate data related to electric generation and delivery systems. This research established methods to review the quality of available local and regional climate information and its ability to be applied in assessment of acute and chronic physical risks^{iv}. Additionally, identifying data gaps and uncertainties is crucial for understanding the limitations in attributing changes in weather or natural conditions to climate change effects^v. The technical framework will facilitate analysis and application of appropriate climate data to broadly support future planning, design, and operation of energy infrastructure.

Metrics and Targets – Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.

 In 2024, we continued to collaborate on development of technically sound approaches and recommendations to improve the application of GHG accounting protocols to the energy industry^{vi,vii}. Annual updates for our Scope 1 and Scope 2 greenhouse gas (GHG) emission estimates are provided in Appendix C.

- Scope 1 GHG emissions are direct emissions from owned or controlled sources. Alliant Energy reports GHG emissions annually to the U.S. Environmental Protection Agency (EPA) as required by the Clean Air Act (CAA) regulations for the Mandatory Greenhouse Gas Reporting Program (40 CFR Part 98). The estimated Scope 1 GHG emissions for Alliant Energy in 2024 based on available information were approximately 13.1 million metric tons of CO₂-equivalent (CO₂e). Our 2024 total CO₂e is estimated with global warming potentials (GWP) applied by the EPA mandatory program as follows: carbon dioxide (CO₂) = 1, methane (CH₄) = 28, nitrous oxide (N₂O) = 265.
- Scope 2 GHG emissions primarily refer to indirect emissions associated with generation of electricity or heat purchased by an entity for its own use. We account for purchased electricity for our company's business operations located within our utility service territory in our Scope 1 direct GHG emissions resulting from electric generation production. However, at some facilities, our regulated utilities (IPL and WPL) and logistics company (Travero) need to purchase electricity for business operations outside of the Alliant Energy service territory. This is considered an indirect Scope 2 GHG emission because another utility company provides the energy. The Scope 2 GHG emissions estimated for this purchased energy in 2024 were approximately 912 metric tons of CO₂e using the location-based method or 896 metric tons of CO₂e using the market-based method based on the <u>World Resources Institute guidance for Scope 2</u> emissions calculations.
- Scope 2 GHG emissions can also include certain other energy-related indirect sources such as electric transmission and distribution (T&D) line losses. Currently, guidance does not clarify the accounting for indirect GHG emissions from T&D line losses. This is complicated due to the various business models in the energy industry (for example, vertically integrated versus transmission and/or distribution only) as well as the different types of purchase power agreements. For example, one area not adequately addressed in technical reporting guidance for the energy sector relates to accounting for GHG emissions associated with common carrier energy infrastructure^{viii}. Updating GHG accounting methodologies for new evolving technologies such as energy storage systems is also a relevant consideration^{ix}. Estimation of these Scope 2 GHG emissions is not an efficient or practical focus of resources given these technical issues and uncertainties.
- Scope 3 emissions are all other indirect GHG emissions not included in Scope 2. Scope 3 indirect emissions are the result of activities occurring upstream and downstream within our operational value chain from assets our company does not own or control. There are several quantification challenges when accounting for Scope 3 emissions, because the sources of these GHG emissions are outside of our control and the current estimating methods are based on voluntary protocols and general guidelines only. In addition, there remains a lack of clarity on complex technical issues as well as important considerations related to data availability, accessibility and accuracy^x. Finally, there is double-counting of GHG emissions between companies when doing Scope 3 GHG emissions estimates. Estimation of Scope 3 GHG emissions is not an efficient or practical focus of resources given these technical issues and uncertainties.

- We monitor and calculate our GHG emissions in accordance with applicable U.S. Environmental Protection Agency (EPA) reporting requirements and voluntary inventory protocols to track progress on achievement of our environmental stewardship goals. The primary Scope 1 GHG source from Alliant Energy's utility subsidiaries (approximately 99%) are direct emissions of CO₂ from fossil-fueled electric generation facilities (Figure 10). There are also GHG emissions from our company natural gas transmission and distribution facilities (Figure 11). Our company has evaluated other direct GHG sources and considers these emissions de minimis. The contribution of Scope 2 GHG emissions from our company's facility operational energy purchases from other utility companies is also de minimis in comparison to our Scope 1 emissions (Figure 12).
- Fossil-fueled electric generating unit CO₂ emissions are monitored as required by CAA regulations (40 CFR Part 75). This includes operation of continuous emissions monitoring systems (CEMS), fuel flow meters and supplier fuel analysis. For 2024, CEMS were found to be over 98% accurate and over 99% available based on independent third-party test results. The Mandatory Relative Accuracy Test Audit (RATA) compliance reports for CEMS are submitted to the EPA and certified under penalty of law. The CO₂ emissions reported for our natural gas electric generating units utilize certified fuel flow meters that are over 99% accurate, certified supplier fuel analysis and EPA emission factors specifying carbon content.
- With respect to climate change, Alliant Energy's greatest impact opportunity is to reduce our direct CO₂ emissions from electricity generation. Our company has already made significant progress achieving CO₂ reductions by retiring or converting coal-fired generation to natural gas and expanding renewable resources, as reflected in our historical progress since 2005 (Figure 13). As our energy mix transitions, our annual CO₂ emissions may fluctuate due to various factors such as electricity production needed in response to MISO energy market reliability requirements, evolution of new energy technologies, and increasing customer demand to support business growth or due to electrification adoption.
- As we deliver on our <u>Energy Blueprint</u> plans, we will continue to manage our company's GHG emissions over the longer term with the transition to natural gas, retirement or conversion to natural gas of our coal-fired units, and expansion of renewable resources. The natural gas transmission and distribution system GHG emissions are primarily (approximately 99%) from fugitive methane (CH₄) losses. Our distribution system is monitored closely to minimize product loss as well as ensure regulatory compliance with applicable environmental and safety requirements. In accordance with Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations, Alliant Energy's integrity management program has been developed to maintain safe, compliant natural gas pipelines for our local distribution system operations. Our company completes regular distribution system inspections including leak surveys, implements routine maintenance to minimize releases of natural gas, and submits regulatory reports on program compliance results.

Metrics and Targets – Describe the targets used by the organization to manage climaterelated risks and opportunities and performance against targets.

- Our company's voluntary environmental stewardship goals include targets that we aspire to achieve through implementation of a responsible energy strategy that meets customer energy needs affordably, safely, reliably, and sustainably. Performance is monitored and annual goal progress is reported in our Corporate Responsibility Report and Climate Report.
 - We are focused on executing a long-term strategy to deliver reliable and affordable energy with lower emissions independent of changing policies and political landscape.
 - Alliant Energy plans to transition away from coal-fired electric generation by incorporating renewable energy, distributed energy resources, energy efficiency, demand response, natural gas-fired electric generation and other technologies such as energy storage.
 - Being proactive helps prepare our company for compliance with future environmental requirements and our voluntary goals serve as a guide to measure progress while providing flexibility to adjust our metrics if needed.
- In 2024, we achieved a 39% reduction in CO₂e emissions compared to 2005 levels (Figure 14). As a primary driver in reaching our voluntary goals, we have retired approximately 1,475 megawatts (MW) of coal generation since 2005. Plans continue to be developed for phasing out coal at our company owned and operated electric generation units by 2040 based on commercial availability of new technologies as well as customer affordability and energy reliability needs (Figure 15).
- In 2020, our company <u>announced</u> a voluntary goal to electrify 100% of our active light-duty fleet by 2030. By the end of 2024, 26% of our passenger vehicles, up to half-ton pickups, and forklifts were a battery electric vehicle or plug-in hybrid electric vehicle (<u>Figure 16</u>). Replacing our existing 100% fossil-fueled vehicles will reduce the associated greenhouse gas emissions as our energy resource mix becomes less carbon-intensive. We will continue to pursue cost-effective replacement of end-of-life vehicles with hybrid or electric models and add new models as available considering supply chain constraints to help reach our fleet electrification goal.
- Alliant Energy continues to track progress on our voluntary 75% reduction goal for water withdrawals. Our water reduction goal covers all of our electric utility operations, including owned fossil-fueled electric generation and our supporting facility operations. In 2024, we achieved 65% reduction compared to 2005 levels, equating to a reduction in volume of over 296 billion gallons of water (Figure 17). Our company's future efforts will continue to focus on implementing water conservation measures and adding renewable resources to further reduce water use from our electric utility operations.

Figures

Figure 1. Board committee corporate responsibility and governance oversight

Board committee corporate responsibility and governance oversight

Board of Directors	Nominating and Governance Committee	Operations Committee
Purpose, Mission and Strategy Cyber and Physical Security Public Policy Engagement	Corporate Responsibility and Government Oversight Board and Management Quality Board Structure	Climate Change Risks Greenhouse Gas Emissions Water Management Energy Portfolio Diversity
Audit Committee	Ownership and Shareowner Rights	Emissions and Waste
Audit and Financial Reporting Enterprise Risk Management Code of Conduct Conflict of Interest	Political Engagement	Customer Engagement Safety and Health
	Compensation and Personnel Committee	Supply Chain Energy Reliability and Resiliency
Business Ethics	Remuneration and Performance Metrics	
	Workforce Environment	
	Corporate Culture Workforce Development	



Figure 2. 2024 Energy Resource Capacity Mix in Megawatts (MW)

*Chart percentage values are as of fiscal year-end 2024. The chart provides approximate electricity generation capacity in Megawatts (MW) from owned electric generation resources and various purchase power agreements (PPAs). This includes utility fixed-term contracts, Alliant Energy® renewable programs (Customer-Hosted Renewables, Community Solar, Renewable Energy Partner), Public Utility Regulatory Policies Act (PURPA) resources from non-utility power producers and other distributed energy resources based on these renewable energy agreements. Other category primarily consists of oil, some biogas and energy storage. All or some of the renewable energy attributes associated with generation from these sources may be used in future years to comply with renewable energy standards or other regulatory requirements.

Figure 3. 2024 Sources of Energy in Megawatt-hours (MWh)



*Chart percentage values are as of fiscal year-end 2024 from Alliant Energy's U.S. Securities & Exchange Commission annual Form 10-K report. The chart provides sources of energy in Megawatt-hours (MWh) determined from owned electric generation resources and various purchase power agreements (PPAs). This includes utility fixed-term contracts, Alliant Energy® renewable programs (Customer-Hosted Renewables, Community Solar, Renewable Energy Partner), Public Utility Regulatory Policies Act (PURPA) resources from non-utility power producers and other distributed energy resources based on these renewable energy agreements. Other category primarily consists of oil and some biogas. All or some of the renewable energy attributes associated with generation from these sources may be used in future years to comply with renewable energy standards or other regulatory requirements.



Figure 4. Customer-owned renewable growth

* Various other renewables including biomass and biogas

Figure 5. Renewable generation from qualified independent power producers



* includes small-scale Public Utility Regulatory Policy Act qualifying renewable facilities with interconnection contracts to provide access to the MISO energy markets through Alliant Energy's distribution system

Figure 6. Capital expenditures 2025-2028 forecast



* Values from Securities and Exchange Commission Form 10-Q for the quarterly period ended March 31, 2025.

Figure 7. 2024 year-end percentage of total utility rate base



Figure 8. 2024 year-end percentage of revenue from coal

2024 year-end percentage of revenue from coal (Note 1)	FERC FORM 1 (Note 2)	Inte	erstate Power & Light (IPL)	w	'isconsin Power & Light (WPL)	R	egulated Total
Total 2024 Revenue	P114 line 2	\$	2,038,052,681	\$	1,874,380,154	\$	3,912,432,835
Depreciation and Amortization	Page 336, Line 2(f)		50,251,271		47,993,513		98,244,784
Operations and Maintenance (Note 3)	P402-403, Line 34 (a)		73,666,160		155,113,177		228,779,337
Interest	P117, Line70		162,828,906		145,620,992		308,449,898
Taxes	P114, Lines 14-19		(65,397,522)		64,877,902		(519,620)
Earnings	P117, Line71		375,641,347		343,502,036		719,143,383
Earnings before interest, taxes, depreciation, and amortization (EBITDA)			473,072,731		554,000,930		1,027,073,661
Coal Rate Base % as of 12/31/2024			5%		11%		8%
Coal EBITDA			23,653,637		60,940,102		80,111,746
Total Coal Expenses		\$	147,571,068	\$	264,046,792	\$	407,135,867
Coal Expenses Excluding Depreciation and Amortization		\$	97,319,797	\$	216,053,279	\$	308,891,083
2024 Calculated Coal Revenue Percentage Excluding Depreciation and Am	ortization		4.8%		11.5%		7.9%
Notes: (1) Alliant Energy Corporation's (AEC) calculated coal revenue percentage	excludes related deprecia	ation	and amortizatio	n ex	penses as these	rep	resent

 Alliant Energy Corporation's (AEC) calculated coal revenue percentage excludes related depreciation and amortization expenses as these represent recovery of legacy coal costs and not new coal. Additionally, AEC should not be penalized for any acceleration of coal plant depreciation.
 Data for this estimate is taken from IPL's and WPL's 2024 Federal Energy Regulatory Commission (FERC) Form 1 regulated utility filings.
 Values are based on IPL's and WPL's equity-share of coal electric generation facilities only.

Figure 9. 2024 year-end percentage of revenue from natural gas

		Int	erstate Power &	W	isconsin Power		,
2024 year-end percentage of revenue from gas	FERC FORM 1 (Note 1)		Light (IPL)		& Light (WPL)	R	egulated Total
Total 2024 Revenue	P114 line 2	\$	2,038,052,681	\$	1,874,380,154	\$	3,912,432,835
Operations and Maintenance - gas fueled generation facilities only (Note 2)	P402-403, Line 34		123,343,084		197,630,355		320,973,440
Depreciation and Amortization	Page 336, Line 6(f)		121,099,219		135,156,927		256,256,146
Gas Rate Base % of other production plant as of 12/31/2024			21%		26%		24%
Interest	P117, Line70		162,828,906		145,620,992		308,449,898
Taxes	P114, Lines 14-19		(65,397,522)		64,877,902		(519,620)
Earnings	P117, Line71		375,641,347		343,502,036		719,143,383
Earnings before interest, taxes, depreciation, and amortization (EBITDA)			473,072,731		689,157,857		608,229,658
Gas Rate Base % as of 12/31/2024			8%		12%		10%
Gas EBITDA			37,845,818		82,698,943		60,214,736
Calculated Gas Depreciation and Amortization			25,504,819		35,641,131		60,862,359
Total Gas Expenses		\$	186,693,722	\$	315,970,430	\$	442,050,535
2024 Calculated Gas Revenue Percentage			9.2%		16.9%		11.3%
Notes:							

Data for this estimate is taken from IPL's and WPL's 2024 Federal Energy Regulatory Commission (FERC) Form 1 regulated utility filings.
 Values are based on IPL's and WPL's equity-share of gas electric generation facilities only.





*estimate provided as carbon dioxide-equivalent (CO2e)

Figure 11. 2024 Scope 1 greenhouse gas emissions by contribution



*estimate provided as carbon dioxide-equivalent (CO₂e)



Figure 12. 2023 Scope 1 and Scope 2 total greenhouse gas emissions







* Renewable megawatt (MW) values reflect approximate electricity generation capacity determined from owned electric generation resources and various purchase power agreements (PPAs) as of fiscal year-end. Emissions are based on continuous emissions monitoring systems (CEMS) and other air compliance data adjusted for equity share of jointly owned electric generation units.



Figure 14. Reducing our greenhouse gas emissions

* Alliant Energy's voluntary goals include direct Scope 1 greenhouse gas emissions that are reportable to the U.S. Environmental Protection Agency (40 CFR Part 98: Subparts C, D, and W) including carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O) from owned fossil-fueled electric generation and natural gas distribution operations.



Figure 15. Path to zero coal generation

Figure 16. Electrifying our light-duty fleet vehicles



Active company-owned passenger vehicles, up to half-ton pickup trucks and forklifts

Figure 17. Reducing our electric utility water supply



Owned regulated utility electric generation and facility operations

Appendix A – Climate transition scenario analysis results Alliant Energy's strategy and consistency with international climate goals

In 2015, the Paris Agreement was established as an international treaty with an objective "to avoid dangerous climate change by limiting global warming to well below 2 degrees Celsius (°C) and pursuing efforts to limit it to 1.5°C," with participating countries submitting greenhouse gas emissions reduction pledges in support of this objective.

Companies are trying to understand how to relate their low-carbon transition plans and greenhouse gas goals to the Paris Agreement. Over the last few years, the Electric Power Research Institute (EPRI) has assessed the science defining the relationship between a company and global average temperatures^{xi,xii}. This research informed the study that EPRI completed for Alliant Energy in 2022.

As part of the EPRI study, the quantitative scenario analyses was completed using the <u>U.S. Regional</u> <u>Economy, Greenhouse Gas, and Energy</u> (REGEN) model. Alliant Energy's integrated resource plans supporting the expected mix of energy supply and demand were used as an input to the REGEN model. Scenarios were developed to explore a range of different possible futures to assess the potential impacts of low-carbon transition on Alliant Energy's electric utility operations and evaluate carbon dioxide (CO₂) emissions projections.

The REGEN modeling results were reviewed relative to projected global emissions pathways consistent with limiting warming to 1.5°C and 2.0°C prepared by external parties. Completing this assessment was informative because global climate scenarios developed by external parties represent alternative visions for future developments. However, it is important to recognize that scenarios are not future predictions. There is a broad range of projected global emissions pathways consistent with limiting temperature increases associated with climate change. Therefore, scenario analysis does not replace Alliant Energy's integrated planning process used to forecast resources necessary to provide our customers with affordable, safe, reliable and sustainable energy.

The transition scenario modeling for Iowa and Wisconsin from EPRI's study reveals a range of potential state-level pathways that could achieve net-zero electric sector CO₂ emissions in 2050. The study finds that both Alliant Energy's net-zero CO₂ emissions from electricity generation in 2050 strategy as well as the REGEN Iowa and Wisconsin modeling emissions pathways are aligned with global emissions pathways consistent with limiting warming to 1.5°C and 2°C (Figure A-1 and Table A-1).

Figure A-1 maps Alliant Energy's CO₂ emission reduction goals that were developed from our plans across the range of potential scenarios for limiting global temperature warming developed by the Intergovernmental Panel on Climate Change (IPCC) and International Energy Agency (IEA). Additionally, the CO₂ goals are mapped across the potential scenarios evaluated by the EPRI study using the REGEN model for achieving net-zero emissions in the electric sector for Iowa and Wisconsin by 2050. The trajectory of Alliant Energy's strategy falls within the approximate international pathways outlined for limiting global temperature to 1.5°C and 2°C. The state-wide pathways for Iowa and Wisconsin in achieving net-zero emissions by 2050 similarly fall within the ranges for limiting global temperature to 1.5°C and 2°C.

The different ranges showing the composition of pathways for limiting warming to 1.5°C and 2°C represent timing and intensity of action. The pathways resulting in a global temperature warming limit of 1.5°C require immediate action in decreasing emissions, as the global temperature is closer to 1.5°C and emissions presently in the atmosphere will continue to warm global temperatures. Achieving a global warming limit temperature of 2°C includes pathways that allow emissions to continue to rise, but require a peak of global emissions in 2030 in order to achieve the temperature goal by 2100. Rather than taking drastic emission reductions in the near future, some potential pathways to 2°C of warming may see rapid decreases closer to 2100 in order to achieve the limiting warming goal.



Figure A-1. Alliant Energy climate scenario analysis for various emissions pathways

The EPRI state-level scenario analysis of carbon dioxide (CO₂) pathways and Alliant Energy's goals (% reductions) fall within or below the ranges of reductions associated with global net CO₂ pathways consistent with limiting global average warming to 1.5°C or 2°C. The blue shaded area represents the range of global emissions pathways found to be consistent with limiting global average warming to 2°C and the grey area represents the range of global pathways found to be consistent with limiting warming to 1.5°C. The orange shaded area represents the range of pathways from EPRI's REGEN modeling quantitative low-carbon transition scenario analysis completed for Alliant Energy discussed in this report. The yellow dots are Alliant Energy's voluntary 2030 and 2050 goals to reduce CO₂ emissions along the projected emissions pathway. The associated datapoints for 2030 and 2050 are provided below in Table A-1.

Source: Figure developed from EPRI's quantitative scenario analysis completed for Alliant Energy and EPRI's evaluation of Intergovernmental Panel on Climate Change and International Energy Agency global emissions pathways (Rose and Scott 2018; 2020).

Results are based on an EPRI 2022 study to assess Alliant Energy's strategy relative to the international Paris Agreement. The EPRI study modeled CO₂ emissions from fossil-fueled electric generation, which are the primary source of greenhouse gases (approximately 99%) from Alliant Energy's regulated utility subsidiaries.

2030 and 2050 Datapoints for Scenario Analysis								
CO ₂ Pathways 2030 Range 2050 Range								
	(maxir	num to min	to minimum) (maximum to minimum					
2°C Global	65%	to	-77%	13%	to	-102%		
1.5°C Global	-29%	to	-69%	-70%	to	-131%		
REGEN (WI+IA)	-39%	to	-80%	-97%	to	-145%		
Alliant Energy goal		-50%			-100%			

Table A-1. 2030 and	2050 datapoints	for scenario anal	vsis
	= = = = = = = = = = = = = = = = = = = =	j =	,

Emissions reduction ranges from the REGEN modeling state-level analysis and Alliant Energy's goals fall within or below the 2030 and 2050 ranges associated with the global pathways consistent with limiting global average warming to 1.5°C or 2°C in Figure A-1.

Source: Table developed from EPRI's study quantitative scenario analysis completed for Alliant Energy and EPRI's evaluation of Intergovernmental Panel on Climate Change and International Energy Agency global emissions pathways (Rose and Scott 2018; 2020).

Figure A-1 represents the range of projected global emissions pathways consistent with limiting warming to 1.5°C (grey) and 2.0°C (blue). The ranges were developed by assessing results from multiple models and assumptions that were published by the IPCC and IEA. The global net change in emissions relative to 2005 is shown as a percentage, and the shaded areas represent the overall range of modeled results (i.e., no single pathway defines either the top or bottom of the range for the entire time horizon).

The figure illustrates that there are many possible pathways to achieving net-zero emissions due to a large number of uncertainties. The wide range of modeled results reflects the variation in how these uncertainties may be considered in the assumptions applied to evaluate projected global emissions pathways. Moreover, it reinforces that there is no single cost-effective strategy or approach due to uncertainty about future population levels, trends in economic growth, estimates of future energy demand, preferences and behavioral change, technological progress, and earth system responses, among other things.

In addition, this figure illustrates the broader range of possibilities for limiting global warming to 2.0°C. More specifically, this can be seen by the range of 2.0°C pathways that go above and below the 1.5°C range, with potential increases in emissions in the near-term and even greater reductions out to 2100. However, there are significantly fewer pathways consistent with limiting global warming to 1.5°C (n=42) versus 2.0°C (n = 529). This is largely attributed to many models being unable to find a solution for limiting warming to 1.5°C. For those models able to solve for 1.5°C emissions pathways, the results are based on very strong, and likely implausible, assumptions regarding immediate harmonized global policy as well as more optimistic technology availability and energy system transitions.

Overall, there is more flexibility when there is a less demanding global temperature constraint of 2.0°C. Many 2.0°C pathways are also based on modeled projections that use a significant amount of <u>carbon</u> <u>dioxide removal (CDR)</u> in the last half of the century. By comparison, the 1.5°C global emissions pathways decline immediately, and all depend on near-term and rapid deployment of CDR, which only demonstrates the significant challenge in achieving this level of warming.

Understanding company climate scenarios and emissions goals

EPRI has completed studies that provide a technical foundation and important insights to consider when developing and evaluating company climate transition scenarios or greenhouse gas (GHG) emissions reduction goals. EPRI's technical studies are referenced by the Task Force on Climate-related Financial Disclosures (TCFD) *Guidance on Scenario Analysis for Non-Financial Companies^{xiii}*. EPRI assisted in the development of this guidance as a member of the TCFD advisory group that included 13 industry representatives and scientific experts advising on its technical content.

EPRI's research found that there are significant challenges in translating global emissions pathways into actions for nations and sectors, and even more so for companies. At the highest level, there is uncertainty in the relationship between a global temperature goal and global GHG emissions. From there, the uncertainty only increases as we move from global to country to local emissions (Figure A-2).

Understanding uncertainties in relating global climate goals to companies



Figure A-2. Understanding uncertainties in relating global climate goals to companies

EPRI's low-carbon transition risk and goal setting research has found that there are many ways for a company to be consistent with international climate goals and that there are many uncertainties for companies to consider and manage^{xiv}. Planning for a single future or outcome is risky for a company, subjecting it to the very real possibility of a different future being realized.

Key insights include from EPRI's studies:

- A broad range of global and sub-global emissions pathways are consistent with any global average temperature outcome.
- Global emissions pathways consistent with limiting warming to 2°C and below are extremely challenging to realize.
- Asking all companies to achieve the same goal via the same means will not be costeffective for society.
- Company-specific uncertainties and circumstances should be considered in assessing climate strategies including both policy and non-policy related drivers.

Since companies are unique (in their assets, systems, markets, and local policy environments), each company will have different opportunities and constraints and different cost-effective emissions reduction strategies in terms of its goals and how it meets them. Applying global modeling results, such as emissions, to all companies within a segment of the economy—like all electric power companies globally—will not result in cost-effective emissions reductions for society. Simply put, a one-size-fits-all approach fails to recognize how individual companies have different opportunities for contributing to the reduction of GHG emissions. In addition, companies need to manage and balance multiple objectives-for example, reliability, affordability, local economic development, environment, and safety.

These are important issues for companies in identifying company-appropriate emissions reduction goals and strategies. However, these issues are frequently not considered in third-party goal-setting methodologies (for example, the Science Based Targets Initiative)^{xv}. EPRI's studies also found that there are important limitations to recognize in using global emissions pathways as points of comparison to company emissions. Furthermore, these pathways should not solely define the basis for what may be considered a GHG reduction goal or target that is aligned with climate change science.

For instance, comparing an individual electric power company's emissions goal or fossil capacity plan to global scenario electric sector emissions or energy supply results can be very misleading. Global scenarios typically exhibit strong electric sector decarbonization and electrification responses that are contingent on assumed idealized global economy-wide policies. Additionally, these scenarios include the global trading of emissions allowances and optimistic assumptions regarding the availability of advanced low-carbon energy supply technologies. However, policy design and technology development are critical uncertainties for companies to evaluate and manage.

Finally, it is important to differentiate low-carbon transition risk assessment from GHG goal setting. These two are frequently conflated in public dialogue. Because of uncertainties, there is no one "right" emissions goal/pathway or transition implementation for a company. Depending on the future context (technologies, markets, and policies), a very different goal/pathway and strategy can be economical for a company. Low-carbon transition risk assessment, however, can usefully inform goal setting.

Appendix B - Physical risk review of historical and projected climate change in the Midwest

Scope and methods

Climate is the average weather over a set period of time ranging from months to years, whereas weather refers to short-term atmospheric processes and conditions including short-term natural events in a specific place and time. Climate change attribution is the study of whether, or to what degree, human influence may have contributed to extreme climate or weather events. Identifying the extent to which physical risks may be attributable to the effects of climate change is challenging because it is difficult to confidently distinguish how natural events may have been affected by anthropogenic factors. In addition, this assessment is further complicated by the availability and quality of observational data needed to determine comparable climate-metrics that may be relevant to the electric power sector^{xvi}.

The study conducted by the Electric Power Research Institute (EPRI) in 2022 included a preliminary qualitative physical risk review of historical and projected climate change. Climate conditions were evaluated to align with Task Force on Climate-related Financial Disclosure (TCFD) scenario analysis guidance including acute periodic extreme weather events as well as chronic longer-term shifts in climate patterns and trends.

To characterize Midwest climate change trends and potential climate futures, EPRI undertook two scales of climate change assessment: a regional analysis based on published studies, and a customized assessment of four specific locations in Alliant Energy's service territory using both detailed weather station and climate projection data. Together, the two assessments, using a diverse set of historical evidence and projections regarding climate change, provide a more holistic and robust characterization of past, current, and future potential changes in the climate hazard possibly relevant to Alliant Energy's operations and planning.

Historical as well as projected changes in climate variables were analyzed. The assessment also considered changes in extreme values (for example, extreme heat and cold, low wind) and averages as well as intensity and frequency for extreme events to characterize potential future changes in high-impact outcomes. The co-occurrence of changes, such as low winds and low solar during a period of extreme temperatures and high winds during extreme cold, was also analyzed to further investigate contexts in which resource adequacy may be a concern.

Regional climate change assessment

To characterize climate change trends and projections in the Midwest region, EPRI assessed information available from published studies. Examples of sources used to compile this analysis are the Fourth National Climate Assessment^{xvii} (Volumes I and II), data sets from the National Climate Data Center (for instance, Climate Normals^{xviii}, Climate at a Glance^{xix}), and the Wisconsin Initiative on Climate Change Impacts^{xx}, ^{xxi} (WICCI). EPRI focused on regional and state level results, which provides a high-level characterization of climate change in Alliant Energy's service territory.

Local climate change assessment

To characterize the latest climate change trends and projections for specific locations in Alliant Energy's lowa (IA) and Wisconsin (WI) service territory, EPRI developed and assessed detailed weather station data and high-resolution results from the latest global climate change projections. In collaboration with Alliant Energy, four locations across Alliant Energy's service territory were chosen to represent a range of climates: Cedar Rapids, IA; Ottumwa, IA; Fond Du Lac, WI; and Plymouth, WI (Figure B-1).



Figure B-1: Selected locations in Iowa and Wisconsin

A site-specific analysis using historical climate data as well as bias-corrected climate projections was carried out for each location, with the historical period ranging from 1950 to 2020 and a projected period from 2021 to 2060. Historical observational climate data were acquired from four different airport surface weather stations near the chosen locations.

Climate models are one of the primary means for scientists to understand how the climate has changed in the past and may change in the future. Climate model output from the <u>Coupled Model</u> <u>Intercomparison Project</u> (CMIP) CMIP6 - ISIMIP3b project was used for the projections of potential future climate change. CMIP6 is the latest generation of climate models that incorporates new Shared Socioeconomic Pathway (SSP) climate scenarios and improved modeling of the climate. <u>ISIMIP3b</u> is a bias-corrected subset of the CMIP6 models.

The SSPs are part of a new scenario framework, established by the climate change research community in order to facilitate the integrated analysis of future climate impacts, vulnerabilities, adaptation, and mitigation. They have been used to help produce the <u>Intergovernmental Panel on Climate Change Sixth</u> <u>Assessment Report</u> on climate change. Climate projections for both lower (SSP1-2.6) and higher (SSP3-7.0) emissions scenarios were used to characterize upper and lower bounds for this analysis.

Physical risk review insights

These study results were used to develop a summary of projected climate variable changes through midcentury to provide a qualitative assessment based on the available observational data and metrics.

Variable	Regional	Cedar Rapids	Ottumwa	Plymouth	Fond du Lac
Extreme Heat	<u>^</u>	<u>^</u>	<u>^</u>	<u>^</u>	<u>^</u>
Extreme Cold	$\checkmark \checkmark$	$\downarrow\downarrow\downarrow$	$\checkmark \checkmark$	$\checkmark \checkmark$	$\downarrow\downarrow\downarrow$
Heating Degree Days	$\checkmark \checkmark$	$\checkmark \checkmark$	$\checkmark \checkmark$	$\checkmark \checkmark$	$\downarrow\downarrow\downarrow$
Cooling Degree Days	<u>^</u>	<u>^</u>	<u>^</u>	<u>^</u>	<u>^</u>
Heavy Precipitation	1	1	1	1	1
Snowfall	NA	↓*	↓*	↓*	↓*
Drought	↓*	↓*	↓*	↓*	↓*
Windspeed	\leftrightarrow	\leftrightarrow	\leftrightarrow	\leftrightarrow	\leftrightarrow
Solar	\leftrightarrow	\leftrightarrow	\leftrightarrow	\leftrightarrow	\leftrightarrow
Streamflow	NA	<u>^</u> *	^ *	NA	NA
Lightning	\leftrightarrow	\leftrightarrow	\leftrightarrow	\leftrightarrow	\leftrightarrow

Table B-1. Summary of projected climate variable changes through mid-century

An up arrow \uparrow denotes an increase while a \checkmark denotes a decrease. Two arrows denote greater certainty in the projected change. An asterisk (*) by the arrow denotes that historical trend only was used to inform projected changes. A sideways arrow (\leftrightarrow) represents no significant projected change or uncertain change.

The following specific thresholds were defined by EPRI and Alliant Energy for the local climate change assessment: Days >90°F for extreme heat, Days <0°F for extreme cold, and Days >2 inches for heavy precipitation. NA means that either data were not available or the variable was not examined at that particular scope.

In addition, this preliminary review also provided high-level insights including:

- Climate change can potentially impact many system components of Alliant Energy's business (generation, distribution, and demand) and potential adaptation responses are specific to each combination of climate hazard and system component.
- Physical climate risk assessment is much more than simply knowing that severe weather or climate trends are changing or could change. A sequence of assessments—hazard, exposure, and vulnerability/response assessments—is required.

Climate and weather are distinct terms, but they are interrelated, especially when it comes to practical application. Evaluating and planning for the effects of weather on our utility assets and operations is already considered in Alliant Energy's efforts to provide reliable energy services to our customers. Our strategy is also focused on making our utilities more resilient in order to prepare for, operate through and recover from significant disruptions, no matter what the cause.

The technical foundation from EPRI's review of historical and projected climate change in the Midwest provides both quantitative and qualitative information that will support Alliant Energy's consideration of the possible long-term effects of climate change on the company's assets and operations. We will continue to evaluate the potential types of climate change impacts and identify possible adaptation responses. To further our efforts in this area, our company is participating in EPRI's <u>Climate READiTM</u>: Power (REsilience and ADaptation initiative) program^{xxii}.

2024 Scope 1 direct greenhouse gas amissions (matrix tons of CO_a)						
2024 Stope 1 direct g				Total CO o		
	200.457	CH ₄	N ₂ U			
EPA Subpart C - Combustion	368,157	5	5	369,520		
EPA Subpart D - Electric Generation	4,226,323	64	34	4,237,247		
EPA Subpart W - Natural Gas Distribution	20	862	-	24,163		
IPL LOTAL 2024 W/DL Emissions	4,594,500	24 231	39	4,630,929		
	7 242		N ₂ U			
EPA Subpart C - Compusion	/,342 9.420.096	115	0	2,549 9,456,060		
EPA Subpart D - Electric Generation	0,423,000	046	55	0,400,909		
EPA Subpart W - Natural Gas Distribution	223 9 436 650	940	- 02	20,/11 9 /01 020		
2024 Alliant Energy Emissions	۵,430,030 ۲ <u>۵</u> ,	1,001 CH.	55 N.O	0,491,029 Total (0.0		
EDA Subpart C. Combustion	275 /00	СП ₄	IN2U	276 860		
EPA Subpart D Electric Constant	12 655 409	170	129	12 604 216		
EPA Subpart W - Natural Gas Distribution	12,055,408	1 808	120	12,094,210		
Alliant Energy Total	13 031 157	1 992	132	12 121 958		
2023 Scope 1 direct	greenhouse gas e	missions (metric	tons of CO ₂ e)	13,121,330		
2023 IPL Emissions	CO ₂	CH₄	N ₂ O	Total CO ₂ e		
FPA Subpart C - Combustion	410.730	5	5	412.326		
FPA Subpart D - Electric Generation	5,305.812	77	49	5.322.396		
FPA Subpart W - Natural Gas Distribution	26	854	-	21.371		
IPL Total	5.716.568	937	54	5.756.094		
2023 WPL Emissions	CO ₂	CH₄	N₂O	Total CO ₂ e		
EPA Subpart C - Combustion	8,795	0	0	8,804		
EPA Subpart D - Electric Generation	7,794,358	108	82	7,821,593		
EPA Subpart W - Natural Gas Distribution	278	929	-	23,491		
WPL Total	7,803,432	1,037	82	7,853,888		
2023 Alliant Energy Emissions	CO ₂	CH ₄	N ₂ O	Total CO ₂ e		
EPA Subpart C - Combustion	419,525	6	5	421,130		
EPA Subpart D - Electric Generation	13,100,170	186	131	13,143,989		
EPA Subpart W - Natural Gas Distribution	304	1,782	-	44,863		
Alliant Energy Total	13,520,000	1,974	136	13,609,982		
2022 Scope 1 direct g	greenhouse gas e	missions (metric	tons of CO ₂ e)			
2022 IPL Emissions	CO2	CH ₄	N ₂ O	Total CO ₂ e		
EPA Subpart C - Combustion	413,095	5	5	414,772		
EPA Subpart D - Electric Generation	5,616,436	74	66	5,637,990		
EPA Subpart W - Natural Gas Distribution	26	851	-	21,299		
IPL Total	6,029,556	931	71	6,074,060		
2022 WPL Emissions	CO ₂	CH ₄	N ₂ O	Total CO ₂ e		
EPA Subpart C - Combustion	11,581	0	0	11,592		
EPA Subpart D - Electric Generation	7,077,451	96	79	7,103,488		
EPA Subpart W - Natural Gas Distribution	259	905	-	22,877		
WPL Total	7,089,290	1,001	79	7,137,957		
2022 Alliant Energy Emissions	CO2	CH ₄	N ₂ O	Total CO ₂ e		
EPA Subpart C - Combustion	424,675	6	5	426,364		
EPA Subpart D - Electric Generation	12,693,887	171	145	12,741,477		
EPA Subpart W - Natural Gas Distribution	284	1,756	-	44,176		
Alliant Energy Total	13,118,846	1,932	151	13,212,017		

Appendix C – Scope 1 and Scope 2 Greenhouse Gas Emissions

Total CO2e is reported with global warming potentials (GWP) consistent with the U.S. Environmental Protection Agency (EPA) Annual Mandatory GHG Reports requirements (40 CFR Part 98). 2022 and 2023 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 298. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 298. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 298. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 298. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 298. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 298. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 208. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2

Scope 2 indirect greenhouse gas emissions (metric tons CO ₂ e)								
Location-based Scope 2 greenhouse gas emissions								
Year	Year 2022 2023 2024							
IPL	137	132	121					
WPL	348	330	306					
Travero	335	297	485					
Alliant Energy total	820	759	912					
Market-based Sco	pe 2 greenhous	se gas emissions	5					
Year	2022	2023	2024					
IPL	117	115	105					
WPL	348	330	306					
Travero	335	297	485					
Alliant Energy total 800 742 896								

The location-based method considers average emission factors for the electricity grids that provide electricity. The market-based method considers contractual arrangements under which power is purchased from specific suppliers or sources.

Based on internal records for energy usage World Resources Institute guidance, and U.S. Environmental Protection Agency (EPA) published eGRID2022 emission factors.

Total CO2e is reported with global warming potentials (GWP) consistent with the U.S. Environmental Protection Agency (EPA) Annual Mandatory GHG Reports requirements (40 CFR Part 98). 2022 and 2023 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25, N2O = 298. 2024 total CO2e is calculated with GWP as follows: CO2 = 1, CH4 = 25.

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