



greatblue

WHAT'S NEXT.

Artificial Intelligence and the Electric Utility

Utility Energy Forum | 44th Utility Energy Forum, April 2025

"Success in the AI era will belong to those who

**adapt, learn, and
innovate continuously."**

Understanding Where AI Was Heading in 2025

Utility Energy Forum | 44th Utility Energy Forum, April 2025

2024 GREATBLUE NATIONAL BUSINESS LEADER AI ADOPTION & UTILIZATION STUDY

AREAS EXPLORED

- **AI implementation & use**
- **AI integration in organizational strategy**
- **Frequency of AI usage**
- **AI's role in establishing a competitive advantage**
- **Ethical considerations & potential disruptions**

National Business Leader AI Adoption & Utilization Study

Utility Energy Forum | 44th Utility Energy Forum, April 2025

59.7%

AI is a **high priority** in current strategy

* 2024 GreatBlue National Business Leader AI Adoption & Utilization Study, Nov.-Dec. 2024 (n=134)

National Business Leader AI Adoption & Utilization Study

Utility Energy Forum | 44th Utility Energy Forum, April 2025

39.6%

Use AI ongoing (multiple times a day)

* 2024 GreatBlue National Business Leader AI Adoption & Utilization Study, Nov.-Dec. 2024 (n=134)

National Business Leader AI Adoption & Utilization Study

Utility Energy Forum | 44th Utility Energy Forum, April 2025

1. Data privacy concerns
2. Accuracy of results
3. High costs
4. Lack of skilled talent
5. Difficulty integrating with legacy systems

Top 5 challenges with implementing AI

* 2024 GreatBlue National Business Leader AI Adoption & Utilization Study, Nov.-Dec. 2024 (n=134)

National Business Leader AI Adoption & Utilization Study

Utility Energy Forum | 44th Utility Energy Forum, April 2025

70.9%

Transformative + Significant impact on industry in the next 1-3 years

* 2024 GreatBlue National Business Leader AI Adoption & Utilization Study, Nov.-Dec. 2024 (n=134)

" Artificial intelligence is the biggest commercial opportunity
for companies, industries, and nations over the next few decades."

AI and the Utility Industry: Recent Headlines

Utility Energy Forum | 44th Utility Energy Forum, April 2025



7 Key AI Trends Transforming the Energy Industry in 2025

- AI-Powered Drones and Robotics
- Predictive Maintenance & Asset Management
- Demand Forecasting & Load Management
- Grid Management & Optimization
- Renewable Energy Forecasting
- Energy Storage Optimization
- AI-Enabled Energy Trading

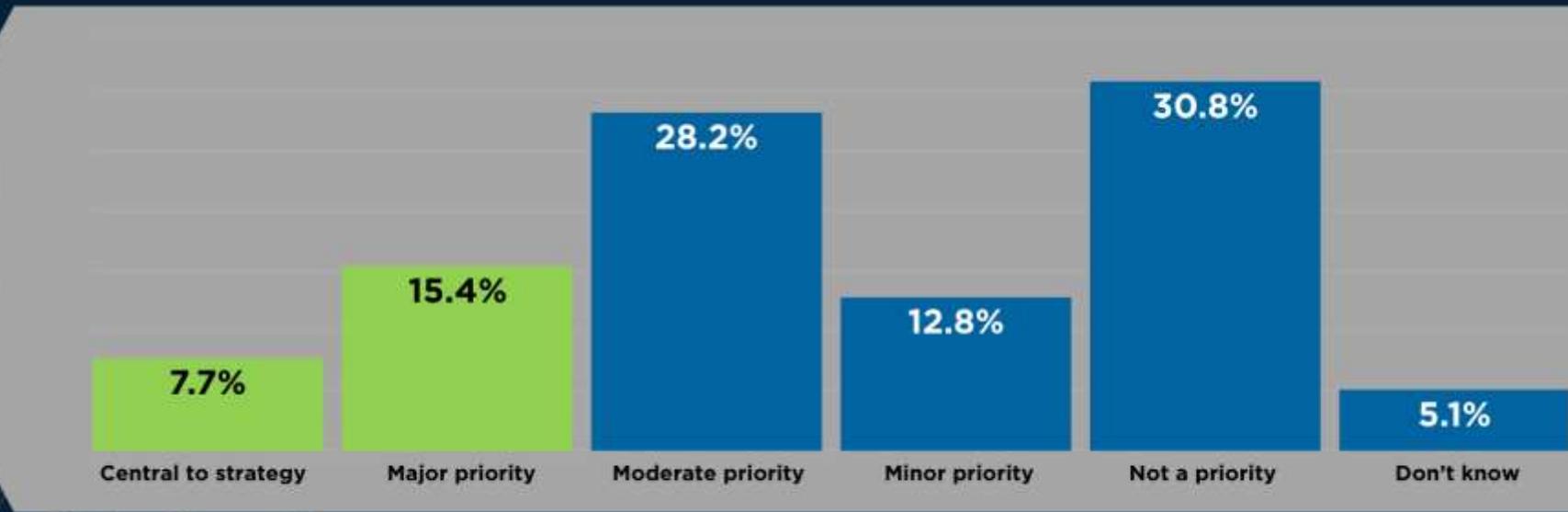
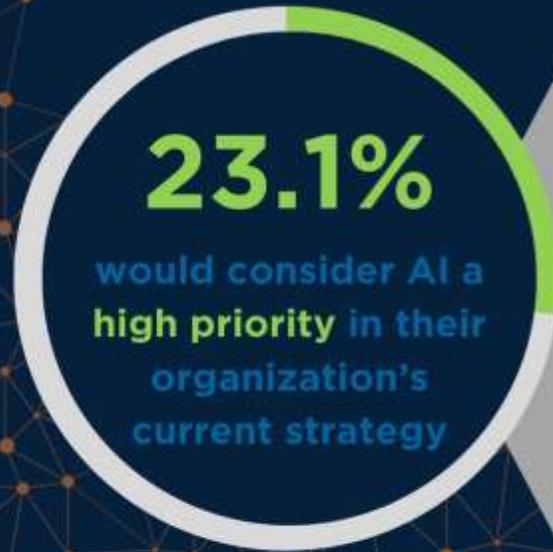


Utility Energy Forum Attendees

AI Adoption & Utilization Perspectives

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025



How integral is AI to your organization's current strategy?

* GreatBlue AI Adoption & Utilization Study, UEF Attendees Survey 2025 (n=39)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025



In general, how frequently would you say your organization leverages AI to support business operations?

* GreatBlue AI Adoption & Utilization Study, UEF Attendees Survey 2025 (n=39)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025



In which of the following areas, if any, has your organization implemented or considered implementing AI technology to support business operations?
(Select all that apply)

* GreatBlue AI Adoption & Utilization Study, UEF Attendees Survey 2025 (n=39)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

1. Data privacy concerns
2. Accuracy of results
3. Ethical considerations
4. Resistance to change
5. Difficulty integrating with legacy systems

What challenges, if any, have you encountered when implementing AI solutions? (TOP 5 shown)

* GreatBlue AI Adoption & Utilization Study, UEF Attendees Survey 2025 (n=39)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

AI will significantly enhance our competitive advantage



To what extent do you agree with the following statements: AI will significantly enhance our competitive advantage

* GreatBlue AI Adoption & Utilization Study, UEF Attendees Survey 2025 (n=39)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

AI's ethical implications are an important consideration in our organization's strategy



To what extent do you agree with the following statements: **AI's ethical implications are an important consideration in our organization's strategy**

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

Our organization is well-prepared to navigate the potential disruptions AI may cause in our industry

46.2%

DISAGREE

17.9%

NEUTRAL

28.2%

AGREE

7.7%

DONT
KNOW

To what extent do you agree with the following statements: Our organization is well-prepared to navigate the potential disruptions AI may cause in our industry

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

43.6%

Transformative + Significant impact on industry in the next 1-3 years

* GreatBlue AI Adoption & Utilization Study, UEF Attendees Survey 2025 (n=39)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

30.8%

Moderate change improving efficiencies without a major disruption in the next 1-3 years

* GreatBlue AI Adoption & Utilization Study, UEF Attendees Survey 2025 (n=39)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

Top 3 areas in which AI could have the most significant impact on operational efficiency with your utility

1. Predictive maintenance of infrastructure
2. Grid optimization and load forecasting
3. Regulatory compliance and reporting

efficiency

In which of the following areas do you believe AI could have the most significant impact on operational efficiency within your utility company? (Select your top three)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

Top 3 customer service tasks most suitable for AI automation within the utility sector

1. Proactive customer notifications (outages, planned maintenance, etc.)
2. Answering frequently asked questions
3. Reporting outages

Which of the following customer service tasks, specifically, do you think are most suitable for AI automation within the utility sector? (Select all that apply)

UEF Attendees | AI Adoption & Utilization Perspectives

Utility Energy Forum | 44th Utility Energy Forum, April 2025

69.3%

Agree increased investment in AI technology is essential for utilities to remain competitive and meet evolving customer expectations

* GreatBlue AI Adoption & Utilization Study, UEF Attendees Survey 2025 (n=39)

AI Adoption & Utilization Perspectives | Final Thoughts

Utility Energy Forum | 44th Utility Energy Forum, April 2025

Energy leaders are leaning into AI where it directly touches the customer

- AI will help drive customer service improvements
- A **next generation** of personalization tools *are possible* to enhance marketing effectiveness

Risk and financial functions are emerging use cases

- Adoption for risk management and compliance is growing
- AI supports financial forecasting with real-time insights

Growth potential lies in internal operations and future-focused areas

- Product development and HR applications remain underutilized
- Talent acquisition ripe for AI-powered efficiency gains

AI Adoption & Utilization Perspectives | Final Thoughts

Utility Energy Forum | 44th Utility Energy Forum, April 2025

Conclusion: Together We Are On A Transformational Journey

AI adoption varies widely, but momentum is clear

**From customer experience to operational efficiency,
AI is becoming indispensable**

The path forward: More integration, more strategy, and unlocking new value across the board



Michael Vigeant

CEO

GreatBlue Research, Inc.

Glastonbury, CT

www.greatblueresearch.com

mjv@greatblueresearch.com (e)

