



White Paper: Generative AI in Utility Sector Transformation

Introduction

Utility companies face significant challenges in maintaining and upgrading infrastructure, complying with regulatory requirements, and addressing evolving customer expectations. Traditional approaches to General Rate Case (GRC) preparation and operational efficiency are resource-intensive and slow.

With Generative AI (GenAI) at the forefront, utilities can now revolutionize their operations. From automating regulatory documentation to predicting infrastructure needs, GenAI transforms how utilities manage complexities and create value.

Old Way → New AI Way

Aspect	Old Way	New AI Way
Regulatory Documentation	Manual data collection and report writing, often taking months and involving multiple stakeholders.	GenAI automates drafting, reviewing, and aligning documents with regulatory guidelines.
Cost Forecasting	Excel spreadsheets with static models, leading to errors and inefficiencies.	AI-driven models deliver dynamic forecasts by integrating data from multiple sources.
Stakeholder Engagement	Limited communication, often delayed due to manual processes.	AI-powered chatbots and content generation tools provide real-time responses and strategic insights.
Infrastructure Planning	Decisions based on historical data, leading to inefficiencies in resource allocation.	Predictive AI models optimize infrastructure investments by analyzing future trends and scenarios.

AI-Driven Solutions in Action

1. Automating GRC Documentation

- Generative AI tools analyze previous submissions, guidelines, and regulations to draft comprehensive reports.
- Example: A utility company reduced GRC preparation time by 40% using AI to create cost-of-service studies (COSS) and stakeholder reports.

2. Dynamic Cost Forecasting

- AI integrates operational cost data from various departments to provide precise, real-time forecasts.
- Example: Forecasting power supply costs improved by 25%, enabling more accurate budgeting and resource planning.

3. Enhanced Stakeholder Communication

- GenAI processes stakeholder inputs and generates targeted communication strategies, including FAQs and blogs.
- Example: An AI system handled 90% of regulatory comment queries, ensuring faster and more accurate responses.

Case Study: Modernizing Rate Case Preparation

- **Challenge:** A U.S.-based utility faced delays and inconsistencies in preparing GRC submissions, risking regulatory penalties.
- **AI Solution:** GenAI streamlined data collection, automated report generation, and ensured compliance with regulatory standards.
- **Outcome:** GRC approval time decreased by 30%, while operational costs for submission preparation dropped by 20%.

Key Benefits

- **Time Savings:** Automates repetitive tasks, reducing preparation and analysis time.
- **Improved Accuracy:** AI-driven insights eliminate errors and enhance decision-making.
- **Enhanced Transparency:** Real-time data sharing fosters trust with regulators and stakeholders.
- **Cost Efficiency:** Optimized resource allocation and reduced operational costs.

Conclusion

The utility sector is poised for transformation with Generative AI. By streamlining processes like GRC preparation, cost forecasting, and stakeholder engagement, AI empowers utilities to operate more efficiently and responsively.

Glyphs Advisory can guide your utility in adopting GenAI, ensuring a seamless transition to smarter, more agile operations. [Contact us today to get started!](#)