Revolutionizing Utility Property Accounting with Artificial Intelligence

Society of Depreciation Professionals

Annual Conference

September 15, 2025

Safe Harbor

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Today’s Speakers

Aaron Smith

Director, Product Management

POWERPLAN®

Graham Miller

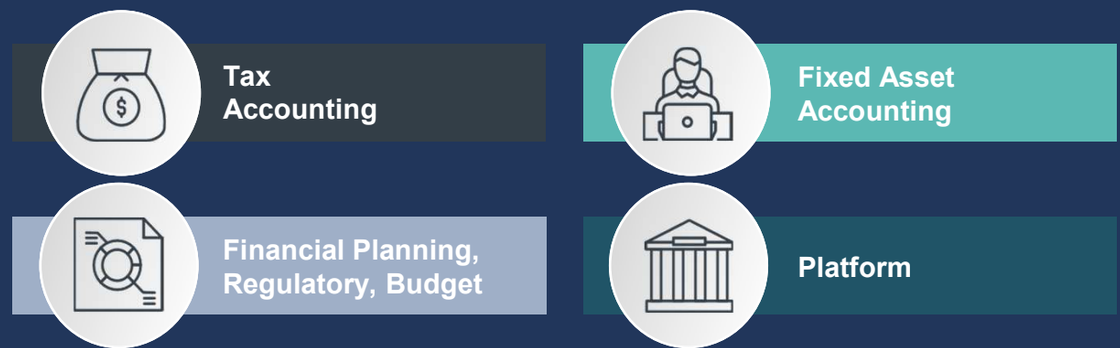
Director, Product Management

POWERPLAN®

Empowering Those Who Power The World

31 Yrs in Industry	**370** FTEs	**~200** Customers
88% Of IOUs use PowerPlan	**$4 Trillion** PP&E supported	**99%** Customer Retention

Best in class solutions that serve the unique and complex needs of Utility & Asset-Intensives CFO's



POWERPLAN®

Core Market

Utilities

Adjacent Markets

Midstream **Rail** **Telecom**

Over 85% of Revenue From Core + Adjacent Markets

Agenda

- Today’s Challenges
- Applications
- Deep Dive – Accelerate Work Order Closings
- Professional Considerations
- The Future
- Q&A

Today’s Challenges

Industry Trends

- Over 13 GW of fossil generation was scheduled to retire in 2025.[1] Current administration and reliability must-run agreements are impacting this forecast.
- Data center power demand expected to more than double from 2024 (46 GW) to 2029 (105 GW).[2]
- Small water IOU experiencing double digit growth in capex the last 4 years 2022 (13%), 2023 (11%), 2024 (14%), 2025 (15% projected).[3]
- Sample of utilities showed 3-5 year capex plans increased from 5% to 40% and projected compound annual growth in rate base between 7% and 10%.[1]

Year	April 2025 Fcst[2]	Oct 2024 Fcst[3]	Forecast Increase	% Increase
2025	$212	$192	+$20	+10%
2026	$222	$196	+$25	+13%
2027	$228	$197	+$31	+16%
Total	**$662**	**$585**	**+$76**	**+13%**

in Billions

Sources:

1. ScottMadden, Energy Industry Update Power Brief – Spring 2025

2. S&P Global Market Intelligence, https://www.spglobal.com/market-intelligence/en/news-insights/research/energy-utility-capex-predicted-to-top-1-trillion-from-2025-through-2029

3. S&P Global Market Intelligence, https://www.spglobal.com/market-intelligence/en/news-insights/research/energy-eutility-capex-plans-on-track-to-all-time-highs-from-2025-to-2027

State of the Industry

Navigating 2025 and beyond

Growing Demand Pressure

Data Center Explosion

- Data centers now consume **4.4%** of total U.S. electricity, projected to reach **6.7-12%** by 2028. **75%** of top 35 utilities report increased demand from data centers.

AI & Manufacturing Renaissance

- AI workloads and domestic manufacturing reshoring driving unprecedented load growth.
- Utilities need **$36-60 billion** by 2030 for grid infrastructure to support data centers alone. Equipment lead times extended to **2+ years**.

Cost Recovery Challenges

Rate Pressure Reality

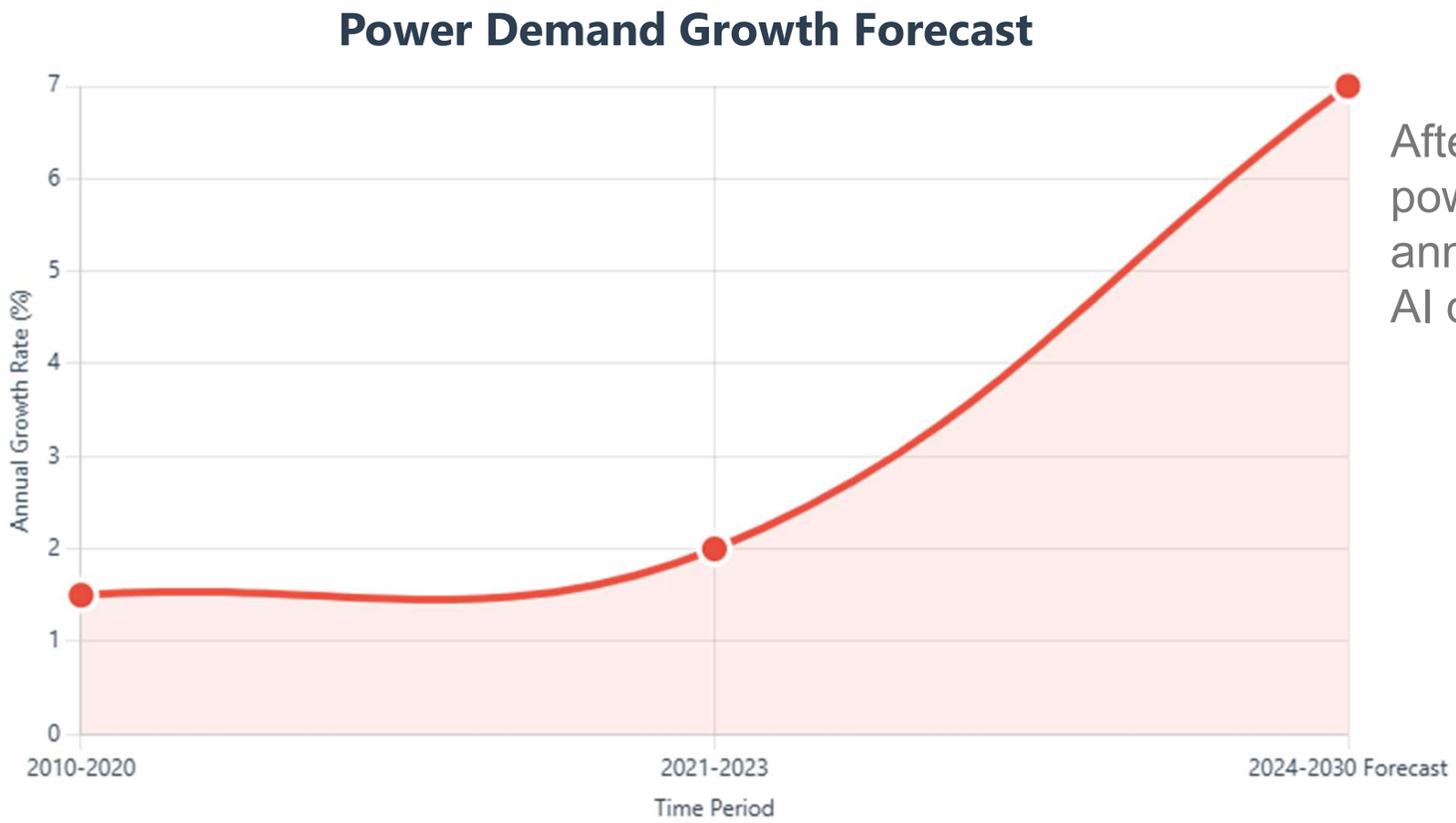
- Customer electricity prices up **4.5%** nationally (vs. 2.4% inflation). Regulators authorized **$9.7 billion** in rate increases in 2023, double 2022 levels.

Affordability vs. Investment

- OBBBA – Clean Energy Credits changes
- Regulators balancing grid modernization needs against customer bill impacts. Some rate cases seeing significant pushback and reduced approvals.
- Shift toward performance-based regulation and away from traditional cost-of-service model gaining momentum

Large Load Cost Allocation

- New tariff structures emerging to prevent data centers from shifting infrastructure costs to residential customers.



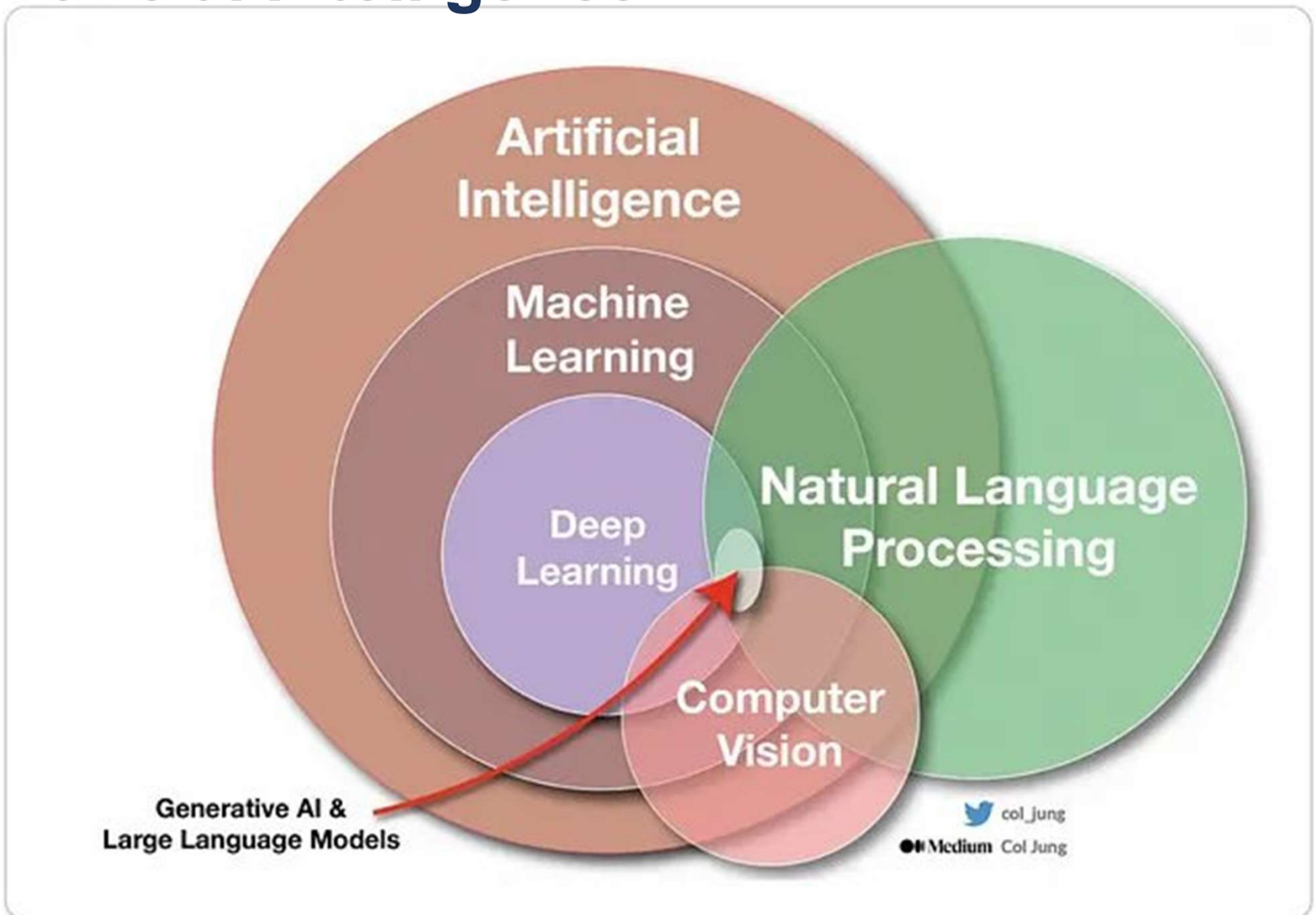
After a decade of 1-2% annual growth, power demand is forecast to grow 6-8% annually over the next 10 years, driven by AI data centers and electrification

Historical low growth transitioning to high growth driven by AI data centers and electrification

Source: S&P Global Ratings

AI Application

Types of Artificial Intelligence

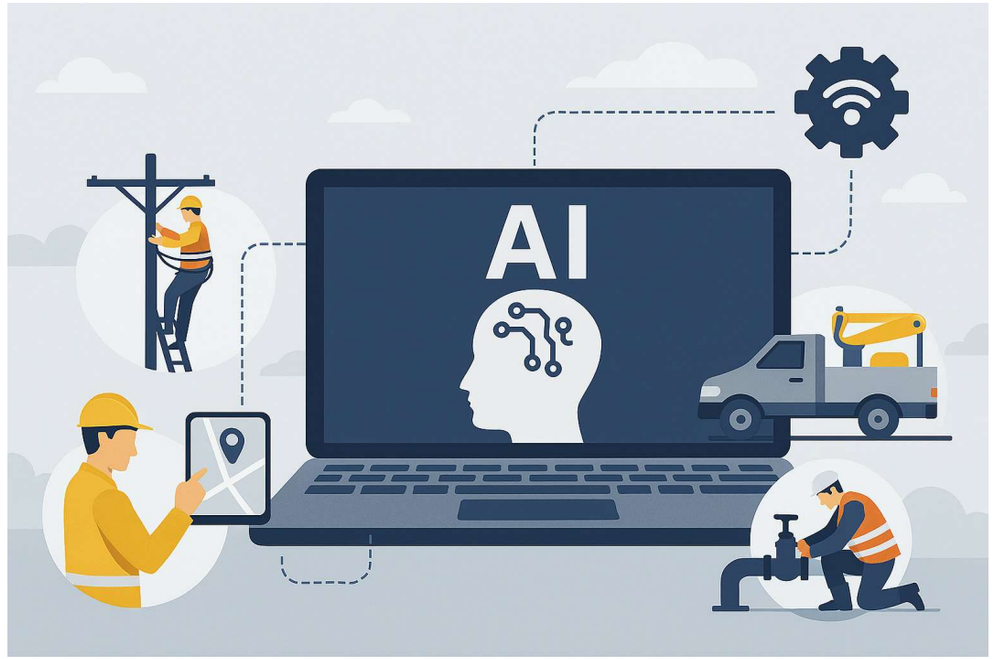


AI in the Utility Industry

Opportunities our customers see

- Early AI use has been more focused in other departments, such as customer service and field operations.
- Some categories in accounting include
  - Data Analytics & Insights
  - Business Efficiency & Optimization
  - Combined Analytics across Business and Field Ops
  - People & Internal Support
  - Research
  - Legal/Contracts/Documents

- Policies are wide ranging
  - Most are encouraging employees to use AI
  - Establishing (or updating) governance and focused internal teams
  - Handful have a zero-AI policy



What AI tools are you using today?

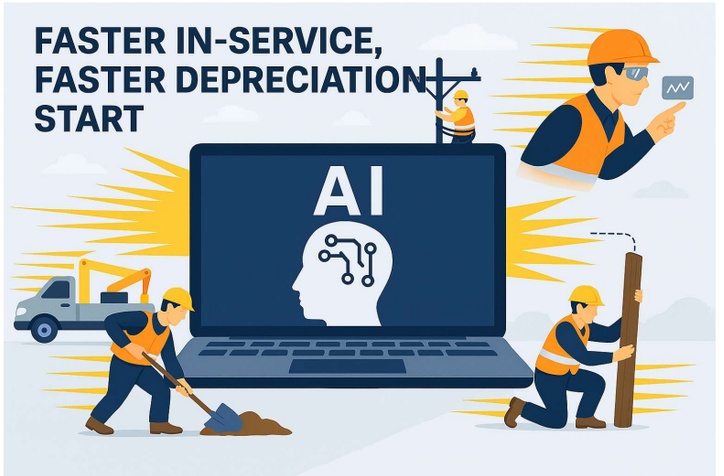
Generated with Microsoft Copilot

Prompt: Create an image of a fun and excited presenter polling the audience about their use of AI tools

What we've heard from customers

Challenges AI can help solve

- **Manual Unitization Processes**
  - Construction work orders requiring detailed asset breakdown
  - Time-intensive review of invoices, work descriptions, and specifications
  - Inconsistent classification decisions across projects and personnel
  - Months-long delays from construction completion to in-service accounting
- **Regulatory Compliance Complexity**
  - FERC USoA requirements with 100+ property accounts
  - State-specific modifications and requirements
  - Continuing property records maintenance
  - Annual compliance reporting with thousands of data points
- **Data Integration Challenges**
  - Multiple source systems: ERP, GIS, WMS, PowerPlan
  - Inconsistent data formats and naming conventions
  - Manual reconciliation between systems with different levels of detail
  - Data quality issues



Deep Dive

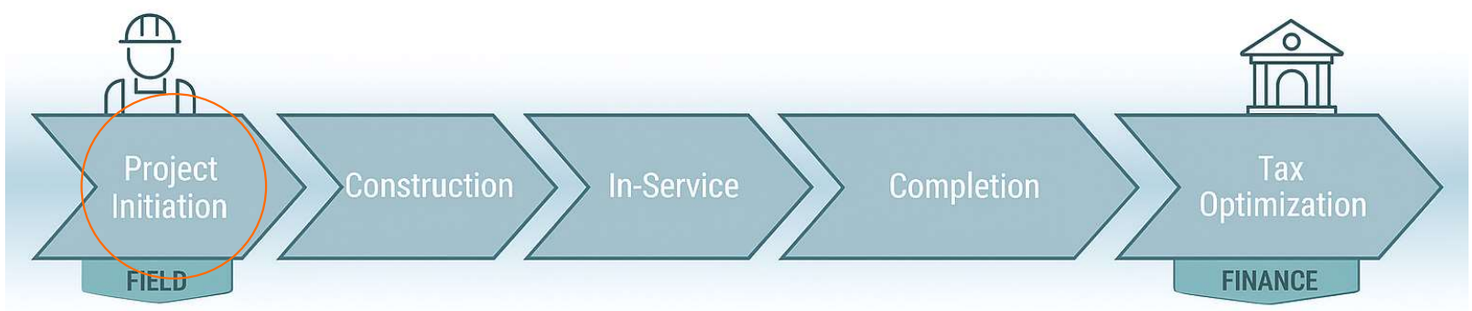
Distribution System Upgrade Program

- $2.3 M upgrade of a circuit.
  - WO analysis – dozens of work orders
  - Classification Engine – hundreds of assets to build and retire
  - Cost Allocation/Unitization – thousands of charges and estimates
  - Regulatory Compliance – Accurate reporting across 15 FERC plant accounts
  - Optimization – Priority, Timing for studies and filings, Impact on rates

Work Order Analysis

Distribution System Upgrade Program

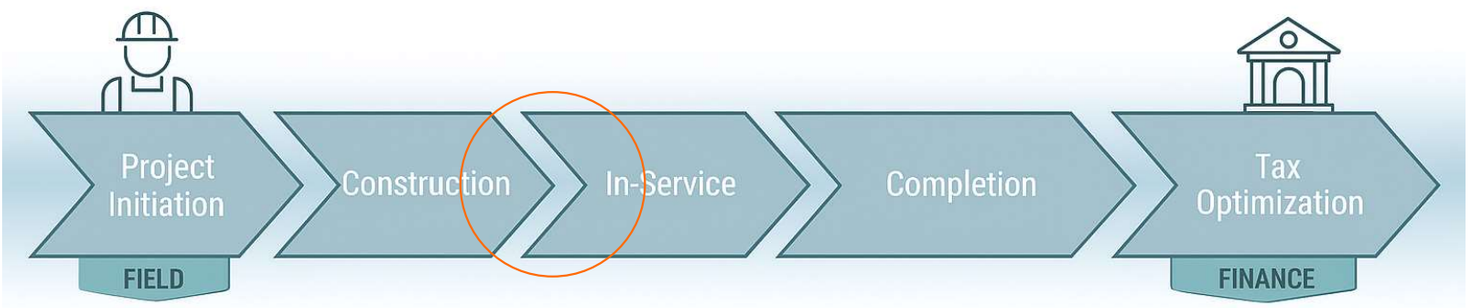
- Project description is "Install 2.5 miles of 15kV underground cable, replace 3 pad-mounted transformers (75kVA each), install 12 new service pedestals, relocate existing switching equipment"
- AI Parsing Results:
  - Underground Cable: 13,200 feet → Account 365 (Underground Conduit)
  - Transformers: 3 units, 75kVA → Account 368 (Line Transformers)
  - Service Equipment: 12 units → Account 369 (Services)
  - Switching Equipment: Relocation → Retirement processing required



Classification Engine

Distribution System Upgrade Program

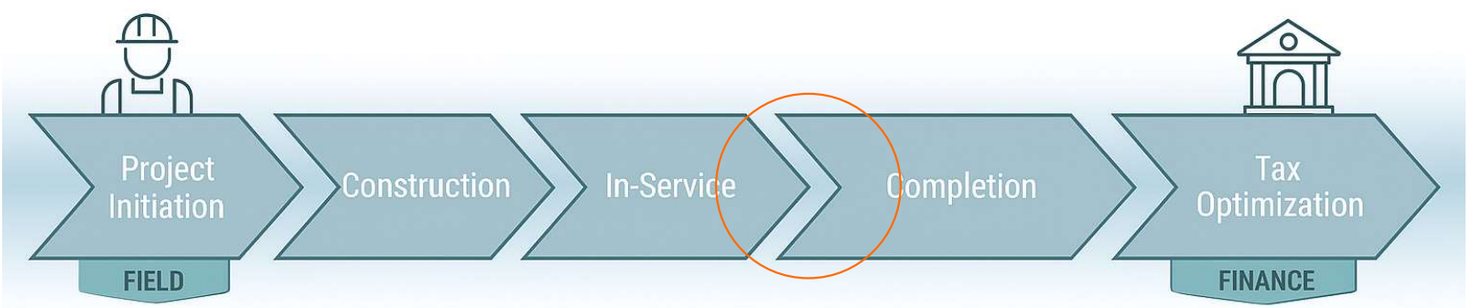
- **Machine Learning Model:** Trained on 10+ years of utility property records
- **Classification Logic:** Considers equipment type, voltage, location, function
- **Confidence Scoring:** Assigns probability scores to each classification decision
- **Exception Flagging:** Items below 85% confidence flagged for additional review



Cost Allocation

Distribution System Upgrade Program

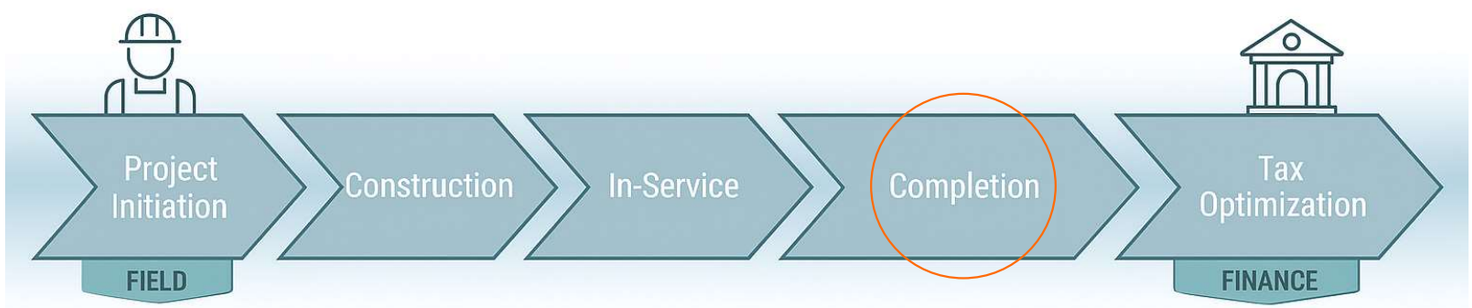
- **Invoice Processing:** Optical Character Recognition (OCR) extracts costs from vendor documentation
- **Automatic Allocation:** AI distributes costs based on material specifications and labor descriptions
- **Unit Cost Validation:** Compares against historical unit costs for reasonableness
- **Variance Analysis:** Flags unusual cost patterns for additional review



Regulatory Compliance

Distribution System Upgrade Program

- **USoA Validation:** Ensures all classifications comply with FERC requirements
- **State Modifications:** Applies jurisdiction-specific accounting rules
- **Continuing Property Records:** Generates required asset records based on capitalization policy
- **Depreciation Update:** Verifies appropriate depreciation rates and predicts impact to expense



Examples of Proactive Insights

Construction Monitoring

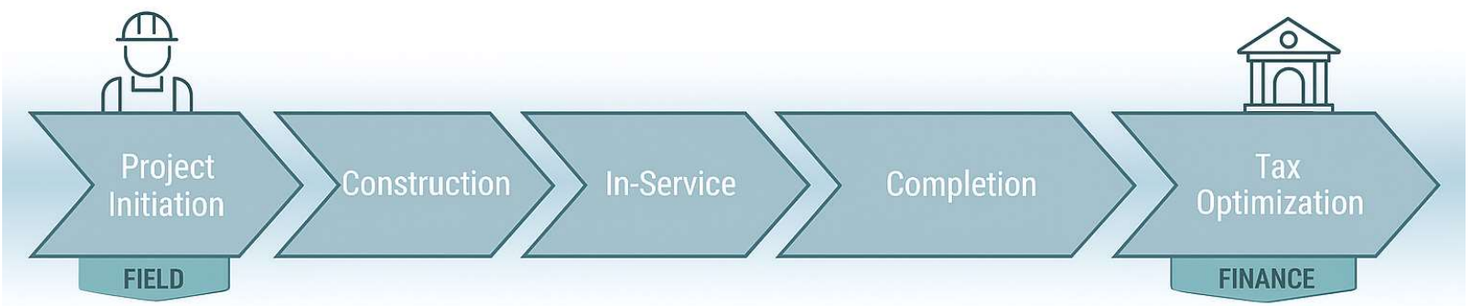
- AI tracks project milestones and predicts completion dates
- Enables proactive property accounting preparation
- Optimizes in-service timing for rate recovery

Depreciation Impact

- Real-time calculation of accumulated reserve impact
- Impact analysis on service lives due to retirements
- Alignment with depreciation study preparation timelines

Cost Recovery Optimization

- Recommendations for project completion sequencing
- Regulatory lag reduction strategies



Professional Considerations

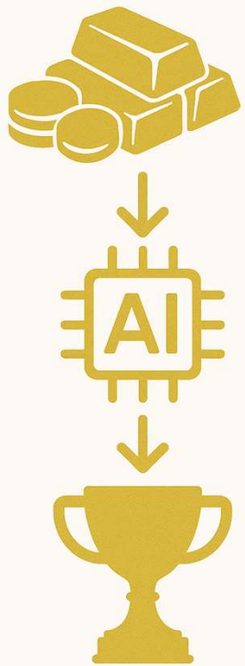
What should I be thinking about?

- AI Best Practices
  - **Transparency**: Disclose AI methodology and avoid “black box” results
  - **Validation**: Benchmark to existing methods and repeat over time
  - **Sensitivity** Analysis: Demonstrate robustness of AI with varied inputs and identify when not to use AI
  - **Expert Judgement**: AI is a tool, you must still apply professional judgement
- Learning opportunities
  - AICPA and CPA Canada have guidance and professional development for AI in the accounting field
  - NARUC is offering courses: *Artificial Intelligence for Utility Regulators: Navigating Opportunities and Risks* (March 2025) and *Artificial Intelligence (AI) and Regulation* (April 2026)
- Ethical Requirements
  - Model Bias
  - Professional Responsibility
- Regulatory Commission acceptance of AI
  - Not aware of any formal announcement or guidance yet from federal or state regulators

not If, but When

Some Ideas for how to get started with AI

- For Companies:
  - **Data Audit:** Assess current data quality [GIGO] and availability
  - **Pilot Project:** Start with one asset class or service territory
  - **Vendor Evaluation:** AI vendors and AI-enhanced software options
  - **Staff Training:** Build internal AI literacy
- For Regulators:
  - **Policy Development:** Guidelines for AI-enhanced study acceptance
  - **Technical Expertise:** Staff training on AI evaluation
  - **Industry Collaboration:** Work with utilities on best practices
- For Consultants:
  - **Capability Building:** Invest in AI tools and staff training
  - **Partnership Strategy:** Collaborate with tech firms or hire data scientists
  - **Client Education:** Help clients understand AI benefits and limitations

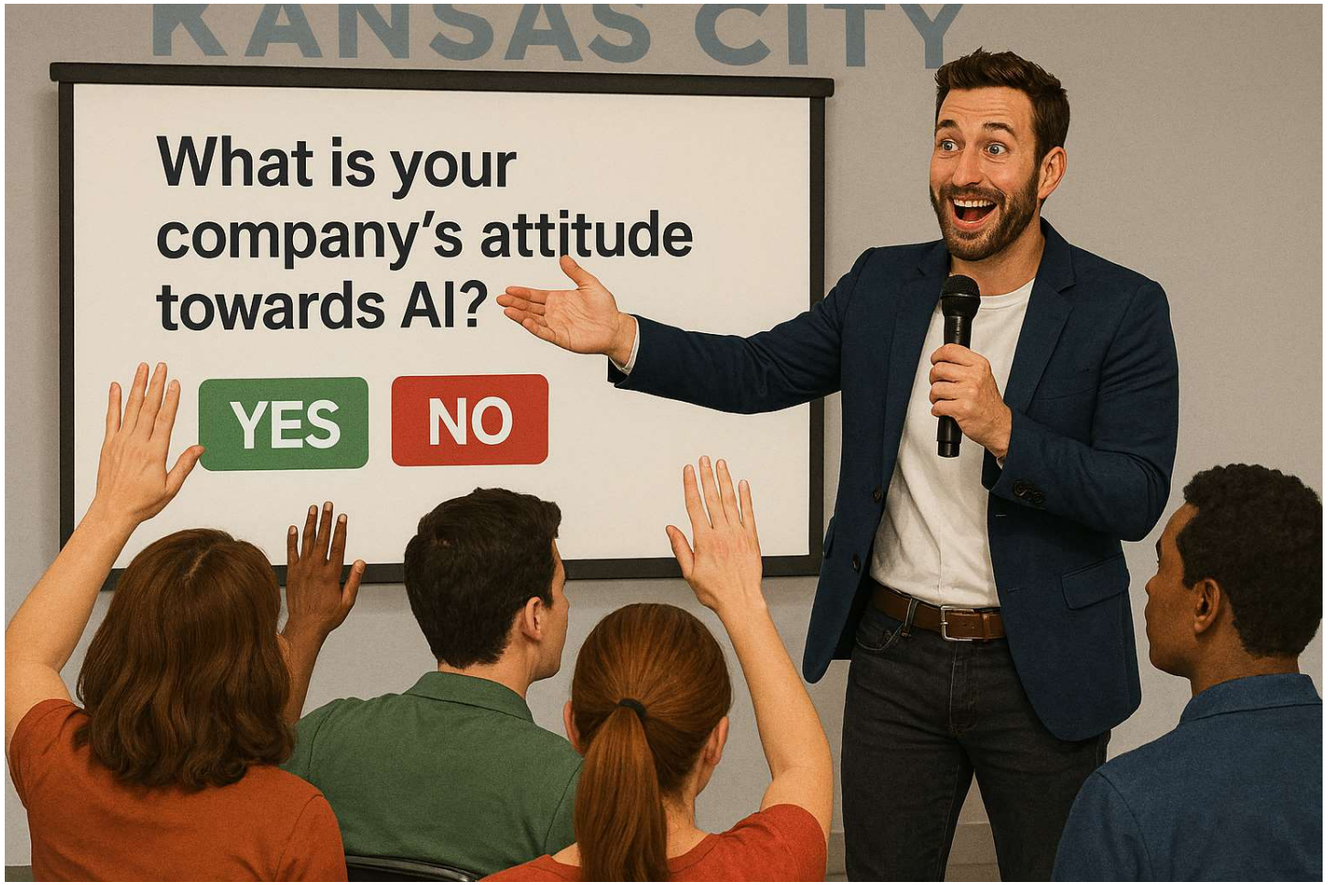


Key Themes to follow on your AI Journey

Images Generated with Microsoft Copilot
Prompt: give me a futuristic image for <“theme“>

The Future

What is your company’s attitude towards AI?



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Second Prompt: Update the picture to make it more realistic, clear that the conference is in Kansas City, and change the question to "What is your company's attitude towards AI?"

What’s real in the future of finance and AI

Where are we in the AI transformation journey

- Recent Big 4 surveys show striking disconnect between AI interest and actual implementation
- McKinsey’s “Seizing the Agentic AI Advantage” finds that 78% of companies use GenAI but 80% see no business impact
- Surveys reveal what researchers call the “AI paradox” – high interest but low implementation

For regulated utilities, this transformation presents unique opportunities and challenges around compliance, rate-making, and operational efficiency

McKinsey Insights

Gen AI Paradox - Widespread AI Deployment, Minimal Business Impact

- 78% of companies now use gen AI in at least one business function
- 80% report NO material contribution to earnings from gen AI initiatives
- Only 1% of enterprises view their gen AI strategies as mature
- Fewer than 10% of vertical use cases make it past pilot stage

Mindset transformation complete – now execution must follow

Q&A

Thank You