WHITE PAPER

POWERPLAN

NAVIGATING
ERP TRANSFORMATION IN OIL & GAS:

Strategic Considerations for Finance Leaders

Executive Summary

Oil and gas companies are in the midst of a significant enterprise resource planning (ERP) transformation cycle. Current market data reveals that less than 60% of the industry has adopted next-generation ERP platforms, yet only 9% of those who have transformed are realizing their expected value[1]. As finance and IT leaders evaluate their organizations' technology roadmaps, understanding both the transformation landscape and the specialized requirements unique to asset-intensive energy operations becomes critical to achieving successful outcomes.

The Current State of ERP Transformation in Oil & Gas

The oil and gas industry is experiencing substantial movement in enterprise systems modernization, though adoption remains incomplete. **Implementation timelines vary significantly based on scope and complexity, with comprehensive transformations typically requiring 16-18 months for accelerated projects and multi-year commitments for large, geographically distributed organizations.**

Perhaps most concerning is the substantial gap between investment and outcome - with nearly three-quarters of companies falling short of expectations. Technical debt created by heavy system customization, insufficient attention to industry-specific requirements, and underestimation of change management complexity are commonly cited issues with delivering on ERP transformation promises.

Research indicates that many companies have "plateaued" in their digital transformation journeys, often due to lack of alignment between digital and business leaders, absence of centralized governance, and siloed implementations creating "islands of automation." These organizational challenges compound the technical complexities inherent in large-scale systems transformation.

Understanding the M&A Context

Oil and gas ERP transformation initiatives are occurring against the backdrop of unprecedented industry consolidation. The sector experienced more than $400 billion in acquisitions during 2024—a three-year high and record-setting year.[2]

This M&A activity creates additional pressure on enterprise systems. Organizations must not only modernize their core ERP platforms but also ensure these platforms can rapidly integrate acquired entities. Leading companies are developing "IT M&A toolkits" with pre-configured templates, data migration programs, and automated integration processes specifically designed to onboard acquisitions efficiently within their ERP environments.

Critical Success Factors for Transformation

Organizations that achieve successful ERP transformation outcomes exhibit several common characteristics. These success factors span organizational, technical, and change management dimensions.

- **Phase Zero Planning:** A clear ERP vision, including all financial systems, sets the foundation for an outcomes-driven approach. This important groundwork is Phase Zero, an essential step that precedes all other pieces of the project. Phase Zero is where critical decisions are made about technology architecture, vendor partnerships, and process optimization that will impact your organization for the next 20+ years.

- **Leadership Alignment and Governance:** Strong partnership between digital and business leaders from strategy through execution proves essential. Centralized innovation committees with structured decision-making frameworks help maintain clear alignment between digital initiatives and business needs.

- **Early Tax, Property Accounting, and Regulatory Engagement:** Early engagement avoids rework by incorporating tax requirements up front and identifying opportunities for after-tax cash flow optimization early in the project.

- **Change Management Investment:** Organizations that allocate appropriate change management resources achieve faster time-to-value and higher user satisfaction with ERP transformations. Often, the change management leader is from outside the organization and implements business process redesign along with comprehensive training programs for departments touched by the transformation project.

Understanding Industry-Specific Requirements

Understanding where standard ERP platforms adequately serve oil and gas operations versus where they require augmentation is critical for successful transformation planning.

The Regulatory Risk Landscape

FERC's 2025 Enforcement Report reveals an intensifying pattern of financial exposure created by inadequate asset accounting and tax management capabilities. The Division of Audits and Accounting completed 10 audits across electric, gas, and oil pipeline companies, resulting in 63 findings of non-compliance and directing an estimated $80 million in refunds and recoveries—a 75% increase from the prior year. These audits can extend 12-18 months and create substantial organizational disruption beyond the immediate financial impact, as personnel redirect effort from normal responsibilities to audit response and remediation activities. With compliance findings increasing 15% year-over-year, the trend demonstrates FERC's heightened scrutiny.[3]

For oil and gas pipelines specifically, FERC identified several recurring compliance failures that standard ERP systems cannot adequately address:

Depreciation Management Failures: Pipelines have been found using unapproved depreciation rates, applying incorrect depreciation methods without proper authorization, and relying on outdated depreciation studies. These errors have led to asset groups showing negative book values and result in overstated carrier property values, inflated depreciation expenses, and consequently inflated cost of service calculations. When companies must remediate years of incorrect depreciation, the financial impact compounds through adjustments to accumulated depreciation, deferred taxes, and regulatory liabilities.

Asset Classification and Capitalization Errors: Pipelines have incorrectly classified idled property as carrier property instead of noncarrier property, and misclassified maintenance expenses—such as replacement of minor items of property—as capital investments. This creates a cascade of financial impacts: overstated asset values, incorrect depreciation expense, inflated cost of service calculations, improper tax deductions, and ultimately penalties when discovered.

AFUDC Calculation Deficiencies: The Allowance for Funds Used During Construction (AFUDC) represents both significant tax impacts and compliance risk. Gas transmission companies have been found erroneously using parent company consolidated balances rather than regulated pipeline balances, failing to include appropriate debt balances, using capital structures exceeding overall rates of return, and improperly including items like undistributed earnings. These errors result in misstated AFUDC balances which can be subject to penalties or remeasurements that are retroactive.

FERC Reporting Non-Compliance: Oil pipelines demonstrated inaccurate or incomplete reporting across multiple schedules, including incorrect input balances on Page 700 (Annual Cost of Service-Based Analysis), misapplied interstate allocation percentages, unfiled cash management agreements, and missing required journal entry approvals. The complexity of maintaining accurate FERC reporting across multiple disconnected systems—typically ERP for general ledger combined with spreadsheets for detailed asset data—creates significant compliance risk.

Tax Compliance Complexity: For the approximately 50% of the oil and gas market structured as Master Limited Partnerships, tax compliance demands exceed standard ERP capabilities. MLP structures impose extremely compressed timelines—unit holders including senior executives require K-1 distributions by April 15, long before most companies complete their tax close processes. This timeline demands specialized automation for rolling up hundreds of thousands of asset activities to tax record level detail and summarizing into reportable unit holder information, while maintaining a detailed audit trail.

These compliance failures have proven persistent across multiple audit cycles. The 15% increase in findings between FY2024 and FY2025, coupled with the 75% increase in financial impact, indicates that FERC is both expanding audit scope and imposing more substantial remediation requirements—making specialized compliance capabilities increasingly critical for midstream operators.

The Specialized Capabilities Required

To avoid the risks documented above, oil and gas operations demand capabilities that extend well beyond generic ERP functionality:

Asset Management: Handling large volumes of self-constructed, widely-distributed assets across multiple jurisdictions; managing long construction cycles with detailed work-in-progress tracking and AFUDC optimization; supporting granular book asset record-keeping at operational detail levels; and automating asset componentization and unitization from field data.

Regulatory Compliance: Automated FERC reporting with systematic reconciliation to GAAP books; support for both market-based and cost-of-service rate structures; MLP tax structure support with rapid K-1 generation turnaround; and systematic support for M&A activity including acquisition integration and divestiture carve-outs.

Financial Optimization: Detailed tracking for cost recovery optimization; AFUDC recognition optimization balanced against CPI minimization; book-to-tax synchronization with optimization of tax benefits; support for forecasting and scenario analysis for asset valuations; and enhanced decision-making through granular data availability to appropriate stakeholders.

Organizations attempting to manage these requirements within ERP consistently face the operational risk and data integrity issues that FERC audits uncover—risks that translate directly to multi-million-dollar financial exposure.

Customization Risks and Realities

ERP customization represents one of the most significant risk factors in transformation programs. While customization can theoretically address functionality gaps, it creates substantial downstream consequences that organizations often underestimate during planning phases.

- **Technical Debt and Maintenance Burden:** Heavy ERP customization creates technical debt that compounds over time. Each custom development introduces maintenance requirements, testing complexity, and potential points of failure. When ERP vendors release updates, patches, or new features, customized systems require additional validation and potential rework to ensure compatibility—work that organizations with "clean core" implementations avoid entirely.

  Industry data shows that organizations with heavily customized ERP implementations face significantly higher total cost of ownership and longer, more complex upgrade cycles. Leading organizations' recent transformations from highly customized legacy systems to standardized cloud ERP using "fit-to-standard" approaches illustrate the industry shift toward minimizing customization even for large, complex organizations.

- **Cloud Strategy Alignment:** Customization also jeopardizes cloud transformation objectives. Cloud ERP benefits—including automatic updates, scalability, reduced infrastructure costs, and access to emerging capabilities like artificial intelligence—diminish significantly when organizations implement heavy customization. Custom code often prevents organizations from adopting new cloud features or requires substantial rework to maintain compatibility.

- **Implementation Risk and Timeline:** Customization extends implementation timelines and increases program risk. Each custom requirement demands additional design, development, testing, and training cycles. Organizations attempting to replicate all legacy system functionality through ERP customization often find their transformation programs extending far beyond original schedules and budgets.

A STRATEGIC APPROACH:

ERP Plus Specialized Solutions

Herein lies the problem: ERP customizations are bad for business, but operating with significant gaps in industry-specific functionality is unacceptable due to the regulatory risks created.

How do oil and gas companies overcome this challenge? Leading organizations are adopting a best-of-breed approach that combines cloud ERP for core financial management with specialized solutions purpose-built for industry-specific requirements. This architectural approach enables organizations to maximize ERP out-of-the-box capabilities while addressing oil and gas operational complexities with proven, industry-standard solutions, such as PowerPlan.

Benefits of the Integrated Approach

Organizations adopting an integrated approach by combining cloud ERP with specialized solutions for asset-intensive requirements consistently achieve superior outcomes across multiple dimensions.

Financial Optimization: Specialized solutions provide granular data foundations that improve cash flow through optimized tax, regulatory, and accounting cost recovery. The ability to maximize available tax incentives through detailed tracking, automated calculations, and enhanced forecasting accuracy with robust depreciation and budgeting tools drives measurable financial benefits.

As an example, a company with granular fixed asset data integrated with tax compliance can automatically evaluate all capital projects to optimize their tax repair deduction and drive a more informed tax strategy.

Program Risk Reduction: ERP transformation programs face inherent execution risk. Organizations reduce this risk by avoiding heavy ERP customization, leveraging out-of-the-box established practices, utilizing cloud-managed service models with predictable operating expenses, and accessing deep industry expertise during critical design and implementation phases.

The proven success of specialized solutions across asset-intensive companies, and increasingly within oil and gas, provides confidence in their ability to deliver required functionality without the risk profile of custom development or unruly excel files.

Compliance Assurance and Audit Readiness: Specialized solutions help ensure accurate representation of SEC, regulatory, and IRS guidance through purpose-built capabilities. They systematically address nuanced accounting and regulatory rules that would otherwise require error-prone manual processes or risky ERP customizations. This compliance assurance becomes particularly important as regulatory requirements evolve. Specialized vendors proactively update their solutions to address new guidance, while custom ERP modifications require ongoing maintenance to remain compliant.

The 2025 FERC Enforcement Report, with a 15% increase in findings year over year, underscores the importance of systematic compliance capabilities. Organizations with robust, purpose-built compliance systems demonstrate faster audit cycles and fewer findings than those with custom ERP functionality or manual processes.

The enforcement report highlights that many findings stem from inadequate coordination between accounting, tax, and regulatory functions. Purpose-built solutions that maintain integrated book, tax, and regulatory ledgers with detailed audit trails and automated reconciliation capabilities directly address this organizational risk, enabling the cross-functional collaboration that is critical to FERC compliance.

Operational Efficiency: Integrated approaches deliver operational efficiency by eliminating offline spreadsheets, reducing manual processes, automating workflow and approval routing, and providing detailed, auditable data supporting enterprise capital lifecycle management. Organizations report saving thousands of manhours by moving from spreadsheet-based processes to systematized workflows, while simultaneously improving data quality and reducing error rates.

Finance professionals can also redirect efforts toward higher-value activities including strategic analysis, business partnering, forecasting/scenario planning, and process improvement. This workforce evolution aligns with broader organizational objectives to maximize the value delivered by finance functions.

CONCLUSION:

Building for Sustainable Success

ERP transformation in oil and gas organizations represents both significant investment and substantial opportunity. The current market dynamics, with less than 60% of companies having modernized their ERP platforms and only 9% of transformations delivering expected value, underscore the importance of strategic planning and execution excellence.

Success requires recognizing that, in many cases, no single ERP platform can optimally address all requirements for asset-intensive energy operations. Cloud ERP platforms excel at core financial management, but they lack the specialized depth required for complex fixed asset accounting, regulatory compliance, tax optimization, and operational reporting unique to oil and gas.

By adopting integrated approaches that combine cloud ERP with specialized financial solutions, unique industry requirements can be achieved. This architectural strategy enables clean ERP implementations that preserve cloud benefits while ensuring comprehensive functionality through proven industry solutions. The result: reduced program risk, optimized financial outcomes, systematic compliance, and operational efficiency that frees finance teams for higher-value strategic work.

As companies evaluate their transformation roadmaps, the critical question is not whether to modernize, but how to modernize strategically. This involves making architectural decisions that position the organization for both near-term success and long-term competitive advantage. The organizations that architect their ERP transformation to address both core financial management and industry-specific compliance requirements will realize the full promise of cloud transformation.

PowerPlan provides mission-critical software for the highly specialized world of midstream oil and gas companies. Our solutions are designed to compliment ERP systems by delivering specialized financial capabilities essential to financial success. With decades of experience in the oil and gas market, we have a deep understanding of the industry problems facing IT and finance departments during ERP transformations. **Scan or visit PowerPlan.com to learn more.**

[1] EY Future of Energy Survey in Oil, Gas & Chemicals (https://www.ey.com/en_us/energy-resources/ey-future-of-energy-survey#tabs-d3c8caceb8-item-ecf440019a-tab)
[2] Bain & Company: M&A in Energy & Natural Resources (https://www.bain.com/insights/energy-and-natural-resources-m-and-a-report-2025/)
[3] FERC "FY2025 Report on Enforcement" (https://www.ferc.gov/news-events/news/fy2025-report-enforcement)

PowerPlan began with a simple realization: The more fixed assets an organization has, the more challenging it is to manage them financially and to strategically understand how compliance requirements impact the treatment of each asset. Our founders saw ERPs and EAMs alone didn't capture enough data to optimize decisions, so they built the first software platform that combined granular financial and operational asset data from every corner of the organization; filling the gaps ERPs and EAMs could not provide. For more information, please visit powerplan.com.