EY Digital Energy Enablement Platform
Connecting operations with the business

Powered by the Microsoft Power Platform, Microsoft Dynamics 365, Microsoft Azure and Microsoft Office 365, EY DEEP provides an open platform that enhances innovation, supports better decision-making, improves efficiency and reduces time and cost.

The solution:
• Provides a common data model that delivers data integrity across multiple user interfaces, improving end-user confidence in a single source of truth
• Supports future digital solutions, such as artificial intelligence (AI), machine learning and predictive analysis
• Enables standard and custom analyses of complex processes for faster and more iterative engineering designs and scenario or contingency planning

EY DEEP Energy Enablement Platform (DEEP) connects operational, production, financial and reporting data, providing business context to carbon management

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<th>Challenges</th>
<th>Operational data inputs</th>
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<th>Reporting</th>
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<td>Operational and production data are ingested to a certain extent, but are viewed from a compliance standpoint, not an operational status.</td>
<td>Data historians</td>
<td>Well planning tools</td>
<td>Challenges</td>
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<td>Current systems are focused on regulatory emissions reporting and engineering calculations, have nascent AI/ML capabilities and lack modern data visualization without addressing carbon management.</td>
<td>IoT</td>
<td>Operational planning tools</td>
<td>• Carbon emissions reporting is done quarterly at best and is reported at a very high level.</td>
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<td>Carbon emissions may be calculated, but not with enough granularity for scenario planning or carbon management.</td>
<td>Gas chromatographs</td>
<td>Multiple SAP systems</td>
<td>• Carbon emissions information is displayed in only a regulatory context, with supporting systems focused on disclosure and not analysis.</td>
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Modern air emissions platform

- Challenges:
  - Operational and production data are ingested to a certain extent, but are viewed from a compliance standpoint, not an operational status.
  - Current systems are focused on regulatory emissions reporting and engineering calculations, have nascent AI/ML capabilities and lack modern data visualization without addressing carbon management.
  - Carbon emissions may be calculated, but not with enough granularity for scenario planning or carbon management.

- Operational data inputs:
  - Data historians
  - IoT
  - Gas chromatographs

- Business tools:
  - Well planning tools
  - Operational planning tools
  - Multiple SAP systems

- Reporting challenges:
  - Business tools are currently tied to operations, but are not tied to carbon emissions tracking.
  - There is no ability to incorporate carbon pricing, regulatory and market shifts, or sequestration cost into financial forecasting and planning.
  - There is an ability to incorporate carbon intensity or pricing in financial reporting.
Building a better working world

How can intelligent AI agents use data from the modeling state and culture, we can help our clients move faster and create sustainable value by transforming processes and regulations.

Better insight and transparency into carbon emissions standpoint.

Benefits

• Long-term value creation through rebalanced portfolio
• Cross-enterprise spending, aligned with strategic carbon reduction goals
• Ability to forecast potential financial impacts, identify investments in carbon mitigation and better understand the relationship between production, emissions and finance

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The EY DEEP value proposition

What questions should I ask myself in the future?

Data-driven decisions

- How do I increase the frequency of data availability?
- How do I improve the accuracy of my data?
- How do I streamline data collection and processing?
- How do I inform operational decisions with my data?
- How can my data forecast future emissions?

Finance

• Continued investment in outdated assets based on legacy processes and regulations
• Investments that do not account for market and regulatory shifts
• Reactive capital allocation siloed within business units

Future state

• Proactive centralized capital allocation model, incorporating carbon pricing, cost of sequestration and demand shifts as variables when planning for capital allocation
• Automated data analysis to identify and solve potential problems pertaining to carbon management and sequestration
• Carbon emissions and intensity as variables in operational and planning activities, and plans that are altered to optimize from a carbon emissions standpoint

Operations

• Carbon management not currently incorporated into operations
• Automated data analysis to identify and solve potential problems pertaining to carbon management and sequestration
• Carbon emissions and intensity as variables in operational and planning activities, and plans that are altered to optimize from a carbon emissions standpoint

C-suite

• Lack of alignment of risk functions with decarbonization strategic objectives
• Enterprise-wide key risk indicators aligned to decarbonization strategy
• Real-time dashboards with forecasting, scenario planning and initiative tracking
• Access to investor-grade carbon emissions data

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As changing demand and pricing volatility transforms the oil and gas industry, companies must reshape to thrive in this new energy world. But how do you balance the immediate cost and regulatory pressures of “now” with investment in what comes “next”? EY’s Global Oil & Gas team brings together the breadth of expertise and capabilities needed to approach the entire production process — by considering four key pillars of change: structure and culture, customers, technology, and skills and capabilities. We can help you adapt for today and reap the opportunities of tomorrow. And together we can build a better working world.

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