# Energy sector digital transformation faces regional divides and challenges for smaller suppliers



The energy sector is experiencing a significant digital transformation characterised by the adoption of innovative technologies such as B2B eCommerce, cloud computing, blockchain, and artificial intelligence (AI). These advances promise to enhance supply chain efficiency, reduce operational costs, and streamlining procurement processes. However, a considerable digital divide exists across different regions, resulting in a fragmented global landscape that particularly challenges smaller and rural suppliers in keeping pace with rapid technological progress.

Mimi Stansbury, CEO of OFS Portal, highlights this growing digital divide, noting that while regions like the European Union (EU) have made substantial achievements through initiatives like OpenPEPPOL—a standardised digital invoicing and procurement system—other regions, especially North America and Asia-Pacific (APAC), are still reliant on paper-based processes. Many energy companies in these areas continue to use manual procedures such as paper and PDF invoices and physical checks, which introduce inefficiencies and delay, disproportionately affecting smaller suppliers who may lack the resources necessary to modernise.

Unlike the EU, where standardised e-invoicing and digital procurement processes are mandated, North American firms have no national regulatory compulsion to adopt similar systems. This absence of a uniform approach leads to a patchwork of manual processes that are costly, prone to error, and time-consuming. Within the EU itself, differences in national requirements for invoicing, procurement, and payment processing add further complexity. For instance, countries beyond the EU, such as Colombia and Malaysia, have implemented their own unique electronic invoicing models—DIAN and MyInvois respectively—further fragmenting the digital landscape.

These regional variations compel energy companies to invest in diverse, often expensive technologies to comply with local regulations, which do not always integrate smoothly with existing systems. As such, the benefits of digital commerce and procurement remain unevenly realised, with businesses operating within a complicated and costly environment.

Moreover, government-led digital commerce initiatives, while useful, still fall short of achieving widespread industry adoption and lack comprehensive data protection measures. With vast amounts of sensitive data exchanged throughout supply chains, robust security protocols are essential but often incomplete in current frameworks.

The digital divide has profound implications for smaller suppliers, particularly those in rural or underserved areas. Limited access to broadband internet, digital banking, and financial technology often forces these suppliers to rely on traditional communication such as fax, phone, and postal mail. Financial constraints further hinder their ability to upgrade digital infrastructure, leaving them excluded from opportunities afforded by digital supply chains such as improved efficiency, cost reductions, and transparency.

This exclusion impacts procurement practices by reducing supplier diversity, as smaller companies may not meet the technical or financial criteria required by digital procurement platforms. The reliance on manual processes also contributes to inefficiencies and delays, obstructing real-time visibility, traceability, and automation benefits critical to managing complex supply chains.

To address these challenges, there is a growing call for more standardisation and regulatory alignment across regions. The EU’s success with OpenPEPPOL demonstrates how a unified, interoperable system can streamline transactions and increase transparency. However, regions like North America lack a national e-invoicing mandate, resulting in a patchwork of systems and processes.

Mimi Stansbury emphasises the need for structured approaches in North America, suggesting that national e-invoicing standards could improve interoperability, reduce fraud, and speed up financial transactions. One promising model is the Digital Business Network Alliance (DBNAlliance), a cross-industry initiative providing a standardised e-invoicing platform with strong data protection safeguards. Unlike government mandates, DBNAlliance has achieved notable industry adoption and offers robust security features comparable to those utilised by OFS Portal.

In addition to regulatory reform, bridging the digital divide demands investment in technology infrastructure and support for smaller suppliers. Government subsidies, incentives, and training programmes are recognised as vital mechanisms to help overcome financial and knowledge barriers, enabling smaller and rural suppliers to integrate into digital ecosystems more effectively. Efforts to expand broadband access and improve internet connectivity will also play a key role in fostering inclusion.

Some digital tools have already proved effective and cost-effective for smaller suppliers. OFS Portal, for example, has successfully implemented solutions like its Catalog Management and Syndication system, which standardises price books, automates workflows and approvals, and supports invoice matching. These tools streamline operations, improve accuracy, and reduce overhead for suppliers of varying sizes.

OFS Portal itself is a long-established leader in digital energy supply chain solutions, founded by major oilfield service firms including ABB, Baker Hughes, Halliburton, Schlumberger, and Weatherford. The organisation’s network connects hundreds of operators and service providers worldwide, facilitating secure electronic catalogue and service agreement transactions with a commitment to data security and compliance.

Mimi Stansbury, who was appointed CEO of OFS Portal in March 2024, previously served as Senior Vice President of Finance and Administration and also holds leadership roles with PIDX International and the Digital Business Network Alliance. She has led efforts to develop policies and guidelines supporting the US Exchange Framework and digital business network deployment.

Looking ahead, the successful digital transformation of energy supply chains is envisioned as an inclusive, interoperable ecosystem uniting large enterprises with smaller and more remote suppliers. This requires coordinated efforts to harmonise standards, increase accessibility, and provide the necessary financial and educational support to smaller players. A comprehensive framework that addresses regulatory, technological, and operational challenges is crucial to unlocking the full benefits of digital technologies, which include improved efficiency, visibility, and sustainability across the global energy sector.

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