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Energy efficiency: Europe's untapped advantage

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Europe stands at a crossroads. With ambitious 2030 climate targets requiring an 11.7 percent reduction in energy consumption¹ and geopolitical tensions pressuring energy supply and costs, the continent faces a fundamental question: can it execute at the scale and speed required?

New research from ABB, surveying 2,700 senior industrial decision-makers across 15 countries, reveals a paradox. Awareness of energy efficiency's impact on profitability is widespread. Technology exists today. Investment is happening. Yet results remain fragmented.

For European manufacturing, the stakes are existential. As global competition intensifies, end-to-end energy intelligence - the integrated use of technologies, data, and expertise to optimise how energy is produced, managed, and consumed system-wide - has become inseparable from manufacturing excellence itself.

The stakes: competitiveness, security, and industrial leadership

Energy consumes roughly 25 percent of operating costs across European industry. In manufacturing, where net profit margins are often measured in single digits, this burden directly determines competitiveness. Approximately 60 percent of companies report that rising energy costs continue to threaten profitability. For European manufacturers, controlling energy costs and consumption is not a sustainability challenge. It's an imperative for competitiveness.

But energy efficiency delivers more than cost savings. It delivers resilience and security. Every kilowatt-hour saved is one less unit of imported energy, one less exposure to geopolitical volatility, one less vulnerability in Europe's energy system.

¹ As established by the revised Energy Efficiency Directive.

While Europe excels in engineering sophisticated products, it struggles to optimise the systems that manufacture them. Factories deploying cutting-edge technology yet operate motor-driven systems at efficiency levels from decades past. According to IEA², less than 25 percent of industrial motors globally run with variable speed drives, leaving massive efficiency potential untapped in the systems that power machinery, compressors, pumps, conveyors, and cooling.

And as electricity demand surges across industries, energy efficiency becomes even more critical - because it directly reduces the impact of this surge on consumption.

The execution paradox: high intent, fragmented results

Capital is no longer the primary constraint. 73 percent of companies cite data and organisational obstacles, not cost, as their main barriers. The execution gap has replaced the awareness gap, with 90 percent of European companies having already invested or about to invest in energy efficiency, and 59 percent ready to deploy AI-driven analytics for energy optimisation.

Yet our research³ reveals activity across almost every efficiency initiative, hinting at experimentation rather than system change.

Four barriers stand out:

- 1) **Financial misalignment.** While 79 percent agree lifecycle costs should guide decisions, only 28 percent consistently apply this logic. Upfront capital constraints still dominate, even when lifecycle savings are clear.
- 2) **Data fragmentation.** 25 percent lack data for remote energy analysis; 24 percent have poorly organised data. Responsibility scatters across finance, operations, maintenance, sustainability, and executive teams - with no clear owner. You cannot optimise what you cannot measure.
- 3) **Capability deficit.** 47 percent of companies cite workforce resistance to technology and/or digital skills shortages. Advanced manufacturing also requires advanced energy engineering capabilities.
- 4) **Disruption concerns.** Manufacturers most exposed to energy costs are often most reluctant to assess their consumption. 29 percent cite operational disruption as a top barrier - second only to cost. Opposite to energy appraisals, traditional on-site audits require equipment access, process interruptions, and careful coordination. When unplanned stoppages are expensive or dangerous, protecting uptime overrides efficiency action.

How policy can unlock execution

As the European Commission prepares its post-2030 energy and climate framework, policymakers can unlock execution at scale through targeted enablers:

- **Recognise energy appraisals alongside traditional energy audits.** Remote appraisals use existing operational data to identify inefficiencies and model improvements without stopping production. They transform energy efficiency from periodic projects into ongoing operational discipline.

² IEA's Energy Efficiency 2025 <https://www.iea.org/reports/energy-efficiency-2025/executive-summary>

³ [End-to-End Energy Intelligence: Closing the Efficiency Execution Gap](#), "a global study of 2,700 senior decision-makers across 15 industries and 15 countries, conducted by ABB Motion Services in partnership with Sapio Research (December 2025-January 2026).

Between November 2024 and February 2026, ABB screened over 21,000 industrial motor-driven systems across the globe. Among these, 13,700 were prioritised and appraised, identifying average energy savings of 33 percent - equivalent to approximately 2,000 GWh annually.

- **Foster lifecycle thinking in public investment.** Embed lifecycle cost requirements in public procurement and Clean Industrial Deal implementation. The total cost of ownership is the game changer. When public projects model lifecycle value thinking, rather than upfront costs alone, they shift market expectations across the industrial base.
- **Invest in energy intelligence capability and the workforce to match it.** We need energy engineers who understand manufacturing, data scientists who understand energy systems, and cross-functional teams who act on insights.

The time to act is now

The technology exists today. Investment intent is real. The post-2030 policy framework represents a pivotal moment. By recognising low-disruption pathways like remote appraisals, embedding lifecycle thinking in public investment, and building energy intelligence capabilities, policymakers can set Europe's manufacturers on a more competitive, resilient and future-ready path.

About the author

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Erich Labuda is President of ABB's Motion Services division. Since 2023, he has led a global team with a presence in more than 60 countries, helping industries operate at high performance and become more productive, efficient, and sustainable.

Erich joined ABB in 2011 through the company's Swiss Executive Trainee Program. Since then, he has held leadership roles in corporate strategy, business development, and marketing at both the ABB Group level and the ABB Motion Business Area level. In 2024, he was appointed to the Executive Committee of the Energy Efficiency Movement. Since October 2025, he has also served as ABB's representative to Orgalim, supporting Europe's manufacturing and technology industries.

Erich graduated from the Technical University of Munich (TUM) with a diploma in business administration and mechanical engineering.

Orgalim represents Europe's technology industries, comprised of 770,000 innovative companies spanning the mechanical engineering, electrical engineering, electronics, ICT and metal technology branches. Together they represent the EU's largest manufacturing sector, generating annual turnover of over €2,972 billion, manufacturing one-third of all European exports and providing over 11,9 million direct jobs. Orgalim is registered under the European Union Transparency Register – ID number: 20210641335-88.