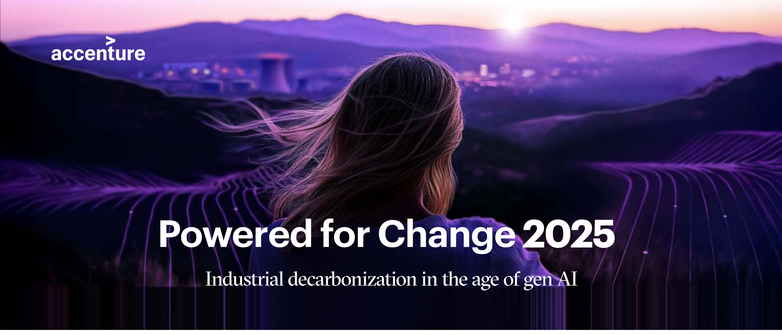


Powered for Change 2025

Industrial decarbonization in the age of gen AI

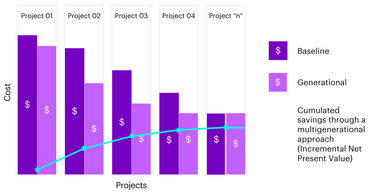
Decarbonizing heavy industry is one of the biggest hurdles to reaching net zero by 2050—it's also one of the biggest levers for transformative progress.

In 2023, our *Powered for Change* research explored the need for industrial decarbonization—why it matters and where to start. This year's research shows how to make it real, by scaling net-zero infrastructure rapidly and cost-effectively by applying a multigenerational approach.

Think renewables, hydrogen, carbon capture, nuclear and more.

It's time to rethink how we build the future.

A multigenerational approach delivers compounding cost reductions over time.



Notes: H2 demand based on IEA WEO 2024 NZE 2050 scenario. NPV calculation based on delta LCOH between base and optimized scenario, 7% WACC, discounted from 2025-2050. The fossil fuel-based gray hydrogen is expected ton increase in line with carbon tax, at $70-80/t CO2 today, $150/t in 2037 and $300/t in 2050.

Source: Accenture S-curve model.

We have identified four critical levers to accelerate industrial decarbonization:

Lever 1

Scale efficient, resilient supply chains

Minimize cost volatility and shorten lead times by building cohesive supply chain partnerships that use standardized designs and modularized components.

Lever 2

Foster community support and customer demand

Align decarbonization efforts with community needs, earning stakeholder buy-in while accelerating project approvals.

Lever 3

Rethink talent, skilling and workflows

Tap the potential of gen AI to reimagine skilling and how work gets done—breaking down traditional siloes, automating repetitive workflows and empowering people to focus on the most meaningful, valuable tasks.

Lever 4

Establish a strong digital core to power AI learnings

Integrate AI, digital twins and ESG tracking across project portfolios, enabling real-time transparency and compounding cost reductions and innovation.

Green hydrogen provides a compelling example of how this approach can unlock significant benefits:

01

Accelerate cost parity

Scaling efficiency gains across a portfolio can bring cost parity for green hydrogen six years earlier than a project-by-project approach.

02

Unlock significant value

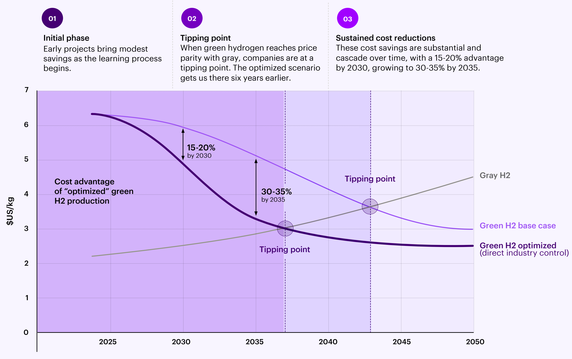
A structured, multigenerational approach could generate over $60 billion in value by 2050, when modeled by capturing just 5% of global green hydrogen demand.

03

Reduce capital expenditure

Cross-project learning drives capex reductions of up to 50% by the fifth project iteration—as demonstrated in the case of shipbuilding, explored in more detail in the report.

Optimized inverse S-curve, applied to cost evolution on green hydrogen projects



By adopting a long-term, multigenerational strategy, companies can break free from short-term cycles that have historically stalled large-scale decarbonization. This approach delivers compounding benefits—faster approvals, lower costs and greater market adoption—creating a self-reinforcing cycle of innovation and reinvestment.

From now until 2050, every project, investment and partnership must be made to count. Now is the time for industrial leaders to move beyond pilots, commit to scalable strategies and translate net-zero ambition into measurable business impact.

How Accenture can help

We create sustainable value and impact for our clients as they strive to activate industrial decarbonization and achieve net-zero carbon emissions.

We help companies formulate and advance their net-zero transition by focusing on:

- Net-zero strategy to set the decarbonization approach, monitor and measure performance
- Net-zero infrastructure to increase capital efficiency for the build of large low-carbon projects, including green finance approaches
- Net-zero plants and operations to transform existing infrastructure and operations, including energy efficiency, green energy procurement and connected energy
- Net-zero road transportation to implement strategies and logistics including fleet management, green finance and net-zero driver experience
- Net-zero products to ensure green product and market design, including eco-design, circularity and net-zero customer adoption
- Net-zero finance to support assessment of net-zero projects, including reporting and industry benchmarks, as well as optimizing access to funding and subsidies
- Carbon intelligence to build enterprise carbon intelligence through carbon measurement and accounting, as well as approaches to carbon removal

Access the full report: Powered for Change 2025

Contact us to learn more:
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