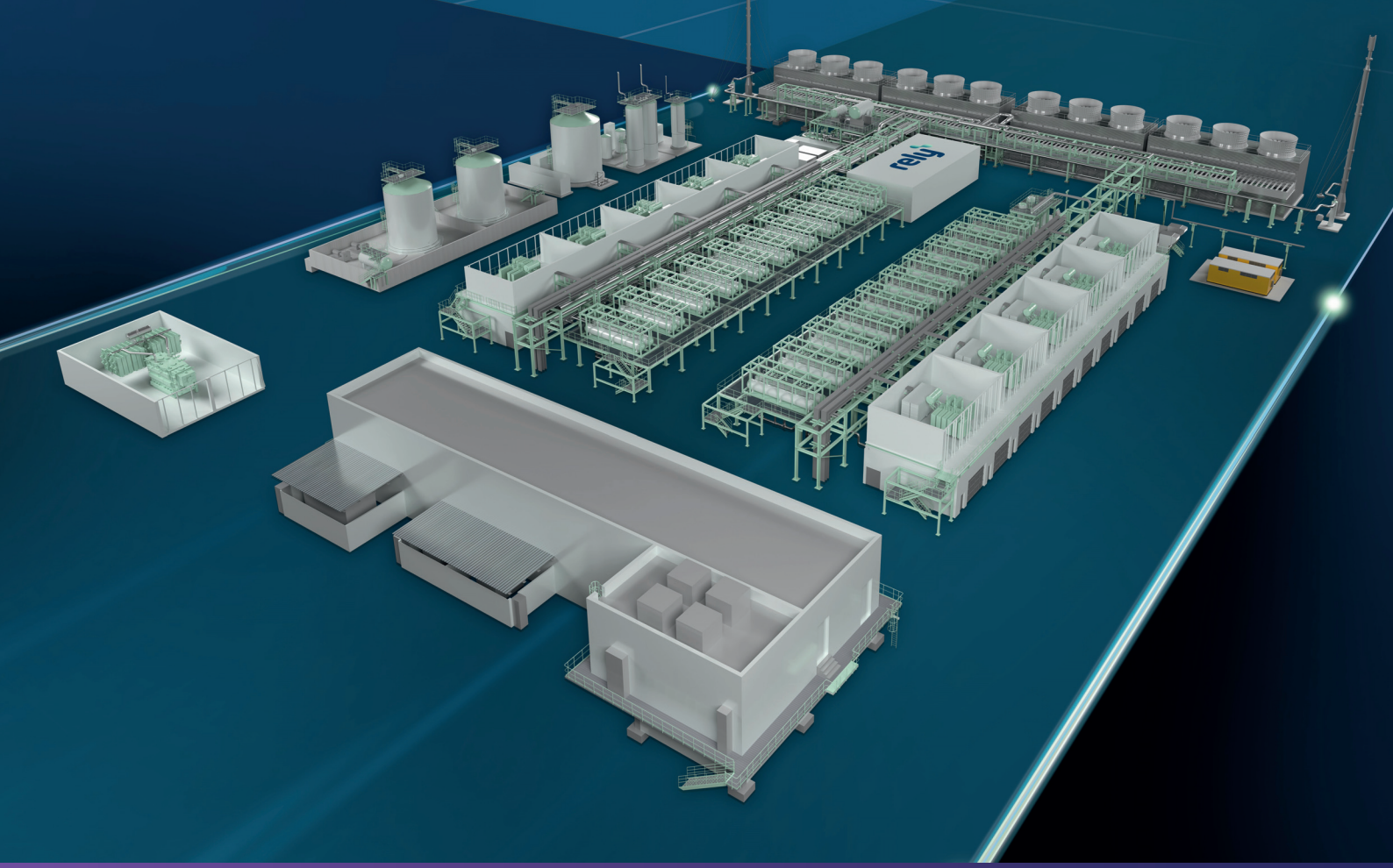


Clear100+

Rely: from engineering complexity to scalable solutions

The global push for decarbonization has positioned green hydrogen as one of key components of the energy transition. However, large-scale deployment remains constrained by high costs, fragmented supply chains, and long project timelines. Addressing these barriers, Rely – a joint venture between Technip Energies and John Cockerill – has introduced an innovative approach that combines standardization, seamless integration, and a fully wrapped project delivery model for green hydrogen and power-to-X. With its flagship product, Clear100+, Rely is transforming how green hydrogen plants are designed, built, and operated, making industrial-scale hydrogen production more efficient, cost-effective, and reliable.

By Matjaž Matošec

A new player with deep expertise

Founded in November 2023, Rely is a joint venture between two industry heavyweights: Technip Energies (T.EN) and John Cockerill. By combining T.EN's extensive experience in engineering, procurement, and construction (EPC) with John Cockerill's industrial engineering expertise, Rely has positioned itself as a transformative force in green hydrogen production.

"While many hydrogen companies emerge as start-ups, Rely brings the best of both worlds: the agility of a new player combined with the competencies and track record of proven industry

leaders," explains Claire Hénaut, Director of Products and Services at Rely. "Rather than forming loose partnerships, we established a dedicated company to provide a fully integrated and productized green hydrogen solution. This means that from the early project phases to full operations, our clients can rely on one entity to deliver a seamless, high-performing solution for green hydrogen and power-to-X (PtX) plants.

"While others in the market pursue integrated partnerships or productized plant solutions, Rely distinguishes itself by structuring these elements within a single entity. This approach ensures consistency, efficiency, and a high level of accountability throughout the project lifecycle."

Although Rely is a new company, it benefits from the resources and industry experience of its parent companies. "T.EN procures over €2 billion worth of equipment and materials annually, giving Rely access to an extensive supply chain network," says Claire. "We leverage the technical expertise of both T.EN and John Cockerill and gain valuable insights from their laboratory facilities, strengthening our ability to innovate and accelerate development."

Claire Hénaut, Director of Products and Services at Rely

At the same time, Rely is not merely an extension of its parent companies. While it leverages their expertise, its focus is different. "T.EN specializes in large-scale projects, whereas Rely is developing modular, highly cost-focused solutions," Claire explains. "We need to think differently, challenge conventional approaches, and bring fresh innovation to the market."

End-to-end solutions

Unlike conventional industry models where project developers must coordinate multiple suppliers, Rely provides a one-stop-shop approach, offering a single point of accountability across the entire lifecycle of a hydrogen project.

Clear100+ product owner Christophe Goddin presents at Rely's first seminar in 2023

> *"Clients don't just buy a plant from us – they buy certainty."*

From feasibility studies and permitting to EPC and operations & maintenance (O&M), Rely ensures seamless project execution.

"In this emerging market, many players are fragmented," says Claire. "Clients often purchase electrolyzers from an OEM but must then develop the balance of plant separately. Rely's fully integrated model eliminates these challenges by delivering a comprehensive, single-provider solution."

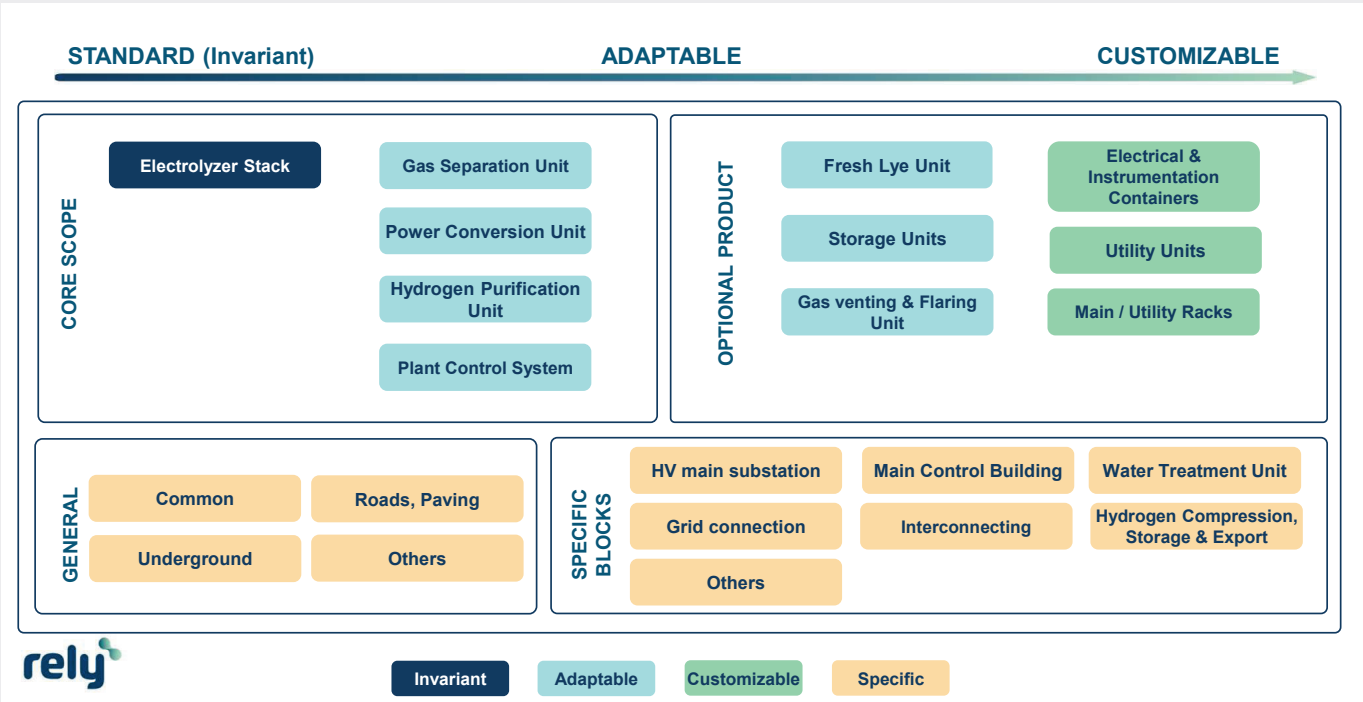
A key differentiator is Rely's performance wrap, which guarantees that its plants achieve the agreed efficiency, uptime, and production targets. "Clients don't just buy a plant from us – they buy certainty," says Claire. "We take responsibility for performance, ensuring predictability and cost control in an industry where uncertainty has been a major barrier. From stack replacement and electrolyte management to predictive maintenance and digital monitoring, we ensure our clients' plants continue to operate at peak performance."

Clear100⁺ – a productized green H_2 plant

At the core of Rely's approach is Clear100⁺, a pre-engineered, modular green hydrogen production plant designed to streamline large-scale production while ensuring cost efficiency and scalability.

"In the traditional industrial model, every hydrogen plant is designed from the ground up, which leads to high costs and long development cycles," explains Claire. "We have identified the invariant parts of a plant that can be standardized, allowing us to deploy repeatable solutions that maintain high performance while significantly reducing CAPEX."

"Productization means applying a standardized, repeatable model to hydrogen plant design," continues Claire. "In wind and solar, standardization has lowered costs and accelerated deployment. Green hydrogen must



'Plant as a product' maximizes standardization while embracing customization to manage complexity.

> *"We are moving away from one-off engineering projects towards scalable, repeatable solutions."*

follow the same trajectory. With Clear100⁺, we are moving away from one-off engineering projects towards scalable, repeatable solutions."

Clear100⁺ integrates John Cockerill Hydrogen's alkaline pressurized electrolyzers within a standardized plant design, balancing high efficiency, cost-effectiveness, and operational reliability. The plant is designed for capacities of 100 MW and above, offering 96% availability and an accelerated deployment timeline that reduces lead times by up to 12 months compared to conventional projects.

"As the market evolves, we will continue to optimize Clear100⁺ for gigawatt-scale applications," notes Claire. "Our goal is to ensure green hydrogen plants can be deployed faster, at lower cost, and with minimized risk."

Another critical aspect of Rely's productization strategy is the use of feedback loops to refine and improve Clear100⁺ continuously.

"We don't stop at the first iteration," says Claire. "Each project provides valuable data that feeds into our R&D process, allowing us to optimize efficiency, performance, and cost over time."

Technology at the core of Rely's approach

Technology is the driving force behind Rely's mission to industrialize green hydrogen. As the industry evolves, continuous innovation and investment are critical to bridging gaps in cost, efficiency, and scalability.

"When assessing the landscape, we found that approximately 50% of the technology needed to achieve the energy transition had not yet been developed or even identified," explains Claire. "This indicates enormous potential for innovation, and if we were not a technology-driven company, we would not be able to offer a true differentiator. That is why technology investment is a top priority."

Bridging the gap in the energy transition

Rely's mission is encapsulated in its slogan: 'Bridging the gap.' This refers to three key challenges the company seeks to address:

1. **Cost reduction** – Closing the price gap between green and fossil-based hydrogen through standardization, efficiency, and economies of scale.
2. **Technology integration** – Optimizing the electrochemical transformation process to maximize efficiency and reliability, effectively bridging the gap between the electron and the molecule.
3. **Transition acceleration** – Supporting the shift from fossil fuels to renewables by making hydrogen infrastructure more accessible and scalable.

Beyond commercial projects, Rely is investing in R&D to develop emerging power-to-X technologies, among others. The company also collaborates with John Cockerill Hydrogen through a joint innovation platform to accelerate technology development and industrial deployment of green hydrogen plants.

John Cockerill Hydrogen electrolyzer

"Being technology-based is not just about having the right tools – it is a mindset."

Claire emphasizes that technology at Rely is not just about hardware and systems but also about a way of thinking. "Being technology-based is not just about having the right tools – it is a mindset. At Rely, we cultivate this mindset across our team and through strategic collaborations. While we have selected John Cockerill Hydrogen as a key technology partner, we are continuously engaging with other partners to push the boundaries of innovation. Our clients expect this level of forward-thinking from us."

Balancing standardization and customization

While standardization is at the core of Rely's strategy, the company also recognizes the need for project-specific customization. To address different client requirements, Rely employs a two-pronged approach:

- **Productized solutions** – Clear100+ offers a highly standardized, ready-to-deploy green hydrogen plant.
- **Customized integration** – For clients requiring specific configurations, Rely provides tailored project execution, integrating technologies from multiple OEMs.

"We offer flexibility while maintaining the efficiency benefits of standardization," says Claire. "Clients can choose between a fast-deploy, off-the-shelf solution or a customized approach that meets their specific needs. If a client wants to work with different OEMs or integrate a hybrid technological solution, we have the flexibility to do so. As an integrator, we ensure seamless compatibility and optimize plant design accordingly."

Digital solutions to optimize performance and efficiency

Beyond engineering and hardware, digital solutions play a crucial role in monitoring, optimizing, and maintaining Rely's hydrogen plants. A key development is Rely's in-house Energy Management System (EMS), designed to optimize electricity use, maximize hydrogen production, and reduce operational costs.

"Our EMS enables anticipation, helping operators dynamically manage power demand, integrate with renewables, and ensure that both supply (power) and demand (green hydrogen or its derivatives) are properly balanced through robust planning capabilities," says Claire. "Given that electricity accounts for a significant share of costs, this tool ensures that hydrogen production remains as efficient and cost-effective as possible."

Alongside power optimization, predictive maintenance and real-time monitoring enhance plant reliability and safety. "By using advanced analytics, we can detect irregularities before they lead to failures. This is the goal," Claire explains.

To strengthen its EMS, Rely is also collaborating with technology partners specializing in grid management and power optimization. "We focus on what we do best while integrating expert solutions for power control," Claire notes. "This ensures clients receive a best-in-class digital platform for efficient, scalable hydrogen production."

Expanding the scope beyond hydrogen

In addition to green hydrogen production, Rely is actively engaged in PtX applications, converting hydrogen into valuable derivatives such as green ammonia, e-methanol, and e-SAF (sustainable aviation fuel).

The Rely team on the day of the company's inauguration

"Many clients are looking for sustainable molecules beyond hydrogen," explains Claire. "Green hydrogen will primarily replace gray hydrogen in refineries and fertilizer plants, but industries are also increasingly interested in e-fuels. Green ammonia, for example, is emerging as a potential key fuel for maritime transport, while e-methanol is another promising alternative. In aviation, e-SAF will play a critical role in decarbonizing the sector by the second half of the 2030s."

While Rely currently focuses on providing seamless integration of hydrogen production with downstream PtX applications, it also has ambitions to develop a productized solution in this space. "Our intent is to develop a PtX product that maximizes replication, standardization, and reuse – just as we have done with Clear100⁺," says Claire. "The challenge is greater because these processes involve multiple transformation steps, meaning there are more variables to manage. However, we see significant potential in green ammonia, which is not only an important feedstock for fertilizers but also a promising energy carrier and marine fuel."

By leveraging its expertise in technology integration and plant standardization, Rely is working to optimize PtX solutions, ensuring they are cost-effective and scalable for industrial deployment.

Driving the future of green hydrogen

Rely is more than just another hydrogen technology provider – it is a catalyst for industrializing green hydrogen. By merging EPC excellence with electrolyzer expertise, adopting a productized approach, and offering comprehensive lifecycle support through to O&M services, the company is helping accelerate the transition to a sustainable energy future.

"Green hydrogen is the cornerstone of the energy transition," concludes Claire. "With Rely, we are not just developing projects – we are building the infrastructure of a sustainable future."