Press Release

Fincantieri, *new*cleo and Pininfarina reveal the look of new nuclear power at the 19th International Architecture Exhibition of the Venice Biennale

The project will show for the first time a full-scale fourth-generation lead-cooled fast reactor for maritime applications, defining a new image for nuclear energy.

Venice, 8 May 2025 – Fincantieri, *new*cleo and Pininfarina have unveiled for the first time the look of next-generation sustainable nuclear power at the 19th International Architecture Exhibition of the Venice Biennale. Together, the three have embraced the challenge of presenting at the prestigious exhibition - curated by Carlo Ratti - one of the most advanced solutions in clean energy production and sustainable design to tackle two of today's most pressing challenges: climate change and decarbonization.

Combining technological vision, industrial expertise, and cutting-edge design, the three companies have collaborated to redefine the image of nuclear energy. Visitors are invited reimagine their preconceptions of nuclear power as they embark on a highly interactive journey exploring the extraordinary potential of atomic fission in combating climate change and decarbonizing human activities.

At the heart of the collaborative project, housed within Venice's historic Corderie dell'Arsenale, stands a full-scale reproduction of the TL-40 liquid lead-cooled nuclear reactor designed by *new*cleo, a safe, sustainable, and compact reactor specifically engineered for powering large maritime vessels and to produce energy in off-grid and isolated areas.

Guided through an immersive experience, visitors will discover the functioning of the reactor, its ability to burn waste produced by traditional nuclear power plants, and its passive safety features that make it the ideal solution for powering energy-intensive human activities in a sustainable and decarbonized manner.

Pininfarina has brought aesthetic and symbolic qualities that heighten the reactor's appeal and allure, while ensuring it remains accessible to the public. Visitors are presented with a reactor designed in an open configuration, allowing complete visibility from every angle and featuring numerous unexpected elements to create a sense of wonder.

Its distinctive silhouette, which is reminiscent of a grand vase, conveys a sense of suspension and weightlessness that dramatically contrasts with its actual mass of over two thousand kilograms. The exterior shell features a pattern of tightly arranged slats with a Moiré effect that accentuate its flowing contours, create sophisticated interplays of light and shadow, and impart a mesmerizing quality to the entire structure, which stands approximately five and a half meters tall.

Designed with an open-section approach, the reactor allows a direct view of its interior. The immersive experience in the heart of the machine allows visitors to immediately grasp the principles and processes that govern energy generation.

*new*cleo's fourth-generation small modular reactors represent a revolutionary approach to the challenge of decarbonization, addressing the perceived limitations of conventional nuclear power. The innovative lead-cooling system incorporates passive safety mechanisms that eliminate the risk of nuclear incidents through the laws of physics that govern the reactor's operation. Furthermore, these advanced modular reactors can eliminate waste from conventional nuclear reactors through a virtuous multi-recycling system, consuming it to produce clean, cost-effective, and virtually endless energy.

To illustrate these processes, the companies have set up a system for interactive visualization of data and information on nuclear energy and its role within the process of decarbonizing energy systems. The installation will reveal the effectiveness of nuclear energy in decarbonizing maritime transport, as well as the potential contained in existing nuclear waste stored in Europe, which would be sufficient to power the continent's electricity demand for hundreds of years.

Pininfarina has curated the project's creative vision by infusing *new*cleo's technological solutions with design, bringing for the first time to the nuclear industry a creative vision that mixes technical and aesthetic elements to facilitate its integration in urban and peri-urban environments.

Fincantieri has contributed to the project its extensive experience in shipbuilding, studying a possible industrial application for *new*cleo's innovative solution. Thanks to its track-record in managing complex projects, the company has ensured the integration of the naval sector's most advanced technological innovations, combining operational efficiency, sustainability, and safety.

The joint project is more than an installation, it is a declaration of intent. The three companies are already collaborating to realize their shared vision. Fincantieri and newcleo have been collaborating since 2023 to study applications of *new*cleo's technology for naval propulsion of *new*cleo's technology. Similarly, Pininfarina is collaborating with newcleo to design a nuclear fuel research and development center that will be built in France, in Chusclan in the Gard region.

Showcasing this collaboration at the prestigious 19th International Architecture Exhibition of the Venice Biennale provides a unique platform to present to the world an innovative, unprecedented, and forward-looking vision of nuclear energy—one that breaks from historical narratives and inspires a near-future where this inexhaustible clean energy source serves humanity by enabling the transformation toward a sustainable energy ecosystem.

Pierroberto Folgiero, CEO of Fincantieri, stated:

"*Fincantieri's vision has always been to anticipate the future through concrete, innovative, and sustainability-focused industrial solutions. Our collaboration with newcleo and Pininfarina at the 2025 Architecture Biennale marks a pivotal step in this direction, bringing to the maritime sector solutions that seamlessly integrate safety, efficiency, and environmental responsibility. This project exemplifies how technological innovation, industrial ingenuity, and design can converge to craft a new narrative for nuclear energy. At this historic moment when industry must decisively address both ecological transition and energy security challenges, we contribute our expertise in complex naval engineering and advanced technological system integration. The new generation of nuclear technologies is no longer merely a prospect—it's a tangible catalyst for exploring new application frontiers, beginning with the maritime sector."*

Stefano Buono, founder and CEO of *new*cleo, stated:

"*Through this installation, we're introducing the world to a new paradigm of clean, sustainable nuclear energy designed to serve people and communities. Moving beyond the large reactors of the past, we've developed small, inherently safe reactors that solve the nuclear waste problem while delivering abundant decarbonized energy. Together with Pininfarina and Fincantieri, we're unveiling a new vision for nuclear power engineered for forward-thinking societies that are committed to both progress and caring for the environment***."**

Silvio Angori, Vicepresident and CEO at Pininfarina, stated:

"*Design plays a strategic role in developing emerging technologies, particularly within sustainable energy solutions. It ensures the complete integration of social and environmental dimensions throughout the innovation process. Our partnership with newcleo and Fincantieri represents a tangible commitment to a future where design doesn't simply accompany technology but elevates it, creating meaningful impact in addressing climate change challenges and supporting the global transition toward decarbonization***."**

Notes to editors

About Fincantieri

Fincantieri is one of the world's largest shipbuilding groups, the only one active in all high-tech marine industry sectors. It is leader in the construction and transformation of cruise, naval and oil & gas and wind offshore vessels, as well as in the production of systems and component equipment, after-sales services and marine interiors solutions. Thanks to the expertise developed in the management of complex projects, the Group boasts first-class references in infrastructures, and is a reference player in digital technologies and cybersecurity, electronics and advanced systems. With over 230 years of history and more than 7,000 ships built, Fincantieri maintains its know-how, expertise and management centres in Italy, here employing over 11,000 workers and creating around 90,000 jobs, which double worldwide thanks to a production network of 18 shipyards operating worldwide and with over 22,000 employees.

About *new*cleo

Since launching in 2021 *new*cleo has quickly established itself as innovator in the field of nuclear energy. *new*cleo is working to design, build, and operate Gen-IV Advanced Modular Reactors (AMRs) that are cooled by liquid lead and fuelled by reprocessed nuclear waste. Through an innovative combination of existing and proven technologies, and by reviving a nuclear industry model based on the manufacture and multi-recycling of Mixed Oxide fuel, *new*cleo aims to close the nuclear fuel cycle while safely producing clean, affordable, and practically inexhaustible energy required for low carbon economies. With a EUR 50m group turnover in 2024, more than EUR 537m of private funding and over 100 partnerships and collaborations across the nuclear industry, the growth of the *new*cleo group is supported through the targeted acquisition of key companies with strong capabilities in nuclear engineering, manufacturing, and waste management. Through its workforce of over 1100 highly qualified employees across France, the UK, Italy, Switzerland and Slovakia, *new*cleo is not only developing and delivering the skills and services required for the group's own ambitious project timelines but also supporting the development of Small Modular Reactor supply chains in Europe and beyond.

About Pininfarina Architecture

A global icon of Italian style, Pininfarina is recognized for its unparalleled ability to create timeless works based on its values of technology and beauty. Pininfarina is headquartered in Italy and has offices around the world, with a design scope that includes transportation, industrial design, architecture/interiors, and automotive design. Many of Pininfarina Architecture's architecture and interior design projects span geographic locations such as Turkey (the Air Traffic Control Tower at Istanbul's New Airport), Brazil (e.g., Cyrela by Pininfarina, Heritage, Yachthouse), the United States (including The Concourse Club and Motorsport Tower), and Italy (Juventus Stadium in Turin, The New Stauffer Center for Strings in Cremona, Urban Lounge in Milan, The Cave in Bologna). It has won several international architecture awards, most recently the Green Good Design Award 2022 for Urban Lounge, the American Architecture Award 2020 with Yachthouse, the International Architecture Award 2020 for Sixty6, and the Red Dot Award 2019 for Bus Shelters for the City of Miami. With offices in Turin, Miami, and Shanghai, Pininfarina Architecture works with a Team of 50 professionals-trained at the world's leading academic institutions and research centers-with multidisciplinary backgrounds including, but not limited to, architecture, engineering, social sciences, and interaction design, linked by their professional experiences.

https://pininfarina.it/sectors/architecture/

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