

Pininfarina, Newcleo, and Fincantieri: The Future of Nuclear Energy at the Venice Biennale

The project will show for the first time a full-scale fourth-generation nuclear reactor with the aim of redefining the social image of nuclear power

Venice, May 8, 2025 – Pininfarina, a global icon of Italian design, leads **the creative vision of the innovative nuclear startup newcleo**, on the occasion of **the 19th International Architecture Exhibition - The Venice Biennale**. Together with **Fincantieri**, these three prestigious companies take up **the challenge of showcasing one of the most advanced clean energy production and sustainable design solutions**, thus addressing two of the most pressing issues of our time: climate change and decarbonization.

Combining **technological vision**, **industrial expertise and cutting-edge design**, the companies have collaborated with **the goal of redefining the social image of nuclear energy**, asking visitors to forget everything they know about it and let themselves be guided on a highly interactive journey to discover the extraordinary opportunities offered by fission of atoms in combating climate change and decarbonizing human activities.

At the center of the joint project, housed inside the Corderie of the Venice Arsenal, is a full-size reproduction of the TL-40 liquid-lead cooled nuclear reactor engineered by newcleo, a safe, sustainable and compact reactor.

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

Pininfarina has endowed the object with **a set of aesthetic and symbolic qualities that enhance its attractiveness and appeal**, while making it both ▸

explorable and accessible to public understanding. What is presented to the eyes of visitors to the Architecture Biennale is, in fact, a reactor conceived in **an open configuration**, entirely observable from all angles and enriched by multiple elements of surprise.

Its distinctive **shape**, **evocative of the lines of a large vase**, suggests **a sense of suspension and lightness**, in stark contrast to its actual mass of more than two thousand kilograms. The outer shell is distinguished by a moiré-effect motif of closely spaced lamellae, which enhances the sinuosity of the lines, generates refined plays of light and shadow, and lends an additional hypnotic effect to the entire structure, which is about five and a half meters high.

Conceived by designers with an open-section approach, **the reactor allows a direct view of its interior**. The immersive experience at the heart of the machine allows visitors to grasp with immediacy the principles and processes that govern power generation.

To make them even clearer, a system has been set up for interactive visualization of data and information on nuclear energy and its role within the decarbonization process of energy systems.

In fact, **the installation will reveal the effectiveness of nuclear power in decarbonizing marine transport**, as well as the potential contained in Europe's existing nuclear waste that would be sufficient to power electricity demand on the continent for hundreds of years. **The design conceived by Pininfarina** takes the form of a tool in the service of collective knowledge and awareness. Through a process of refined mediation, concepts of high complexity are translated into



accessible forms, yet without ever sacrificing scientific rigor and precision. This approach aims to contribute actively and responsibly to the challenge of social change, placing design at the crossroads of aesthetics, popularization and civic engagement.

Indeed, **newcleo's fourth-generation small modular reactors** represent a revolutionary approach to the decarbonization challenge by offering the answer to the perceived problems of traditional nuclear power. The innovative lead cooling system introduces passive safety systems that completely avoid ▸



the risk of nuclear accidents through the physical laws governing reactor operation. In addition, these reactors are able to eliminate nuclear waste generated by conventional nuclear power plants through a virtuous multi-cycle system that allows it to be burned generating clean, cheap and virtually inexhaustible energy.

It is also noteworthy that the installation presented in the **Architecture Biennale** is conceived according to **the principles of sustainable and circular design**. Indeed, it was aimed at eliminating waste, and extending the life cycle of materials while significantly reducing its environmental impact.

In fact, this work features a modular design that makes it easier - and therefore less impactful - to assemble, handle, and transport, thereby reducing carbon emissions. All of the elements that make up the installation will also find a second life after the exhibition, within a future newcleo location.

Within the collaboration, **Pininfarina** then oversaw the creative vision of the project by **infusing sustainable design into the technological solutions**, and bringing for the first time to the nuclear industry a creative vision that mixes technical and aesthetic elements to promote their understanding to a wide audience and, in the future, integration into urban and peri-urban environments.

Fincantieri complemented the project through **its extensive experience in shipbuilding**, **studying a possible industrial application** to the innovative newcleo solution. Thanks to its established know-how in managing complex projects, the company ensured the integration of the most advanced technological innovations in the shipbuilding industry, combining operational efficiency, sustainability and safety.

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

The unveiling of the collaboration within the context of the prestigious 19th International Architecture Exhibition of the Venice Biennale is a unique opportunity to show the world an innovative, unprecedented and futuristic vision of nuclear energy, far from the narratives of the past and capable of inspiring a near future where this inexhaustible source of clean energy will be at the service of humanity to enable the transformation of the energy system towards sustainable energies.

Silvio Angori, **Vice President and CEO of Pininfarina**, said: *"Design plays a strategic role in the development of emerging technologies, particularly in the context of sustainable energy solutions. In fact, it ensures a full integration of social and environmental dimensions in innovation processes. Our collaboration with newcleo and Fincantieri takes the form of a tangible commitment to a future in which design not only accompanies, but enhances technology, helping to generate real impact in the face of the challenges posed by climate change and the global transition to decarbonization."*

Giovanni de Niederhäusern, **Senior Vice President Architecture and Product Design at Pininfarina**, said: *"In a context focused on reducing consumption and renewable energy to minimize emissions, the collaboration with Newcleo offers Pininfarina the opportunity to contribute, through design, to a technology with the potential to revolutionize the energy sector. Design is essential to make the technology, its benefits and the low level of risk of next-generation nuclear reactors understandable."*

PININFARINA

A global icon of Italian style, 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 design work that includes transportation, industrial design, architecture/interiors, and automotive design. Many of Pininfarina's architecture and interior design projects span geographic areas such as Turkey (the Air Traffic Control Tower at the New Istanbul Airport), Brazil (e.g., Cyrela by Pininfarina, Heritage, Yachthouse), the United States (including The Concourse Club and the Andare residences), Italy (Juventus Stadium in Turin, New Stauffer Center for Strings in Cremona, Urban Lounge in Milan), and the United Arab Emirates (Iconic Residences in Dubai). Pininfarina Architecture employs a team of 120 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.

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