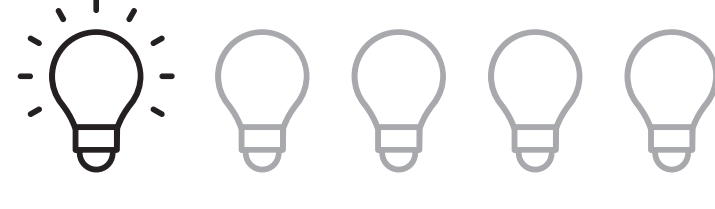


The Aurora Powerhouse Safety By Design

The physics that power the Aurora powerhouse make it inherently safe.



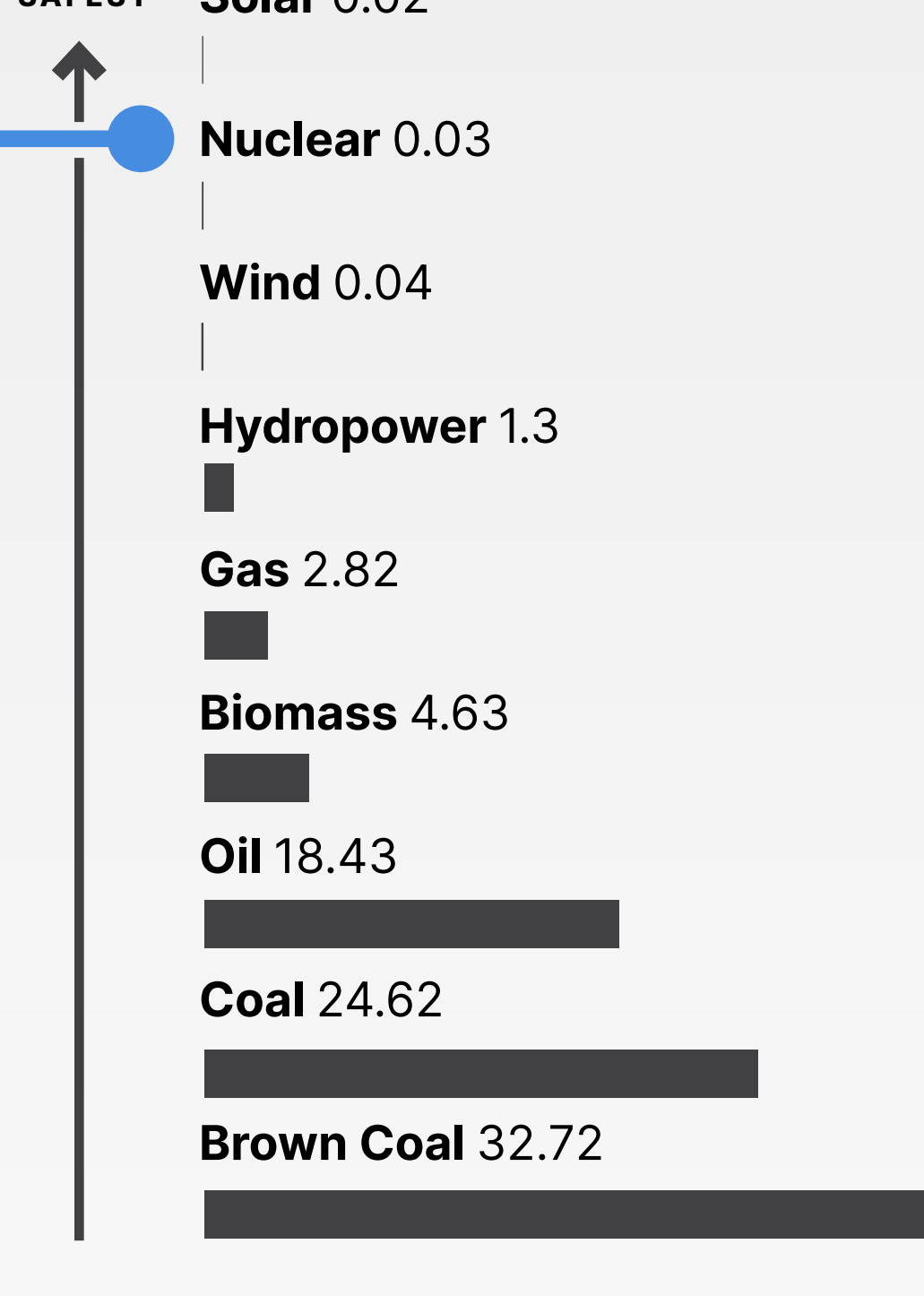
Nuclear energy is as safe as wind and solar— nearly 800 times safer than coal



Nuclear already powers nearly 20% of the U.S. grid, delivering affordable, reliable energy that runs day and night, in all kinds of weather and with zero emissions. It also has one of the strongest safety records of any energy source.

The Oklo Aurora powerhouse builds on that record with a fast reactor design that produces no carbon or chemical air pollutants and is inherently safe by nature.

How safe is nuclear compared to other energy sources?



Measured as fatalities per terawatt-hour (TWh) of electricity produced
(Source: International Energy Agency)

The Aurora powerhouse is built on fast reactor technology proven safe even under extreme conditions.



Proven safety principles

The Aurora powerhouse is built on principles demonstrated by the Experimental Breeder Reactor-II, a fast reactor that safely operated for 30 years and proved it could shut down and cool itself using only the laws of physics.



Proven record

Fast reactors have over 400 years of cumulative operating experience worldwide.



Low-pressure cooling

Liquid metal sodium transfers heat efficiently without high-pressure water systems.



Natural circulation

If power or pumps stop, heat removal continues through gravity-driven flow.



Self-stabilizing

Power naturally decreases at higher temperatures, keeping the system stable.



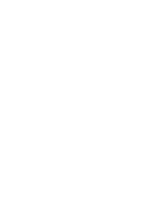
How the Aurora powerhouse advances nuclear technology

The Aurora powerhouse is enhanced by advancements in engineering, fabrication, and system monitoring to provide dependable, self-protecting performance at all times.



Compact

A small, efficient design that is suited for factory fabrication.



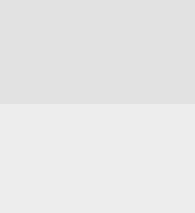
Standardized parts

Commercially available parts make construction more straightforward, supply chains more resilient, and maintenance more predictable.

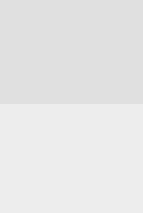
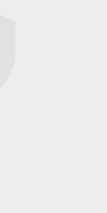


Smart monitoring

Built-in sensors continuously track the system's health.



Proven design by operational fast reactors around the world



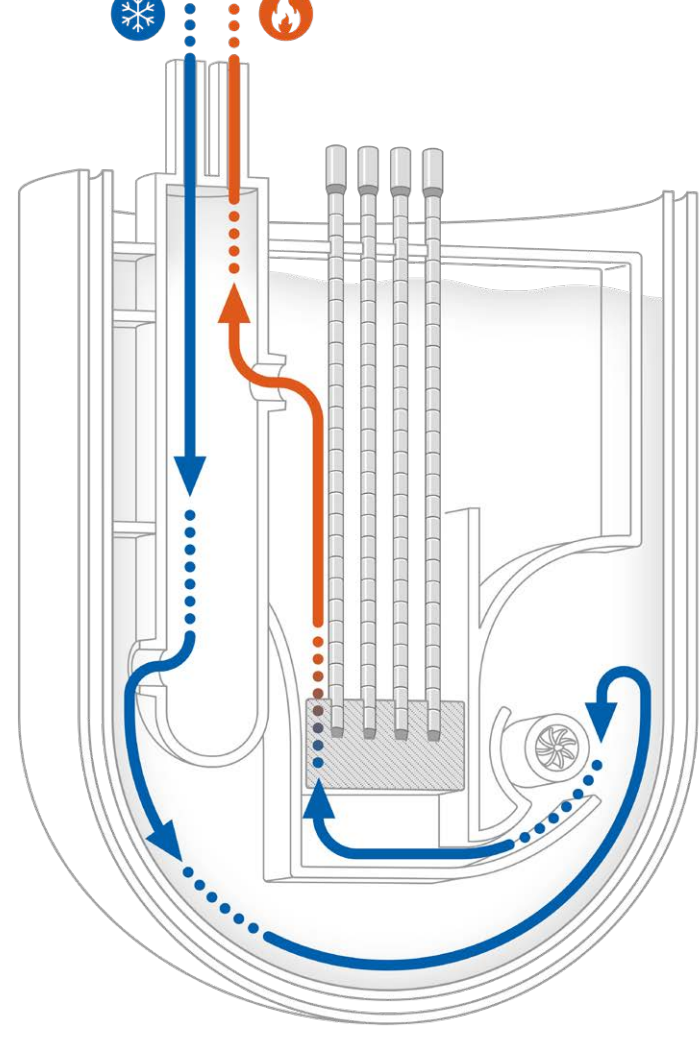
Designed for reliability, efficiency, and scalability

The Aurora powerhouse stays safe, automatically, with a self-protecting design.

The Aurora powerhouse is a simple, self-regulating system. The same physics that make it operate also make it inherently safe. If external power is lost, passive heat removal and natural system responses continue automatically, with no operator action required. Even if the pumps stop working, the hot sodium circulates on its own, carrying heat away from the core.

Four layers of physics that keep a sodium fast reactor safe

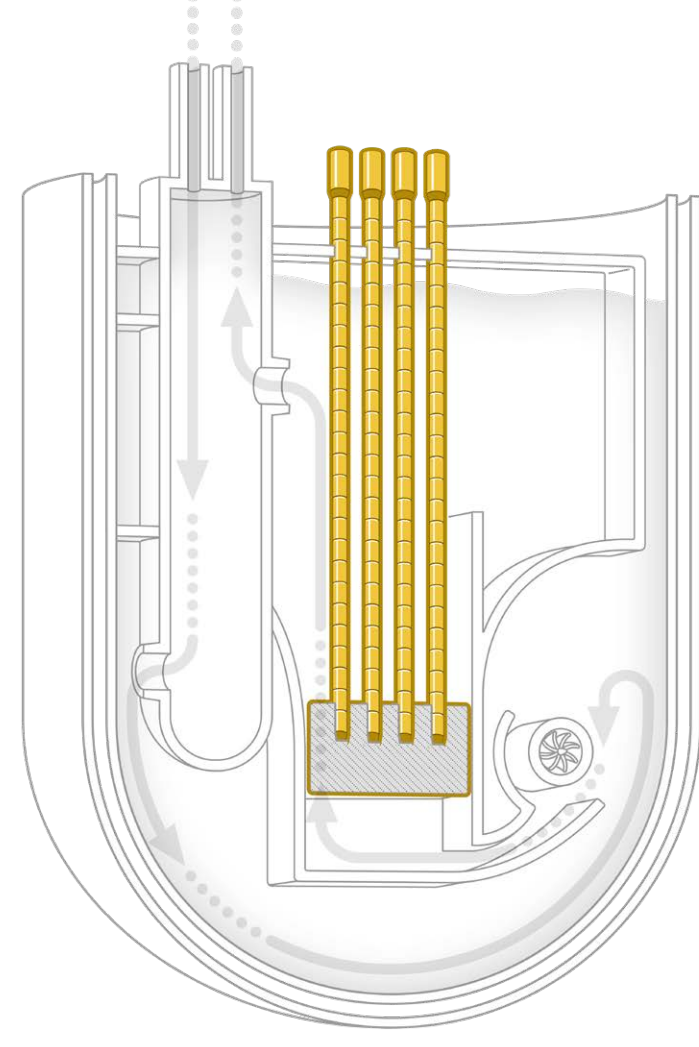
01



The liquid metal coolant circulates on its own as it heats up.

Liquid sodium carries heat away from the core in a closed loop. In the event of power loss or pump failure, high-temperature sodium naturally moves away from the core without relying on active systems for safety.

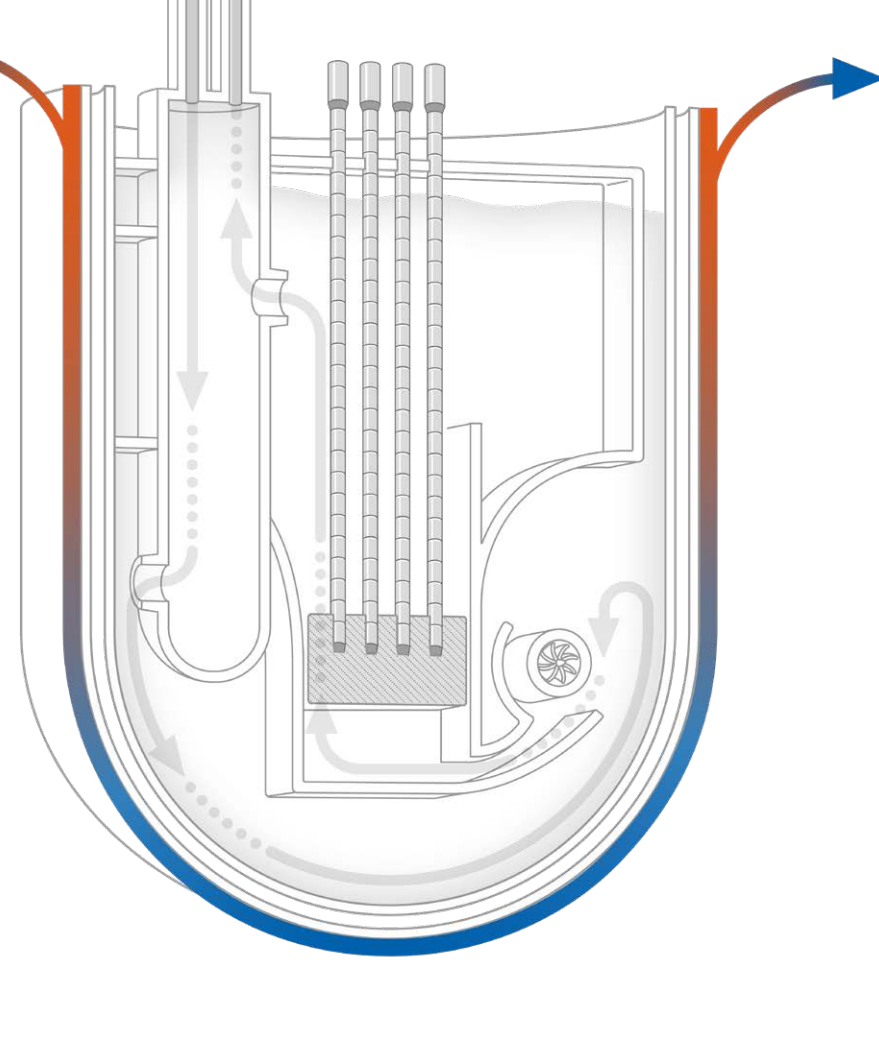
02



The reactor core self-adjusts to stay stable.

As core temperature rises, the metal fuel expands and reduces reactivity, which lowers power until the reactor settles at a new, steady state. If external power is lost, the control assemblies drop into the core automatically, shutting down the reactor.

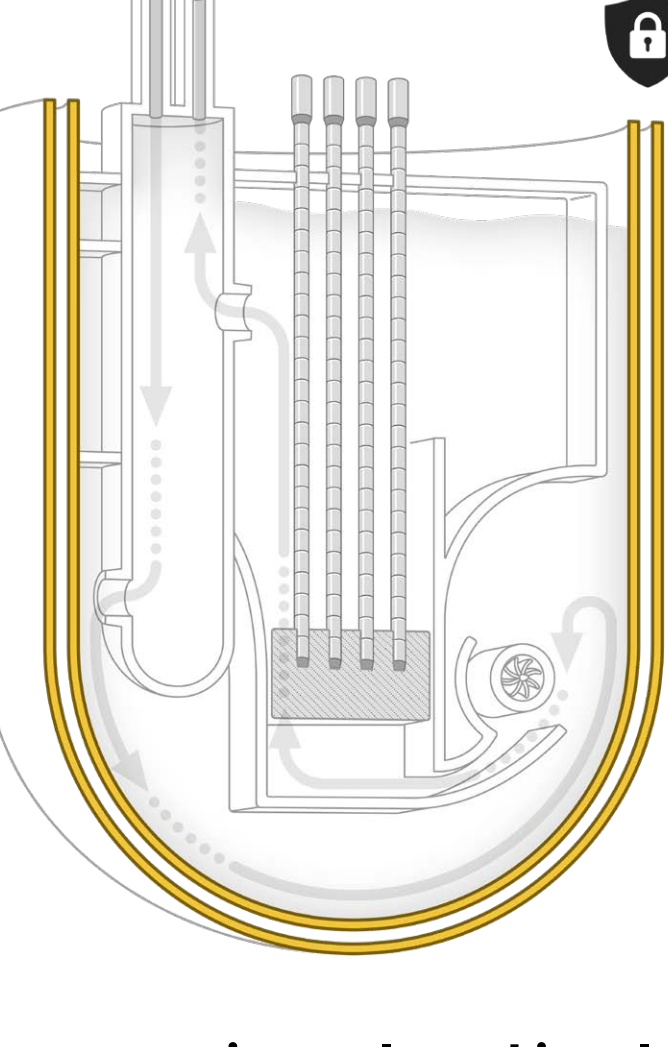
03



Air pathways remove heat.

After shutdown, decay heat continues to be generated and needs to be shed. Air is pulled in naturally over the outside of the vessel, removes the heat via convection, and carries that heat outside the powerhouse, no fans or electricity required.

04



The reactor is enclosed in a low-pressure environment.

The reactor core and coolant are sealed in a double-walled vessel at near ambient pressure, which minimizes stress on key components, allows for simpler design, and increases overall safety.

The inherent safety of the Aurora powerhouse opens new possibilities for clean, reliable, and scalable energy.



Faster builds

Factory fabrication shortens construction timelines.



Lower costs

Commercially available materials reduce expense and complexity.



Repeatable licensing

Standardized design supports a more efficient regulatory process.



Scalable deployment

Multi-unit sites are sized to meet customer needs.