# Google partners with Kairos Power to build small nuclear reactors for AI energy needs



Google has officially entered a high-stakes partnership with nuclear startup Kairos Power to build seven small reactors intended to fuel its burgeoning demand for electricity, particularly to power AI systems. The landmark agreement, revealed on Monday, aligns with Google's strategy to source 500 megawatts of carbon-free electricity as tech companies face heightened energy pressures from artificial intelligence advancements and data center expansions.

The power purchase agreement between Google and Kairos Power underscores the growing trend of technology giants turning to nuclear energy. This development follows in the footsteps of other industry leaders like Microsoft and Amazon, which have recently struck similar deals to tap into nuclear power sources. In September, Microsoft reached an agreement with Constellation Energy to revive a reactor at Pennsylvania's Three Mile Island, while Amazon plans to connect a hyperscale data facility to a nuclear plant in the same state.

Scheduled to become operational by 2030, these reactors are part of a new wave of small-modular reactors (SMR), marking a significant departure from traditional large-scale nuclear plants that typically take decades to construct. Smaller in scale yet poised for mass production, Kairos Power is focusing on these SMRs to lower construction costs and timeframes. Their design leverages molten salts, specifically lithium fluoride and beryllium fluoride, for cooling—a novel approach that diverges from the industry-standard water-cooling method.

The implementation of these reactors exemplifies an effort to harness next-generation nuclear technology to meet surging energy demands without adding to carbon emissions. However, this innovative path brings its own set of challenges, from navigating regulatory scrutiny to addressing public perception amidst mixed opinions on nuclear energy. Recent surveys indicate that while a majority of Americans support nuclear energy, nearly half remain opposed.

By partnering with Kairos Power, Google aims to propel the advancement of nuclear technology, potentially fast-tracking its use in energy sectors traditionally dominated by wind and solar. The project not only represents a strategic push for sustainable, round-the-clock energy solutions but also highlights Google’s continued influence in accelerating clean energy transition.

This development arrives as Google’s energy demands from AI applications have exacerbated the strain on existing energy grids. The internet behemoth's own emissions have spiked by 48% since 2019—a situation amplified by the intensive energy and water requirements of AI systems such as those powered by ChatGPT.

While Kairos Power's SMR technology is still pending government approval, the partnership will likely facilitate key technological advancements and regulatory compliance. However, specific details regarding the financial and geographical aspects of the project remain undisclosed for now. Nevertheless, the construction of these reactors signals a pivotal step towards securing the energy future of not only Google but also the broader tech industry’s AI infrastructures.

Source: [Noah Wire Services](https://www.noahwire.com)

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