Google’s power-hungry data centers crave nuclear energy

Google announced a new agreement to update six nuclear power plant sites across the US as the tech giant seeks to generate more electricity for its power-hungry data centers.

Google signed the 20-year deal with Constellation, the leading nuclear power plant operator in the US. The power purchase agreement is meant to guarantee the revenue needed to cover the cost of efficiency upgrades at existing nuclear plants and “represents more than $4.3 billion of new investment by Constellation,” according to the press release.

Over the next five years, the companies expect new equipment at each site to collectively lead to 890 megawatts of additional nuclear capacity. That’s roughly equivalent to the amount of electricity one large new nuclear reactor or three small modular reactors might generate, according to Google and Constellation.

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PJM has struggled lately to meet growing demand from AI data centers. An independent market monitor filed a complaint last year with the Federal Energy Regulatory Commission (FERC) saying that PJM was planning to allow huge data centers to connect to the grid that it could not reliably serve, which could lead to blackouts.

Along with the nuclear power deal, Google also inked a separate, much larger 15-year energy supply agreement with Constellation meant to guarantee continued revenue for other

existing power plants Constellation operates within PJM, regardless of fuel type. Nuclear energy made up 70 percent of Constellation’s total generating capacity last year, and another 8 percent came from renewables. Gas and oil made up the remaining 22 percent, according to the company’s latest sustainability report. Gas also accounts for the largest chunk of PJM’s fuel mix. At 2,700MW, the second deal is much larger than the nuclear power purchase agreement.

Data centers are driving a surge in new gas infrastructure projects in the US, moving many tech companies further from their sustainability goals. Google’s carbon emissions rose by 18 percent last year along with a jump in electricity demand of 37 percent, according to the company’s latest sustainability report.

https://www.theverge.com/science/1006082/google-nuclear-energy-power-purchase-agreement-constellation