

POWERING UP EUROPE

Booming Datacenter pipeline and AI spending boom - the pivotal role of energy

European DC pipeline now at nearly 500 GW, 1.5x power demand. We update our datacenter pipeline estimate – the number of DC connection requests received by grid operators across Europe – and the numbers keep increasing. Our latest projection is at c.480 GW, equivalent to 1.5x current European power demand. Our latest update – six months ago – was at c.290 GW ([here](#)), and our original estimate (published in January 2025) was 170 GW ([here](#)). Although some of this pipeline may be speculative, we believe its growth and size may signal a major construction phase for datacenters. Further, we believe utilities will be pivotal to support the development of datacenters by: providing energy, scouting for land and grid connections, and reinforcing existing power grids.

EU Datacenter Association: +20 GW by 2031. The EUDCA expects +20 GW DC additions by 2031; this would nearly triple the existing capacity to c.35 GW. About 60% of the expected additions are under-construction or have received a final investment decision; the rest is nearly fully approved. This forecast has two implications: (1) DCs would support +1.5% power consumption growth pa, as of 2028-29 on our estimates, and (2) DCs would be c.10% of Europe's power consumption by 2031E.

Europe and the need for Artificial Intelligence: Productivity, national security, privacy. We see a high likelihood of a major AI roll-out in Europe, supported by the need to enhance productivity, reinforce national security considerations and preserve data sovereignty. As discussed in our report from early 2026 ([here](#)), we believe that Europe will reach 65-80 GW (IT capacity) of datacenters by 2035. Later in the decade, datacenters could drive 1.5-2% power consumption pa, depending on the adoption rates of AI Agents and AGI.

Big Tech AI spending keeps getting bigger. The AI spending from Big Tech continues to increase: the targets by the five main hyperscalers imply total capex of nearly \$1 trillion in 2027, a near tenfold increase vs 2023.

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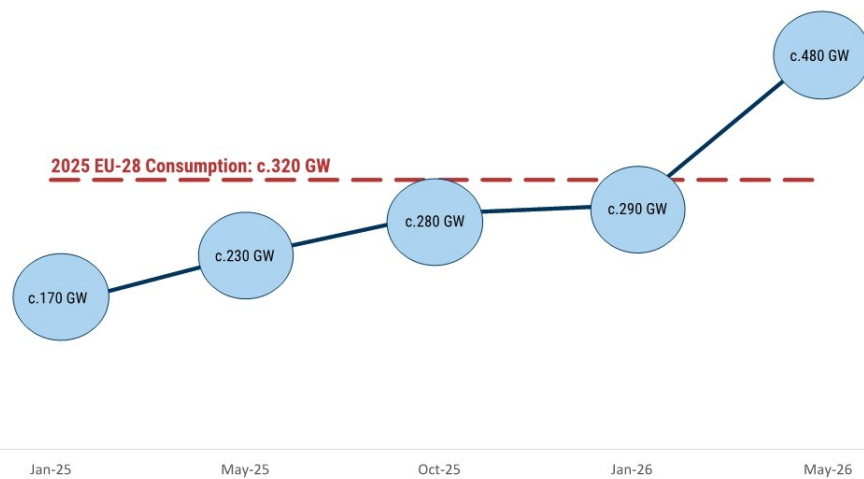
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Executive summary

Booming Datacenter pipeline and AI spending boom – the pivotal role of energy

Europe’s datacenter pipeline – measured as the number of connection requests to power grids across Europe – has surged to nearly 500 GW, equivalent to 1.5x current European power demand, up sharply from our most recent projection of c.290 GW six months ago and just 170 GW in January 2025. While some of this pipeline may be speculative, we believe its rapid growth and its scale signal a major datacenter construction phase ahead, spread fairly evenly across the continent. The EUDCA expects +20 GW of additions by 2031, nearly tripling existing capacity, with around 60% already under construction or FID. This would drive +1.5% power consumption growth pa from 2028-29, on our estimates. We continue to believe Europe will reach 65-80 GW of IT capacity by 2035, with datacenters driving 1.5-2% power consumption pa later in the decade, depending on AI Agents and AGI adoption. Meanwhile, Big Tech AI spending keeps climbing, with the five main hyperscalers implying c.\$700 bn of capex in 2026, rising to nearly \$1 trillion in 2027. Next year’s AI infrastructure spending would be around ten times larger than in 2023, underscoring that the datacenter boom continues in full force. We believe utilities will be pivotal to this process by providing energy, scouting for land and grid connections, and reinforcing existing power grids to support the incremental consumption.

Exhibit 1: The EU DC pipeline has more than doubled in one year
 EU 28 GSe datacenter pipeline evolution, 2025-26 (GW)



Source: Goldman Sachs Global Investment Research

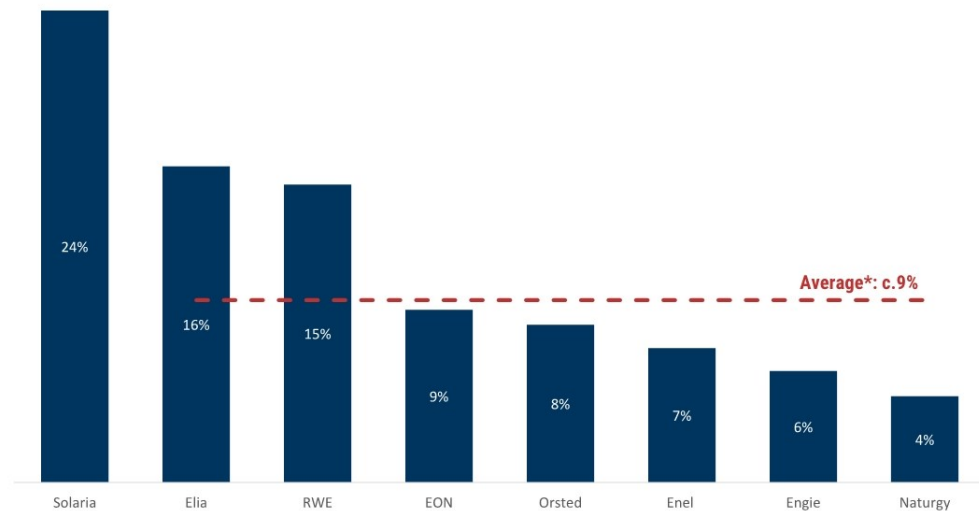
Electrification and AI to drive a generational earnings super-cycle

The acceleration in the electrification process (energy security), together with rising AI adoption rates and the continued datacenter build-out, should drive materially higher power consumption. Our hyper-electrification scenario points to +5% annual demand by 2029-30. This would drive €3.5 trn of investment needs in power generation (largely renewables) and power grids, thus supporting a generational earnings super-cycle (see

here for details). Several companies have also highlighted an ability to extract AI-driven cost efficiencies, which could provide an additional tailwind to the sector’s organic growth. While our base case assumes a c.+9% EPS CAGR for our main electrification compounders, we estimate that hyper-electrification would support EPS growth well in excess of +10% pa.

Exhibit 2: We estimate an EPS CAGR of c.+9% to the end of the decade for our key electrification compounders

2026-30E Clean EPS CAGR breakdown by company (percentage)



*Ex-solaria, Naturgy CAGR shown as 2025-30E

Source: Goldman Sachs Global Investment Research

Favour transformative electrification stories, renewables, and energy security infrastructure providers

We favor clusters of companies: (1) *Transformative electrification stories* include companies where we believe electrification capex is about to meaningfully accelerate (Naturgy, Enel and Engie), significantly transforming these portfolios on a 3-5 year basis. (2) *Renewable developers* that would benefit from rising returns and organic growth opportunities (RWE, EDPR, Solaria, Orsted); and *RES manufacturers* that would benefit from rising orders and margins (eg Vestas and Nordex). And (3) *Energy security providers*, such as ENR, EON and Snam.

Exhibit 3: We see three company clusters as the main beneficiaries

Infographic

We favour three company clusters:



Transformative Electrification Stories:
Naturgy, Enel, Engie



Renewables:
Developers (RWE, EDPR, Solaria, Orsted)
Manufacturers (Vestas, Nordex)



Energy Security Providers:
Siemens Energy, EON, Snam

Source: Goldman Sachs Global Investment Research

The main beneficiaries trade on an average P/E of c.12x and an EV/EBITDA of c.7.5x by 2030E, a discount to the sector average, despite higher growth prospects.

Exhibit 4: The three clusters trade on an average P/E of c.12x by 2030E

Key valuation metrics, 2026-30E (x)

	P/E					EV/EBITDA				
	2026E	2027E	2028E	2029E	2030E	2026E	2027E	2028E	2029E	2030E
Transformative Electrification Stories										
Naturgy	13.2x	13.1x	12.5x	12.0x	11.3x	8.3x	8.3x	8.1x	7.9x	7.7x
Enel	13.3x	12.6x	11.7x	10.9x	10.2x	7.3x	7.3x	7.1x	6.9x	6.7x
Engie	14.3x	14.1x	13.1x	12.5x	11.5x	9.7x	9.1x	8.8x	8.7x	8.5x
Average	13.6x	13.3x	12.4x	11.8x	11.0x	8.4x	8.2x	8.0x	7.9x	7.6x
Renewables										
RWE	22.2x	17.2x	16.0x	13.6x	12.7x	10.4x	9.4x	9.0x	8.2x	7.9x
EDPR (ex-gains)	48.6x	35.2x	31.8x	27.0x	21.5x	12.6x	11.7x	11.1x	10.4x	9.4x
Solaria	18.9x	14.4x	10.9x	9.2x	8.1x	12.0x	9.3x	9.4x	8.1x	7.3x
Orsted	17.8x	18.9x	13.8x	14.2x	13.1x	8.2x	8.1x	6.2x	6.5x	6.3x
Vestas	19.4x	14.1x	11.6x	9.7x	8.4x	8.4x	6.6x	5.5x	4.5x	3.7x
Nordex	21.0x	16.1x	13.5x	11.9x	11.0x	8.5x	6.5x	5.4x	4.8x	4.4x
Average	24.7x	19.3x	16.3x	14.3x	12.5x	10.0x	8.6x	7.8x	7.1x	6.5x
Energy Security Providers										
Siemens Energy	33.0x	24.6x	18.6x	14.6x	11.8x	17.4x	13.1x	10.1x	7.9x	6.6x
E.ON	16.5x	14.1x	13.2x	12.4x	11.8x	10.6x	10.0x	9.8x	9.6x	9.5x
Snam	14.6x	14.1x	13.1x	12.7x	12.1x	11.9x	11.6x	11.4x	11.1x	10.5x
Average	21.3x	17.6x	15.0x	13.2x	11.9x	13.3x	11.6x	10.4x	9.5x	8.8x
Total Average	21.1x	17.4x	15.0x	13.4x	12.0x	10.5x	9.3x	8.5x	7.9x	7.4x
Sector Average	19.2x	16.8x	15.2x	13.9x	12.9x	10.4x	10.0x	9.6x	9.2x	8.8x

Source: Goldman Sachs Global Investment Research, Bloomberg

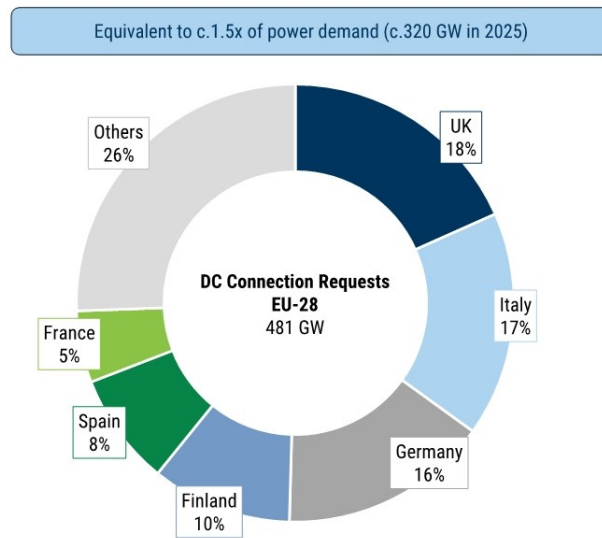
AI spending boom and the pivotal role of energy

European DC pipeline now at nearly 500 GW, or 1.5x EU consumption

Datacenter connection requests to the European power grid have seen, since we first discussed this topic ([here](#)) in early 2025, an exponential increase. This is signaling a major upcoming boost to European power demand, in our view. Based on data which we have collected from the main European power grid operators, we estimate the current EU datacenter pipeline at 480 GW. Regionally, the UK, Italy and Germany are the largest regions in absolute terms. Yet, relative to the size of the domestic market, we note that Finland is also quite large.

Exhibit 5: The european DC pipeline has reached c.480 GW

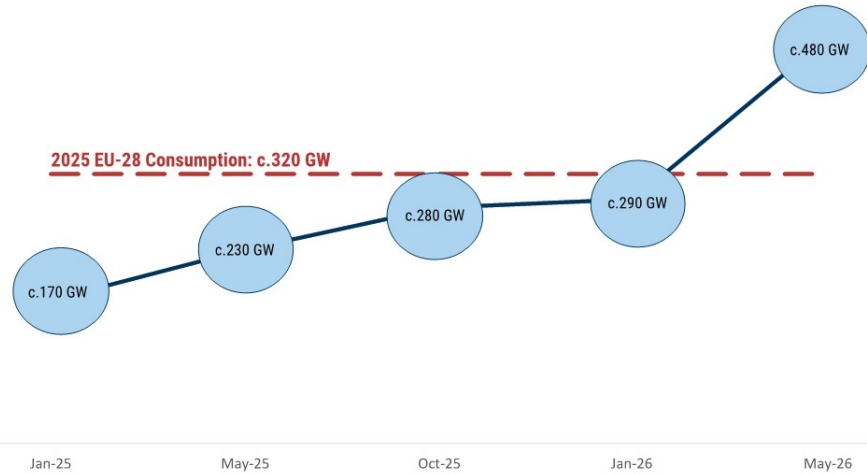
European data center connection requests, by country (GW, percentage)



Source: Company data, Goldman Sachs Global Investment Research

Our initial analysis on EU datacenters – published in early 2025 – saw c.170 GW of connection requests across the EU28. Since then, we have completed several iterations with our January 2026 analysis ([here](#)) indicating c.290 GW, equivalent to c.90% of Europe’s current power demand (c.320 GW). Our latest analysis now implies a DC pipeline of 480 GW, or a +60% increase over our previous projections. The current DC pipeline is also equivalent to 1.5x the current power consumption in Europe.

Exhibit 6: The EU DC pipeline has more than doubled in one year
 EU 28 GSe datacenter pipeline evolution, 2025-26 (GW)



Source: Goldman Sachs Global Investment Research

EU Datacenter Association forecasts +20 GW by 2031

As of the end of 2025, Europe featured datacenter capacity of c.15 GW, mostly located in the FLAP-D area (Frankfurt, London, Amsterdam, Paris, Dublin). The European Data Center Association collects bottom-up estimates by operators in the DC supply chain; on this basis, the EUDCA expects that +20 GW will be built by 2031, bringing the total EU DC capacity to c.35 GW by then. Out of the expected additions, the EUDCA points out that about 60% is already under construction or FID. The rest has essentially reached all the authorizations — this implies a high visibility on DC additions over the coming five years in Europe.

Exhibit 7: The EUDCA forecasts +20 GW DC capacity additions by 2031
European datacenter evolution, 2025-31 (GW)

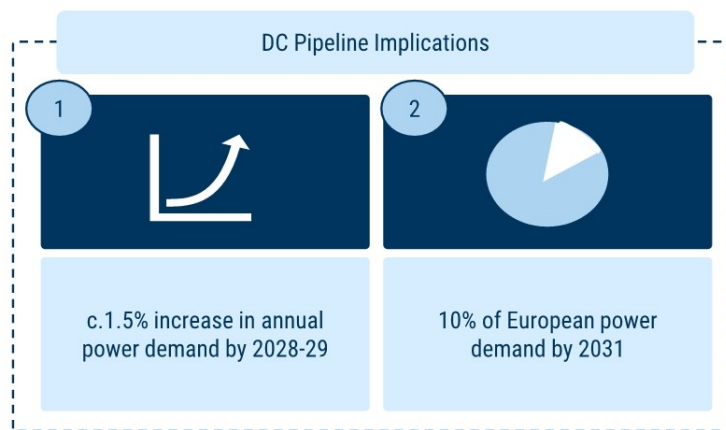


Source: European Data Center Association

This expected DC build-out would, we estimate, represent +c.7% vis a vis the current power consumption in Europe. Considering that most of these projects are projected to be operational in 2028-29, we estimate that by then, datacenters could drive +c.1.5% annual power consumption in Europe. By 2031, 35 GW of DC capacity would account for c.10% of total European power demand.

Exhibit 8: DC capacity development to 2031 could drive +1.5% power demand growth pa, as of 2028-29

35 GW of DC capacity in 2031 would be equivalent to 10% of total EU power demand



Source: Goldman Sachs Global Investment Research

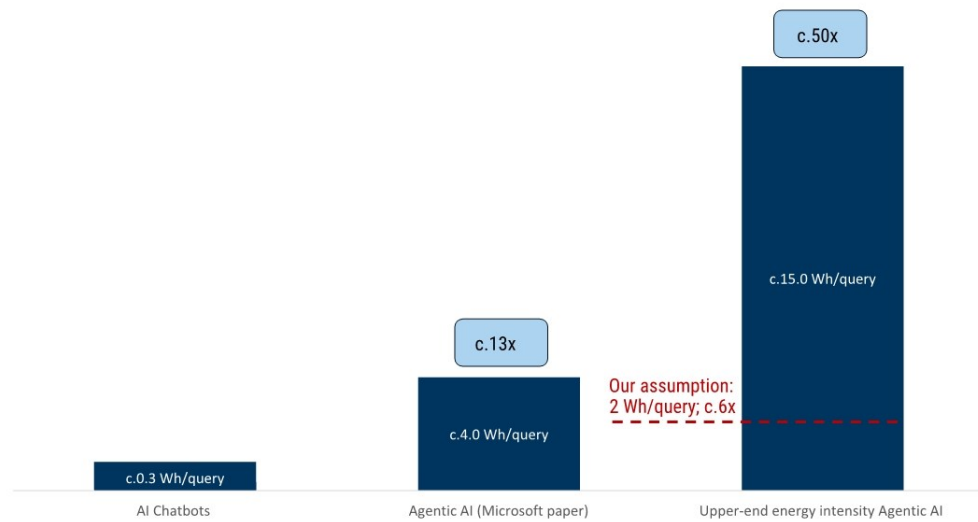
AI Agents might significantly increase DC needs

Based on our recent analysis ([here](#)), we believe the market underestimates Agentic AI (AAI) as a catalyst for datacenter needs, as well as power demand growth. Tech

literature suggests that Agentic AI queries can consume up to 50x more energy than a typical AI chatbot. A recent paper by Microsoft implies that Agentic AI energy intensity may drop to 13x (c.4.0Wh/query). Our analysis on AI Agents assumes a further 50% improvement in energy intensity and instead of adopting a 15 Wh power need per agentic query, we lower this to 2 Wh/query. This compares with current AI chatbots at 0.3 Wh/query.

Exhibit 9: Agentic AI queries are much more energy-intensive than traditional queries; we adopt a conservative approach

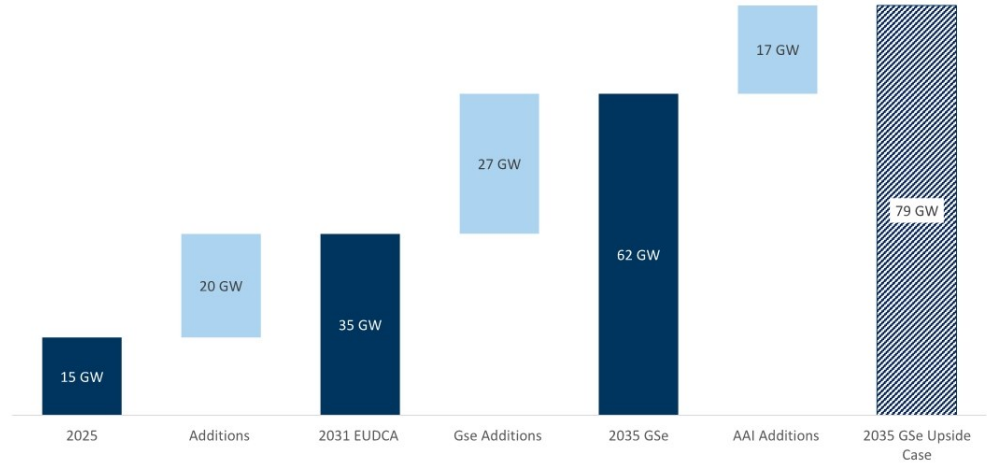
Energy use of traditional vs. Agentic AI query (Wh/query)



Source: Research Gate

Most industry experts suggest that the current rate of datacenter development is consistent with a share of 20-30% of queries being Agentic AI by 2030 in the US. Considering that we see Europe lagging the US by around five years, we take a similar share of Agentic queries by 2035. We estimate that +10pp uptick in Agentic AI adoption rates could boost European datacenter needs by c.25-30%, resulting in an installed capacity of c.80 GW by 2035. By then, datacenters would account for c.25% of total power demand.

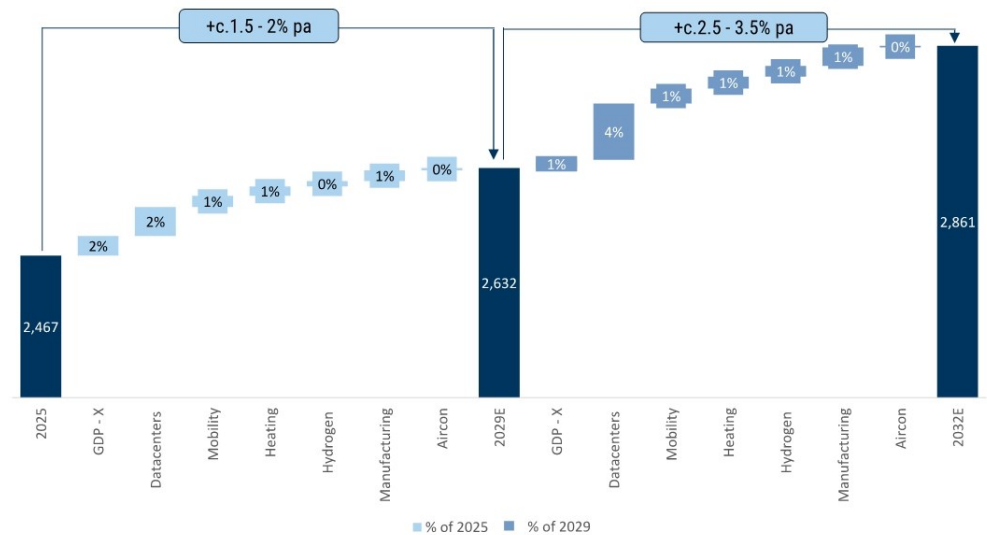
Exhibit 10: Europe’s datacenter market would reach c.80 GW total DC capacity by 2035 in our upside case, equivalent to c.25% of demand
 Breakdown of total DC capacity in our base and upside case, 2035 (GW)



Source: Goldman Sachs Global Investment Research, European Data Center Association

Our top-down analysis of European power demand indicates that datacenters could contribute to growing power demand by c.1.5-2% later in the decade - that is without the impact of Agent AI needs, which would add additional tail winds.

Exhibit 11: We expect power consumption to grow by 1.5-2% pa over 2025-29E, with growth rising to 2.5-3.5% pa as electrification and datacenter rollout accelerate
 EU 2025-32E power demand power evolution, breakdown by driver (TWh, percentage)



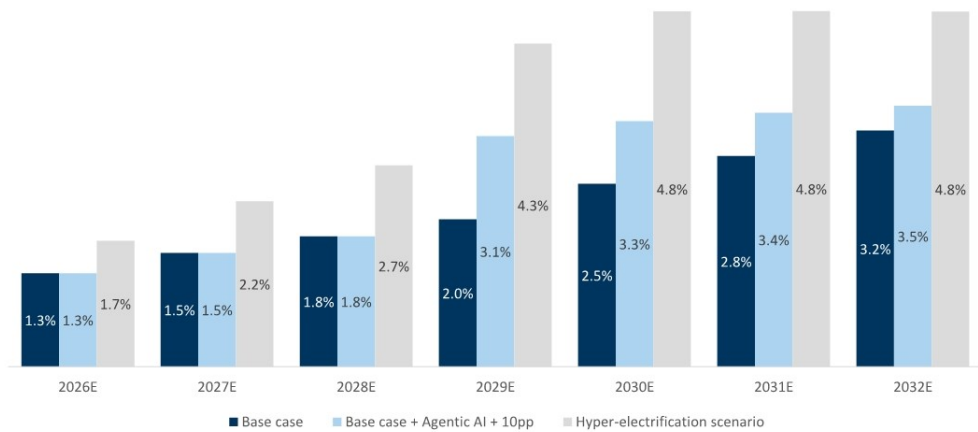
Source: Goldman Sachs Global Investment Research

We simulate a third scenario: hyper-electrification scenario ([here](#)). Here — on top of assuming adoption rates for AI Agents similar to our upside case — we broadly assume delivery of Europe’s existing 2030 electrification goals. On this basis, we estimate that

power demand could grow even faster, by +5% pa as early as 2030. This compares with c.3-3.5% pa vs our upside scenario, and to 2.5-3% in our base case.

Exhibit 12: Our “hyper-electrification” scenario sees power demand grow as much as +5% pa from 2030

EU 2026-32E power demand evolution across base case and different GS scenarios (percentage)

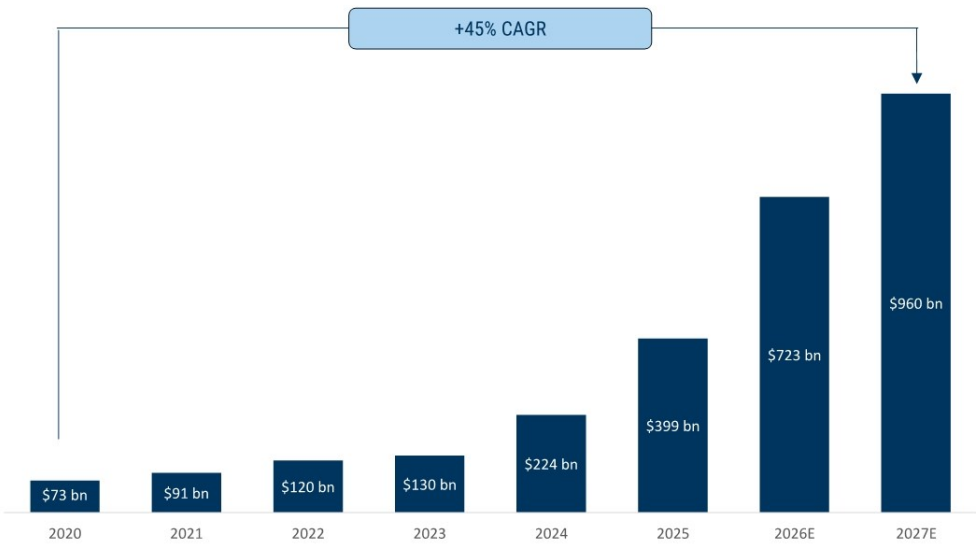


Source: Goldman Sachs Global Investment Research

AI infrastructure spending could peak at c.\$1 trn in 2027

AI infrastructure investments by the five main hyperscalers (Amazon, Microsoft, Alphabet, Meta, Oracle) continue to accelerate. In 2020-22, capex from these companies was around \$100 bn on average. For 2027, company guidance suggests investments at nearly \$1 trillion, a tenfold increase over 2023. Cumulatively, investments over 2023-27 would amount to \$2.4 trillion, broadly equivalent to the GDP of Italy.

Exhibit 13: The main five hyperscalers are set to invest c.\$1 trn in 2027
Hyperscaler AI investment evolution, 2020-27E (\$)



Source: Company data, Goldman Sachs Global Investment Research

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Reg AC

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