
EPISODE
425
IS THE WORLD
BUILDING TOO MANY
DATA CENTRES?
HOSTED BY
DAMIEN
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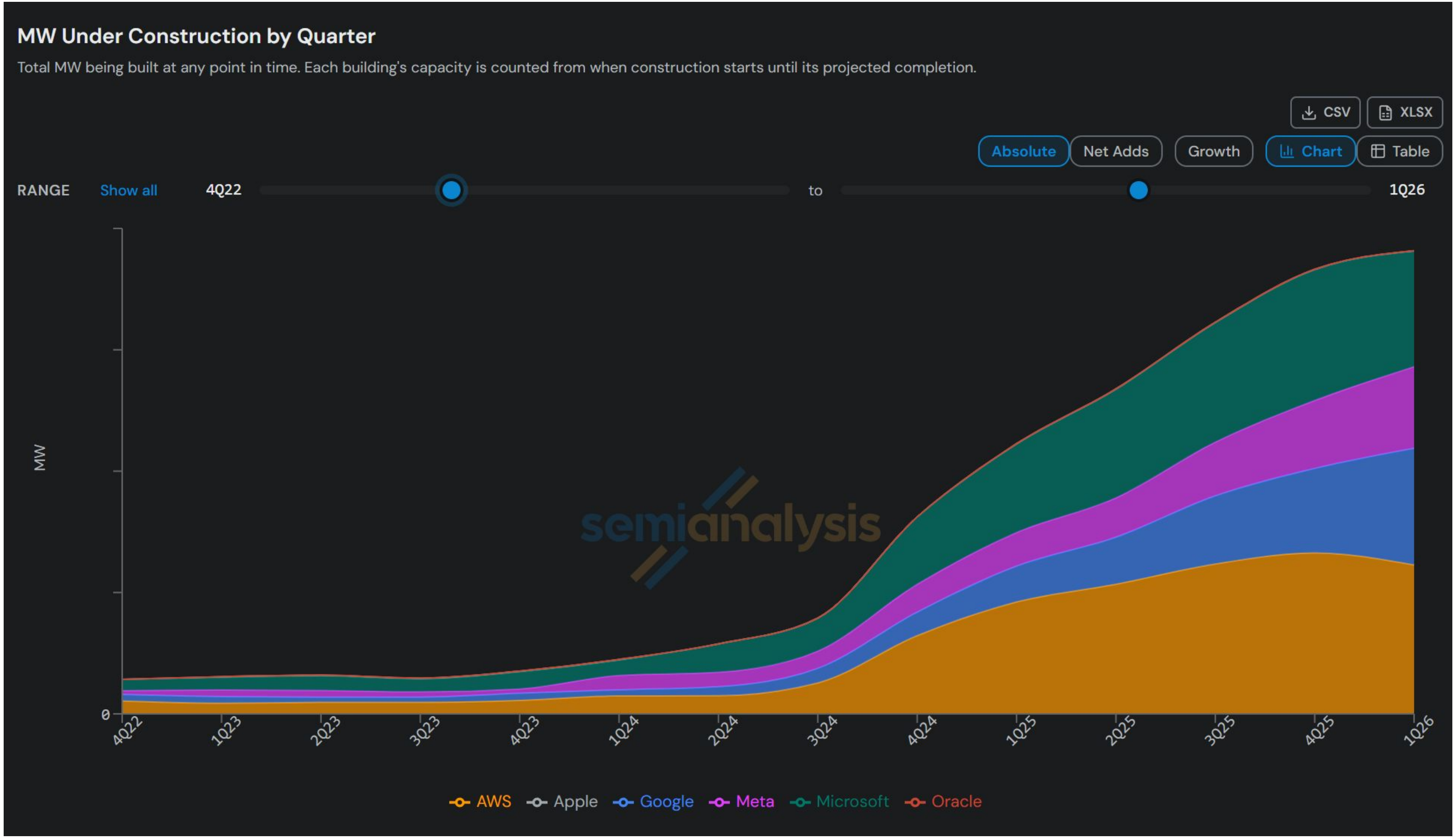
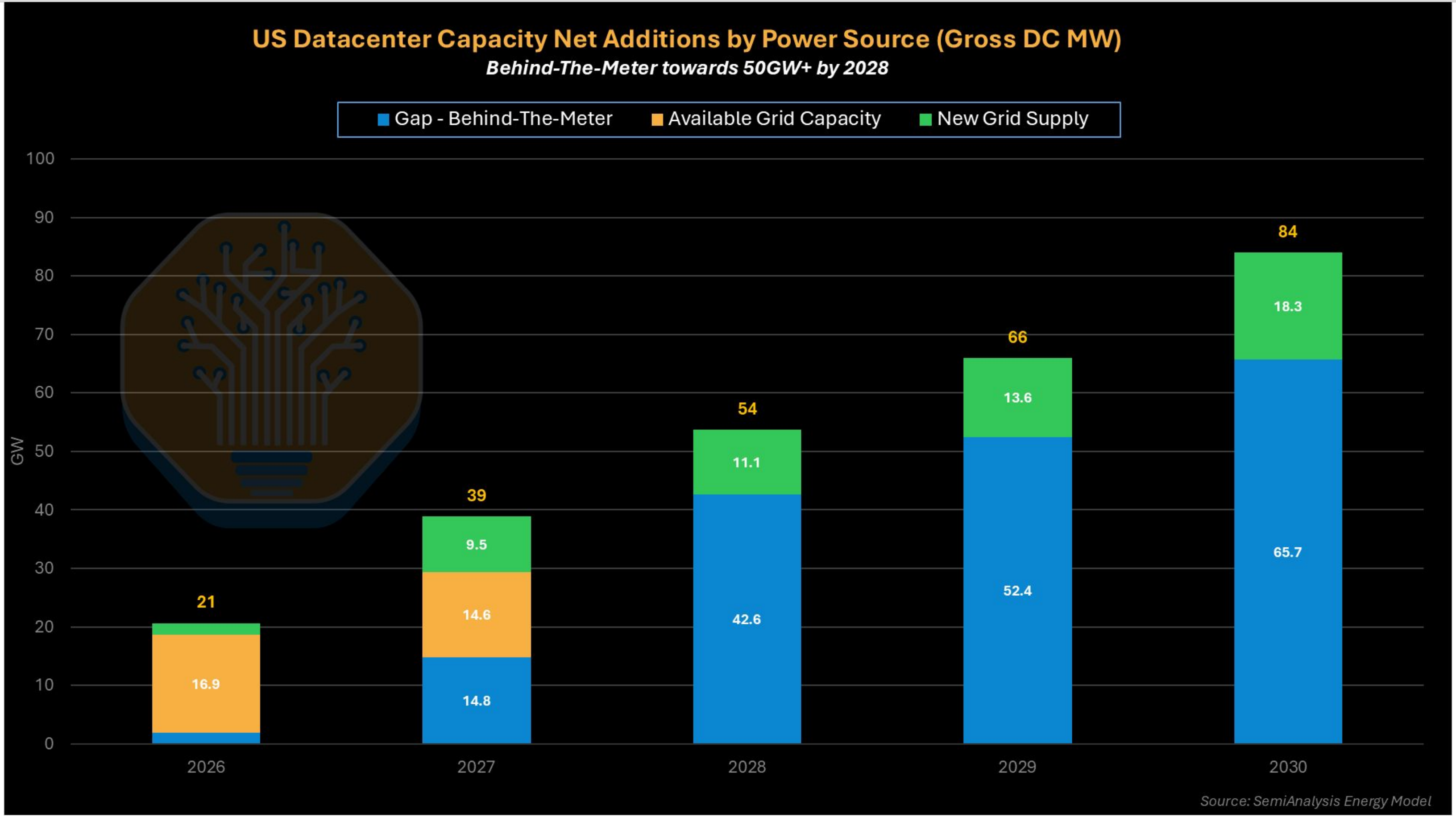
1. Under construction

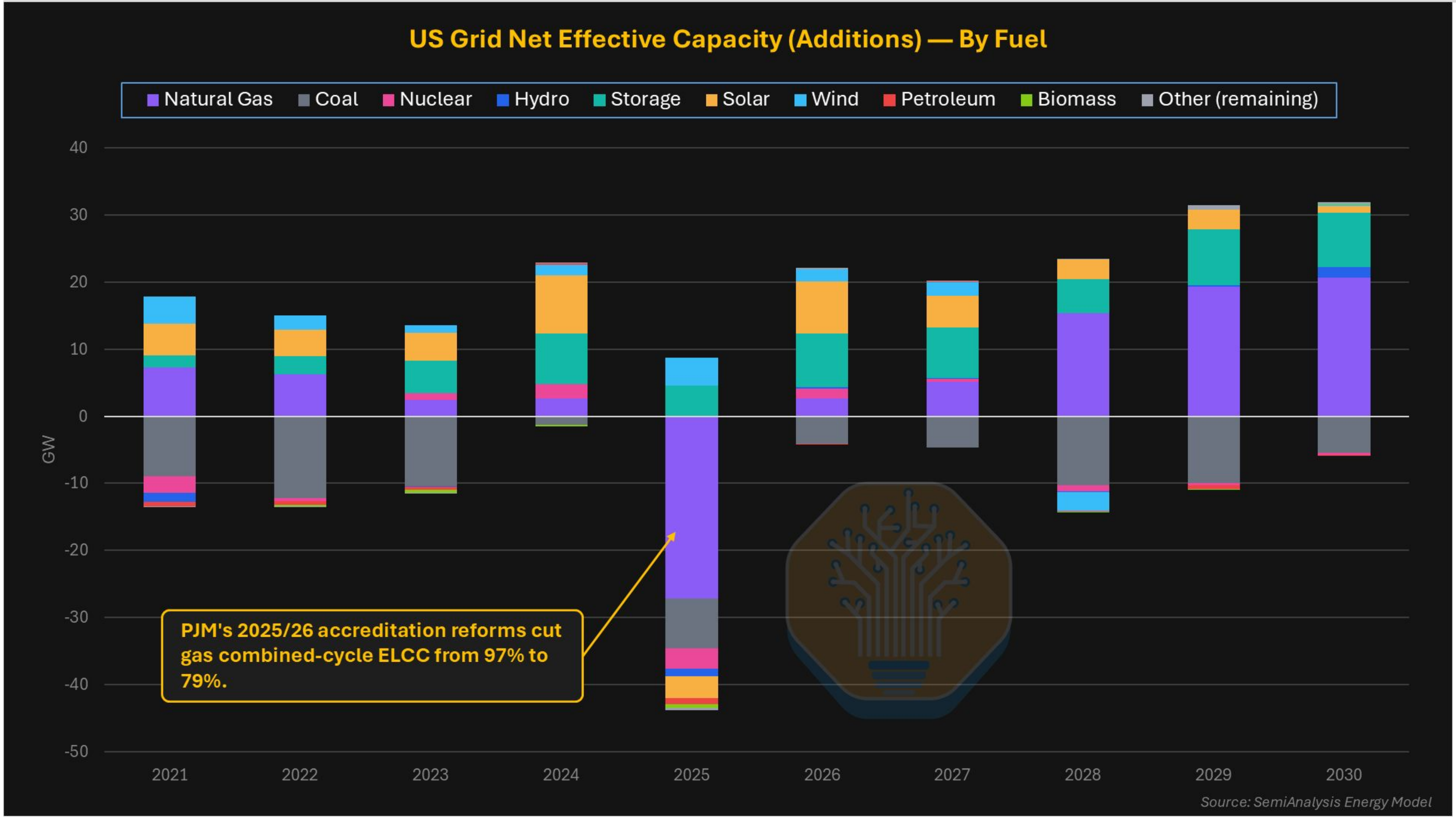


1. Energy:



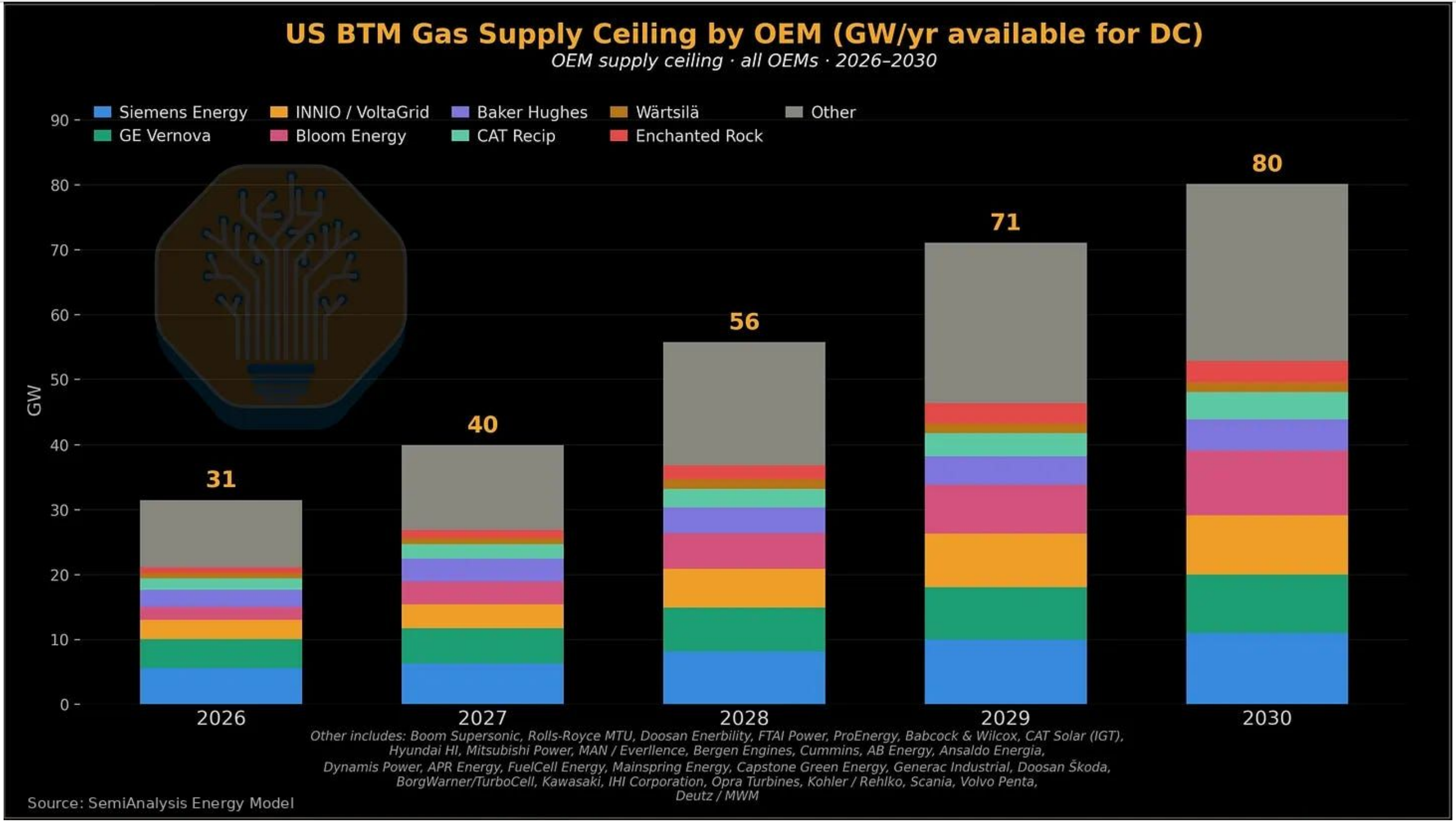
US Datacenter Capacity Net Additions by Power Source (Gross DC MW)
Behind-The-Meter towards 50GW+ by 2028
Gap - Behind-The-Meter
Available Grid Capacity
New Grid Supply
GW
100
90
80
70
60
50
40
30
20
10
0
21
16.9
39
9.5
14.6
14.8
54
11.1
42.6
66
13.6
52.4
84
18.3
65.7
2026
2027
2028
2029
2030
Source: SemiAnalysis Energy Model

1. Energy:



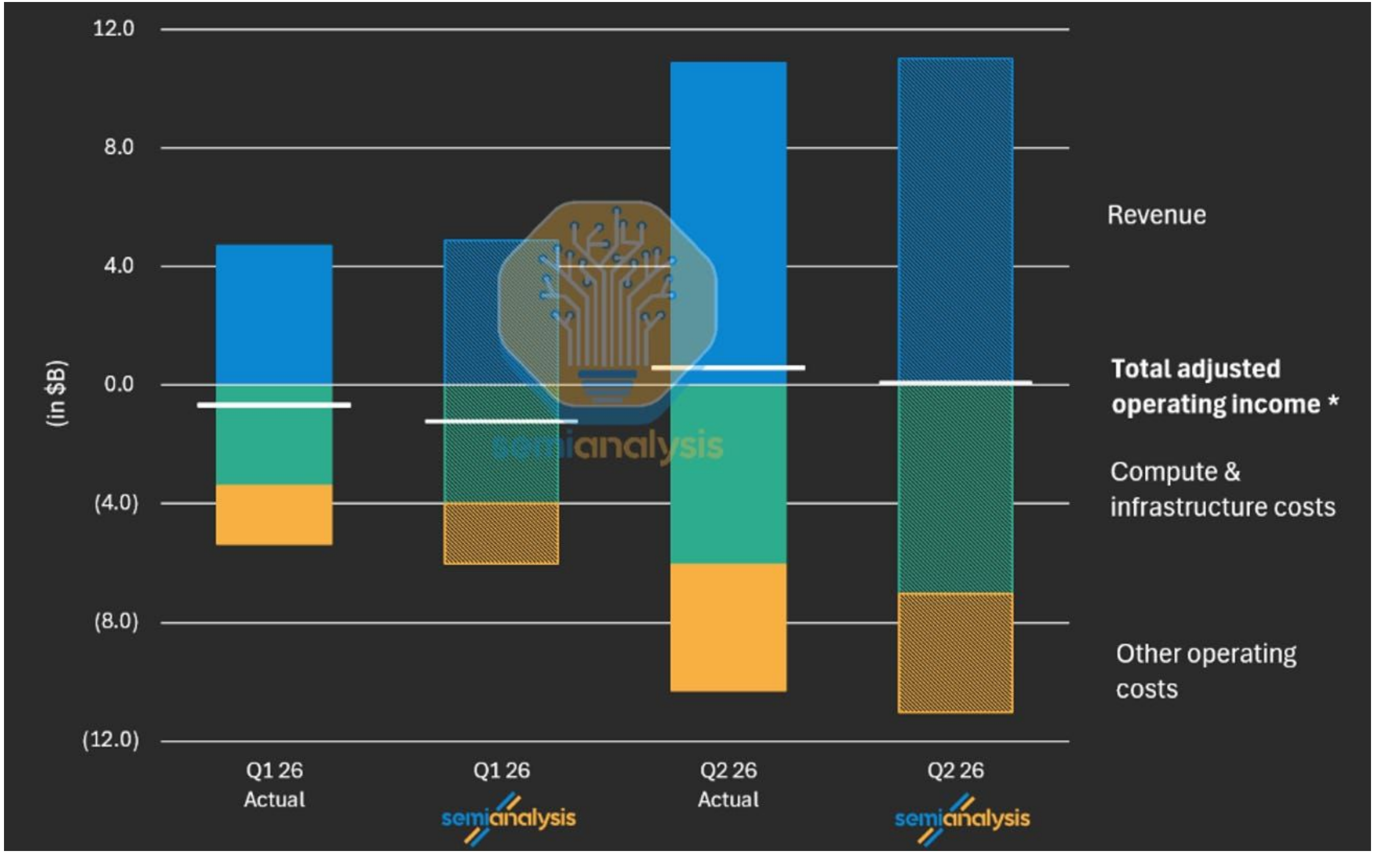
US Grid Net Effective Capacity (Additions) — By Fuel
Natural Gas
Coal
Nuclear
Hydro
Storage
Solar
Wind
Petroleum
Biomass
Other (remaining)
40
30
20
10
0
-10
-20
-30
-40
-50
GW
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
PJM's 2025/26 accreditation reforms cut gas combined-cycle ELCC from 97% to 79%.
Source: SemiAnalysis Energy Model

1. Energy:

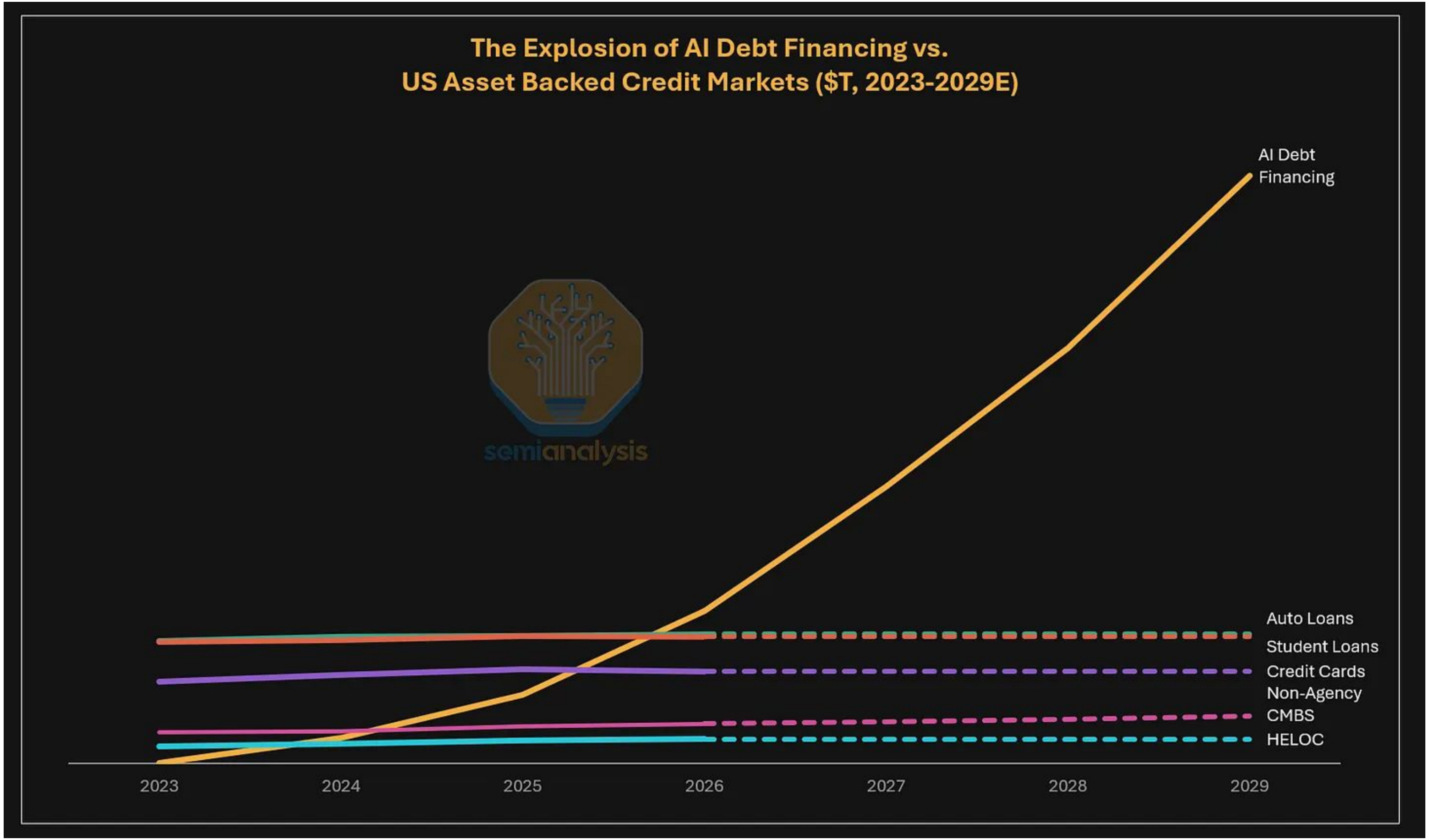


US BTM Gas Supply Ceiling by OEM (GW/yr available for DC)
OEM supply ceiling · all OEMs · 2026–2030
Siemens Energy
INNIO / VoltaGrid
Baker Hughes
Wärtsilä
Other
GE Vernova
Bloom Energy
CAT Recip
Enchanted Rock
GW
90
80
70
60
50
40
30
20
10
0
31
40
56
71
80
2026
2027
2028
2029
2030
Other includes: Boom Supersonic, Rolls-Royce MTU, Doosan Enerbility, FTAI Power, ProEnergy, Babcock & Wilcox, CAT Solar (IGT), Hyundai HI, Mitsubishi Power, MAN / Everllence, Bergen Engines, Cummins, AB Energy, Ansaldo Energia, Dynamis Power, APR Energy, FuelCell Energy, Mainspring Energy, Capstone Green Energy, Generac Industrial, Doosan Škoda, BorgWarner/TurboCell, Kawasaki, IHI Corporation, Opra Turbines, Kohler / Rehlko, Scania, Volvo Penta, Deutz / MWM
Source: SemiAnalysis Energy Model

Anthropic Case Study:



Debt Issues?



The Explosion of AI Debt Financing vs.
US Asset Backed Credit Markets ($T, 2023-2029E)
AI Debt
Financing
Auto Loans
Student Loans
Credit Cards
Non-Agency
CMBS
HELOC
2023
2024
2025
2026
2027
2028
2029
semianalysis

Off balance sheet

Nvidia Backstop - Indicative Terms

Backstop Pricing		
Year 1	$/hr/GPU	$3.68
Year 2	$/hr/GPU	$3.15
Year 3	$/hr/GPU	$2.62
Year 4	$/hr/GPU	$2.10
Year 5	$/hr/GPU	$1.57
Year 6	$/hr/GPU	$1.04
Average Backstop Price	$/hr/GPU	$2.36
Backstop Duration	Years	6
Nvidia Rev Share above Backstop	%	~40-60%

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