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Building Data Centers in the Middle East: Energy, Security, and the Remaking of AI Supply Chains

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What's New:
In mid-April, Microsoft announced a $1.5-billion investment in UAE-based AI firm G42, paving the way for the company to build AI data centers in the Middle East, Central Asia, and Africa. The Biden administration had a heavy hand in shaping the deal, which requires the companies to comply with "U.S. and international trade, security, responsible AI, and business integrity laws and regulations" and commits G42 to stripping all Chinese gear out of its operations. The announcement comes five weeks after Amazon announced its own $5.3-billion investment to build data centers in Saudi Arabia.

Why It Matters:
Microsoft and Amazon's new ventures may initiate a wave of investment in the Middle East from U.S. companies seeking to meet what many anticipate will be the astronomical energy demands of AI models. These investments and uncertainty around future energy needs are forcing U.S. policymakers to grapple with the potential economic losses of offshoring data center investments and the national security concerns around placing data centers in the Gulf amid China's growing influence in the region.

Key Points:
- On April 15, Microsoft announced it would invest $1.5 billion in G42 – a data center and AI company based in Abu Dhabi – earning Microsoft a minority stake in G42 and a seat on its Board of Directors. Both companies will focus on the co-innovation of next-generation AI solutions and cloud services, specifically leveraging Microsoft Azure. The deal involves a detailed, first-of-its-kind Intergovernmental Assurance Agreement between Microsoft and G42 to ensure the secure, trusted, and responsible development and deployment of AI technologies. The deal was developed in close consultation with both the U.S. and Emirati governments, with Commerce Secretary Gina Raimondo traveling twice to the UAE in recent months to discuss the partnership.
- On March 4, Amazon Web Services (AWS) announced plans to invest over $5.3 billion to launch a new AWS Infrastructure Region in the Kingdom of Saudi Arabia (KSA) by 2026. This investment aims to support the growing demand for cloud services within the kingdom and will establish data centers across three availability zones at launch.

Key Points (continued):

- Other U.S. companies have publicly stated intentions to explore data center investments in the Middle East, including Cloudflare, IBM, Dell, Google, and Oracle. They will face stiff competition not only from Chinese companies such as Alibaba, Tencent, and Huawei, but from local companies planning significant pipeline developments over the next five to seven years. This includes Khazna Data Centers, Gulf Data Hub, Equinix, and STC in the UAE and EDGNEX, Ezditek, Quantum Switch Tamasuk, and Khazna Data Centres in KSA.
- The UAE presents a significant investment opportunity for data center companies due to its robust fiber connectivity and high internet usage, and both the UAE and KSA are providing big financial incentives for companies to build data centers there while easing regulatory requirements and subsidizing power.
- Both Abu Dhabi and KSA have announced substantial AI investment funds, with Abu Dhabi's fund potentially swelling to $100 billion within a few years. KSA's sovereign wealth fund is in talks with venture capital powerhouse Andreessen Horowitz about allocating as much as $40 billion to AI investments.
- Meanwhile, the Chinese government is looking to establish nuclear power plants in KSA and has multiple agreements with the UAE and KSA on nuclear energy cooperation. The recent increases in Middle East Sovereign Funds' investments in China also highlight national security concerns associated with data center investments in the Middle East.

"We always assumed there would be power, but obviously that was woefully inaccurate, so now we're chasing where power is."

Phill Lawson-Shanks
Chief Innovation Officer, Aligned
Reuters

What We're Thinking:

- *There is massive uncertainty around AI energy supply and demand...* The urgency with which U.S. companies are investing in the Middle East is partly a reflection of the deep uncertainty surrounding the energy needs of future AI models – and the United States' capacity to meet them. While the International Energy Agency projects that data center energy usage could double by 2026, skeptics argue that projected energy use may be offset by efficiency gains and that data centers as a whole only account for approximately 2% of total electricity usage in the United States today, ensuring U.S. utilities can meet even a meteoric rise in AI data centers. Others still argue that energy demand will only overwhelm supply at the local level, particularly in states that house data center clusters.
- *… including within the Biden administration.* This uncertainty extends to the U.S. government, where the Department of Energy (DOE), the Office of Science and Technology Policy, the National Security Council, and other White House offices hold widely varying perspectives around the scale of future energy needs and U.S. supply. While DOE expects to issue a report on the energy efficiency of data centers later this year, the issue is sucking significant oxygen now. The Secretary's Energy Advisory Board has also established a new working group tasked with making recommendations by June on how to meet the growing energy demands of AI and data center infrastructure.

> *"Data centers' total electricity consumption could reach more than 1,000 terawatt-hours in 2026… roughly equivalent to the electricity consumption of Japan."*
>
> International Energy Agency

What We're Thinking (continued):

- *Competing with China remains an Administration priority...* China's increased involvement with Middle East Sovereign Wealth Funds and civilian nuclear programs in the region, among others, could complicate the Administration's efforts to decouple from China. Anthropic PBC recently decided to exclude KSA from its financing round, citing national security concerns. Offshoring data centers to the Middle East could also hinder the U.S. government's ability to identify malicious actors using US cloud services, including those from China and Russia. However, the Administration green lighting Microsoft's partnership with G42 exemplifies President Biden's view that the United States must pull the Middle East closer rather than cede market share to China.
- *… as does clean energy.* The move to the Middle East complicates the Administration's clean energy commitments, necessitating reforms in permitting laws and energy infrastructure. While the Administration is looking to invest in geothermal and nuclear energy to provide predictable energy to data centers, the reality remains that despite having been established in 1975, the Nuclear Regulatory Commission has never approved a power plant to become operational.
- *Congress is honing in on the economic impact of offshoring.* Congress is concerned about the economic losses associated with diverting AI data center investments from the United States. Some prominent Senate Committee Chairs have expressed disappointment about recent investments in the Middle East and point to growing power generation in the United States, including the recently restarted nuclear power plant in Michigan. The Senate Committee on Energy and Natural Resources and others are exploring hearings on the issue of AI and load growth, to include discussions on reforming transmission and permitting laws.
- *The time to engage is now.* Policymakers are trying to understand the incentive structures driving data center investments and energy demands to formulate effective policy responses. Agencies, the White House, and Congress disagree on the incentives driving industry to invest in the Middle East versus the United States (while some believe it is power supply, others point to financing). Proactive industry engagement is essential to helping the U.S. government address the challenges and opportunities presented by data center investments in the Middle East.

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