



Middle East All-vanadium Liquid Flow Battery





Overview

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Dhahran, May 22, 2025, SPA -- Saudi Aramco has achieved a world-first milestone by successfully operating a megawatt-scale renewable energy storage system to support gas production operations. This marks the first global use of an iron-vanadium flow battery as a solar energy backup for gas well.

Saudi Arabian Oil Co. (Aramco) has claimed an industry breakthrough with the start-up of a renewable energy storage system designed to power natural gas activities. “It is the first deployment globally of an Iron-Vanadium (Fe/V) flow battery as a backup solar power source for gas well operations”.

Aramco has commissioned a megawatt-scale Iron-Vanadium flow battery to power gas production, marking a global renewable energy milestone. Aramco has achieved a global milestone by commissioning a megawatt-scale renewable energy storage system, using an Iron-Vanadium (Fe/V) flow battery to power gas.

Aramco, a leading integrated energy and chemicals company, has achieved a world-first by successfully commissioning a megawatt (MW)-scale renewable energy storage system to power gas production activities. It is the first deployment globally of an Iron-Vanadium (Fe/V) flow battery as a backup solar.

Aramco has developed a flow battery for solar storage in collaboration with Rongke Power - Credit: Rongke Power Aramco’s MW-scale Iron-Vanadium flow battery is storing renewable solar energy to power gas operations in Saudi Arabia’s extreme weather conditions Aramco has successfully commissioned an.

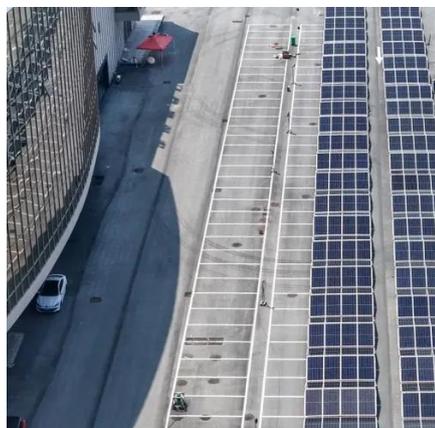
First-of-its-kind deployment: Aramco is the first company to commission a megawatt-scale Iron-Vanadium flow battery for renewable energy storage in gas operations. Strategic emissions reduction: The technology supports Aramco’s goal



of achieving net-zero Scope 1 and 2 emissions across wholly owned.



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[Aramco Deploys World-First Iron-Vanadium Flow ...](#)

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It is the first deployment globally of an Iron-Vanadium (Fe/V) flow battery as a backup solar power source for gas well operations.

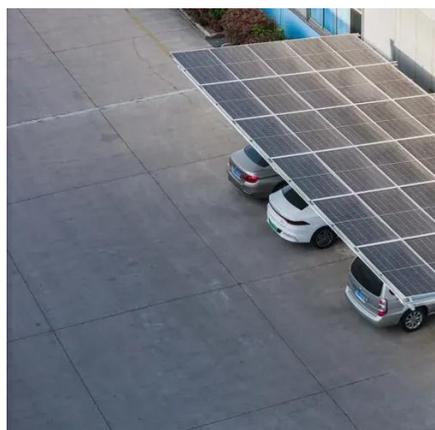


[Aramco launches renewable energy storage system for gas ...](#)

Saudi oil and gas giant Aramco has successfully commissioned a megawatt (MW)-scale renewable energy storage system to power gas production activities. It is the first ...

[Aramco Debuts RE Storage System for Gas Operations](#)

'It is the first deployment globally of an Iron-Vanadium (Fe/V) flow battery as a backup solar power source for gas well operations'.



Aramco Deploys World-First Iron-Vanadium Flow Battery to ...

The 1-MW/hour battery system--installed at Wa'ad Al-Shamal in western Saudi Arabia--will power up to five remote gas wells and is engineered to operate reliably in extreme ...

[Aramco Becomes First in the World to Operate Advanced ...](#)

The 1-megawatt-hour flow battery system in Wa'ad Al Shamal in northwest Saudi Arabia is based on patented technology developed by Aramco and implemented in collaboration with Rongke ...



Aramco's Renewable Energy Breakthrough: Flow Battery Powers ...

Developed with Rongke Power, this battery offers a robust alternative to traditional solar energy solutions. It efficiently handles variable power demands and is engineered to ...





Aramco Debuts RE Storage System for Gas ...

'It is the first deployment globally of an Iron-Vanadium (Fe/V) flow battery as a backup solar power source for gas well operations'.



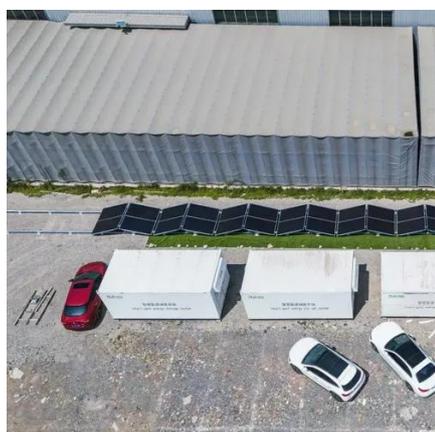
Aramco's Renewable Energy Breakthrough: Flow ...

Developed with Rongke Power, this battery offers a robust alternative to traditional solar energy solutions. It efficiently handles ...



Aramco's World First in Sustainable Energy Storage

Aramco has successfully commissioned an Iron-Vanadium (Fe/V) flow battery on a megawatt scale, set to enhance renewable energy storage by converting solar energy into a ...



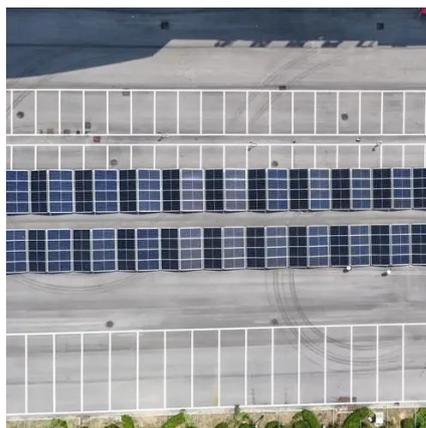
World's first commercial iron/vanadium flow battery system ...

The new system, deployed in the industrial city of Wa'ad Al-Shamal in western Saudi Arabia, is the world's first commercially available iron/vanadium liquid flow battery solar ...



[Aramco commissions iron-vanadium flow battery ...](#)

It is specifically engineered to withstand the hot climate of Saudi Arabia and achieve optimal performance under extreme weather ...



[Aramco's World First in Sustainable Energy Storage](#)

Aramco has successfully commissioned an Iron-Vanadium (Fe/V) flow battery on a megawatt scale, set to enhance renewable ...

Aramco commissions iron-vanadium flow battery for energy storage

It is specifically engineered to withstand the hot climate of Saudi Arabia and achieve optimal performance under extreme weather conditions, setting it apart from other ...



[Aramco launches renewable energy storage ...](#)

Saudi oil and gas giant Aramco has successfully commissioned a megawatt (MW)-scale renewable energy storage system ...



[Aramco Deploys World's First Fe/V Flow Battery for](#)

Saudi Aramco has achieved a global first by successfully deploying a megawatt-scale Iron-Vanadium (Fe/V) flow battery system to power gas production activities, setting a ...





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