EXHIBIT 01 / SAUDI TRADE · 2023–2025 / INDEPENDENT RESEARCH

24 November 2026

Saudi battery storage: $1.73bn of lithium-ion imports and the grid build-out

China supplied almost all Saudi lithium-ion imports in 2025.

Customs records cover every end use, so the contracts provide a separate measure of grid demand.

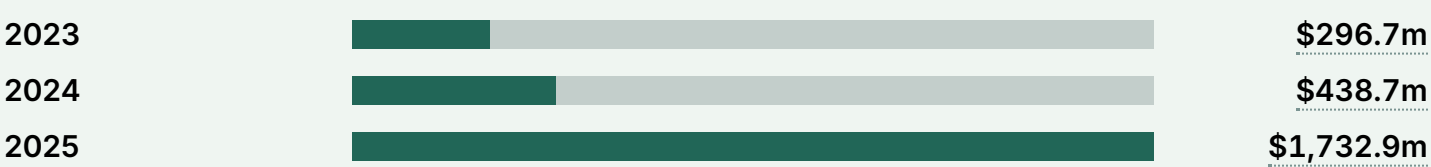
$1.73bn

Saudi imports of lithium-ion accumulators in calendar 2025.



Saudi lithium-ion accumulator imports

HS 850760 · world origins · current USD million



Source · $1,732.9m · UN Comtrade Plus

EXHIBIT 02 / IMPORTS BY ORIGIN

Imports nearly quadrupled in 2025 as the value per kilogram fell

Year	World · $m	Net tonnes	USD/kg	China · $m / share
2023	296.7	5,178	57.30	284.9 · 96.0%
2024	438.7	27,237	16.11	426.0 · 97.1%
2025	1,732.9	182,149	9.51	1,710.2 · 98.7%

Net weight is estimated by UN Comtrade in 2023 and 2025. The 2024 World weight is unflagged.

Largest 2025 origins	2023 share	2024 share	2025 share
China	96.0%	97.1%	98.7%
South Korea	0.5%	0.1%	0.3%
Malaysia	0.1%	0.1%	0.2%
United States	0.7%	0.6%	0.1%
Poland	0.2%	0.2%	0.1%

One origin dominates the import bill

China supplied $1,710.2m in 2025. Ask integrators where replacement modules and spares will come from over the warranty term.

Weight cannot establish the price of a grid battery

A heavier mix of products can lower USD/kg without a comparable fall in the cost per usable MWh. Customs data do not identify storage duration, project or warranty.

EXHIBIT 03 / GCC IMPORT DEMAND

Saudi Arabia leads the Gulf markets reporting 2025 imports

Reporter · USD million	2023	2024	2025
Saudi Arabia	296.7	438.7	1,732.9
Oman	8.6	17.2	48.8
Qatar	10.1	15.9	not available
Kuwait	10.7	9.4	9.1
Bahrain	4.4	4.5	not available
UAE	199.8	not available	not available

Oman offers a second procurement lead

Omani imports rose to $48.8m. Speak to the importer about the end user and application before treating any shipment as utility storage.

What to investigate next

For each market, match the tender award, integrator and delivery window to project disclosures. The UAE reported a sizeable market in 2023. Its later missing observations prevent a full Gulf ranking.

Not available = no annual World observation in the direct reporter query on 24 November 2026. The missing markets are excluded from comparisons for that year.

EXHIBIT 04 / BID SPECIFICATION

Write one meter definition into every storage bid

Buying route	What the buyer compares	Evidence to request
Developer / project company	Net energy and availability under the storage services agreement.	Guaranteed MW and MWh at the revenue meter at commissioning and at end of term.
EPC / integrator	AC conversion, cooling loads, grid interface and who pays for replacement modules.	Single-line diagram, loss budget, duty cycle, augmentation plan and scope split.
Utility / network owner	Performance under local grid conditions, protection response and site safety.	Witnessed grid tests, emergency response plan, test reports for the proposed installation.

A comparable warranty has a duty cycle

Specify temperature, cycles or throughput, state-of-charge window, allowed outages and test conditions. Require the bidder to price augmentation, including installation downtime, if needed to meet the energy guarantee.

TEST AND ACCEPTANCE

IEC 62619 covers industrial lithium cells and batteries. IEC 62933-5-2 addresses safety of grid-connected electrochemical storage systems. UL 9540A is a fire-propagation test method. Request the report for the offered configuration and agree acceptance with the project authority.

Sources · IEC 62619:2022 · industrial lithium cells and batteries · IEC 62933-5-2:2025 · grid-connected system safety · UL 9540A · thermal runaway fire propagation test method

EXHIBIT 05 / COMMERCIAL SENSITIVITY / ILLUSTRATIVE CASE

Two extra hours require about SAR 152 per kW-year

Hypothetical incremental capacity payment · constant riyals · no project bids used

Calculation	Assumption or result
Additional discharge at the AC meter	100 MW × 2 hours = 200 MWh
Installed cost of additional usable energy	200 MWh × SAR 600,000/MWh = SAR 120.0m
Finance and service life	8% annual discount rate over 15 years. Capital recovery factor 0.11683.
Annual fixed operating cost	SAR 1.2m for the extra storage
Annual cost to recover	SAR 120.0m × 0.11683 + SAR 1.2m = SAR 15.22m

BREAK-EVEN PAYMENT

SAR 15.22m ÷ 100,000 kW = SAR 152.2/kW-year. This is the extra annual payment for the additional two hours.

Which contract costs move the price?

The example assumes the same grid connection and inverter rating. It excludes charging energy, tax and incremental augmentation. Add the cost of keeping the AC guarantee as the battery ages. Subtract only additional revenues the contract allows.

Capital recovery factor = $r \div [1 - (1 + r)^{-n}]$. Capital is spent at inception and recovered in equal year-end payments.

EXHIBIT 06 / DECISION AND DILIGENCE / BUYER ACTIONS

Shortlist the bids that meet the dispatch guarantee in the final year

01 Engineering · set the delivery test

State the AC meter location, net discharge MW, hours, ambient conditions and allowed auxiliary consumption. Ask for beginning- and end-of-term curves at the same dispatch profile.

02 Procurement · put responsibility in one schedule

Identify the cell maker, integrator and performance guarantor. Obtain signed warranty terms, augmentation timing, service response and a test remedy if the system falls short.

03 Commercial · price the same delivered service

Discount installed cost, charging losses, service, replacement modules and end-of-life obligations. Divide by discounted guaranteed net AC MWh dispatched under one utilisation scenario.

WHAT WOULD CHANGE THE CONCLUSION

A lower-priced bid can regain the lead if it guarantees the same output, absorbs augmentation cost or incurs fewer charging losses under the agreed duty cycle.

EXHIBIT 07 / PROJECT AWARDS AND PROCUREMENT

Saudi grid buyers have two distinct storage programmes

Programme / site	Power / energy	Latest milestone supported by cited documents
SPPC Group 1 · Al-Muwaih, Haden, Al Kahafa	500 MW / 2,000 MWh each	Three agreements signed in August 2026. Gotion reports it will supply all three sites, totalling 6 GWh.
SPPC Group 1 · Al Khushaybi	500 MW / 2,000 MWh	Fourth agreement signed with the ENGIE consortium. All four total 2,000 MW / 8,000 MWh.
SPPC Group 2 · six sites	500 MW / 2,000 MWh each	Procurement and developer qualification. Samha, Al-Leeth, Al-Henakiyah, Khulis, Sadawi and Ashyrah total 3,000 MW / 12,000 MWh.
Saudi Energy · Tabuk and Hail	1,000 MW / 4,000 MWh combined	HiTHIUM supply awarded, Alfanar leads construction. SEC maps 2,000 MWh at each site. The cited releases give a combined MW rating.
Saudi Energy · Dawadmi	500 MW / 2,500 MWh	Reported supply rating for one of five BYD sites. Alfanar led EPC. MEED reported programme grid tests at end-May 2026. Forvis Mazars records June commissioning of the 12.5 GWh programme.

Who has a purchase order to place?

SPPC procures storage service from a project company. The project company, its EPC or integrator may contract the equipment. Saudi Energy also awards grid-storage packages directly. Count a named site once within its programme.

SEC's H1 2025 map supplies the Tabuk and Hail site figures. Dawadmi uses the reported BYD package rating. Programme and fleet totals overlap.

Sources · Principal Buyer · four storage agreements, 20 August 2026 · ACWA · three contracted projects, 20 August 2026 · Principal Buyer via SPA · Group 2 sites and ratings, 22 April 2026 · Principal Buyer · Group 2 qualified developers, July 2026 · Saudi Electricity Company · H1 2025 results, p. 8 · HiTHIUM · Tabuk and Hail contract · HiTHIUM · combined MW and MWh, Chinese release · BYD · five-site supply contract, 17 February 2025 · ESS News · five site ratings, 13 January 2025 · MEED · five-site grid tests, 5 June 2026 · Forvis Mazars · June 2026 commissioning, accessed 24 November 2026 · Gotion · three sites, 28 September 2026 · Saudi Energy nine-month operating results

EXHIBIT 08 / OPERATING IMPLICATIONS / RESEARCH NOTES

Buy the energy the operator can call on at the meter

DECISION

Require every shortlisted bidder to guarantee the same net AC power and energy throughout the dispatch term.

Method

Trade is Saudi-reported imports, HS 850760, at current USD customs value. Unit value divides World value by World net weight. Origin shares divide partner value by the same year's World value.

Scope of the evidence

The heading includes grid and non-grid batteries. Projects are a separate register. MW measures power and MWh measures energy. The finance example is hypothetical.

Source documents

Open the links below or select this report's full source register in the Renewable Vision · industrial report library. Undated documents carry the access date of 24 November 2026.

Sources · UN Comtrade Plus · UN Comtrade HS 2022 headings · Principal Buyer · four storage agreements, 20 August 2026 · Principal Buyer via SPA · Group 2 sites and ratings, 22 April 2026 · HiTHIUM · Tabuk and Hail contract · IEC 62933-5-2:2025 · grid-connected system safety · UL 9540A · thermal runaway fire propagation test method