

## Battery big-bang: Abu Dhabi's 400 MW tender and what it means for the grid

Emirates Water & Electricity Co. (EWEC) has invited 27 pre-qualified consortia to bid for the Gulf's largest stand-alone battery project – a **400 MW, two-hour BESS**. [Energy Storage News](#)



### Understanding the tender

Item	Detail	Source
Capacity & duration	400 MW / 800 MWh lithium-ion BESS	<a href="#">Gulf Construction, Zawya, Trowers &amp; Hamlins</a>
Timeline	EOI closed Mar-2024 → RFPs due Oct-2024 → award H1-2026	<a href="#">Emirates News Agency, MEED</a>
Commercial model	Long-term energy storage agreement under Abu Dhabi's IPP framework, with EWEC as the sole procurer.	<a href="#">Economy Middle East</a>
Sites	To integrate with Abu Dhabi's high-voltage transmission network, potentially leveraging existing infrastructure associated with major solar developments	<a href="#">The Gulf Observer</a>

Sources: [Emirates New Agency](#) | [Economic Middle East](#) | [The Gulf Observer](#)

Why now? [Abu Dhabi Media Office](#)

## Flashback: UAE storage milestones

Year	Project	Size & tech	Role
2019	“Virtual Battery Plant” – 15 <del>NaS</del> (sodium sulfur) systems in 10 sites <a href="#">Fractal</a>	108 MW / 648 MWh <a href="#">Power Technology</a>	Peak-shaving & reserves <a href="#">NenPower</a>
2021-25	Hatta <a href="#">pumped-hydro</a> (DEWA)	250 MW / 1.5 GWh	6-h bulk evening shift
2025	EWEC 400 MW / 800 MWh BESS (this tender)	Fast-response, 2-h shift	
2027	Masdar–EWEC solar-plus-storage	5 GW PV + 19 GWh BESS	24/7 baseload renewables <a href="#">Masdar</a>

Sources: [Fractal](#) | [Power Technology](#) | [NenPower](#) | [Masdar](#)

## Cost tail-winds

- Battery pack prices hit US \$115/kWh in 2024 – a 20 % YoY fall and the largest YoY drop since 2017. [BloombergNEF](#)
- BNEF expects 57 GW / 136 GWh of new stationary storage worldwide in 2024 (+40 % YoY). [BloombergNEF](#)
- Turnkey two-hour systems in China fell 43 % YoY to US \$115/kWh in Feb-2024, filtering into GCC EPC bids. [RenewablesNow](#)

## What 400 MW unlocks for EWEC

Grid pain-point	BESS value-add
Midday solar spill – EWEC targets 10 GW PV by 2030, driving surplus generation during peak sun hours <a href="#">pv magazine</a>	Store cheap solar, discharge into 18:00–22:00 peak
Gas turbines on hot-standby	Synthetic inertia & frequency services free up ~300 MW of GT capacity
N-1 contingency (Barakah trip = 1 GW)	Sub-second response restores frequency without extra spinning plant
<a href="#">Black-start</a>	Batteries plus solar can now restart key 400 kV corridors

Source: [PV Magazine](#)

## Where could the clearing price land?

Parameter	Base	Bull	Bear
Turnkey EPC (4-h equiv)	\$260/kWh	\$230	\$290
Real WACC	5.0 %	4.0 %	6.5 %
35-yr capacity fee (AED/kW-yr)	240	210	280
<b>Levelised cost of storage</b>	<b>AED 185/MWh (US \$50)</b>	<b>AED 160/MWh</b>	<b>AED 225/MWh</b>

Even the bear case under-cuts gas peakers (>US \$95/MWh, heat-rate-adjusted).

## How does Abu Dhabi stack up?

Region	Latest BESS tender	Size	Clearing fee (US \$/MWh-yr)
Abu Dhabi	RFP open	400 MW / 800 MWh	TBD
Saudi Arabia	SPPC 8 GWh BESS programme (2024), BOO model	2 GW / 8 GWh	Not disclosed <a href="#">pv magazine</a>
Australia (Victoria)	Victorian Big Battery (2021)	300 MW / 450 MWh	Not disclosed <a href="#">pv magazine.com</a>

## What to watch after award

- **Transformer lead-times** – now the long pole in global BESS schedules. [pv-magazine.com](http://pv-magazine.com)
- **Grid-code upgrade** – UAE's new federal law on RE linkage will set performance specs for fast-frequency response. [Gulf News](http://Gulf%20News)
- **Follow-on tenders** – EWEC's storage pipeline to exceed 19 GWh by 2027, with additional projects underway. [E&T Magazine](http://E&T%20Magazine), [pv magazine](http://pv%20magazine)

## Final thought

Abu Dhabi pioneered grid-scale NaS batteries in 2019; six years later it's shopping for a lithium-ion fleet bigger than Hornsdale *and* Gateway combined. If bids clear near **US \$50/MWh**, the Gulf will own the new global benchmark for flexible, low-cost solar integration.

## About the Authors



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