Korea Battery

Share prices +10-26% on hopes of accelerated US AIDC infrastructure buildout; raise US ESS demand estimate by 52%

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The Korea battery chain rallied by 10-26% yesterday (Jun 29, vs KOSPI flat) following local media coverage on the 18 June US FERC's show cause orders to US RTOs to further advance the integration of datacenters and other large loads in the interstate electric transmission grid (link & link). According to local media, this is expected to shorten the approval timeline for datacenters' power supply requests from "several years" to "90 days", especially if the datacenter is paired with ESS, which allows for curtailable transmission service (link). We believe the shift would incentivise datacenters to consider including ESS attachment, even if it is using fossil fuel powergen, as it might accelerate the grid connection process. We raise our 2030 US ESS demand forecast by 52% to 303 Gwh, with datacenters now comprising 45% of US ESS demand by 2030. We view this as a positive for Korea battery makers LGES/SDI/SKI (all rated OW), with ESS representing 38%/34%/3% of JPMe 2027 revenue mix, respectively.

- **What's new?** On 18 June, the US Federal Energy Regulatory Commission (FERC) issued tailored orders to the 6 regional transmission organizations (RTOs), directing them to either justify or reform their current tariffs and processes for interconnecting large loads like AI data centers (link). FERC explained that the show cause orders are intended to accelerate speed-to-power timelines for hyperscalers and data center operators through region-specific reforms. RTOs must submit a detailed report describing how the grid operator intends to ensure adequate generation will be available to serve existing and new large loads by mid-July, and justify current tariffs or provide provisions for large loads by mid-August. The 5 core reform areas are: (1) streamlining interconnection studies for large loads, (2) preventing unfair cost-shifting by requiring large loads to pay for necessary network upgrades and reducing the financial risk for utilities, (3) expediting interconnection studies for new power generation or ESS facilities matched to large loads, (4) creating flexible transmission service for large loads, and (5) enabling smaller and more flexible transmission tariffs for large loads co-located with generation/ESS to support the above goals.
- **Datacenters with ESS might get faster connections even before network upgrades:** FERC cited the Southwest Power Pool (SPP) as a model for other regional power markets. Under SPP's newly approved framework, a data center paired with on-site power generation or ESS qualifies for an expedited, load-limited interconnection study, which may be completed within 90 days. Pairing ESS with a data center presents a flatter, lower maximum demand to the grid via peak-shaving, which reduces the required network upgrades and reduces study complexity. SPP is also introducing curtailable transmission service as an option for DCs paired with ESS that seek to connect to the grid before network upgrade is completed, in exchange for potential curtailment during system stress.
- **Raising 2030 US ESS forecast by 52%**: While utility-scale ESS is not mandatory in existing conventional data center designs, we expect the regulatory changes to incentivize ESS adoption even for data centers that do

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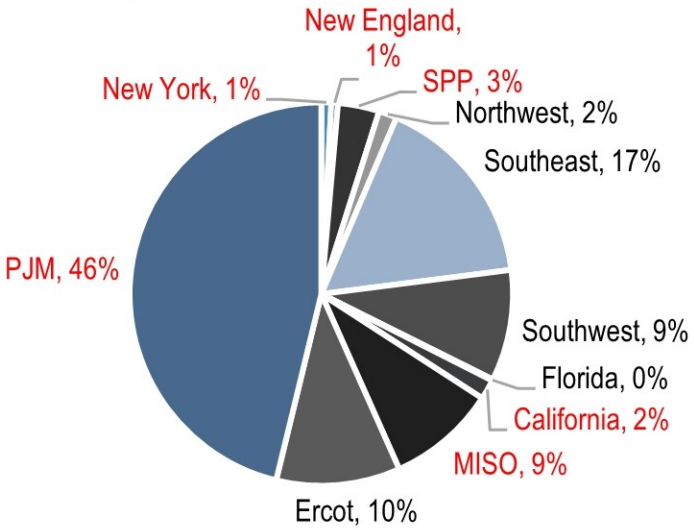
not rely on solar/wind, as it might accelerate the grid connection. Among existing projects, the ESS attachment ratio is around 10-30% of the DC load, with a typical duration of 2-4 hours, according to data from Wizestor. By 2030, we model in 35% of US datacenters coming with ESS attachment, resulting in 2030 ESS demand of 303 Gwh (previous: 200 Gwh).

- **Positives for Korea Battery cell makers**: As shown in Figure 2, LGES/SDI/SK On have >200 Gwh of battery capacity in North America today, potentially rising to >400 Gwh by 2030 (74% of total). Higher US ESS demand could help offset weakness in the EV battery market and boost utilization rates and margins. We view LGES as best positioned to win market share, with the company aiming to increase its US ESS order backlog from 140 Gwh in 4Q25 to 230 Gwh by 4Q26 (JPM note). SDI has built an ESS battery orderbook covering 2-3 years of its US capacity, which we estimate at ~60Gwh (JPM note). While SK Inno has a comparatively negligible US ESS order backlog, it has significant US battery capacity (JPM's PT ascribes only 0.1x book value) and investments in 4th generation nuclear SMR technology for data centers (JPM note).
- **Korea Cathode - Prefer L&F and LG Chem > EBM/PFM:** L&F should be a key beneficiary, given higher visibility on ESS-bound LFP cathode demand. The company has secured a W1.6tn LFP cathode contract from SDI (JPMe: ~130kt) covering 2026-29, and we see potential for follow-on orders from both existing and new customers seeking to reduce reliance on Chinese cathode supply. While LG Chem does not currently produce LFP cathodes, it aims to launch a differentiated product and we do not rule out the company entering the LGES ESS supply chain over the next 2 years. For Posco Future M, the company is developing LFP cathodes to address LFP ESS demand, but we see execution risk and potential delays in the development and mass production ramp, which limits near-term visibility. For Ecopro BM, we expect a more neutral impact, as the company is likely to remain focused on NCM for EV batteries.

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Figure 1: US data center capacity additions by RTO/power market (2026-2035)

Red = RTOs covered by FERC's large load show cause orders



Source: BloombergNEF, J.P. Morgan.

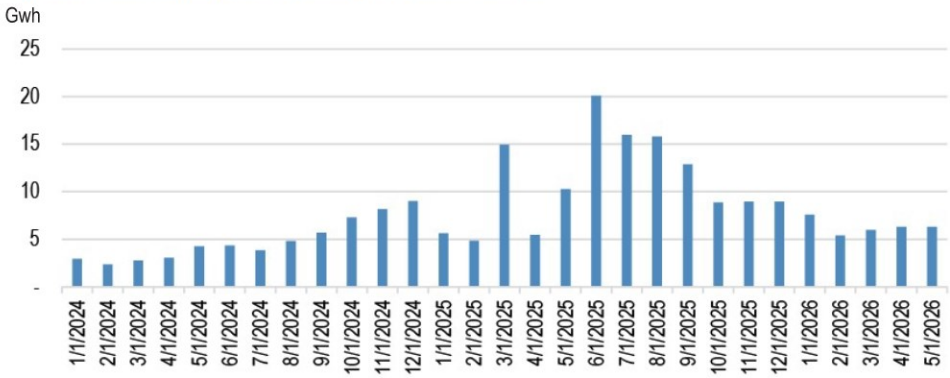
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Figure 2: US Battery supply-demand balance

(Gwh)	2024	2025	2026	2027	2028	2029	2030
CAPACITY							
LGES (incl Canada)	65	87	128	221	254	282	282
Samsung SDI	-	15	27	64	64	64	64
SK On	22	22	57	57	102	102	102
Panasonic	52	74	74	74	74	74	74
Ford Michigan (LRS with CATL)			20	20	20	20	20
Ford Kentucky (acquired from SK On)				10	20	20	20
Others	13	23	35	45	45	45	45
US Battery Capacity	**151**	**220**	**341**	**491**	**579**	**607**	**607**
y/y growth	*53%*	*46%*	*55%*	*44%*	*18%*	*5%*	*0%*
Capacity allocated for ESS		***24***	***69***	***143***	***179***		
LGES		17	50	89	Can scale to >115 Gwh		
SDI		7	19	29	29		
SK				approx 10-15			
Ford				10+	20+		
US EV+ESS battery shipments (Gwh)							
EV Battery	117	119	83	100	115	130	146
% LGES market share	27%	20%	5%	18%			
y/y growth	*-7%*	*2%*	*-30%*	*20%*	*15%*	*13%*	*12%*
ESS battery (grid+BBU)	55	110	128	179	150	219	303
% LGES market share	9%	10%	28%	36%	47%		
% CATL market share (excludes LRS)	63%	47%	27%	17%	10%		
BBU as % of total ESS	**0%**	**0%**	**1%**	**1%**	**2%**	**2%**	**1%**
Data center as % of total ESS	**4%**	**6%**	**8%**	**27%**	**12%**	**33%**	**45%**
y/y growth	*16%*	*100%*	*16%*	*40%*	*-16%*	*46%*	*38%*
Total	**172**	**229**	**211**	**279**	**265**	**349**	**449**
y/y growth	*-1%*	*33%*	*-8%*	*32%*	*-5%*	*32%*	*29%*
Demand as % of capacity (T+1)	78%	67%	43%	48%	44%	58%	74%
Demand as % of KR/JP makers capacity (T+1)	98%	100%	59%	71%	63%	83%	107%
LGES shipments as % of US capacity (T+1)	55%	41%	31%	38%	42%	43%	47%
US light vehicles sales (k units)	**15,858**	**16,233**	**15,422**	**15,576**	**15,732**	**15,889**	**16,048**
US BEV sales (k units)	**1,243**	**1,216**	**912**	**1,090**	**1,259**	**1,430**	**1,605**
y/y growth	*7%*	*-2%*	*-25%*	*20%*	*15%*	*14%*	*12%*
BEV as % total sales	**8%**	**7%**	**6%**	**7%**	**8%**	**9%**	**10%**
ESS battery (May 2026 est)	55	110	128	151	156	179	200

Source: Company data, IEA, EIA, J.P. Morgan Asia Energy Research. Note: Historical capacity data are based on JPM estimates based on company data; demand numbers are JPM estimates based on government data.

Figure 3: Chinese players' ESS battery exports to the US



Source: ICCSINO.

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