24H1 储能新增装机能量规模+64%，独立储能日均等效充放+103%

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投资要点：

- **24H1 储能新增装机能量规模+64%。**2024 年 9 月 9 日，中电联发布《2024 年上半年电化学储能电站行业统计数据》。24H1 新增储能总装机 10.37GW/24.18GWh，yoy+40%/+64.3%。相当于新能源新增装机的 8.04%，此值相较于各省大多要求的配储 10%及以上的要求较小。截止 2024 年 6 月，累计储能总装机 35.37/75.05GWh，相当于新能源总装机的 2.87%，此值对比新增储能装机/新增新能源装机偏小，我们认为，目前储能仍有历史缺口需满足。截止 24 年 6 月，73.4%的电站配储时长为 1-2h。

- **百兆瓦级以上电站占 74%，新疆、山东和江苏新增储能装机前三。**24H1，新增电网侧储能（主要为独立储能）6.85GW，同比超 100%，占总装机 66%。电源侧新能源配储新增总装机 3.37GW，与去年持平。24H1，新增百兆瓦级以上电站 7.64GW，同比超 100%，占总装机 73.68%。我们认为，体现出电站业主更倾向于投建大型独立储能，以期获得更多调用机会，在电力现货市场、辅助服务等上获得更多收益。新疆、山东和江苏 24H1 新增投运储能 7.09GWh、2.7GWh 和 2.05GWh，分别占 29.3%、11.2%和 8.5%。

- **电化学储能运行情况有所提升，独立储能日均等效充放电次数+103%。**24H1 电化学储能日均等效充放电次数由 0.58 次提升至 0.63 次（相当于每 1.6 天完成一次完整充放电），平均利用率指数由 34%提升至 42%。其中就日均等效充放电次数而言，独立储能和新能源配储有显著提升，独立储能从 0.36 次提升至 0.73 次（每 1.4 天一次完整充放电）,yoy+102.8%，已投运的运行满一年的独立储能电站 24H1 标杆调用次数 206 次（每天调用 1.13 次），可实现一充一放。我们认为，调用次数提高有利于经济性的提升。新能源配储日均等效充放电次数由 0.31 次提升至 0.50 次（每两天一次完整充放电）,yoy+61.3%。日均等效充放电次数最高的五个省份分别为广东（1.18）、浙江（1.06）、安徽（1.01）、江苏（0.97）和贵州（0.89）。

- **电化学储能平均综合效率 81.89%。**上半年，电化学储能总充电电量 4050GWh、总放电电量 3591GWh、基均转换效率 88.67%，下网电量 2211GWh、上网电量 1810GWh、平均综合效率 81.89%，平均能量保持率 93.85%。

- **宁德时代和亿纬锂能储能电池装机量领先。**截至 2024 年 6 月，总能量排名前五的电池厂商依次是：宁德时代、亿纬锂能、海辰储能、比亚迪、瑞浦兰钧，总能量 24.17GWh、占比 67.78%。总功率排名前五的 PCS 厂商依次是：上能电气、国电南瑞、科华数据、阳光电源、禾望电气，总功率 9.37GW、占比 52.98%。

- **投资建议。**我们认为，随着储能电站的运行情况转好，特别是独立储能的调用次数提高，未来参与电力现货市场和辅助服务市场等，或能有更好的经济性，同时，随着新能源发展配储有需求+原有的储能历史缺口需补足，储能增速或仍能强劲。我们建议关注储能电池宁德时代、亿纬锂能、中创新航和瑞浦兰钧。建议关注储能 PCS，上能电气、盛弘股份、科华数据、阳光电源和禾望电气。建议关注储能集成商南网科技、威腾电气。建议关注储能运营商南网储能。

- **风险提示。**储能需求不及预期，储能经济性不及预期，储能运行状况不及预期。

APPENDIX 1

Summary

Investment Highlights:

24H1 energy storage capacity increased by 64%. On September 9, 2024, the China Electricity Council released the ‘2024 H1 Electrochemical Energy Storage Station Industry Statistics’. 24H1 added 10.37GW/24.18GWh of storage capacity, YoY +40%/+64.3%. This is 8.04% of new energy installations, lower than the 10%+ required by most provinces. By June 2024, total storage capacity was 35.37GW/75.05GWh, 2.87% of total new energy installations, indicating a historical gap in storage needs. By June 2024, 73.4% of stations had a storage duration of 1-2 hours. Large stations (100MW+) accounted for 74%, with Xinjiang, Shandong, and Jiangsu leading in new storage capacity. 24H1 saw 6.85GW of new grid-side storage (mainly independent storage), over 100% YoY, making up 66% of total installations. New energy storage on the power side was 3.37GW, flat YoY. 24H1 added 7.64GW of 100MW+ stations, over 100% YoY, making up 73.68% of total installations. This shows a preference for large independent storage to gain more dispatch opportunities and revenue in the power spot market and auxiliary services. Xinjiang, Shandong, and Jiangsu added 7.09GWh, 2.7GWh, and 2.05GWh, respectively, accounting for 29.3%, 11.2%, and 8.5%. Electrochemical storage performance improved, with independent storage daily charge/discharge cycles +103%. 24H1 daily charge/discharge cycles rose from 0.58 to 0.63 (one full cycle every 1.6 days), with average utilization up from 34% to 42%. Independent storage cycles rose from 0.36 to 0.73 (one full cycle every 1.4 days), YoY +102.8%, with benchmark dispatches at 206 times (1.13 times/day) for stations operating for a year. Increased dispatches improve economics. New energy storage cycles rose from 0.31 to 0.50 (one full cycle every two days), YoY +61.3%. The top five provinces for daily cycles were Guangdong (1.18), Zhejiang (1.06), Anhui (1.01), Jiangsu (0.97), and Guizhou (0.89). Electrochemical storage average efficiency was 81.89%. In H1, total charge was 4050GWh, total discharge was 3591GWh, with an average conversion efficiency of 88.67%. Grid power was 2211GWh, with an average efficiency of 81.89% and energy retention of 93.85%. Contemporary Amperex Technology and EVE Energy led in storage battery installations. By June 2024, the top five battery manufacturers were Contemporary Amperex Technology, EVE Energy, Haichen Energy Storage, BYD, and REPT BATTERO Energy, with a total of 24.17GWh, accounting for 67.78%. The top five PCS manufacturers were Sineng Electric, NARI Technology, Kehua Data, Sungrow Power Supply, and Hopewind Electric, with a total of 9.37GW, accounting for 52.98%. Investment advice: With improved storage station performance, especially increased independent storage dispatches, future participation in the power spot market and auxiliary services may yield better economics. With the need for new energy storage and historical gaps to fill, storage growth may remain strong. We suggest to focus on the storage battery manufacturers Contemporary Amperex Technology, EVE Energy, CALB Group, and REPT BATTERO Energy. For PCS, focus on Sineng Electric, Shenzhen Sinexcel Electric, Kehua Data, Sungrow Power Supply, and Hopewind Electric. For integrators, focus on China Southern Power Grid Technology and Wetown Electric Group Co., Ltd. For operators, focus on China Southern Power Grid Energy Storage.

Risk Warning: Storage demand, economics, and performance may be weaker than expected.

附录 APPENDIX

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中性，未来 12-18 个月内预期相对基准指数变化不大，基准定义如下。根据

评级分布 Rating Distribution

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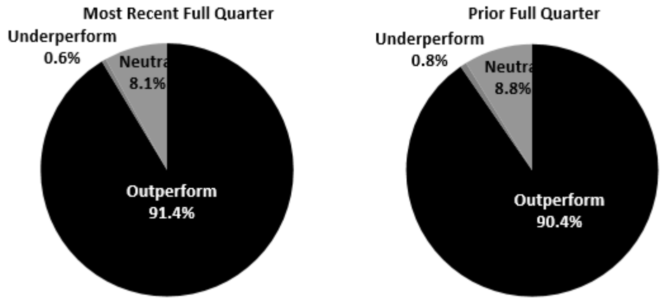

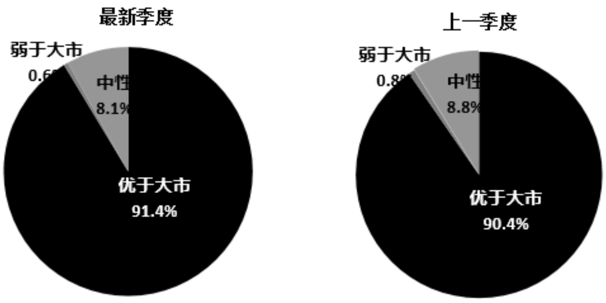

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