



OFFICE of INTELLIGENCE and ANALYSIS
INTELLIGENCE IN FOCUS

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ECONOMIC SECURITY

(U//FOUO) People's Republic of China State-Supported Firms Likely Hindering US Utility Battery Energy Storage Security

(U) Scope Note: This analysis builds on previous products that focused on People's Republic of China state-supported firms' use of noncompetitive tactics in the electric vehicle and battery supply chains.

(U//FOUO) Some China-based firms are using People's Republic of China (PRC) state support to quickly and cheaply enter the emerging US utility battery energy storage (hereafter referred to as utility storage) industry and create supply chain dependencies on China, which will likely hinder the development of a secure US utility storage supply chain. Utility storage systems are critical to US efforts to modernize the electrical grid and expand renewable energy sources. The PRC has prioritized dominance in the utility storage industry and has provided Chinese-based producers with extensive state support. These firms have begun to manufacture these storage systems and components at economies of scale, which provides them with a noncompetitive advantage that amplifies the effectiveness of otherwise benign market practices. PRC state-supported firms are probably also seeking to capitalize on US incentives meant to stimulate domestic development and help secure an independent US battery supply chain.

(U) Background on Utility Storage Systems

(U) Utility storage systems use high-capacity batteries to support the power grid by storing surplus energy production when energy demand is low and prices are cheaper, and discharging energy when demand is high and prices are higher. This allows them to stabilize the grid during periods when intermittent, renewable sources like wind and solar are less productive, making them critical to US efforts to add renewable energy sources and to modernize the power grid. Electric vehicle and utility storage batteries have similar components, creating supply chain competition between auto and utility storage firms.

- (U) Beijing seeks to “tighten the dependence of the international industrial supply chain” on the PRC for new energy technologies, including battery energy storage, as directed by President Xi Jinping. To assist in reaching these goals, the PRC has created a favorable regulatory environment in China for utility storage firms. This environment has, in part, enabled select Chinese-based firms to build dedicated manufacturing facilities for utility storage systems, according to industry reporting, allowing them to produce systems at a noncompetitive economy of scale. This noncompetitive advantage is compounded with other forms of PRC government support, including access to the PRC critical mineral supply chain, large government orders, and partnerships with Chinese state-owned enterprises.
- (U) Select PRC state-supported utility storage firms have benefited from the various forms of state support and leveraged this to further business strategies for gaining US market share. These firms include Contemporary Amperex Technology Co. Limited (CATL), Build Your Dreams (BYD), and Ruipu Energy Co. Ltd. (REPT). CATL and BYD are selling complete utility storage systems, while REPT and CATL sell components to US utility storage firms, according to industry reporting. These firms have positioned themselves as a solution to the current lack of utility storage component manufacturing in the United States to meet consumer demand. For example, in 2022, a known US utility storage firm partnered with CATL, citing CATL’s dedicated utility storage manufacturing as a critical factor cementing their partnership, according to industry reporting.
- (U) Chinese-based firms are targeting US government incentives and investments to expand their market share and footprint in the United States. BYD’s public website as of Spring 2023 highlighted how US state incentives can make BYD utility storage systems an attractive investment. If PRC firms succeed in accessing US incentives, it could support sustained market dominance by PRC firms, limiting US firms’ overall economic competitiveness.

(U) Recent US Legislation Impacting Utility Storage

(U) Recent legislation has provided over \$600 million to DOE to improve US green energy technology capabilities and bolster US energy independence by supporting utility storage research, system demonstrations, pilot program grants, a joint program with DOD to decrease energy storage costs, and goals of achieving carbon-free electricity by 2035 and a net-zero economy by 2050.

(U) The Inflation Reduction Act (IRA) and Bipartisan Infrastructure Law (BIL), passed in the past two years, expanded the number of utility storage systems that are eligible for investment tax credits, lowering the cost for firms looking

to invest in utility storage systems. These incentives are scheduled to remain in place until at least 2032.

(U) In April 2024, DOE and Department of Treasury precisely defined a foreign entity of concern (FEOC) in the IRA and BIL designed to limit such foreign entities from participation in these funding opportunities. DOE's definition for a FEOC includes entities incorporated in, headquartered in, or performing relevant activities in a covered nation (China, Iran, North Korea, and Russia), or a company with at least 25 percent voting interest, board seats, or equity held by the government or senior official of a covered nation, regardless of where the relevant activities occur. Increased scrutiny of the influences held over such entities may help protect US resilience in the battery supply chain industry.

Source, Reference, and Dissemination Information

Definitions

(U) **PRC State-Supported Firm:** a PRC business that has gained a noncompetitive market advantage because of substitutive direct or indirect support from the PRC government. This support is often directed at firms operating in industries the PRC has identified as strategically significant, with PRC support increasing both the PRC's influence within the firm and across the overall industry. However, unlike PRC state-owned enterprises, these firms are not completely controlled by the PRC government.

(U) **Utility Battery Energy Storage:** an electrochemical system designed to store surplus power and release it at a later time to support and stabilize the power grid; this includes both public and privately owned systems.

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Homeland Security

Office of Intelligence and Analysis

Customer Feedback Form

Product Title: (U//FOUO) People's Republic of China State-Supported Firms Likely Hindering US Utility Battery Energy Str

All survey responses are completely anonymous. No personally identifiable information is captured unless you voluntarily offer personal or contact information in any of the comment fields. Additionally, your responses are combined with those of many others and summarized in a report to further protect your anonymity.

1. Please select partner type: and function:

2. What is the highest level of intelligence information that you receive?

3. Please complete the following sentence: "I focus most of my time on:"

4. Please rate your satisfaction with each of the following:

	Very Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied	N/A
Product's overall usefulness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product's relevance to your mission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product's timeliness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product's responsiveness to your intelligence needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. How do you plan to use this product in support of your mission? (Check all that apply.)

- | | |
|--|---|
| <input type="checkbox"/> Drive planning and preparedness efforts, training, and/or emergency response operations | <input type="checkbox"/> Initiate a law enforcement investigation |
| <input type="checkbox"/> Observe, identify, and/or disrupt threats | <input type="checkbox"/> Initiate your own regional-specific analysis |
| <input type="checkbox"/> Share with partners | <input type="checkbox"/> Initiate your own topic-specific analysis |
| <input type="checkbox"/> Allocate resources (e.g. equipment and personnel) | <input type="checkbox"/> Develop long-term homeland security strategies |
| <input type="checkbox"/> Reprioritize organizational focus | <input type="checkbox"/> Do not plan to use |
| <input type="checkbox"/> Author or adjust policies and guidelines | <input type="checkbox"/> Other: <input type="text"/> |

6. To further understand your response to question #5, please provide specific details about situations in which you might use this product.

7. What did this product *not* address that you anticipated it would?

8. To what extent do you agree with the following two statements?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	N/A
This product will enable me to make better decisions regarding this topic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product provided me with intelligence information I did not find elsewhere.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. How did you obtain this product?

10. Would you be willing to participate in a follow-up conversation about your feedback?

To help us understand more about your organization so we can better tailor future products, please provide:

Name: <input type="text"/>	Position: <input type="text"/>
Organization: <input type="text"/>	State: <input type="text"/>
Contact Number: <input type="text"/>	Email: <input type="text"/>



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