

Batteries and Energy Storage

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Navigating the future of energy



Rystad Energy quick facts

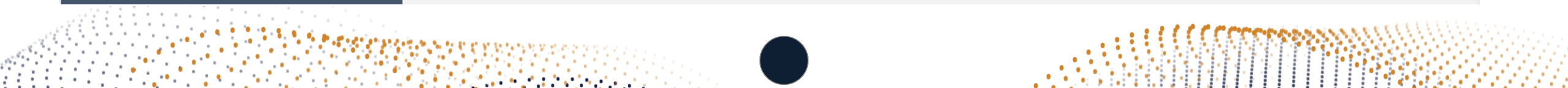
-  **Established** in Oslo, Norway in 2004
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-  **Over 700 employees** worldwide, and growing
-  **Energy market orientation** with clients that span operators, service companies, manufacturers, investment banks, and investors
-  **Range of offerings**, from data subscription and analytics services to bespoke consulting engagements

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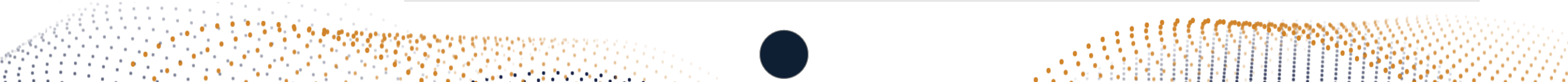
(1/2) Recent reference projects within battery cells

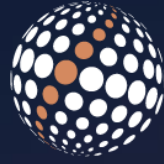
Client	Description of study
	<ul style="list-style-type: none"> • Merger between US company Alussa Energy SPAC and US-Norwegian Freyr Battery • We brought parties together and did the commercial due diligence for Alussa Energy
<p>Battery cell manufacturer</p>	<ul style="list-style-type: none"> • Battery cell manufacturer with US expansion plans • Market study for battery energy storage systems, including applications in grid and EV charging
<p>Industrial investor</p>	<ul style="list-style-type: none"> • Buy side market due diligence wrt battery cell manufacturer. Analyzed EV and ESS demand for cells • Client wanted to understand the potential of a specific battery technology and startup
	<ul style="list-style-type: none"> • Market analyses of cell demand for specific battery chemistry, electric vehicle and energy storage • Analyzed ESS: EV charging, FFR, UPS, peak shaving and ferry charging. Also, electric 2/3-wheeler market.
<p>Battery cell manufacturer</p>	<ul style="list-style-type: none"> • Supply-demand forecasting of cells going forward • Split by region and segment (EV and ESS)
<p>Battery cell manufacturer</p>	<ul style="list-style-type: none"> • Capex benchmarking of cell production facilities • Analyzed seven plants to compare the capex against cell output
<p>Battery cell manufacturer</p>	<ul style="list-style-type: none"> • Market intelligence support on supply and demand for cells • Energy storage 101, battery materials outlook and pricing
<p>Battery cell manufacturer</p>	<ul style="list-style-type: none"> • Detailed analyses of supply-demand outlooks for battery cells • We split markets by chemistry, region and target market (EV/ESS)
<p>Battery cell manufacturer</p>	<ul style="list-style-type: none"> • Competitor benchmarking of high-power/high cycle life cells • Comparative cost and revenue analysis of using high-power cells vs standard energy cells in grid applications



(2/2) Recent reference projects within broader battery value chain

Client	Description of study
Private Equity Company	<ul style="list-style-type: none"> Considering to invest in company supplying batteries for ships and charging infrastructure
Global Energy Company	<ul style="list-style-type: none"> Considering to invest in Renewables, the company asked us for economics models for renewables and energy storage
Private Equity Company	<ul style="list-style-type: none"> Commercial due diligence on buy side for small scale LNG provider Competition from energy storage and hydrogen in nearshore ferries one of the key market outlook considerations
Private Equity Company	<ul style="list-style-type: none"> Market study on transportation of vehicle exports and logistics Considerations made on disruptive effect of EVs on global production patterns
 Nagal	<ul style="list-style-type: none"> Energy storage company with cell-level control systems for second life of EV batteries. Analyzed ESS market Capital raise support documentation
 Vianode	<ul style="list-style-type: none"> Supported Hydro Battery with market analyses to understand Vianode case Market due diligence of battery raw materials industry, specifically graphite used in anodes
Industrial investor	<ul style="list-style-type: none"> Energy storage market assessment
 Vianode	<ul style="list-style-type: none"> Supported Hydro Battery with market analyses to understand Vianode case Generated cost curve for battery anode material, all 90 plants globally
Industrial investor	<ul style="list-style-type: none"> Market due diligence of natural graphite battery anode value chain
Battery cell manufacturer	<ul style="list-style-type: none"> Market outlook and case study of battery energy storage and assets Revenue stack, applications (hybrid solar PV, combined with rooftop solar PV, grid support)
Eastern European Country	<ul style="list-style-type: none"> Complete strategy advisory study for the country administration to help the nation reduce the dependency on fossil energy. Advice was to deploy large amounts of solar PV, wind and batteries. We took a systems approach, considering national security, economic security and sustainability.
Solar PV/BESS developer	<ul style="list-style-type: none"> Developer of Solar and Storage in Angola. Understanding price development for selected SolarPV and energy storage products. SolarPV modules, mounting structures, inverters, BESS, battery modules, substations and switching stations
 NY-BEST	<ul style="list-style-type: none"> New York State Battery Energy Storage Technology Consortium Taxonomy of value chain, screening of suppliers in USA and NY State. Strategy advice on how to make NY state an attractive area for BESS supply chain
Global Energy Company	<ul style="list-style-type: none"> Market research study to understand demand for long-duration energy storage (electricity and heat), both front-of and behind-meter Focus on Poland, Germany, and UK
Private Equity Company	<ul style="list-style-type: none"> Market research study to understand Swedish Frequency Control Power market Revenue potential for wind farm, competition with energy storage





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