Tesla Battery Supplier LG Energy Solution (LGES) Raises $10.8 Billion in Its IPO

Date of analysis: Jan. 19th, 2022
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On Jan. 14th, LG Energy Solution announced that it attracted US$10.8 billion in its initial public offering in South Korea.
● LG Energy Solution is an energy storage manufacturer in South Korea. The company currently provides EV batteries for car companies, including Tesla, General Motors, and Volkswagen. Before spinning off from LG Chem Ltd., LG Energy Solution was the battery business of LG Chem.

● On January 14th, LG Energy Solution announced that it attracted US$10.8 billion in its IPO. According to Bloomberg, the deal values the company’s worth at around US$ 59 billion. LG Energy Solution said it would use the funds to expand battery factories in South Korea and other countries.

● According to the Patent Rankings developed by InQuartik, only 4% of LG Energy Solution patents in some major markets are more likely to be monetized. For patents under IPC H01M, the company owns larger proportions of high-quality patents and high-value patents than its Chinese rival CATL. The potential targets for LG Energy to monetize its patents include Samsung and Bosch.
Coverage and Status - Global Coverage

Applications: 6,350
Families: 5,299

Around 54.44% of LG Energy’s patent applications are active patents and around 45.23% are pending.

The geographic coverage of LG Energy’s patents:

**Country**: US(4,176), KR(1,384), WO(550), EP(229), AU(9), EM(1), IN(1)

<table>
<thead>
<tr>
<th>Country</th>
<th>Patent Appl.</th>
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<td>US</td>
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<td>IN</td>
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Most of its patents were filed to the USPTO.

Notice that it also filed many applications to WIPO, suggesting its ambition for international expansion.
Coverage and Status - Pending Patents

According to the patent data, most of LG Energy’s pending applications were filed in 2020.

The company has 550 pending applications at WIPO, and most of them were filed between 2020 and 2021, suggesting that the company is actively expanding its market.

You can see LG Energy’s pending applications in each year. Go to Due Diligence to find out more.
Coverage and Status - Remaining Life

The number of LG Energy’s active patents will decrease more rapidly starting 2027 — mainly driven by number of expiring patents in the U.S.

The country code below indicates the year by which the company will no longer hold any enforceable patents in that country.

All of LG Energy patents in Korea and the U.S. will expire before January 1, 2041.
Nearly three out of four LG Energy patents fall in Processes or Means for the Direct Conversion of Chemical Energy into Electrical Energy (IPC H01M).
Patent Transaction History

According to the patent records in the U.S. and China, around 99.19% of LG Energy’s patents have been transacted.

LG Chem Ltd. transferred 4,141 patents to LG Energy Solution. The results suggest that most of LG Energy patents in the U.S. and China were from LG Chem Ltd.
Only 0.12% of LG Energy's U.S. patent applications have been litigated.

See the government bodies to which these patent applications were taken.

Litigated Patents

0.12%

5 Applications

0.12% COMPOSITION

District Court: 5
ITC: 4
PTAB Review: 5
C.A.F.C: 3
Supreme Court: 0
Quality and Value Evaluation

Why Quality and Value?

Quality and Value are the two cornerstones of patent evaluation. By reflecting on a patent’s true quality and value, we can evaluate patents with an objective viewpoint instead of relying on subjective guesswork—eventually giving a fair price to patents.
Quality and Value Definition

According to our proprietary models, each patent is ranked as per the quality and value dimensions and is categorized into one of the following six grades: AAA, AA, A, B, C, and D.

A patent with a quality score in the 97th percentile is graded as AAA.

Quality:
Predicts the tendency for invalidation.
Describes whether a patent is eligible, novel, non-obvious, and described with clarity.

Value:
Predicts the tendency for monetization.
Describes whether a patent has commercial viability—either realized from enforcement, transaction, or other commercial practices.

Defined as "high-quality / high-value" patents in Patentcloud.
Quality and Value Rankings - Quality and Value*

Our Patent Quality & Value Dashboard shows that only 4% of LG Energy’s patents in major countries are of high value.

Of the 5,225 patent families, 6,247 patents are active or pending in major countries, of which 243 (4%) are high-value patents.

* The scope of the Quality and Value analysis includes patents filed with the patent offices of the US, China, Europe, Japan, Korea, Taiwan, and the WIPO.
### Quality and Value Rankings - Quality and Value

Among the high-value patents, some have a higher likelihood of standing against legal challenges.

**High-value, low-quality** patents: They have good monetization potential, but the risk of invalidation is high.

**High-quality, high-value** patents: The potential for monetization is high, and the risk of being invalidated is low.

A large proportion of LG Energy patents may stand better against legal challenges but are less likely to be monetized.
Peer Comparison - Quality Rankings

For LG Energy's patents under IPC A61K, the proportion of high-quality patents is 29.78%, higher than CATL (12.79%).
Peer Comparison - Value Rankings

The proportion of LG Energy’s high-value patents in the same field is **4.26%**, higher than CATL (1.87%).
Quality and Value Highlights - Eligibility and Novelty Issues

Around **68.57%** of LG Energy's U.S. patents have been challenged during prosecution or at PTAB — an indicator of potential quality issues for its patents’ family members.

Nonobviousness is the most common challenge brought against LG Energy's patent applications in the U.S.
Quality and Value Highlights - Potential Targets of the Portfolio

LG Energy’s potential targets based on novelty citations include Samsung and Bosch, among others.

Some of these companies’ patent applications received a novelty (§102) rejection based on patents currently held by LG Energy.

Based on all references citing LG Energy’s patents, its targets include Samsung and Bosch, among others.
The ten companies that cite LG Energy's patents the most. They are potential targets for LG Energy to monetize its patents.
Patents Against the Potential Targets

The most heavily cited families — these patent families are ideal for LG Energy to use against potential targets.

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<tr>
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<td>41653720</td>
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You can view potential targets by the types of references that cite LG Energy’s patents.
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Matrix Analysis

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**Source:** Patent Vault
Visualize patent assets with just one click

- Instantly access and examine patent portfolio attributes to aid in decision-making.
- Discover the patents with the greatest monetization potential — and the most likely targets.
- Identify the strengths and weaknesses of a patent portfolio.
- Maximize investment opportunities and value.