

Liquefied Petroleum Gas

Patent Landscape Report

This sample report showcases a landscape of advancements in Liquefied Petroleum Gas technology by analyzing 7928 patent from 2010 to 2025.

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Sample

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Executive Summary

This sample report showcases a landscape of advancements in Liquefied Petroleum Gas technology by analyzing 7928 patent from 2010 to 2025. The analysis reveals:

Explosive Growth

Patent filings in LPG technology rose steadily from around 500 families in 2010 to over 630 by 2022. Despite slight declines in 2016–17, innovation rebounded strongly, peaking again in 2019 and continuing upward.

Technology Focus

LPG technology focuses on producing and enhancing liquefied petroleum gas, natural and synthetic gases, and their combustion additives. It also emphasizes hydrocarbon-cracking processes to efficiently generate liquid fuel products.

Geographic Dominance

USA and China hold about 62% of LPG technology patents, underscoring their dominant positions and strong future market growth. Saudi Arabia, South Korea, and Japan also play key roles.

Market Potential

The global LPG market was valued at approximately USD 142.83 billion in 2023, and is projected to grow at a CAGR of about 7.33% over the 2024–2032 period.

Methodology

The methodology employed in this report integrates AI-driven data analytics, machine learning algorithms, and expert human analysis, thereby ensuring a thorough and precise assessment of patent trends within this technology sector.

Data Collection

The analysis initiates with the collection of patent metadata from reputable global patent databases, including:

- WIPO PATENTSCOPE (World Intellectual Property Organization)
- Lens.org
- USPTO (United States Patent and Trademark Office)
- EPO (European Patent Office)
- National Patent Offices

These datasets encompass structured metadata, including patent titles, abstracts, claims, classifications (e.g., IPC, CPC), applicants, publication dates, citations, and legal status.

AI & Machine Learning Analysis

Using proprietary artificial intelligence (AI) and machine learning models developed by STIMAnalytics, the acquired patent data undergoes the following processing stages:

- Text Mining and Natural Language Processing (NLP): Extracting critical technical terms, concepts, and innovation themes from patent documents.
- Clustering and Classification: Categorizing patents into relevant technological groups and subgroups.
- Trend Analysis: Identifying growth trajectories, emerging technologies, and shifts in innovation focus over time.
- Network Analysis: Mapping interrelationships among applicants, technologies, and jurisdictions.
- Predictive Insights: Forecasting future technological advancements and market trends based on historical and contemporary patenting activities.

Reporting Infrastructure

The analytical results are subsequently integrated into a robust reporting infrastructure, which autonomously generates structured reports and interactive dashboards. These outputs are further enriched with:

- Visual Analytics (charts, graphs, maps)
- Strategic Insights
- Technology Roadmaps
- Company and Academic Profiles

Expert Review

Finally, all reports undergo a rigorous quality assurance process conducted by domain experts and technical editors to ensure:

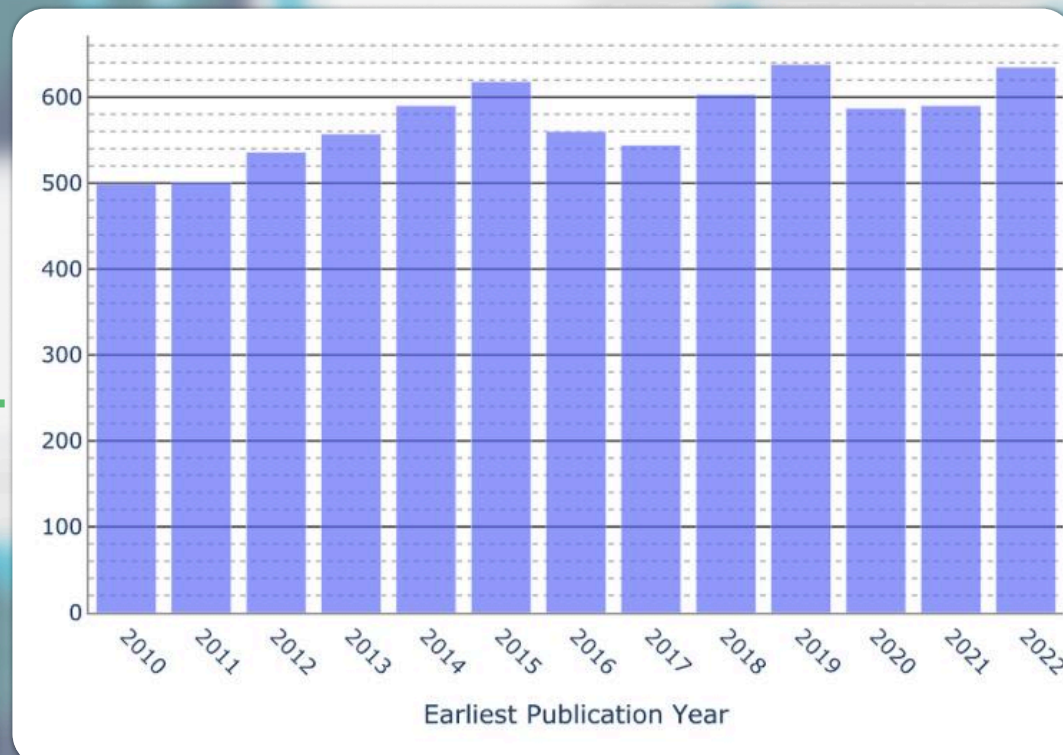
- Accuracy of technical interpretation
- Consistency in terminology and classification
- Relevance of strategic insights
- Professional formatting and readability

Delivery Formats

The final outputs are delivered in two formats:

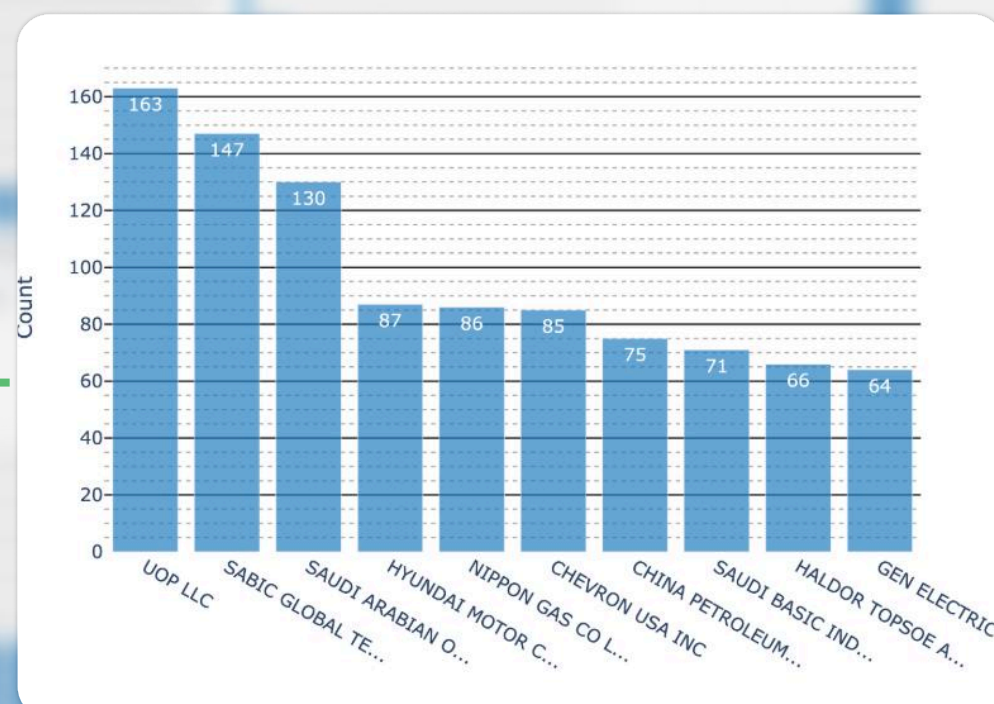
- Written Report (PDF): A comprehensive, publication-ready document featuring executive summaries, technology breakdowns, market insights, and key player profiles.
- Interactive Dashboard: A web-based platform enabling users to explore patent trends, filter by technology, applicant, jurisdiction, and time period, and generate customized reports.

Patent Landscape Overview



Patent filings remained consistently strong from 2010 to 2022, fluctuating narrowly between 500 and 650 annually, indicating a mature innovation landscape with sustained, stable R&D output over the observed timeframe.

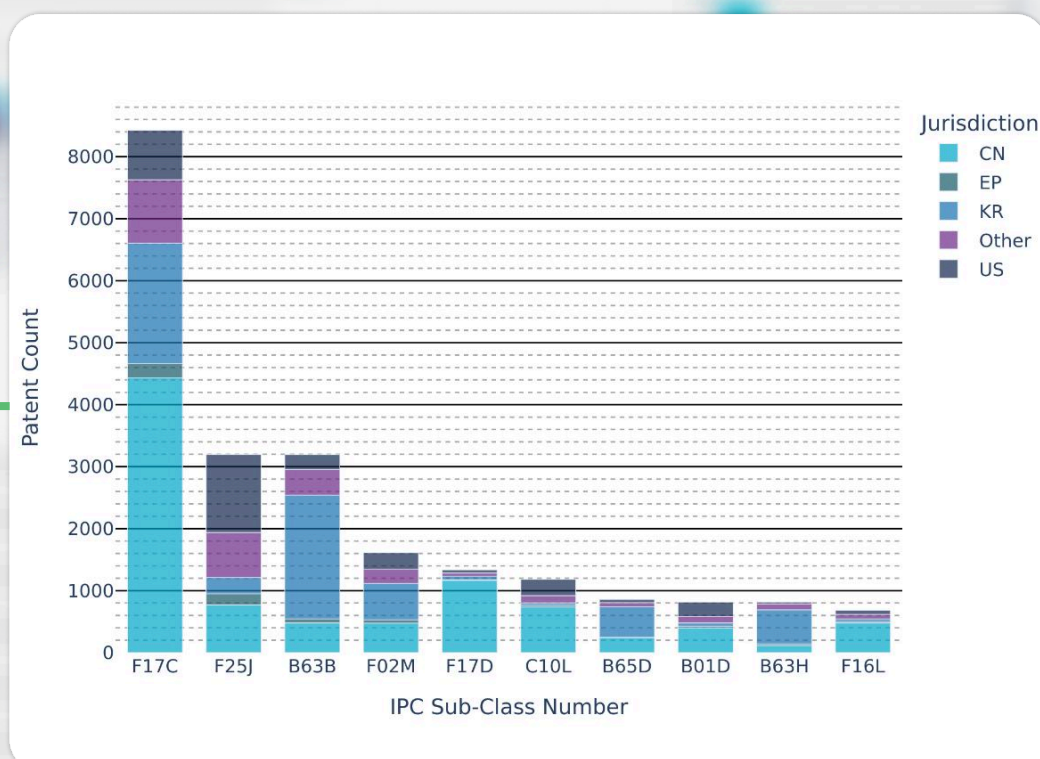
Top Patent Applicants



UOP LLC leads with 163 patents, reflecting dominant innovation in chemical processing; the presence of energy, petrochemical, and automotive firms indicates strong cross-sector R&D activity focused on materials, fuels, and industrial efficiency technologies.

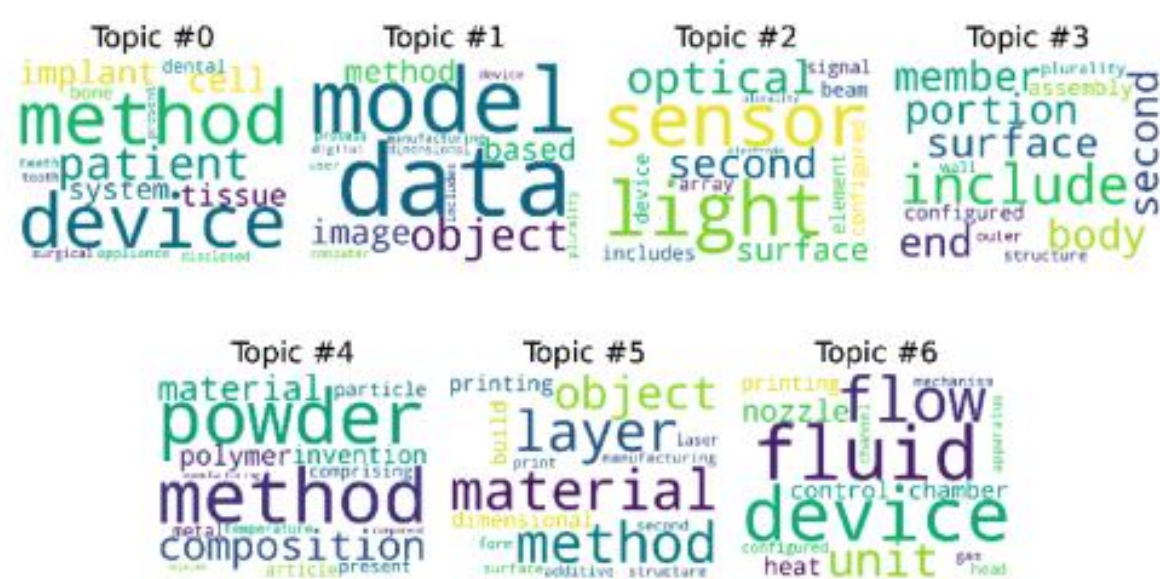
Technology Trends

Top Technologies by Sub-Class



F17C, related to liquefied or compressed gas storage, dominates patent activity with over 8,000 filings—mostly from China—indicating concentrated innovation in gas transport and energy infrastructure across industrial and clean energy sectors.

Key Patent Themes



Strategic Recommendations:



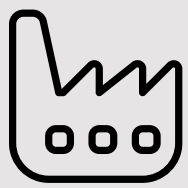
Policy Makers

1. Focus on fostering innovation in high-growth sectors.
2. Encourage investments in sustainable technologies.
3. Support industry-specific research and development initiatives.



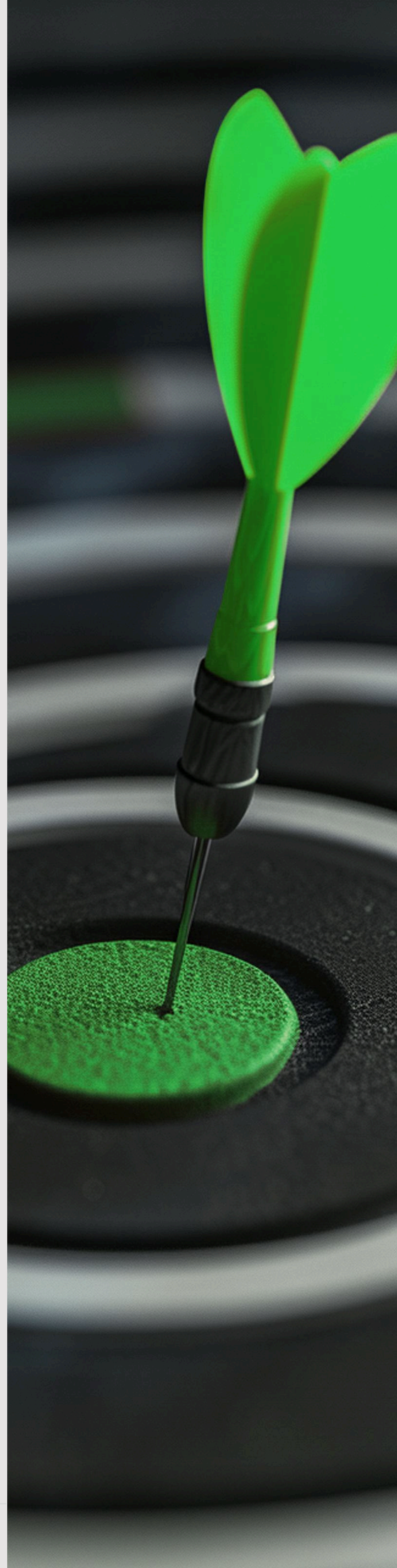
Investors

1. Prioritize companies with strong intellectual property in emerging technologies.
2. Monitor the latest advancements in new industrial applications and sectors.



Manufacturers

1. Embrace new technology adoption to improve operational efficiency.
2. Invest in scalable solutions for long-term growth.
3. Focus on sustainability and circular economy practices.

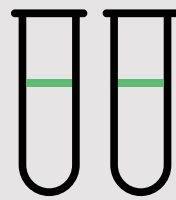


Our Industrial Expertise



Energy

Exploring innovations in the oil, gas, electricity, and renewable energy sectors.



Chemical

Advancing chemical processes, products, and catalysts for industrial applications.



Health and Pharma

Analyzing new pharmaceutical products, health services, and medical technologies.



ICT & Software

Examining trends in information and communication technology, software, and hardware.



Mining Industry

Investigating improvements in iron, steel, aluminum, copper, and other related industries.



New Materials

Researching advancements in advanced materials, nanotechnology, and their applications.

Our Global Allies




Liquefied Petroleum Gas

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