

## 全球能源转型

### 欧洲新能源深度研究：未受重视的欧洲新能源成长性；地缘政治结构性改变了欧洲新能源前景

观点聚焦

Name	Rating	Target		P/E	
		Price	2023E	2024E	2024E
Ballard Power Sys.	Outperform	8.00	n.a.	n.a.	n.a.
Bloom Energy	Outperform	33.00	n.a.	46.5	46.5
Clearway Energy	Outperform	43.00	19.6	18.8	18.8
Enphase Energy	Outperform	304.00	28.1	21.3	21.3
Livent	Outperform	37.00	11.3	9.3	9.3
Lynas Rare Earth	Outperform	12.00	17.0	18.1	18.1
MP Materials	Outperform	56.00	22.4	12.7	12.7
Nextracker	Outperform	50.00	28.4	20.8	20.8
Plug Power	Outperform	15.00	n.a.	n.a.	n.a.
SolarEgde Tech.	Outperform	373.00	27.1	22.9	22.9
Vestas Wind Sys.	Outperform	300.00	331.7	33.4	33.4
JGC Holdings	Outperform	2,386	14.0	13.8	13.8
RENOVA	Outperform	2,375	48.2	18.4	18.4

(本报告为 2023 年 7 月 21 日发布的英文报告的翻译版,以原版为准。)

#### 建议关注欧洲市场相关的全球新能源

虽然一些市场观点会认为,去年由于俄乌冲突而导致的欧洲能源价格上涨是“一次性”的,今年在新能源(即清洁能源)需求和政策方面会出现中断,但我们相信,欧洲可再生能源需求将在本十年保持强劲。我们对欧洲新能源展望和政策的深入研究凸显了我们的观点,即投资于日益增加欧洲敞口的全球新能源。我们看到欧洲市场清洁能源政策的加速,部分和美国的通货膨胀削减法案类似,并促进新的投资,从而导致本十年以更实惠的新能源实现结构性更高的需求增长。

**欧洲可再生能源需求成长将保持强劲:** 我们预测 2023 年至 2030 年,欧洲可再生能源需求成长性为每年 10%,见图 1(过去十年为每年 9%),但低于 IEA 估计的全球平均每年 13% 的成长性。我们认为欧洲的需求可能因政策支持而上升。去年欧洲的可再生能源强度增长了 11%,目前是 1965 年以来的最高水平,与全球 11% 的平均成长持平,尽管低于中国 15% 的成长,见图 7。

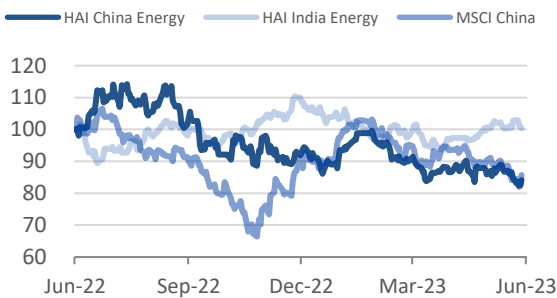
**太阳能而非风能是需求驱动因素:** 我们预测欧洲的太阳能需求成长性将超过风能和地热/生物燃料,而绿氢只能在较低的基础上提供更高的需求增速,见图 8-9。这与技术的进步推动的光伏降本和欧盟屋顶重建计划有关。

**持续的欧洲新能源政策支持:** 欧盟制定了一系列目标,到 2030 年将可再生能源的份额提高到 42.5%。其中包括 600GW 的太阳能产能、双倍的地热产能、10 吨/年的本土绿色氢产能,以及到 2030 年可再生能源累计产能达到 1,236GW。

**欧洲制造能力不断提高,但进口依赖度仍较高:** 欧盟的目标是到 2030 年拥有 30GW 的太阳能制造能力、36GW 的风能制造能力、至少 31GW 的热泵能力和 100GW 的电解槽能力。我们认为欧洲能源转型可能仍依赖进口,国内产能仅能满足年需求的 40%。

**海通国际在全球新能源领域中与欧洲相关的大部分覆盖范围的公司表现不佳:** 就海通国际的全球新能源覆盖范围中,除韩国电池制造商外,大多数公司今年迄今为止的表现都不佳,这反映了市场对欧洲可再生能源展望放缓的看法。我们建议关注 SolarEdge,该公司涉足欧洲太阳能市场, Vestas 涉足欧洲风能,巴拉德则涉足欧洲绿氢市场,见图 17。

**风险提示:** 需求和价格弱于预期、地缘政治、欧洲能源政策变化。



Source: Factset, HTI

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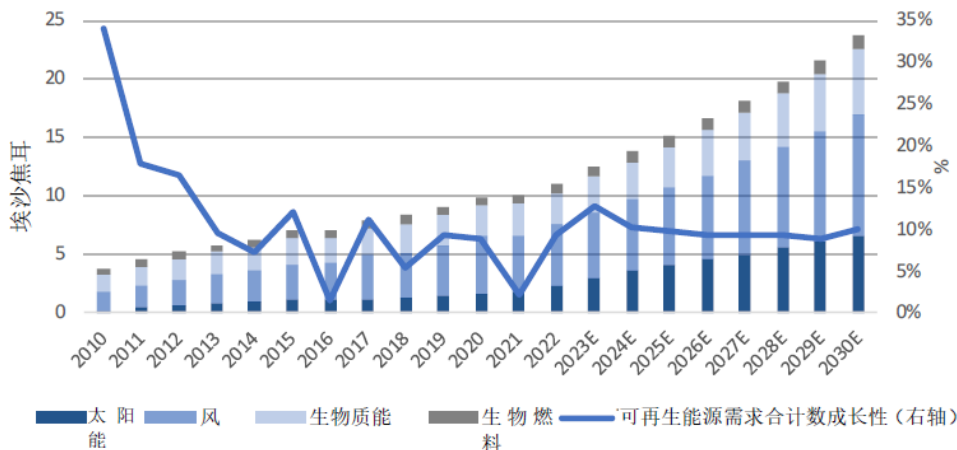
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## 未受重视的欧洲新能源成长性

图 1: 强劲的欧洲可再生能源需求成长性展望

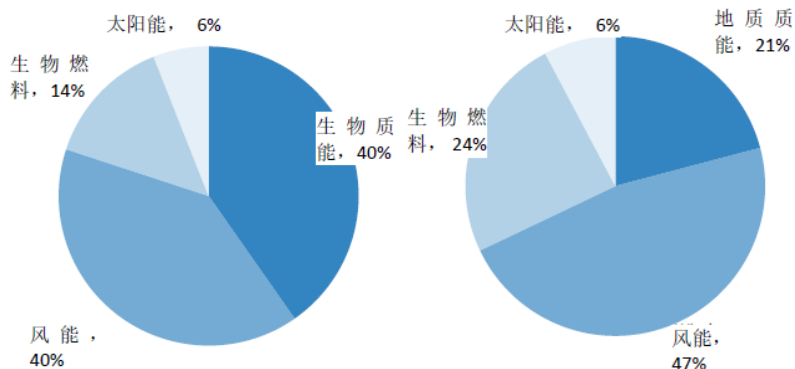
2010-2022 年欧洲可再生能源需求年均增速为 9%，我们预计 2023-2030 年均增速为 10%



资料来源：能源研究所《2023 年全球能源统计评论》，RepowerEU，GWEC，海通国际研究。图表展示了欧洲可再生能源需求在未来几年直到 2023 年的展望

图 2: 欧洲可再生能源分布演变

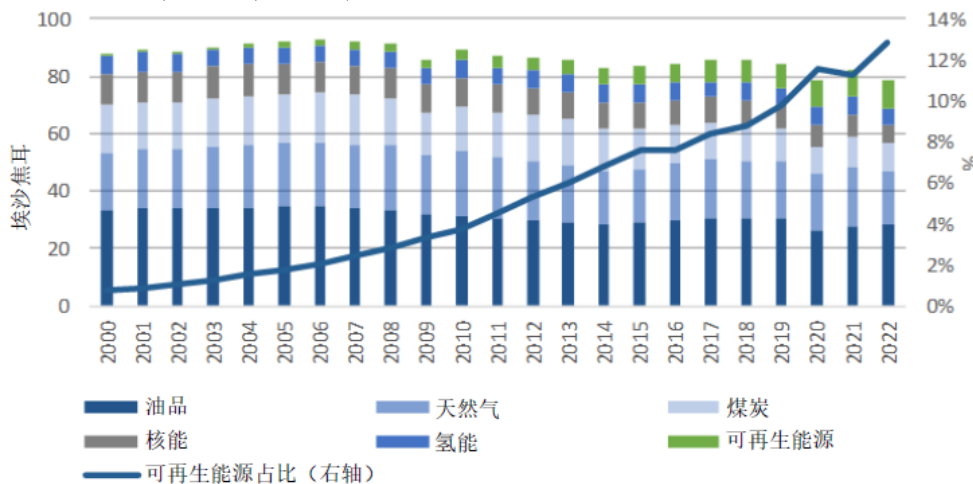
2010-2022 年，欧洲能源转型主要由风能驱动，生物燃料和太阳能的驱动程度较低



资料来源：《能源研究所 2023 年全球能源统计评论》，海通国际研究。图表显示了 2010 年（左轴）和 2022 年（右轴）的欧洲可再生能源分布情况

图 3: 欧洲能源需求结构越来越倾向于可再生能源

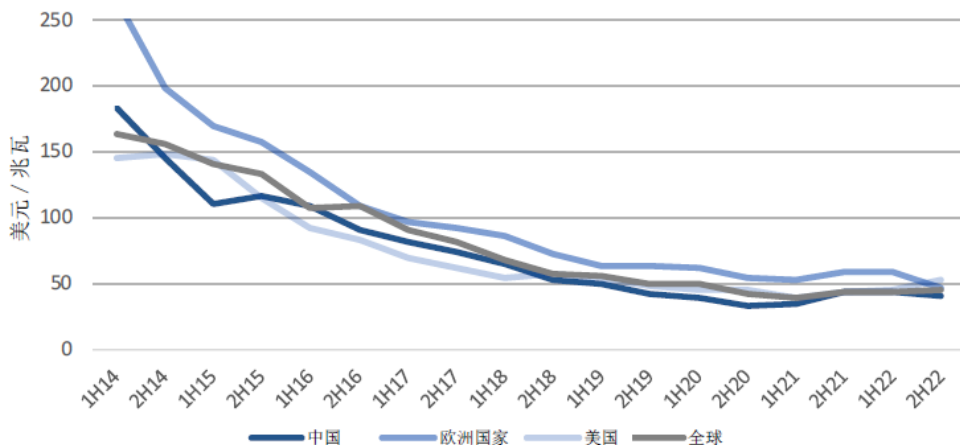
欧洲可再生能源在能源结构的份额已从 2000 年的 1% 增加到去年的 13%，我们预计本十年将加速增长，到 2030 年可再生能源份额可能达到 42.5%



资料来源：《能源研究所 2023 年全球能源统计评论》，海通国际研究。图表显示了欧洲能源需求结构随时间变化的情况

2014-2022 年，欧洲光伏平准度电成本下降 82%，至 47 美元/MW，而 2022 年全球平均水平为 45 美元/MW

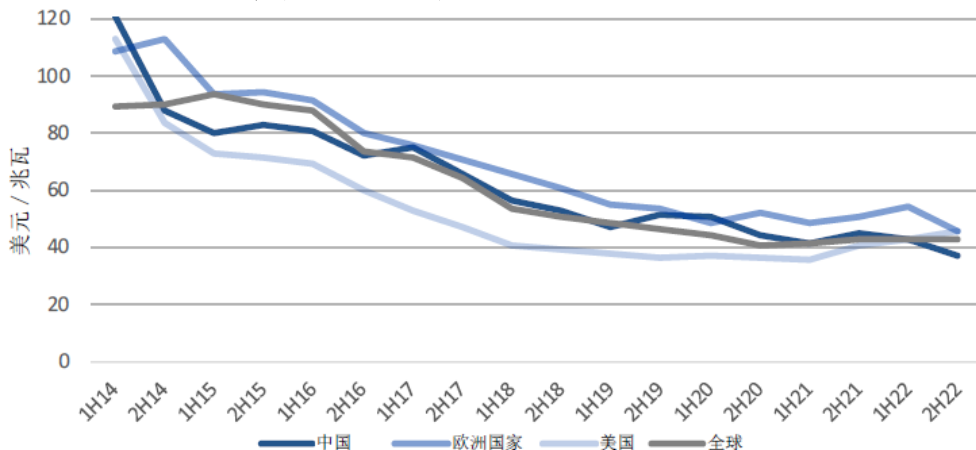
图 4：欧洲太阳能全生命周期度电成本随时间变化的情况



资料来源：BNEF，海通国际研究。图表显示了全球非跟踪光伏发电的全生命周期度电成本（电力平准成本=（资本开支+寿命期运营支出）/寿命期能源生产，表示发电机在其寿命期内平均净发电成本）

2014 年至 2022 年期间，欧洲陆上风电平准度电成本下降 58%，至 2022 年每兆瓦 46 美元，而全球平均水平为 43 美元/兆瓦

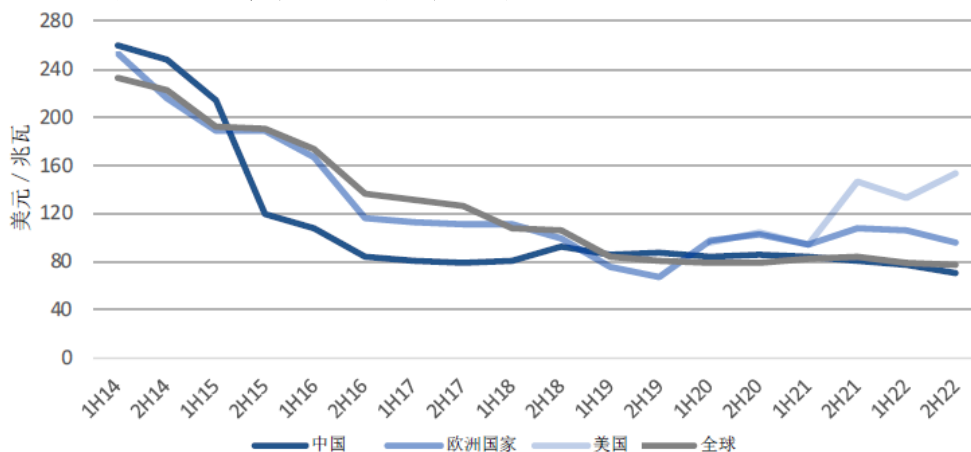
图 5：欧洲陆上风电全生命周期度电成本历年变化情况



资料来源：BNEF，海通国际研究。图表显示全球陆上风电全生命周期度电成本

2014 年至 2022 年，欧洲海上风电平准度电成本下降 62%，至 2022 年每兆瓦 96 美元，而全球平均水平为 78 美元/兆瓦

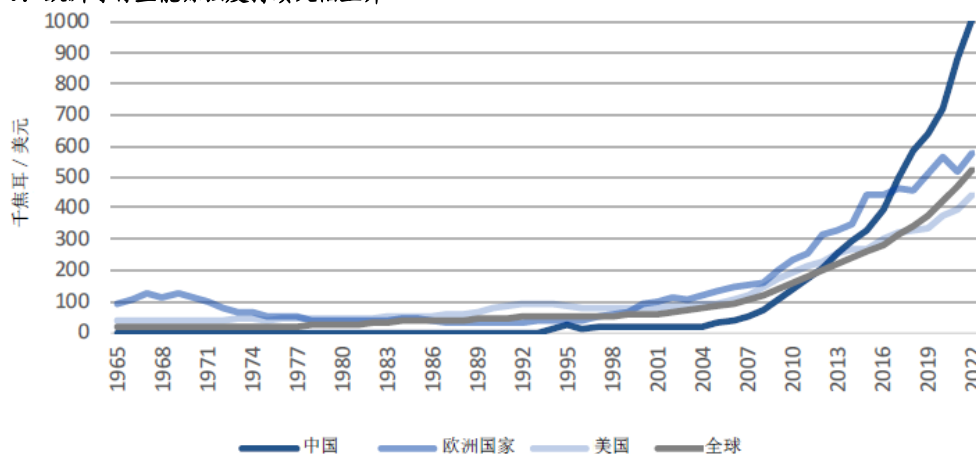
图 6：欧洲海上风电全生命周期度电成本历年变化情况



资料来源：BNEF，海通国际研究。图表显示全球海上风电全生命周期度电成本

2022 年欧洲可再生能源强度上升了 11%，这是自 1965 年能源研究所数据记录以来的最高水平

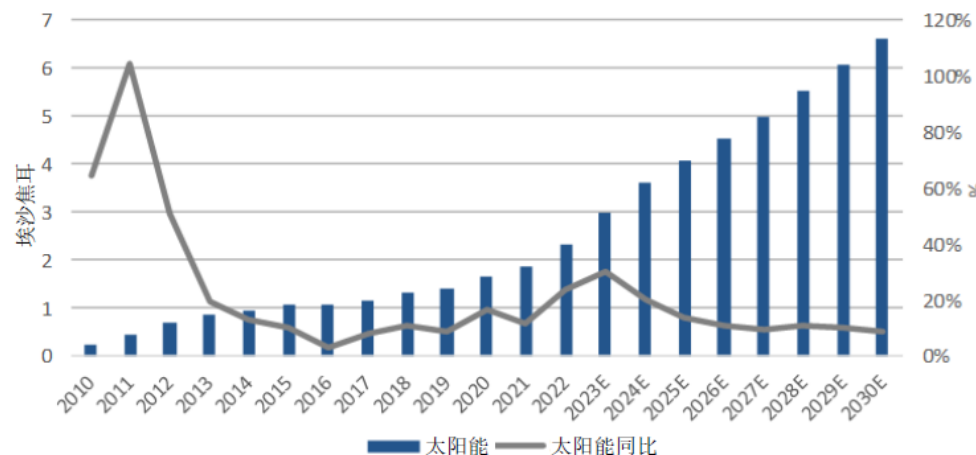
图 7: 欧洲可再生能源强度持续大幅上升



资料来源:《能源研究所 2023 年全球能源统计评论》, 海通国际研究。图表显示了以美元计算的可再生能源需求合计数与 GDP 之比。

太阳能需求在 2010 年-2022 年的年均增速为 22%，我们预测在本十年，受到太阳能成本下降，“屋顶倡议”和 REPower EU 计划的推动，太阳能需求年化增速将达到 15%。到 2030 年安装 600GW 的太阳能容量（去年为 209GW）。

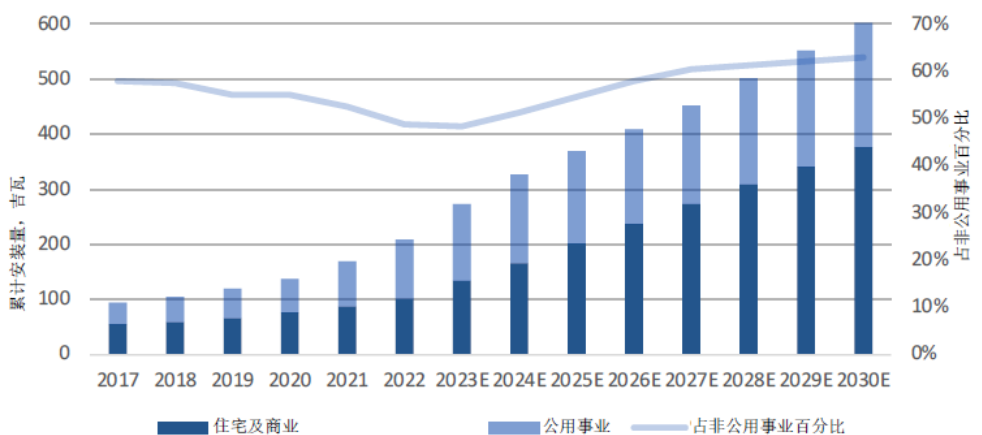
图 8: 欧洲太阳能市场需求展望



资料来源: 能源研究所《2023 年沃尔德能源统计评论》, RepowerEU, 海通国际研究。图表展示了欧洲太阳能需求在未来几年直到 2030 年的预测情况

我们预计欧洲太阳能需求在本十年内将以平均每年 15% 的速度增长，到 2025 年预计达到 320GW 的安装合计数，到 2030 年预计达到 600GW，其中约 60% 来自住宅太阳能需求

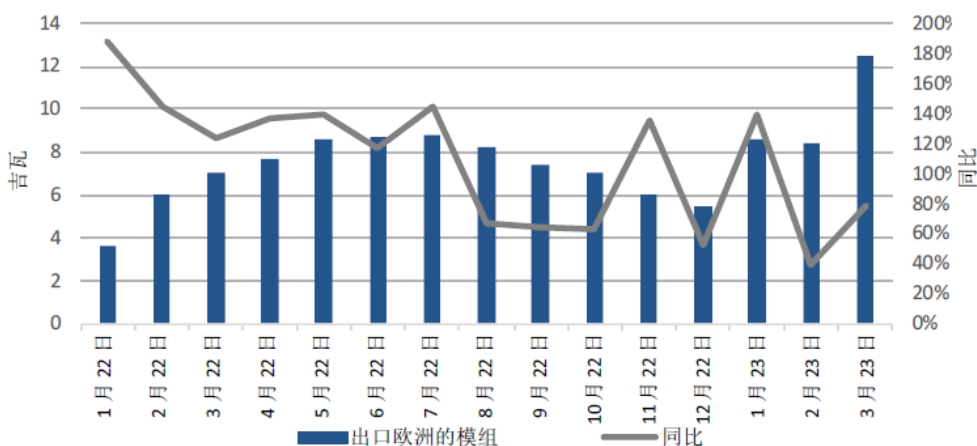
图 9: 欧洲各细分市场的太阳能需求



资料来源: 能源研究所《2023 年沃尔德能源统计评论》, Repower EU, 海通国际研究。图表显示, 到 2030 年, 住宅和商业太阳能需求可能约占欧洲 (不包括英国) 合计数的 60%。

2023 年第一季度，中国向欧洲出口的太阳能模组总量为 29.5GW，同比增长 77%

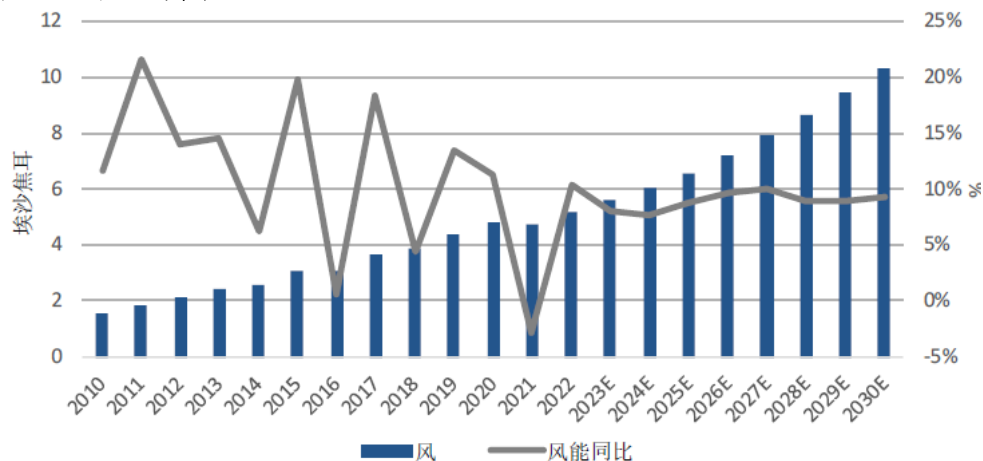
图 10: 中国太阳能模组出口欧洲情况



资料来源: 光伏产业信息网, 海通国际研究。图表显示中国每月向欧洲出口的模组成交量

2010-2022 年风能需求平均每年增长 12%，我们预测本十年需求成长性率为 8%，基于 GWEC 的预测，到 2030 年将风能装机容量翻一番，到 2030 年实现 42.5% 的能源主要来自风能和太阳能

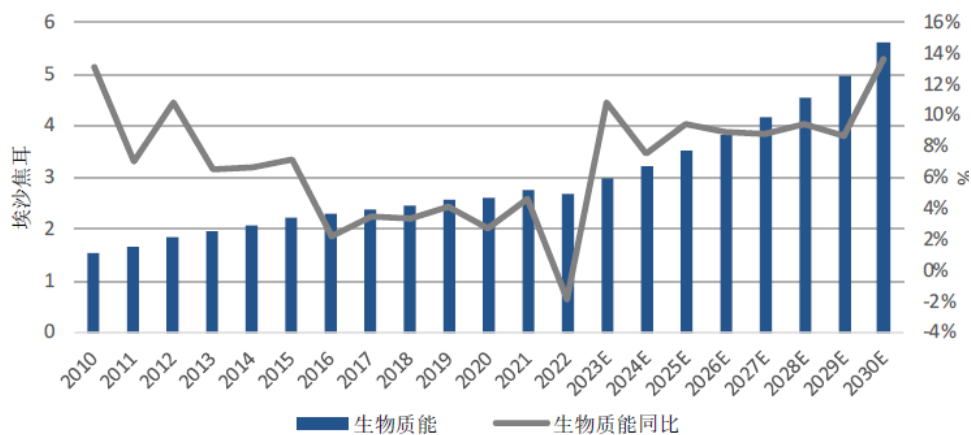
图 11: 欧洲风电需求展望



资料来源: 能源研究所《2023 年全球能源统计评论》，GWEC, 海通国际研究。图表显示欧洲风能需求在未来几年直到 2030 年的预测情况

地热 / 生物质需求在 2010-2022 年平均每年增长 5%，由于受到欧洲各国政府增加投资的推动，旨在到 2030 年将运行中的热泵数量翻倍，我们预测在本十年内需求成长性将达到 8%，

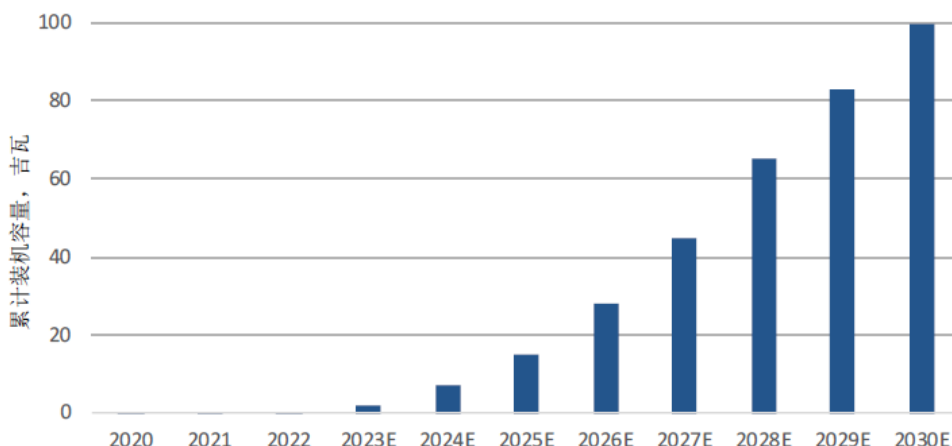
图 12: 欧洲地热 / 生物质能展望



资料来源: 《能源研究所 2023 年全球能源统计评论》，海通国际研究。图表显示了欧洲地热 / 生物质能需求在未来几年直到 2023 年的预测情况

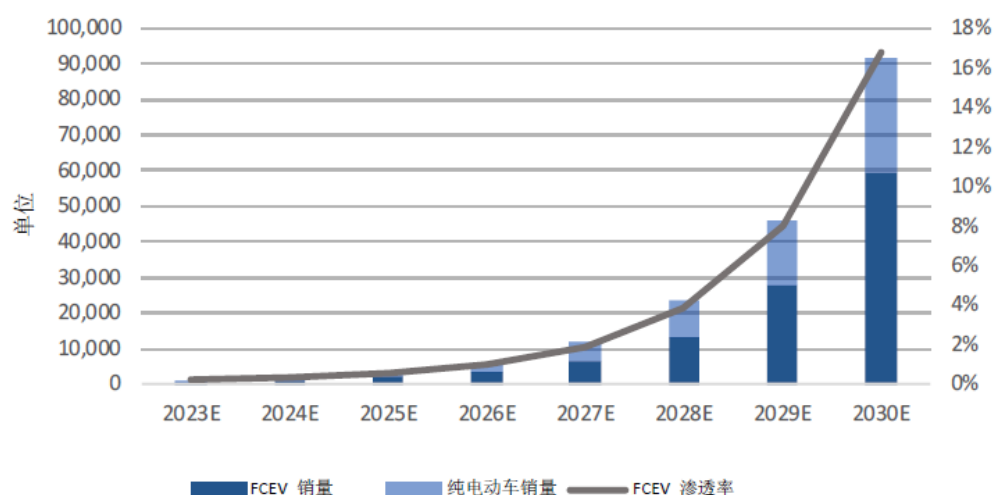
在本十年内，受欧盟氢能倡议的推动，累计绿色氢能产能将从 0.1GW 增长到 100GW，到 2030 年生产 1000 万吨可再生氢。

图 13: 欧洲绿色氢能展望



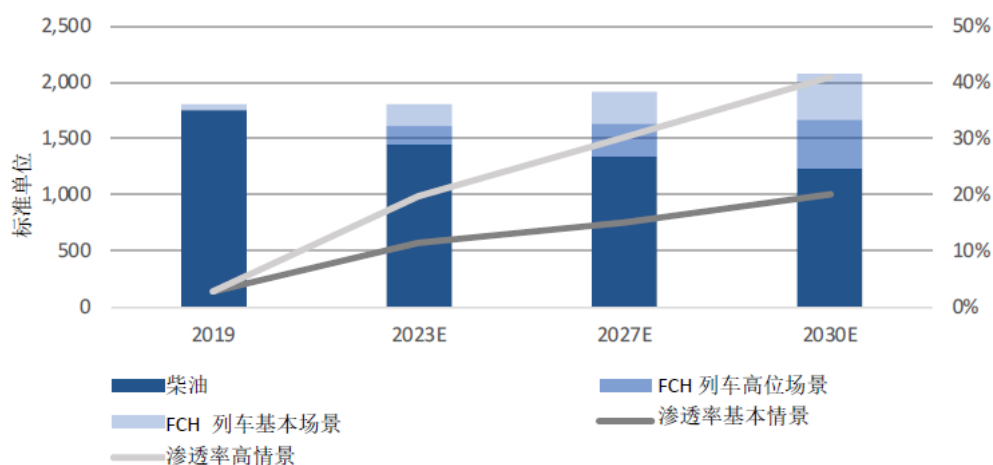
资料来源: 燃料电池与氢能观测站, 海通国际研究。图表显示了基于 REPower EU 靶点的 2030 年电解槽产能预测

图 14: 欧洲燃料电池重型车销售展望



资料来源: 燃料电池与氢能 2 号联合项目“燃料电池氢能卡车研究”, 海通国际估计。图表展示了欧洲燃料电池货车销售数量和渗透率在 2030 年的展望 (右轴)。

图 15: 燃料电池在欧洲铁路运输中的潜力



资料来源: 燃料电池和氢能 2 号联合企业, Shift2Rail 联合企业, 罗兰贝格, “在铁路环境中使用燃料电池和氢”, 海通国际研究。图表左轴显示列车数量, 右轴显示燃料电池在列车中的普及率。

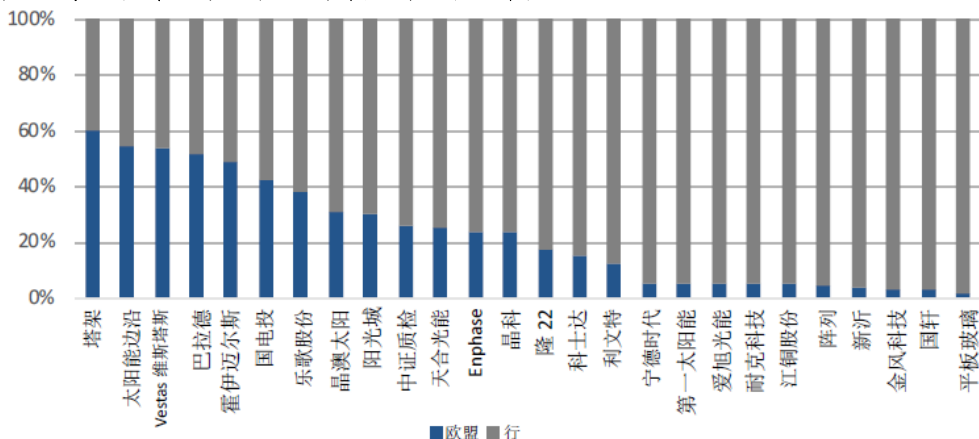
欧洲燃料电池重型车预计将从 2022 年的不足 600 辆增长到 2030 年的 5.9 万辆

本十年欧洲对燃料电池列车的需求可能平均每年成长性为 78%，且渗透率至少达到 20%



我们看到太阳能、风能和储能相关公司和欧洲新能源的相关性最高

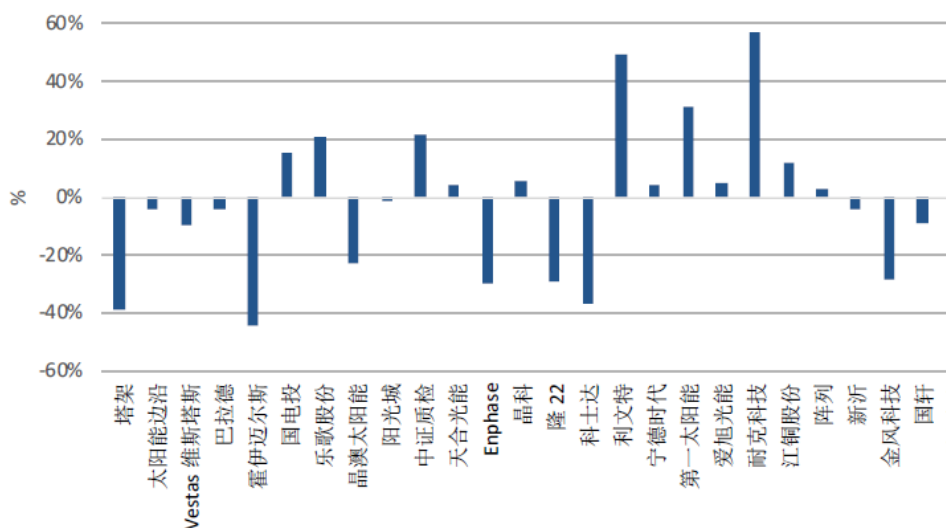
图 16: 海通国际在全球不同地区的新能源营业收入拆分



资料来源: Bloomberg, 海通国际研究。图表展示了 2022 年按地域划分的海通国际全球新能源营收, 特别强调了欧洲和世界其他地区的敞口。

除韩国电动汽车电池制造商外, 海通国际在全球新能源业务中, 对欧洲敞口较高的公司, 在今年的表现大多不佳

图 17: 海通国际全球新能源绝对股票价格表现



资料来源: Bloomberg, 海通国际研究。图表显示了海通国际全球新能源年度至今的绝对股票价格表现。LGES = LG 能源解决方案、SDI = 三星 SDI、CSIQ = 阿特斯阳光电力、CATL = 当代新能源。

## 欧洲新能源政策概述和展望

2022年5月，欧盟委员会启动了“重振欧盟计划”，旨在创建一个负担得起、安全和可持续的能源系统，以减少对俄罗斯的依赖并应对气候风险。该计划要求加快可再生能源部署，靶点是到2030年将其份额提高到42.5%，并力争达到45%。

欧盟为太阳能、风能、地热能、氢能和生物燃料制定了一系列目标，见下表1。除此之外，欧盟还推出了“屋顶倡议”。该倡议要求到2029年年底，在所有现有和新建的公共或商业建筑中，以及所有新建的住宅建筑中，实用面积大于250的屋顶，强制性地安装光伏设施。成员国还就缩短和简化可再生能源项目审批流程达成一致，以帮助促进大型风能和太阳能项目的安装。

表1: REPower EU 可再生能源标的

	2030 Targets	Additional Support
Solar	Double solar capacity by 2025 and install 600GW by 2030	Rooftop Initiatives
Wind	480GW by 2030	Simplification of permitting procedure
Geothermal	Double the deployment rate of heat pumps	
Hydrogen	10mtpa domestic green hydrogen production capacity	€200m funding for research
Biofuel	Increase production to 35bcm	Biomethane Action Plan

资料来源: REPower EU, 计划, 海通国际研究。

2023年3月下旬，欧盟委员会提出了“净零工业法案”（NZIA），以扩大欧洲可再生能源的生产能力，到2030年至少满足40%的国内需求，见表2。

NZIA 的投资靶点是8项核心的净零技术，包括太阳能、风能、电池/储能、地热、电解槽和电芯、生物燃料、碳捕捉和储存以及电网技术。根据欧盟的估计，支持REPower EU计划的资金合计数将达到3000亿欧元，其中2250亿欧元是根据恢复和韧性计划提供的贷款，200亿欧元是通过出售欧盟排放交易系统配额提供的赠款。潜在的可再生能源项目将会进行招标和筛选，以获得资金支持，最终所有相关国家将共享生产的可再生能源带来的好处。

欧盟已经制定了一个雄心勃勃的目标，旨在在全球电池市场中具有竞争力，计划到2030年时生产出最多90%的国内电池需求，相当于550GW的制造能力。目前，中国电池产能占全球的76%。由于高度依赖原材料进口，原材料价格波动危及竞争力，以及目前缺乏公众对该行业的支持，市场担心这一预测可能无法保证实现。其他的经济激励措施包括一些成员国的税收减免。例如，德国、荷兰、英国、罗马尼亚、爱尔兰等国已经对住宅太阳能项目实行了增值税款的豁免或降低，幅度在5%-21%之间。我们认为，欧洲的能源转型可能仍将依赖进口，因为其国内产能有限，且前景充满挑战。

表2: 《净零工业法案》标的

	2023 capacity baseline
Solar	30GW
Wind	36GW
Heat pumps	31GW
Battery	550GW
Hydrogen electrolyzer	100GW

资料来源: 《净零工业法案》，海通国际研究。



## 附录 APPENDIX

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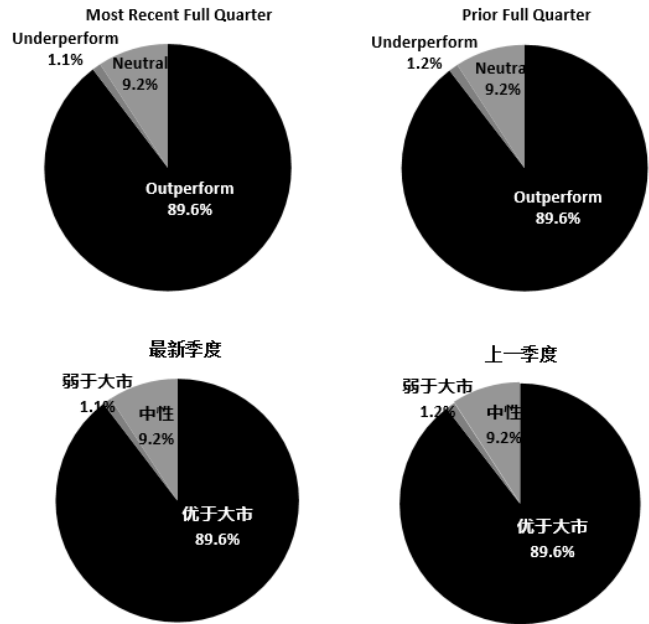
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**评级分布 Rating Distribution**



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投资银行客户*	4.7%	5.6%	10.0%

\*在每个评级类别里投资银行客户所占的百分比。

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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 FINRA/NYSE 的评级分布规则, 我们会将中性评级划入持有这一类别。

卖出, 未来 12-18 个月内预期相对基准指数跌幅在 10%以上, 基准定义如下

各地股票基准指数: 日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100; 其他所有中国概念股 – MSCI China.

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	Outperform	Neutral (hold)	Underperform
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IB clients*	4.7%	5.6%	10.0%

\*Percentage of investment banking clients in each rating category.

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**SELL:** The stock's total return over the next 12-18 months is expected to be below the return of its relevant broad market benchmark, as indicated below.

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