研究报告 Research Report

9 Jul 2023

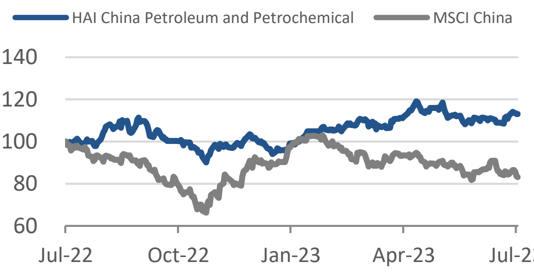
中国石油石化 China Petroleum and Petrochemical

石化央企布局氢产业链，国内首个万吨级绿氢炼化项目全产业链贯通

Petrochemical Enterprises Layout the Hydrogen Industry Chain, and the Green Hydrogen Refining Project Went into Operation

观点聚焦 Investment Focus

股票名称	评级	股票名称	评级
中国石油	Outperform	纳徽科技	Outperform
中国石化	Outperform	九丰能源	Outperform
中国海油	Outperform	东华能源	Outperform
荣盛石化	Outperform	胜华新材	Outperform
恒力石化	Outperform	维远股份	Outperform
东方盛虹	Outperform	华锦股份	Outperform
新奥股份	Outperform	滨化股份	Outperform
中海油服	Outperform	海优新材	Outperform
卫星化学	Outperform	卓然股份	Outperform
广汇能源	Outperform	卓越新能	Outperform
桐昆股份	Outperform	同益中	Outperform
上海石化	Outperform	德美化工	Outperform
中油工程	Outperform	蒙泰高新	Outperform
齐翔腾达	Outperform	万凯新材	Outperform
新凤鸣	Outperform	鹿山新材	Outperform
华润材料	Outperform	天振股份	Outperform



资料来源：Factset, HTI

Related Reports

Presentation: 石化央企估值修复，“一带一路”迎能源合作新机遇（The valuation of petrochemical central enterprises is restored, and the the Belt and Road welcomes new opportunities for energy cooperation）(2 Jul 2023)

MTBE 价格上涨，原材料 C4 价格下降，相关企业有望受益（MTBE Prices Increase, Raw Material C4 Prices Decrease, and Related Enterprises are Expected to Benefit）(2 Jul 2023)

石化行业 2Q23 行业回顾与业绩前瞻（Petrochemical Industry 2Q23 Industry Review and Performance Outlook）(26 Jun 2023)

(Please see APPENDIX 1 for English summary)

- **核心观点：** 为应对碳中和转型，石化央企依托产业、技术和网络等优势，积极布局氢能全产业链。6 月 30 日，中石化新疆库车绿氢示范项目顺利产氢，标志国内首次实现万吨级绿氢炼化项目全产业链贯通。项目建设内容贯通“光伏发电、绿电输送、绿电制氢、氢气储存、氢气输运、绿氢炼化”全流程，所用的光伏组件、电解槽、储氢罐、输氢管线等重大设备及核心材料全部实现国产化，有望促进氢能装备和全产业链发展。

- **中石化新疆库车绿氢示范项目顺利产氢。** 2023 年 6 月 30 日，中石化新疆库车绿氢示范项目顺利产氢，标志国内首次实现万吨级绿氢炼化项目全产业链贯通。项目建设内容贯通“光伏发电、绿电输送、绿电制氢、氢气储存、氢气输运、绿氢炼化”全流程，电解水制氢能力 2 万吨/年、储氢能力 21 万标立方、输氢能力 2.8 万标立方每小时，生产的绿氢就近供应中石化塔河炼化公司，完全替代现有天然气制氢，每年减排二氧化碳 48.5 万吨，为绿氢工业化应用提供示范。

- **示范项目有望促进氢能装备和产业链发展。** 新疆库车绿氢示范项目先后完成了万吨级电解水制氢工艺与工程成套技术、绿氢储运输工艺技术、晶闸管整流技术、智能控制系统研发等创新成果，均实现了工业应用；所用的光伏组件、电解槽、储氢罐、输氢管线等重大设备及核心材料全部实现国产化，我们认为能有效带动产业链的发展。以电解槽为例，在该项目启动之前，国内的 1000Nm³/h 电解槽累计需求量不到 30 台，而仅库车绿氢示范项目就需要 52 台。

- **石化央企积极布局氢能全产业链。** 2021 年国内氢气产量约 3300 万吨，化工领域为目前主要的氢气生产利用领域之一。碳中和背景下，氢能产业为未来重点发展方向之一。根据中国氢能联盟预测，预计到 2060 年碳中和情景下，我国氢气需求量有望增至 1.3 亿吨，在终端能源消费中占比约 20%。为应对碳中和转型，石化央企依托产业、技术和网络等优势，积极布局氢能全产业链。

- **中石化：“油气氢电服”综合能源转型，打造中国第一氢能公司。** 作为全国最大的氢气生产利用主体之一，中石化近年来每年氢气生产利用量约为 450 万吨。公司锚定“打造中国第一氢能公司”目标，聚焦“氢能交通、绿氢炼化”两大领域，根据中国石化 2022 年可持续发展报告，到 2050 年，公司计划加氢站数量、加氢能力保持全国最大，道路交通领域氢气 100%来自非化石能源，炼化企业用氢 100% 来自蓝氢和非化石能源制氢。2022 年，公司在制氢、供氢、加氢站环节稳步推进：（1）制氢，首套 30 标立/时的 PEM（质子交换膜）制氢示范装置和兆瓦级（200 标立/时）PEM 制氢装置在燕山石化投用；

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（2）供氢，截至 2022 年末累计在 9 家企业建成燃料电池供应中心，提供燃料电池用高纯度氢气，能力达 1.9 万标立/时（约 1.65 万吨/年）；（3）加氢站，截至 2022 年末累计建成加氢站 98 座，合计加氢能力约 45 吨/天，是全球拥有加氢站最多的企业。此外，2023 年 2 月 16 日，中国石化内蒙古鄂尔多斯市风光融合绿氢示范项目正式启动开工，项目年产绿氢 3 万吨，是目前全球最大的绿氢耦合煤化工项目。

- **中石油：打造“油气热电氢”综合能源公司。**根据中国石油 2022 年度环境、社会和治理报告，2022 年，公司新增高纯氢产能 1500 吨/年，高纯氢总产能达到 3000 吨/年。公司积极推进加氢站建设，2022 年新投运加氢站（综合服务站）23 座，目前共有加氢站（综合服务站）35 座。

- **投资建议。**化工领域为国内主要的氢气生产利用领域之一，为应对碳中和转型，石化央企依托产业、技术和网络等优势，积极布局氢能全产业链。建议关注低估值、注重股东回报，并积极转型升级的石化央企中国石油、中国石化、中国海油等。

- **风险提示：**氢能技术发展不及预期；政策支持力度不及预期等。

1. 建议关注：中国石化、荣盛石化、桐昆股份、新奥股份、卫星化学、恒力石化、东方盛虹

1.1 中国石化

（1）我们预计 2023 年随着下游需求改善，炼化行业景气度有望逐步回升。（2）低估值：截至 2023 年 3 月 3 日，公司 A 股、H 股 PB 分别为 0.77、0.60 倍，尚未恢复至疫情前 2019 年平均水平（A 股 0.9 倍、H 股 0.8 倍）。（3）高分红：2021 年中石化 A 股、H 股股息率分别为 10.8%、14.3%，行业领先。（4）回购增强股东回报。2022 年 9 月 21 日-2022 年 11 月 25 日，公司使用 18.88 亿元回购 A 股股份 4.42 亿股，回购均价 4.27 元/股。

风险提示：原油价格大幅波动；石化行业景气度下滑等。

1.2 荣盛石化

（1）控股 4000 万吨/年浙石化 51%股权，我们预计 2023 年随着下游需求改善，炼化行业景气度有望逐步回升。（2）完善下游新材料布局，重点布局新能源和高端材料领域，浙石化三大项目（二期工程产品结构优化、高端新材料、高性能树脂项目）合计总投资规模 1178 亿元，主要包括 EVA、DMC、ABS、α 烯烃-POE、己二腈-PA66 等产品，公司预计年均可实现净利润合计 164 亿元。

风险提示：原油价格下跌；产品价格下跌；项目进度不及预期。

1.3 桐昆股份

（1）涤纶行业龙头，主业稳步扩张，提供业绩增量。截至 2022 年上半年，公司 PTA 产能 420 万吨/年，涤纶长丝产能 950 万吨/年。根据公司现有项目规划，未来公司 PTA 产能将达到 920 万吨/年，长丝（短纤）产能超过 1500 万吨/年。（2）参股大炼化。参股 20%的浙石化，2022 年 1 月浙石化二期项目全面投产，有助于公司投资收益提升。

风险提示：原油价格下跌；产品价格下跌；长丝产能扩张不及预期。

1.4 新奥股份

（1）天然气龙头企业，控股新奥能源 33%的股权，受益天然气需求较快增长。（2）注入舟山 LNG 接收站，接收站一、二期合计实际处理能力有望达到 800 万吨/年。

风险提示：天然气价格大幅波动；天然气消费增速不及预期。

1.5 卫星化学

（1）轻质化龙头，工艺具有成本低、排放低、副产氢等优势。（2）连云港年产 135 万吨 PE、219 万吨 EOE 和 26 万吨 ACN 联合装置项目二阶段工程全面投产，且主要原材料价格高位回落，我们预计盈利有望改善。（3）在建及储备项目提供未来增长动能，包括绿色化学新材料产业园项目（20 万吨/年乙醇胺、80 万吨/年聚苯乙烯、10 万吨/年 α-烯烃与配套 POE、75 万吨/年碳酸酯）、平湖基地新能源新材料一体化项目（年产 80 万吨 PDH、80 万吨丁辛醇）等。

风险提示：产品价格大幅波动；项目进展不及预期等。

1.6 恒力石化

（1）公司以“炼化+乙烯+煤化”为载体，强化上游大化工平台支撑，主要包括2000万吨/年炼油、150万吨/年乙烯、500万吨/年现代煤化工装置。（2）加速新材料布局，打造第二成长曲线，稳步推进160万吨/年高性能树脂及相关配套工程、260万吨/年功能性聚酯工程、30万吨/年己二酸化工新材料配套项目及16亿平锂电膈膜项目等在建项目建设。

风险提示：原油价格下跌；产品价格下跌；项目进度不及预期。

1.7 东方盛虹

（1）公司上游拥有1600万吨/年炼化一体化项目（2022年底全面投产）、240万吨/年甲醇制烯烃装置（MTO）、70万吨/年PDH装置，实现“油、煤、气”三种烯烃制取工艺路线全覆盖。（2）公司加快布局新材料产业链，规划未来实现EVA产能100万吨/年（现有30万吨/年）、POE产能50万吨/年（分期建设，其中800吨POE中试装置于2022年9月27日一次开车成功），并拟在湖北宜昌投资建设配套原料及磷酸铁、磷酸铁锂新能源材料项目。

风险提示：原油价格下跌；产品价格下跌；项目进度不及预期。

2. 一周跟踪：恒力石化、卫星化学

2.1 恒力石化

恒力石化发布关于分拆所属子公司康辉新材料科技有限公司重组上市的预案。方案主要包括：（1）重大资产出售，大连热电拟向大股东洁净能源集团或指定的第三方出售截至评估基准日之全部资产及负债，拟出售资产交易对方以现金方式支付对价。（2）发行股份购买资产，大连热电拟向公司和恒力化纤发行股份购买康辉新材100%股权，发行价确定为4.42元/股。（3）募集配套资金，拟募资总额不超过发行股份购买资产交易价格的100%，发行数量不超过购买资产后总股本30%。

风险提示：原油价格下跌；产品价格下跌；项目进度不及预期。

3. 风险提示：

原油价格大幅波动；石化行业景气度下降；产品价格大幅波动。

APPENDIX 1

Summary

- **Conclusions.** In response to the carbon neutrality transformation, petrochemical central enterprises actively layout the entire hydrogen energy industry chain based on their advantages in industry, technology, and network. On June 30th, the Sinopec Xinjiang Kuche Green Hydrogen Demonstration Project successfully produced hydrogen, marking the first time in China to achieve the full industrial chain connection of a 10000 ton green hydrogen refining project. The project construction content runs through the entire process of "photovoltaic power generation, green power transmission, green power hydrogen production, hydrogen storage, hydrogen transportation, and green hydrogen refining". All major equipment and core materials used, such as photovoltaic modules, electrolytic cells, hydrogen storage tanks, and hydrogen transmission pipelines, have been domestically produced, which is expected to promote the development of hydrogen energy equipment and the entire industrial chain.

- **Investment Advice.** The chemical industry is one of the main fields of hydrogen production and utilization in China. In response to the carbon neutrality transformation, petrochemical central enterprises rely on their advantages in industry, technology, and network to actively layout the entire hydrogen energy industry chain. We suggest attention on PetroChina, Sinopec, CNOOC and other petrochemical SOEs.

- **Risks warning.** The reform of state-owned enterprises did not meet expectations; Downstream demand is lower than expected; Significant fluctuations in oil prices; Policy risks, etc.

附录 APPENDIX

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分析师股票评级

优于大市，未来 12-18 个月内预期相对基准指数涨幅在 10%以上，基准定义如下

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。

弱于大市，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, 美国 – SP500; 其他所有中国概念股 – MSCI China.

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Analyst Stock Ratings

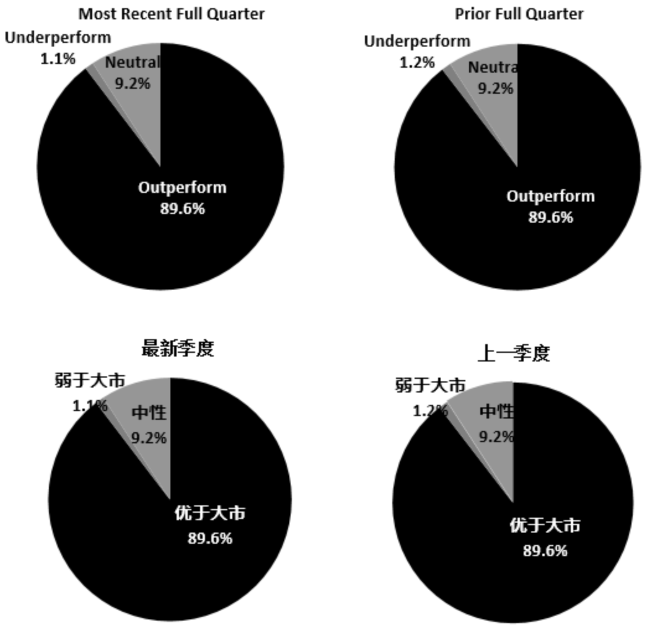
Outperform: The stock’s total return over the next 12-18 months is expected to exceed the return of its relevant broad market benchmark, as indicated below.

Neutral: The stock’s total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

Underperform: 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.

Benchmarks for each stock’s listed region are as follows: Japan – TOPIX, Korea – KOSPI, Taiwan – TAIEX, India – Nifty100, US – SP500; for all other China-concept stocks – MSCI China.

评级分布 Rating Distribution



截至 2023 年 6 月 30 日海通国际股票研究评级分布

	优于大市	中性 (持有)	弱于大市
海通国际股票研究覆盖率	89.6%	9.2%	1.1%
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。

上述分布中的买入，中性和卖出分别对应我们当前优于大市，中性和落后大市评级。

只有根据 FINRA/NYSE 的评级分布规则，我们才将中性评级划入持有这一类别。请注意在上表中不包含非评级的股票。

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买入，未来 12-18 个月内预期相对基准指数涨幅在 10%以上，基准定义如下
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.

Haitong International Equity Research Ratings Distribution, as of Jun 30, 2023

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	89.6%	9.2%	1.1%
IB clients*	4.7%	5.6%	10.0%

*Percentage of investment banking clients in each rating category.
BUY, Neutral, and SELL in the above distribution correspond to our current ratings of Outperform, Neutral, and Underperform.
For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category. Please note that stocks with an NR designation are not included in the table above.

Previous rating system definitions (until 30 Jun 2020):

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NEUTRAL: The stock's total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

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.

Benchmarks for each stock's listed region are as follows: Japan – TOPIX, Korea – KOSPI, Taiwan – TAIEX, India – Nifty100; for all other China-concept stocks – MSCI China.

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