New Trends in the International Oil Market
国际石油市场新趋势

Mr. ZHENG Xingyang

Chief Analyst, PCI

郑兴扬 先生，中国石油国际事业公司

首席分析师

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演讲人：郑兴扬

Speaker: Zheng Xingyang

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一疲弱 One Weakness

全球经济疲弱
Global Economic Fragility

经济扭曲增长，呈现脆弱韧性
Distorted and fragile economic growth, creating a fragile resilience

抑制油价
Weighs on oil prices

二持续 Two Continuations

区域冲突持续 Persistent Regional Conflicts

俄乌冲突持续、中东局势动荡持续、南美或存变数
The Russia-Ukraine conflict continues, the Middle East remains turbulent, and South America faces potential changes.

推高油价
Supports Higher oil price

能源安全政策持续 Sustained Energy Security Policy

能源安全优先、资源民族主义
Prioritizing energy security; rise of resource nationalism.

支撑油价
Support Oil Price

三重构 Three Restructurings

01

大国关系重构 Great Power Relations Restructuring

大国竞合、平行体系、科技脱钩
Major power competition & cooperation; parallel systems; tech decoupling.

对油价影响不定 Uncertain Impact On Oil Price

02

贸易格局重构 Trade Patterns Restructuring

关税和贸易保护蔓延，供应链重构
Proliferating tariffs & trade protectionism; supply chain reshoring.

对油价影响不定 Uncertain Impact On Oil Price

03

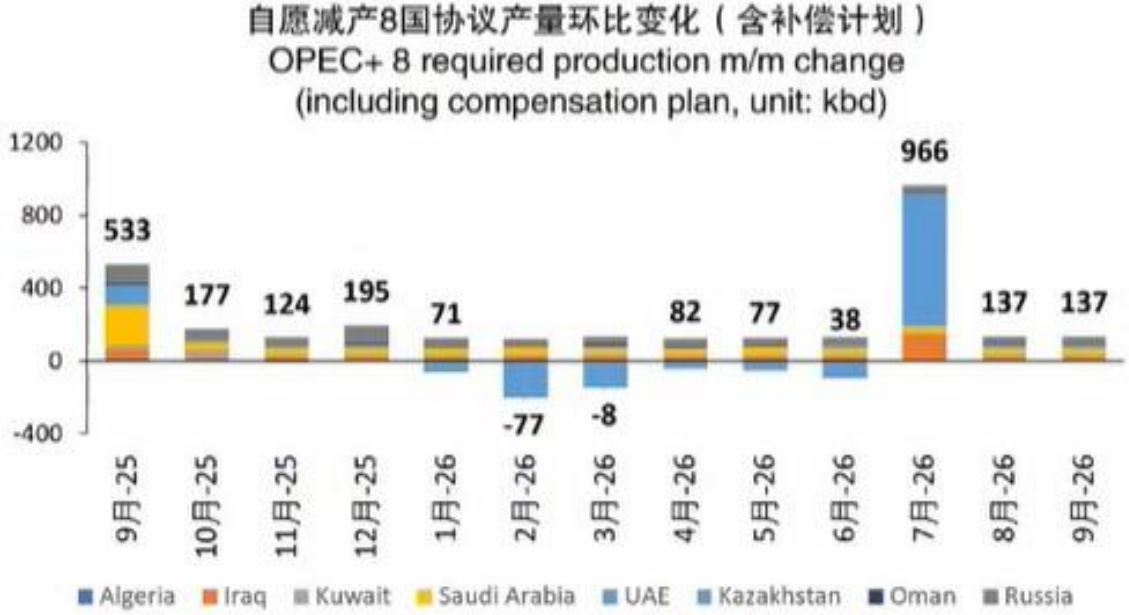
金融体系重构 Financial System Restructuring

降息与弱美元政策、货币多元化
Interest rate cuts & a weaker USD policy; currency diversification.

对油价影响不定 Uncertain Impact On Oil Price

OPEC+产量展望 OPEC+ Supply Outlook

- **名义产量：**按当前增产路径计算，自愿减产8国按每月13.7万桶/日的增速，将于2026年9月退出165万桶/日的自愿减产；与此同时，此前超额生产的国家更新了逐月的减产补偿计划。
- **Nominal output:** Based on the current unwinding path, the OPEC+ 8 will phase out the 1.65 mbd voluntary cuts by Sep 26 at a pace of 137 kbd/month; meanwhile, over-producing members have updated the monthly compensation plans.
- **实际产量：**大部分成员国自愿减产履约率长期保持在较低水平，且补偿减产难以落地；预计受实际剩余产能和政策约束等因素限制，实际产量增长可能仅为宣布增产量的50%左右，**约80万桶/日左右，**且主要集中在沙特。
- **Actual output:** Compliance with voluntary cuts has long been weak, and compensation cuts are unlikely to be delivered. Constrained by spare capacity and policy factors, actual output growth may reach only about 50% of the announced level, about 0.8 mb/d, mostly from Saudi Arabia.



美国页岩油：达峰与枯竭的信号 US Shale Prod Inflection Point Nears

EIA短期能源展望认为美国页岩油已在2025 Q2达峰，部分第三方机构认为未来几年美国或勉强维系当前的高产量

EIA said in STEO that US crude prod is already peaked in Q2 2025. Some third-party institutions believes that US shale ay barely be able to sustain the current high output levels in the coming years.

我们认为2025 Q2开始，单纯的效率提升无法再弥补开工率的大幅放缓

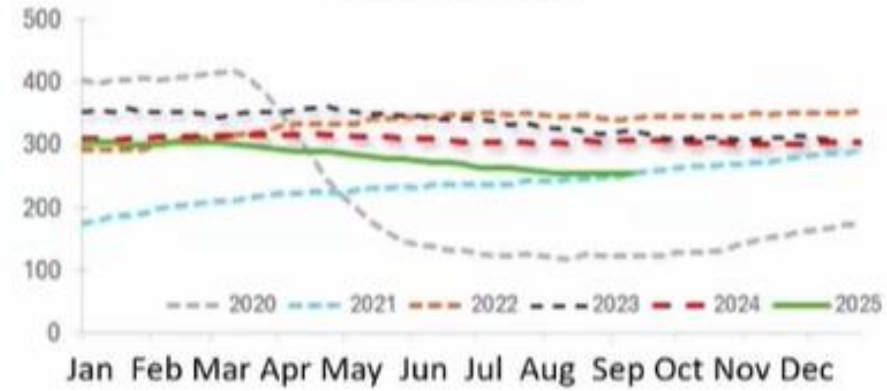
We believe since Q2 2025，the efficiency gain can no longer make up the production loss (natural decline) due to slow down of drilling, and completion

美国页岩油区块的后续潜力已经开始枯竭；以二叠纪为例，甜点区块已经用完，产出中更多伴生气和轻烃替代了原油

US Shale reservoir productivity started to decline, sweet spots are gone; Permian barrels, for example, gradually has more associate gas and NGL, compares to crude.

二叠纪钻机数

Permian Rig Counts



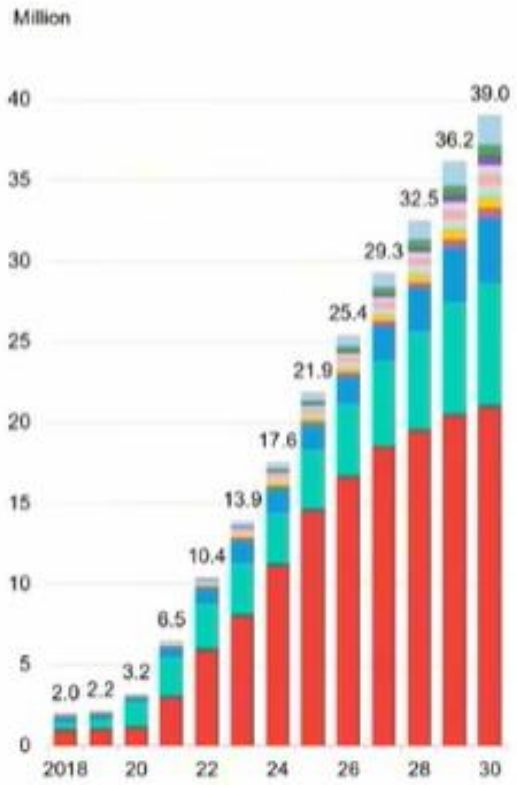
典型二叠纪井，原油，轻烃，天然气的组成变化

Crude, NGL, NG Make Up Evolution in a Permian Well

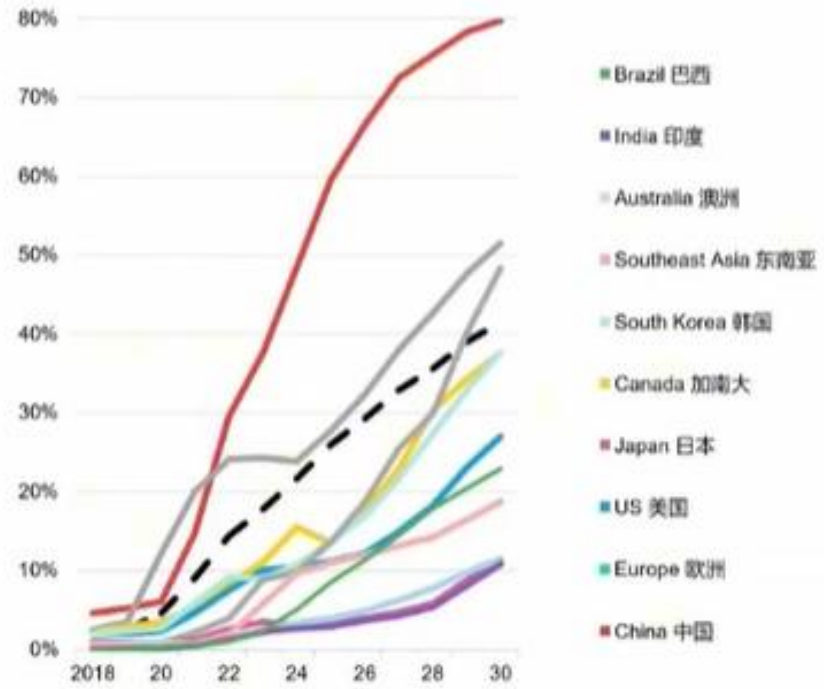
	Q2 '22	Q3 '22	Q4 '22	Q1 '23	Q2 '23
Oil (BOPD)	347,964	354,043	350,608	361,316	369,070
NGL (BOEPD)	160,183	162,372	165,533	167,486	181,098
Gas (MCFPD)	808,181	841,005	872,589	909,831	963,064
Total (BOEPD)	**642,844**	**656,582**	**661,573**	**680,440**	**710,678**

中国能源替代新形势 New Landscape for Energy Transition in China

Global passenger EV sales by market
全球乘用车电动车销售量(百万辆)



Global EV share of new passenger-vehicle sales by market
全球乘用车电动车新车渗透率



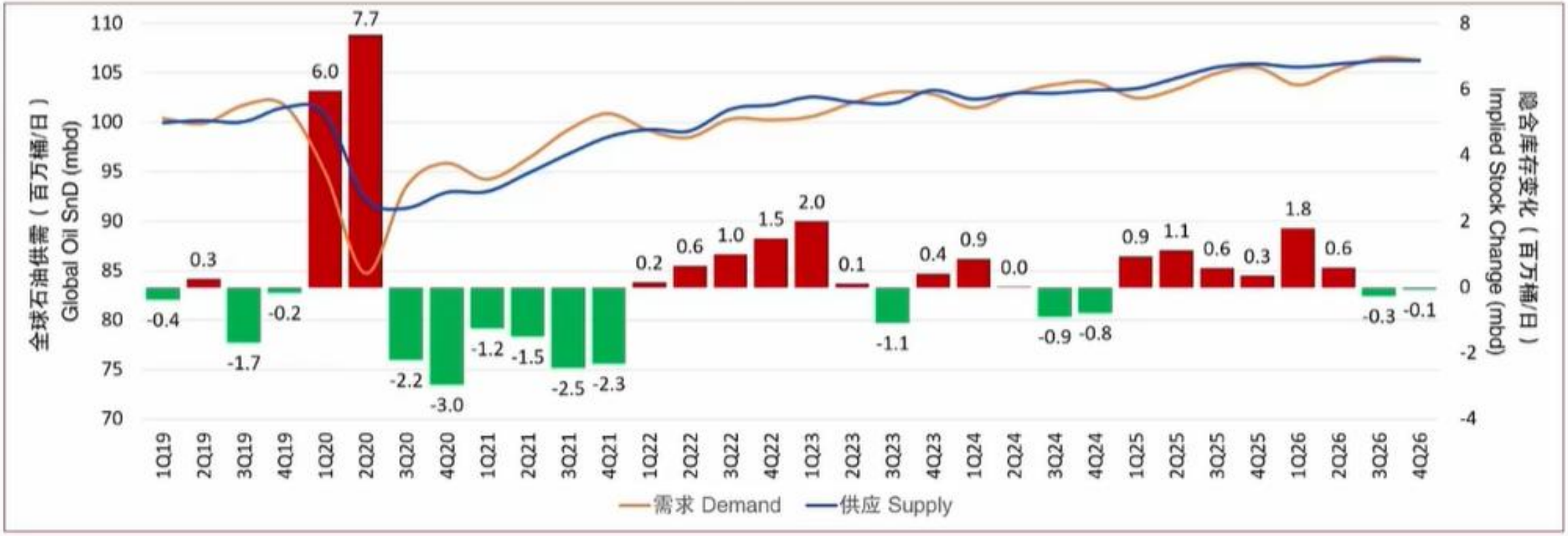
中国新能源替代不可复制
China's new energy transition cannot be replicated elsewhere

中国新能源替代"加速度"可能趋缓：
Even the "China Speed" of New Energy Replacement may slow down, reasons being:

- **新能源补贴退坡**
  Phasing out new energy subsidies
- **存量油车重置成本考量**
  Replacement cost considerations for the existing stock of gasoline vehicles
- **"油电同赋"箭在弦上**
  Taxation on gasoline vehicles and electric vehicles will gradually converge.

全球石油供需平衡展望 Global Oil Supply and Demand Outlook

- 尽管OPEC+继续增产加剧了市场对供应过剩的担忧，但我们对2026年基本面预期相对乐观：当前全球石油库存空间仍然充足，尤其是OECD国家原油库存水平维持在五年最低值以下，随着美国页岩油产量加速下滑，若考虑到补库存需求，明年旺季市场仍有望达到供需平衡甚至局部供不应求的情况。
- **Despite OPEC+ unwinding worsened concerns over oversupply, we remain relatively optimistic for 2026 fundamentals:** Global storage capacity remains ample, OECD crude stocks are below the five-year low, and with U.S. shale output declining, restocking demand could push the market toward balance, or even tightness during next year's peak season.



第二部分 PART II

油价交易和研判新趋势

Emerging Trends in Oil Price Trading and Forecasting

油价波动新趋势

New trends in oil price fluctuations

Top 1000 15min K Bar based on the ABS(price_change_rate)

	A	B	C	D	E	F	G	H	J
1	bar_start	bar_end	open	high	low	close	volume	price_cha	direction
2	2015-01-02 11:45:00+00:00	2015-01-02 12:29:00+00:00	57.37	57.54	55.94	55.96	10401	-0.02458	decreasing
3	2015-01-05 15:45:00+00:00	2015-01-05 16:29:00+00:00	53.64	53.68	52.66	52.67	25669	-0.01808	decreasing
4	2015-01-07 10:00:00+00:00	2015-01-07 10:44:00+00:00	50.53	51.63	50.53	51.43	10149	0.017811	increasing
5	2015-01-12 14:15:00+00:00	2015-01-12 14:59:00+00:00	48.45	48.57	47.67	47.75	10766	-0.01445	decreasing
6	2015-01-13 13:45:00+00:00	2015-01-13 14:29:00+00:00	45.54	46.31	45.49	46.24	7399	0.015371	increasing
7	2015-01-13 20:00:00+00:00	2015-01-13 20:44:00+00:00	46.46	47.29	46.45	47.26	4147	0.017219	increasing
8	2015-01-14 18:30:00+00:00	2015-01-14 19:14:00+00:00	46.13	47.27	46.06	47.24	2983	0.024062	increasing
9	2015-01-15 11:30:00+00:00	2015-01-15 12:14:00+00:00	47.7	48.7	47.68	48.66	408	0.020126	increasing
10	2015-01-15 11:45:00+00:00	2015-01-15 12:29:00+00:00	47.95	48.99	47.9	48.94	362	0.020647	increasing
11	2015-01-15 12:00:00+00:00	2015-01-15 12:44:00+00:00	48.11	49.34	48.11	49.1	415	0.020578	increasing
12	2015-01-21 15:45:00+00:00	2015-01-21 16:29:00+00:00	49.38	49.39	48.53	48.61	25828	-0.01559	decreasing
13	2015-01-22 11:00:00+00:00	2015-01-22 11:44:00+00:00	49.39	50.42	49.38	50.16	11625	0.01559	increasing

992	2025-06-13 09:30:00+00:00	2025-06-13 10:14:00+00:00	73.71	75.63	73.7	75.26	54558	0.021028	increasing
993	2025-06-15 22:00:00+00:00	2025-06-15 22:44:00+00:00	78.31	78.32	75.68	75.72	51190	-0.03307	decreasing
994	2025-06-17 07:00:00+00:00	2025-06-17 07:44:00+00:00	72.84	74.44	72.83	74.41	22036	0.021554	increasing
995	2025-06-18 14:00:00+00:00	2025-06-18 14:44:00+00:00	77.32	77.38	74.41	75.07	136857	-0.0291	decreasing
996	2025-06-22 22:00:00+00:00	2025-06-22 22:44:00+00:00	80.29	81.4	78.82	78.9	45382	-0.01731	decreasing
997	2025-06-23 17:15:00+00:00	2025-06-23 17:59:00+00:00	74.12	74.26	72.03	72.32	60211	-0.02428	decreasing
998	2025-06-24 05:45:00+00:00	2025-06-24 06:29:00+00:00	68.98	69	67.7	67.82	20551	-0.01682	decreasing
999	2025-06-24 06:45:00+00:00	2025-06-24 07:29:00+00:00	67.68	69.17	67.62	69.17	26437	0.022015	increasing
1000	2025-08-01 13:30:00+00:00	2025-08-01 14:14:00+00:00	71.61	71.68	70.02	70.07	101556	-0.02151	decreasing
1001	2025-09-02 12:15:00+00:00	2025-09-02 12:59:00+00:00	69.2	69.26	68.07	68.09	48891	-0.01604	decreasing
1002									

2015: 120 rows	2015: 73 days
2016: 151 rows	2016: 75 days
2017: 26 rows	2017: 21 days
2018: 48 rows	2018: 30 days
2019: 38 rows	2019: 26 days
2020: 306 rows	2020: 95 days
2021: 48 rows	2021: 33 days
2022: 160 rows	2022: 84 days
2023: 43 rows	2023: 29 days
2024: 27 rows	2024: 19 days
2025: 33 rows	2025: 22 days
Total: 1000 rows	Total: 507 days

科学研究五个范式 The Five Paradigms of Scientific Research

01

第一范式：经验科学

First Paradigm: Empirical Science

时期： 数千年前 - 17世纪左右

Period: Several thousand years ago – circa 17th century

方法： 主要依赖人类的直接感官和经验总结。

Approach: Relied primarily on direct human observation (seeing, hearing, smelling, touching) and the accumulation of experiential knowledge.

02

第二范式：理论科学

Second Paradigm: Theoretical Science

时期： 17世纪 - 20世纪中期

Period:17th century to mid-20thcentury

方法： 运用数学、逻辑进行归纳、演绎和推理，建立理论体系。

Approach: Used mathematics, logic, and other formal tools for induction, deduction, and reasoning to establish theoretical frameworks.

03

第三范式：计算科学

Third Paradigm: Computational Science

时期： 20世纪中期 - 21世纪初

Period: Mid-20th century – early 21st century

方法： 对复杂系统建立数学模型，编写计算机程序进行数值模拟。

Approach: Involved building mathematical models of complex systems and developing computer programs to perform numerical simulations.

04

第四范式：数据密集型科学

Fourth Paradigm: Data-Intensive Science

时期： 21世纪初 - 现在

Period: Early 21st century – present

方法： 使用高级算法、统计和机器学习技术，从大数据中发现模式和新规律。

Approach: Leverages advanced algorithms, statistical methods, and machine learning techniques to extract patterns, correlations, and new insights from large-scale data.

05

第五范式：智能科学

Fifth Paradigm: Intelligent Science

时期： 正在涌现的未来

Period: Emerging future

方法： AI系统自主提出假设、设计实验、分析模拟并形成新理论。

Approach: AI systems autonomously formulate hypotheses, design experiments, perform data analysis and simulations, learn from outcomes, and develop new theories, with human scientists primarily providing guidance and making high-level decisions.

*科学研究的“五个范式” 主要是由著名计算机科学家，1998年图灵奖得主，被誉为“数据库事务处理技术之父”的吉姆·格雷（Jim Gray）提出并推广的.
The "Five Paradigms of Scientific Research" were primarily proposed and popularized by the renowned computer scientist, 1998 Turing Award recipient, and acclaimed "Father of Database Transaction Processing Technology," Jim Gray.

分析和交易世界观和方法论的进化路径

The Evolutionary Path of Analytical and Trading Worldviews and Methodologies

主观时代 Era of Subjectivity:

非量化，依赖大脑整理信息，通过经验和简单逻辑形成市场认知与判断。Non-quantitative, relying on the brain to process and digest information, using experience and simple logic to form market perceptions, judgments, and intuitive sense.

平衡表时代 Balance Sheet Era

运用数学、逻辑工具进行归纳推理，建立以供需平衡表为核心的理论体系。Employing mathematical and logical tools for induction, deduction, and reasoning, establishing a theoretical system centered on supply-demand balance sheets.

传统量化时代 Traditional Quantitative Era

静态供需平衡表，结合概率论和数理统计，对市场进行简单化数学理解。Static supply-demand balance sheets and a simplified mathematical understanding of the world based on probability theory and mathematical statistics.

深度学习时代 Deep Learning Era

引入海量数据，实现大数据、细颗粒、低延迟的量化分析，发现非线性关系。Introducing massive datasets, achieving big data, fine granularity, and low latency in quantitative analysis, uncovering certain nonlinear relationships.

瞬时先知时代 Real-time Prophet

动态学习结构化与非结构化数据，构建完整市场视图，高效处理突发事件，理解市场波动为概率云。Collecting and dynamically learning all structured data and some unstructured data to construct a more comprehensive market view. Enabling efficient processing of news and black swan, recognizing that the market is a superposition of multiple Hawkes processes, with market fluctuations and trends expressed as probability clouds.

AI与人类：从工具到合作者
AI and Humanity: From Tools to Collaborative Partners

人工智能正在从简单的工具转变为人类的智能合作伙伴。在能源市场这一复杂决策环境中，AI与人类的协作将创造出前所未有的分析深度和决策质量。Artificial intelligence is evolving from a simple tool to an intelligent collaborative partner for humans. In the complex decision-making environment of the energy market, the collaboration between AI and humans will unlock unprecedented analytical depth and decision-making quality.

工具阶段 Tool Phase

AI作为分析师的辅助工具，提供数据处理和基础分析支持。AI serves as an analytical assistant, providing data processing and foundational analytical support.

顾问阶段 Advisor Phase

AI提供决策建议，人类保留最终判断权，形成初步协作关系。AI offers decision-making recommendations, while humans retain final judgment, forming a preliminary collaborative relationship.

合作者阶段 Collaborator Phase

AI与人类形成深度协作，各自发挥独特优势，共同做出决策。AI and humans engage in deep collaboration, leveraging their unique strengths to jointly make decisions.

增强共生 Augmented Symbiosis

AI与人类能力深度融合，形成超越各自局限的增强智能体系。AI and human capabilities are deeply integrated, forming an augmented intelligence system that transcends the limitations of either alone.