

山西省能源领域多元化发展 ——以吕梁市为例

Diversified Development of Energy Sector in Shanxi Province ——Case Study of Lvliang City

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Background

面积 Area: 2.11万平方公里

21,100 Square Kilometers

常住人口 Resident Population: 337万人, 3.37million
(Ranked 5th in Shanxi)



- **经济社会 Economy and Society**

- GDP: 2419亿元 (241.9 billion CNY)

- 人均地区生产总值 (GDP Per Capita) : 71722 CNY

- 居民可支配收入 (Per capita disposable income) : 34243 CNY

- 人均可支配收入在全省排名末位

- Per capita disposable income ranked last in Shanxi Province.

- 三次产业结构 Structure of the three industries: 4.5:69.6:25.9

- **煤炭历史 History of coal**

- 含煤炭面积占总面积的54.3%

- The area of land containing coal accounts for 54.3% of the total area.

- 煤炭产量位居全省第4位 (2022年煤炭产量1.56亿吨)

- Coal production ranked 4th in Shanxi Province, with an output of 156 million tons in 2022.

- **转型驱动 Drivers for transitioning away from coal**

- 政策驱动 Policy-driven

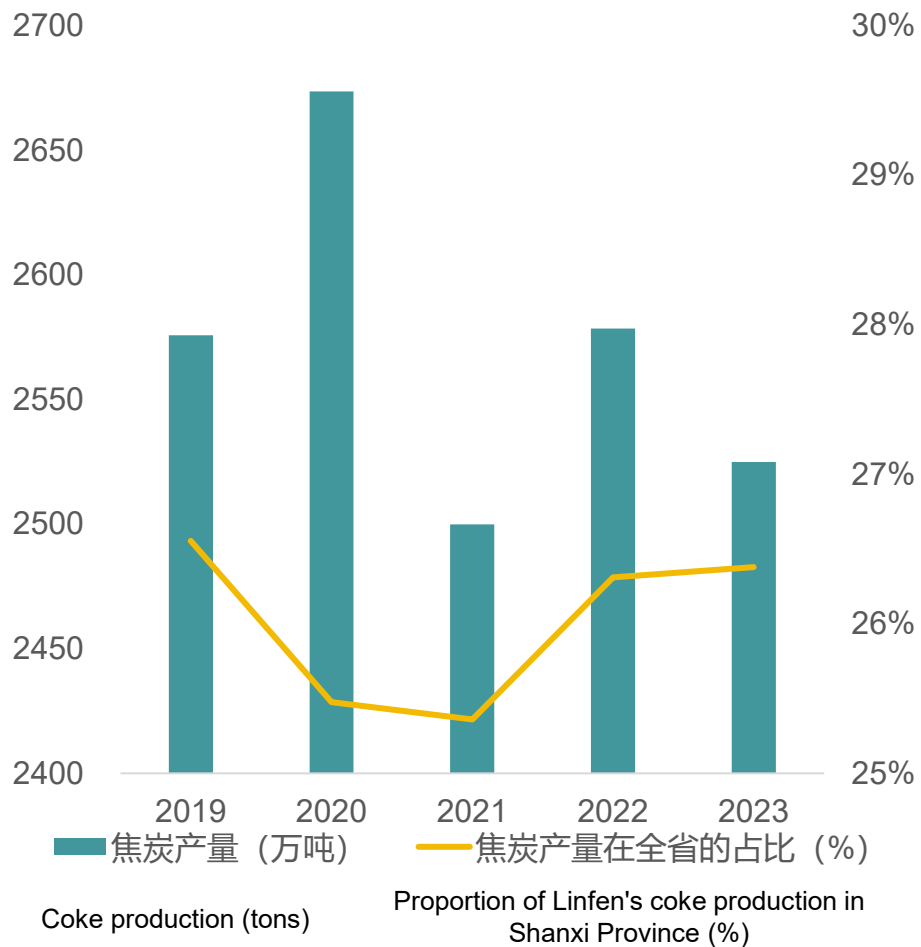
- 国家资源型经济转型综合配套改革试验区

- National Comprehensive Supporting Reform Pilot Zone for Resource-based Economic Transformation

- “双碳”目标驱动能源转型

- Dual Carbon Goals driving the regional energy transition

Assessment of local resources



Advantages

- 国内优质的主焦煤基地
High-quality coking coal base in China
- 焦炭产量常年位居全省前列
Coke production has consistently ranked among the top in Shanxi province
- 重卡应用需求较大
Higher demand for heavy truck application

Disadvantages

- 地形以山地为主(山区半山区面积占国土面积的91.8%)
The terrain is predominantly mountainous .
(Mountainous and semi-mountainous areas account for 91.8% of Lvliang's land area)
- 常住人口流失 (近十年常住人口规模持续下滑)
Loss of resident population
(The size of the resident population has been declining for the last 10 years)
- 对外来投资和人口的吸引力不足
Insufficient attraction of inward investment and population.

Key policies/mechanisms and sources of finance



省级 (Provincial) :

氢能产业遴选确定为山西省首批十大重点产业链之一

Hydrogen energy industry identified as one of the first 10 key industry chains in Shanxi Province

鹏飞、美锦成为“链主”企业

Shanxi Pengfei Group and Shanxi Meijin Energy have become "chain leader" enterprises.

市级 (Municipal):

出台氢能规划、行动计划等

Development of the hydrogen energy plan and action plan by the municipal government of Lvliang.

设立了氢能专班

Hydrogen specialization established

Funding support from different levels

吕梁 (Lvliang) :

氢能产业专项资金 Special Funds for Hydrogen Energy Industry (1亿元 100 million)

重点支持氢能车辆示范应用

Focus on supporting the demonstration and application of hydrogen-powered vehicles

孝义(Xiaoyi):

氢能产业发展基金 (50亿元) Hydrogen Energy Industry Development Fund (5 billion)

企业 (Corporations) :

氢能产业股权投资基金

Hydrogen Energy Industry Equity Investment Fund

山西兴证鹏飞新动能基金

Shanxi Xingzheng Pengfei New Dynamic Fund

Progress, challenges, and suggestions on next steps

投资企业 Investor Company	制氢方式 Hydrogen Production Method
鹏飞集团 Shanxi Pengfei Group	规划建设20万吨焦炉尾气制氢、5GW风光电制10万吨绿氢、100座加氢综合能源岛 Planning and construction of 200,000 tons of coke oven tail gas to produce hydrogen, 5GW wind power to produce 100,000 tons of green hydrogen, 100 hydrogen integrated energy island
山西美锦能源集团 Shanxi Meijin Energy	焦炉煤气制氢 Hydrogen production from coke oven gas
兴县山西泽丰达新能源有限公司 Xingxian Shanxi Ze Fengda New Energy	天然气液化提氦制氢 Natural gas liquefaction and helium extraction to hydrogen production

Progress and achievements

山西省2023年氢能产业发展指数：

Hydrogen energy industry development index for each city in Shanxi Province in 2023:

吕梁氢能产业发展综合指数位列**全省第一**

Lvliang ranked first in Shanxi Province in the comprehensive index of hydrogen energy industry development

Existing challenges

氢能行业尚处于探索阶段，应用成本较高

Hydrogen industry is still in the exploratory stage with high application costs
相关标准体系、管理体系仍在摸索中

Relevant standard system and management system are still being mapped out

Suggestions on next steps

争取国家政策支持（未纳入国家燃料电池汽车示范城市群）

Seek national policy support (Lvliang was not included in the national fuel cell vehicle demonstration city cluster)

及早精准定位长期发展优势

Early and precise positioning of long-term development advantages

Implications for other coal regions

Experience

能源龙头企业前瞻导入前沿产业

Leading energy enterprises are proactively introducing cutting-edge industries with foresight.

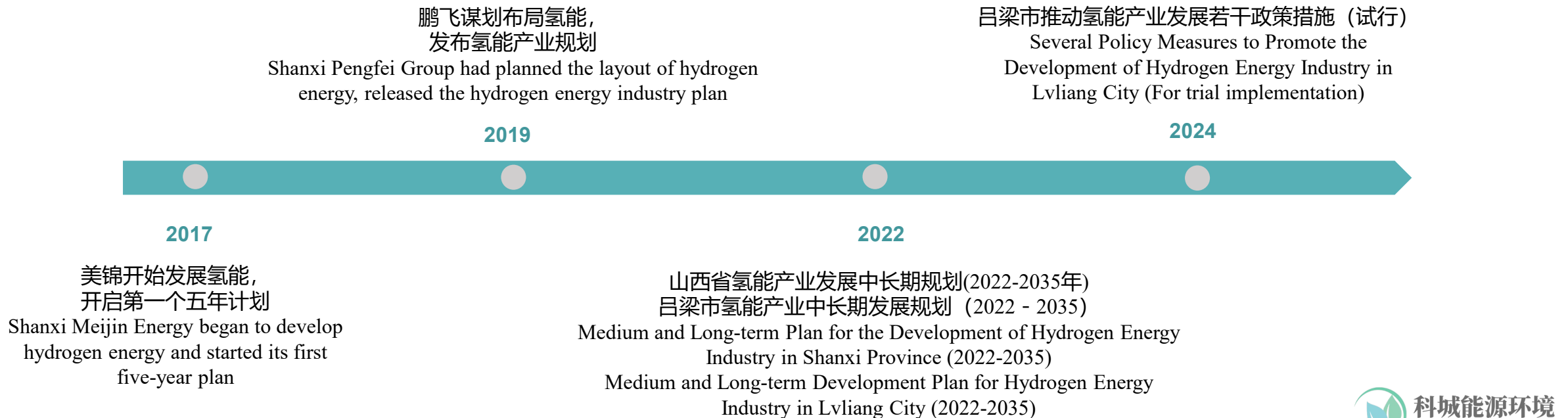
加强本地与国外、省外地区的行业交流和互动

Strengthen industry exchange and interaction between local, other domestic and foreign regions.

Lessons learnt

把握转型先机

Seizing the opportunity for early transition (Lvliang City was not included in the national fuel cell vehicle demonstration city cluster).





THANKS