



山西卓越瓦斯研究中心  
2023年工作回顾及2024年工作设想  
Work Review of 2023 and Work Plan for 2024  
of RCE-CMM in Shanxi



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## 第一部分 工作背景- 中国出台多项甲烷控排政策

Part I: Background - China has issued some policy on methane emission reduction

## 第二部分 2023年工作回顾

Part II: Work Review of 2023

## 第三部分 2024年工作设想

Part III: Work Plan for 2024



# 第一部分 工作背景-中国出台多项甲烷控排政策

Part I: Background-China has issued some policies on methane emission reduction



- 1、2023年11月7日生态环境部等11部门联合出台了《甲烷排放控制行动方案》明确提出“十四五”和“十五五”期间甲烷排放控制目标。
- 2、2023年10月19日生态环境部、市场监管总局联合发布了《温室气体自愿减排交易管理办法（试行）》。
- 3、2023年1月22日上午，中国温室气体自愿减排交易（CCER）市场启动仪式在北京举行，国务院副总理丁薛祥宣布了自愿减排交易市场启动。

1. On November 7, 2023, the Ministry of Ecology and Environment and 11 other departments jointly issued the Action Plan for Methane Emission Control, which clearly proposed methane emission control targets during the 14th and 15th Five Year Plans.

2. On October 19, 2023, the Ministry of Ecology and Environment and the State Administration for Market Regulation jointly issued the "Management Measures for Voluntary Greenhouse Gas Emission Reduction Trading (Trial)".

3. On the morning of January 22, 2023, the launch ceremony of China Certified Emission Reduction (CCER) market was held in Beijing, and Vice Premier Ding Xuexiang of the State Council announced the launch of the CCER market.

生态环境部  
外交部  
国家发展和改革委员会  
科学技术部  
工业和信息化部  
财政部  
自然资源部  
住房和城乡建设部  
农业农村部  
应急管理部  
国家能源局

文件

环气模〔2023〕67号

生态环境部等11部门关于印发《甲烷排放控制行动方案》的通知

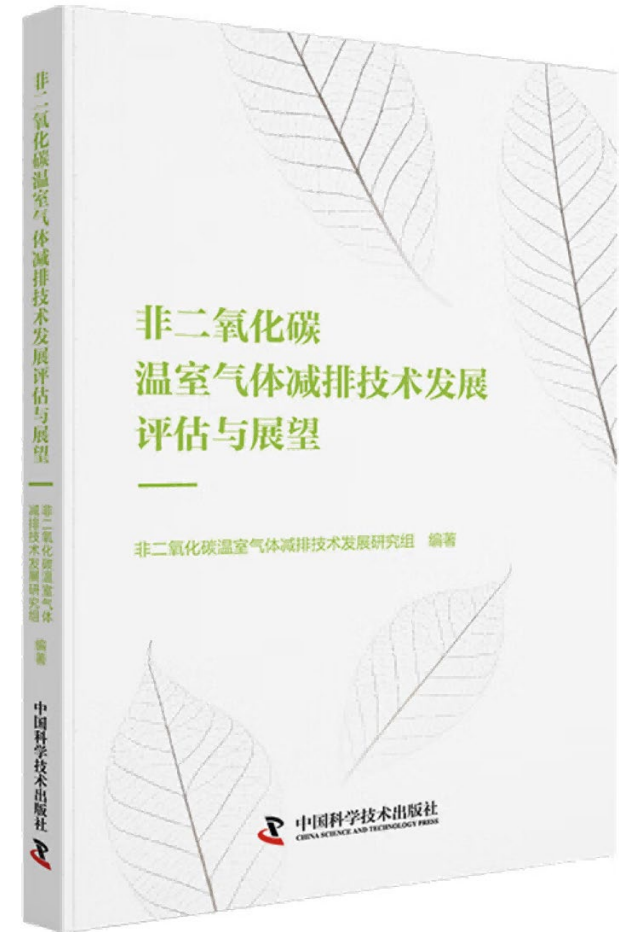
## 温室气体自愿减排交易管理办法（试行）

《温室气体自愿减排交易管理办法（试行）》已于2023年9月15日由生态环境部2023年第三次部务会议审议通过，并经国家市场监督管理总局同意，现予公布，自公布之日起施行。

生态环境部部长 黄润秋  
市场监管总局局长 罗文

4、2023年初，科技部组织出版发行了《非二氧化碳温室气体减排技术发展评估与展望》专著，提出了中国煤矿甲烷减排，特别是通风瓦斯利用减排政策、路径及未来技术创新空间的建议，并强调了国际合作的积极意义。

4. At the beginning of 2023, the Ministry of Science and Technology organized the publication of a monograph titled "Assessment and Outlook on the Development of Non Carbon Dioxide Greenhouse Gas Reduction Technologies", which proposed policies, paths, and future technological innovation space for methane reduction in Chinese coal mines, especially ventilation gas utilization. It also emphasized the positive significance of international cooperation.



5、2024年1月15日，山西省发改委等五部门联合发布《关于进一步加快煤矿低浓度瓦斯综合利用的通知》。《通知》在压实煤矿企业瓦斯利用的主体责任、优化瓦斯发电项目立项方式、鼓励煤矿企业建设自发自用瓦斯发电项目、煤矿瓦斯发电享受分布式发电等支持政策、积极支持瓦斯利用项目参与碳市场交易、加强低浓度瓦斯利用技术攻关等六个方面做出了具体规定。

5. On January 15, 2024, five departments in Shanxi Province jointly issued a notice on further accelerating the comprehensive utilization of low concentration gas in coal mines. The Notice has made specific provisions in six aspects, including consolidating the main responsibility of coal mining enterprises for gas utilization, optimizing the approval method of gas power generation projects, encouraging coal mining enterprises to build spontaneous self use gas power generation projects, enjoying distributed power generation for coal mine gas power generation, actively supporting gas utilization projects to participate in carbon market transactions, and strengthening the research and development of low concentration gas utilization technologies.

## 山西省发展和改革委员会等部门关于进一步加快煤矿低浓度瓦斯综合利用的通知

索引：000014349/2024-10594 发号：晋发改能源发〔2024〕7号

发布机构：能源处 发布日期：2024-01-15

### 山西省发展和改革委员会等部门关于进一步加快煤矿低浓度瓦斯综合利用的通知

晋发改能源发〔2024〕7号

各市发展改革委、能源局、科技局、生态环境局、行政审批服务管理局：

为适应煤矿瓦斯防治和减少碳排放的新形势，进一步加大政策扶持力度，加快煤矿低浓度瓦斯抽采利用，提高煤矿瓦斯抽采利用水平，经省政府同意，现通知如下：

一、压实煤矿企业瓦斯利用的主体责任。煤矿企业是煤矿瓦斯抽采利用的责任主体。高瓦斯、煤与瓦斯突出矿井应配套建设瓦斯抽采与综合利用设施。对甲烷体积浓度大于等于8%的抽采瓦斯，在确保安全的前提下，煤矿企业应进行综合利用；对甲烷体积浓度在2%（含）至8%的抽采瓦斯以及乏风瓦斯，鼓励企业探索开展综合利用。

二、优化瓦斯发电项目立项方式。煤矿瓦斯发电项目属于资源综合利用项目，全部实行备案管理。各级项目审批部门要严格落实企业投资项目备案管理权限和有关规定，在项目开工建设前通过在线平台办理瓦斯发电项目备案手续。备案机关不得擅自设置前置审查条件。



## 第二部分 2023年工作回顾

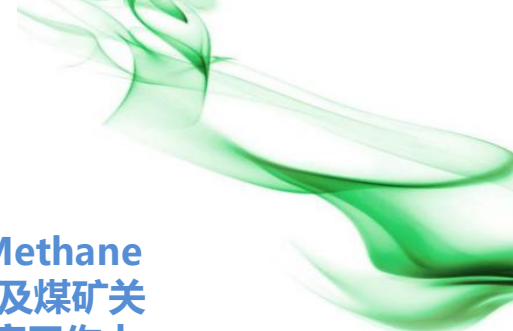
## Part II: Work Review of 2023



# 1. 开展国际交流

## 1. Conducted technical exchanges





1、2023年联合国煤矿瓦斯及公平过渡专家委员会新设立了三个专业化的技术工作小组，甲烷利用减排（Methane Emissions Reduction）专家工作小组；煤矿转型公平过渡（Just Transition）专家工作小组；安全运行及煤矿关闭（Safe Operations and Closure of Coal Mines）专家工作小组。瓦斯中心派出专家分别加入上述专家工作小组，参加技术交流活动。

1、In 2023, the GOE established three specialized technical working groups: Methane Emissions Reduction Group Group on Just Transition in Coal Mine Transformation, Group on Safe Operations and Closure of Coal Mines.The center dispatched experts to join the above working groups and participate in technical exchange activities.



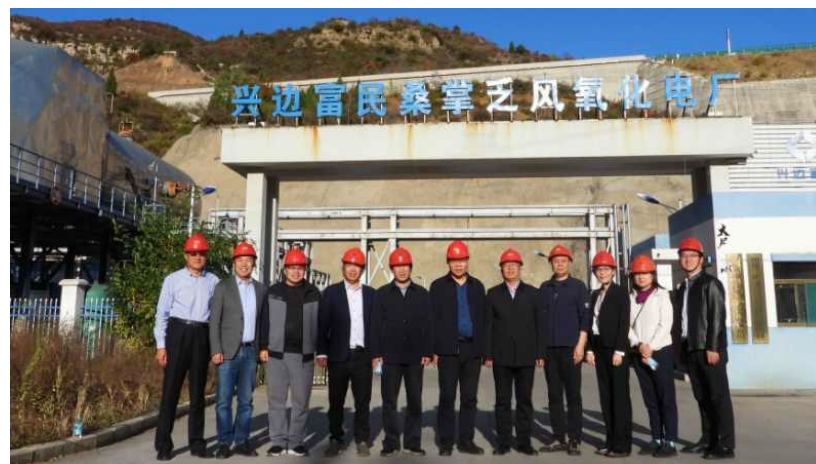
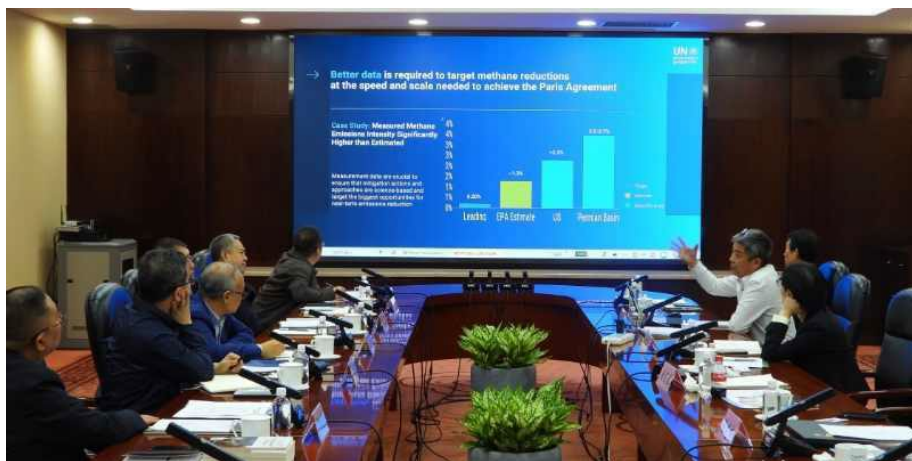
2、2023年7月，完成由联合国环境规划署起草的《炼焦煤甲烷合作伙伴关系（METCOAL METHANE PART NERSHIP）》谅解备忘录的英文版翻译校核工作，并积极参与联合国正在推动的与各煤炭生产国、炼焦煤生产企业进行的备忘录签订工作，该备忘录文稿篇幅1万余字。

2. In July 2023, the translation and verification of the English version of the Memorandum of Understanding on the Methane Partnership for Coking Coal was completed, drafted by the United Nations Environment Programme. And actively participate in the signing of memorandums of understanding with coal producing countries and coking coal production enterprises being promoted by the United Nations. The memorandum is over 10, 000 words.



3、2023年10月20日，联合国环境规划署专家访问瓦斯中心，双方磋商了煤矿甲烷利用减排的科研项目、技术培训等合作机会。环境规划署专家介绍了自上而下的全球甲烷减排监测监控最新技术，还实地考察了桑掌乏风氧化发电余热利用项目。

3. October 20, 2023, experts from the United Nations Environment Programme visited the Center to discuss cooperation opportunities such as scientific research projects and technical training on CMM utilization and emission reduction. They also introduced the latest global methane emission reduction monitoring and monitoring technology from top to bottom, and took a site visit to Sangzhang VAM project.





4、2023年10月21日，参加（科技部）中国21世纪议程管理中心举行的中美甲烷监测技术创新与合作研讨会。

4. October 21, 2023, participated in the China US Methane Monitoring Technology Innovation and Cooperation Seminar held by the China Agenda 21 Management Center of the Ministry of Science and Technology.

5、2023年10月28日，参加第18届国际矿山测量大会甲烷观测与量化边会视频会议。

5. October 28, 2023, participated in the video conference on methane observation and quantification at the 18th International Mine Surveying Conference.





## 2 积极推动煤矿甲烷利用减排工作

## 2. Promoting the utilization and emission reduction of CMM

1、瓦斯中心主要发起单位，山西焦煤集团、潞安化工集团、华阳新材料集团积极落实瓦斯抽采利用减排规划，发挥了国有煤炭大集团的积极作用，提出了“减碳、去碳、降碳、固碳”的低碳发展理念。

The main initiators of the Gas Center, Shanxi Coking Coal Group, Lu'an Chemical Group, and Huayang New Materials Group, actively implemented the gas extraction and utilization emission reduction plan, played a positive role in state-owned coal group, and proposed the low-carbon development concept of "Reducing carbon, Delete carbon, Low carbon, and Carbon Capture and Storage".

2、由瓦斯中心提供技术支持的“华晋焦煤瓦斯发电厂二期工程提质增效技术研究及应用”项目课题研究已完成80%的工作，并将完成专题论文两篇，从项目试运行的实际情况看，未来有望实现提高发电效率15%的目标。

The research project "Research and Application of Quality and Efficiency Enhancement Technology for Huajin Coking Coal Gas Power Plant Phase II Project", supported by the Center, has completed 80% of the work and will issue two papers. will improve power efficiency by 15% in the future.

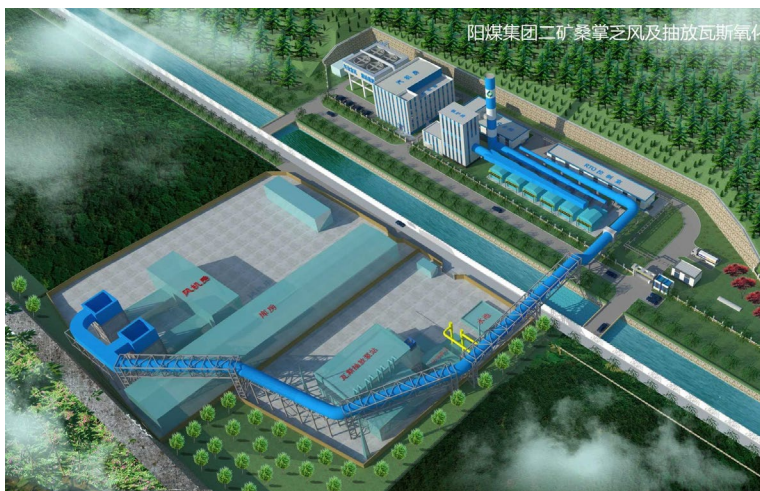




3、中心理事单位兴边富民（北京）清洁能源技术有限公司是超低浓度瓦斯综合利用专业化公司，由该公司开发的桑掌乏风氧化发电余热利用项目运行情况良好，2023年发电3926万度，为矿井供热1.81万吨蒸汽，利用瓦斯1635万Nm<sup>3</sup>，实现二氧化碳减排当量26.1万吨。所开发的古城煤矿乏风氧化发电余热利用项目已投产运行，2023年项目发电9759.5万度，利用瓦斯3391万Nm<sup>3</sup>/a，供热3.8495万吨蒸汽/a，实现二氧化碳减排当量54.1万吨。

Fortman Energy (Beijing) Clean Energy Technology Co., Ltd, the Council Members of our center, is a specialized company for the comprehensive utilization of ultra-low concentration gas. The Sangzhang VAM project developed by the company operates well, generating 39.26 million kilowatt hours of electricity in 2023, providing heat to mines 18, 100 tons steam, and utilizing 16.35 million Nm<sup>3</sup> gas, Realize 261000 tons ERs.

Gucheng Coal Mine VAM project developed by Fortman Energy has been put into operation. In 2023, the project generated 97.595 million kWh of electricity and utilized 33.91 million Nm<sup>3</sup> gas. Heating 38495 tons of steam/a, achieving a reduction of 541000 tons ERs.



4、中心理事单位山西国源煤层气综合利用工程技术股份有限公司是煤矿瓦斯抽采专业化公司，2023年完成瓦斯抽采钻孔进尺70万米，为煤矿建设瓦斯抽采能力1.5亿m<sup>3</sup>/a，为清洁能源利用温室气体减排创造了基础条件。

Shanxi Gowin Coalbed Methane Comprehensive Utilization Engineering Technology Co., Ltd., the central director unit, is a specialized company for CMM drainage. In 2023, it completed borehole drilling of 700000 meters, with a CMM drainage capacity of 150 million m<sup>3</sup>/a for coal mine.

5、瓦斯中心网站是宣传温室气体减排理念，传播煤矿甲烷减排技术的窗口，网站页面可实现PC端、手机端的浏览。  
网站域名为：<http://ice-cmm.org.cn/>

The Gas Center website is a window for promoting greenhouse gas emission reduction concepts and promoting coal mine methane emission reduction technologies. The website page can be browsed on both PC and mobile devices.

The website is: <http://ice-cmm.org.cn/>







# 第三部分 2024年工作设想

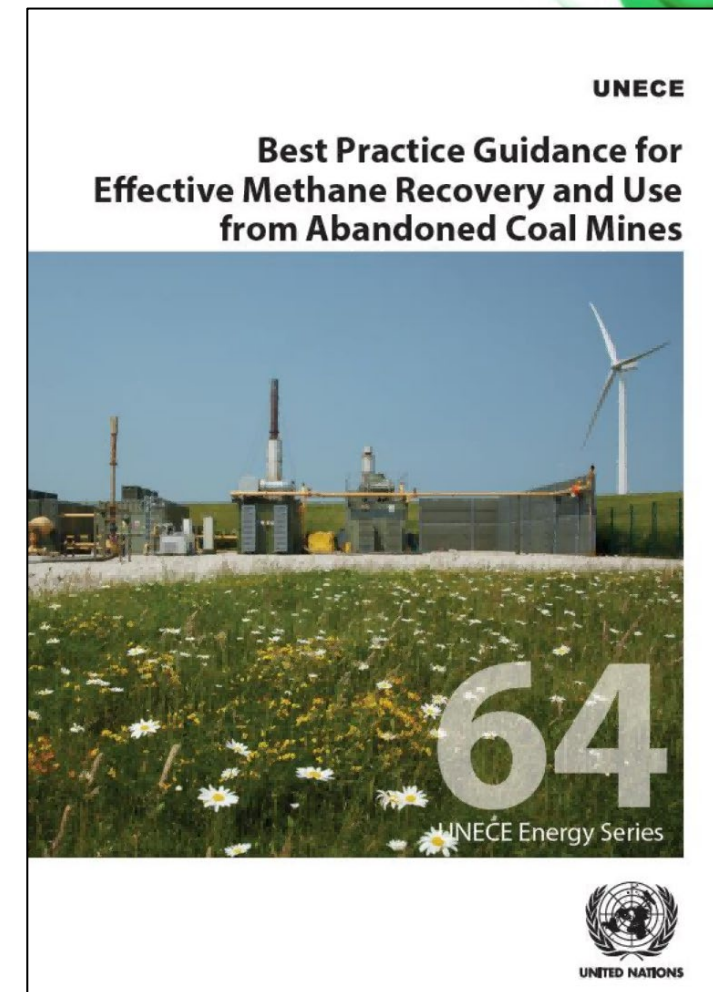
## Part III: Work Plan for 2024

## 1.中心将围绕以下五个方面开展工作

- ◆ 提升现有瓦斯利用减排项目水平，实现提质增效；
- ◆ 推广新技术，提高瓦斯抽采浓度和流量；
- ◆ 推动废弃矿井示范项目，参与相关规范的编制；
- ◆ 参与通风瓦斯自愿减排方法学编制工作；
- ◆ 参与煤矿瓦斯监测监控系统提升改造工作。

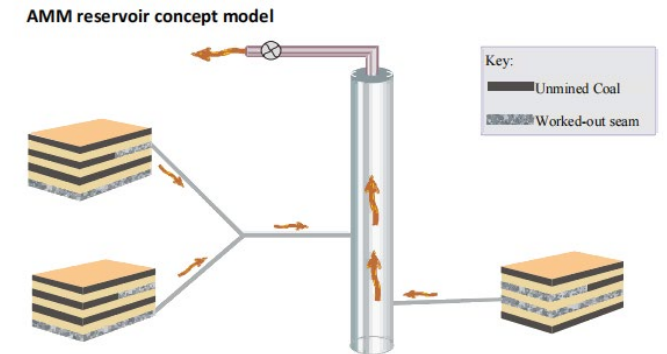
## 1. The Center will carry out work around the following five aspects

- ◆ Improve the level of existing gas utilization and emission reduction projects, achieve quality and efficiency improvement;
- ◆ Promoting new technology for CMM concentration and flow improving;
- ◆ Pushing AMM Demonstration project, and participate in the formulation of standards for AMM;
- ◆ Participate in the development of voluntary emission reduction methodology for VAM;
- ◆ Participate in the improvement and renovation of coal mine gas monitoring and control systems



## 2.具体工作内容 Work plan for 2024

- ◆ 总结煤矿瓦斯利用减排示范项目经验，推动焦煤集团、华阳集团、潞安集团等煤炭企业瓦斯利用项目提质增效；
- ◆ 推广矿井采用新技术、加强培训，提高瓦斯抽采浓度和流量；
- ◆ 推动废弃矿井瓦斯回收利用减排示范项目，参与技术规范及鼓励政策的制定工作；
- ◆ 积极参与通风瓦斯自愿减排方法学编制工作，为通风瓦斯利用减排做贡献；
- ◆ 与联合国环境规划署合作，借鉴联合国“石油和天然气甲烷伙伴关系（Oil & Gas Methane Partnership, OGMP）”成功经验，服务煤炭企业加入《炼焦煤甲烷合作伙伴关系（METCOAL METHANEPARTNERSHIP）》。
- ◆ Summarize the experience of CMM utilization and emission reduction demonstration projects, promote the improvement and efficiency of CMM projects in coal enterprises such as SCCG, Huayang Group, and Lu'an Group;
- ◆ Promote new technologies and training, increase CMM concentration and flow rate;
- ◆ Pushing demonstration project on AMM recovery and utilization, participate in the formulation of technical specifications and encourage policies
- ◆ Actively participate in the development of voluntary emission reduction methodology for VAM.
- ◆ Collaborating with the United Nations Environment Programme and drawing on the successful experience of the United Nations Oil&Gas Methane Partnership (OGMP), we aim to serve coal enterprises in joining the METCOAL METHANEPARTNERSHIP.



## 2.具体工作内容

- ◆ 服务煤矿瓦斯监测监控系统提升改造，实现煤矿瓦斯安全监测监控、甲烷数据采集多功能化、集成化。
- ◆ 服务中国与欧盟就风排瓦斯自愿减排方法学的互通互认，服务煤炭企业温室气体减排国际化、市场化。
- ◆ 积极参加国际温室气体减排专业活动，扩大煤炭行业在国际碳减排领域的影响力。
- ◆ 协调各理事单位煤矿瓦斯抽采利用减排项目工作，推动煤炭行业传统产业创新发展、高碳产业低碳发展。
- ◆ Upgrade coal mine gas monitoring and control system to achieve multifunctional and integrated monitoring of coal mine gas safety and methane data collection.
- ◆ Serve recognition and exchange of voluntary emission reduction methodologies for VAM between China and the European Union, and to serve the internationalization and marketization of greenhouse gas emissions reduction for coal enterprises.
- ◆ Participate in international greenhouse gas reduction professional activities and expand the influence of the coal industry in the field of international carbon reduction.
- ◆ Coordinate the work of Council Members on CMM drainage , utilization, and emission reduction projects, and promote the innovative development of traditional industries and low-carbon development of high carbon industries in the coal industry.





**谢谢！ THANKS**