

● OCTOBER 2022

# CHINA ENERGY POLICY NEWSLETTER

China Energy Transformation Programme

## 1. Project activities

### CETO 2022 full Chinese report is launched

The China Energy Transformation (CET) programme has officially published the full Chinese report of the *China Energy Transformation Outlook 2022* (CETO2022) on the CET website. Please download it from [here](#).



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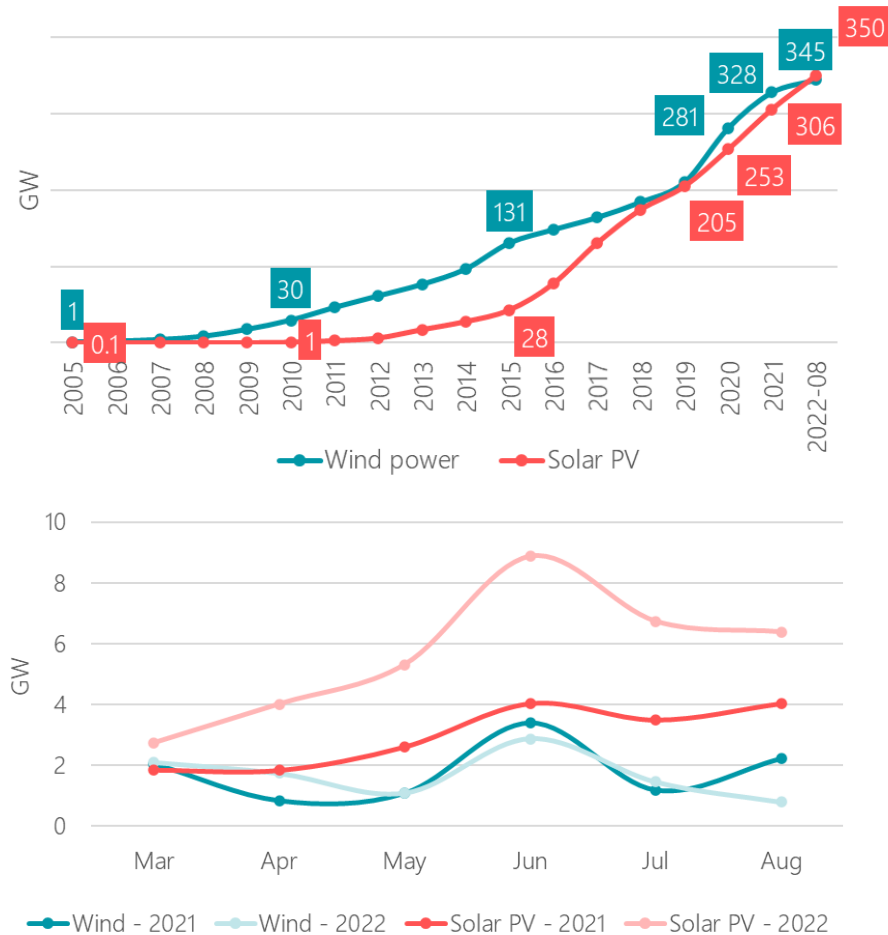
## 2. China energy transition updates

### The total installed capacity of solar PV exceeds that of wind power for the first time

According to the latest data released by the China Electricity Council (CEC), the cumulative installed capacity of solar PV power generation has reached 350 GW by August 2022, surpassing wind power (345 GW) for the first time and becoming the largest non-hydro renewable power source in China<sup>1</sup>, mainly due to the rapid development of distributed solar PV in recent years.

From January to August, 2022, with the county-level rooftop solar PV projects continued to develop, and the household solar PV expansion accelerated, the monthly newly installed solar PV capacity increased significantly year-on-year, of which the proportion of distributed solar PV reached 67%. With the increase in solar PV installed capacity, some provinces are facing greater consumption pressure in the second half of the year. The national New Energy Consumption Monitoring and Warning Centre (NECMWC) pointed out that the soaring price of silicon material this year has led to an increase of more than 8% in the capital cost of solar PV power plants. However, according to the settlement price of the electricity spot market in Shanxi, from January to May, the feed-in tariff of some solar PV power plants dropped to below 0.2 RMB/kWh, causing losses for solar PV enterprises and needing attention.<sup>2</sup>

The cumulative installed capacity of wind power and solar PV from 2005 to August of 2022 (up); The monthly newly installed capacity of wind power and solar PV from March to August in 2021 and 2022 (bottom)



Source: National Energy Administration (NEA), China Electricity Council (CEC), accessed in September 2022

<sup>1</sup> “2022年1-8月全国电力工业统计数据一览表,” China Electricity Council, 21 September 2022, accessed at <https://cec.org.cn/detail/index.html?3-313693>.

<sup>2</sup> “2022年二季度全国新能源电力消纳评估分析,” National New Energy Consumption Monitoring and Early Warning Center, 6 September 2022, accessed at <https://mp.weixin.qq.com/s/4g9Ml1EaOk5H-eTe9GgZag>.

## 2021 provincial wind power and solar PV utilization hours released

The National Energy Administration (NEA) recently released the *2021 Renewable Energy Power Monitoring and Evaluation Report*, which summarizes the 2021 renewable energy installed capacity, power generation, share in power consumption, utilization rates, as well as wind power and solar PV utilization hours, and the proportion of renewable energy in Ultra-High-Voltage (UHV) lines. The complete installed capacity and power generation data table can be found on the [CET website](#), and the renewable energy power consumption status report can be found in the May 2022 [newsletter](#).

In 2021, the national average utilization rate of wind power was 96.9%, an increase of 0.4 percentage points year-on-year, and the utilization hours of wind power in the Three Norths has increased overall. Meanwhile, the national average utilization rate of solar PV was 98%, remained at the same level compared to that of 2021, while the utilization hours of solar PV power generation decreased year-on-year in majority of the provinces in the Three Norths because of the rapid expansion of solar PV capacity and slowdown of power demand growth in the first half of the year.

The annual transmission of renewable energy from 17 DC UHV lines across the country increased by 18.3% year-on-year, accounting for 58.7%. Among them, the 13 lines in the State Grid region account for 50.2% of the annual electricity transmission, and the four lines in the Southern Power Grid region accounts for 100%.<sup>3</sup> The previously released *14th Five-Year Plan for Renewable Energy Development* proposed that the proportion of renewable energy transmission for new key lines during the 14th Five-Year Plan period should not be less than 50%.<sup>4</sup>

### Regional wind and solar PV utilization hours in key provinces in 2021

Region	Province	Wind Power	Wind Power Year-on-Year	Solar PV	Solar PV Year-on-Year
National		2246	+	1163	+
North	Inner Mongolia	2407~2626	+	1562~1568	-
	Shanxi			1424	-
	Hebei	1995	-	1343	-
Northwest	Xinjiang	2241~2781	+	1455~1597	-
	Shaanxi	2317	+	1455	-
	Ningxia	2018	+		
	Gansu	1861~2153	+	1389~1562	+
	Qinghai			1248~1474	-
Northeast	Liaoning	2293	+	1327	-
	Heilongjiang	2063~2254	-	1503	-
	Jilin	2280~2427	+	1537	+

Source: NEA, September 2022

<sup>3</sup> “国家能源局关于2021年度全国可再生能源电力发展监测评价结果的通报, 国能发新能(2022)82号,” National Energy Administration, 27 August 2022, accessed at [http://www.nea.gov.cn/2022-09/16/c\\_1310663387.htm](http://www.nea.gov.cn/2022-09/16/c_1310663387.htm).

<sup>4</sup> “关于印发“十四五”可再生能源发展规划的通知, 发改能源(2021)1445号,” National Development and Reform Commission et al, 21 October 2021, accessed at [https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202206/t20220601\\_1326719.html?code=&state=123](https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202206/t20220601_1326719.html?code=&state=123).

### 3. China's carbon peaking and carbon neutrality "1+N" policy system has been basically established

As of August 2022, under the framework of the "1+N" policy system for carbon peaking and carbon neutrality, the State Council, national ministries, and provincial governments have successively issued more than 60 national and provincial policies, including carbon peaking action plans covering fields of energy, industry, transportation, urban and rural affairs, and other fields and industries, the "1+N" policy system has been initially established. The policy monitoring team of the China Energy Transformation (CET) program has made corresponding supplements and summaries based on the table created by the Green and Low-Carbon Finance Industry Committee<sup>1</sup> recently.

#### Overview of the carbon peaking and carbon neutrality "1+N" policy system (as of August 2022)

No.	Date	Authorities	Policy name	Main contents	Link
Top-layer documents					
1	2021-10-26	State Council	"N": Action Plan for Carbon Dioxide Peaking Before 2030, State Council Development [2021] No. 23 ( CHN: 国务院关于印发 2030 年前碳达峰行动方案的通知, 国发〔2021〕23 号 )	<a href="#">Newsletter (November 2021)</a>	<a href="#">Link</a>
2	2021-10-24	CPC, State Council	"1": Working Guidance for Carbon Dioxide Peaking And Carbon Neutrality In Full And Faithful Implementation of The New Development Philosophy ( CHN: 中共中央 国务院关于完整准确全面贯彻新发展理念做好碳达峰碳中和工作的意见 )	<a href="#">Newsletter (November 2021)</a>	<a href="#">Link</a>
Carbon peaking action plans					
Energy sector					
3	2022-04-09	NDRC, MIIT, MEE, MoHURD, SAMR, NEA	Notice on Issuing the <i>Benchmarking and Standard Levels in Key Fields of Clean and Efficient Coal Utilization (2022 Edition)</i> , NDRC Operation [2022] No. 599 ( CHN: 国家发展改革委等部门关于发布《煤炭清洁高效利用重点领域标杆水平和基准水平 (2022 年版)》的通知, 发改运行〔2022〕559 号 )		<a href="#">Link</a>
4	2022-03-23	NDRC, NEA	Medium- and Long-term Development Plan for Hydrogen Energy Industry (2021-2035) ( CHN: 国家发展改革委、国家能源局联合印发《氢能产业发展中长期规划 (2021-2035 年)》 )	<a href="#">Newsletter (April 2022)</a>	<a href="#">Link</a>
5	2022-01-30	NDRC, NEA	Opinions on Improving the System, Mechanism and Policy Measures for the Green and Low-carbon Energy Reform, NDRC Energy [2022] No. 206 ( CHN: 国家发展改革委、国家能源局关于完善能源绿色低碳转型体制机制和政策措施的意见, 发改能源〔2022〕206 号 )	<a href="#">Newsletter (March 2022)</a>	<a href="#">Link</a>
6	2022-01-29	NDRC, NEA	Notice on Issuing the <i>14th Five-Year Implementation Plan for New-type Energy Storage Development</i> , NDRC Energy [2022] No. 209 ( CHN: 国家发展改革委 国家能源局关于印发《“十四五”新型储能发展实施方案》的通知, 发改能源〔2022〕209 号 )	<a href="#">Newsletter (March 2022)</a>	<a href="#">Link</a>
7	2022-01-29	NDRC, NEA	Notice on Issuing the <i>14th Five-Year Plan for the Modern Energy System Development</i> , NDRC Energy [2022] No. 210 ( CHN: 国家发展改革委 国家能源局关于印发《“十四五”现代能源体系规划》的通知, 发改能源〔2022〕210 号 )	<a href="#">Newsletter (April 2022)</a>	<a href="#">Link</a>
8	2021-10-21	NDRC, NEA, MoF, MNR, MEE, MoHURD, MARA, CMA, SFGA	Notice on Issuing the <i>14th Five-Year Plan for Renewable Energy Development</i> , NDRC Energy [2021] No. 1445 ( CHN: 国家发展改革委等九部门联合印发《“十四五”可再生能源发展规划》, 发改能源〔2021〕1445 号 )	<a href="#">Newsletter (June 2022)</a>	<a href="#">Link</a>

<sup>1</sup> “中国碳达峰碳中和“1+N”政策体系已基本建立,” Green and Low Carbon Financial Industry Committee of China Energy Conservation Association, 24 August 2022, accessed at [https://mp.weixin.qq.com/s/OtVx\\_CDaKZoxeViQTFb\\_Vg](https://mp.weixin.qq.com/s/OtVx_CDaKZoxeViQTFb_Vg).

Emission reduction					
9	2022-06-10	MEE, NDRC, MIIT, MoHURD, MoT, MARA, NEA	Notice on Issuing the <i>Synergistic Implementation of Pollution Reduction and Carbon Reduction</i> , MEE General [2022] No.42 ( CHN: 生态环境部等七部门联合印发《减污降碳协同增效实施方案》, 环综合〔2022〕42号 )		<a href="#">Link</a>
10	2022-02-03	NDRC, MIIT, MEE, NEA	Notice on Issuing the <i>Implementation Guidelines for Energy Conservation and Carbon Reduction Transformation and Upgrading in Key Areas of Energy-intensive Industries (2022 Edition)</i> , NDRC Industry [2022] No.200 ( CHN: 关于发布《高耗能行业重点领域节能降碳改造升级实施指南(2022年版)》的通知, 发改产业〔2022〕200号 )		<a href="#">Link</a>
11	2021-12-28	State Council	Notice on Issuing the <i>14th Five-Year Comprehensive Work Plan for Energy Saving and Emission Reduction</i> , State Council Development [2021] No. 33 ( CHN: 国务院印发《“十四五”节能减排综合工作方案》, 国发〔2021〕33号 )	<a href="#">Newsletter (March 2022)</a>	<a href="#">Link</a>
Industry sector					
12	2022-07-07	MIIT, NDRC, MEE	Notice on Issuing the <i>Implementation Plan for Carbon Peaking in the Industrial Sector</i> , MIIT Joint Energy Saving [2022] No.88 ( CHN: 工业和信息化部 国家发展改革委 生态环境部《关于印发工业领域碳达峰实施方案的通知》, 工信部联节〔2022〕88号 )	<a href="#">Newsletter (September 2022)</a>	<a href="#">Link</a>
13	2022-06-29	MIIT, NDRC, MoF, MEE, SASAC, SAMR	Notice on Issuing the Action Plan for Industrial Energy Efficiency Improvement, MIIT Joint Energy Saving [2022] No.76 ( CHN: 工业和信息化部等六部门关于印发工业能效提升行动计划的通知, 工信部联节〔2022〕76号 )	<a href="#">Newsletter (August 2022)</a>	<a href="#">Link</a>
14	2022-06-23	MIIT, MWR, NDRC, MoF, MoHURD, SAMR	Notice on Issuing the Action Plan for Industrial Water Efficiency Improvement, MIIT Joint Energy Saving [2022] No.72 ( CHN: 工业和信息化部等六部门关于印发工业水效提升行动计划的通知, 工信部联节〔2022〕72号 )		<a href="#">Link</a>
15	2022-06-08	MIIT, MoHRSS, MEE, MoC, SAMR	Guiding Opinions on Promoting the High-quality Development of Light Industry, MIIT Joint Consumption [2022] No.68 ( CHN: 工业和信息化部等五部门关于推动轻工业高质量发展的指导意见, 工信部联消费〔2022〕68号 )		<a href="#">Link</a>
16	2022-04-12	MIIT, NDRC	Guiding Opinions on the High-Quality Development of the Industrial Textile Industry, MIIT Joint Consumption [2022] No.44 ( CHN: 工业和信息化部 国家发展和改革委员会关于产业用纺织品行业高质量发展的指导意见, 工信部联消费〔2022〕44号 )		<a href="#">Link</a>
17	2022-04-12	MIIT, NDRC	Guiding Opinions on the High-Quality Development of the Chemical Fiber Industry, MIIT Joint Consumption [2022] No.43 ( CHN: 工业和信息化部 国家发展和改革委员会关于化纤工业高质量发展的指导意见, 工信部联消费〔2022〕43号 )		<a href="#">Link</a>
18	2022-03-28	MIIT, NDRC, MoST, MEE, MEM, NEA	Guiding Opinions on Promoting the High-quality Development of the Petrochemical and Chemical Industry during the 14th Five-Year Plan Period, MIIT Joint Raw Material [2022] No.34 ( CHN: 工业和信息化部等六部门联合印发关于“十四五”推动石化化工行业高质量发展的指导意见, 工信部联原〔2022〕34号 )		<a href="#">Link</a>
19	2022-01-20	MIIT, NDRC, MEE	Guiding Opinions on Promoting the High-quality Development of the Iron and Steel Industry, MIIT Joint Raw Material [2022] No.6 ( CHN: 工业和信息化部 发展改革委 生态环境部关于促进钢铁工业高质量发展的指导意见, 工信部联原〔2022〕6号 )		<a href="#">Link</a>
20	2021-12-22	MIIT, NDRC, MoST, MoC, NHC, MEM, NHSA, NMPA, NATCM	Notice on Issuing the 14th Five-Year Plan for Pharmaceutical Industry Development, MIIT Joint Regulations [2022] No.217 ( CHN: 工业和信息化部等九部门关于印发“十四五”医药工业发展规划的通知, 工信部联规〔2021〕217号 )		<a href="#">Link</a>

21	2021-11-15	MIIT	Notice on Issuing the <i>14th Five-Year Plan for Industrial Green Development</i> , MIIT Regulations [2021] No.178 ( CHN: 工业和信息化部印发《“十四五”工业绿色发展规划》, 工信部规〔2021〕178号 )	<a href="#">Newsletter (December 2021)</a>	<a href="#">Link</a>
Urban and rural sector					
22	2022-06-30	MoHURD, NDRC	Notice on Issuing the Implementation Plan for Carbon Peaking in the Field of Urban and Rural Construction, MoHURD Standard [2022] No.53 ( CHN: 住房和城乡建设部 国家发展改革委关于印发城乡建设领域碳达峰实施方案的通知, 建标〔2022〕53号 )	<a href="#">Newsletter (August 2022)</a>	<a href="#">Link</a>
23	2022-05-07	MARA, NDRC	Notice on Issuing the <i>Implementation Plan for Emission Reduction and Carbon Sequestration in Agriculture and Rural Areas</i> , MARA Science and Education Development, [2022] No.2 ( CHN: 农业农村部 国家发展改革委关于印发《农业农村减排固碳实施方案》的通知, 农科教发〔2022〕2号 )		<a href="#">Link</a>
24	2022-03-11	MoHURD	Notice on Issuing the 14th Five-Year Plan for Energy Saving of Buildings and Green Building Development, MoHURD Standard [2022] No.24 ( CHN: 住房和城乡建设部关于印发“十四五”建筑节能与绿色建筑发展规划的通知, 建标〔2022〕24号 )	<a href="#">Newsletter (April 2022)</a>	<a href="#">Link</a>
25	2022-03-01	MoHURD	<i>The 14th Five-Year Plan of Housing and Urban-Rural Construction Technology Development</i> , MoHURD [2022] No.23 ( CHN: 住建部印发《“十四五”住房和城乡建设科技发展规划》, 建标〔2022〕23号 )		<a href="#">Link</a>
26	2022-01-19	MoHURD	Notice on Issuing the 14th Five-Year Plan of Construction Industry Development, MoHURD Market [2022] No.11 ( CHN: 住房和城乡建设部关于印发“十四五”建筑业发展规划的通知, 建市〔2022〕11号 )		<a href="#">Link</a>
27	2021-11-12	State Council	Notice on Issuing the 14th Five-Year Plan of Promoting the Modernization of Agriculture and Rural Areas, State Council Development [2021] No.25 ( CHN: 国务院关于印发“十四五”推进农业农村现代化规划的通知, 国发〔2021〕25号 )		<a href="#">Link</a>
28	2021-10-21	CPC, State Council	<i>Opinions on Promoting Green Development of Urban and Rural Construction</i> ( CHN: 中共中央办公厅 国务院办公厅印发《关于推动城乡建设绿色发展的意见》 )		<a href="#">Link</a>
Transport sector					
29	2022-04-18	MoT, NRA, CAA, SPB	<i>Opinions on Implementing the Working Guidance for Carbon Dioxide Peaking And Carbon Neutrality In Full And Faithful Implementation of The New Development Philosophy</i> , MoT Planning and Development [2022] No.56 ( CHN: 交通运输部 国家铁路局 中国民用航空局 国家邮政局贯彻落实《中共中央 国务院关于完整准确全面贯彻新发展理念做好碳达峰碳中和工作的意见》的实施意见, 交规划发〔2022〕56号 )		<a href="#">Link</a>
30	2021-12-09	State Council	Notice on Issuing the Comprehensive Modern Transportation System Development Plan of 14th Five Year Plan, State Council Development [2021] No.27 ( CHN: 国务院关于印发“十四五”现代综合交通运输体系发展规划的通知, 国发〔2021〕27号 )		<a href="#">Link</a>
31	2021-10-29	MoT	Notice on Issuing the <i>14th Five-Year Plan of Green Transportation Development</i> , MoT Planning and Development [2021] No.104 ( CHN: 交通运输部关于印发《绿色交通“十四五”发展规划》的通知, 交规划发〔2021〕104号 )		<a href="#">Link</a>
Circular economy					
32	2022-01-27	MIIT, NDRC, MoST, MoF, MNR, MEE, MoC, STA	Notice on Issuing the Implementation Plan for Accelerating the Comprehensive Utilization of Industrial Resources, MIIT Joint Energy Saving, [2022] No.9 ( CHN: 工业和信息化部等八部门关于印发加快推动工业资源综合利用实施方案的通知, 工信部联节〔2022〕9号 )		<a href="#">Link</a>



33	2021-07-01	NDRC	Notice on Issuing the 14th Five-Year Plan of Circular Economy Development, NDRC Environmental Data [2021] No.969 ( CHN: 国家发展改革委关于印发“十四五”循环经济发展规划的通知, 发改环资〔2021〕969号 )		<a href="#">Link</a>
Technological innovation					
34	2022-06-24	MoST, NDRC, MIIT, MEE, MoHURD, MoT, CAS, CAE, NEA	Notice on Issuing the <i>Implementation Plan for Science and Technology to Support Carbon Peaking and Carbon Neutrality (2022-2030)</i> , MoST Development and Society [2022] No.157 ( CHN: 科技部等九部门关于印发《科技支撑碳达峰碳中和实施方案（2022—2030年）》的通知, 国科发社〔2022〕157号 )		<a href="#">Link</a>
35	2021-11-29	NEA, MoST	Notice on Issuing the <i>14th Five-Year Plan for Scientific and Technological Innovation in the Energy Sector</i> , NEA Development and Technology [2021] No.58 ( CHN: 国家能源局 科技部关于印发《“十四五”能源领域科技创新规划》的通知, 国能发科技〔2021〕58号 )		<a href="#">Link</a>
Carbon sequestration					
36	2022-02-21	MNR	Accounting Method for the Economic Value of Ocean Carbon Sinks ( CHN: 自然资源部发布《海洋碳汇经济价值核算方法》 )		<a href="#">Link</a>
37	2021-12-31	SAMR, SA	Guidelines for Validation and Verification of Forestry Carbon Sink Projects (GB/T 41198-2021) ( CHN: 国家市场监督管理总局、中国国家标准化管理委员会发布《林业碳汇项目审定和核证指南》 (GB/T 41198-2021) )		<a href="#">Link</a>
Capacity building					
38	2022-04-19	MoE	Notice on Issuing the <i>Work Plan for Strengthening the Construction of the Professionals Training System of Carbon Peaking and Carbon Neutrality for Higher Education</i> , MoE Higher Education Letter [2022] No.3 ( CHN: 教育部关于印发《加强碳达峰碳中和高等教育人才培养体系建设工作方案》的通知, 教高函〔2022〕3号 )		<a href="#">Link</a>
Supporting documents					
39	2022-06-01	CBIRC	Notice on Issuing the Green Finance Guidelines for the Banking and Insurance Industry, CBIRC Development [2022] No.15 ( CHN: 中国银保监会关于印发银行业保险业绿色金融指引的通知, 银保监发〔2022〕15号 )		<a href="#">Link</a>
40	2022-05-31	STA	Guidelines for Preferential Tax and Fee Policies to Support Green Development ( CHN: 国家税务总局印发《支持绿色发展税费优惠政策指引》 )		<a href="#">Link</a>
41	2022-05-25	MoF	Notice on Issuing the <i>Opinions on Financial Support for Carbon Peaking and Carbon Neutrality</i> , MoF Environment [2022] No.53 ( CHN: 财政部关于印发《财政支持做好碳达峰碳中和工作的意见》的通知, 财资环〔2022〕53号 )	<a href="#">Newsletter (June 2022)</a>	<a href="#">Link</a>
42	2022-03-10	MEE	Notice on the Key Work of Enterprise Greenhouse Gas Emission Reporting Management in 2022 ( CHN: 生态环境部办公厅《关于做好2022年企业温室气体排放报告管理相关重点工作的通知》 )		<a href="#">Link</a>
43	2021-11-27	SASAC	Notice on Issuing the <i>Guiding Opinions on Promoting the High-Quality Development and Achieving Carbon Peaking and Carbon Neutrality of Central State-owned Enterprises</i> , SASAC Development and Technology Innovation [2021] No. 93 ( CHN: 国资委关于印发《关于推进中央企业高质量发展做好碳达峰碳中和工作的指导意见》的通知, 国资发科创〔2021〕93号 )	<a href="#">Newsletter (January 2022)</a>	<a href="#">Link</a>

## Abbreviations

CAA	Civil Aviation Administration	中国民用航空局
CAE	Chinese Academy of Engineering	中国工程院
CAS	Chinese Academy of Sciences	中国科学院
CBIRC	China Banking and Insurance Regulatory Commission	中国银行保险监督管理委员会
CMA	China Meteorological Administration	国家气象局
CPC	Communist Party of China	中共中央
MARA	Ministry of Agriculture and Rural Affairs	农业农村部
MEE	Ministry of Ecology and Environment	生态环境部
MEM	Ministry of Emergency Management	应急管理部
MIIT	Ministry of Industry and Information Technology	工业和信息化部
MNR	Ministry of Natural Resources	自然资源部
MoC	Ministry of Commerce	商务部
MoE	Ministry of Education	教育部
MoF	Ministry of Finance	财政部
MoHRSS	Ministry of Human Resources and Social Security	人力资源和社会保障部
MoHURD	Ministry of Housing and Urban-Rural Development	住房和城乡建设部
MoST	Ministry of Science and Technology	科学技术部
MoT	Ministry of Transport	交通运输部
MWR	Ministry of Water Resources	水利部
NATCM	National Administration of Traditional Chinese Medicine	国家中医药管理局
NDRC	National Development and Reform Commission	国家发展和改革委员会
NEA	National Energy Administration	国家能源局
NHC	National Health Commission	国家卫生健康委员会
NHSA	National Healthcare Security Administration	国家医疗保障局
NMPA	National Medical Products Administration	国家药品监督管理局
NRA	National Railway Administration	国家铁路局
SA	Standardization Administration	国家标准化管理委员会
SAMR	State Administration for Market Regulation	国家市场监督管理总局
SASAC	State-owned Assets Supervision and Administration Commission of the State Council	国务院国资委
SFGA	State Forestry and Grassland Administration	国家林业和草原局
SPB	State Post Bureau	国家邮政局
STA	State Taxation Administration	国家税务总局