

China Energy Policy Newsletter: September 2018

1. China energy transition updates

MEE is taking the lead of climate change action

As one of the seven new ministries established after the ministerial reform in March 2018, the Ministry of Ecology and Environment (MEE) became the principal ministry in charge of climate change policy in China. The Three-determination Plan of the new ministry was issued in August. MEE will take over several mandates from the National Development and Reform Committee (NDRC) regarding climate change regulation. Although the plan makes no change in either carbon markets or overall ministry-level mandates on climate change regulation, the duties and functions of the former Climate Change Department is split up among several different departments.

Mandates on Climate Change Regulation of MEE by departments ¹

| Climate Change Department | Ecological Environment Monitoring Department | International Cooperation Department |
|--|--|--|
| <ul style="list-style-type: none"> • Analyze the overall impact of climate change on the social economical development • Implement and coordinate affairs related to compliance of the United Nations Framework Convention on Climate Change (UNFCCC) • Implement the Clean Development Mechanism • Carry out the specific works of National Leading Group on climate change | <ul style="list-style-type: none"> • Undertake the monitoring of GHG emission and emission abatement | <ul style="list-style-type: none"> • Lead and organize the participation in the negotiation of relevant international conventions |

The merging of environment regulation from former Ministry of Environment (MEP) and climate change regulation from NDRC presents both challenges and opportunities.²

- Building national carbon market: The restructuring takes a step towards integration of regulatory power, but it may require further institutional changes to build a national carbon market. The duty of collection and verification of local emission was switched from local DRCs to local environmental administrative departments. Reporting and national emissions inventories will also take longer. Coordination between MEE and local DRCs will determine how soon we can expect national carbon market, and as experts expect provincial pilot market will continue operating in place for 2-3 years while a national market evolves.
- Coordination with energy planning and socio-eco development: The removal of climate from NDRC may suggest that energy planning will be less coordinated with carbon and emissions policy than in the past. However, experts have noted that this depends not only on strict bureaucratic reporting lines, but also on the guidance and direction of top national leaders, who generally remain committed to strong climate action.
- Enhanced monitoring and inventories: Through the merge, MEE gains the mandate of monitoring GHG emission. Given that the former MEP already had air emissions monitoring capabilities, this may facilitate implementation of GHG monitoring.
- International negotiations: The high-level negotiating staff for international climate talks will likely

¹ Wang Shu, "Perspective on the New Role of MEE Regarding Climate Change Policy," Networking Meeting – China's New Environmental Governance and its Impacts on Climate Policies and Markets, 30 August 2018.

² Chen Zexiu, "生态环境部"三定"方案现身 行政编制增五成," finance.jrj.com.cn, 21 August 2018, accessed at <http://finance.jrj.com.cn/2018/08/21052224978061.shtml>

remain unchanged, as top-level staff were transferred over.

- Carbon law: Some environmental observers were disappointed that China has not yet established a law regulating carbon as a pollutant. Now that climate matters are under MEE, and each main department under MEE has a corresponding law or draft law—except carbon—there is a possibility this could lead to a new law covering this aspect. However, experts believe this may not be a priority given the other more immediate and practical matters that need to be addressed with carbon markets and enforcement.

Solar PV outlook for the second half of 2018

New Energy and Renewable Energy Department of the National Energy Administration (NEA) has provided guidance on solar PV sector policy for the second half year of 2018: While noting that China's total installed capacity has reached 150 GW—already beyond the national target set for 2020—NEA reaffirms that China will continue supporting solar PV deployment, but the government will focus on accelerating price parity of solar compared to coal power. The main PV-supporting programs of NEA currently are the Top-runner program, PV for poverty alleviation, and distributed PV plants.³

Several organizations have predicted that second half of 2018 will see a large decline in newly installed capacity of solar PV due to the 531 policy, which slashed the quota for the amount of PV that could receive feed-in tariff subsidies. While the policy should reduce installations, it will also accelerate PV's price decline.⁴ According to the press release from a Major National Social Science Foundation Project regarding energy fiscal policy, large-scale wind farms and PV power plants will still find it difficult to achieve price parity in China by 2020, which is one of the goals in the 13th Five-Year Plan for Renewable Energy.⁵

The side-effects of the 531 policy may significantly impact both domestic and global PV markets. In January 2018, U.S. President Trump announced a 30% levy on all imported solar panels, hampering the expansion of China's PV market in the U.S. The 531 policy afterwards, which cut the PV subsidy, implicitly pushes manufacturers to explore the new overseas markets to offset rising tariffs.⁶ Nevertheless, small- and middle-scale manufacturers with weak balance sheets probably cannot survive a period of industry overcapacity, and could face closure.⁷

Regarding the question of when solar and wind will achieve price parity, the GIZ Energy Transition team notes that this concept is inherently hard to pin down, since the price competitiveness of wind and solar at any given location depends on local wind and solar resources, the level of indirect subsidies for fossil energy (such as low prices for external costs like air emissions and water consumption), the design of the market (China presently lacks spot markets, outside of certain pilot provinces), and whether the grid layout can support real-time balancing of renewable energy over large regions.

The projections of newly installed solar PV capacity before and after the 531 policy⁸

| Organizations | The projection of China's incremental PV installed capacity in 2018 (GW) | | | Shares in incremental PV installed capacity in global | | |
|-------------------|--|----------------------|-------------|---|----------------------|------------|
| | The end of 2017 | After the 531 Policy | Differences | The end of 2017 | After the 531 Policy | Difference |
| SolarPower Europe | \ | 39 | \ | \ | 38.20% | \ |
| GTM Research | 48 | 28.8 | 20 | 46% | 28% | 18% |
| IHS | 53-60 | 38 | 15-22 | 47-53% | 36% | 11-17% |
| Energy Trend | 46-7 | 29-35 | 17-7-11.7 | 44% | 29-35% | 9-15% |

³ “2018 年光伏行业上半年发展回顾与下半年形势展望”, China Photovoltaic Industry Association, 26 July 2018, accessed at <http://www.china-epc.org/zixun/2018-07-26/33721.html>.

⁴ “2018 年光伏行业上半年发展回顾与下半年形势展望”, China Photovoltaic Industry Association, 26 July 2018, accessed at <http://www.china-epc.org/zixun/2018-07-26/33721.html>.

⁵ “研究报告：风电光伏评价上网面临严峻挑战！”, China Energy News, 22 August 2018, accessed at <https://baijiahao.baidu.com/s?id=1609458540985442085&wfr=spider&for=pc>; “国家发展改革委关于印发《可再生能源发展“十三五”规划》的通知”, NDRC, 10 December, 2018, accessed at http://www.ndrc.gov.cn/zcfb/zcfbtz/201612/t20161216_830264.html.

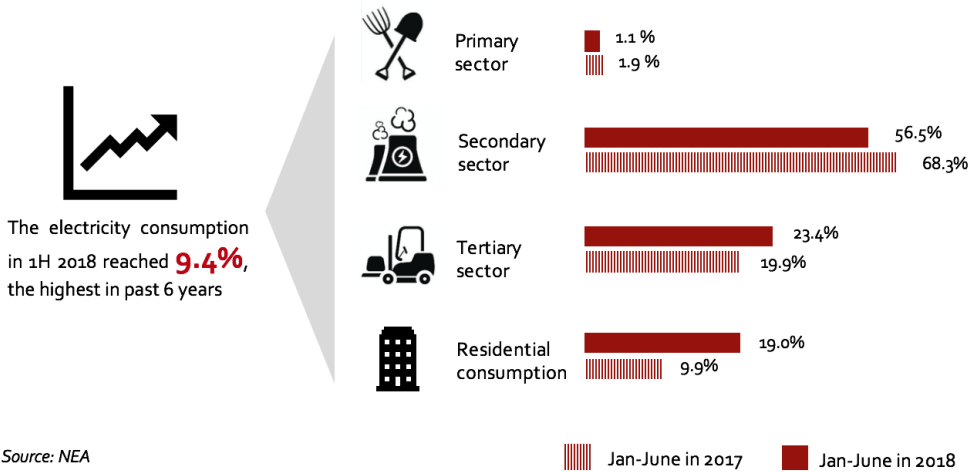
⁶ “China's solar subsidy cuts impact of Trump tariff”, Steelguru, 03 Sep 2018, accessed at <https://steelguru.com/power/china-s-solar-subsidy-cuts-impact-of-trump-tariffs/519506>.

⁷ “China solar manufacturers raise first-half output despite capacity cap: association”, Reuters, 26 July 2018, accessed at <https://www.reuters.com/article/us-china-solar/china-solar-manufacturers-raise-first-half-output-despite-capacity-cap-association-idUSKBN1KGoJ9>.

⁸ “2018 年光伏行业上半年发展回顾与下半年形势展望”, China Photovoltaic Industry Association, 26 July 2018, accessed at <http://www.china-epc.org/zixun/2018-07-26/33721.html>.

2. Infographic

Sectors contributing to electricity consumption increase in 1H 2018



Electrification

In China's 13th Five-Year Plan, the NRDC and NEA set a target for the electrification rate of the whole energy system should reach 27%, equivalent to 450 TWh electricity replacing energy directly from fossil fuel.



Residential consumption

According to the NEA research institute, the year-on-year increase rate of residential electricity consumption in 1H 2018 reached 13.2%, due to rising per capita income, as well as increased adoption of electric appliances.



Urbanization

China has an urbanization rate below 60%. According to Japanese and Korean experiences, every percentage point increase in urbanization at this stage will lift residential electricity consumption by 9.2-12.9%.



Emerging computing technologies

China is currently experiencing rapid growth of emerging computing technologies, including Internet commerce and big data. According to CICC, this factor will contribute 0.9-1.1 percentage points of total electricity consumption in 2018, and 0.8-1.2 points in 2019.



Cooling (unusually hot weather)

According to the China Meteorological Administration, in May 2018, nine provinces had unusually high temperatures and saw increases in electricity consumption above national average level (11.4%). Four provinces had increases even higher than 20%.



Bitcoin mining

According to data from Bitcoinity, China's bitcoin mining accounts for 58% of the global total. CICC has reported that the electricity used for bitcoin mining in 2018 is expected to be 39.8 TWh, contributing 0.4 percentage points of electricity consumption growth. This includes 16.6 TWh electricity in 1H 2018, contributing 0.7 percentage points.

Source: China International Capital Corporation

NEA announces 2018 Coal power units retrofit targets

Notice of Implementing Provincial (Districts, Cities) Ultra-low-emission and Energy Saving Retrofit Tasks in 2018, NEA Power [2018] No.65

The government has ordered the retrofit of ultra-low-emissions equipment for 48.68 GW coal power units and energy saving retrofits for 53.9 GW units nationwide in 2018, and each province will receive a specific, quantitative target. Ultra-low emission is defined as the emission levels of coal power units that do not exceed 5 mg/m³ for particulates, 35 mg/m³ for sulphur dioxide and 50 mg/m³ for NO_x. These limits are 75%, 30% and 50% respectively lower than the upper limits in the Thermal Power Air Pollutant Emission Standard (GB13223-2011).⁹

2018-08-19

http://zfxgk.nea.gov.cn/auto84/201808/t20180828_3227.htm

Timeline set for assessing soil and water conservation

Notice on Carrying out Assessment and Examination on Implementation Status of National Soil and Water Conservation Planning, MWR Protection [2018] No.192

The Ministry of Water Resources (MWR) together with other six ministries will carry out the provincial assessment of the national soil and water conservation plan (2015-2020) annually from 2018, with inspections once every five years. 2020, 2025 and 2030 are the years of inspections. The assessment considers four aspects: dynamic change of soil erosion areas, the implementation of the governance project, soil erosion prevention and control in projects and soil and water conservation responsibilities to implement.

2018-08-03

http://swcc.mwr.gov.cn/ggl/201808/t20180807_3044907.htm

NEA will establish power system emergency risk plan

Notice of Emergency Capacity Building Action Plan of Power Sector (2018-2020), NEA Safety [2018] No.58

NEA has issued a plan that requires all provinces, prefectural cities and counties to make plans by 2020 for handling large-scale blackouts. This includes asking large companies to establish emergency plans, clarifying regulatory agency responsibilities, and improved rules, regulations, and standards for emergency management.

2018-07-30

http://zfxgk.nea.gov.cn/auto93/201808/t20180807_3222.htm

Public participation required for environmental impact assessments

Public Participation in Environmental Impact Assessments, MEE Order No. 4

The MEE will require public participation in environmental impact assessments (EIA) for industrial, agricultural, animal husbandry, forestry, energy, water conservancy, transportation, urban construction, tourism, and natural resource development that may cause adverse environmental impacts. MEE also stipulates that EIA reports should include public opinion. The government encourages construction units to publish EIA draft reports through new media such as WeChat and Weibo.

2018-07-16

http://www.mep.gov.cn/gkml/sthjbgw/sthjbl/201808/t20180803_447662.htm

State Council will supervise several emissions-related activities in 2018

Notice on Carrying out State Council Supervision Tasks of Year 2018, the State Council [2018] No.3

The State Council will supervise implementation of the following targets related to high emissions industries: loose coal (a highly-polluting, low-quality coal sold in rural areas) treatment and replacement, and governance plans for diesel truck emissions and ship emissions beyond national standards. The government will implement comprehensive controls in designated airsheds and marine areas, as well as full control of urban brackish water.

2018-07-05

http://www.gov.cn/zhngce/content/2018-07/06/content_5304034.htm

⁹ "Ultra-low-emission Definition," Baidu Baike, accessed at <https://baike.baidu.com/item/%E8%B6%85%E4%BD%8E%E6%8E%92%E6%94%BE/19125632?fr=aladdin>