GREENPEACE 绿色和平

China Green Recovery Watch | Q4 2020

中国绿色复苏季度观察 | 2020年第四季度

Greenpeace will quarterly sort out China's recovery data from economic, environmental, and social dimensions, exploring the parallel path of deepening high-quality economic reforms and sustainable development.

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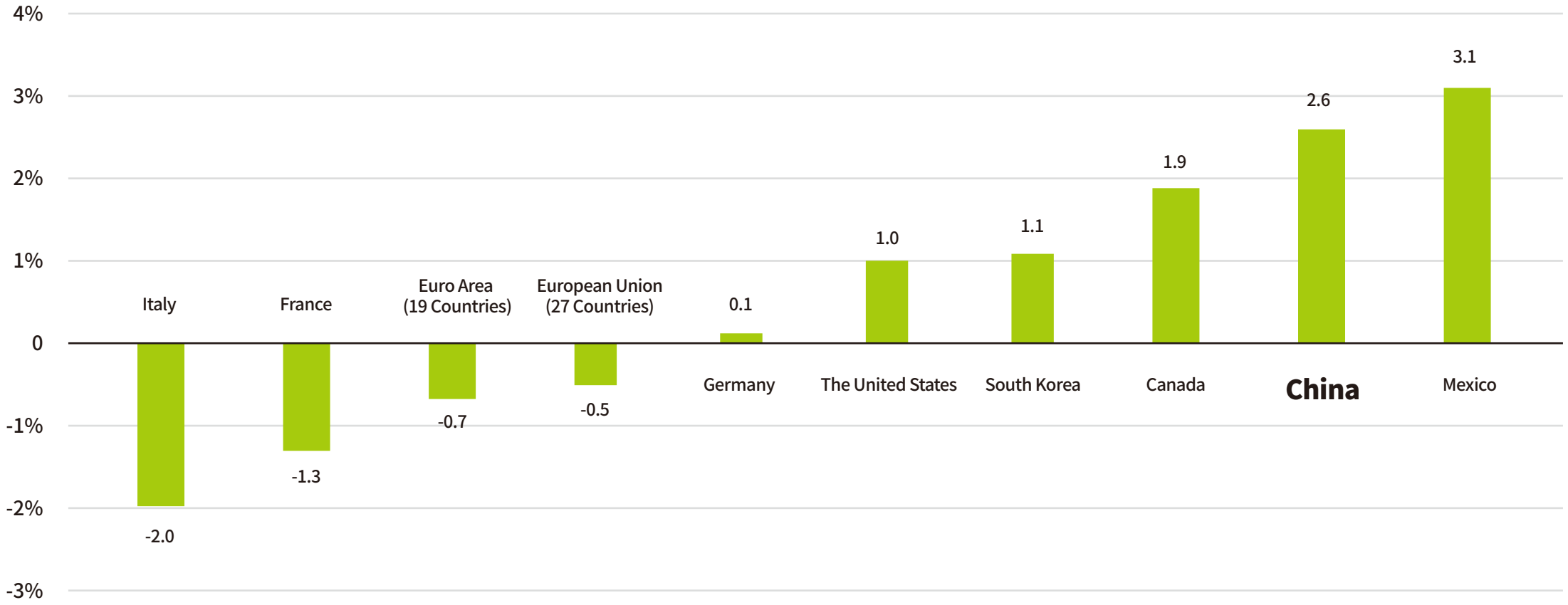
Global Recovery Overview | Gross Domestic Product

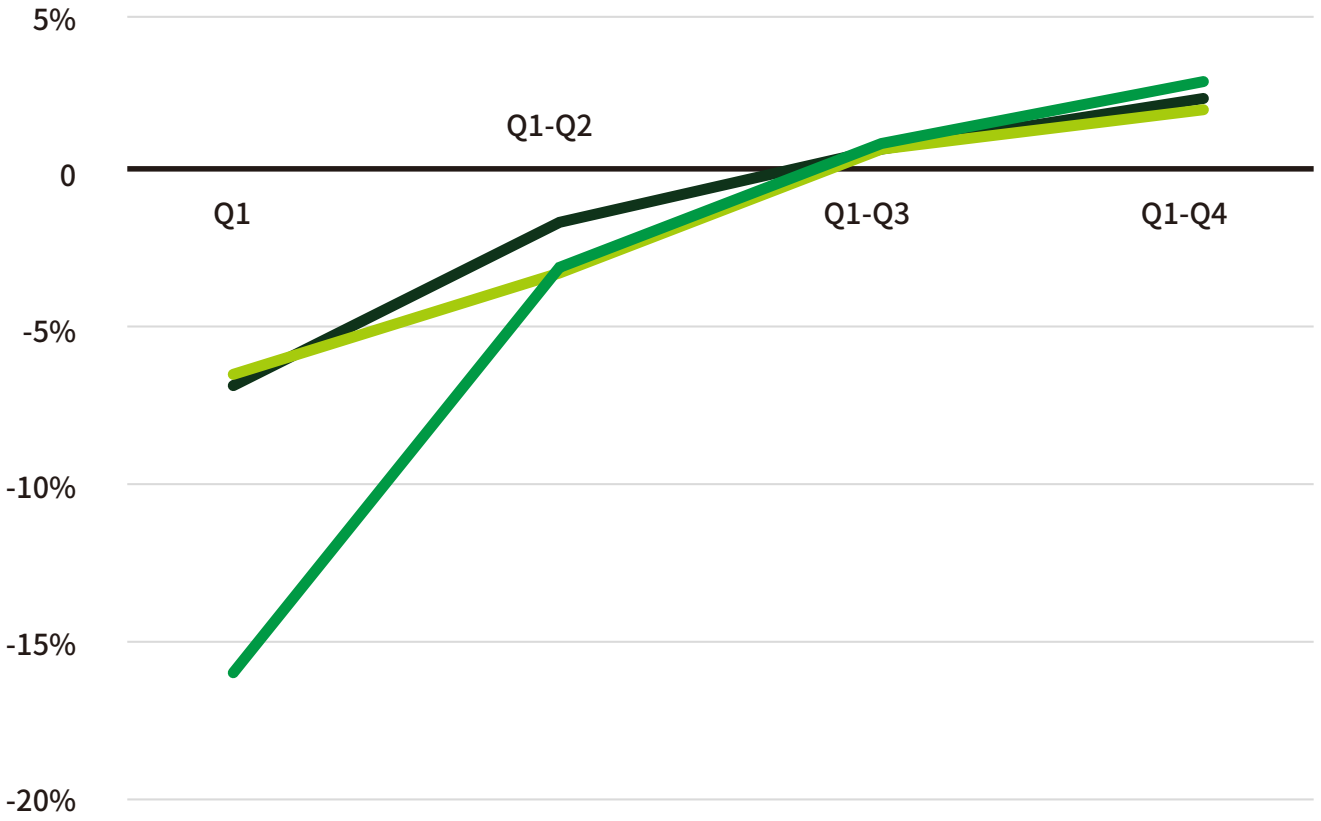
Q4. 2020 GDP of Some Major Economies, Percentage Change, Previous Period



Source: OECD

China's Recovery | Economy Overview

2020 Percentage Change, Same Period, Previous Year



	Q3-Q4. 2020 (Q-o-Q)	2020 (Y-o-Y)
Gross Domestic Product (GDP)	+11.3%	¥ 101.60 trillion +2.3%
Foreign Trade	+2.9%	¥ 32.16 trillion +1.9%
Investment in Fixed Assets	-46.8%	¥ 51.89 trillion +2.9%

Source: National Bureau of Statistics of the People's Republic of China

China's Recovery | Central Government Expenditure

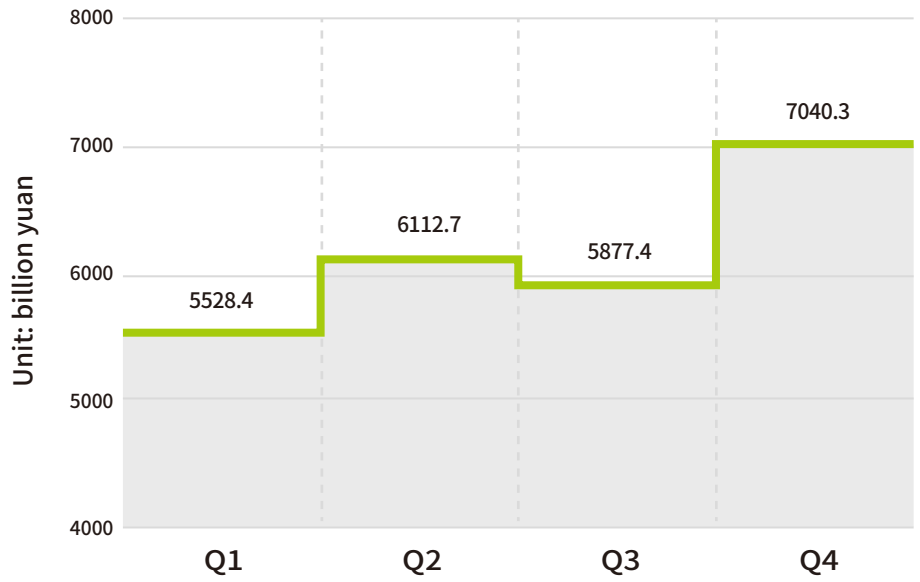
- General Public Expenditure

Q3-Q4. 2020 (Q-o-Q)

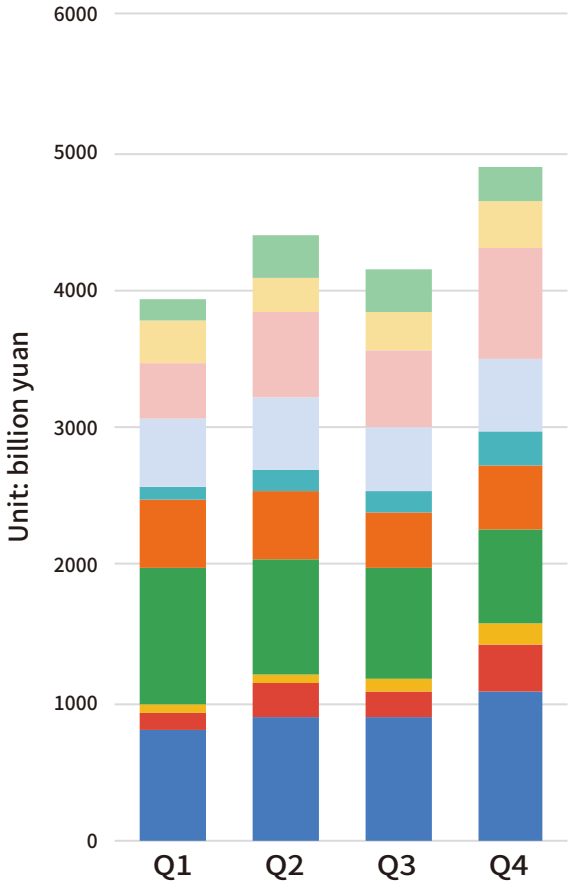
19.8%

2020 (Y-o-Y)

2.8%



- Main Categories



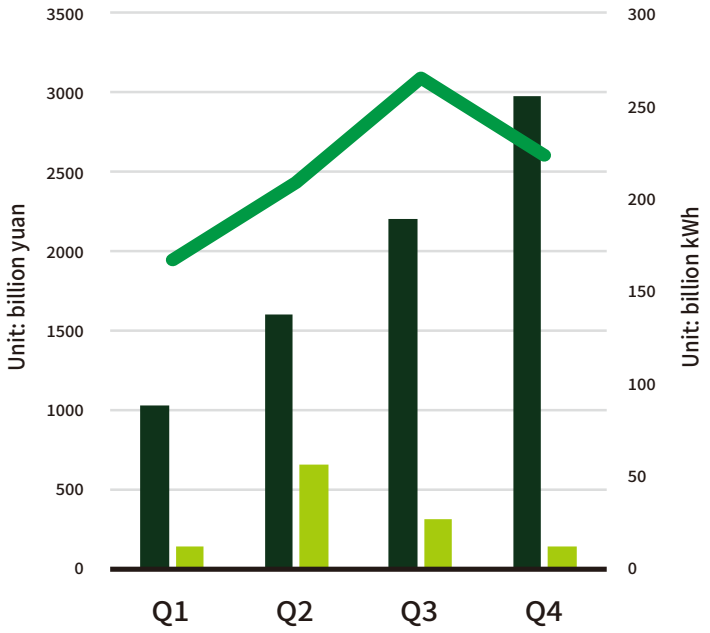
	Q3-Q4. 2020 (Q-o-Q)	2020 (Y-o-Y)
Education	22.3%	4.4%
Science and Technology	74.3%	-4.9%
Culture, Tourism, Sports, and Media	67.8%	3.6%
Social Security and Employment	-15.1%	10.9%
Healthcare	13.7%	15.2%
Energy Conservation and Environmental Protection	68.2%	-14.1%
Urban & Rural Community Affairs	14.2%	-20.0%
Agriculture, Forestry & Water Conservancy	39.6%	4.4%
Transportation	21.3%	3.2%
National Debt	-12.9%	16.4%

Source: Ministry of Finance of the People's Republic of China

China's Recovery | Economic Structure

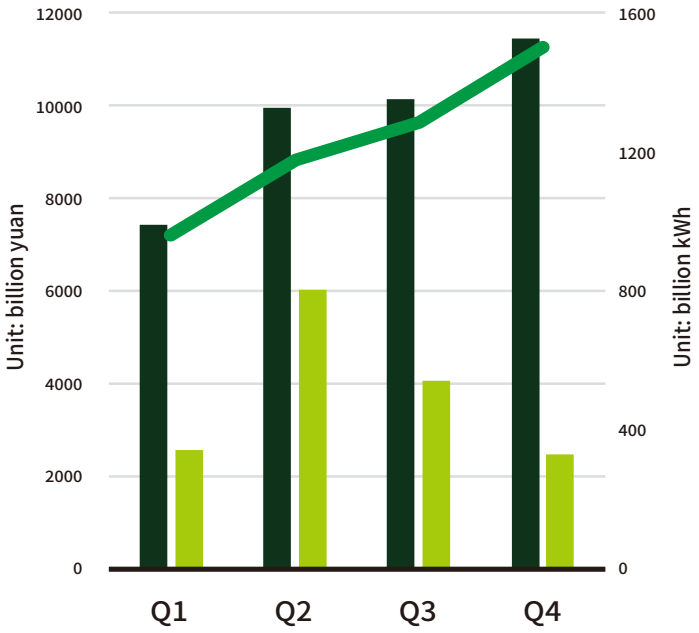
• Primary Industry

	Q3-Q4. 2020 (Q-o-Q)	2020 (Y-o-Y)
GDP	↑ 34.3%	↑ 3.0%
Investment in Fixed Assets	↓ -50.9%	↑ 19.5%
Electricity Consumption	↓ -15.9%	↑ 10.2%



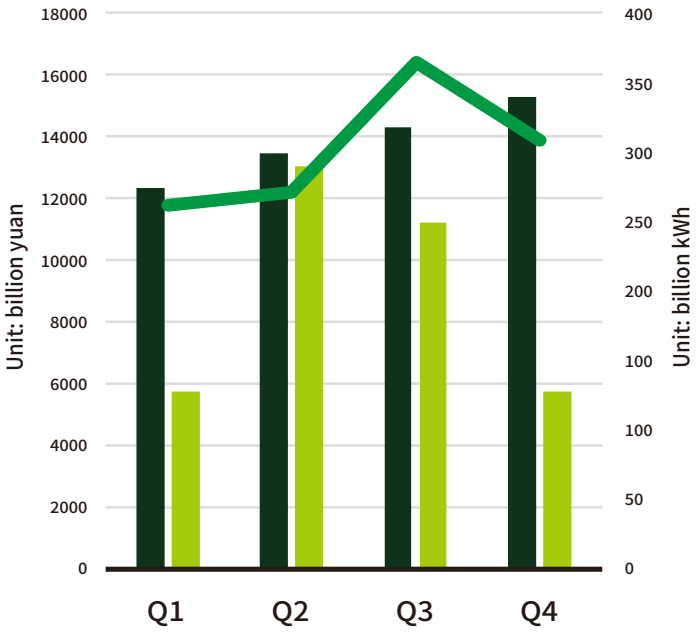
• Secondary Industry

	Q3-Q4. 2020 (Q-o-Q)	2020 (Y-o-Y)
GDP	↑ 12.2%	↑ 2.6%
Investment in Fixed Assets	↓ -39.9%	↑ 0.1%
Electricity Consumption	↑ 12.9%	↑ 2.5%



• Tertiary Industry

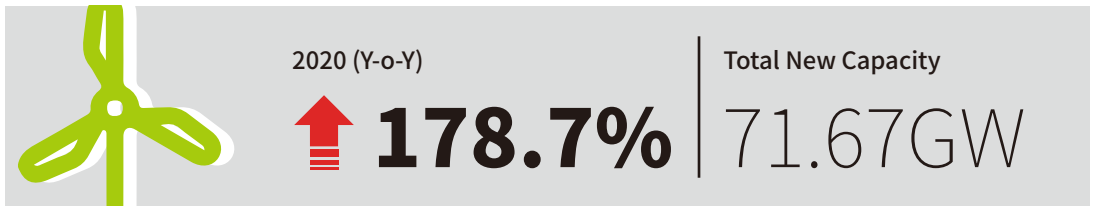
	Q3-Q4. 2020 (Q-o-Q)	2020 (Y-o-Y)
GDP	↑ 7.1%	↑ 2.1%
Investment in Fixed Assets	↓ -49.2%	↑ 3.6%
Electricity Consumption	↓ -14.9%	↑ 1.9%

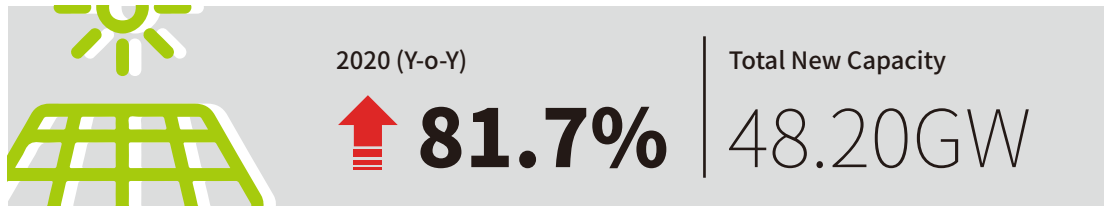


Source: National Bureau of Statistics; National Energy Administration of the People's Republic of China

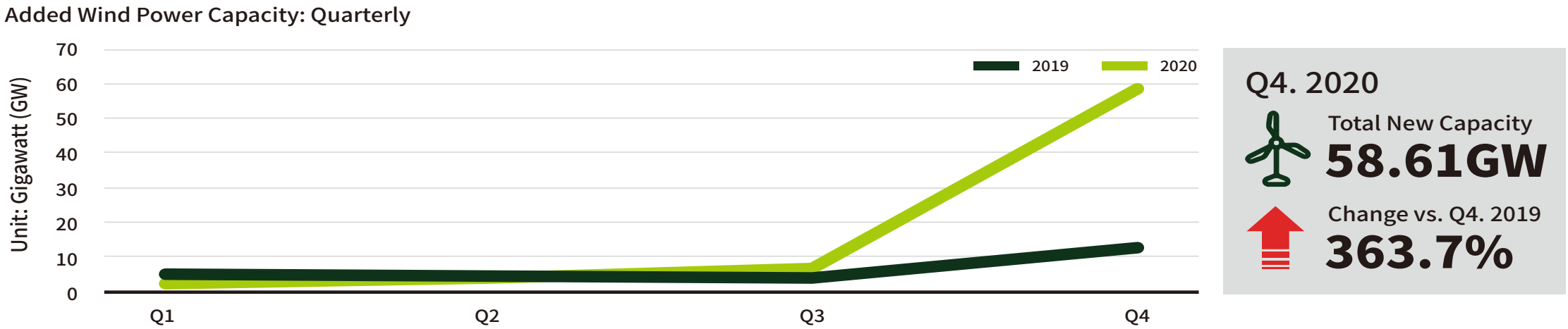
China's Recovery | Power Sector: Renewable Capacity

- In 2020, the installed capacity of wind and solar power had increased significantly compared to 2019.





- The added wind power capacity in 2020 has exceeded the sum of that in past 3 years. Also, the performance in the fourth quarter of 2020 was impressive—**3.5 times higher** than the sum of added capacity in the first three quarters of 2020.



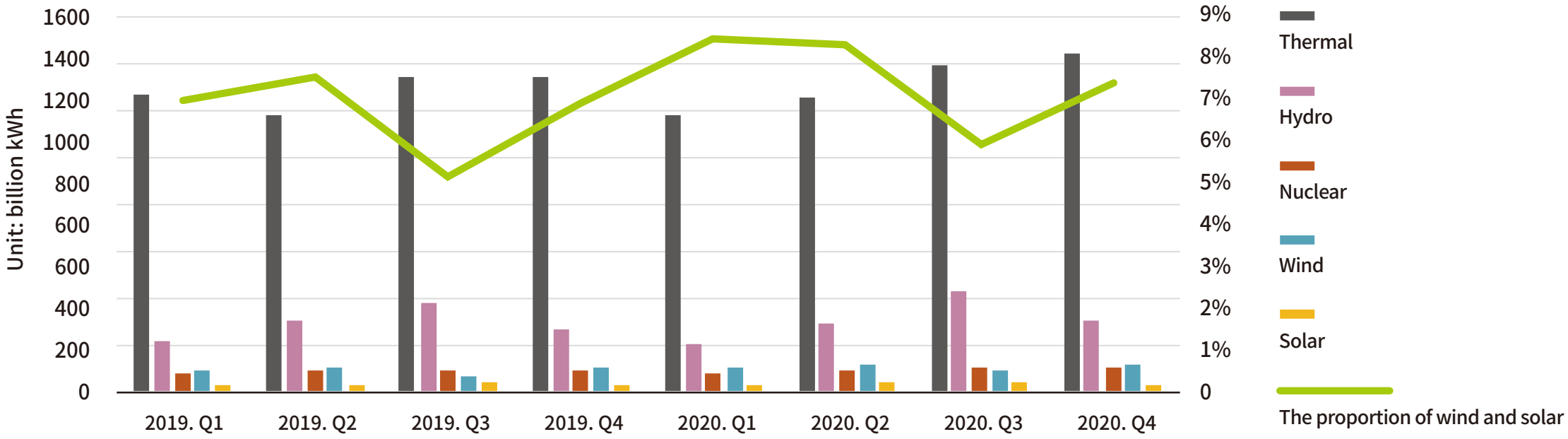
Source: National Energy Administration of the People's Republic of China

China's Recovery | Power Sector: Electricity Generation

- In 2020, the proportion of wind and solar-generated electricity had increased compared to 2019, which shows an improvement in the energy structure.

	Q4. 2020 vs. Q4. 2019	2020 (Y-o-Y)
Wind	↑ 16.2%	↑ 15.9%
Solar	↑ 20.5%	↑ 21.2%

2019 - 2020 Electricity Generation (by sources)

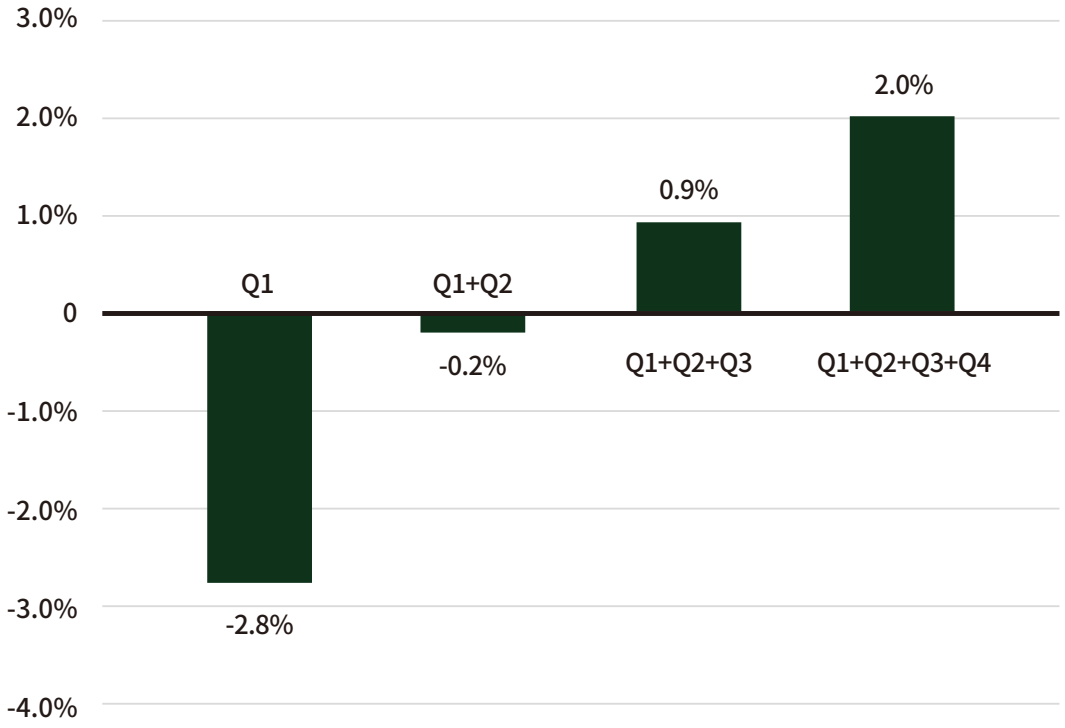


Source: National Bureau of Statistics of the People's Republic of China

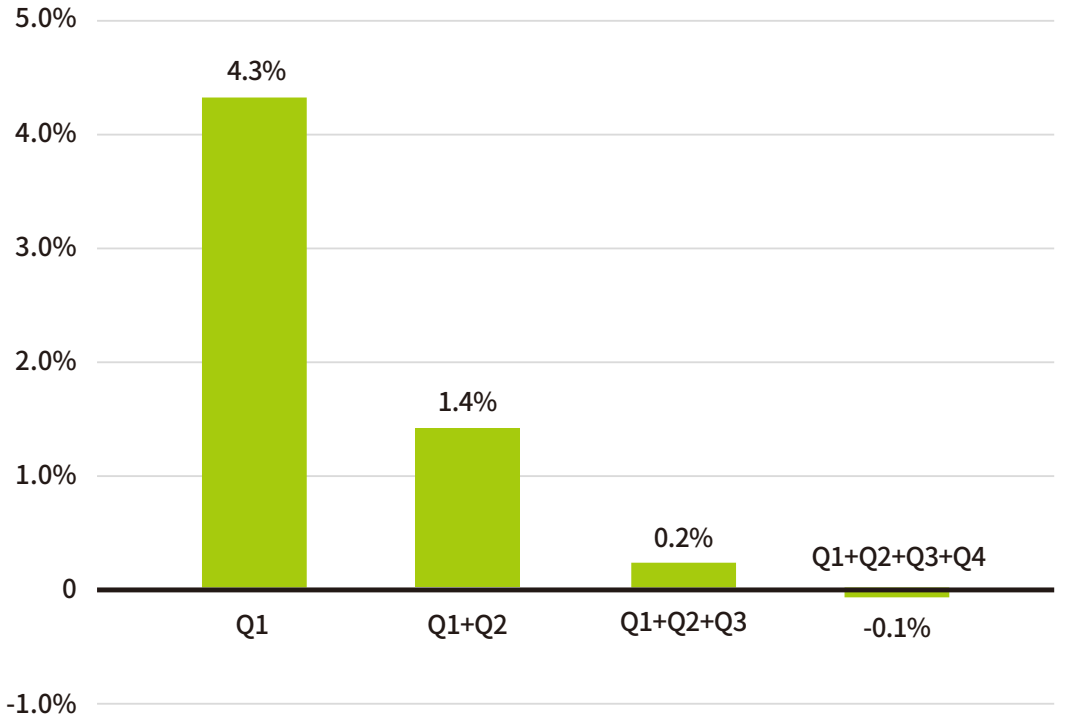
China's Recovery | Energy Consumption

- For energy consumption, the fourth quarter maintained the upward trend of the first three quarters. Meanwhile, the energy intensity continued to decline, reversing the positive Y-o-Y growth rate in the first three quarters.

Total Energy Consumption, Percentage Change (Y-o-Y)



Energy Intensity: Energy Consumption Per Unit of GDP, Percentage Change (Y-o-Y)

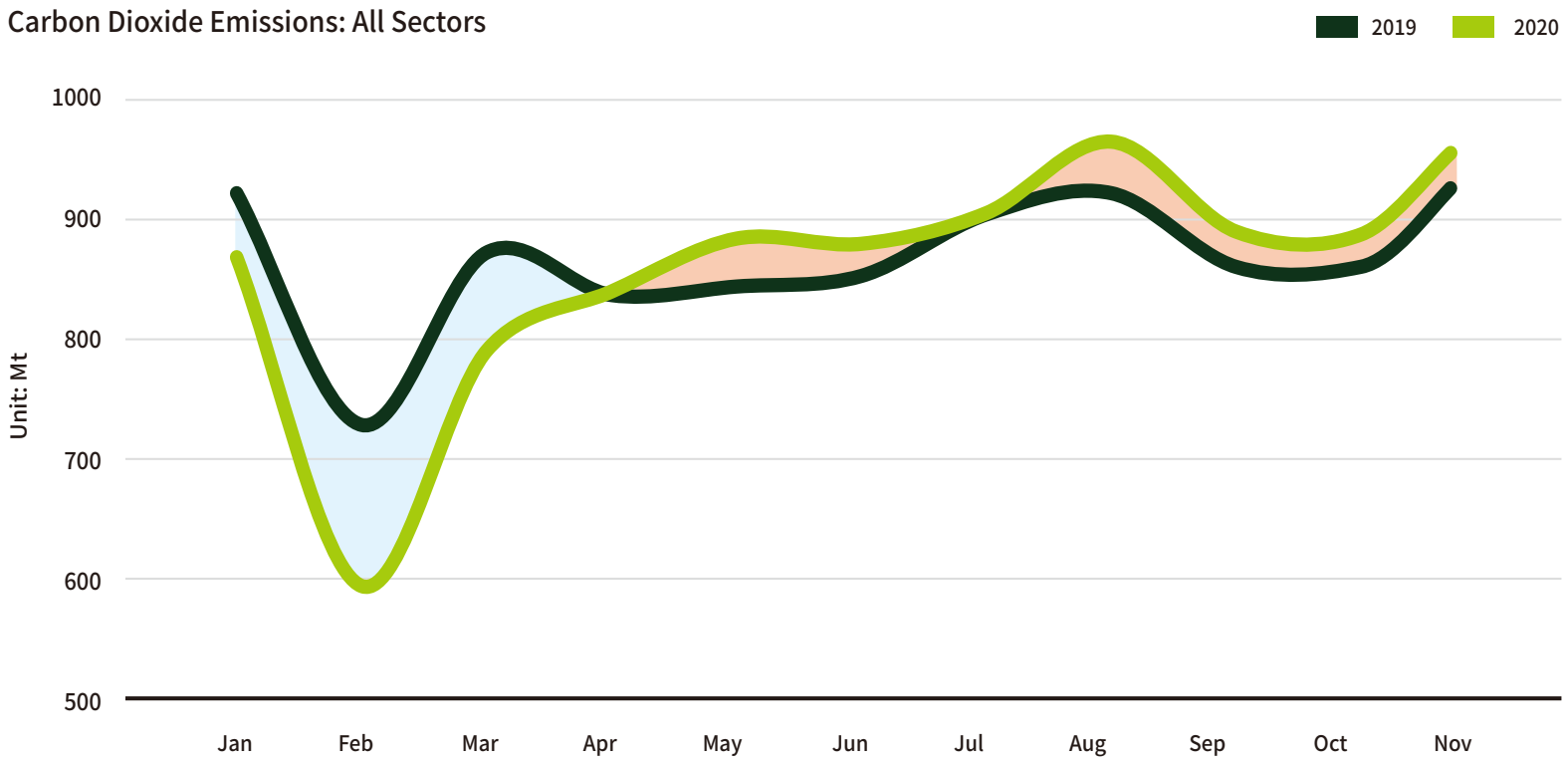


Source: National Bureau of Statistics of the People's Republic of China

China's Recovery | Carbon Dioxide Emissions

- Due to the impact of COVID-19, the CO_2 emission in the first quarter of 2020 significantly dropped. However, starting from the second quarter, the overall emission level has remained above 2019.

	Q4. 2020 vs. Q4. 2019	2020 (Y-o-Y)
All Sectors	5.9%	0.5%
Domestic Aviation	8.1%	-17.5%
Ground Transport	-4.8%	-12.5%
Industry	8.9%	2.9%
Power	5.4%	1.2%
Residential	4.8%	0.5%



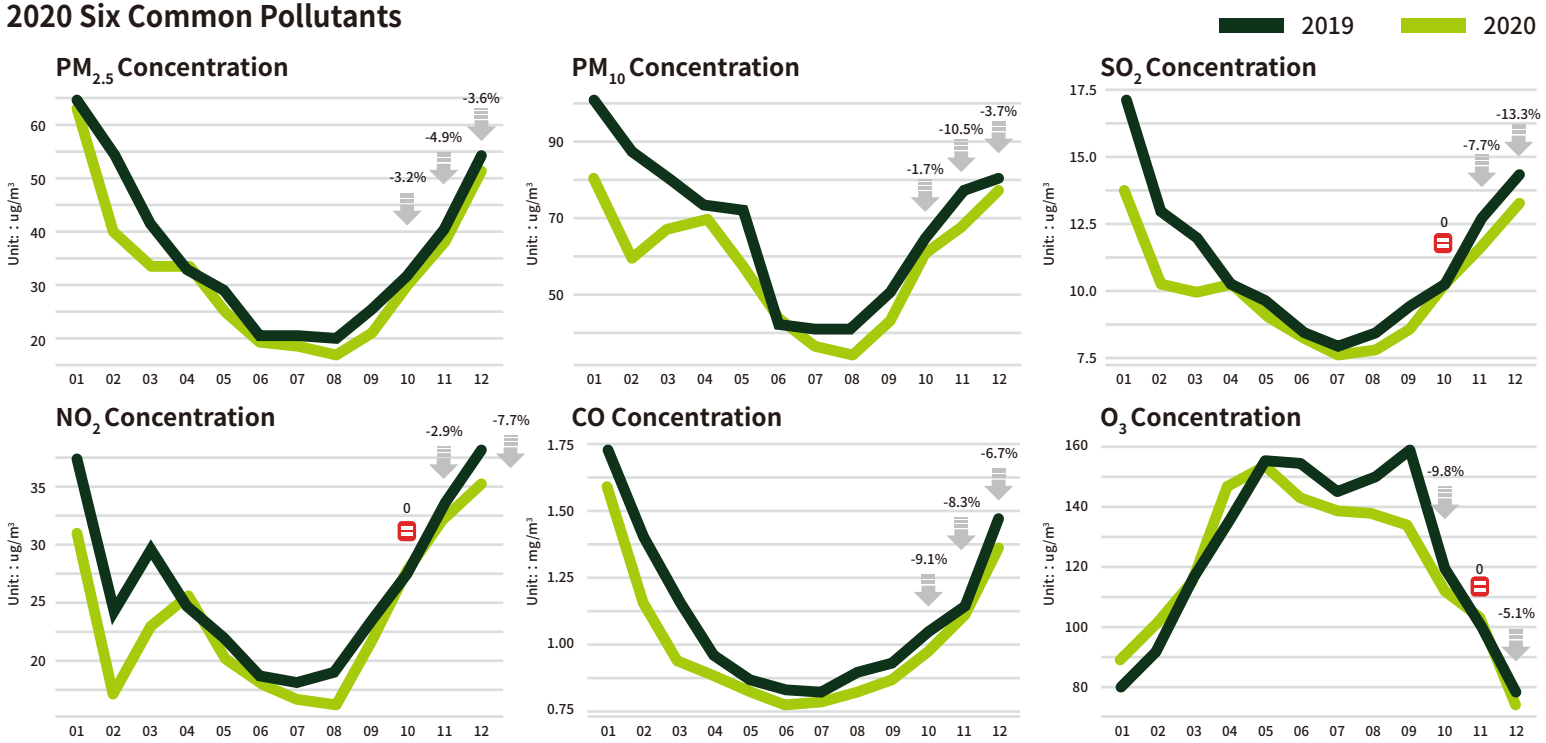
Source: Carbon Monitor

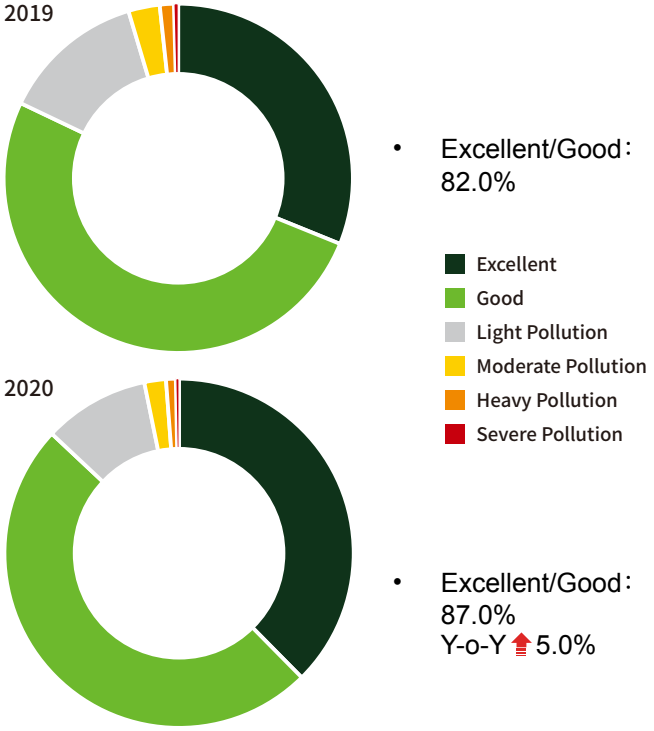
China's Recovery | Air Quality

- Compared to 2019, air quality in 2020 has improved.

Pollutants	PM2.5	PM10	SO2	NO2	CO	O3
2020 (Y-o-Y)	↓ -8.3%	↓ -11.1%	↓ -9.1%	↓ -11.1%	↓ -7.1%	↓ -6.8%

2020 Six Common Pollutants





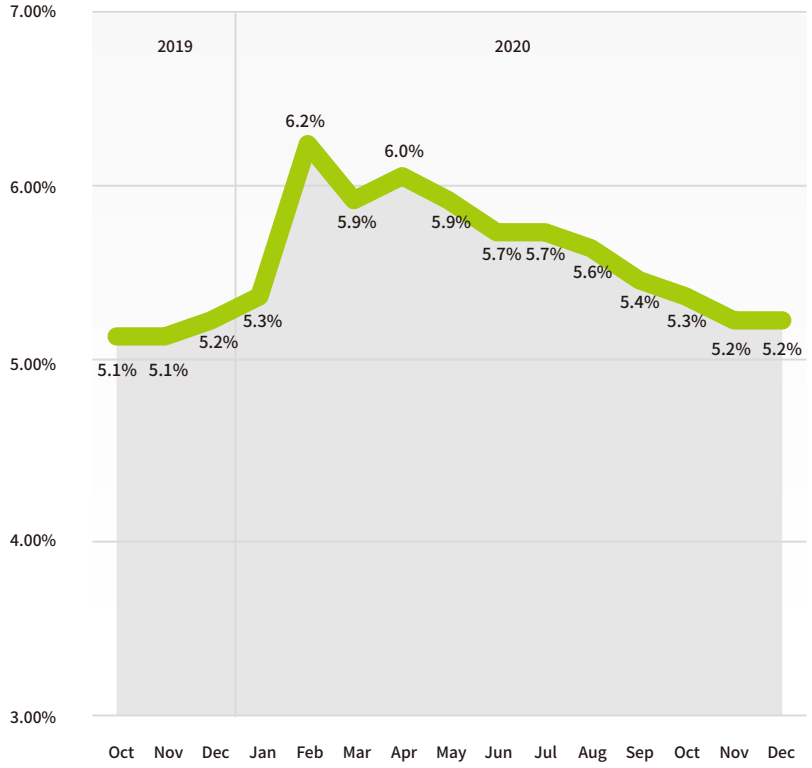
- Excellent/Good: 82.0%
- Excellent/Good: 87.0%
  Y-o-Y ↑ 5.0%

Source: Ministry of Ecology and Environment of the People's Republic of China

China's Recovery | Employment

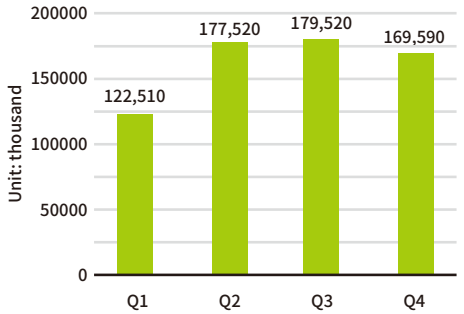
- After the peak (6.2%) in February, the unemployment rate has been gradually decreasing and then maintained at 5.2%.

National Surveyed Urban Unemployment Rate



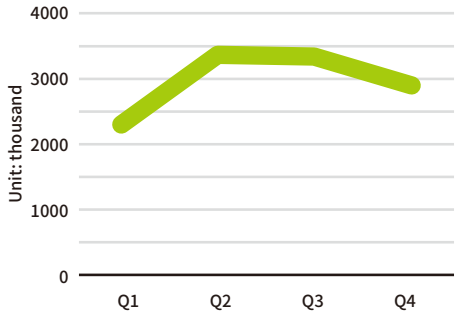
Employment Situation

Migrant Workers from Rural Areas: Quarterly Total



Q3-Q4, 2020 (Q-o-Q)
-5.53%

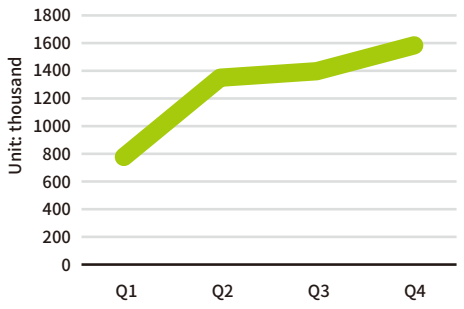
Urban Job Creation Number: Quarterly Added



Q3-Q4, 2020 (Q-o-Q)
-13.77%

2020 Annual Total
11.86 Million

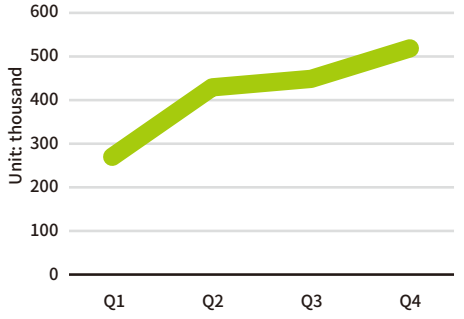
Unemployment to Reemployment Number: Quarterly Added



Q3-Q4, 2020 (Q-o-Q)
12.86%

2020 Annual Total
5.11 Million

Employment of People with Difficulties: Quarterly Added



Q3-Q4, 2020 (Q-o-Q)
15.56%

2020 Annual Total
1.67 Million

Source: National Bureau of Statistics; Ministry of Human Resources and Social Security of the People's Republic of China

Quarterly Highlight | China's Updated 2030 Climate Targets

- December 12, 2020, five years after the Paris Agreement, China's President Xi Jinping announced China's updated 2030 climate targets at the Climate Action Summit.
- Further studies are needed to prove if the 65% reduction of carbon intensity would make the peak in 2030 feasible.

Target for 2030	2015 NDC	2020 NDC	Progress as of 2019
Carbon intensity reduction (compared to 2005)	60-65%	65%以上	48.1%
Non-fossil share in primary energy mix	≈20%	≈25%	15.3%
Forest volume increase (compared to 2005)	≈4.5 billion/m^3	6 billion/m^3	5.1 billion/m^3
Wind and solar power generating capacity	N/A	Over 1,200 GW	414 GW

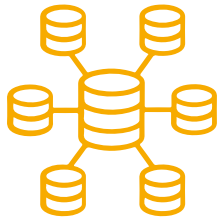
Source: Ministry of Ecology and Environment of the People's Republic of China

China's Recovery Outlook | The Development Data Center Industry

December 28, 2020, China issued the ***Guiding Opinions on Accelerating the Construction of a National Integrated Big Data Center Collaborative Innovation System***, proposing to align the big data center national hub nodes with major regional development strategies and consider energy structure, industrial layout, market development, climate and environment, etc.

On December 15, 2020, the ***White Paper on Data Center (2020)*** was officially released, explaining the new perspective, new responsibilities, industry, technology, and other aspects of data centers. Some important data (as of the end of 2019):

- The scale continues to grow:



The total rack space of data centers reached **3,150,000 rack units (U)**, with an average annual growth rate of more than **30%** over the past five years.

The number of large and ultra-large-scale data centers surpassed **250**, accounting for **2,370,000U**, over **70%**, of total rack space;

More than **180** large data centers were planned, with more than **3,000,000U** of rack space

- The level of energy efficiency continues to improve. For power efficiency:

Ultra-large-scale data centers avg. **1.46η**; large data centers avg. **1.55η**

New data centers are expected to reach avg. **1.41η**; ultra-large-scale and large data centers are expected to reach avg. **1.36η** and 1.39η, respectively

Source: The National Development and Reform Commission of the People's Republic of China; China Academy of Information and Communications Technology

China's Recovery Outlook | The Development of the New Energy Vehicle (NEV) Industry

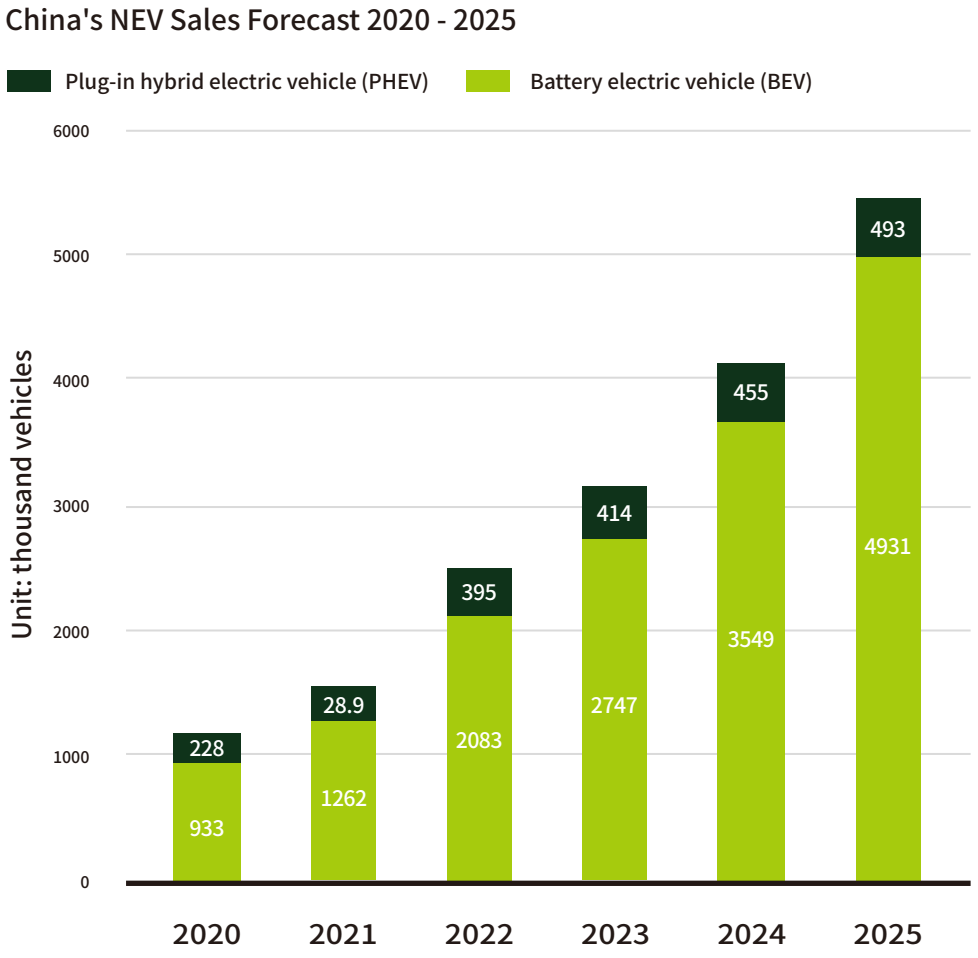
In November 2020, the General Office of the State Council of China issued the ***New Energy Vehicle Industry Development Plan (2021-2035)*** to support the new energy vehicle industry's development.

According to IDC, China's NEV market will witness robust growth in the next five years, with a compound annual growth rate (CAGR) reaching **36.1%** from 2020 to 2025.

Two of the main factors restricting the development of China's new energy vehicle market are:

- **Inadequate infrastructure (primarily in the form of public charging stations)**
- **Higher energy costs**

Therefore, it is critical to increase the application of renewable energy generated-electricity and promote the coordination of renewable energy and the NEW market development.



Source: General Office of the State Council of the People's Republic of China; IDC China

Thank You

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