



# ENERGY END-USE AND ENERGY EFFICIENCY STATISTICS IN CHINA

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# CHINA'S ENERGY END-USE AND ENERGY EFFICIENCY STATISTICS

## I Energy End-Use Statistics in China

### ➤ Two Energy End-Use Surveys by **DES**

- a. Monthly online survey on industrial enterprises which are above designated size (380 thousands enterprises, accounts for 90% of total industrial energy consumption).
- b. Quarterly online survey on non-industrial enterprises including enterprises in construction, hotel and catering services, wholesale trade and retail trade sectors (1.2 thousands enterprises).



# CHINA'S ENERGY END-USE AND ENERGY EFFICIENCY STATISTICS

## I Energy End-Use Statistics in China

- **Energy Consumption Surveys by Other Departments and Organizations**
  - a. Annual sample survey on residential energy use.
  - b. Monthly survey on electricity consumption by China Electricity Council.



# CHINA'S ENERGY END-USE AND ENERGY EFFICIENCY STATISTICS

## II Energy Efficiency Statistics in China

### ➤ Integrated Energy Efficiency Indicators

Energy Consumption per Unit GDP  
Electricity Consumption per Unit GDP

Calculated by energy  
balance data

Energy Consumption per Unit Industrial Added Value



Calculated by industrial end-use data



# CHINA'S ENERGY END-USE AND ENERGY EFFICIENCY STATISTICS

## II Energy Efficiency Statistics in China

### ➤ Energy Transformation Efficiency and Recovery

Monthly online survey on energy transformation and recovery data in more than 7 thousands industrial enterprises.

### ➤ Energy Consumption per Unit Production

Quarterly online survey on energy consumption per unit production in main energy-consuming industrial enterprises (7 thousands enterprises).



# EXPERIENCES IN DATA COLLECTION

## I A Relatively Complete Data Survey System

- Surveys on energy **intensive industrial enterprises** are comprehensive

380 thousands industrial enterprises, accounts for 90% of total industrial energy consumption

7 thousands industrial enterprises conducted the online survey on energy transformation and recovery data.

7 thousands industrial enterprises conducted the quarterly online survey on energy consumption per unit production.



# EXPERIENCES IN DATA COLLECTION

## I A Relatively Complete Data Survey System

### ➤ Comprehensive **electricity consumption** data

Monthly survey on electricity consumption by China Electricity Council, covering all sectors of society and the residential consumption.





# EXPERIENCES IN DATA COLLECTION

## II A Effective Administrative Mode

### ➤ **Unified leadership 统一领导**

To implement a unified method of system to ensure the comparability of regional data.

### ➤ **Hierarchical management 分层管理**

The provincial and municipal statistical bureaus own a special energy statistics department (Branch), county statistical offices have energy statistics posts.



# EXPERIENCES IN DATA COLLECTION

## III High Frequency of Energy Survey

### ➤ Monthly

Industrial energy consumption and processing conversion data

### ➤ Quarterly

Regional comprehensive energy consumption data

### ➤ Annual

Energy balance sheets are prepared each year based on various surveys and other industry data collected from various sectors.



# EXPERIENCES IN DATA COLLECTION

## IV A Strict Data Review Process

- The aforementioned fundamental energy data is strictly verified by DES, especially for online collected data. Taking advantages of statistical data online collection system, the data management is strengthened. The automatic and manual verification methods are both utilized to enhance the fundamental energy data quality.



# EXPERIENCES IN DATA COLLECTION

## V An Advanced Online Statistical Survey Platform

- From 2012, a survey system was built and used to provide a platform for enterprises to directly submit data online. The trace of data submission, modification, review and acceptance will be retained, to ensure the process to be legitimate.



# FUTURE CHALLENGES

## I Solve the Double Counting Problem

- Companies and their subsidiaries may be in different regions, while they both submit data to two statistical.
- How to effectively avoid a double data collection in this condition?.



# FUTURE CHALLENGES

## II Improve the Energy Efficiency Statistics

- In **residential and transportation, service sectors**, the data is not detailed enough.
- For example, energy consumption in residential sector can not be divided into space cooling, heating, lighting, cooking and appliances.