



清华大学能源环境经济研究所
INSTITUTE of ENERGY, ENVIRONMENT and ECONOMY
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Energy Data Reporting and Verification in China: Practice and Lessons

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Reporting



ENERGY PRODUCTION

Large scale industry:
organized by NBSC and
submit seasonal report

Small scale industry:
(annual income less
than 5 million RMB)
organized by NBSC and
submit seasonal report

ENERGY CIRCULATION

Coal: CCTDA organize investiga-
tion on regional coal sale and report
every season

Crude oil: the data of production
come from the monthly produc-
tion report, the purchase comes
from seasonal energy consumption
report, and the import comes from
custom import and export report

Oil products: NBSC organize
the investigation and report every
season

Natural gas: the circulation be-
tween different provinces will be
reported by the top 3 petroleum
companies

Electricity: data from State Elec-
tricity Regulatory Council

Other energy: refer to
crude oil

ENERGY CONSUMPTION

Industry: NBSC will investigate
the consumption of coal, NG, oil,
electricity, etc. and report every
season

Agriculture: NBSC organize the
investigation and submit annual
report

Building: whole investigation
should be submitted on survey year,
and extrapolated data should be
submitted on non-survey years, and
the MOHURD should be orga-
nized by MOHURD and submit
annual report

Transportation:

Rail/air/pipeline: MOR, local
railway council, CAAC, pipeline
department of the top 3 petroleum
companies will investigate the situ-
ation and submit annual report

Road/ship/port: NBSC will be in
charge of the statistics and report
every year

Residence: NBSC spot checks the
energy consumption on urban and
rural residences and reports every
year

Reporting of energy
data:

Energy production;
Energy circulation;
Energy consumption;

Reporting



❖ Energy Production

- Above “Statistical level”: Monthly reporting covering all conventional energy types;
- Below “Statistical level”: quarterly reporting of coal production and electricity generation;

❖ Energy Circulation

- Energy flows among provinces;
- COAL: Converge: all coal production and circulating enterprises; Frequency: quarterly; China Coal Transportation and Vending Association;



❖ Energy Circulation

- Crude oil: Oil wholesale and retail enterprise, monthly for production, quarterly for circulation;
- Natural Gas: 3 state-owned petroleum and natural gas companies;
- Electricity: China Electricity Enterprise Union;
- Other types: same as crude oil

Reporting



❖ Energy Consumption

- Industrial enterprises: full investigation for above “statistical level”, sample investigation for below “statistical level”, quarterly;
- Agriculture: sample investigation, annually;
- Building industry: full investigation in general investigation year, sample in other years;
- Service industry: Catering, transportation;
- Residential: urban and rural, sample investigation, quarterly;
- Buildings: Ministry of Construction and NBS;

Reporting



❖ Energy Utilization Efficiency Statistics

- Energy consumption per unit physical product or per activity value;
- 25 products, 108 energy intensity indicators, enterprise with energy consumption higher than 25 thousand tce;

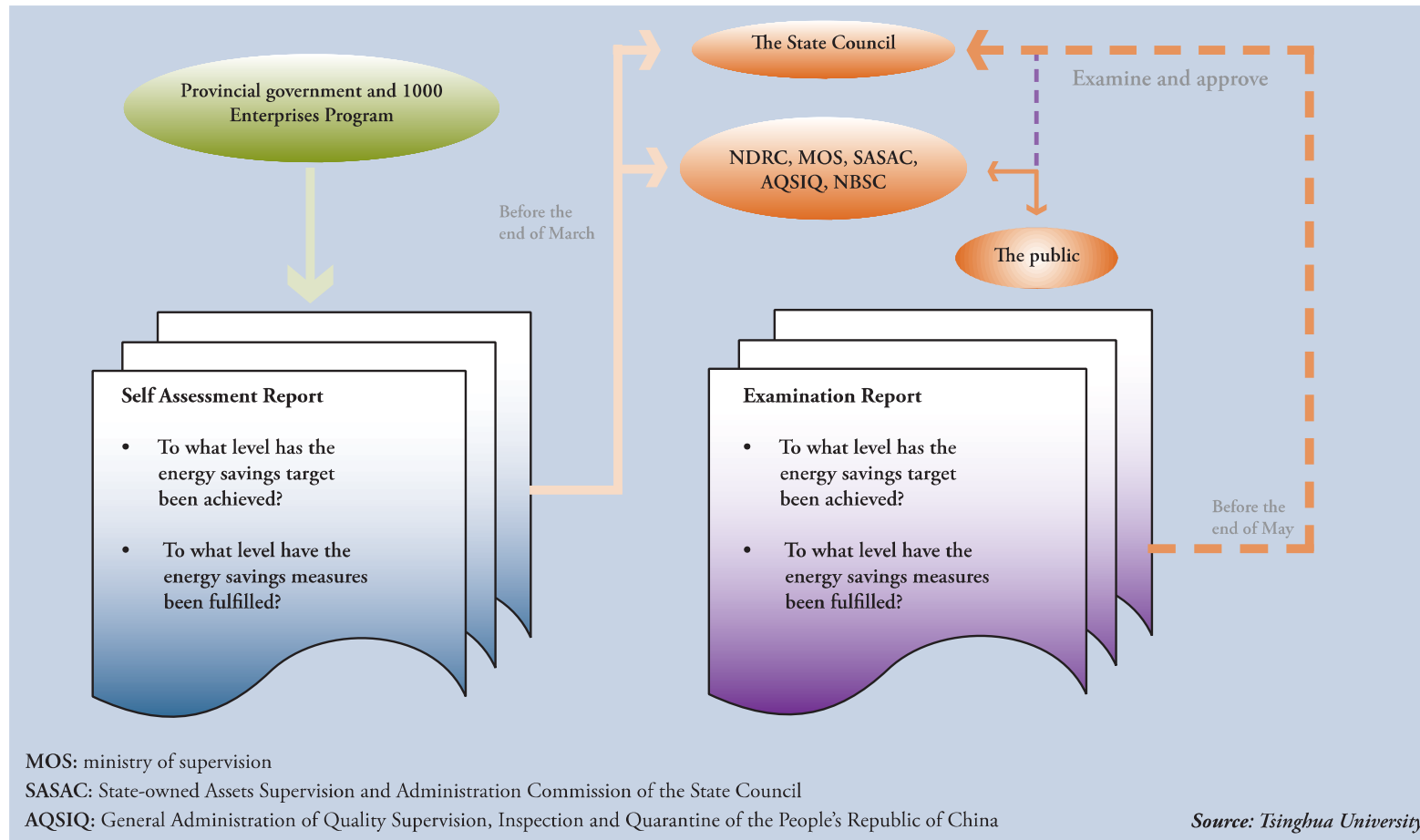
Examination and Verification



❖ Examination during reporting

- New energy type? Why?
- Comparison with previous report, big change? Why?
- Calculation of energy price, not normal range? Why?
- Efficiency of energy conversion, big change? Why?
- Comparison of energy intensity, big change? Why?
- Inter-tables consistency check;

Examination and verification



Energy Auditing



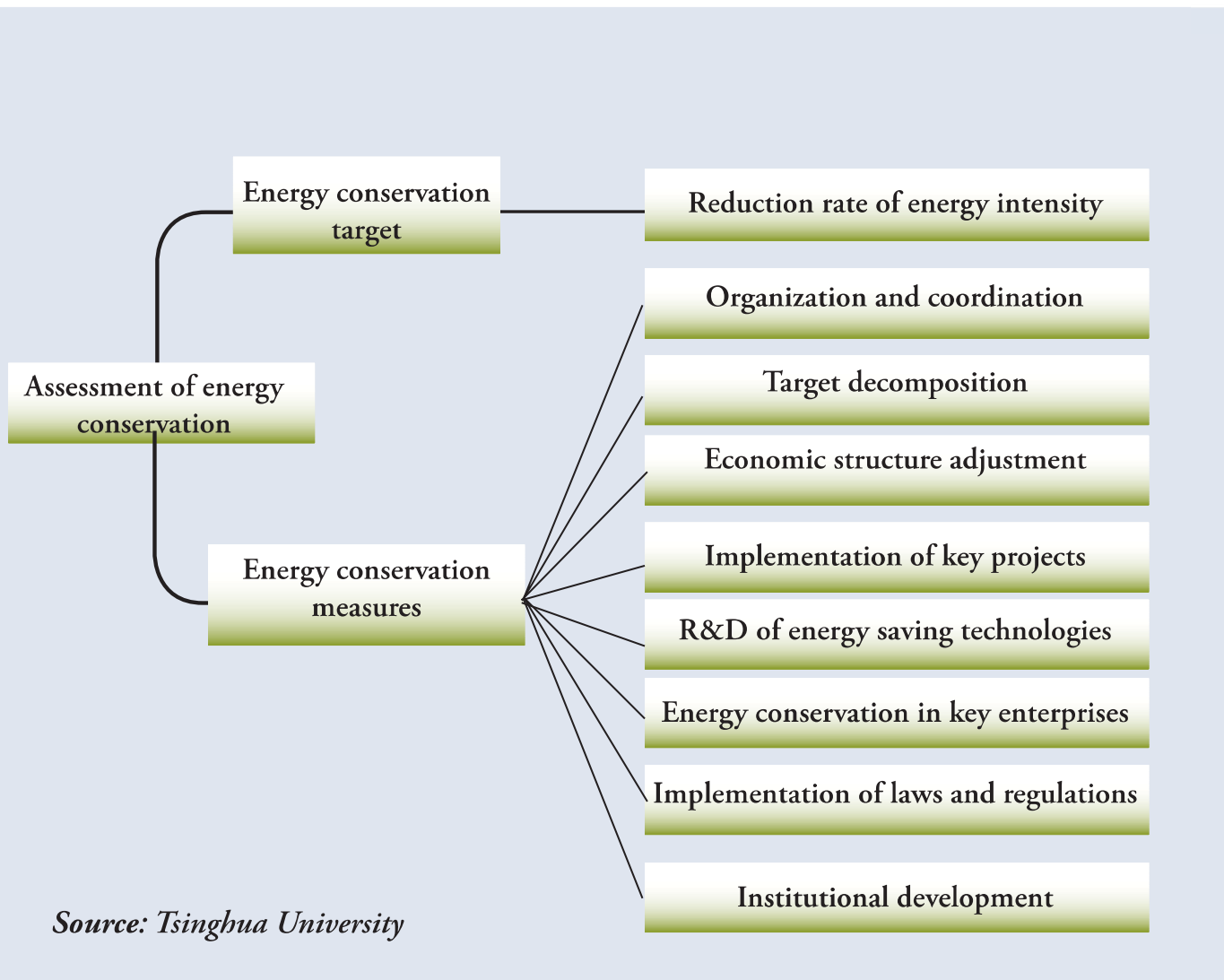
❖ 1000 enterprises:

- Analysis of energy consumption throughout the enterprise;
- Examination of the energy measurement and reporting system;
- Assessment of the efficiency of equipment operations;
- Evaluation of energy use indicators of products and production,
- Conducted by local energy conservation centers;

❖ Subsidies for energy saving:

- Verify enterprises' actual energy savings to process government incentives for energy-efficiency projects;
- conducted by Certification agency, provincial energy conservation supervision centers, and provincial financial inspection centers

Evaluation



Evaluation



TABLE 7. Evaluation system for 1000 enterprises program

Energy conservation target (40)	100% achieved: 40; 90% achieved: 35; 80% achieved: 30; 70% achieved 25; 60% achieved: 20; 50% achieved: 0
Energy conservation measures (60)	<p>Energy conservation leading group: 3</p> <p>Energy conservation management department: 2</p> <p>Decomposition of target to unit and person 3</p> <p>Assessment of energy conservation target 3</p> <p>Reward and punishment system 4</p> <p>Energy efficiency performance in 1000 enterprises: 10 for top 10% and 5 for top 50%.</p> <p>Energy conservation R&D fund 4</p> <p>Annual energy conservation plan 4</p> <p>Closure of backward equipment 7 Retirement of outdated equipment</p> <p>Implementation of local regulation 2</p> <p>Implementation of energy consumption norm 4</p> <p>Norm management for energy consuming equipments 2</p> <p>Implementation of energy conservation design 2</p> <p>Energy audit and monitoring system 2</p> <p>Energy statistics manger and account 3</p> <p>Energy monitoring appliance 3</p> <p>Energy conservation training 2</p>

New Movement in 12th FYP



- **Low carbon development pilot programmes:** Low carbon provinces and cities pilots (5 provinces+8 cities); low carbon parks pilot (low carbon emerging industries); low carbon communities pilots (low carbon building and lifestyle); low carbon products (standards, labeling, verification, low carbon consumption);
- **GHGs statistical and accounting system:** Establishing comprehensive GHGs statistics system; involved in evaluation system of local government performance; GHG inventory at local level, key sectors and enterprises;
- **Emission trading schemes:** Establishing voluntary emission trading scheme; Conducting emission trading pilot programmes (two provinces+five cities); Enhancing supporting system for emission trading (MRV, registry, third party, regulation etc)

Experiences and Lessons



- ❖ Statistical indicator system and investigation system, including energy production, import/export, circulating, consumption, storage and utilization and comprehensive utilization ;
- ❖ Improved coverage, frequency, reporting requirements;
- ❖ Incentives: Assessing performance vs. assessing potential and opportunities;
- ❖ More supporting mechanism and Capacity building: standardized tools, guidelines, database, quantified auditors;
- ❖ International cooperation and information sharing;



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**Thank you for your
attention**

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