China Low Carbon Development Side Event

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MRV Practice in China: Domestic System and future challenge

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Outline

- Why MRV;
- How China MRV mitigation actions;
- Future Challenges

Why focusing on MRV?

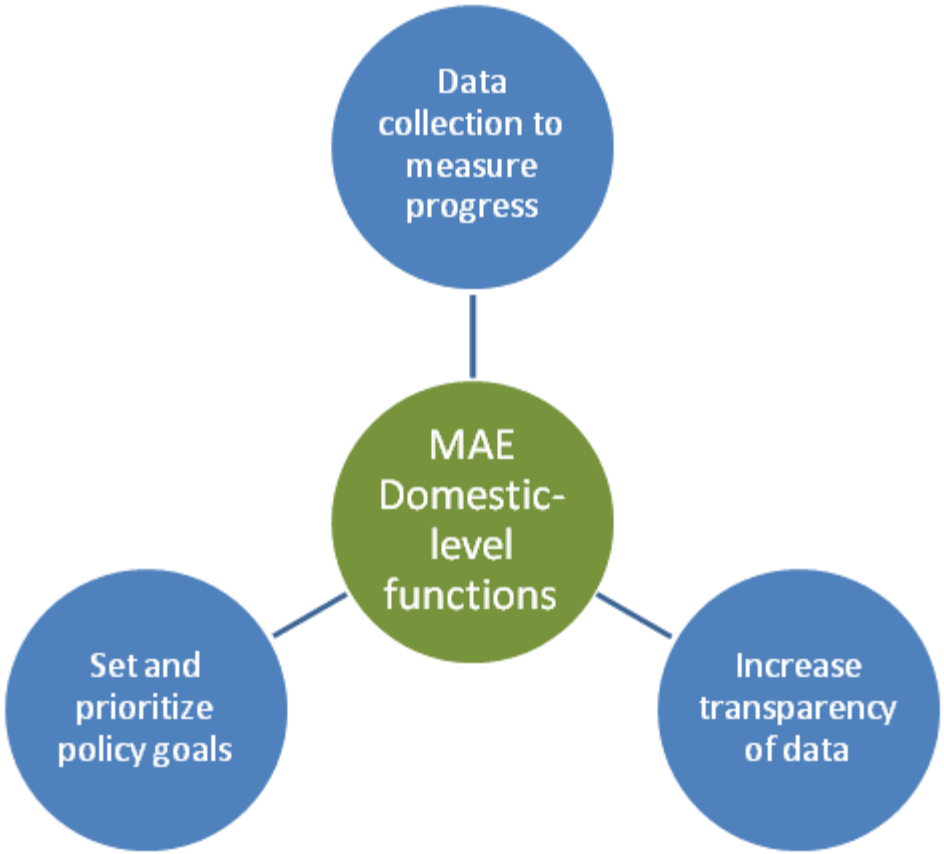
- Bali Action Plan
  - MRV for commitment and MRV for action;
  - MRV requirement is distinct for 1bi and 1bii;
- Achievement of Cancun Agreement
  - Call for improvements on current reporting;
  - New tools: BR, ICA, IAR;
  - NA1 Less onerous than A1；
- Key questions
  - International Perspective: Trust building and Transparency;
  - How about domestic needs?

The importance of MAE system

- One of the most important and challenging aspects of the Cancun Agreement is to address the question of ***transparency*** to improve trust and cooperation among the Parties, this needs:
  - Focus on explaining and clarifying domestic systems among Parties to avoid misunderstanding and to improve confidence in other's action.
  - Identify capacity gaps at the domestic level and enhance robustness of domestic monitoring, assessment and evaluation systems through capacity building.
- A successful outcome of international climate negotiations will be dependent upon the accuracy and effectiveness of national MAE systems.
- ***Starting point:*** Understand incentives and practice of DCs to track mitigation actions domestically;

MAE system in China

- In China, MAE systems traditionally have been referred to as ***monitoring***, ***assessment*** and ***evaluation*** (MAE).
- ***Data collection***, ***policy goals setting*** and the ***transparency of data*** are the three pillars of MAE system.



The functions of MAE system

- *Measuring overall progress through national-level data.*
  - The national level is the level at which countries' mitigation commitments can be compared and their commitment to an international climate regime evaluated.
  - Measurement at the national level is essential for the country's own purposes in considering and prioritizing energy and climate policy in the context of overall macro-economic policy.
- *Measuring the impact of specific programs or players.*
  - A domestic MAE system provides the data needed for energy and climate policymakers to track progress toward specific policy goals. In China, this includes measuring at the sub-national level, sectoral or company-level reporting to enforcement bodies (to the extent that enforcement occurs at those levels), and programmatic data (metrics collected to assess the progress of specific energy or climate programs).
- *Providing data that can be disseminated (public transparency) and that can be used to promote accountability.*
  - The transparency and accountability functions can occur at all levels, from national to local.

Policies and Measures at National Level

5-Year Plan	• Set by State Council • Approved by the National
Energy and Environmental Policy (Energy Conservation and Pollution Abatement) **National Climate Change Program**	• Set by State Council • Implemented by the ministries
National Level Programs (such as 1000 Enterprises, Priority Dispatch, Industry Specific Efficiency Standards, Renewable Energy Programs)	• Administered by the ministries and delegated to provinces and delegated to provinces and industries
Programs	• Administered at the provincial, local and industry level

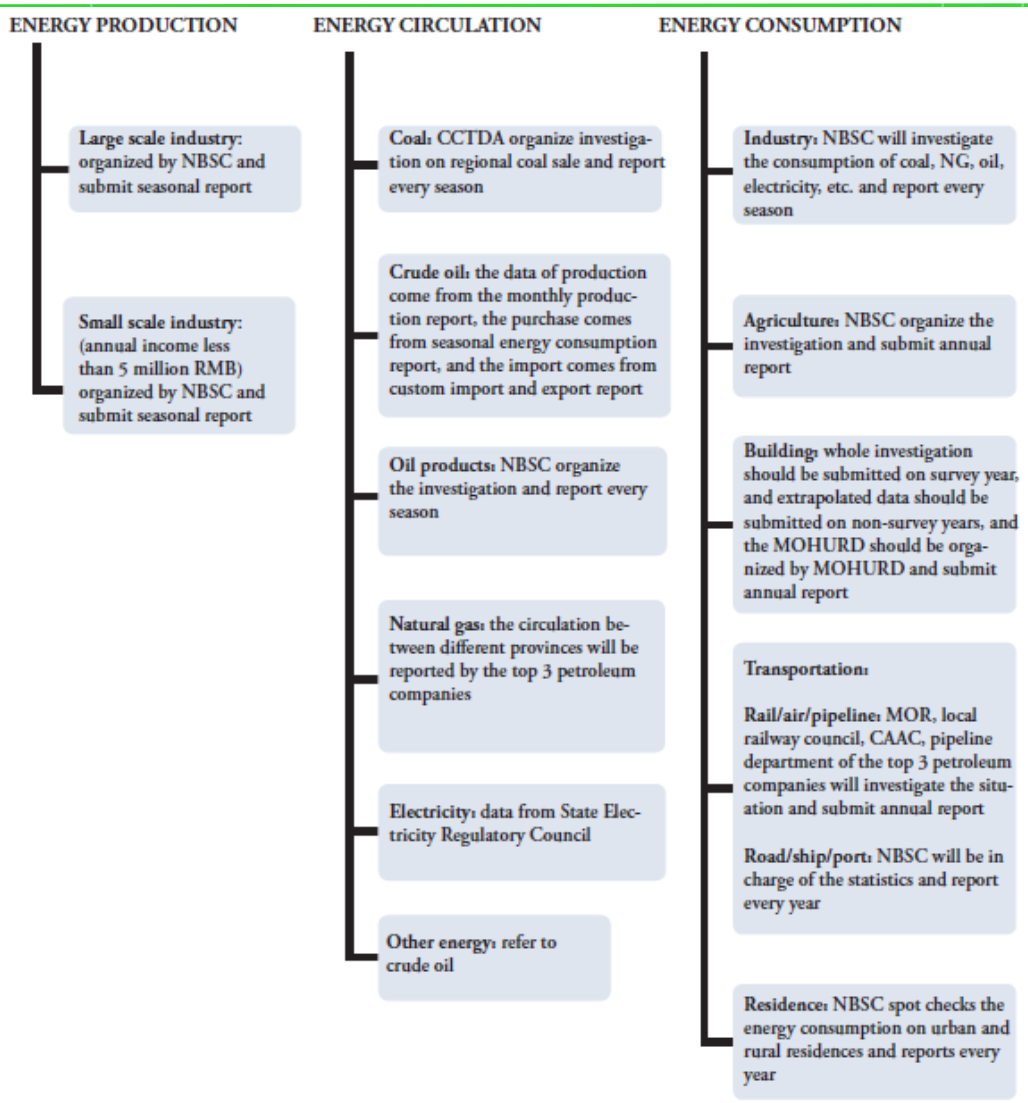
Major Targets at 11th FYP

Indicators	Status In 2005	Target for 2010	Achieve-ment in 2008[1]
Share of service industry's contribution to GDP	40.3%	43.3%	40.1%
Urbanization rate	43%	47%	45.7%
R&D as a percent-age of GDP	1.3%	2%	1.52%
Energy intensity (energy consumption per unit of GDP)		20% reduction from 2005 levels	10.08%
Rate of compre-hensive use of solid industrial waste	55.8%	60%	
Forest coverage as a percent of total land cover	18.2%	20%	

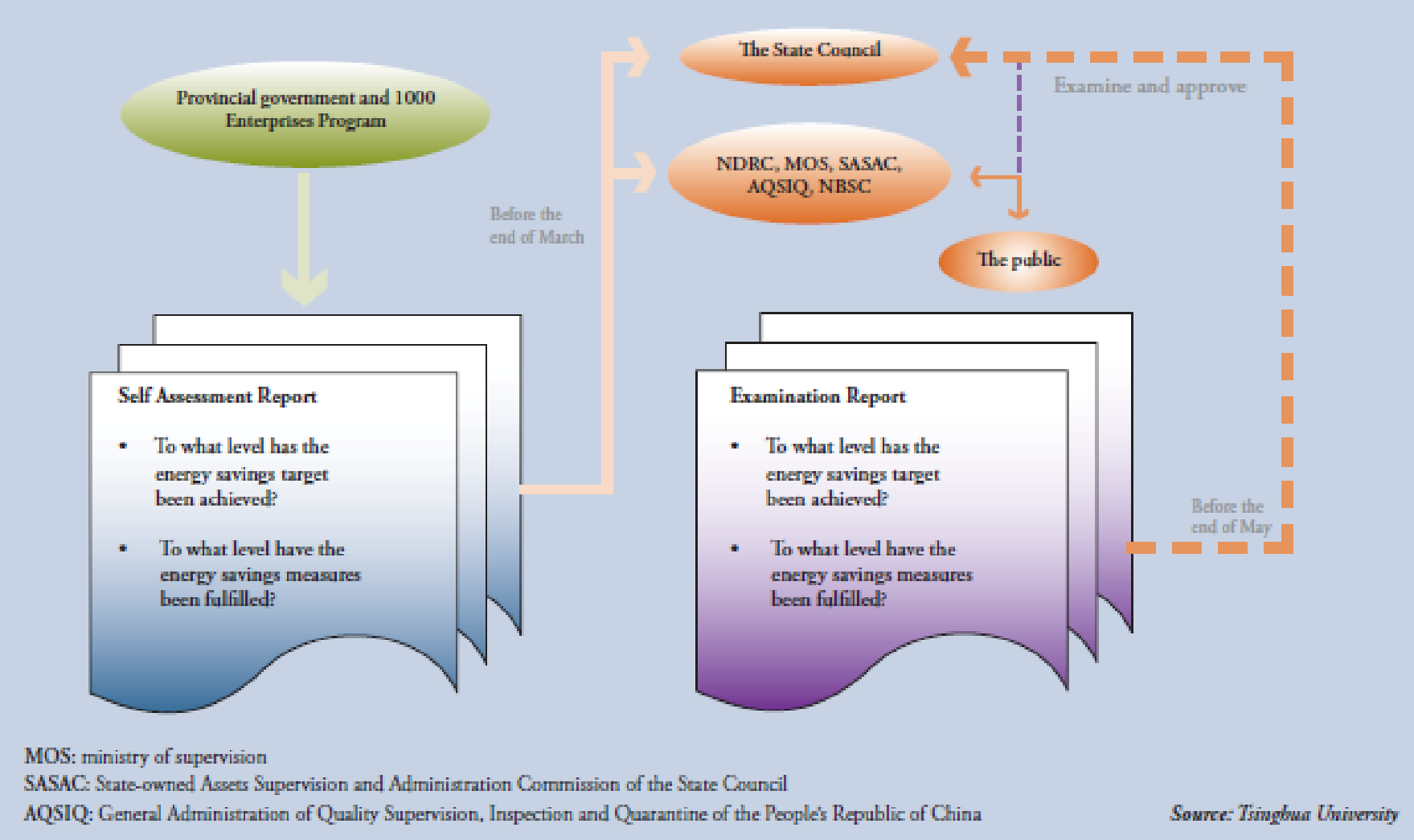
Target for Structure Change

Target for Energy Efficiency

Compliance System for 20% Target



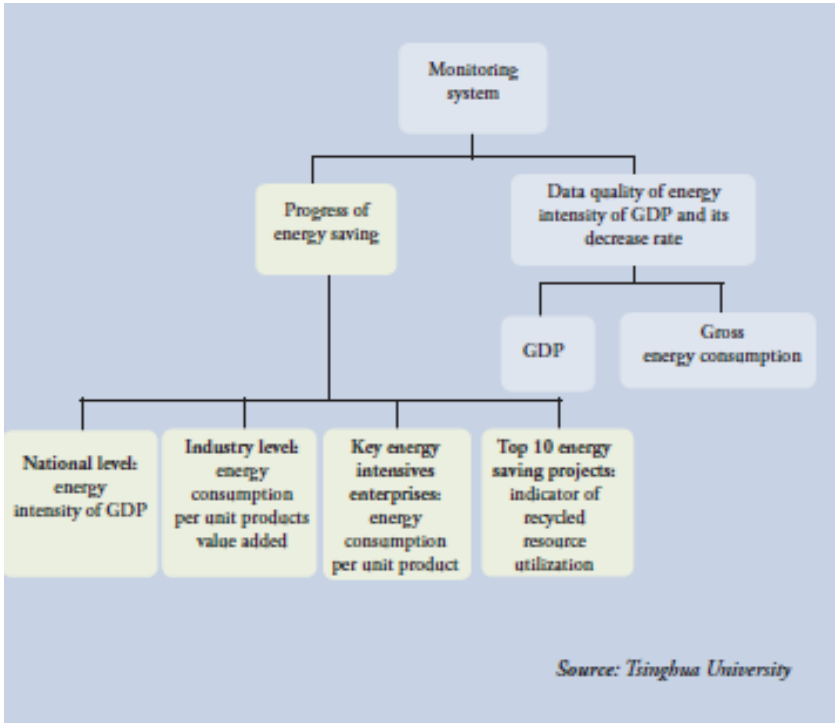
Compliance System for 20% Target: Reporting

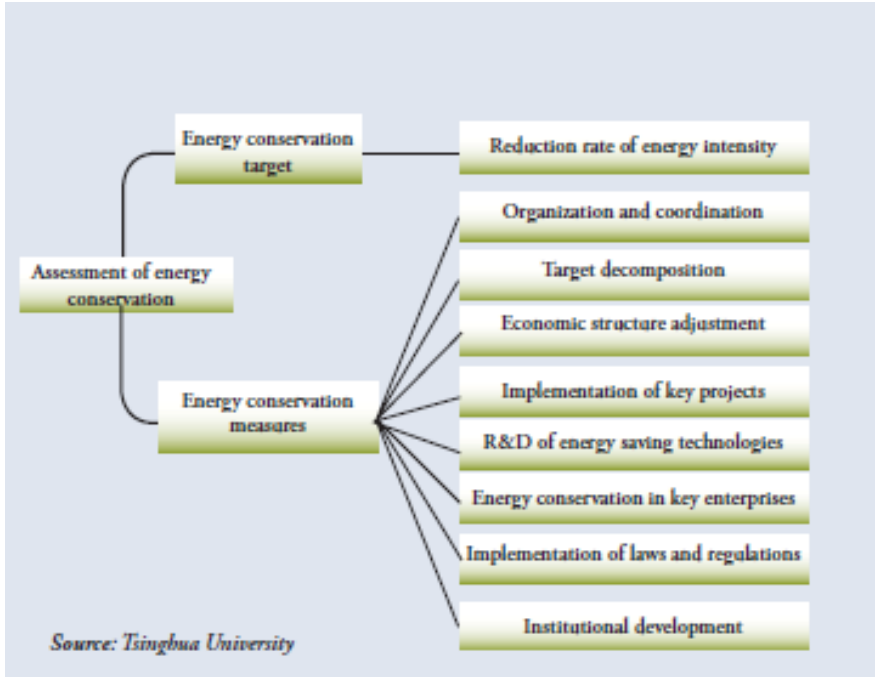


MOS: ministry of supervision
SASAC: State-owned Assets Supervision and Administration Commission of the State Council
AQSIQ: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

Source: Tsinghua University

Compliance System for 20% Target: Verification



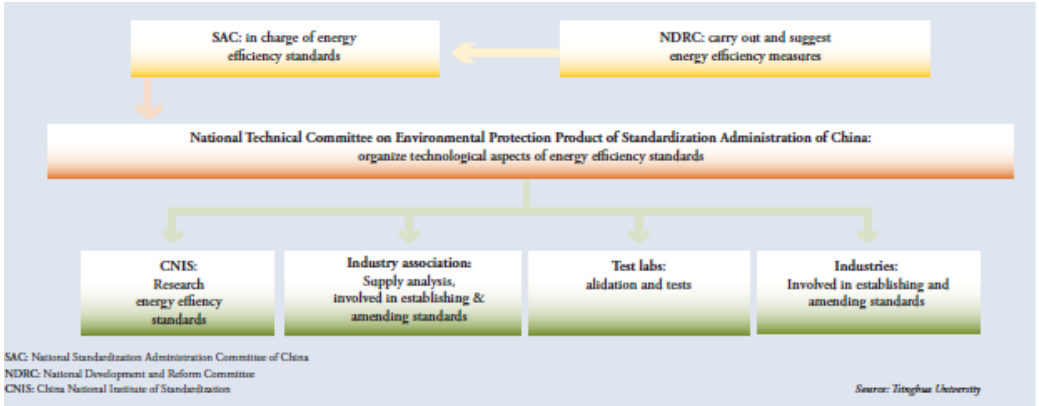


MRV at National Level

		Measurement	Reporting	Verification	
GDP Restructuring	National	Share of GDP represented by the service sector	NBS publishes a yearly statistics bulletin	Internal data quality assurance system within NBS	5 year goal, annual progress reports
Technology Development	National	Share of GDP represented by R&D spending	NBS, MOST and MOF jointly publish a yearly statistics bulletin	NBS and MOST collect enterprise-level data separately	5 year goal, annual progress reports
Energy Intensity	National, with targets given to each province, locality and State-owned enterprise	Energy used (MTCE/ Unit GDP)	Calculated by NBS and published in a semi-annual statistics bulletin	Collected from multiple sources to ensure cross-checking	Five year goal. Many data are tabulated monthly. Provinces are required to report semi-annually
Renewable Energy	National, with targets given to provinces and power generation companies	Renewable energy portfolio standard (specified percentage of renewable in total output)	Energy Bureau aggregates data from NBS, various ministries and industrial associations	Internal data quality assurance system within various ministries and cross-checking	Goals to year 2010 and 2020, calculated annually

Standards, Regulations and Incentive Policies

Efficiency Standards	Multiple industries and consumer products	Energy use per physical unit of output	Industrial processors and product manufacturers report the energy efficiency of their products and processes when asking for approval and registration	Energy saving verified by Energy Conservation Technology Service Center at national and local level	
Efficiency Labeling	Multiple Products	Energy use during product operation	All products in a given product category must be tested for energy efficiency and labeled accordingly, with test results reported to National Institute of Standardization (NIS)	Test results verified by Energy Labeling Management Center under NIS	New products will be added accordingly
Tax policy	National	Increased cost of fossil fuels (examples: fuel tax and VAT rebate change)	National Tax Bureau	Tax bureau has tax receipts	Change becomes permanent
Tax incentives	National	Tax breaks for renewable investments	National Tax Bureau for amount of tax, NDRC for actual investments	NDRC reports on new renewable power	Annual reports

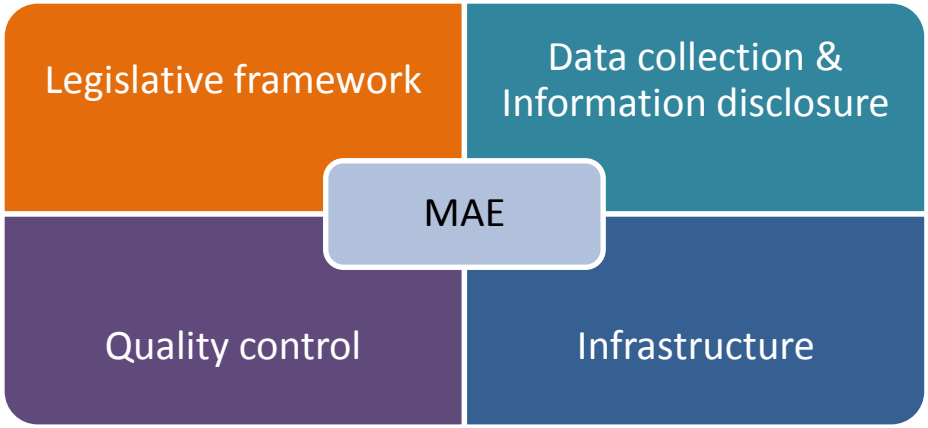


P&M at Sectoral Level

The Thousand Enterprise Program	National, targeted at 1000 largest enterprises	Energy Intensity per unit output	Enterprise to local DRC to NDRC	NDRC verification teams	5 year program with annual targets; progress reports twice a year
Individual Industrial Sector Targets	Set by Sector	Energy Intensity per unit physical output or value added	Industrial association to NBS/NDRC	Aggregated data from individual companies	Annual and 5 year reporting
Program to Close Small Enterprises	National	Percent of total land forested	State Forestry Administration	Energy Bureau of NDRC conducts on-site verification	5 year targets, annual progress reports
Energy Conservation Power Generation Dispatch	Currently piloted in five provinces, but planned to be national within the electric power system	Currently a compliance metric, but no energy metric	Power plant performance determined by NDRC at local levels, which then sets the dispatch priority	Local technical bureaus verify efficiency and performance	
Coal-fired industrial boiler (kiln) retrofit projects	Coal-fired industrial boilers nation-wide	Average efficiency and energy saving of industrial coal-fired boilers	Energy saving reported by enterprises to government	Energy saving projects verified by third parties	2010 Goal
District cogeneration projects	District heating, especially in northern China	Share of cogeneration in district heating and cogeneration capacity	Energy saving reported by enterprises to government	Energy saving projects verified by third parties	2010 Goal
Residual heat and pressure utilization projects	Iron and steel, construction material and other industries with saving potential	Energy saving from residual heat and pressure utilization	Energy saving reported by enterprises to government	Energy saving projects verified by the third parties	2010 Goal
Petroleum saving and substituting projects	Metal, construction material and other industries with saving potential	Quantity of petroleum saved and substituted	Energy saving reported by enterprises to government	Energy saving projects verified by third parties	2010 Goal
Motor system energy saving projects	Major electricity consuming sectors	Motor efficiency improvement and electricity saving	Energy saving reported by enterprises to government	Energy saving projects verified by the third parties	2010 Goal
Energy system optimization projects	Refinery, chemical, iron, and steel industries	Energy improvement per unit product and quantity of energy saving	Energy saving reported by enterprises to government	Energy saving projects verified by the third parties	2010 Goal

The four fundamental elements in Chinese MAE system

1. A centralized administration at the National Bureau of Statistics and a strong **legislative framework** to guide their work;



2. A **data reporting, and information disclosure**, system that is flexible but emphasizes frequent reporting; This takes place at the enterprise, national and international level;
3. A system for **quality control** and assurance of energy and climate data;
4. The necessary **infrastructure** to support the MAE system at all levels.

Current Status and Capacity Building Needs for MAE Systems in China

	Current Status	Capacity Building Needs
Legislation	Energy Conservation Law (amended in 2008) and other related guidelines have established the basic framework for energy monitoring and measurement. A centralized National Bureau of Statistics has an important role in the legislative framework to support the MAE system.	Further guidelines to extend scope of monitoring from energy consumption to GHGs emission. More process-oriented guidelines are needed. International benchmarks would be useful.
Infrastructure	Lack of capacity exists in small enterprises in both monitoring instruments and human capital.	Technology transfer and capacity building for local producers of energy and emission monitoring instruments. Financial support to facilitate investment in monitoring equipment Training program for staff responsible for energy and emission monitoring, especially in small companies
Quality Control	Mandatory energy auditing now required for large enterprises, but voluntary energy auditing still permitted for small enterprises. Local energy conservation centers are responsible for the review of energy auditing reports.	Training program for energy auditors. Certification program for qualified energy auditing companies. Energy conservation assessment for large-scale projects.
Information Disclosure	Three tier reporting process now being used to prepare the country's second National Communication and progress report on the national action plan.	Sufficient international funding to support more frequent National Communications. Training for local and provincial staffs in conducting basic emission and energy inventories. Training for statistical agency staffs in integrating GHGs statistics into the existing energy statistics system.

Next Step in 12th FYP

- National MRV
  - GHG inventory at national and local level;
  - Allocation of 17% target (finished) and MRV system for local government;
- Market based MRV
  - Pilot phase of carbon market;
  - MRV guidance for enterprises at major sectors;
- Product based MRV
  - Low carbon product standards, label and certification

Conclusions

- A cooperative approach is the best way to enhance trust among Parties to the UNFCCC and provide meaningful assurance they will undertake mitigation actions.
- The experience in China suggests that mitigation assurance should be based on robust domestic MAE systems that are aligned with the underlying interests of the countries employing them.
- Key factors in the Chinese MAE system are a legislative framework, a process for data collection and information disclosure, a quality control system and the necessary infrastructure.
- The major functions of a MAE systems at the domestic level include data collection and transparency, the setting of policy goals, and the prioritization of mitigation actions.
- As in China, national MAE systems in developing countries may face significant capacity gaps that need to be filled.
- Opportunities exist for the international community to engage in filling these capacity gaps.

Future Challenge

- MRV and transparency is only part of the solution, we need comparable progress in KP and 1bi in LCA to be a package;
- Provide positive incentive for developing countries to participate;
- A step in strategy: Short-term focus on M and R; long-term focus on V;
- Focus on capacity building and close the gap;

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THANKS!

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