

China Higher Efficiency Power and Distribution Transformers Promotion

switchasia



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Project background

- **Effectivity** of transformers



Need 5-6 tansformers, every 1kW
power demand roughly requires 8kVA
of transformer capacity



- Improvement of **energy efficiency** of transformers means
 - alleviating loss of wires of power transmission and distribution grids, reducing investment of upper level grids
 - enhancing use efficiency of power and equipment, alleviating overuse of non-renewable resourves and reducing GHGs emissions

Project background

- Rewards of higher energy-efficient transformers ?

Figure1: Transformer efficiency changes

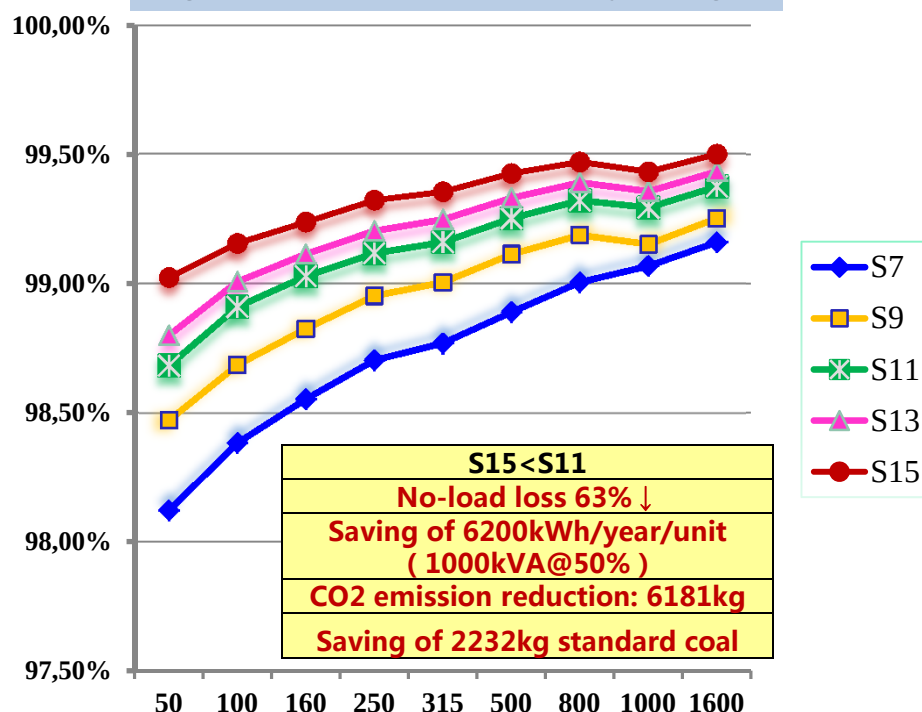
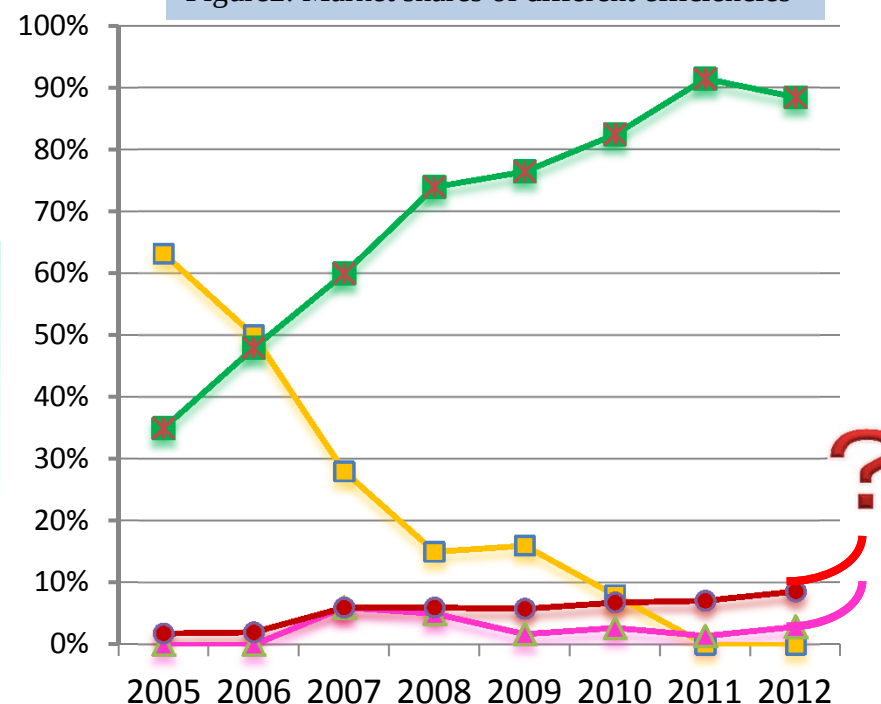


Figure2: Market shares of different efficiencies



Objective



The project seeks to reduce electricity loss by increasing the market penetration of higher efficiency transformers (S13 and above), and by enlarging their market share in China.

Linking Policy to Supply Chain Actors



Linking Policy to Supply Chain Actors



Resource use
Main resources associated to the various phases of the life cycle are as below:

Resource	Use phase	Value	Unit
Electricity	Manufacturing	1.00	kWh
Electricity	Use phase	0.01	kWh
Electricity	End of life	0.01	kWh
Water	Manufacturing	0.01	m ³
Water	Use phase	0.01	m ³
Water	End of life	0.01	m ³

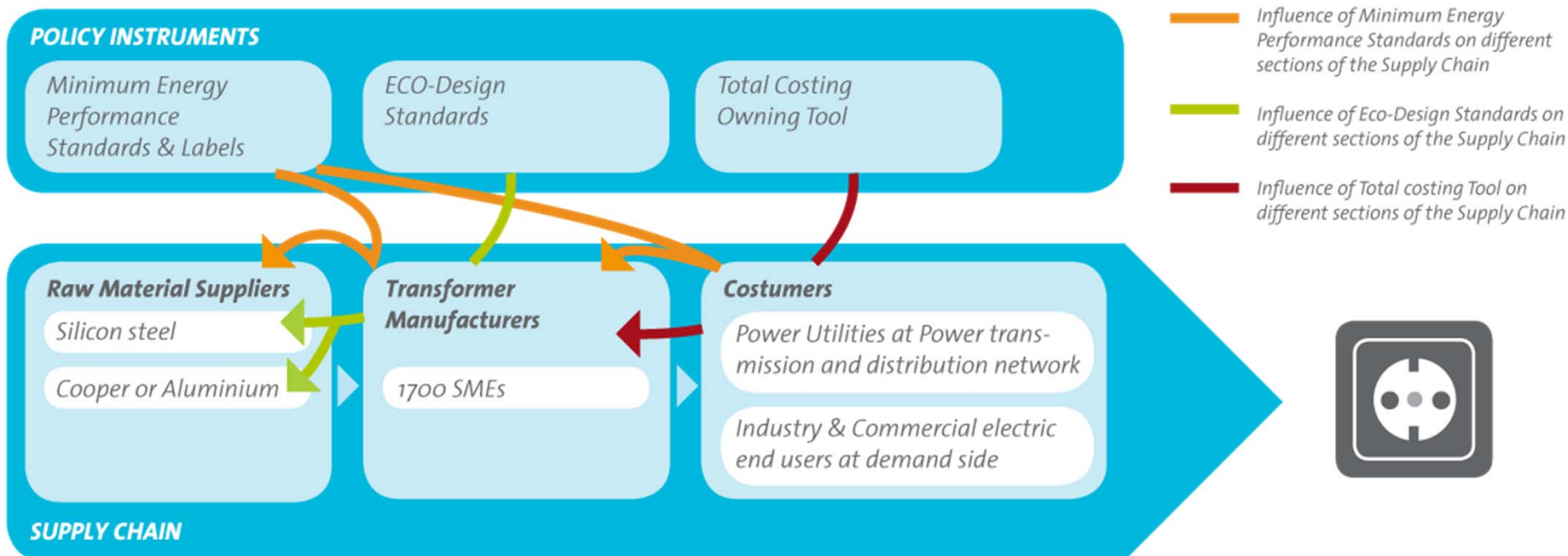
Use of non-renewable resources
The net energy consumption and losses in the use phase are as follows:

Resource	Use phase	Value	Unit
Electricity	Manufacturing	1.00	kWh
Electricity	Use phase	0.01	kWh
Electricity	End of life	0.01	kWh
Water	Manufacturing	0.01	m ³
Water	Use phase	0.01	m ³
Water	End of life	0.01	m ³

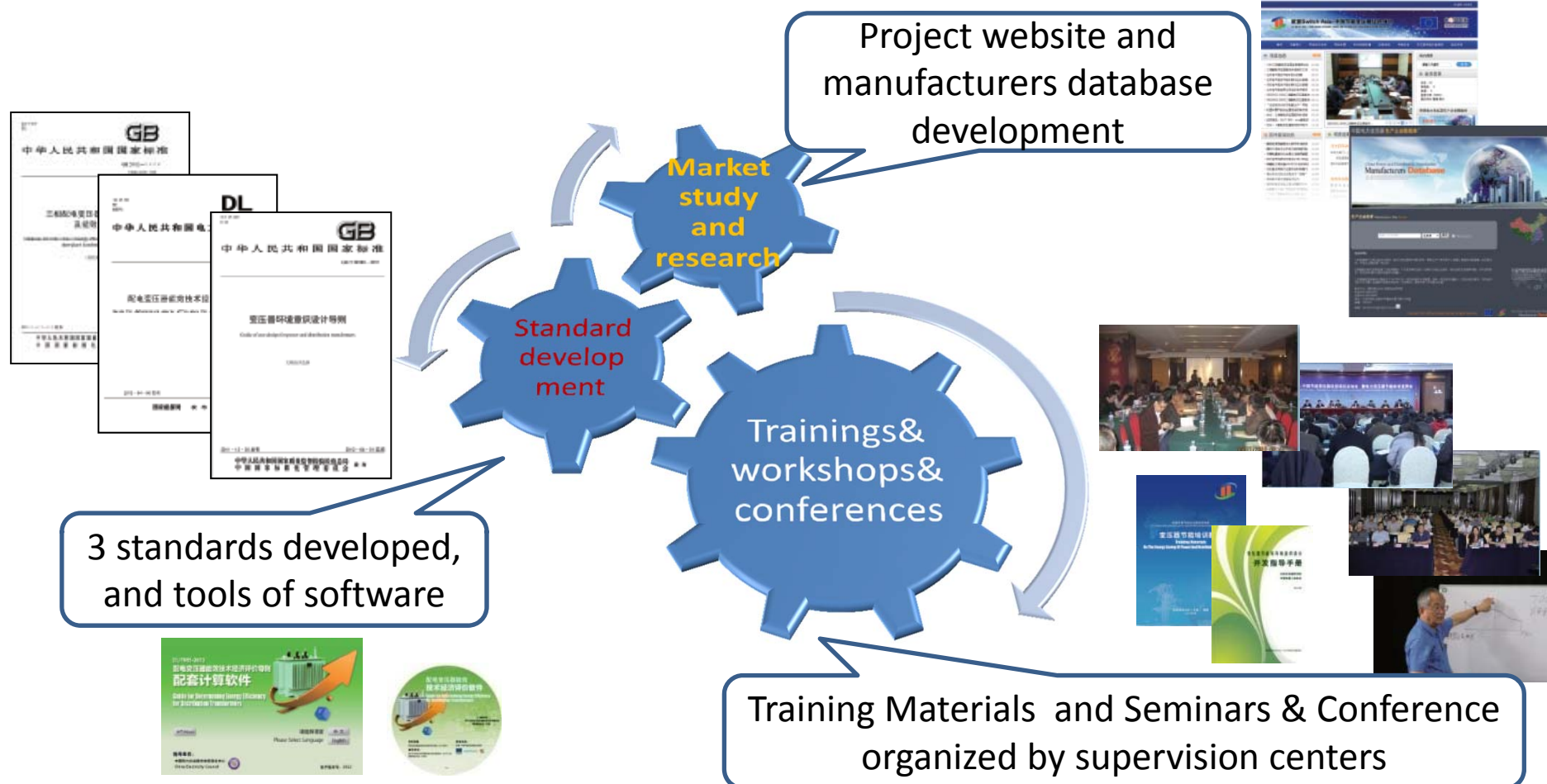
Wastes produced in the different phases of the life cycle are as follows:

Resource	Use phase	Value	Unit
Electricity	Manufacturing	1.00	kWh
Electricity	Use phase	0.01	kWh
Electricity	End of life	0.01	kWh
Water	Manufacturing	0.01	m ³
Water	Use phase	0.01	m ³
Water	End of life	0.01	m ³

maintain cost
operation cost
Primary cost



Promotion of standards: integral part of the up-scaling strategy



Impact:

POLICY LINKAGES



- 3 standards development: MEPS, LCC and Eco-design
- Finance incentive for higher efficiency distribution transformer launched based on Energy Efficiency Standard (MEPS & Labeling)

ENVIRONMENTAL IMPACT



- 887 million kWh saved & 846,300 tons CO2 emission cut/year
- Environment-friendly products with recycling materials
- Reduce the utilization of fossil fuels meanwhile by increasing of energy efficiency

ECONOMIC IMPACT



- Reduce electricity loss by the increasing of higher efficient transformers
- Encouraged end users to procurement higher efficiency transformers, and transformer industry adjust products based on demand of energy saving

SOCIAL IMPACT



- Promote positive evaluation between the resource using & environment burden, energy saving & cost control at the supply chain, and increase the end users awareness of sustainable energy consumption that help SMEs to get the benefits from TOC consideration at higher efficient transformers procurements



THANK YOU !

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