



International Copper
Association
Copper Alliance

APEC Distribution Transformers Survey S EWG 15 12A – Progress Update

Pierre Cazelles
Director – Partnerships Asia
International Copper Association



Project Identity

Cu

Title	APEC Distribution Transformers Survey: Estimate of Energy Savings Potential from Mandatory Efficiency Standards
APEC Ref.	APEC Distribution Transformers Survey S EWG 15 12A
Sponsor	China
Co-Sponsors	Australia, New-Zealand, USA
APEC funding	101,500 USD
Self-funding	265,700 USD, including cash contribution by ICA of 61,000 USD and 135,000 USD (direct contract to LBNL)
Project Overseer	CNIS (China National Institute for Standardization)

Objective	Increase awareness among APEC economies about the energy savings and GHG emission reduction potential from an increased share of higher efficiency DTs, as well as to provide APEC economies with recommendations on how to increase the market share of higher efficiency DTs.	
Activities	1) Data collection and survey (outsourced consultants)	Jan-Apr
	2) Data analysis, quantitative evaluation of energy saving and emission reduction potentials, and identification of best practices	Apr-Jul
	3) Recommendations – feedback from EGEEC	Jul-Aug
	4) Develop strategic framework for the development of national roadmaps for the increase of MEPS	Aug-Oct
	5) Dissemination workshop (EGEEC 2013)	Nov
	6) Final report	Dec

- **CNIS: Project Overseer; coordinator for activities in China**
- **ICA: partner, coordination of international work outside of China**
- **Consultants selected and engaged by CNIS :**
 - China work: Zhong Biao Standard Technology Research Institute Co. Ltd (ZBSTRI), for data collection and analysis
 - International work: Econoler, Canada, to survey transformer manufacturers and utilities to identify enablers / barriers ; and to determine best practices and roadmaps for economies other than China
- **ICA has engaged LBNL USA (Self-funded) to :**
 - Estimate cost-effective MEPS levels per economy
 - Economy level impact modeling and analysis (energy savings, emission reductions, costs)
- **ICA will coordinate the work of LBNL and Econoler to ensure coherence, consistency in the International work**
- **Data is needed for the work of Econoler and LBNL for which the support by respective Economies is critical. Useful analysis is only possible for Economies from whom data is received !**

Data required (for each economy)



- Total stock and annual use (domestic production plus imports less exports)
- Energy efficiency market shares
- Efficiencies and market prices of baseline transformers and high efficiency transformers
- Electricity prices, growth rates
- National electricity demand forecast
- Grid emission factors for CO₂, SO₂ and nitrogen oxides per unit of generated electricity
- Macro-economic data, growth rates etc.
- Contacts of Transformer manufacturers & Utilities

Project Status (International Work)



Activity 1a (Data collection for LBNL Analysis) Jan – April

- Data received from : **Canada, Chile, Hong Kong, New Zealand, Singapore, USA**
- Data awaited from : **Australia, Korea, Japan, Mexico, Peru**
- Contact established but receipt of data uncertain: **Indonesia, Papua New Guinea, Philippines, Thailand, Vietnam**
- No response : **Brunei, Chinese Taipei , Malaysia, Russia**

Project Status (International Work)



Activity 1b (Data collection for Econoler Surveys)

Jan – April

- Contact details of Transformer Manufacturers :

Available for all Economies except

Brunei, Hong Kong, New Zealand, Papua New Guinea, Russia

- Contact details of Distribution Utilities :

Available for :

Canada , Chile, Indonesia, Mexico, New Zealand , Thailand , Papua New Guinea , Peru ,Philippines , Vietnam

Needed for : Australia, Brunei, Hong Kong, Japan, Korea, Malaysia, Russia , Singapore, Thailand

Activity (INVESTIGATION – completed)

Jan – April

Task 1: Policy information

Investigating laws and regulations, policies, issued and implemented standards on popularizing efficient DTs by Chinese government and local government in recent **years. (Mandatory and encouraging policies)**

Task 2: Market situation (In 2011)

- Collecting data about DTs such as output, sales, stock;
- Collecting data about China's total generating capacity, social power consumption, power transmission and distribution losses.

Task 3: Manufacturer (In 2011)

Investigating the amount of DTs manufacturer, business address, production value or product quantity. (50 manufacturer)

Next steps:

Task 4: Energy saving technology of DTs

Investigating model, non-load losses, load loss level, promotion methods and development speed of efficient DTs developed by Chinese enterprises. (S9, S11, S13, S15, new energy efficiency 1 grade)

Task 5: Product specifications and energy efficiency level

- Production quantity and export volume of oil immersed and dry type DTs in China;
- Energy efficiency level of oil immersed and dry type DTs in China;
- Materials usage and cost of DTs in different energy efficiency level;
- Scrap value of DTs in different energy efficiency level.

Task 6: Main user

- Energy efficiency level of DTs used by major end users;
- User's electricity load rate.

Cooperation from EGEEC



- **Cooperation from EGEEC members is requested to obtain the necessary data to enable the work of the consultants for the analysis and survey. (We thank those who have already provided the same)**
- **We once again request that to facilitate communications, each EGEEC representative should nominate a contact person for this project.**



Thank you

Pierre Cazelles
Director – Partnerships Asia
International Copper Association
Tel: (86) 159-0100-7376
Email: pierre.cazelles@copperalliance.asia