CEIS/KEEI Workshop:

The Way to Advance Energy Statistics in Korea

(Project of Development of the National Energy Statistics System)

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Energy Statistics Research Division

Center for Energy Information and Statistics (CEIS)





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I. National Energy Statistics System in Korea

II. Efforts to Advance Energy Statistics

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I. National Energy Statistics System in Korea (1)

- Government designates the agencies in charge of energy statistics by Code of MOTIE minister
 - KEEI : national energy statistics including energy balance
 - KEMCO (Korea Energy Management Corp.): renewable and integrated energy
 - KNOC (Korea National Oil Corp.) : oil and oil products
 - KPX (Korea Power Exchange) : electricity
 - KOGAS (Korea Gas Corp.) : natural gas
 - KOCOAL (Korea Coal Corp.) : coal
 - KCGA (Korea City Gas Association) : city gas
- Each agencies carries out individual surveys for supplement of consumption statistics,
 - KEEI : energy census (every 3 years)
 - KEMCO : survey on the heavy energy consumption companies
 - KPX : survey on the appliances diffusion rate



I. National Energy Statistics System in Korea (2)

All data sources to make national energy statistics by energy sources

Energy Sources	Data Sources
Coal	Import/Export data(KITA : Korea International Trade Association) Anthracite & Bituminous Coal Demand/Supply Data (KCA : Korea Coal Association)
Oil	Import/Export Data(KITA), Oil Demand/Supply Data, PEDSIS & PETRONET(KNOC : Korea National Oil Co.)
Gas	Natural Gas Demand/Supply Data (KOGAS : Korea Gas Co.) Town Gas Demand/Supply Data (KCGA) Importing Company Data(K-Power, POSCO)
Electricity & Heat	Korea Electricity Statistics(KEPCO), Non-Utility Generation(KPX), District Heating Business Statistics(KDHC), Collective Energy Business Data(KEMCO), Data from SH Corporation, GS-Power
Renewable Energy	NRSE Dissemination Data(KEMCO), Forest Production Data(KFS), Municipal Waste Data(MOE), KEPCO Data(KEPCO)



I. National Energy Statistics System in Korea (3)





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IV.	Future Plans



II-1. Needs to Advance Energy Statistics in Korea

- Needs to support analyses of policies on the low-carbon green growth and the impacts of high oil price
- > Data needs to meet international standards (IEA, APEC)
 - more disaggregated industrial classification
 - assurance of consistency between energy statistics by sources
 - accuracy improvement
 - harmonizing the coverage of energy statistics classification with macro-economic statistics
 - adjustment of energy statistics system to the internal and external standards



II-2. Plan for Advancement of Energy Statistics System

Objective : upgrading the energy statistics onto international (IE) level to meet internal and external needs

> Strategies

- change of the energy statistics system onto IEA standards : sources and sectors
- unification of classification systems of energy statistics agencies
- amend/enact codes of government on energy statistics to impose obligation of energy data submission on energy agencies
- authority enhancement of the energy statistics council
- building up energy statistics education for person in charge of energy data production



II-3. Actions to Advance the Energy Statistics

Major Projects (2012~)

- standardization of industrial classification in energy statistics system (2012~)
- establishment of energy balance production system based on IEA standard (2012~)
- improvement of coal energy statistics (2013~)
- construction of EEI-IEA database (2012~)
- energy survey on electricity and heat producers (2011~)
- energy survey on refinery and petrochemical sectors (2012~)



Ι.	National Energy Statistics System in Korea
П.	Efforts to Advance Energy Statistics in Korea
III.	Standardization of National Energy Statistics
 .	Standardization of National Energy Statistics



III-1. Backgrounds of Carrying out The project

> Initiating the action plan for improvement of energy statistics system

- MOTIE and KEEI recognized the necessity for reviewing and modifying the national energy statistics system (2011)
- difference between industrial classifications of Korea energy agencies
 - \rightarrow Problems of data reliability
- insufficiency of industrial classifications in energy balance to meet IEA energy statistics format
- Beginning 3-year action plan for improvement of energy statistics management system (2012~)
- KEEI undertaking the project of standardization of national energy statistics (2012~)



III-2. Objectives of the Project

> Unification of energy agencies' industrial classification system

- in first, focusing on the industrial sector
- standardization of industrial classification by establishments
 - → a certain firm should be included in the same lowest classification of energy agencies' statistics
 - \rightarrow adjust to KSIC (or KEPCO classification)
- standardization of aggregation system of industrial classifications of energy agencies
 - → a same sub-classification should be included in the same next-higher classification of energy agencies' statistics
 - \rightarrow adjust to KSIC (or KEPCO classification)



III-3. Approaching Directions (1)

Approaching direction 1 : standardization of classification by establishments

- coverage : not all industrial establishments but major energy consumption establishments
- setting the population of major energy consumption establishments
 - \rightarrow electricity consumption establishments employing more than 300 persons (KEPCO)
 - + large energy consumption establishments (KEMCO) + large energy consumption buildings (KEMCO) = total numbers of establishments in the population : 5,000
- assignment of the industrial classification codes to establishments in the population
 - → matching each establishments in the population with the establishments list of KOSTAT having KSIC codes for each establishments, using their business registration numbers



III-3. Approaching Directions (2)

Approaching direction 1 : standardization of classification by establishments

- \rightarrow to a successfully matched establishment, assign the industrial classification code of KOSTAT
- \rightarrow if not successful at once, continue to match, using the company name, address
- → repetition of same process above, with the establishments list of KEPCO having KEPCO's classification codes for each establishments
- set the two master files of population with KSIC codes and KEPCO codes by each establishments
- analyzing and comparing the differences in the energy statistics between cases with and without adjustment of the master file (requiring cooperation of energy agencies)
 - \rightarrow comparing the differences from the lowest classification level
 - * at the some higher classification level, the (aggregated) results will be same each other



III-3. Approaching Directions (3)

Approaching direction 2 : standardization of industrial classifications of energy agencies

- Unification of energy statistics aggregation system from lower industrial classification to the next higher industrial classification of energy agencies
 - → for the manufacturing sector, KEPCO 18 sub-classifications, KEEI 11 sub-classifications (based on officially published year book)
 - \rightarrow Therefore, need to unify the industrial classifications of energy agencies based on KSIC
- analyzing and comparing the differences in the energy statistics between cases with and without adjustment of KSIC
- → in aggregation of energy statistics from lower industrial classification to the next higher industrial classification, for each energy agency, comparing the differences between cases with and without adjustment of KSIC



III–3. Current Progress

Completion of two master files for standardization of classification by establishments

- As of 11 November, completion of two master files of population with KSIC codes and KEPCO codes by each establishments
 - \rightarrow for 5,000 establishments
 - \rightarrow left to decide which master file of the two should be adjusted (KSIC? or KEPCO?)
 - \rightarrow for the adjustment of the master file, cooperation of energy agencies is necessary
- completion of comparing and analyzing the differences between industrial classifications of energy agencies and KSIC







IV. Future Plans

Adjustment of the master file for standardization of classification by establishments to each energy agency's energy statistics system

- analyzing and comparing the differences in the energy statistics between cases with and without adjustment of the master file
- plan to complete by the end of December 2013

> Adjustment of the KSIC to energy agency's industrial classification system

• plan to complete in 2014

construction of the national energy statistics system reported data at the lowest industrial classifications from each energy agency

• in 2014? 2015?



Thank you very much !

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