Hot to collect the data needed?

A short introduction

Energy Efficiency Data and Statistics Stream: Session 1

Roberta Quadrelli and Mafalda Silva
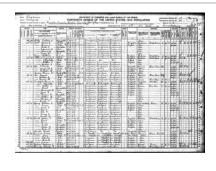
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Methods used by countries to collect data for indicators

➢ Administrative sources

- before starting new data collection

➢ Surveys

- representative sample
- possibly expanding existing surveys

➢ Metering and measuring

- costly but very effective for monitoring specific equipment efficiency

➢ Modelling

- complementary to surveys or stand alone

Examples of data and sources for the residential sector

Table 4.2 • *Summary of the main data needed for residential indicators and examples of possible sources and methodologies*

Data	Source	Methodology
Energy data		
Total residential consumption	National energy balance	Administrative sources Modelling
Energy consumption by source	National energy balance Utilities	Administrative sources Modelling
Activity data		
Floor area	National statistics offices Real estate Regional governments Taxation registers	Administrative sources Surveys
Number of dwellings	Land registry National statistics offices	Administrative sources Surveys
Heating equipment	Building registers Manufacturers/Vendors Subsidy registers	Administrative sources
Number of appliances	Manufacturers National statistics offices	Administrative sources Surveys

IEA Energy Efficiency Indicators:
Fundamentals on Statistics, 2014

Administrative sources: what are pros and cons?

Pros	Cons

Administrative sources: mapping existing data that fit your purposes

Pros	Cons
Typically **less expensive** than a new data collection process	**Boundary issues**: potential mismatch between existing and needed data
Relatively **quick availability**	Challenges in establishing and keeping **institutional communication**
Increased synergy between institutions	Possible **costs** (e.g. purchase data, change data formats…)
Raise profile of **energy efficiency** among different services	**Time investment** in research to find the right sources

The importance of establishing a framework

IEA database on country practices for data collection

- ➤ Practices in surveying, administrative sources, modelling and metering across sectors

- ➤ Questionnaires and other material available

- ➤ Links to various national administrations work

Energy Efficiency Indicators Statistics: Country Practices Database

7 results found
(Tip: sort columns by clicking on the column header)
Perform another search

Filter:

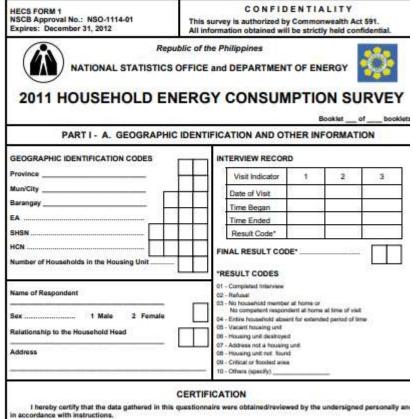| Practice	Countries and territories	Sector	Methodology	Available content
R/Ad/08	Indonesia	Residential	Administrative sources	
R/Su/15	Indonesia	Residential	Surveying	questionnaire
R/Su/22	Thailand	Residential	Surveying	
R/Mo/09	Indonesia	Residential	Modelling	
I/Su/13	Indonesia	Industry	Surveying	
I/Su/24	Thailand	Industry	Surveying	
R/Su/33	Philippines	Residential	Surveying	questionnaire

An example of how to benefit from each other's work
http://www.iea.org/eeindicatorsmanual/

Philippines: household survey example

Background

Country	Philippines
Sector	Residential
Methodology	Surveying
Organisation	Department of Energy / Philippine Statistics Authority (formerly National Statistics Office)
Name	2011 Household Energy Consumption Survey (HECS)
Purpose	The primary goal of HECS is to generate comprehensive and reliable data/information and analy... consumption in the residential sector of the country which is essential in formulating and impler... programs that aim to improve the quality of life of the Filipinos, in accordance with the governm... particularly expanding energy access and strengthening consumer and welfare protection.
Data collection purpose	The specific objectives are as follows: Provide detailed information on the changing energy consumption patterns in Filipino househol... conditions affecting energy use; Establish the fuel/energy mix of the residential sector based on its energy consumption; Determine the most energy consuming appliances, devices and equipment used for household a... Assess the current energy efficiency and conservation techniques in the residential sector vis-a-v... implementation of energy consumption regulation for household appliances and equipment; Measure and analyze the incidence of inter-fuel substitution in the households; and Determine awareness and/or perception of the household on major energy issues (i.e. nuclear e... labelling program, renewable energy, natural gas) in the energy sector.

Data collection

Sample design	Multi stage sampling design using the 2003 Master Sample (MS) developed by the Philippine Stat...

HECS FORM 1
NSCB Approval No.: NSO-1114-01
Expires: December 31, 2012

CONFIDENTIALITY
This survey is authorized by Commonwealth Act 591.
All information obtained will be strictly held confidential.

Republic of the Philippines
NATIONAL STATISTICS OFFICE and DEPARTMENT OF ENERGY

2011 HOUSEHOLD ENERGY CONSUMPTION SURVEY

Booklet ___ of ____ booklet...

PART I - A. GEOGRAPHIC IDENTIFICATION AND OTHER INFORMATION

GEOGRAPHIC IDENTIFICATION CODES
Province _____
Mun/City _____
Barangay _____
EA _____
SHSN _____
HCN _____
Number of Households in the Housing Unit _____

INTERVIEW RECORD

	1	2	3
Visit Indicator			
Date of Visit			
Time Began			
Time Ended			
Result Code*			

FINAL RESULT CODE* _____

*RESULT CODES
01 - Completed Interview
02 - Refusal
03 - No household member at home or No competent respondent at home at time of visit
04 - Entire household absent for extended period of time
05 - Vacant housing unit
06 - Housing unit destroyed
07 - Address not a housing unit
08 - Housing unit not found
09 - Critical or flooded area
10 - Others (specify)

Name of Respondent _____
Sex _____ 1 Male 2 Female
Relationship to the Household Head _____
Address _____

CERTIFICATION

I hereby certify that the data gathered in this questionnaire were obtained/reviewed by the undersigned personally an... in accordance with instructions.

Signature over Printed Name of Enumerator | Date Accomplished | Signature over Printed Name of Supervisor | Date Reviewed

Measuring/metering example: Canada Vehicle Use Study

Canadian Vehicle Use Study (CVUS) by Transport Canada Vehicles equipped with GPS and a screen so that driver inputs some information regarding the trip.

Data collected not only for energy purposes: "The electronic data logger also uses the GPS technology and records the spatial coordinates that could be used in analysis of traffic congestion, road safety and infrastructure planning"

Elements collected:

• Trip patterns over time

• Fuel consumption over time

• Carrier utilisation pattern and impact on fuel economy

• Impact of fuel switching on vehicle fuel economy

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