

From end-use data to national statistics in France

G20 Energy End-Use Data and Energy Efficiency Metrics initiative, 22th November 2019

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Framework

- Energy statistics unit : Ministry (energy, environment, transport, housing) and National Statistical Office.
- Reporting for regulations on European statistics
 - Disaggregation per end-use implemented for residential since 2017
 - In discussion for industry and services
 - Regulations on environmental accounts : includes energy and emissions accounts
- Reporting for IEA energy efficiency database

End-use data for industry

- Annual mandatory survey collected by NSO
 - Industrial plants (excluding energy sector) with >20 employees or high consuming sectors
 - High sampling (8 500 / 22 000) and high response (> 80%) rates
- Survey covers consumption and prices
 - All energies covered (electricity, gas and heat, 4 coal products, 4 oil products, H2, detailed list of renewable or non-renewable waste-type fuels).
 - End use (percentage per energy) according to 5 modalities (industrial processes, feedstock, heat production, electricity production, space heating and others)
- Statistical processing year per year done by NSO

End-use data for industry

- Complementary sources to get national statistics
 - Specific census for iron and steel (detailed coal consumption), petrochemical plants (oil products as feedstocks)
 - Administrative data (eg. natural gas as feedstock)
 - Survey to installations for electricity and cogeneration
- Survey is suitable for disaggregation of consumption for sub-sectors
 - energy account at 2-digits level
 - T&D operators administrative and census data allow for consistency check
- Quality of response for end-use is questionable
 - End-use to be reported on a semi-annual basis

Data for residential and services

- Data collection : delegation to CEREN (research center funded by national environment agency, main electricity and gas T&D operators)
 - multiple surveys (services and residential, not mandatory)
- Statistical processing done by CEREN
 - Complemented by econometrics to get disaggregated data
 - 6 end-use x 9 fuels x 45 sub-sectors (NACE)
- Methodology is examined by French NSO
 - Ensure quality requirements for national statistics are met

Data for residential and services

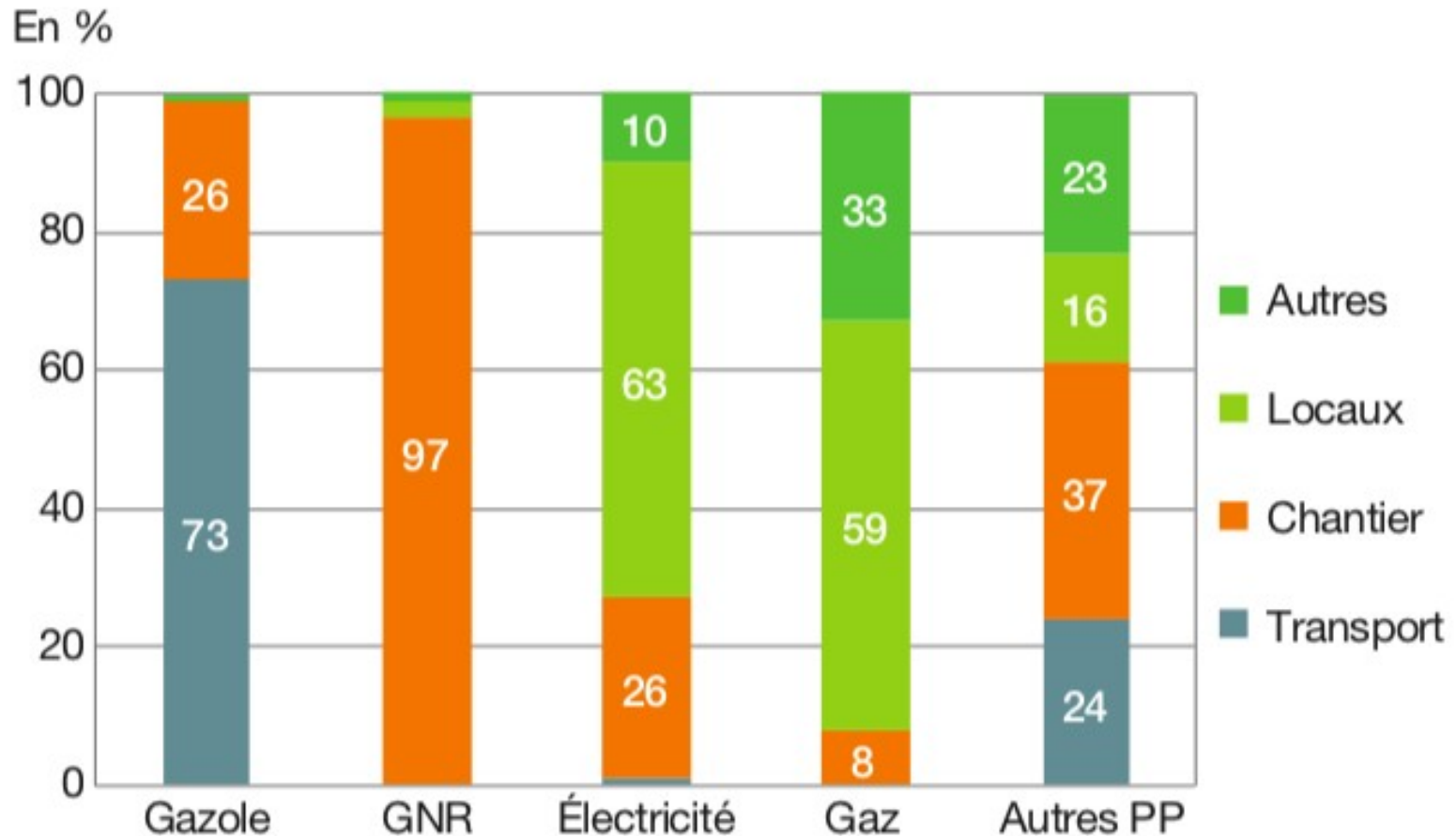
- National statistics rely on multi-sources treatment per energy (electricity, gas, heat) to get national energy balances
 - administrative data and surveys from transport and distribution operators
 - complemented by other demand-side surveys (eg. housing survey for residential wood)
- Ceren results to get share per end-use and service sub-sectors
- Discrepancies between absolute level of final consumptions to be further investigated

Further requirements for energy efficiency

- Statistical information is partial for energy end-use data
 - No detailed statistical data for non-buildings electricity consumption (data-centers, telecommunications)
 - No detailed data per type of appliances
 - Lack of energy data (or up-to-date data) on the demand side for some sub-sectors : Agriculture, Construction
- Improvements in transport sector for collection and modeling, with tight link between energy and activity data

Thank you for your attention

Share of end-use per energy in construction (2014 survey)



Note : GNR = gazole non routier, PP = produits pétroliers, EnR = énergies renouvelables.

Source : SDES, enquête sur la consommation d'énergie dans la construction (ECEC)