The BIEE Programme
in Latin America and the Caribbean

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2016 InterEnerStat Workshop: Energy efficiency and end-use data and Meeting of Organisations

13th December 2016

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BIEE Programme (**B**ase de **I**ndicadores de EE)

ODYSSEE – MURE Initiative

- ODYSSEE: the BEST regional implementation strategy of an EE indicators database

- Implemented by ADEME in 29 + 1 EU countries

- Web: http://www.odyssee-indicators.org/

- MURE: A description of different policies and programs on EE implemented by EU countries

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Development Account ROA 234/8

- "*Towards a Low Carbon Economy in Latin America: Policy Options for Energy Efficiency and Innovation*" 2012 – 2015

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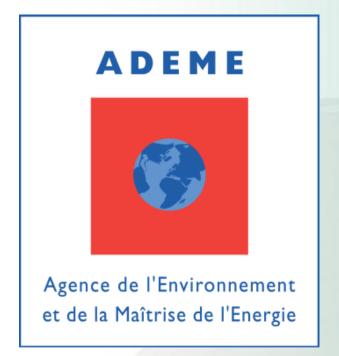# Cooperation Programme CEPAL - BMZ/GIZ

- *"Structural change for sustainable and inclusive development in Latin America and the Caribbean"*

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Technical cooperation agreement with the ADEME

- *"Technical Assistance in the production, management and analysis of Energy Efficiency Indicators in some Latin American countries"*

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BIEE Programme: Objectives

- **Develop a database to assess policies and programs** on EE in the participant countries

- **Promote capacity building** on EE indicators and incorporate knowledge within the national energy authorities

- Define **a common baseline** based on available information

- Motivate the maturity in the implementation   of EE policies and programs based on monitoring, measure and standardization

- Promote the **comparability** (at the aggregate and sectoral level) to improve

- **Enhance regional coordination** on EE issues in the regional and global agenda.

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BIEE Programme participants:

- **Programme management:** ECLAC
- **Technical management**: Technical coordination Committee (ECLAC – ADEME) + ENERDATA
- **Operative structure**: Technical Coordination Committee + National coordination by means of the **National Teams / Focal points.**
- **19 Countries participating (all LA):**
  - ✓ **South America:** Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela
  - ✓ **Mesoamerica:** Costa Rica, El Salvador, Guatemala, Honduras, México ,Nicaragua, Panamá, Dominican Republic, Cuba

BIEE Programme: Process / Activities

1. **Governments commitments / designation of a Focal Point**

2. **Capacity Building Workshops** (presentation of the indicators' template, introduce the data compilation process, estimations and calculations, selection of indicators)

3. *Decentralized data collection process* (based on available information) (National consultants if needed)

4. **National database**

5. *Reporting including analysis and trends comparison: National Report on EE Monitoring*

6. **Website** + regional network of officers and experts

7. **Regional Meetings / International Event**

Eduardo NOBOA
INER, Equator

Carolina MENA
MIEMDNE, Uruguay

Bruno LAPILLONNE
ENERDATA, France

Ricardo GORINI
EPE, Brazil

Andre SCHUSCHNY
UN-ECLAC, Chile

29-30th Sept. 2015
Paris, France

http://www.cepal.org/drni/biee

Data Mapper

http://www.biee-cepal.enerdata.eu/

Sectors

"Macro" sector

DATA

- Macro-economic data: GDP by sector, exchange rates
- Demography (population)
- Energy balances data: primary and final energy consumption by sector: industry, transport, households, services, et agriculture
- Degree-days for cspace heating and climatic corrections (cooling degree-days)

INDICATORS

- Primary intensity*
- Final intensity: total and by sector*
- Ratio final/primary intensity

Energy sector

DATA

- Energy consumption of the power sector: own use of energy sector, oil&gas sector, refineries
- Power sector: production, imports/exports, consumption (inputs), losses, input of thermal plants
- Gas, charcoal, coke, blast furnace, biofuel: input, production

INDICATORS

- Efficiency of energy transformation
- Efficiency of power sector (average, thermal)
- Efficiency of refineries;
- Efficiency of gas plants, charcoal plants, coke power plants
- Power & transmission losses;
- Share of hydro and wind in gross electricity production;

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Industrial sector

DATA

- Value added at constant price by industrial branch;
- Production index by industrial branch;
- Physical production for energy intensive products;
- Final energy consumption by industrial branch;

INDICATORS

- Energy intensity by branch*
- Unit consumption by intensive products;
- Energy intensity at constant structure*;

Transport sector

DATA

- Stock and sales of vehicules by type
- Average distance per vehicle$
- Passenger and Goods traffic in pass-km & ton-km
- Energy consumption by mode and by type of road vehicles
- Specific consumption by vehicles (average, new)

INDICATORS

- Energy consumption per capita;
- Intensity;
- Energy cons. of road transport per vehicle;
- Unit consumption per car equivalent;
- Unit consumption per vehicle;
- Consumption per unit of traffic;
- Mobility in public transport per capita;
- Share of public transport for passengers;
- Share of non-road for goods.

Household sector

DATA

- Number of households;
- Annual construction;
- Caracteristics of dwellings: number by fuel and end-use; floor area;
- Electrical appliances: stock, sales, equipement rate; specific consumption;
- Efficient equipment (CFL, solar water heaters, biomass coking stove): number, sales;
- Energy consumption: by end uses;
- Specific consumption of new dwellings

INDICATORS

- Energy intensity;
- Electricity consumption per electrified households;
- Energy (electricity) consumption per households;
- Energy consumption per households and climate correccted;
- Energy consumption of space heating per dwelling, per m2, with climate corrections;
- Electricity consumption for air conditioning; per dwelling, per m2, with climate corrections;
- Energy consumption of cooking
- SHW: installed capacity; % dwellings; heat production;
- Efficient equipment (label A or equivalent): refrigerator, washing machine, AC;

Service sector

DATA

- Energy consumption of services (public & commercial);
- Energy consumption by branches (8 branches);
- Energy consumption by fuel and end-uses;
- Floor area of buildings;
- Annual construction of buildings;
- Value added by branches;
- Activity data: nb of beds in hospitals, pupils/students, person-nights in hotels-restaurants.

INDICATORS

- Energy (and electricity) intensity (real and normal climate);
- Energy (and electricity) consumption per employee and by branches;
- Electricity consumption of public lighting per capita;
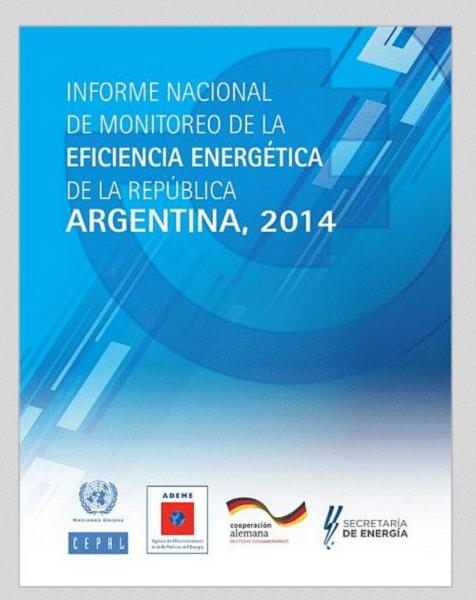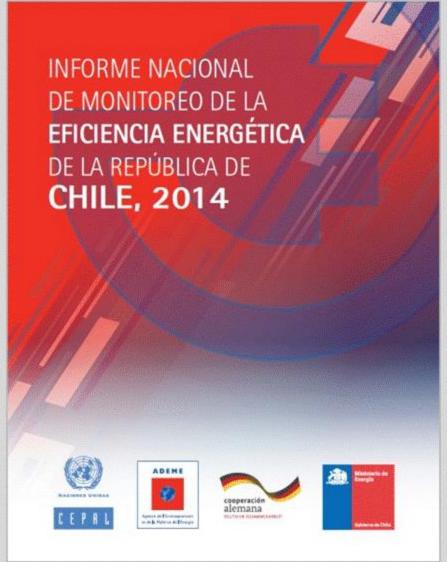- Electricity consumption of air conditioning per employee and/or m2 (observed and at normal climate)

Agricultural sector

- *Macro indicators:*
  - ✓ Total energy intensity / Diesel intensity / Electric intensity
- *Macro indicators by activity*
  - ✓ Energy intensities separated for agriculture, fishing and forestry
- *Explanatory indicators of energy intensity*
  - ✓ Rate of mechanization of agriculture
  - ✓ % of agriculture area with irrigation
  - ✓ Rate of equipment in electric and diesel pumps
- Specific consumption for fishing per boat
- Specific consumption by type of crop

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DE MONITOREO DE LA
EFICIENCIA ENERGÉTICA
DE LA REPÚBLICA
ARGENTINA, 2014

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CHILE, 2014

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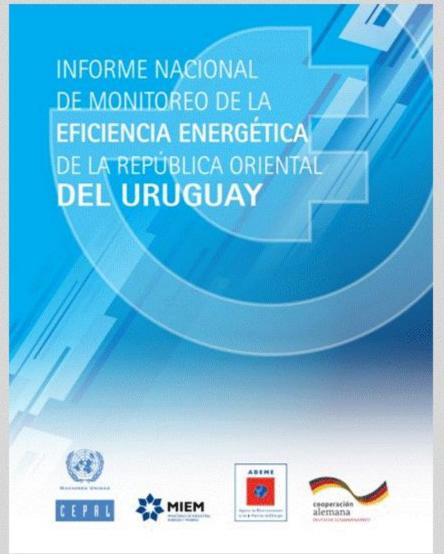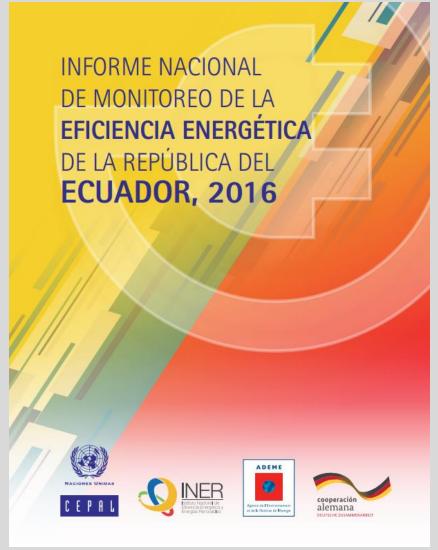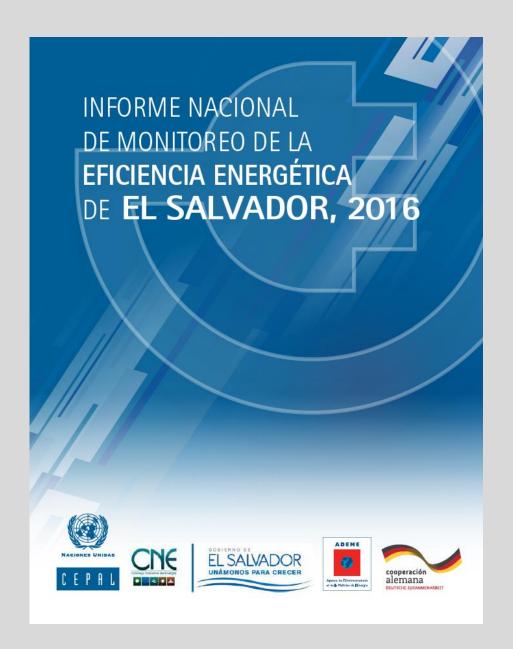Monitoreando la eficiencia energética en América Latina

http://kcy.me/2e9mk

Activities performed

- Almost 140 experts and officers participated in the activities

- 16 regional workshops

- 2 Regional (Cartagena & Rio) and 1 International Meeting (ADEME / France)

- Dedicated sessions in the last 5 Regional Political Dialogues on EE

- 2 European technical tour visiting GIZ, IEA, ADEME, WEC, InterSolar, etc.

- 14 national consultants hired

- Web, Social Network, DataMapper

Data coverage

- Macro: 100 % based on 12 indicators

- Energy Sector: 95% based on 6 indicators

- Household sector: 75% based on 9 indicators

- Transport sector: 60% based on 14 indicators

- Industry sector: 55% based on 16 indicators

- Service sector: 25% based on 14 indicators

- Agricultural sector: 60% based on 4 indicators

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Problems found

- Very few officers in charge of energy efficiency issues in the countries.

- High turnover of staff, especially when management changes with high probability of de-priorization of the initiative

- Deficient culture information sharing.

- Large information gaps or, sometimes, inconsistent information were found.

Regarding End-Uses Data

- ECLAC recommend to their member states the end-uses data compilation for energy planning and so on, but it's compilation and calculation is costly and need International cooperation support.

- Under the BIEE Initiative most of the participating countries use partially end – uses data, but not systematically.

- SE4ALL / SDG Access Pillar: we are starting to use household / multipurpose / life conditions surveys to analyze: Affordability in access.

- This will be an opportunity to compile information about where LAC are and how can this surveys be improved in the area of end use energy information.

Thank you

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Natural Resources and Infraestructure Division

ECLAC – United Nations