

# ***Description of Current Regulatory Practices for the Promotion of Energy Efficiency – Energy Regulators' report***

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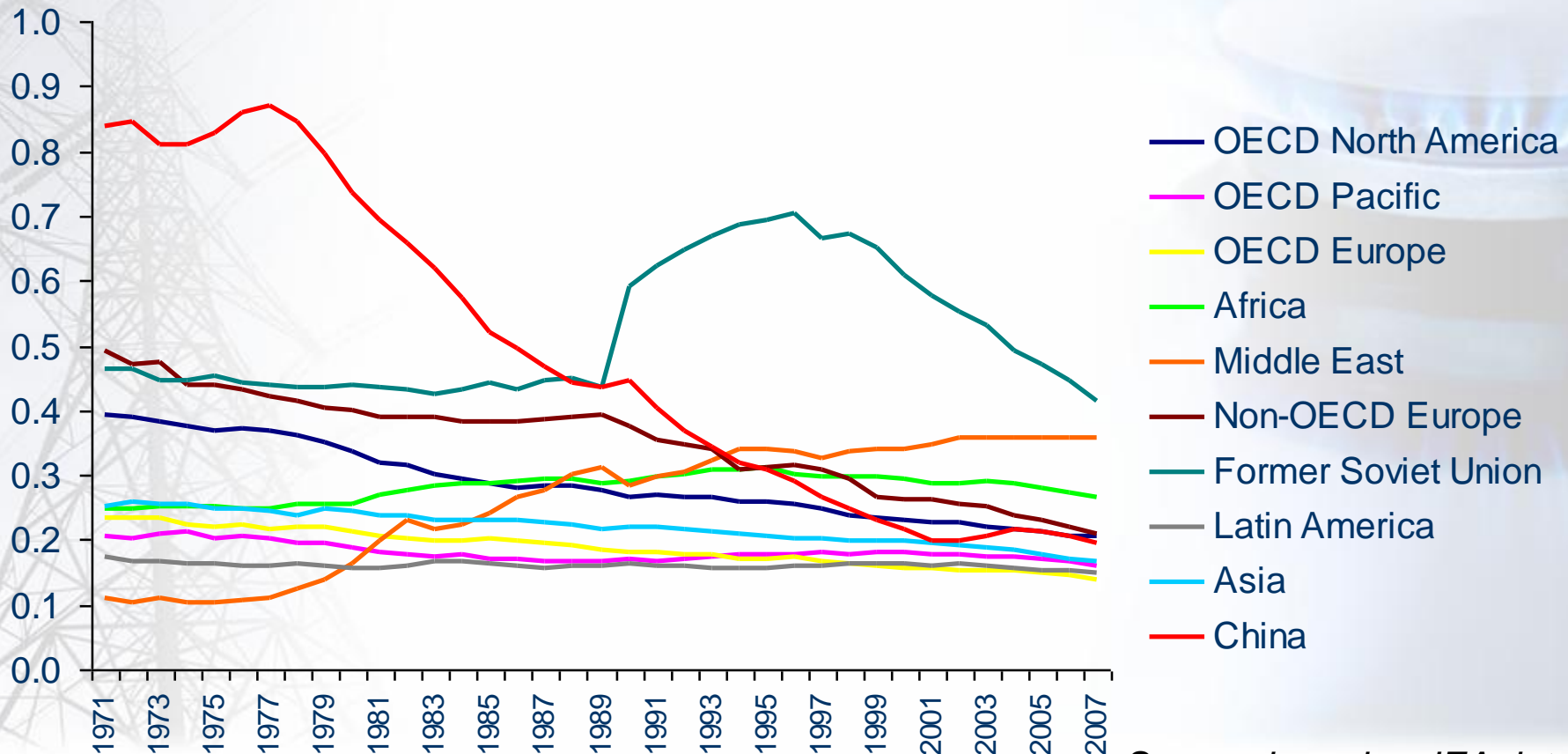
Brussels, 12 April 2011

- Context: the energy efficiency challenge and scope of the report
- Findings: examples of practices
- Findings: the role of energy regulators
- Further work

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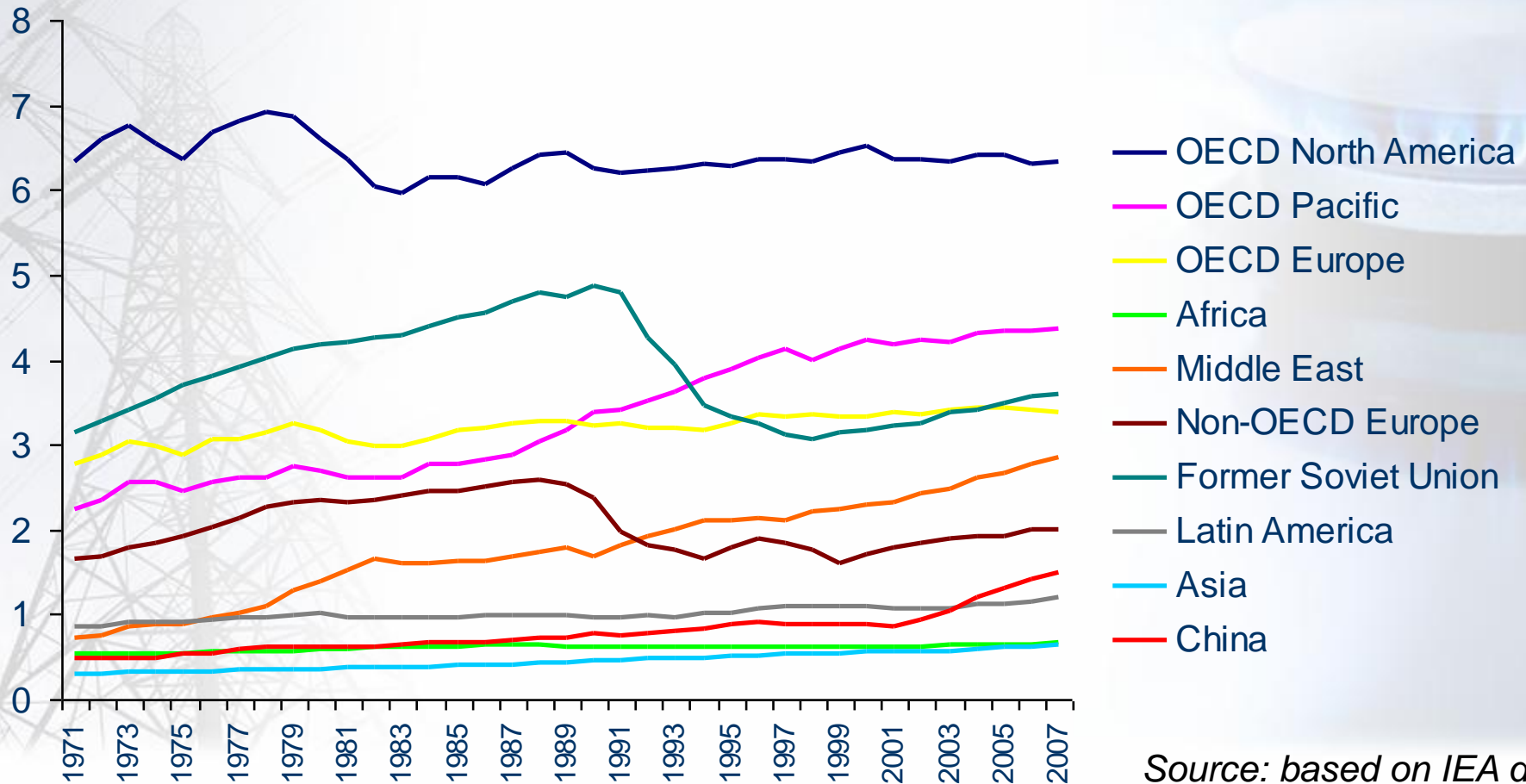
**Total primary energy supply / GDP using purchasing power parities (Mtoe/billion 2000 US dollars)**



Source: based on IEA data



## Total primary energy supply / population (toe/capita)



Source: based on IEA data



# World regulatory approaches to energy efficiency



Energy efficiency policies and measures have been grouped into:

- **Legal and regulatory obligations,**
- **Financial instruments,**
- **Market-based incentives** (tradable certificates, tenders and DSM),
- **Voluntary agreements,**
- **Energy audits,**
- **Consumer education and information provision** (including billing regulation and smart metering),
- **Provisions in the public sector.**

The sources of information for the policies and measures described are:

- Data collected by means of an ad hoc ICER questionnaire, circulated to Regional Regulatory Associations and National Energy Regulators;
- Data and documents provided by Regional Associations;
- Data and documents provided by External Organisations or publicly available.

# Scope of the analysis

Data have been organised by continent and cover the following jurisdictions:

- **Africa and the Middle East:** Algeria, Egypt, Israel, Jordan, Morocco, Saudi Arabia, South Africa, Togo and Tunisia.
- **North America:** Canada (Alberta, British Columbia, Nova Scotia and Ontario), Mexico and USA (California, Maine, Massachusetts, Minnesota, New York, Oregon, Texas, Vermont, Washington and Wisconsin).
- **South America:** Brazil and Uruguay.
- **Asia:** China, India and Japan.
- **Australia**
- **Europe:** EU27 Member States, Armenia, Croatia, Macedonia, Norway, the Russian Federation and Ukraine.

# A challenging task

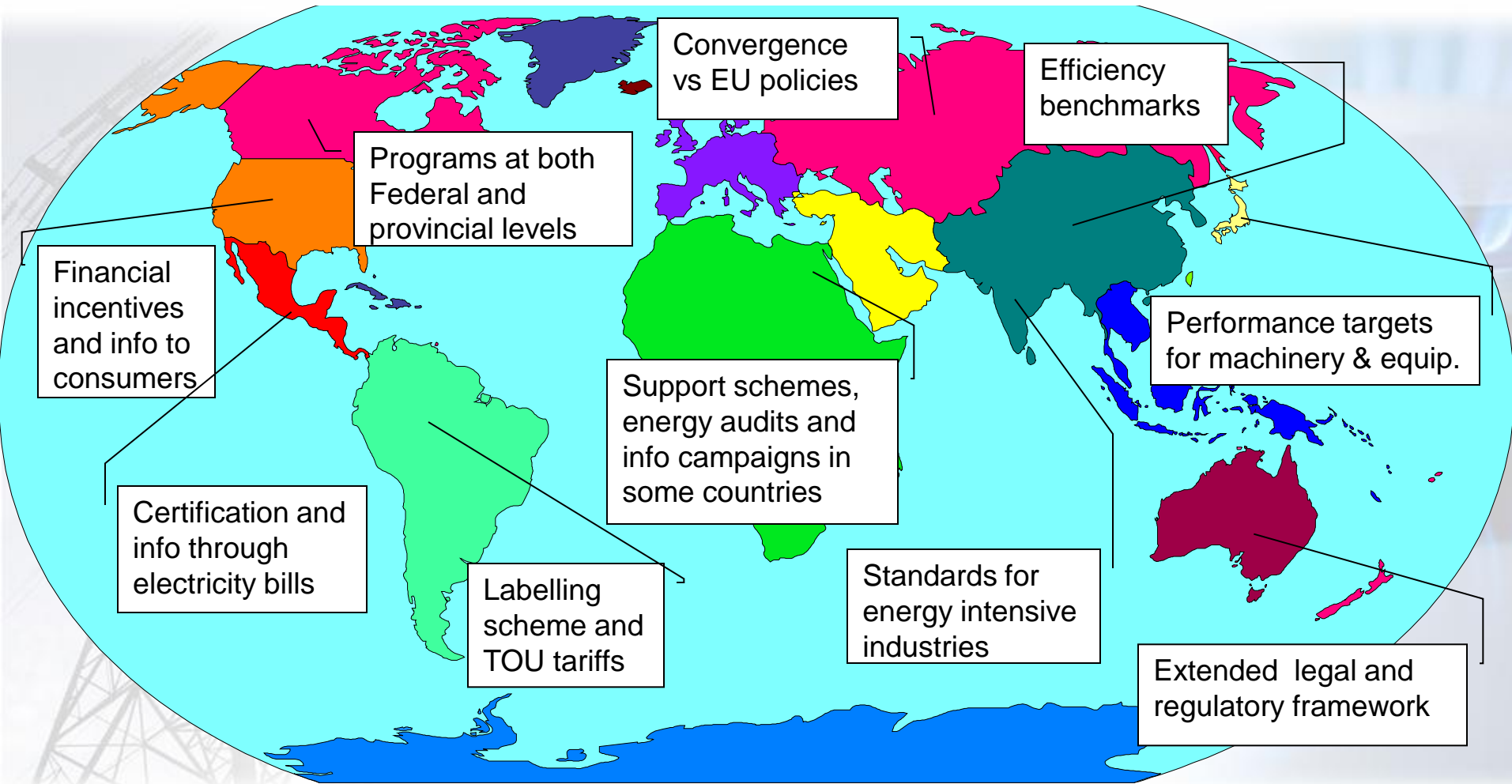
In the preparation of the report we encountered a number of challenges:

- Energy efficiency is a relatively under-researched field in comparison with its importance as an area of great policy interest in tackling climate change.
- There is very limited systematic gathering of information on energy efficiency beyond national or regional boundaries.
- Comparative analysis of the different approaches used to promote energy efficiency worldwide is also very limited.



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# Energy Efficiency outside Europe



## EU 27 + Norway and Croatia



- Established legal and regulatory framework to promote energy efficiency and to create the conditions for the development of a market for energy services.
- In 2007 the EU Council committed to deliver the 20% potential for cuts in primary energy consumption by 2020.
- In most countries traditional financial tools and regulatory instruments have been adopted to boost energy efficiency, in particular in the residential sector.
- Some countries have introduced innovative measures, such as the Portuguese “*Efficiency Cheque*”.
- Austria and the United Kingdom established a link between energy efficiency support and social policy (programs for schools and low-income households).

## EU 27 + Norway and Croatia (cntd)



- Market-based instruments:
  - tradable energy efficiency certificates systems ("*White Certificates*") adopted by, for example, France and Italy
  - tender mechanism introduced in Portugal to select measures through a competitive procedure.
- Voluntary agreements between state/local governments and the business community have been successfully adopted by Northern countries.
- Roll-out of electricity smart meters adopted in 5 countries; under discussion in another 12 countries.
- So far Demand-Side Management (DSM) programs include mostly load interruption and time-of-use tariffs.

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# The role of National Regulatory Authorities for the promotion of energy efficiency



- Competencies of Energy Regulators vary from country to country and States or Provinces in federal countries such as the USA and Canada.
- Regulators in the most developed countries seem to have at least some competencies, especially with regard to end-use measures, roll-out of smart meters, setting DSM and administration of energy efficiency programmes, although policy usually rests with governments.
- In many countries ad hoc governmental agencies have been set up for the implementation and monitoring of measures related to energy efficiency.

# The National Regulatory Authorities in Europe (I)



- Most European Energy Regulators don't have relevant competences on energy efficiency matters; these rest mainly with the government and ad hoc governmental agencies.
- Some Energy Regulators play a role in the management of market-based schemes and/or in the roll-out of smart meters.
- Regulators responsible for network tariffs: cost-reflective not incentives for increased sales.
- Some regulators responsible for billing: importance of clarity and enabling customers can understand.
- Some regulators involved in information dissemination activities to raise public awareness on energy-saving practices.

# The National Regulatory Authorities in Europe (II)



In particular:

- **E-Control** (Austria) has competences for metering systems (smart meters) and information on billing.
- **CREG** (Belgium), **CRE** (France) and **EI** (Sweden) are involved in the development of advanced metering.
- **HEO** (Hungary) participates in the committees evaluating energy saving tenders.
- **AEEG** (Italy) is responsible for the definition, implementation, administration, monitoring and enforcement of the white certificates scheme; besides, it integrates promotion of energy efficiency in regulatory measures.
- **NVE** (Norway) has a role in implementing Directives for end-use energy efficiency and gives advice to the Ministry of Petroleum and Energy.
- **ERO** (Poland) plays a role in smart metering roll-out; moreover, it will probably have a role in managing the tradable white certificates scheme.
- **ERSE** (Portugal) manages the tender mechanism for energy efficiency programs; in particular, it receives the applications to the programmes, evaluates them according to a pre-defined metric, monitors the progress of measures and issues payment order to promoters.

# The National Regulatory Authorities in Europe (III)



- **ANRE** (Romania) took over the tasks of ARCE (former specialized body in the field of energy efficiency) in 2009 and now manages a Department for energy efficiency regulation.
- **URSO** (Slovak Rep.) has responsibilities in end-use energy efficiency.
- **CNE** (Spain) only takes actions when it receives a specific mandate.
- **OFGEM** (UK) has important duties relating to the environment and sustainable development. In particular:
  - ✓ It is committed to playing its part in facilitating the transition to a low carbon energy sector.
  - ✓ It takes full account of the impact on the environment across the range of its decision-making.
  - ✓ It administers Government environmental programmes, including the *Climate Change Levy* exemption and the *Carbon Emissions Reduction Target* (CERT).
  - ✓ It has leads on the roll-out of smart meters initiative.



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Regulators work on Energy Efficiency practices is still work in progress". In the future ICER intends to:

- Identify case-studies that have proved particularly effective in order to facilitate the spread of good practice.
- Continue, on an ongoing basis, the gathering of information on regulatory approaches to foster energy efficiency, particularly in those regions where information is currently less detailed.
- Undertake further comparative analysis of the different approaches to foster energy efficiency as an aid to policy makers in this area, and assess in particular the prerequisites (e.g. legal, economic and technical criteria) for introducing specific regulatory practices.

CEER work on Guidelines of good practice for regulation of energy efficiency starting later in 2011.

# Want to learn more?

- Short ICER/CEER Factsheet “Regulators Practices for the Promotion of Energy Efficiency” ([www.energy-regulators.eu](http://www.energy-regulators.eu));
- CEER’s Sustainable Development Report (2009) ([www.energy-regulators.eu](http://www.energy-regulators.eu));
- The (detailed) ICER (2010) Energy Efficiency report and a (short) standalone Executive Summary ([www.icer-regulators.net](http://www.icer-regulators.net)); and
- MEDREG paper “Effects of the Introduction of Successful Mechanisms to Promote RES/CHP and Energy Efficiency in Non-EU Countries” (with description of case studies) ([www.medregregulators.org](http://www.medregregulators.org))