

Aktuálny európsky pohľad na
smart metering/smart grid. Rol
spotrebiteľa, ako ju iniciovať.

eFOCUS



Delivering a new deal for energy consumers

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Jan Panek

Head of Unit "Retail markets", DG ENERGY

- 1. State of Play - Recap**
- 2. Towards Energy Union with Empowered Consumers**
- 3. New Deal for Energy Consumers**

1. State of Play - Recap

Investments in SG projects so far concentrated mainly in a few Member States

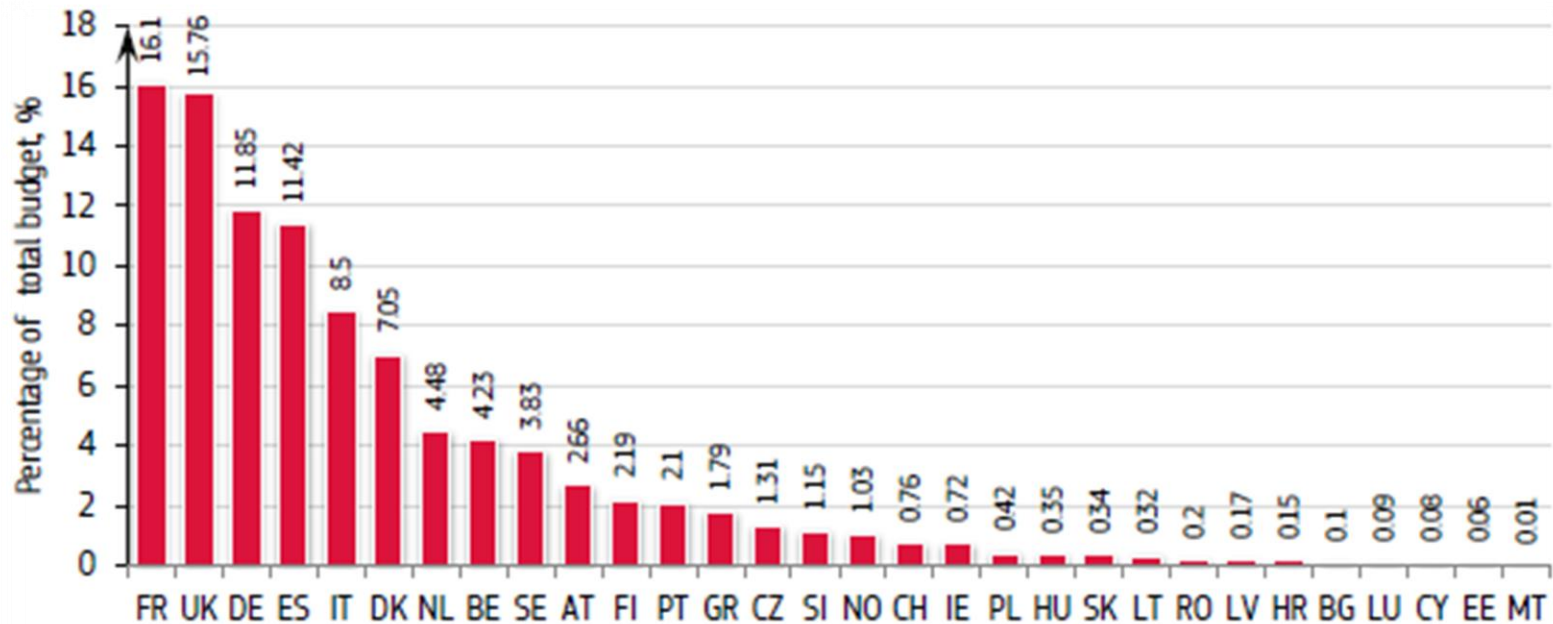
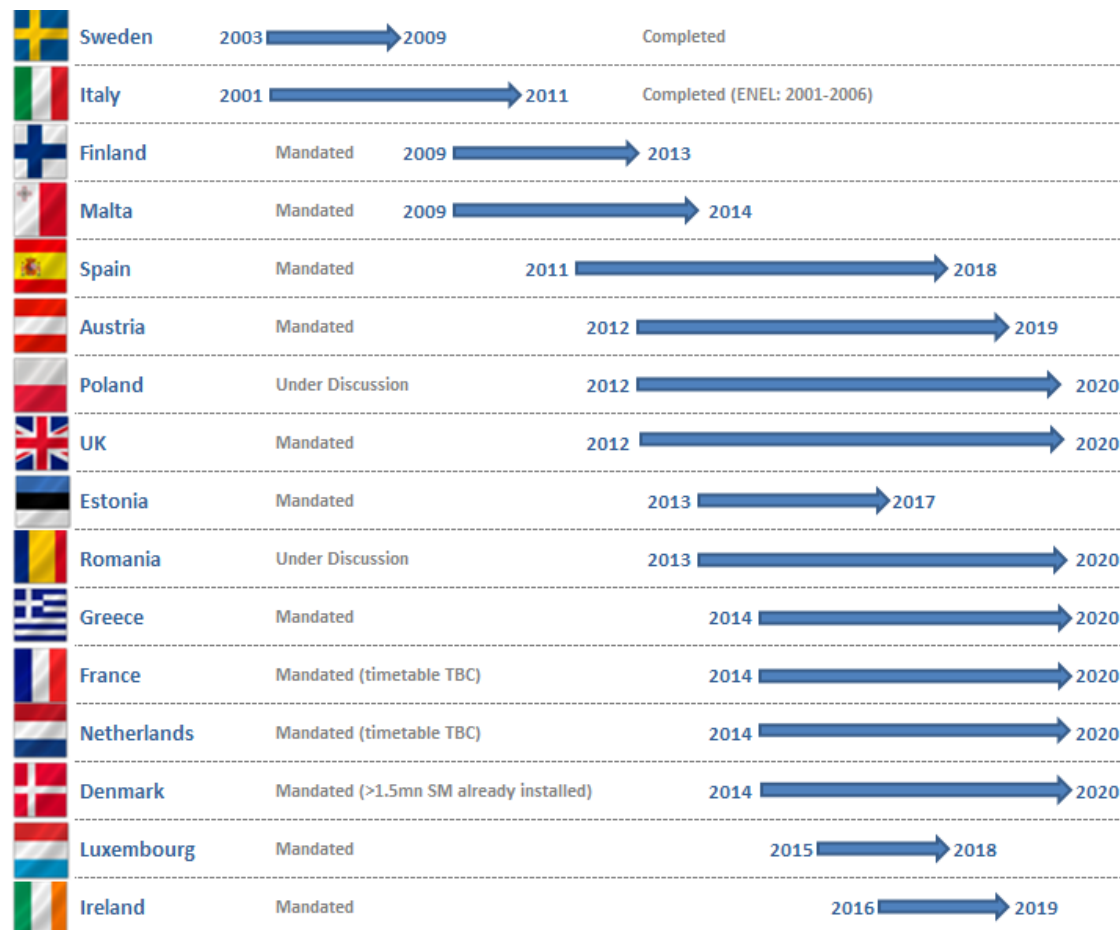


Figure 8 Percentage from total budget per country

Electricity: Wide-Scale Roll-out by 2020 in 16 MS



Altogether: roll-outs in 19 MS => 72% EU electricity consumers with a smart meter by 2020

Commission Benchmarking Report Issued 2014



"Benchmarking Smart Metering Deployment in the EU-27 with a focus on electricity"

- Commission Report (COM(2014) 356)
- Country fiches (SWD(2014) 188)
- Cost-benefit data analysis (SWD(2014) 189)

http://ec.europa.eu/energy/gas_electricity/smartgrids/smartgrids_en.htm

Striking Diversity in CBAs (Here Electricity)

	Range of values	Average (based on data from positively assessed cases)
Discount rate	3.1 to 10 %	5.7% $\pm$ 1.8% (70%)
Lifetime	8 to 20 years	15 $\pm$ 4 years (56%)
Energy saving	0 to 5 %	3% $\pm$ 1.3% (67%)
Peak load shifting	0.8 to 9.9%	n.a.
Cost per metering point	€77 to €766	€223 $\pm$ €143 (80%)
Benefit per metering point	€18 to €654	€309 $\pm$ €170 (75%)
Consumer benefits (as % of total benefits)	0.6 to 81%	n.a.

50% follow recommended functionalities

in the 16 Member States proceeding with large-scale smart metering roll-out by 2020

8 Member States (50% of those rolling-out) consider all recommended functionalities

CONSUMER

- a) Provide readings directly to the consumer and/or any 3rd party
- b) Update readings frequently enough to use energy saving schemes

METERING OPERATOR

- c) Allow remote reading by the operator
- d) Provide 2-way communication for maintenance and control
- e) Allow frequent enough readings for networking planning

COMMERCIAL ASPECTS OF SUPPLY

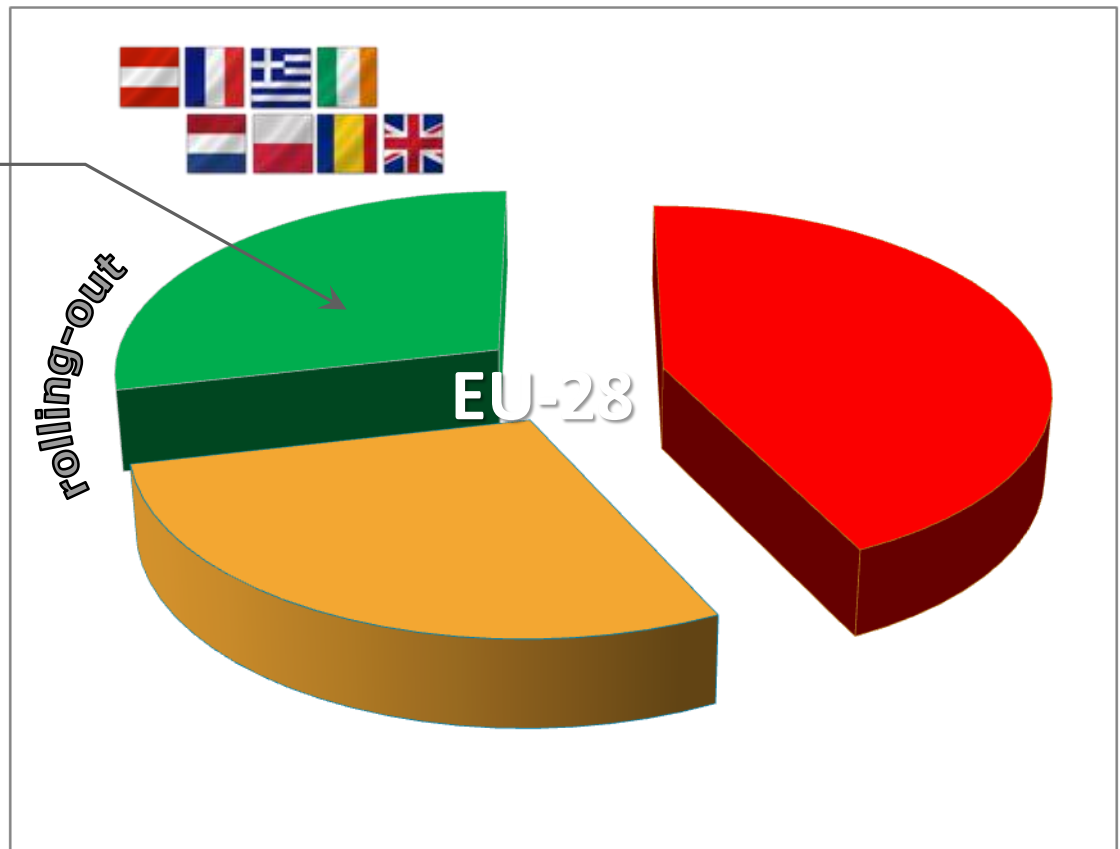
- f) Support advanced tariff system
- g) Remote ON/OFF control supply and/or flow or power limitation

SECURITY - DATA PROTECTION

- h) Provide secure data communications
- i) Fraud prevention and detection

DISTRIBUTED GENERATION

- j) Provide import/export and reactive metering



2. Towards Energy Union with Empowered Consumers

Energy Union – 5 Pillars

- ✓ Energy security, solidarity and trust
- ✓ Integrated European energy market
- ✓ Energy efficiency to moderate demand
- ✓ Decarbonisation of the economy
- ✓ Research, Innovation and Competitiveness



Energy Union "with citizens at its core, where citizens take ownership of the energy transition, benefit from new technologies to reduce their bills, [and] participate actively in the market"

New deal for energy consumers

Key **obstacles** at present:

- Lack of info on costs & consumption
- Limited transparency in offers
- Impediments to self-generation/self-consumption
- Low incentives for consumer action → poor competition
- Increasing network charges, taxes and levies
- Underdeveloped energy services and demand response
- Slow uptake of advanced technologies and **energy efficiency**



Summer Package

- ✓ Market Design Initiative
- ✓ "New Deal" for Energy Consumers including
- ✓ Best practices on energy self-consumption
- ✓ ETS reform
- ✓ Energy Labelling



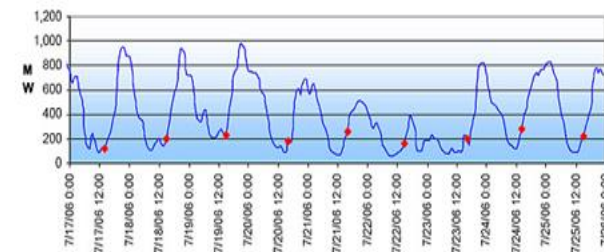
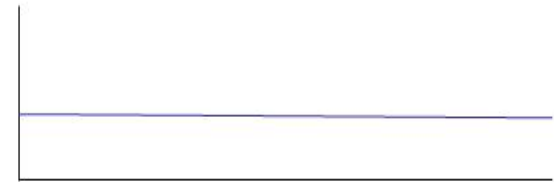
Market design Communication – why?

Previous legislative packages opened up markets

- Competition/unbundling rules, removing barriers for newcomers
- Regulatory oversight, harmonisation of technical rules, etc.

Game changer: Intermittent generation

- RES-share: from 26% to 50%
- From central to decentral
- From "base load" to variable
- Active not passive consumers



Emerging Trends in Energy Distribution

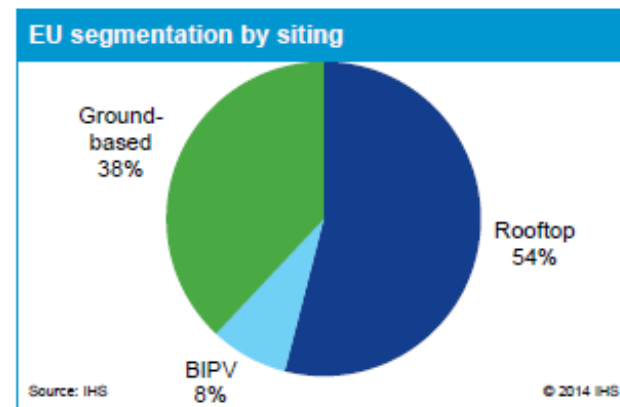
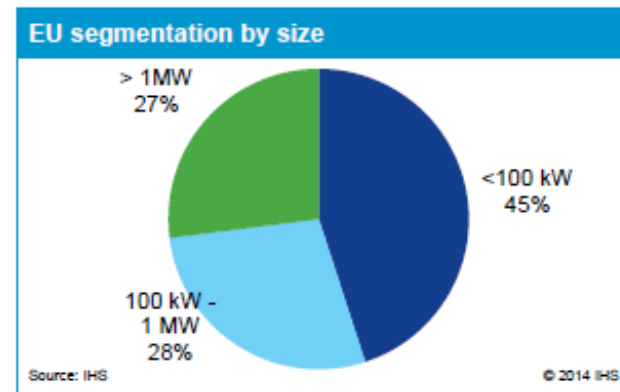
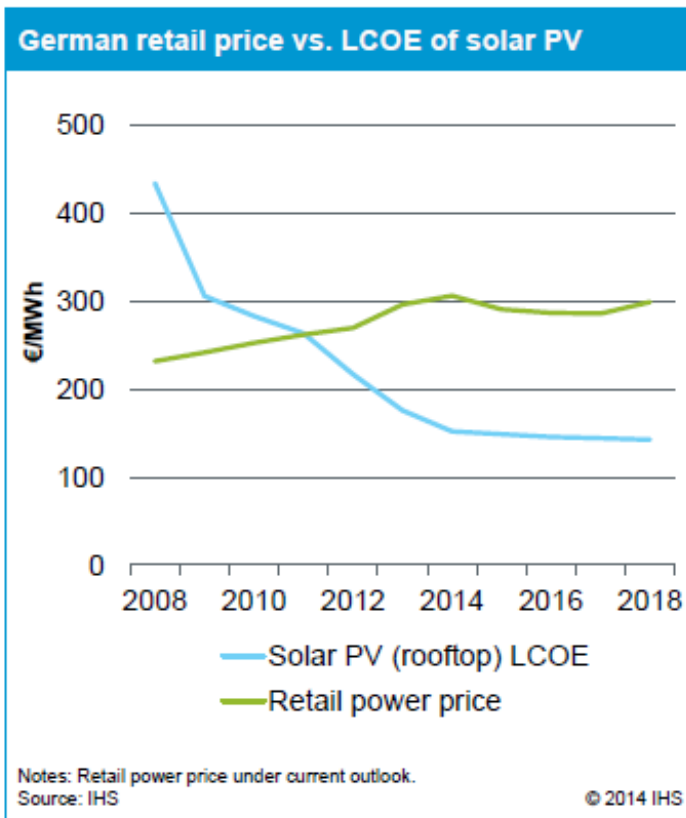
Generation:
Decentralized

New Loads

Energy Distribution:
New Flows

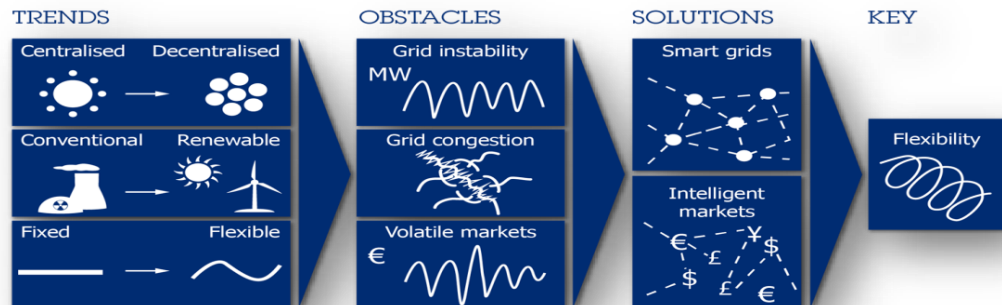


Solar PV – German Case for Illustration



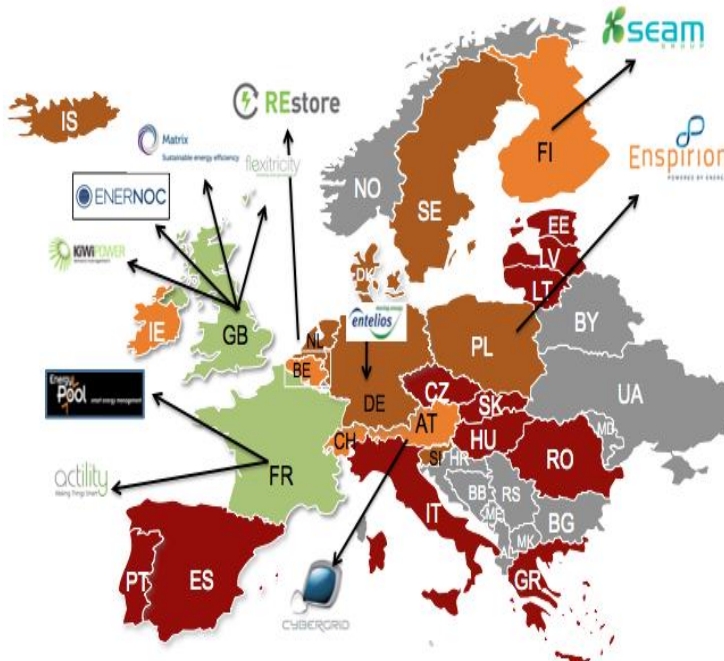
Flexible, connected markets needed

- RES integration requires flexible markets
- Demand response alongside better interconnections contribute to flexibility
- Markets should encompass a broader range of players including on the demand side



Demand Response: Flexibility with Consumer Value

Industrial DR already reality in some MS:



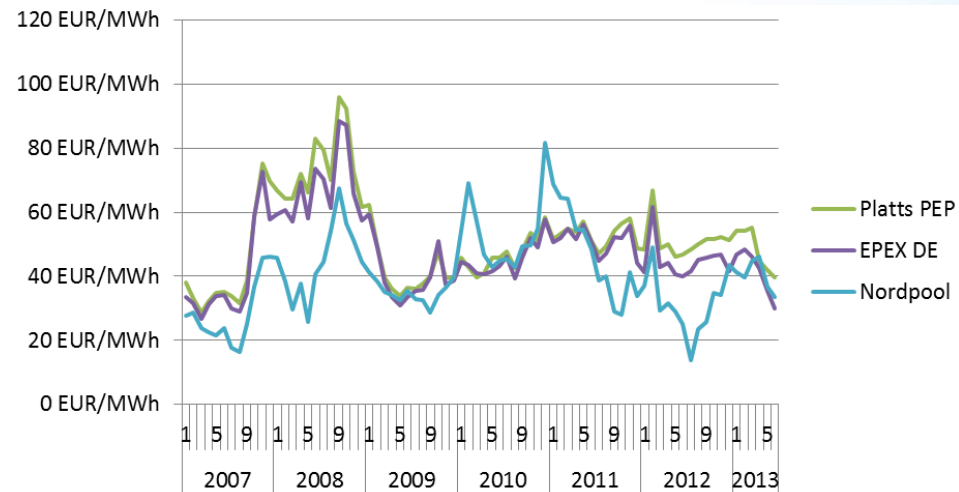
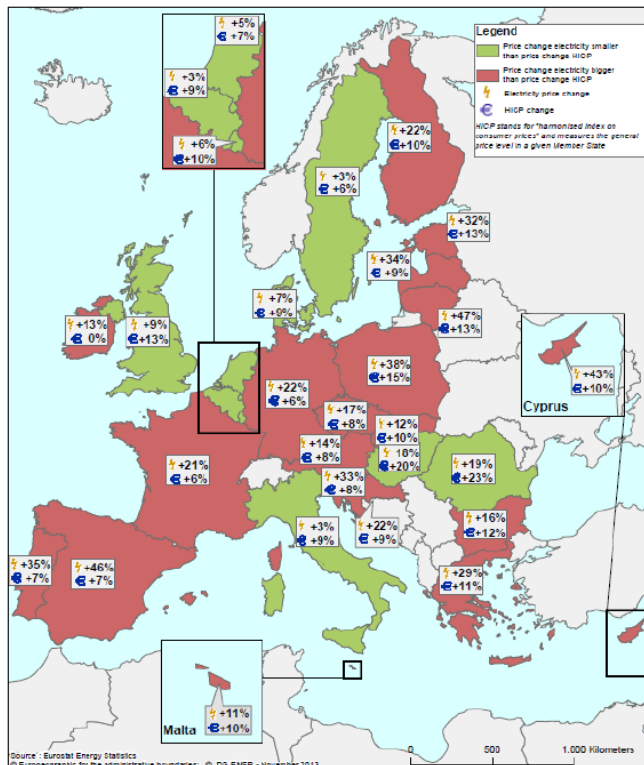
- Consumer-driven
- Market-based
- ↓energy bills (+ ↑grid stability)

How to get more of the same?
more DR in industry; DR also in households

3. New Deal for Energy Consumers

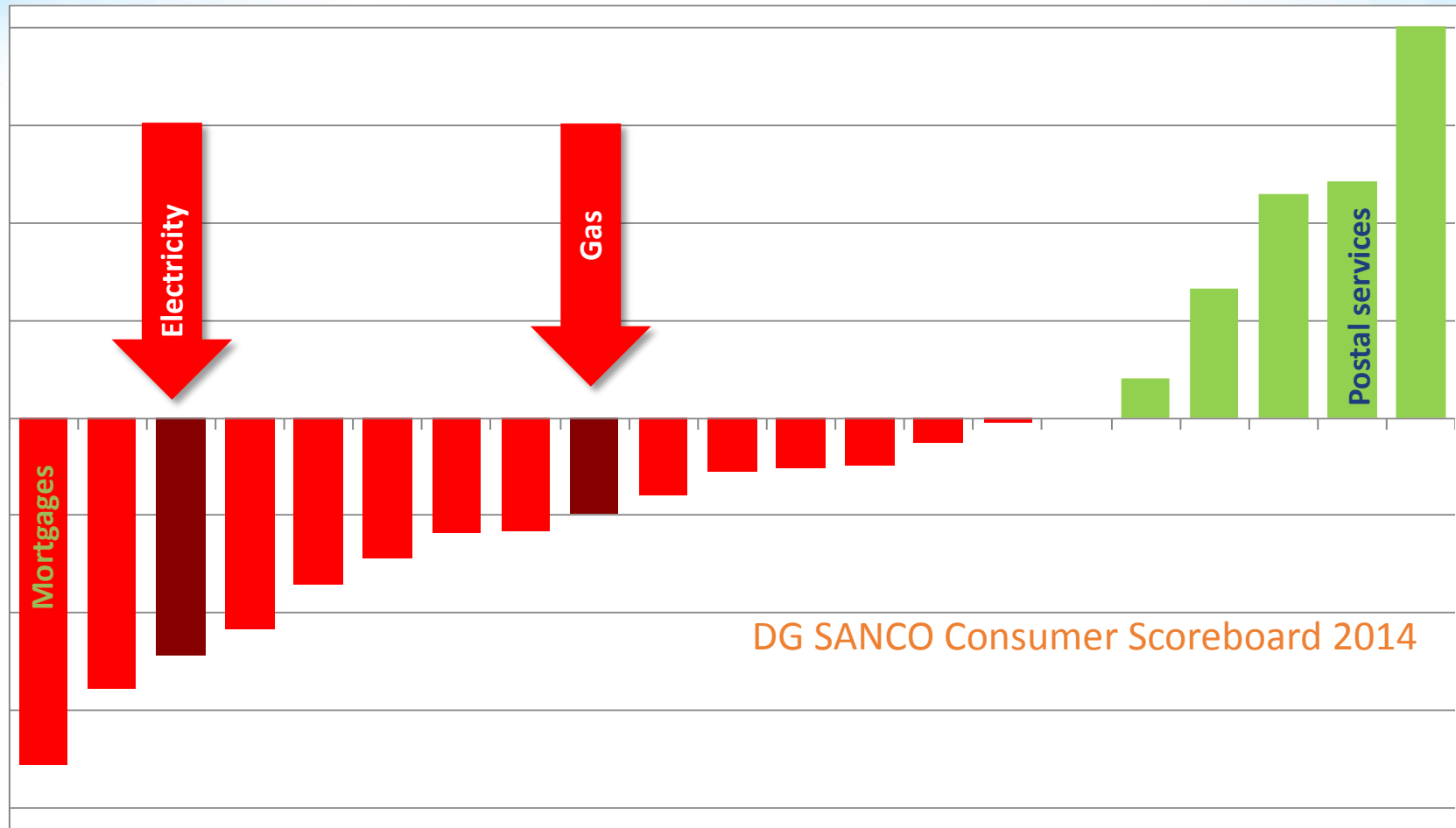
New deal for Consumers – why?

COMPARING PRICE CHANGES: ELECTRICITY VS GENERAL PRICE LEVEL
Electricity prices for median household consumers (2 500 kWh < Consumption < 5 000 kWh)
all taxes included
2008 - 2012% change
All prices in national currency



Falling wholesale prices...
...but rising retail prices.

Customer satisfaction below average



DG SANCO Consumer Scoreboard 2014

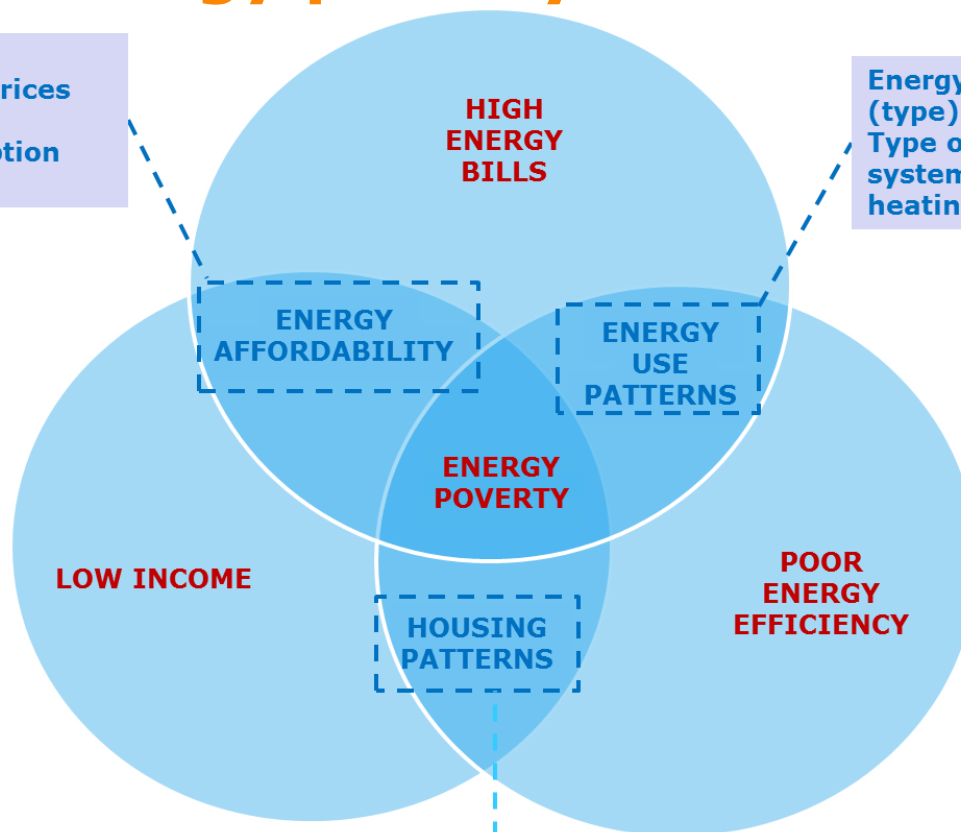


European
Commission

Energy poverty

Income
Energy prices
Energy
consumption
(level)

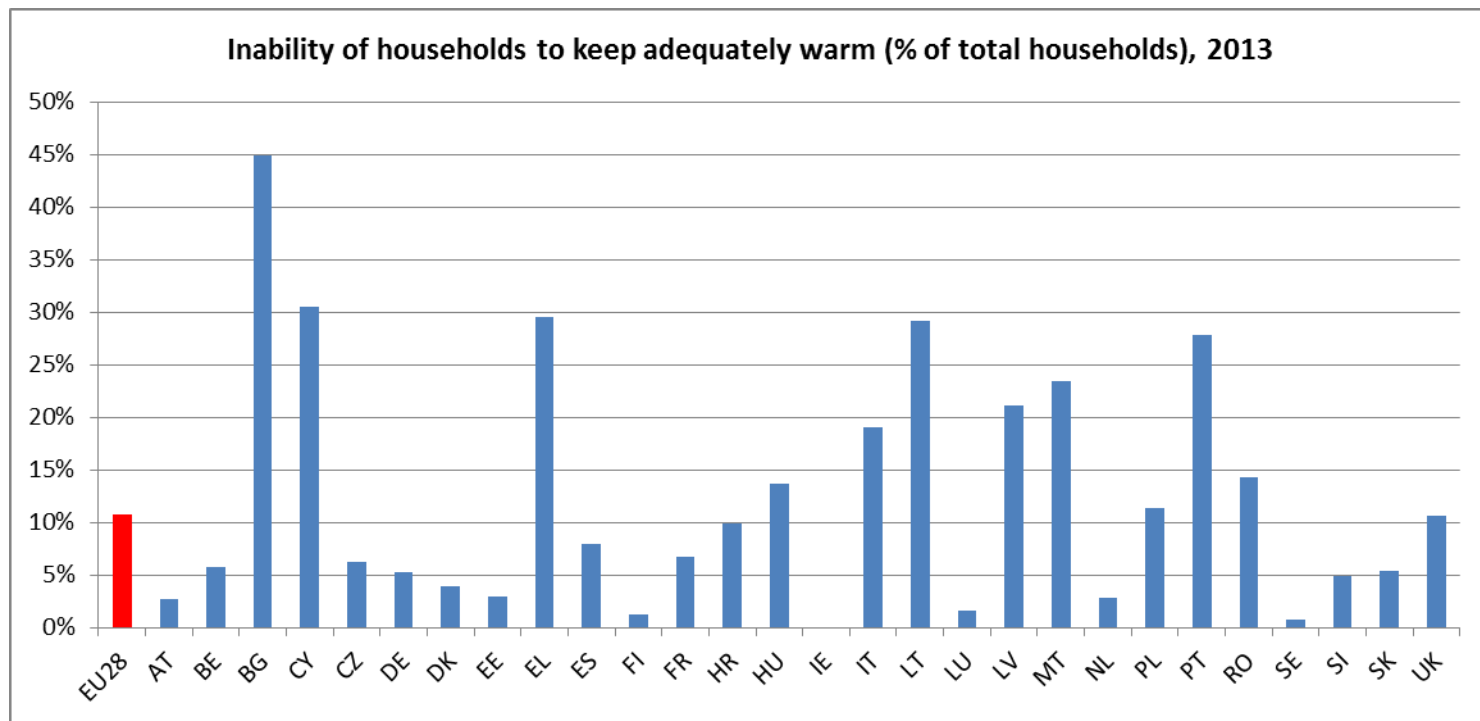
Energy consumption
(type)
Type of heating
system (e.g. central
heating)



Tenure system
Housing
characteristics

Country	Overall rank
Finland	1
Denmark	2
Sweden	3
Luxembourg	4
Czech Republic	5
Netherlands	6
Slovakia	7
Austria	8
Germany	9
France	10
UK	11
Malta	12
Belgium	13
Estonia	14
Ireland	15
Spain	16
Italy	17
Poland	18
Greece	19
Lithuania	20
Hungary	21
Slovenia	22
Portugal	23
Cyprus	24
Romania	25
Latvia	26
Bulgaria	27

Energy poverty affects basic life necessities



Empowerment (1)

I. Empowering consumers to act

- Better **information** on opportunities to save money
 - frequent access to reliable information on consumption, costs and type of energy source
 - transparent, competitive and comparable offers
 - Rewards
- Wider **choice** of action:
 - Simple, reliable switching
 - Demand response, self consumption (best practice)
 - Intermediaries, collective schemes/cooperatives



Empowerment (2)

I. Empowering consumers to act

- Updated consumer **rights & protection**
 - targeted protection of vulnerable (social policy/EE, price deregulation)
 - Collaboration of competent authorities (ucp)
 - Monitoring of energy poverty





Smartness

II. **Smart** homes and grids

- Enablers of energy transition, shift toward home
- Fully interoperable smart home appliances and components
- Access to fit-for-purpose smart metering systems
- Research, innovation and industry for international competitiveness
- Innovation-friendly, cost reflective, cost efficient and transparent network operations

Data

III. **Data** management and protection

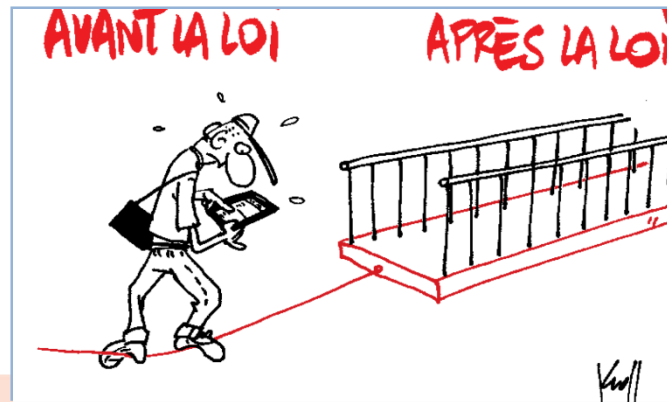
- Consumption and metering data 100% under consumer control
- Guaranteeing privacy and data protection
- Non-discriminatory, efficient handling of metering data to promote innovation and competition
- Important: neutrality of data access managers



Ensuring Privacy by Data Protection & Security

Data Protection

- Data Protection Impact Assessment (DPIA) template
- Data Protection Reform of Directive 95/46



Cyber-Security

- Identification of BATS for smart metering systems
- Trustworthy Network for experience sharing
- Minimum Security Measures

Follow-up of New Deal Communication

Impact assessments together with Market Design initiative

- Further studies on market linking, access to variable prices and creation of enablers for consumer engagement and innovation
- MD consultation

Legislative work end 2016

- Linkages to EED and RED revisions 2016

Local community action

- Covenant of Mayors, Mayors Adapt, Smart Cities

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