

CEER Workshop on Continuity of Supply Regulation by Incentives - Willingness to Pay and Accept

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- ❖ The Energy and climate change strategy
- ❖ Paying for supply quality
- ❖ Technological breakthroughs required

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The overall strategy

In March 2007 the 27 Heads of States and Governments unanimously agreed to:

- precise, legally quantified binding targets
- 20% GHG emissions in 2020
- 30% if there is an international climate agreement
- 20% share of renewables by 2020
- 20% more energy efficiency by 2020

To stay inside of the triangle of the 3 pillars of the EU energy policy:

- .Security of supply
- .Competitiveness
- .Sustainability



20, 20, 20 by 2020

- 20% renewables in the energy supply by a « Burden » sharing between the Member States, on the basis of the current share of RES and the GDP projections
 - The establishment of certificates of guarantees of origin for energy vectors derived from RES
 - A specific 10% target for sustainable renewable based fuels in transport, in each Member State, subject to the fact that biofuels are sustainable and that the 2nd generation biofuels becomes economically available

- - 20% greenhouse gas emissions compared to 1990
 - An improved ETS, auctioning, new sectors, new gases, no more NAPs
 - A « burden » sharing for emissions outside of the ETS, based on GDPs
 - - 30% if an international climate change agreement is in place

- a 20% improvement of the energy efficiency.



The Strategic Energy technology Plan

Objective : To develop the energy technologies which will allow for a new industrial revolution and deliver competitive growth with low carbon emissions

Proposing a joint integrated planning and European Industrial Initiatives in:

- European Wind Initiative
- Solar Europe Initiative
- Bio-energy Europe Initiative
- European Electricity Grid Initiative
- European CO₂ capture, transport and storage initiative
- Sustainable fission initiative (Gen IV)
- Fuel cells and hydrogen (JTI on-going)
- Fusion (ITER on-going)



Objective: a complete and well functioning internal market in electricity and natural gas

- effective separation of supply and production activities from the network operation
- further harmonisation of powers and enhanced independence of the national energy regulators
- creation of a mechanism for transmission systems operators to improve the coordination of network operation and grid security, cross-border trade and grid operations
- greater transparency in energy market operations



Provisions for consumers

A framework for the gradual establishment of a European retail market in the September 2007 package

Establishing a true European retail market is the ultimate goal of the internal electricity and gas markets.

Liberalisation in the retail market is important to ensure that all EU citizens benefit from competition. Retail markets also play a role in increasing peoples' awareness of domestic energy consumption and the cost of energy.

For this purpose, the Commission will set up a forum (by analogy with the Florence and the Madrid forums) which will allow focus on specific issues and will serve as a platform to promote the establishment of an EU retail market.



Provisions for consumers

It is obvious that freedom of choice for consumers must be accompanied by strong guarantees on the rights of the customer.

Vulnerable customers have already a high degree for protection in the current Directive to ensure that they will have access to the energy they need to lead a normal life.

These measures have however been incorrectly applied in some countries and to clarify the framework, the Commission proposes to define binding guidelines.

At the same time, the Commission proposes to strengthen the rights of consumers by giving them the right to change supplier at any time.

Provisions for consumers

The January 2008 Package:

The EU's 2020 commitments on greenhouse gas emissions, renewable energy sources and energy efficiency should underpin policy stability at every level and should encourage consumers and other players in the various sectors of energy supply and use.

The internal energy market should provide improved market access and **consumer choice**, and indeed new markets, in the coming years

Moreover, consumer feedback is being developed, with smart meters, improved energy bills or various calculators.

With significantly reduced energy demand, the energy import bill would be reduced correspondingly and consumers should see lower bills.



Provisions for consumers

In its Proposal for a Directive on Renewable Energy, the Commission establishes the '*Renewable Energy*' obligation which, besides requiring energy suppliers to include a given proportion of energy from renewable sources in their supply **it also requires energy consumers to include a given proportion of energy from renewable sources in their consumption.**

The Commission also proposes that Member States ensure that information on support measures is made available to consumers as they are available to builders, installers, architects and suppliers of heating, cooling and electricity equipment.



The future of energy
with the participation of
the consumers



ENERGY CONSUMERS, ENERGY MARKETS

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MARKET	CONSUMER	POLICY
NATIONAL MONOPOLIES	<ul style="list-style-type: none"> • NO CHOICE • PASSIVE "LOAD" 	CONSUMER "PROTECTION"
<ul style="list-style-type: none"> • FULLY LIBERALIZED • PARTLY INTEGRATED • SUPPLY-SIDE 	<ul style="list-style-type: none"> • FREEDOM OF CHOICE • ACTIVE CUSTOMER • PASSIVE "LOAD" 	RETAIL COMPETITION
<ul style="list-style-type: none"> • FULLY LIBERALIZED • FULLY INTEGRATED • SUPPLY & DEMAND 	<ul style="list-style-type: none"> • FREEDOM OF CHOICE • ACTIVE CUSTOMER • ACTIVE PARTICIPANT 	DEMAND PARTICIPATION (DEMAND RESPONSE)

ELECTRICITY SYSTEMS MODERNIZATION

ELECTRICITY SYSTEMS **CAN** CHANGE :

COST-EFFECTIVE TECHNOLOGIES **ARE** AVAILABLE

ELECTRICITY SYSTEMS **MUST** CHANGE IN ORDER TO ENABLE:

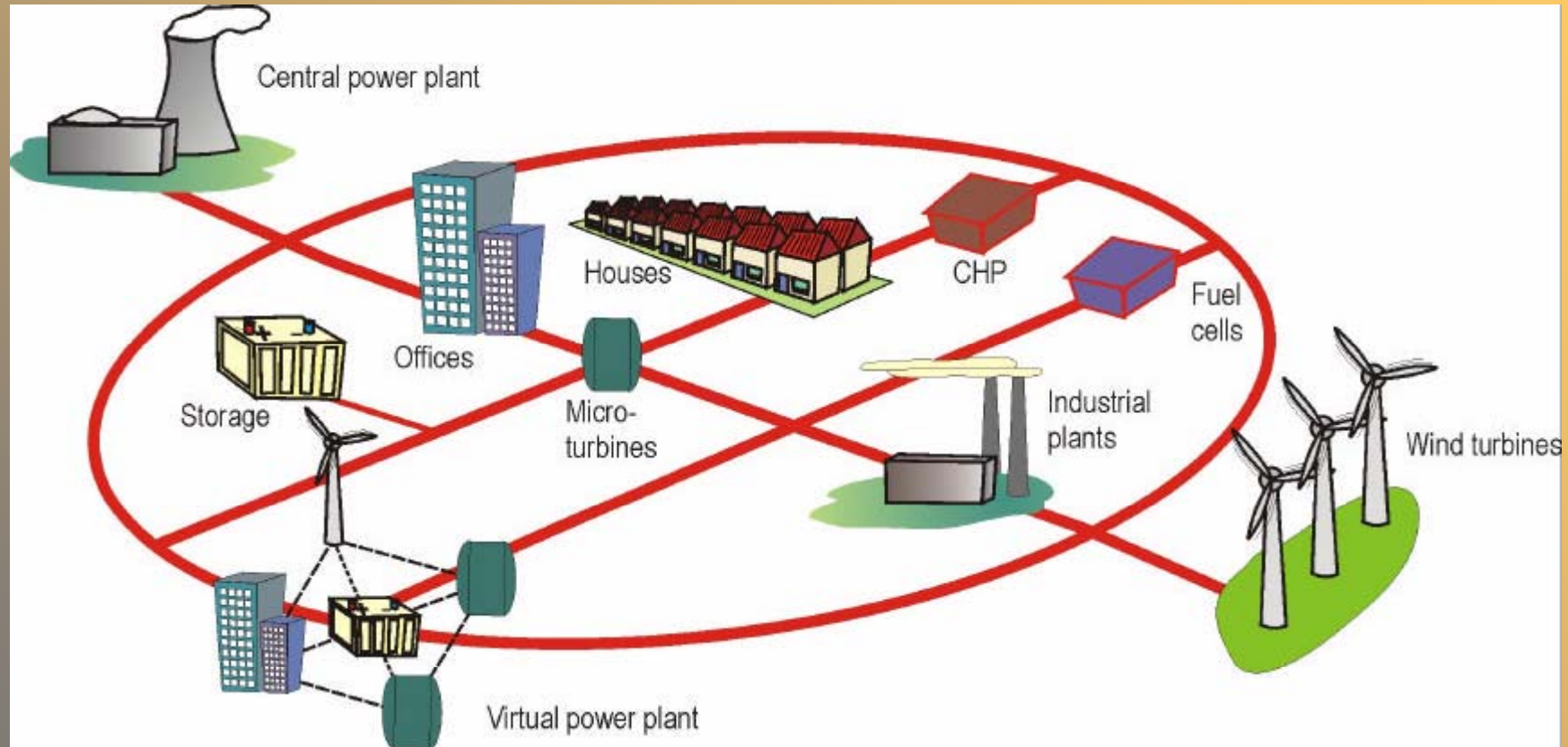
- CUSTOMER SATISFACTION (SWITCHING, QUALITY, STABILITY)
- EFFICIENT USE / DEMAND SIDE MANAGEMENT
- OPTIMAL USE OF RENEWABLE SOURCES
- SYSTEM CONTROL, BETTER RELIABILITY
- EFFICIENT MARKET FUNCTIONING

Technological breakthroughs are required

- Smart grids
- Smart meters
- Distributed energy production
- Storage capacity



Networks Tomorrow

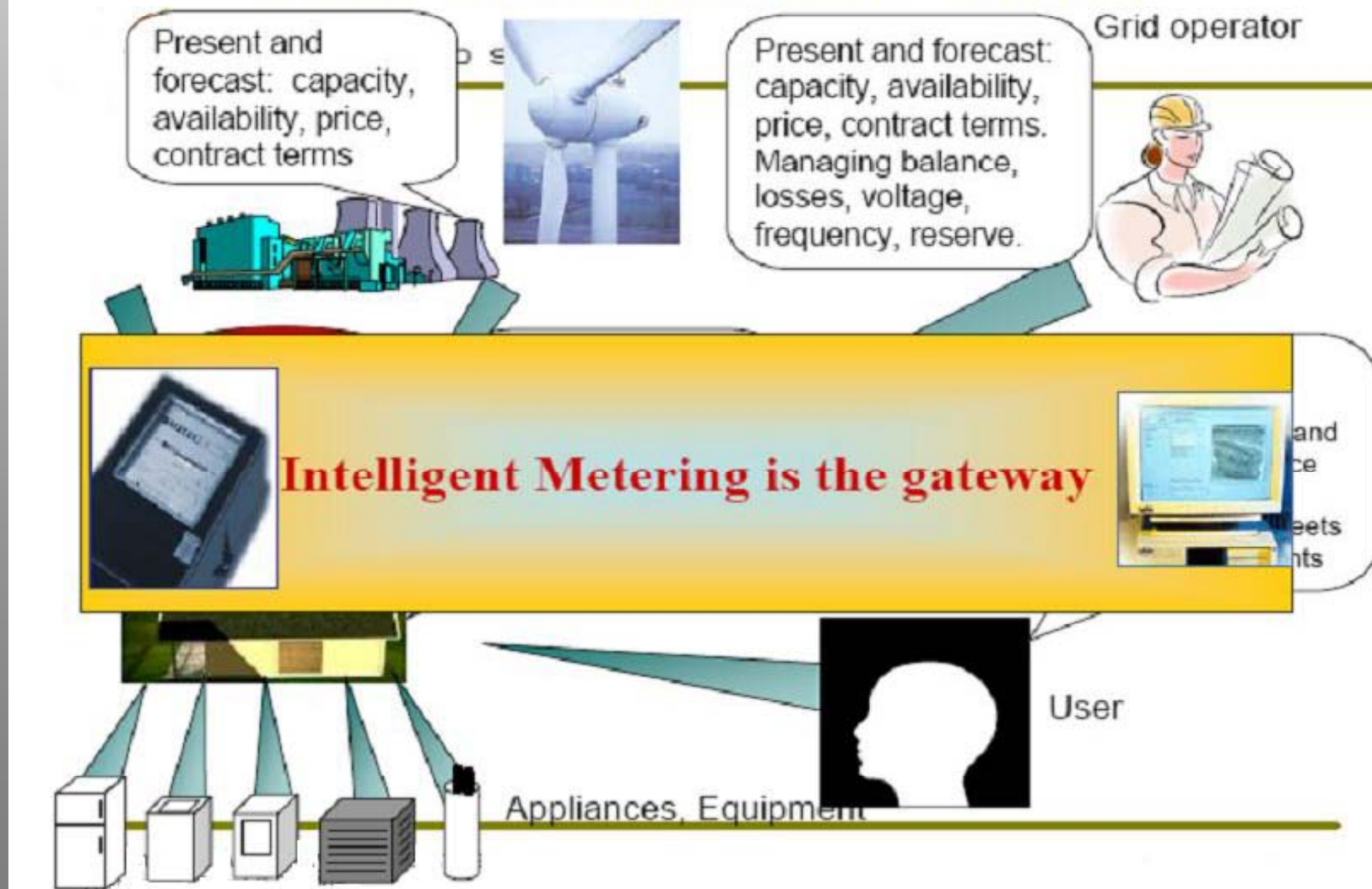


Source: Smartgrid Technology Platform

SMART METER - THE CORNERSTONE OF SMART ELECTRICITY GRIDS

- **Smart meters can make the link and transmit information between generator and consumers.**
- **Smart meters are essential to make the consumer aware of “real” time consumption and pricing information.**
- **Consumers with their own local production “PROSUMERS” can also benefit from smart meters, to optimize their production and consumption patterns and timings.**

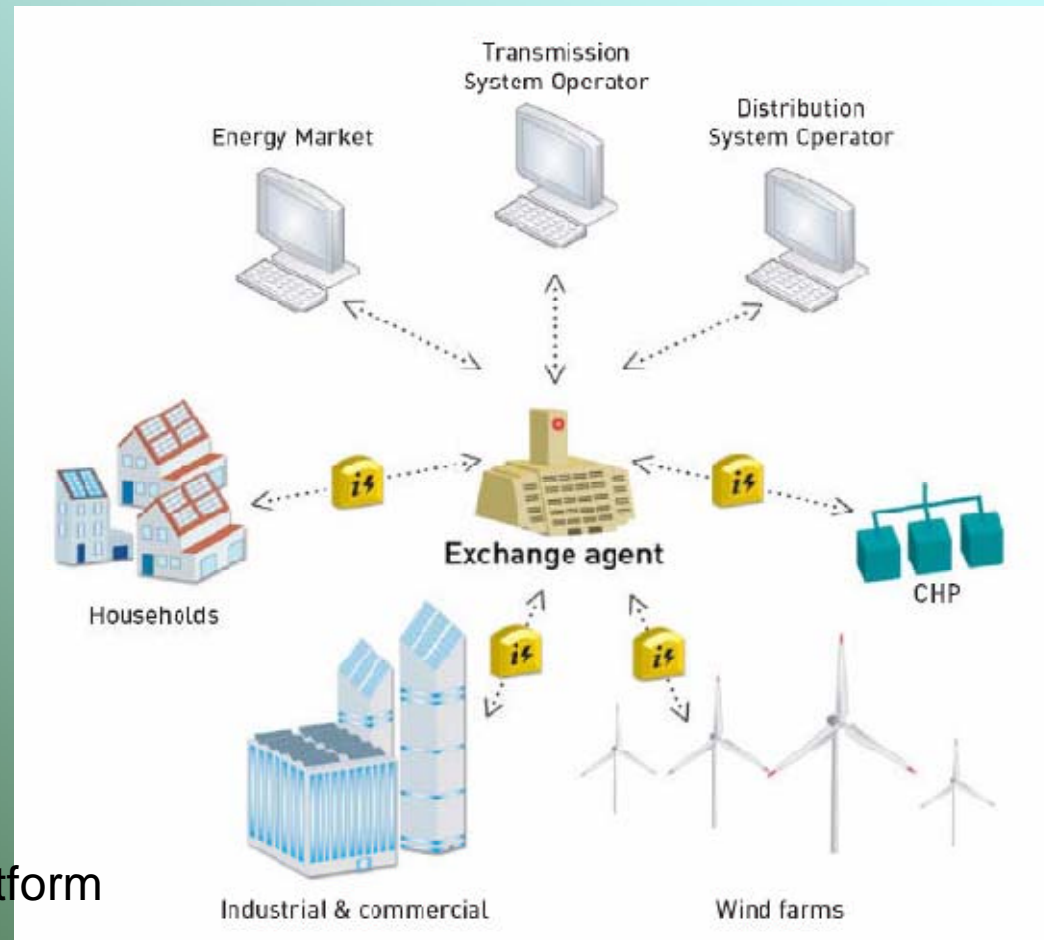
The interactive Grid



Source: Smartgrid Technology Platform

Concepts for the future

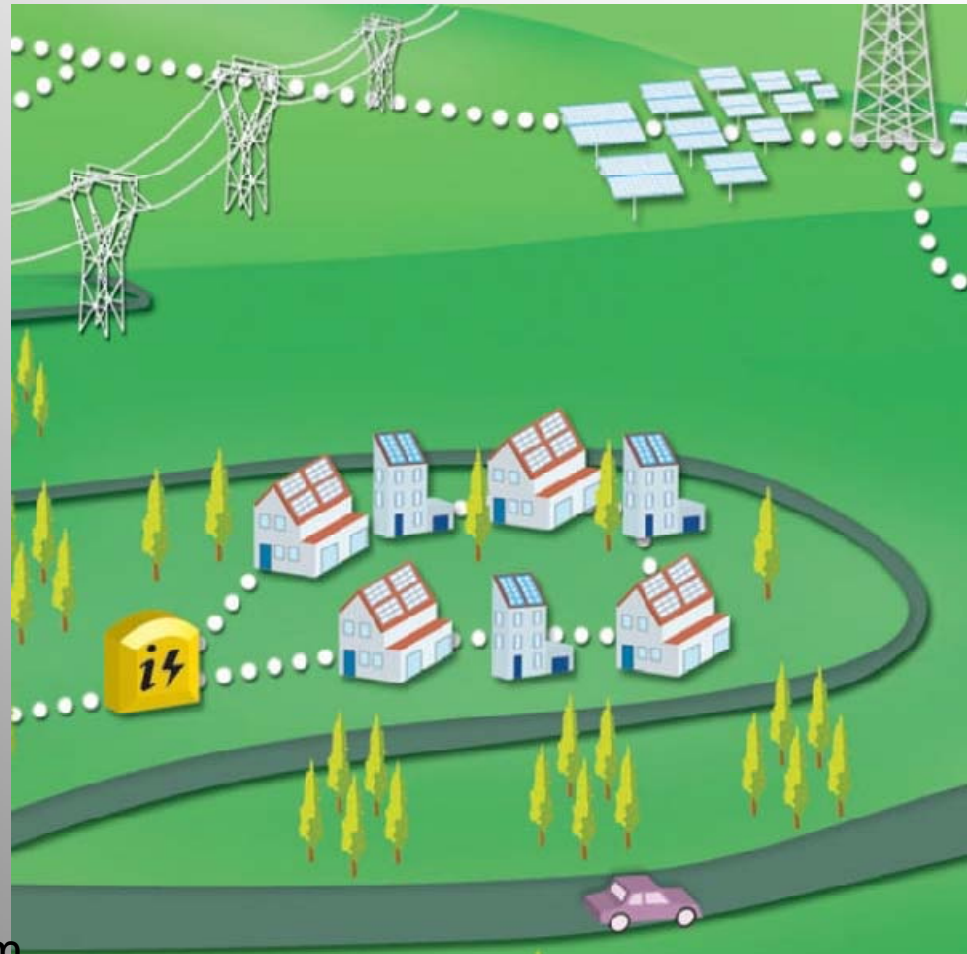
- **Virtual Utilities:**
Configure and deliver ->
“Internet” model



Source: Smartgrid Technology Platform

Concepts for the future

**Microgrids:
Low voltage
networks with DG
sources, local
storage and
controllable
loads,
automatic
islanding**



Source: Smartgrid Technology Platform



CONCLUSIONS

THANKS TO NEW INFORMATION AND COMMUNICATION TECHNOLOGIES, CUSTOMERS MAY BECOME ACTIVE MASTERS OF EFFICIENT ENERGY CONSUMPTION, INSTEAD OF BEING PASSIVE SLAVES OF THEIR ENERGY CONSUMING DEVICES.

IT IS ONE OF THE WAYS OF EMPOWERING THE PEOPLE, AWAY FROM CENTRAL MONOPOLICIES AND BUREAUCRACIES, ALLOWING WELL INFORMED CUSTOMERS TO MAKE FULL USE WHAT IS ON OFFER IN THE MARKETPLACE.

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THANK YOU FOR YOUR ATTENTION