



**Smart Grids Projects:  
The Complexity of the Business Model  
&  
The French Riviera Development Program**

**Jean-Christophe CLEMENT / ICT 2010**

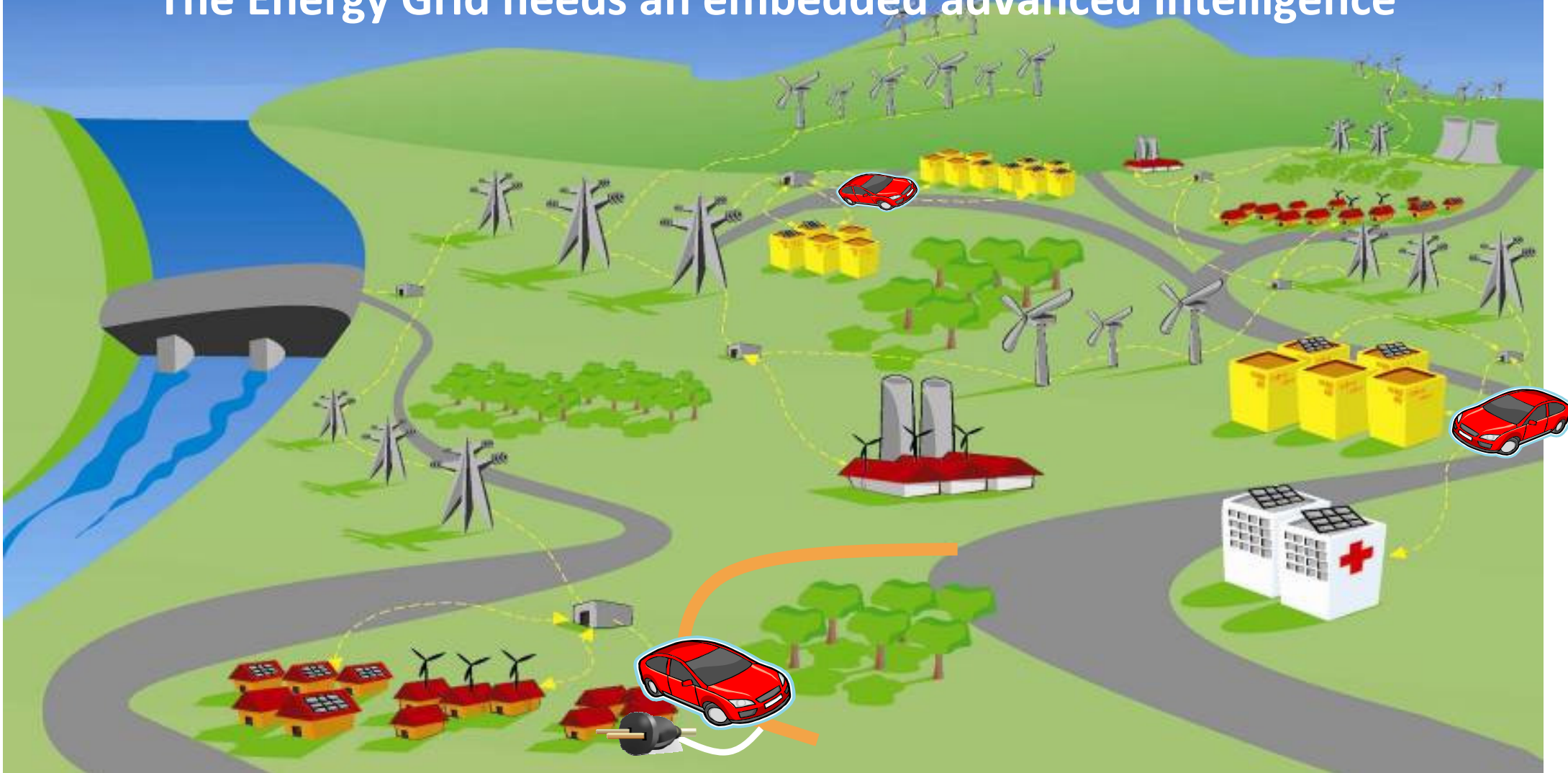


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# 1 CONTEXT

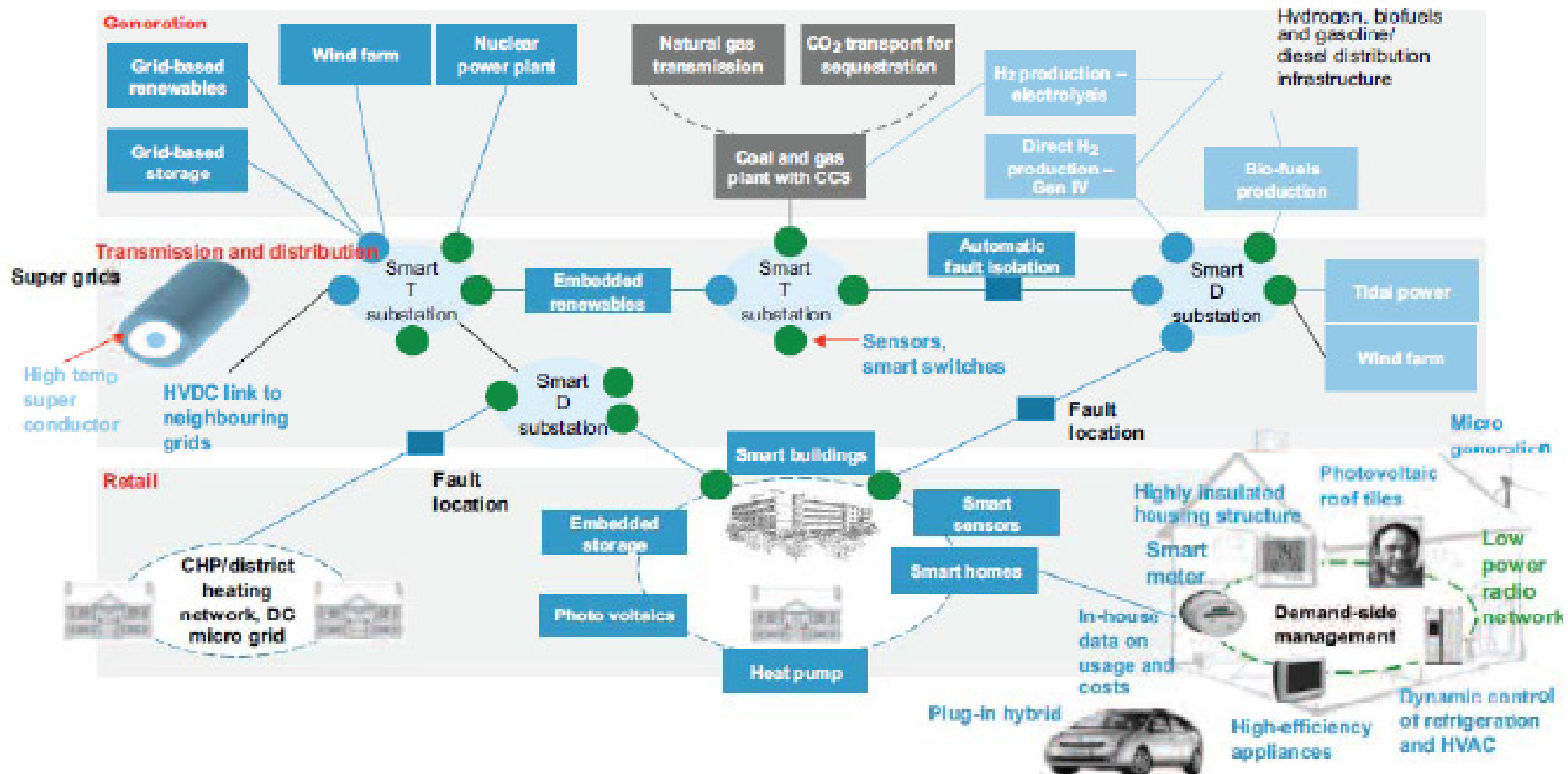
## What is a Smart Grid ?

The dispersion of the production requires a flexible and fast control  
The Energy Grid needs an embedded advanced intelligence



# 1 CONTEXT

## What is a Smart Grid ?



... and the complexity of consumption implies many new functions which communicate information between all levels of the grid management.

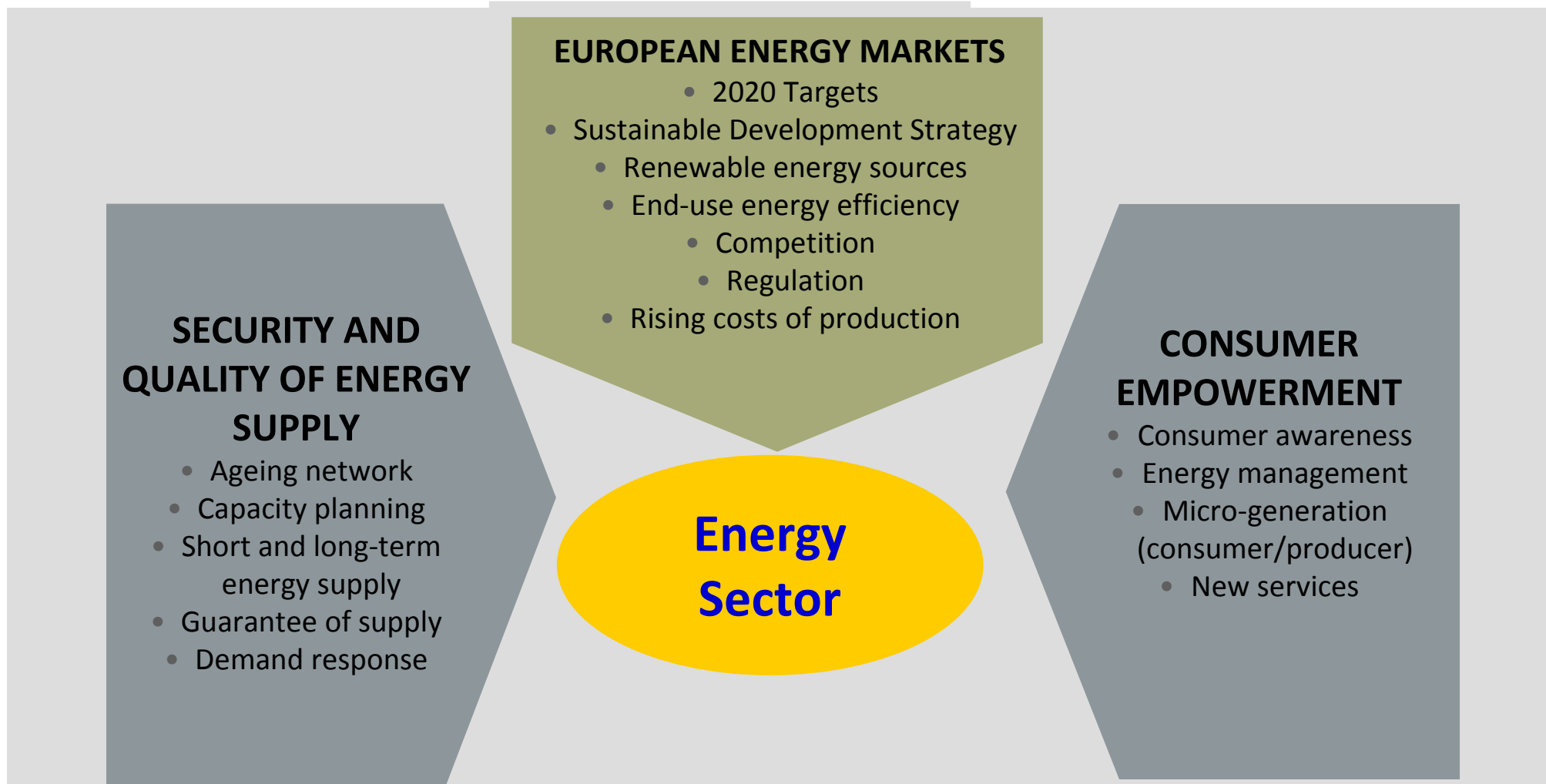
## Some figures

- Smart Grids projected investment is \$ 45 billion / year for the next 10 years-
- ERDF National Linky Roll Out Plan is estimated to 4-8 billions €
- Pdt B. Obama budgeted National Funds for SG up to 10 billions \$

## We are at the start of a revolution in the electricity business :

- Renewable and distributed energy generation will increase, bringing unprecedented volatility to the electrical networks – Current networks were not designed for this
- New tariffs are being considered as a mechanism to change consumer behavior, in particular reducing peak load to drive down production cost.
- Energy will increasingly become « sheddable » under contracted conditions. In conjunction with the emerging energy storage products, load will become more manageable
- As part of this wave of changes, heating and electrical appliances in the home will be able to be controlled remotely

New pressures on the energy sector and new challenges  
=> new way of operation of electric networks / new interactions with the consumers



## Some figures

- 400 millions Smart Meters in Europe, until 2020
- Up to 12% energy savings (USA's ACEEE Report - June 2010)

The Business Case is very complicated involving many players:

Standards:

- Utilities want meters to become a commodity
- Meter manufacturers want to differentiate
- EDF pilot, German standards, UK central service

Use of Smart Metering data:

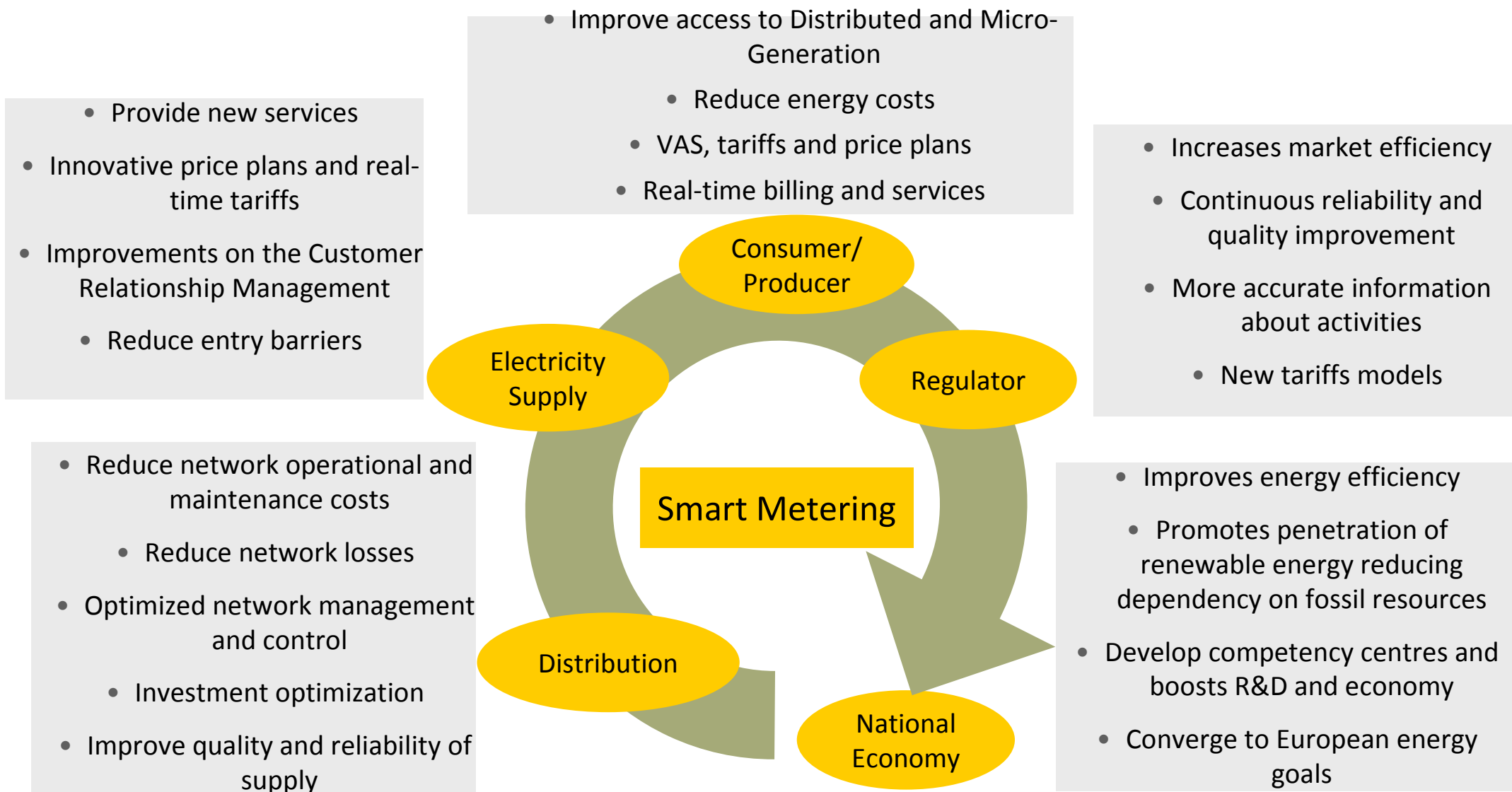
Increasing awareness of Smart Grids and Smart Retail – both are needed

- Some project decisions have delivered compliance at the lowest cost
- Moving forward from there may be difficult

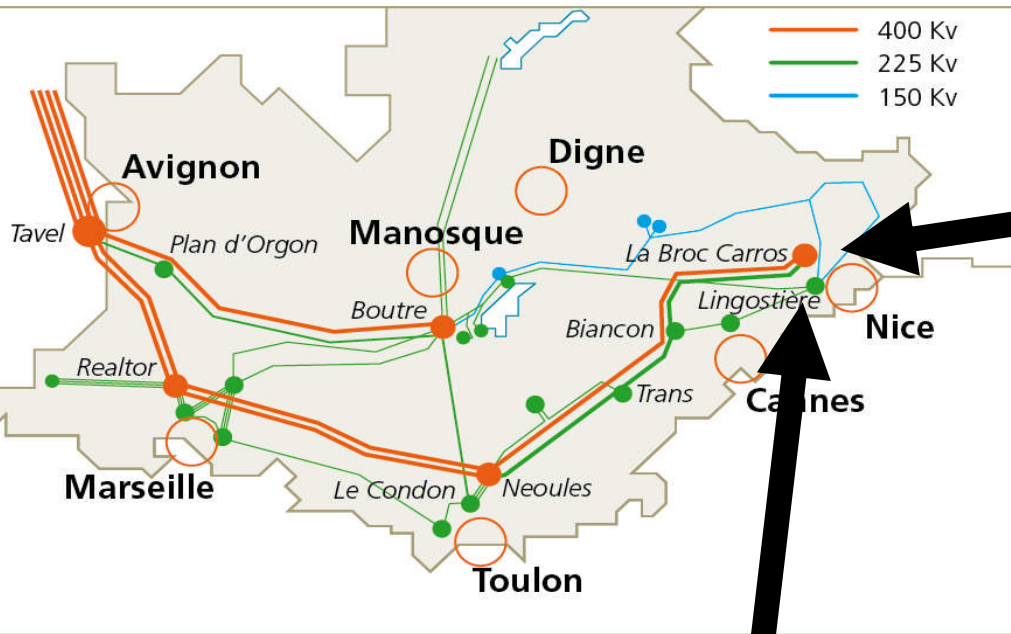
International connectivity:

- Interconnectors
- Optimised generation incentives

## Benefits of Smart Grids effect all parts of the business



## Smart Grid Programs ont the Côte d'Azur



The ADEME Call for projects is prevalent:

It's the first step in the implementation of a Smart Grid initiative on the Côte d'Azur.

2 projects are already on the pipe : Reflex (Veolia Environnement) & Nice Grid (ERDF) : these pilots will show that many components are possible to be integrated on the grid.

## Certification and Test Platform :

Veolia – tests for PV

Héliopolis – Solar Concentrator Electricity Plant

Poweo – Energy Storage Systems

First step to encourage other manufacturers to test their products and establish a bureau on the French Riviera

Hosting facilities by EPA, technical support by CTSB and ETSI, Sophia Antipolis engineers...

To settle a reference Smart Grid place on the French Riviera:

### The French Riviera Smart Grid Action Plan

- 1/ Encourage the manufacturers to come to implement their solutions and innovations
- 2/ Be a reference place on the standards and certifications
- 3/ Encourage the manufacturers to test their products on the French Riviera Labs
- 4/ Encourage Best Practice Sharing
- 5/ Encourage forums, seminars, conferences and working groups
- 6/ Create a local animation plan: smart breakfasts, webinars...
- 7/ Develop a local policy to implement Smart Grids on the Municipalities, inform and teach the Public Bodies

# SMART GRIDS



**Thank You for your attention**

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