

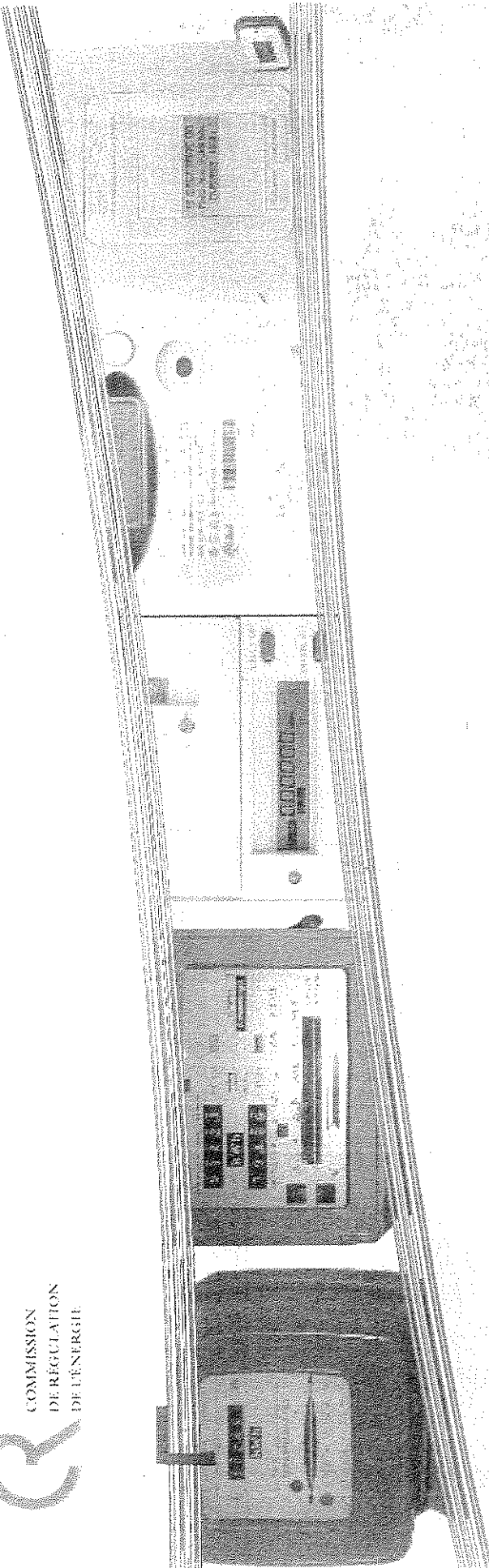
附件 1

CRE - AMM 計畫及

法國電力市場簡報



COMMISSION
DE RÉGULATION
DE L'ÉNERGIE



RECEVÉ PAR LE BUREAU DE LA
COMMISSION DE RÉGULATION DE L'ÉNERGIE
LE 10/05/2011 À 10H00

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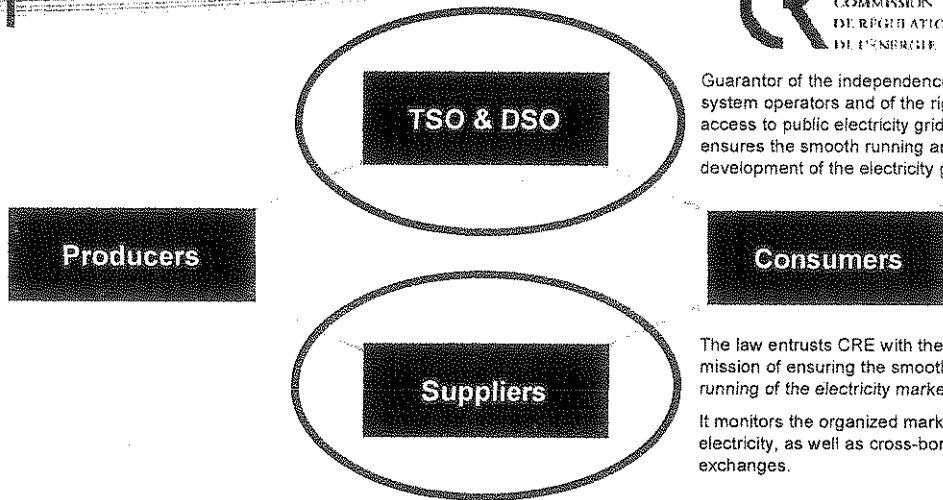
Bureau of Energy, Taiwan power company, CRE
Meeting 8th June 2009

- A. The market structure, characteristic and pricing mechanism of electricity market in France
- B. Metering regulatory framework and policies
- C. Regulatory and legislative tools to promote smart metering
- D. The cost-benefits of AMM, and major influence factor of AMM costs in France

A. The market structure, characteristic and pricing mechanism of electricity market in France



Guarantor of the independence of system operators and of the right of access to public electricity grids, CRE ensures the smooth running and development of the electricity grids.



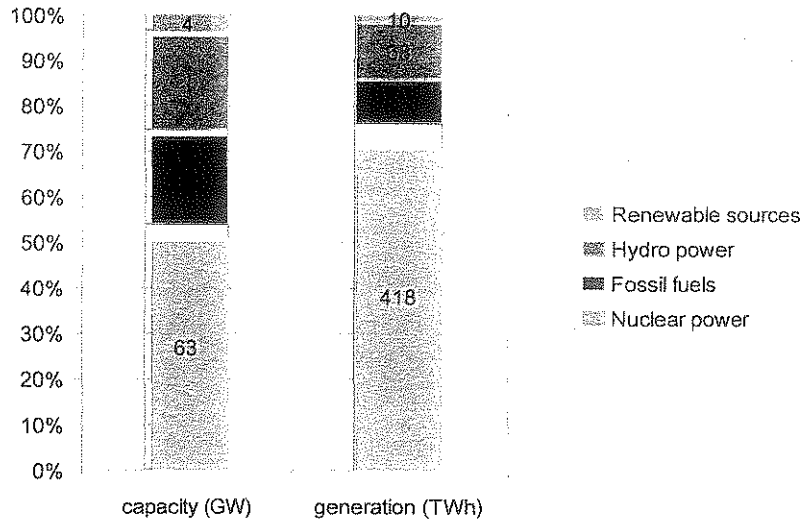
The law entrusts CRE with the mission of ensuring the smooth running of the electricity market.

It monitors the organized market of electricity, as well as cross-border exchanges.



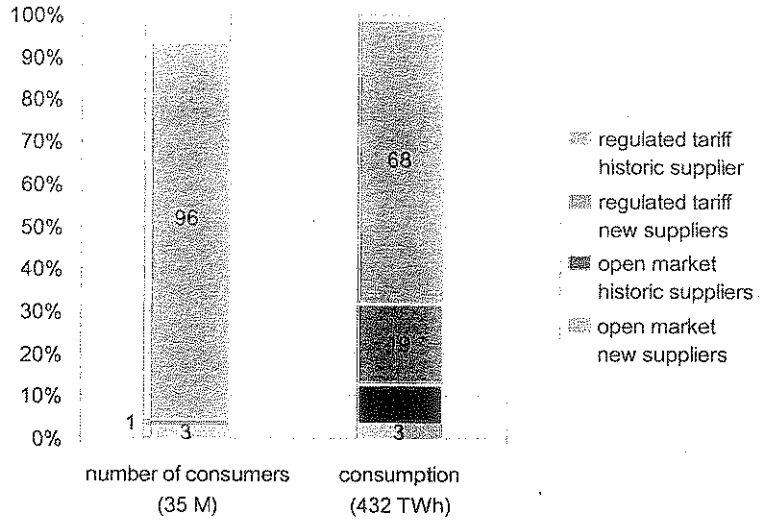
A. The market structure, characteristic and pricing mechanism of electricity market in France

Producers: generating fuel mix in France (2008)



A. The market structure, characteristic and pricing mechanism of electricity market in France

Consumers: size and opening of the market in France (2008)



A. The market structure, characteristic and pricing mechanism of electricity market in France

Suppliers: new suppliers in France (2008)

For industrial

atel

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LA SNET

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enercoop
MILITANTE

GDF SUEZ

POWEO

ALBERTO QUERO

A. The market structure, characteristic and pricing mechanism of electricity market in France

System operators : Grid operators in France (2008)

For Transmission grid



For Distribution grids



1
~ 150

95 %
5 %



B. Metering regulatory framework and policies

Who is responsible of metering?

- The system operator, the user is connected to, is responsible for measuring the power at the connection point.
- The meter is part of the grid, which is the property of the operator (Transmission) or of the local authority (Distribution).
- Suppliers use data given by the system operator for their invoices costumers.
- User is still the owner of its measurement data.

B. Metering regulatory framework and policies

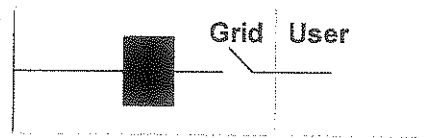
What meter can be used?

- Meter used for billing have to comply with the MID (the European Measuring Instruments Directive).
- For electrical power meter the MID was transposed by the decree #2006-447 of 12th April 2006 (annex MI-03).
 - accuracy
 - operating condition
 - allowable errors
 - ...

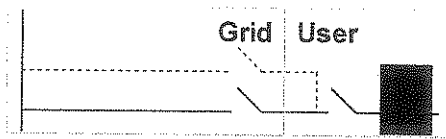
B. Metering regulatory framework and policies

Where meter must be located?

- LV: in connection to the grid (NF C 14-100)



- HV & VHV: in user installation (NF C 13-100 and TSO specifications)



C. Regulatory and legislative tools to promote smart metering

State of regulation on smart metering

- 2006/32 directive (article 13 : Metering and informative billing of energy consumption)
- 3rd package sets a minimum level of users which should have smart meters (80% by 2020)
- French law #2000-108 of 10th February 2000 sets that metering system must allow every supplier to make peak tariff (application decree in consultation)

C. Regulatory and legislative tools to promote smart metering

Tools to promote smart metering

- Access tariff (including metering tariff)
- Control of system operators investment (approval for transmission)

D. The cost-benefits of AMM, and major influence factor of AMM costs in France

Benefits of AMM :

- For system operators :
 - Lower cost of exploitation
 - Better knowledge of network (quality, losses, ...)
- For suppliers :
 - Higher possibility of new offers
 - Easier access to their clients data
- Users :
 - Better and more frequent information and easier access to data
 - "Prosumer" compatible

Producer & Consumer

D. The cost-benefits of AMM, and major influence factor of AMM costs in France

Costs of AMM :

- For system operators :
 - Investment costs (~4.5 G€ for 35 M users) 老裝
- Users : O&M : 尚不知
 - Need to be here when the meter is changed (half of users)