



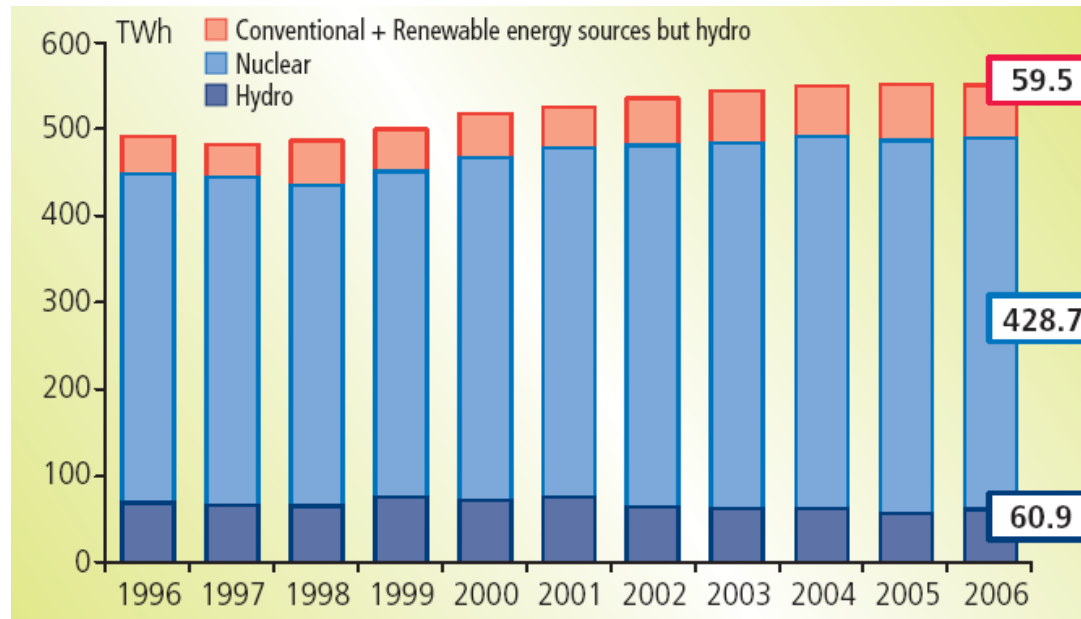
# **French Interconnectors**

Sophie Dourlens, CRE

- **French situation**
  - **Generation, consumption, exports**
- **Management of French Interconnections**
- **Electricity Regional Initiatives**
  - **Focus on each region France is involved in**

## French situation: generation

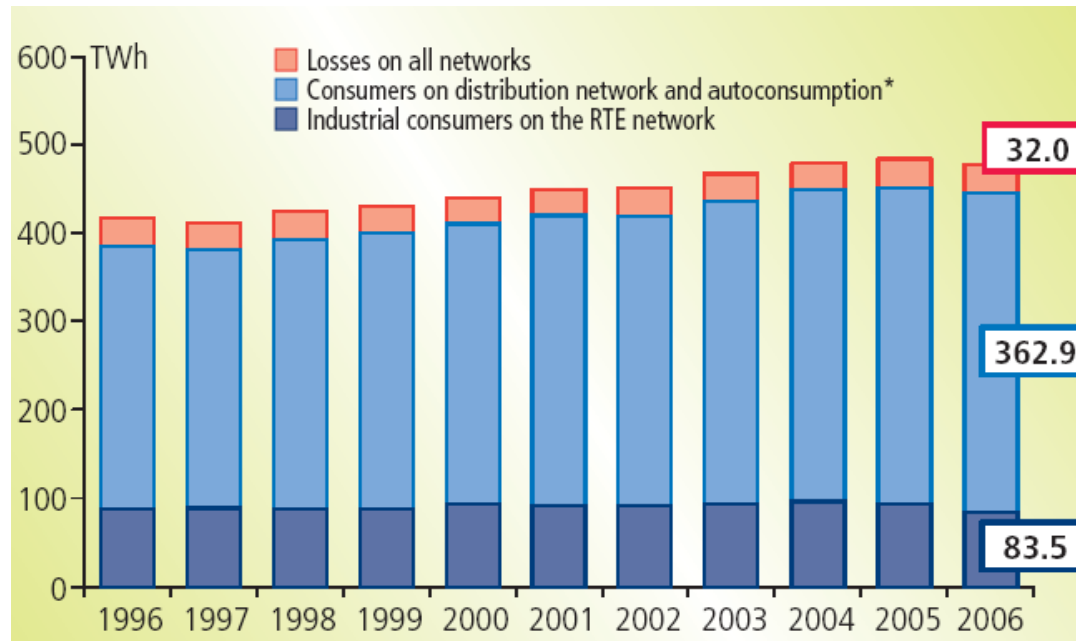
- **549 TWh produced in 2006**



- **Main features of the French generation park:**
  - Large nuclear park
  - One dominant producer: EDF

# French situation: consumption

- **478 TWh consumed in 2006**



- **Main features of the French consumption:**
  - Regularly increasing
  - Small decrease in 2006 due to a decrease in industrial consumption

# French situation: exchanges with foreign countries

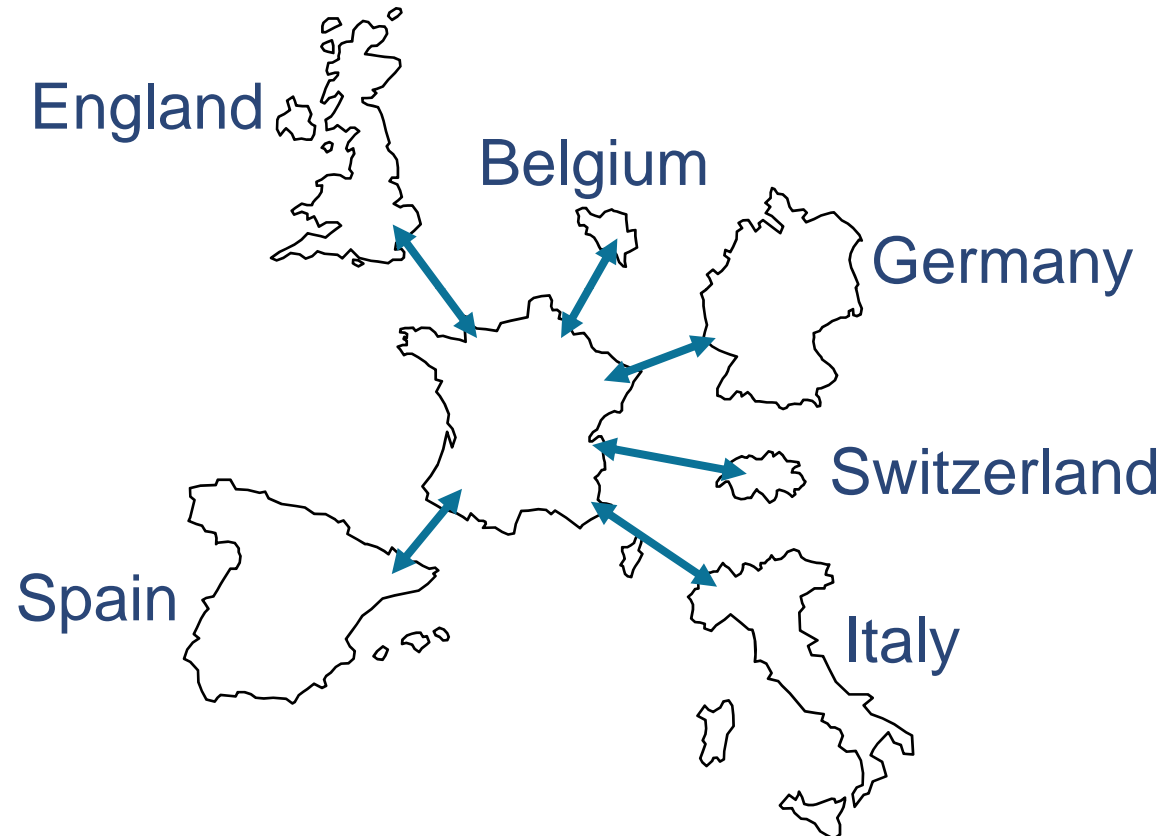
- **63 TWh exported in 2006**



- **Efficient management of interconnections is needed**
  - **To let the final consumers benefit from complementarities of European production parks and consumptions features**

# Management of French Interconnections

- **France is interconnected with 6 countries**

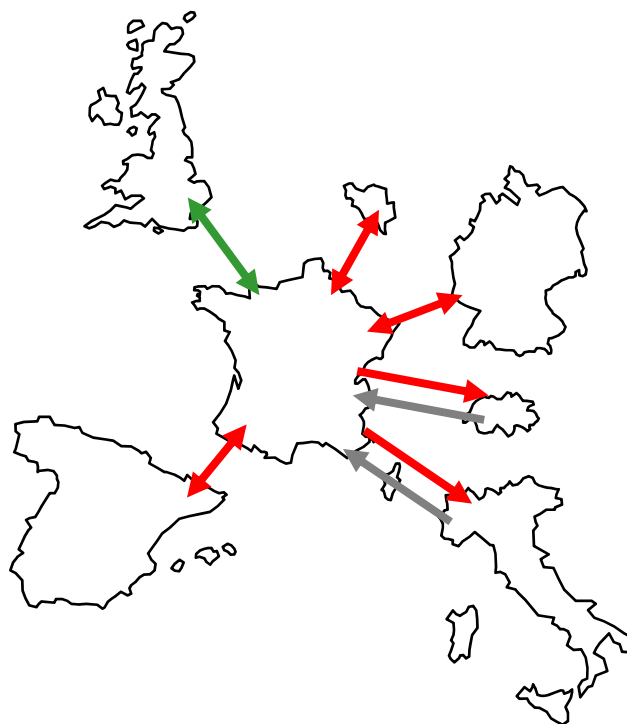


- **Total interconnection capacity = 14,000 MW**

# Management of French Interconnections

- For years, French interconnectors were used for long term export contracts of EDF

## Management of French interconnections in 2004

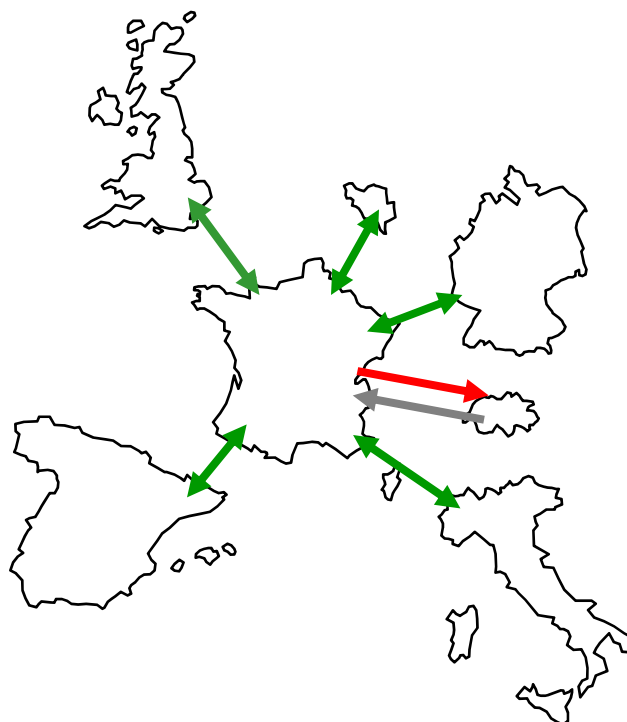


- Priority to long term contracts
- Explicit auctions
- No congestion

# Management of French Interconnections

- **Interconnection management had to evolve to be compliant with European regulation in force**

## Management of French interconnections in 2007

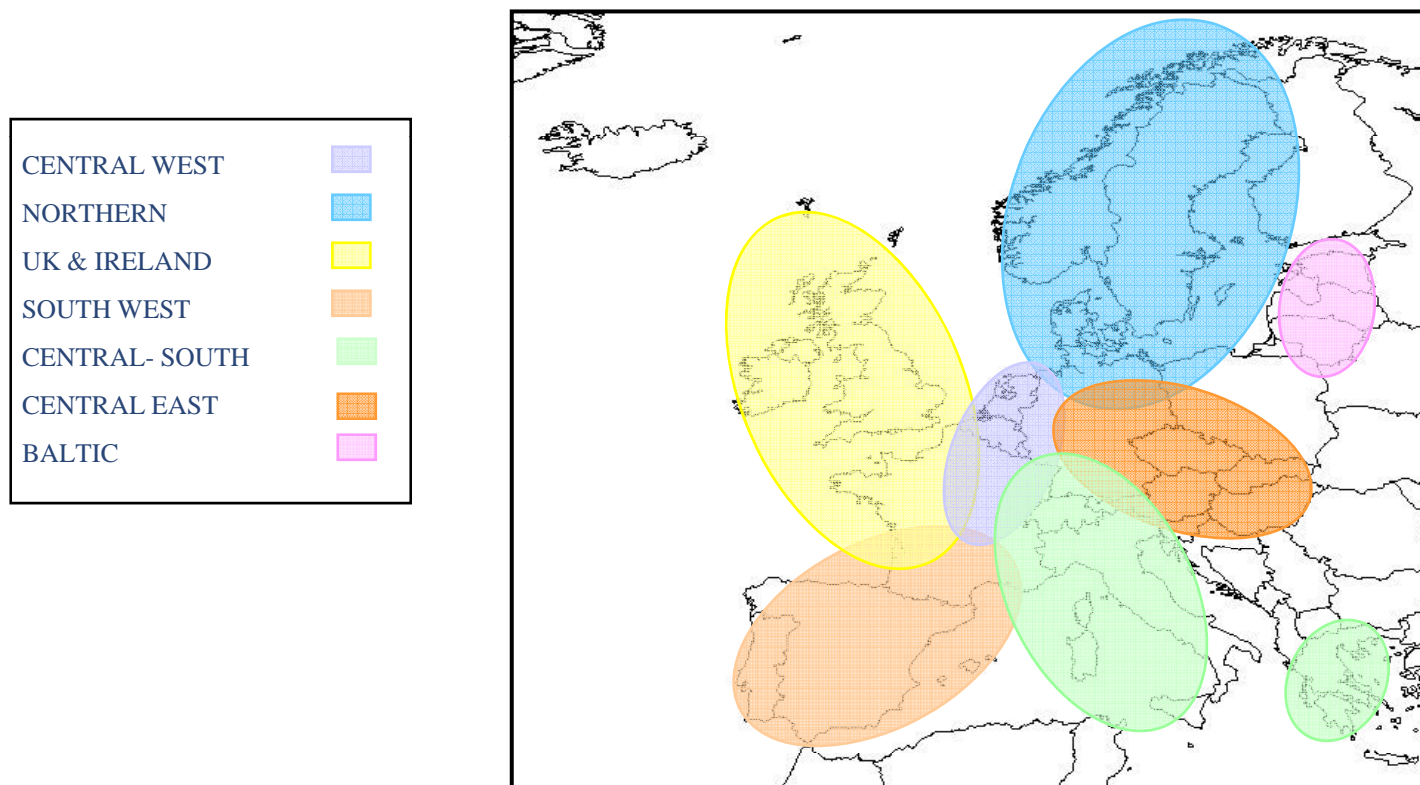


- Priority to long term contracts
- Explicit or implicit auctions
- No congestion

- **Further progress is needed to be compliant with the new Guidelines of European regulation 1228/2003, in force since December 2006**
- **This progress will be undertaken in the framework of the Electricity Regional Initiatives**

# Electricity Regional Initiatives

- 7 electrical regions were defined
- France is involved in 4 of these regions



## Focus on the UK and Ireland region

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- **Features of this region:**
  - **3 countries involved: France, Ireland, United Kingdom**
  - **Lead regulator: England (OFGEM)**
- **For years IFA was fairly ahead of other interconnections with explicit auctions implemented in 2004**
- **The auction design on IFA has now to evolve to be compliant with the new European regulation**
- **To that purpose CRE is the lead regulator of a workstream on Congestion Management in this region**
  - **For developing intraday allocation mechanisms**
  - **For improving the functioning of secondary markets**
  - **For maximising the available capacity through netting and Use-It-Or-Lose-It / Use-It-Or-Sell-It**

## Focus on the Central South region

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- **Features of this region:**
  - **6 countries involved: Austria, France, Germany, Greece, Italy, Slovenia**
  - **Lead regulator: Italy (AEEG)**
  
- **Major progress was recently made: on the main borders of Italy, in particular on the French-Italian interconnection, explicit auctions are fully coordinated since 1 January 2007**

## Focus on the Central West region

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- **Features of this region:**
  - **5 countries involved: Belgium, France, Germany, Luxembourg, the Netherlands**
  - **Lead regulator: Belgium (CREG)**
  - **Very central position in Europe**
  - **Major electricity markets**
- **The very ambitious objective of regulators for this region is to implement a day-ahead implicit auction mechanism within the whole region**
- **Such implicit mechanism has been successfully implemented in November 2006 for the interconnections between France, Belgium and the Netherlands**

- **What are implicit auctions?**

## Explicit auctions

**To export from a country A to a country B, a market player must:**

- buy or produce energy in the country A
- find a counterpart in the country B or offer its energy to the power exchange of country B
- buy explicitly the needed interconnection capacity through capacity auctions
- if A and B have no direct interconnection, but are interconnected through a country C, the market player has to participate in auctions for capacity from A to C and from C to B

## Implicit auctions

**To export from a country A to a country B, a market player must:**

- buy energy to the power exchange of country A
- that's it!
- the power exchanges of country A and B (and possibly country C) manage with TSOs the optimal flows
  - either the resulting flow is maximal (equal to the interconnection capacity)
  - or the price of the two (or more) countries converge

## Focus on the Central West region

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- **Implicit auctions are clearly more efficient than explicit auctions and provide a greater social welfare**
  - **They have to be implemented at a large scale**
    - In the Central West region
    - In other regions?
- **But...**
  - **Complex contractual arrangements between TSOs and PXs**
  - **Regulation issue of PXs**
  - **One of the main challenges for regulators for the next months**

**Thank you for your attention!**