



French Energy Policy And Nuclear Power

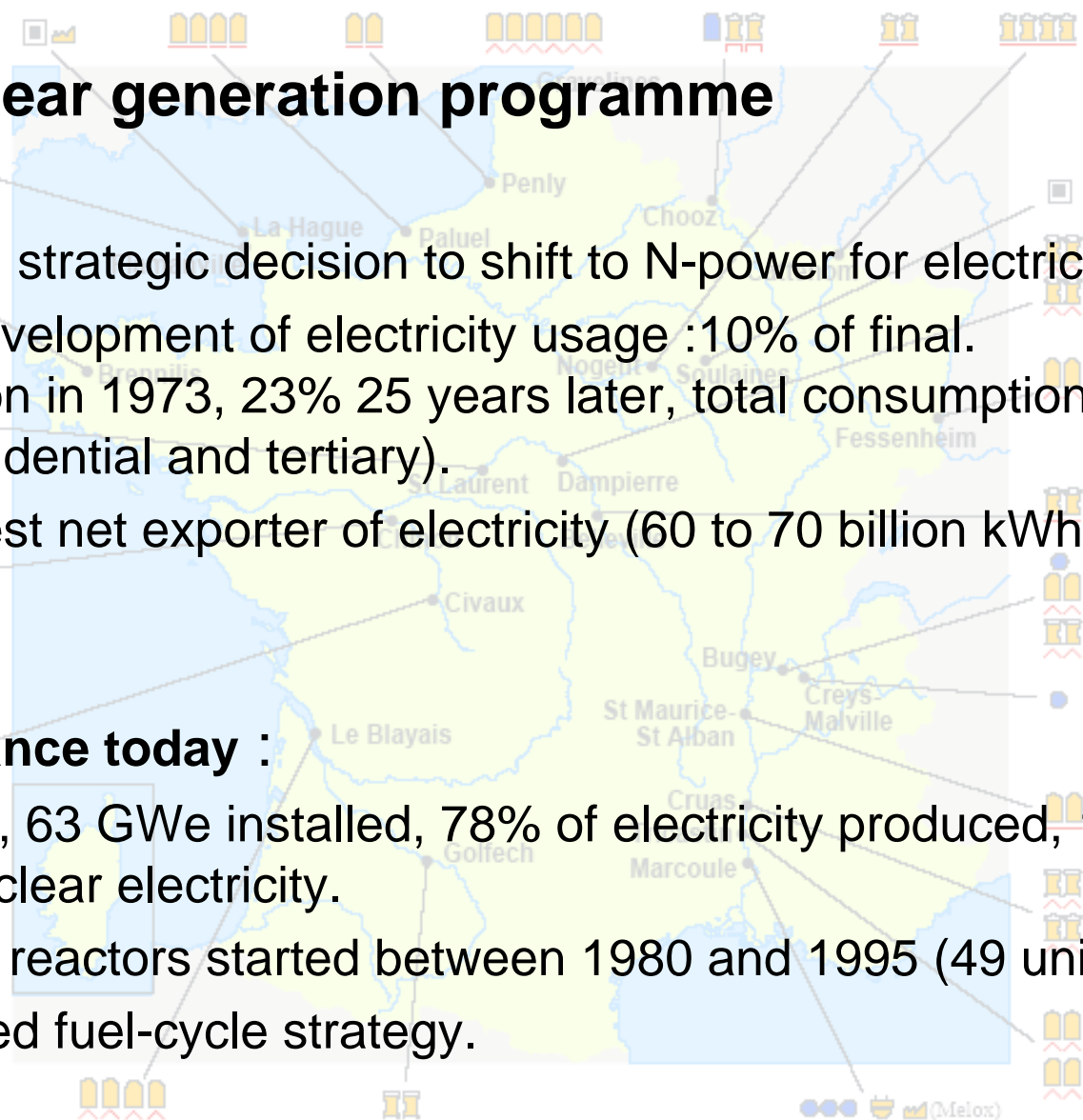
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A mature nuclear generation programme

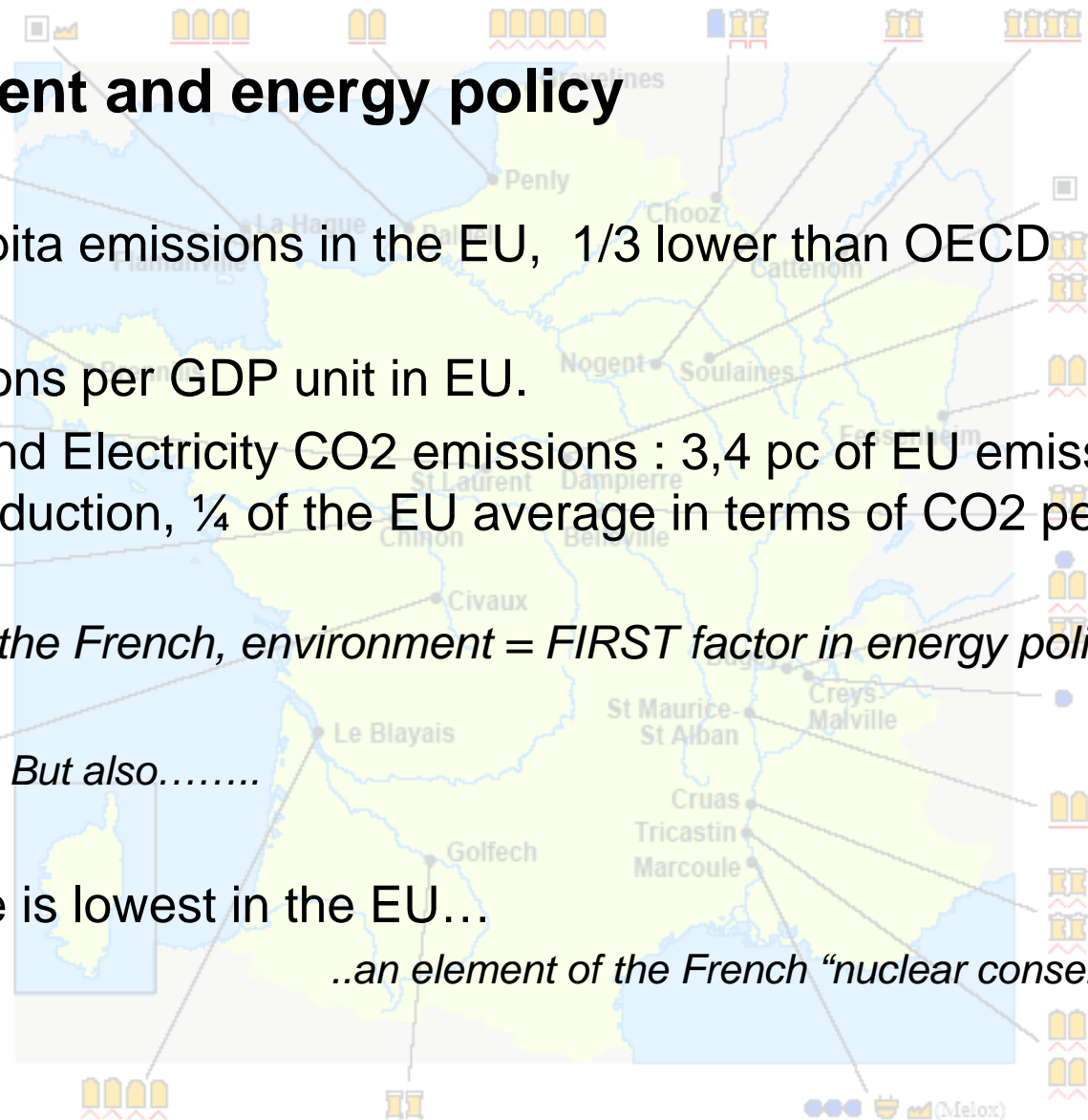
- **Specifics :**
 - Post-1973 : strategic decision to shift to N-power for electricity
 - Massive development of electricity usage : 10% of final consumption in 1973, 23% 25 years later, total consumption X 3 (mainly residential and tertiary).
 - World largest net exporter of electricity (60 to 70 billion kWh net each year).
- **Nuclear in France today :**
 - 59 reactors, 63 GWe installed, 78% of electricity produced, 17% of world nuclear electricity.
 - Most of the reactors started between 1980 and 1995 (49 units).
 - A full-fledged fuel-cycle strategy.





The environment and energy policy

- Lowest per capita emissions in the EU, 1/3 lower than OECD average.
- Lowest emissions per GDP unit in EU.
- Lowest Heat and Electricity CO₂ emissions : 3,4 pc of EU emissions for 15 % of production, 1/4 of the EU average in terms of CO₂ per kw/h.
 - *For 56 % of the French, environment = FIRST factor in energy policy*
- » *But also.....*
- Electricity price is lowest in the EU...
 - ..an element of the French “nuclear consensus”





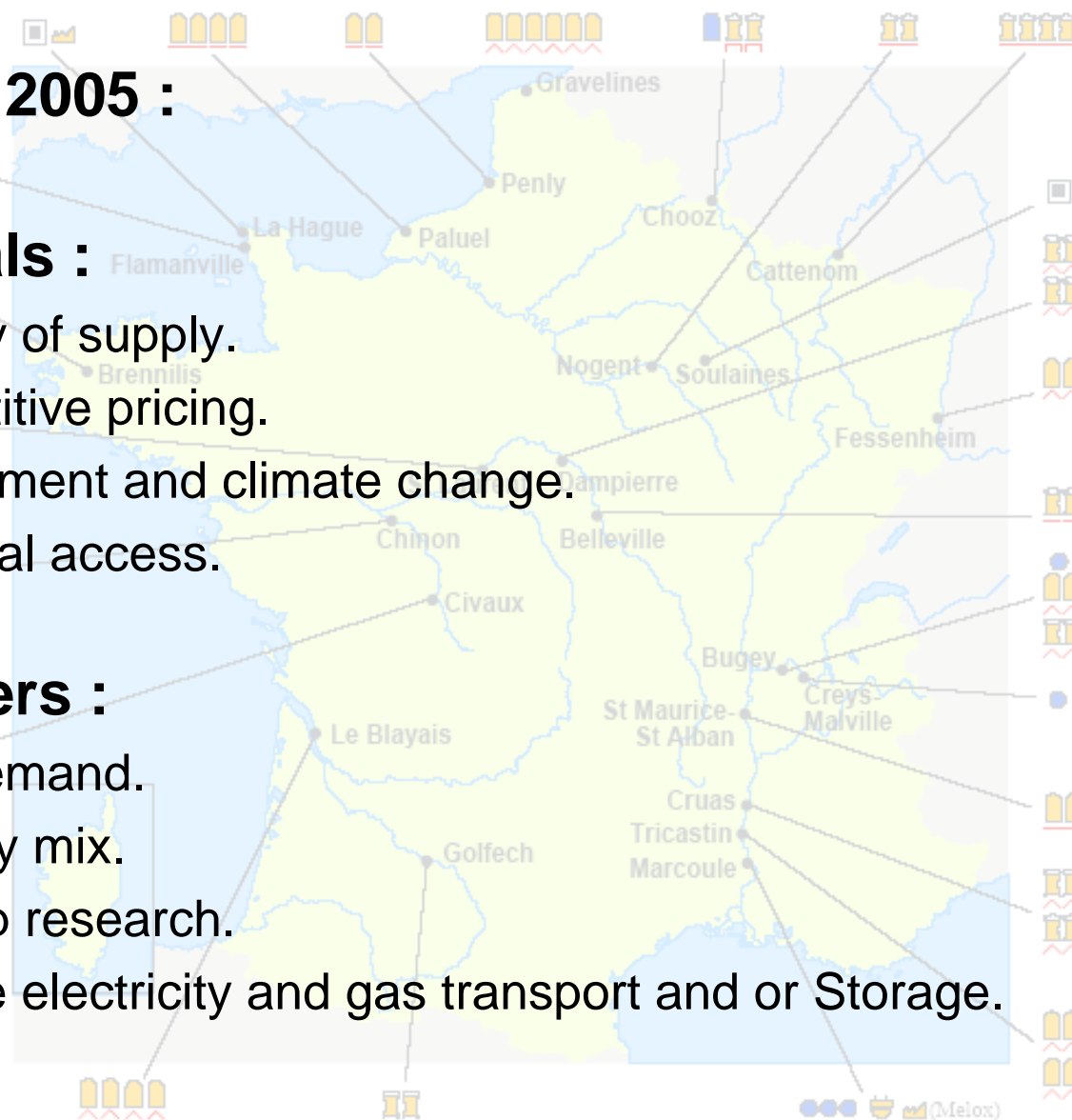
Energy law in 2005 :

– Four goals :

- Security of supply.
- Competitive pricing.
- Environment and climate change.
- Universal access.

– Four levers :

- Curb demand.
- Diversify mix.
- Develop research.
- Improve electricity and gas transport and or Storage.





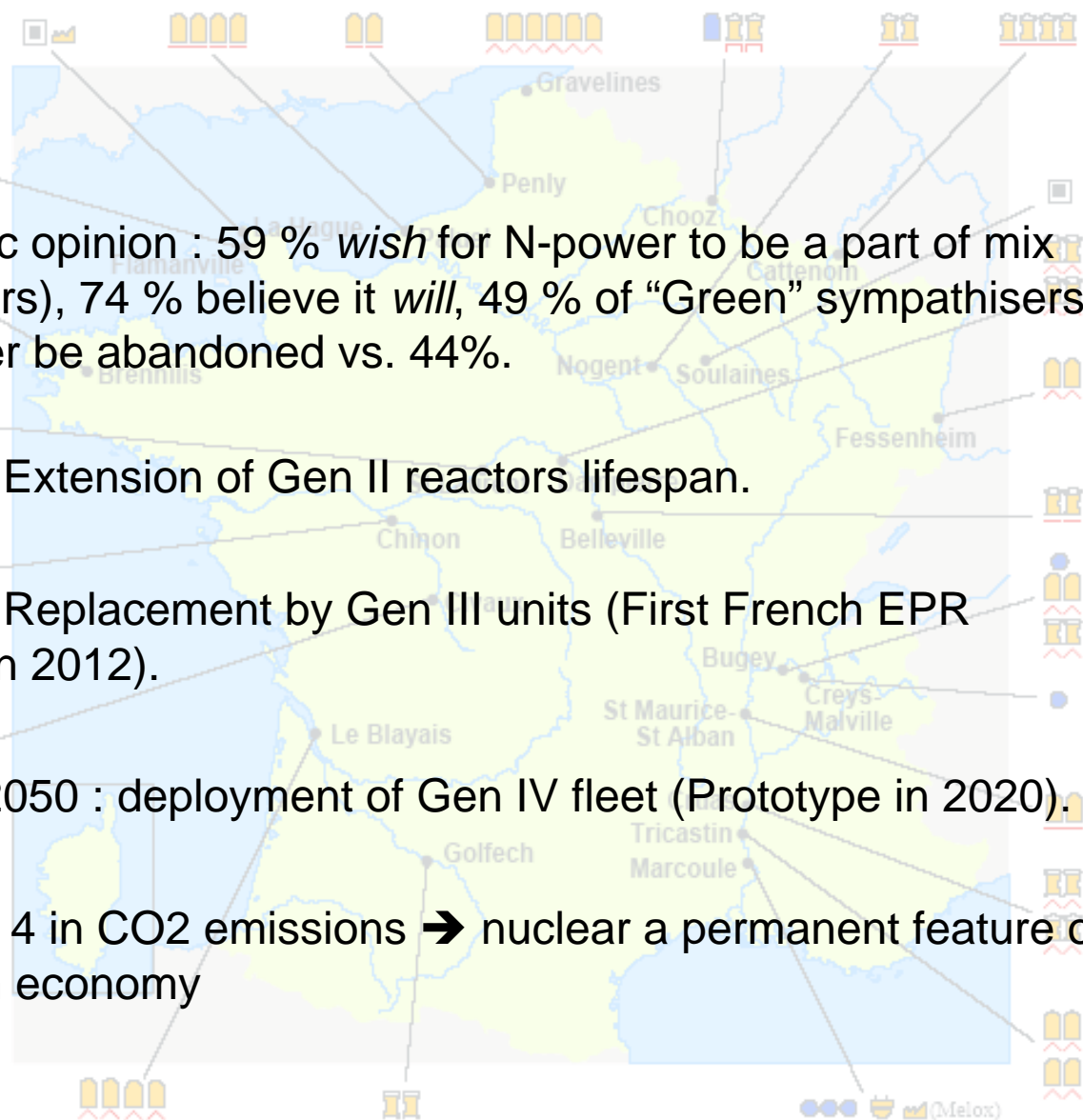
- **Transparency and nuclear safety law adopted in 2006**
 - An independent administrative authority for safety.
 - Improved public information.
- **Waste management law adopted in 2006**
 - Reduce toxicity and quantity of waste plus***
 - Pursue research on three complementary paths for waste : transmutation, reversible geological disposal, long-term conditioning/storage (Public confidence in R/D 75 %).
 - Decision on repository location in 2015 for implementation 2025.
 - Decommissioning Funding with ring-fenced assets.





The future :

- French public opinion : 59 % *wish* for N-power to be a part of mix (among others), 74 % believe it *will*, 49 % of “Green” sympathisers wish N-power be abandoned vs. 44%.
- From 2010 : Extension of Gen II reactors lifespan.
- From 2020 : Replacement by Gen III units (First French EPR operational in 2012).
- From 2040/2050 : deployment of Gen IV fleet (Prototype in 2020).
- 2050 : factor 4 in CO₂ emissions → nuclear a permanent feature of a low – carbon economy





European scene :

- More than 50% of European energy requirement are met by imported products, often from regions potentially concerned by insecurity. This ratio will be 70% in 20 to 30 years if nothing changes.
- Opening of the European energy market.
- Europe is entering a reinvestment cycle : over 100 GW capacities need to be replaced between 2010 and 2030.
- 20/20/20 commitment : in 2020, 20% of final energy consumption to be met by renewables, reduction of GHG emissions by 20%.
- European SET Plan (jan 08).
- SNE / TP : a platform for sustainable fission.

