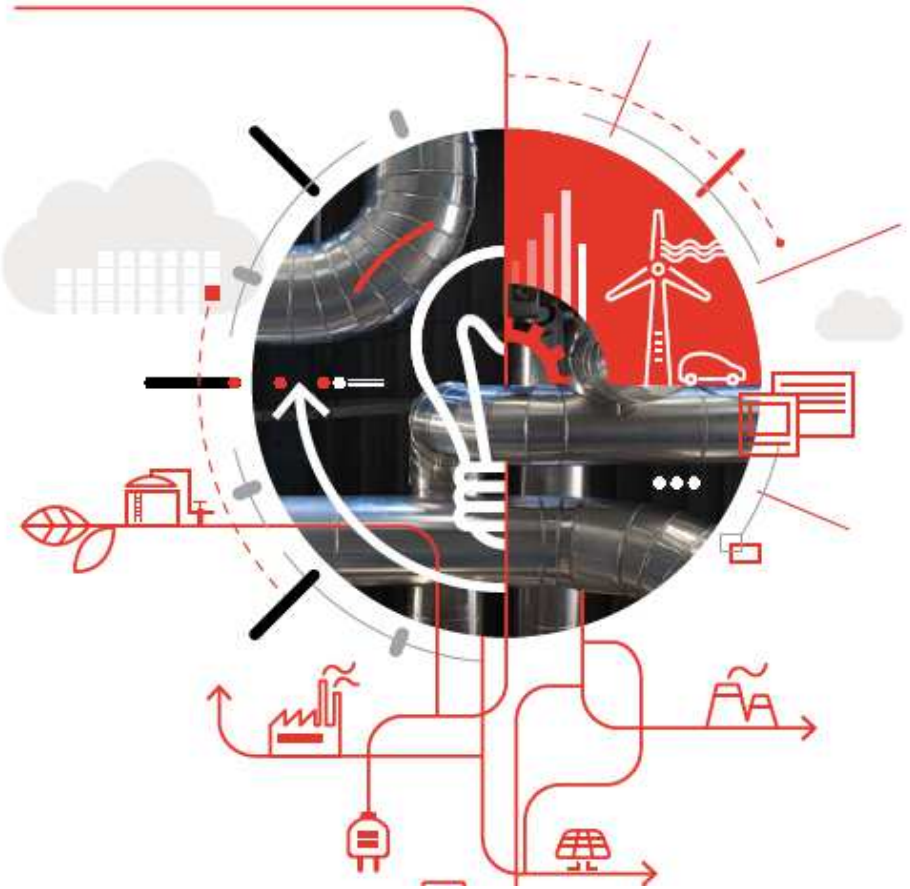

Local energy planning in France

a way to reinforce energy transition

ADEME
Agence de l'Environnement et de la Maîtrise de l'Energie

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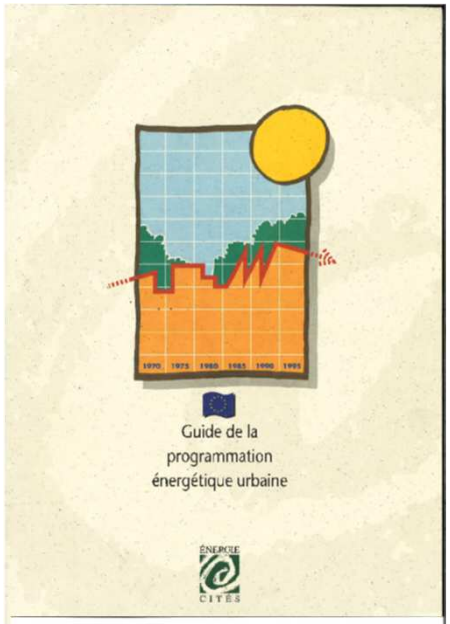
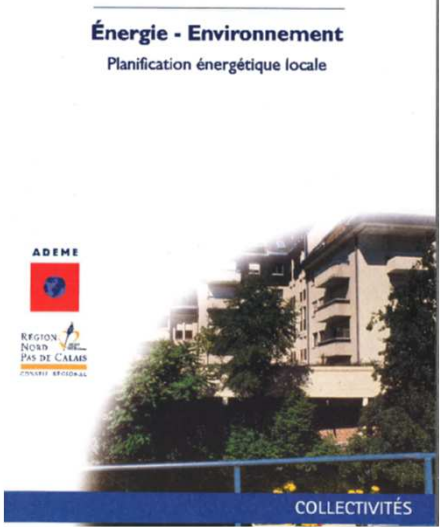
ECEEE Summer Study 2017

- Institutional, Legislative and Technical Context
- Method of Local Energy Planing
- Discussion

Historical perspectives on energy decentralization in France

- Guide from Energy cities supported by European Comission (DG Energy) in 1995
  - *Leicester, Breme, Sikies, Newcastle, Rennes, Martigny, Funchal…*
- Pioneers territories in 1990 in North of France
  - *Douai*
  - *Arras*
  - *Communauté de communes du Pays de Condé*
  - *Communauté Urbaine de Dunkerque*
- Local Energy Planning Guide published in 2000 by ADEME – Regional Council Nord-Pas de Calais

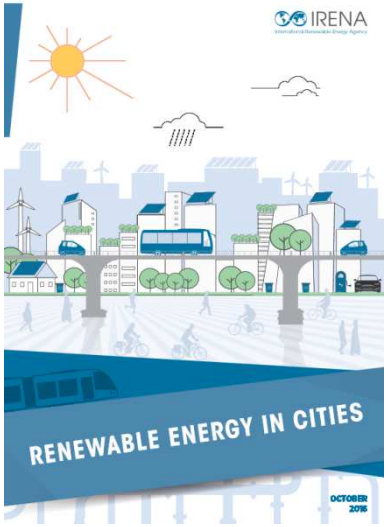


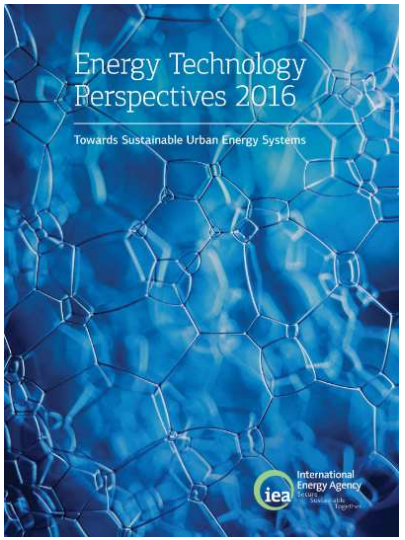


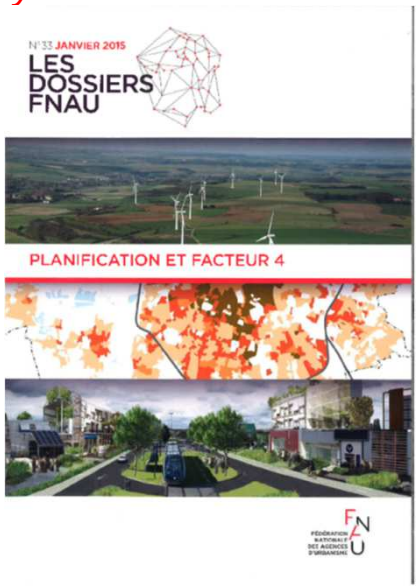
Territories as a lever in the energy transition

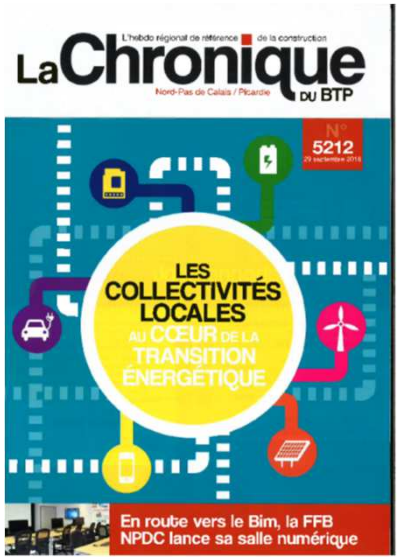
- Energy decentralization (political, technical, institutionnal…) from 30 years
- Consensus about the role of local authorities and territories in energy transition
  - *International institutions –(IRENA, IEA..)*
  - *Professional publication (Building sector)*
  - *Town Planning Agency*
  - *Cities networks*

  (C40, Energy cities…)









• The current energy context in France

From a historically centralized energy system…

… to a future decentralised energy system?

	2015	2050
Technical consequences: Supply and Distribution		
Primary Energy	Extensive import of gas, oil, coal, uranium (from 98 to 100 %)	Major local or national production (from 50 % to 100 % depending on scenarios and energy vectors)
Electricity	58 nuclear power plants (GW) on 19 sites 10 sites with oil power plants, 10 with gas and 4 sites with coal (GW) Approximatively 2 000 on-shore wind farms (MW)	50 000 wind turbines (MW) Thousands of PV plants (MW) Millions of roof with solar panels (kW) Biomass cogeneration (MW) Power-To-Gas site (MW) …
Gas	5 import points –interconnections (pipelines coming from over countries)	Thousands of methanisation units (depending of the size and type of production)
Oil	99 % of oil consumed is imported 10 refineries on the national territory	Oil phased out from the transportation system New transport system with millions of charging stations (home, office…) linked to the electric grid, and some thousands to the gas network
Economic consequences		
Economic	40 to 70 Billion €/year needed in 2012 to import gas and oil About 1 billion €/year needed to import uranium	Probably the same amount in order of magnitude but with a significant shift and expansionist effect on the national and local economy

- France is a centralized country. But as defined in the Constitution from 1958, its organization is decentralized with **four local administrative levels** share responsibilities with 101 counties, 36 700 municipalities, 22 regions and 2,600 municipality groups.
- Decentralization trend
  - *1982 and the first decentralization laws (the Defferre laws)*
  - *Then in 2003, the Raffarin laws were the second act of decentralisation, which gave new responsibilities to local authorities.*
  - *And the third act, with two recent laws (1) the Modernization of Territorial Public Action and Assertion of Metropolitan Areas (MAPTAM) law and the (2) New organization of the Republic (NOTRe) Law.*
  - *Because of these two laws, energy is now a crosscutting theme each level (region, county, group of cities, municipality) of government must deal with.*

Local authorities and current responsabilities

- *The Region is responsible in the following policy fields:* ***planning, biodiversity protection, climate, energy, air quality, economic development, transportation, research****.*

- *The County is responsible in the following policy fields:* ***social action, fuel poverty, solidarity between territories****.*

- *Municipalities (and groups of municipalities – métropoles, communautés d'agglomération, de communes) are given enhanced responsibilities in the field of sustainable* ***mobility, local public services, and local development.*** *Around major cities, metropolitan areas are given reinforced responsibilities on energy issues compared to "minor" groups of municipalities****e***

- Local authorities' international networks : Energy Cities, Climate Alliance, CCRE, FEDARENE and EUROCITIES, C40
- Positive Energy Territories (TEPOS) Network
- Pioneer territories : as Greater Lyon

Objectives of Local Energy Planing

- Territorialisation of the energy transition

- Vision from constraints to opportunities

- Rise in competence of elected people

- Define the local energy strategy and prioritize the means in short terms

- Define a new local energy governance with all stakeholders

Phase 1 Understanding the energy context of the territory	Phases 2 Perspectives: understanding the potential of the territory	Phase 3 Strategy and action planning
Understanding the energy consumption and production in the territory Mapping energy networks and grids (gas, electricity, heat, hydrogen…) Understanding the new responsibilities and skills of the local authorities	Conducting a local foresight exercise (demographic, economic, urban planning…) Assessing the potential for energy savings and renewable energy production Mapping the development of networks, grids	Elaborating scenarios for 2050 Elaborating a multi-years (5 years) actions plan with stakeholders commitments Identifying indicators Monitoring

- Energy as an opportunity in terms of local development…but only for the pioneers?
- Management from centralized and technical form of governance to a decentralized one
- A first step towards integrating the energy system in urban planning, mobility planning
- Strong ambitions for the pioneers (100% RE)… but are there limits to autarky?
- An adaptation of energy transition to local characteristics… but without the local citizens?