

French support schemes for biogas

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The main objectives of the law on energy transition

The objectives of the energy policy

- Reduce the GHG emissions by 40% between 1990 and 2030, by 75% between 1990 and 2050
- Reduce the primary energy consumption by 50% between 2012 and 2050
- Increase the share of renewables in the final energy consumption to 23% in 2020, 32% in 2030
- Reduce the share of nuclear in the electricity production to 50% in 2025

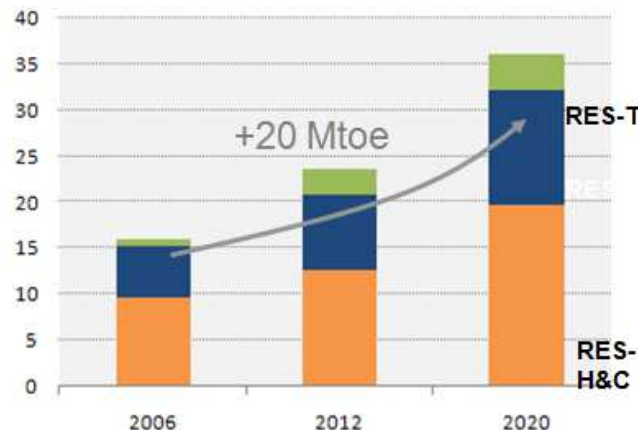
Several challenges are identified

- Buildings renovation
- Clean transport
- Circular economy, reduction of energy waste
- Renewable Energy Sources
- Nuclear security and information
- Simplification of legal procedures
- Energy steering and programming

New targets for each renewable energy sectors will be defined in the Multiannual Programming of Energy (« programmation pluriannuelle de l'énergie – PPE »).

Ambitions related to renewable energies

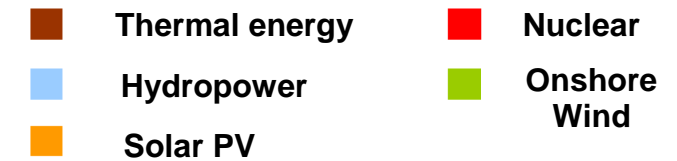
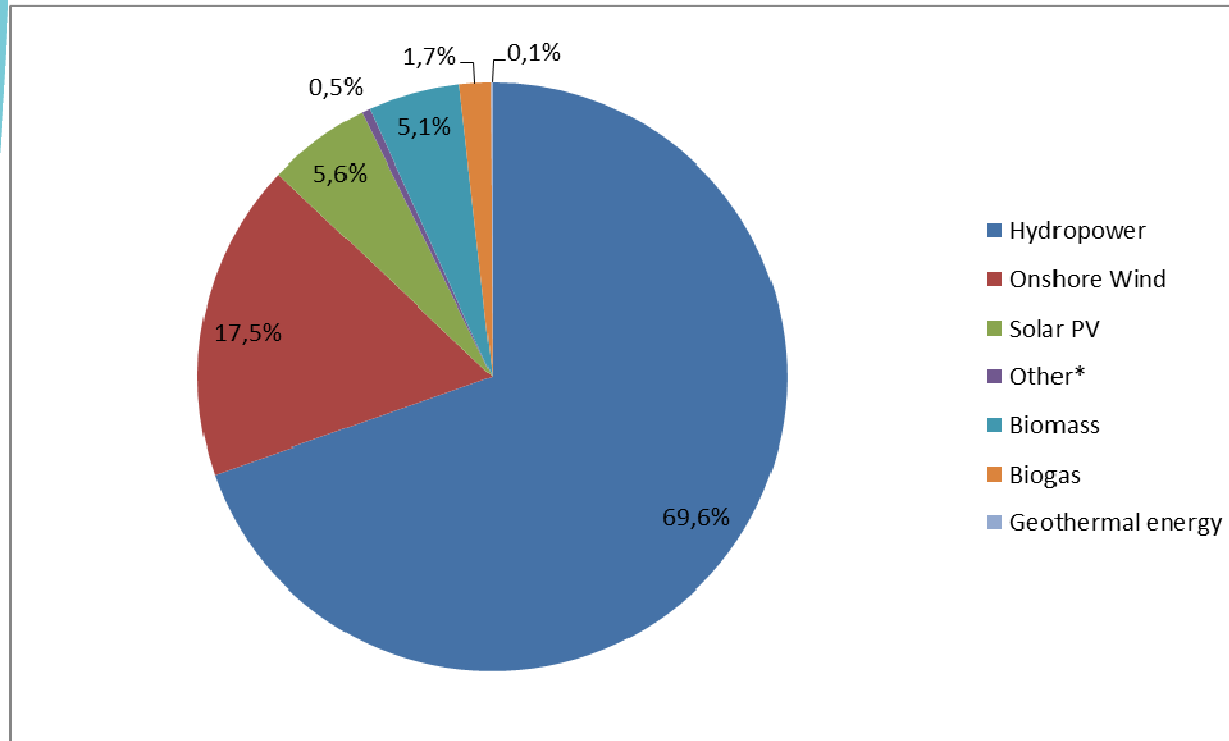
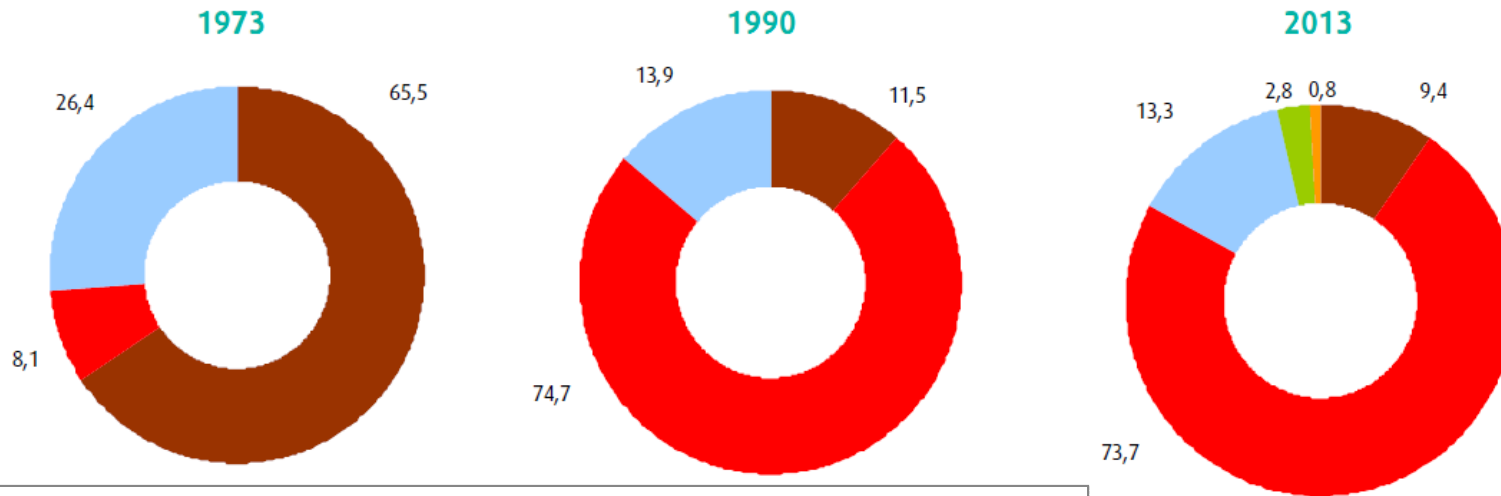
- Contribute to the diversification of the energy mix to allow a better energy independence :
 - ✓ Increase the installed capacity in France, increasing the share of RES in the energy mix
 - ✓ Reduce the cost of these technologies and continue to support them all the way through maturity
- Secure a de-carbonated energy supply with competitive conditions
- Reach environmental and local supply objectives
- Enable national and international industrial leadership :
 - ✓ Develop training programs and internationalization of competences skills
 - ✓ Create new jobs and support the development of new industries in Europe
 - ✓ Encourage technology breakthroughs



The French electricity mix

Evolution of the electricity production mix since 1973

En %



Renewable electricity consumption in 2013 (in %)

* Other : La Rance tidal power plant

Current/Previous RES Support schemes

Feed-in tariffs

- ✓ Hydropower
- ✓ Onshore wind
- ✓ Biomass
- ✓ Biogas
- ✓ Solar PV < 100kW

Tender scheme

- ✓ Offshore wind
- ✓ Biomass
- ✓ Biogas
- ✓ Solar PV > 100kW

- The energy transition law introduces new policy tools - feed-in-premiums - to achieve the new RES objectives and to :
 - ✓ Improve RES integration in electricity markets
 - ✓ Expose RES generation to short term market signals
- In the same time, the commission introduced new State aids guidelines for environmental protection and energy
- ➔ A large consultation was launched at the beginning of 2014 to share with the stakeholders the evolution issues of support scheme and to provide the Commission with a French shared position in the context of the elaboration of the new State aids guidelines

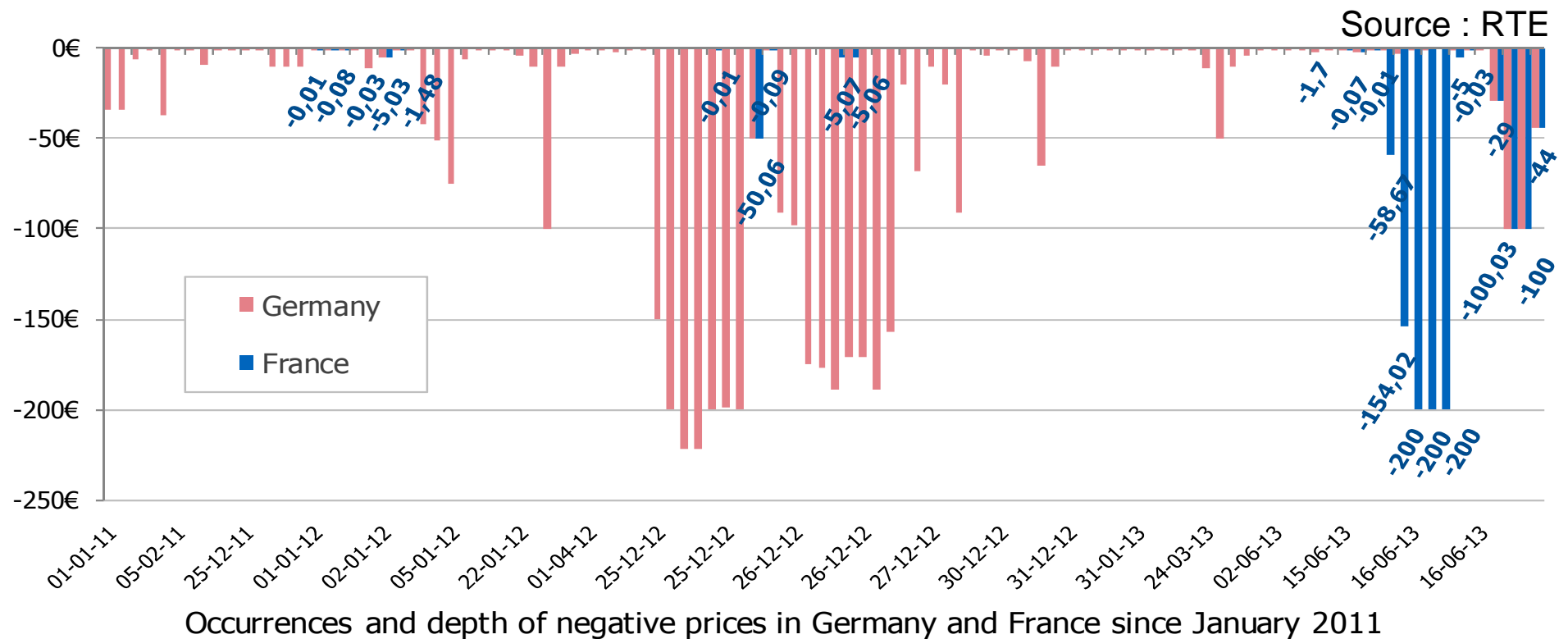
RES and the electricity market

- The electricity market no longer gives the proper signals for investments:
 - Economic crisis : decline of the demand
 - Low CO₂ signals and low coal prices
 - Production overcapacities
- ➔ the wholesale prices of the electricity have collapsed and baseload prices are now lower than the levelized costs for new generation units and even O&M costs for conventional thermal units (CCGTs are no longer profitable).
- ➔ RES integration is not responsible of low prices but it contribute to that decrease of prices (effects on the merit order)
- RES support schemes contribute to the increase of negative prices :
 - First negative prices in France in 2012
 - -200 €/MWh in June 2013
 - Mainly due to RES support schemes and the lack of flexibility of conventional power plants

Negative prices are becoming more and more frequent

Comparison of negative prices between France and Germany

- Negative prices used to be a German concern
- The first negatives prices in France were “imported” from Germany
- In June 2013, first occurrence of negative price in France “exported” to Germany



RES and the electricity market

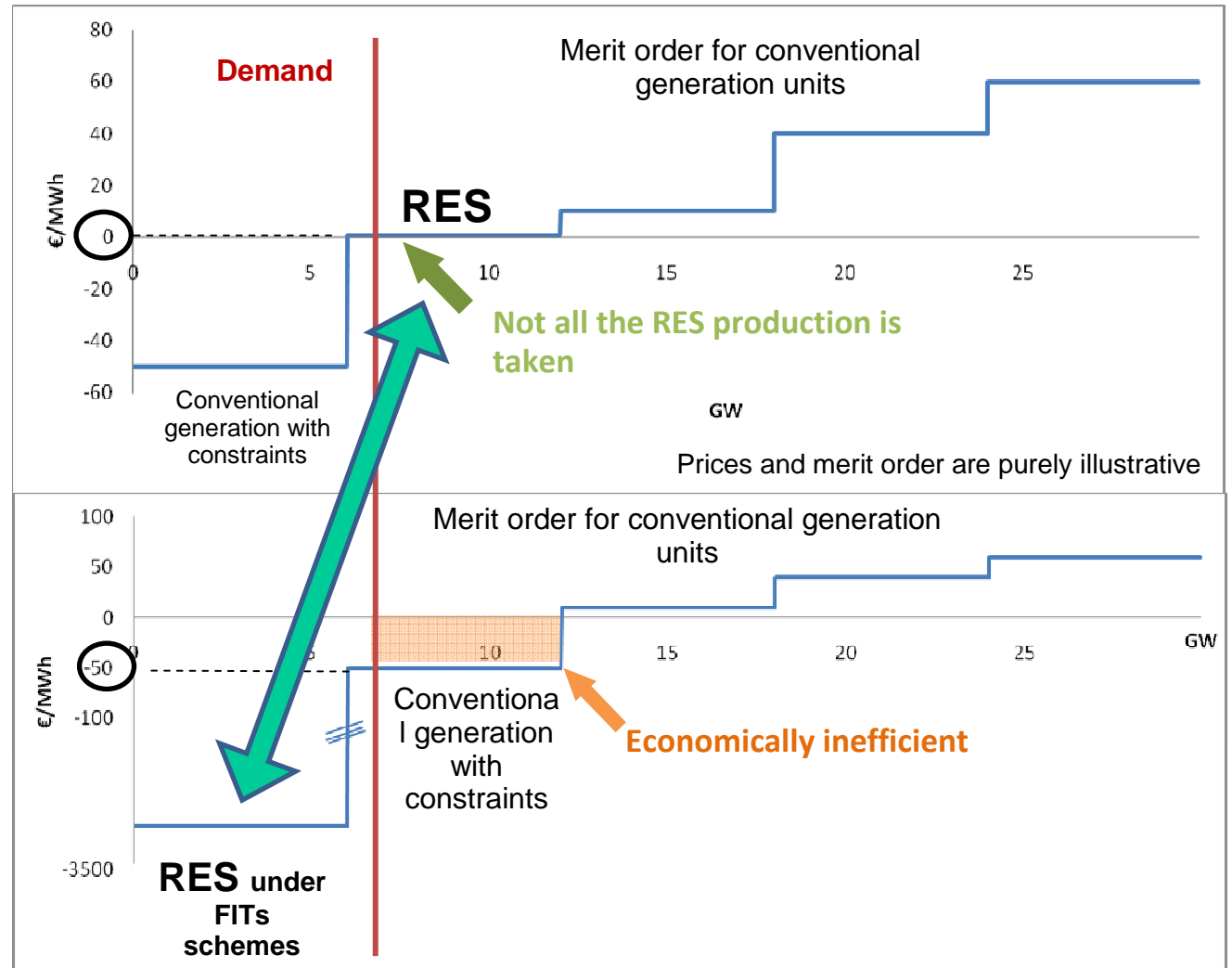
Impacts of RES support schemes on the merit order

➤ Without support scheme :

- Energy sources are called according to the merit order
- RES are offered at their O&M costs

➤ With current RES support scheme :

- RES have a priority access to the grid resulting in « offers at all costs »
- As a consequence, negative prices occur more often



➔ Call for rethinking the RES support schemes

New RES support schemes

Feed-in tariffs

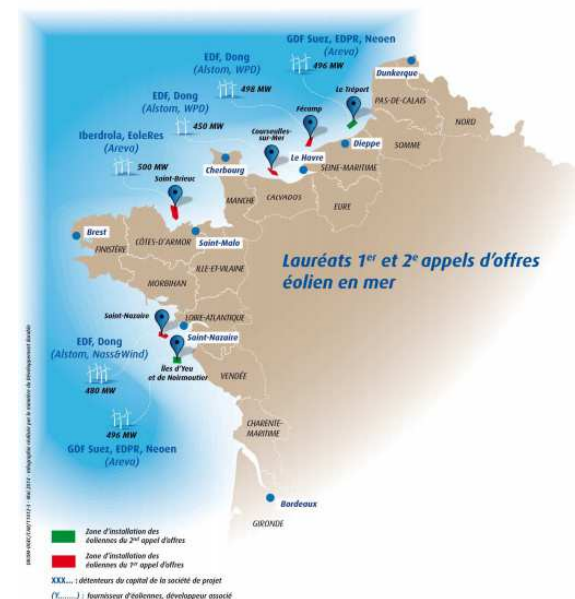
- ✓ “Small” size capacities
- ✓ Level of the FIT may be modified in accordance with the European Guidelines

Feed-in-premium

- ✓ “Large” size capacities
- ✓ “Complément de rémunération” in the French law

Tender scheme

- ✓ At least, for all capacities above 1 MW
- ✓ Maybe other capacities (Solar PV, biomass)

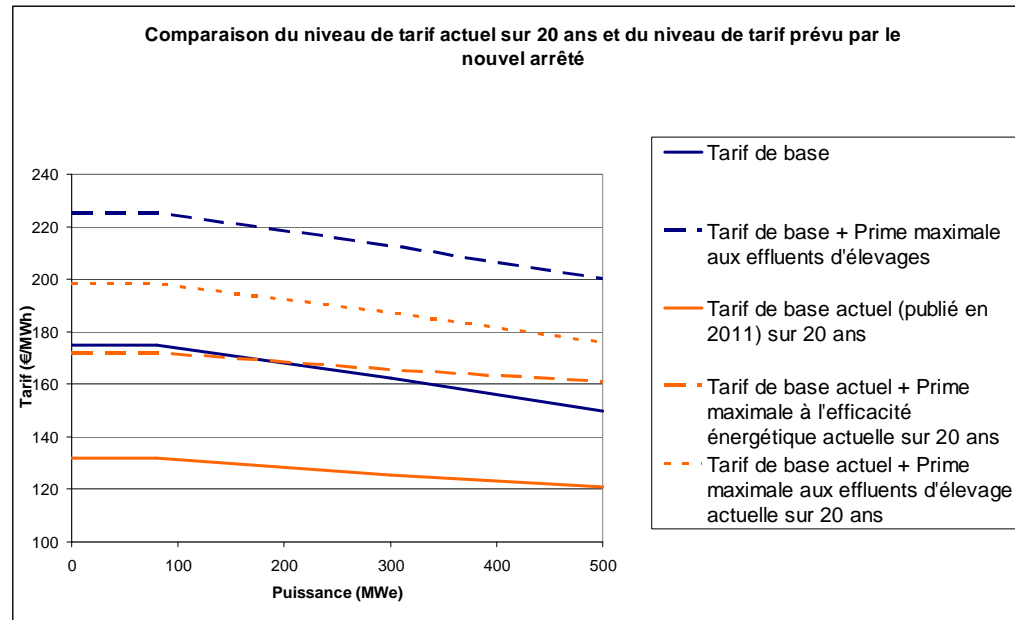


General view of the new support schemes

	Capacity (kW)				
Renewables	100	< 250	< 500	≤ 1000	> 1000
Hydropower	FiT			FiP	Tender (FiP)
Waste incineration	FiP				
Biomass	Tender (CR)				
Biogas (ludge gas and landfill gas)	FiT			FiP	
Biogas (methanization)	FiT			Tender (FiP)	
Geothermal Power	FiP				
CCGT - CHP	FiT	FiP			Tender (FiP)
Minegas	FiT				
Solar PV	FiT	Tender (FiT)			Tender (FiP)
Wind onshore	FiT/FiP				
Marine energy	FiT				
Wind offshore	Tender (FiP)				

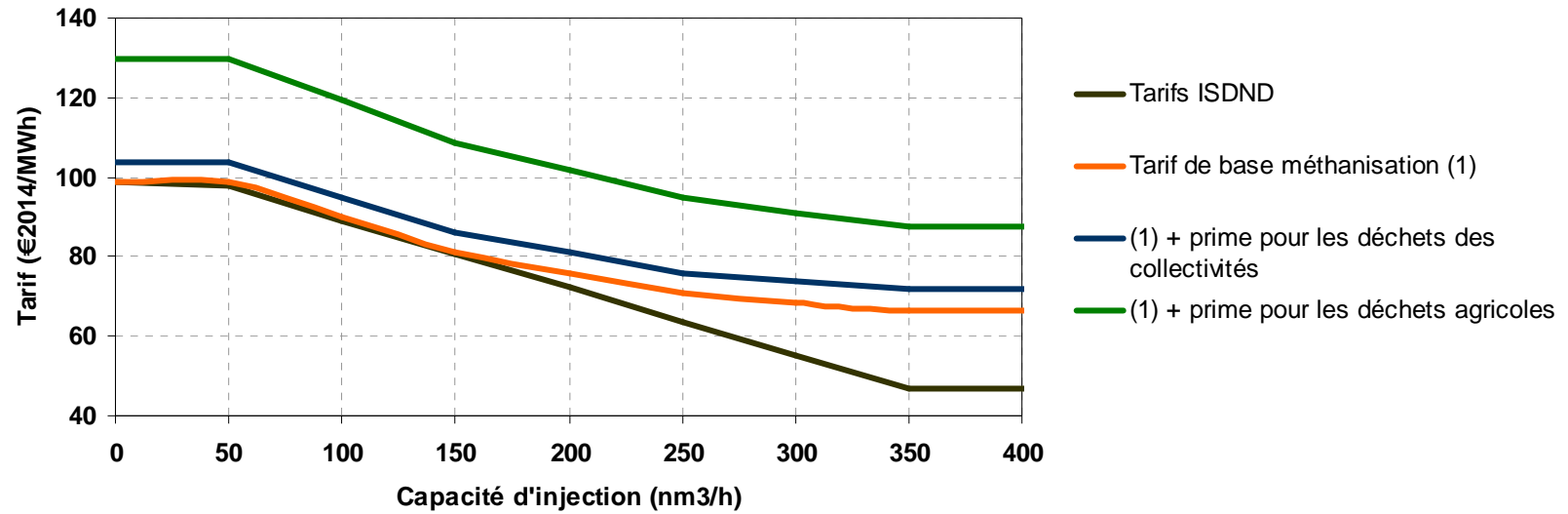
New schemes for biogas (methanazation)

FIT scheme for small size installations + possible investment aids (ADEME)



Tender procedure combined with FIP scheme for installations above 500 kW

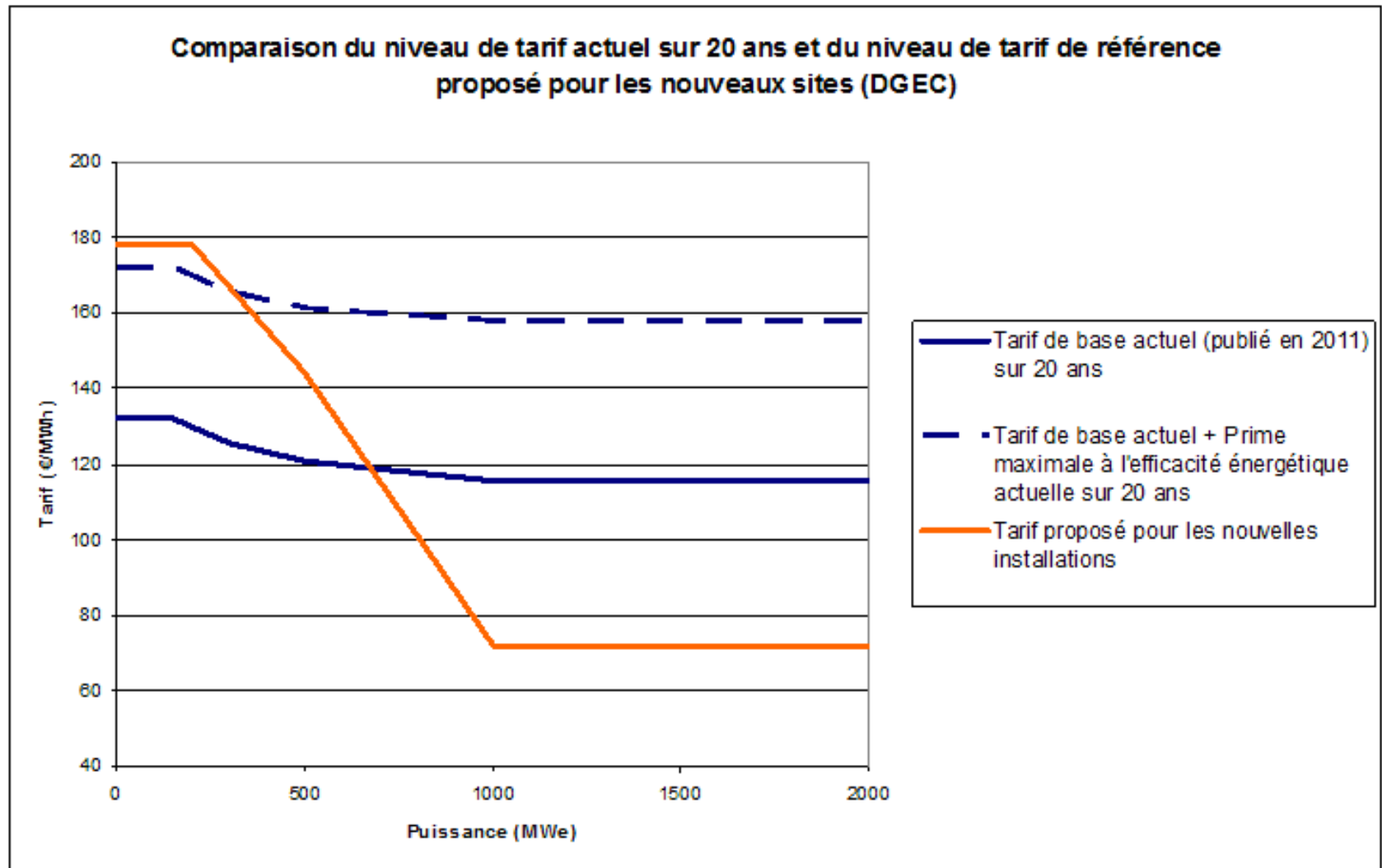
FIT scheme for biomethane



Tender procedure introduced by the energy transition law

Thank you for your attention

New FIP schemes for ludge biogas



New FIP schemes for landfill biogas

