

# French support schemes for biogas

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# The main objectives of the law on energy transition

## The objectives of the energy policy

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- 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

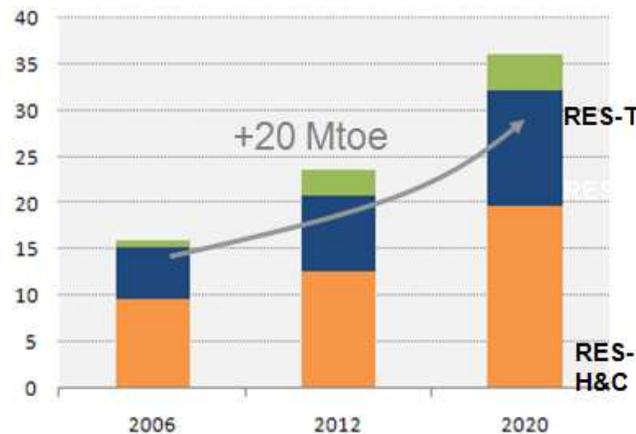
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- Buildings renovation
- Clean transport
- Circular economy, reduction of energy waste
- Renewable Energy Sources
- Nuclear security and information
- Simplification of legal procedures
- Energy steering and programming

**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

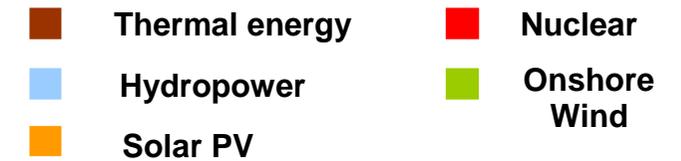
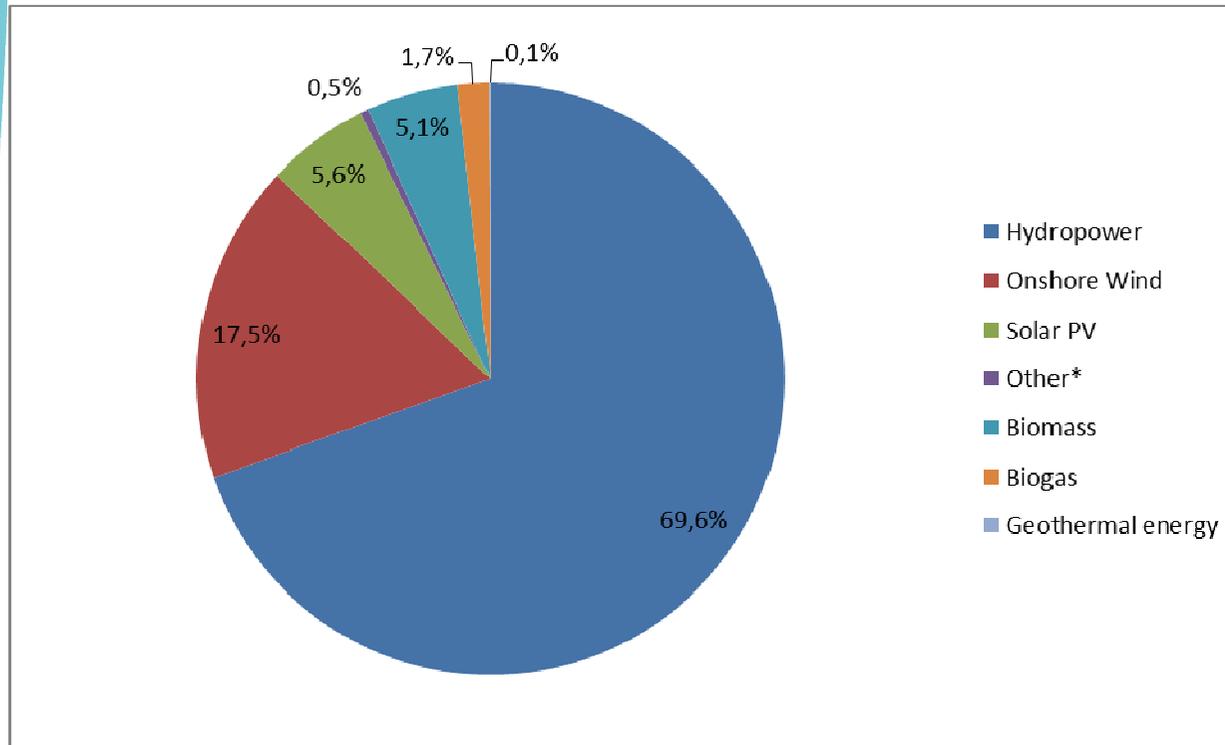
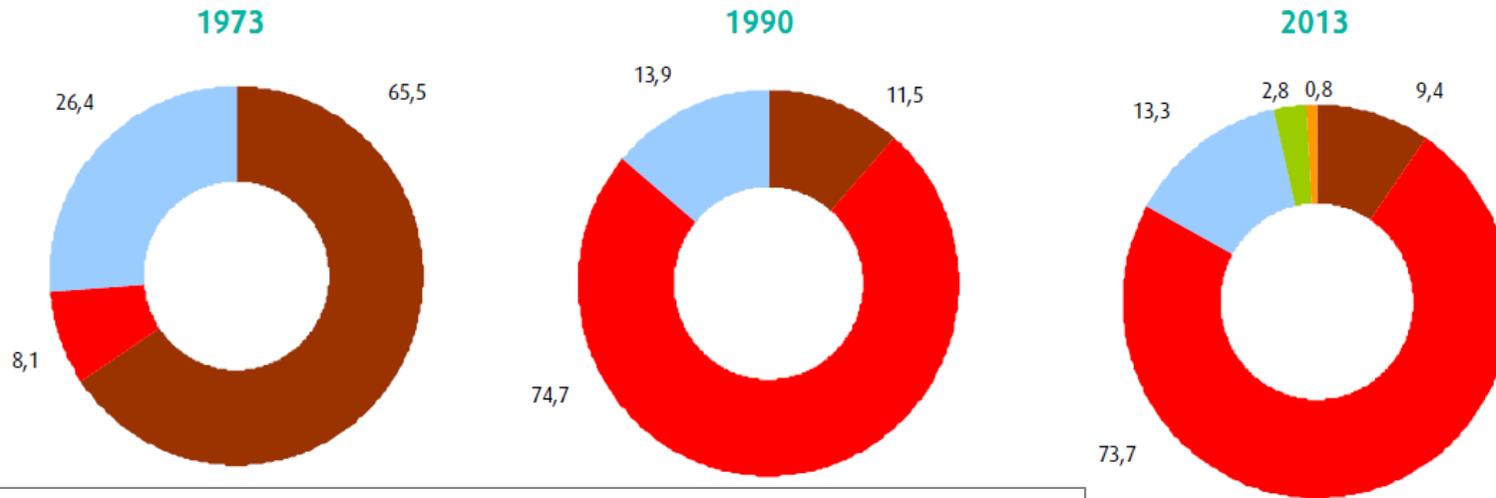
- Contribute to the diversification of the energy mix to allow a better energy independence :
  - ✓ Increase the installed capacity in France, increasing the share of RES in the energy mix
  - ✓ Reduce the cost of these technologies and continue to support them all the way through maturity
- Secure a 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 CO<sub>2</sub> 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



# RES and the electricity market

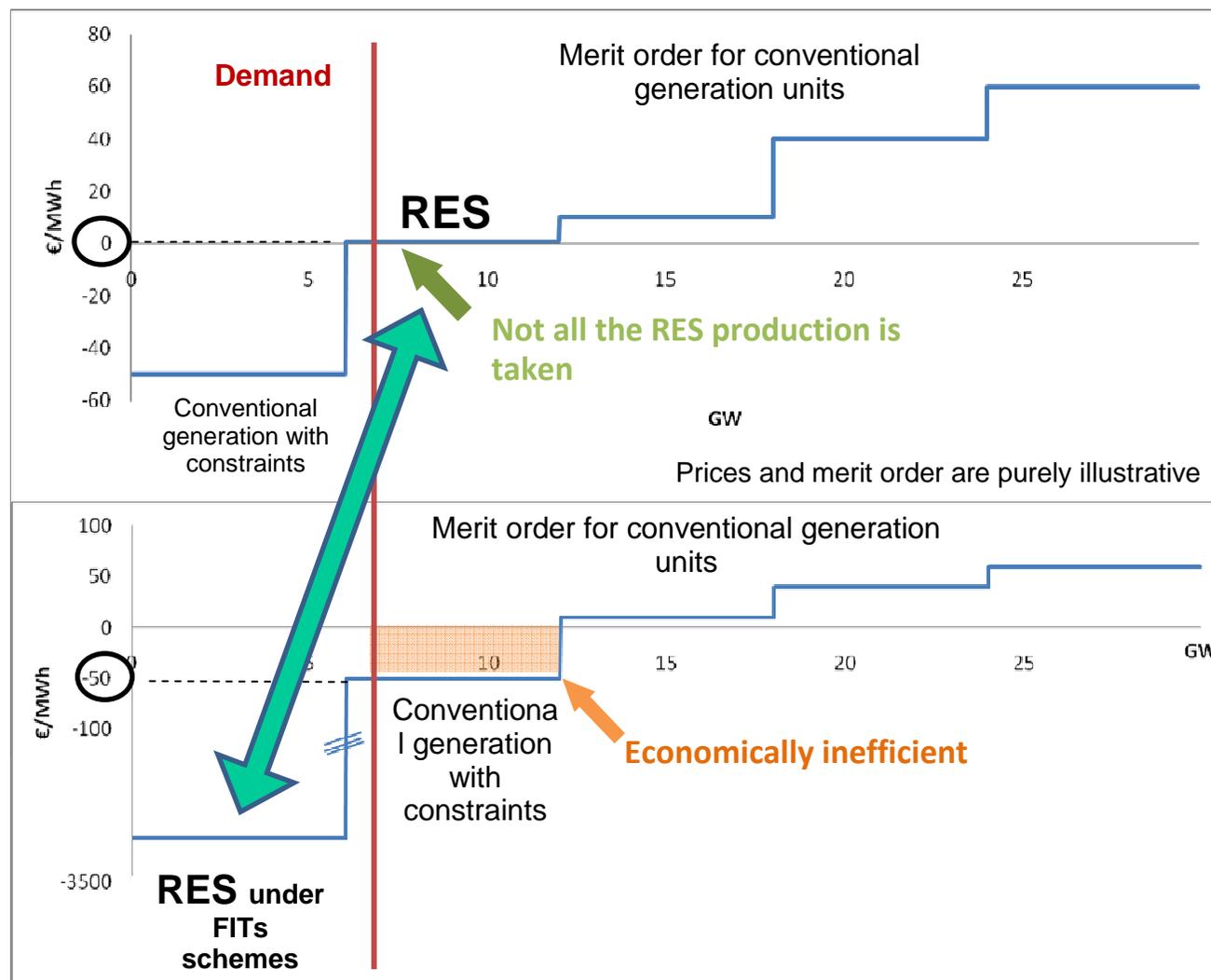
## Impacts of RES support schemes on the merit order

### ➤ 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

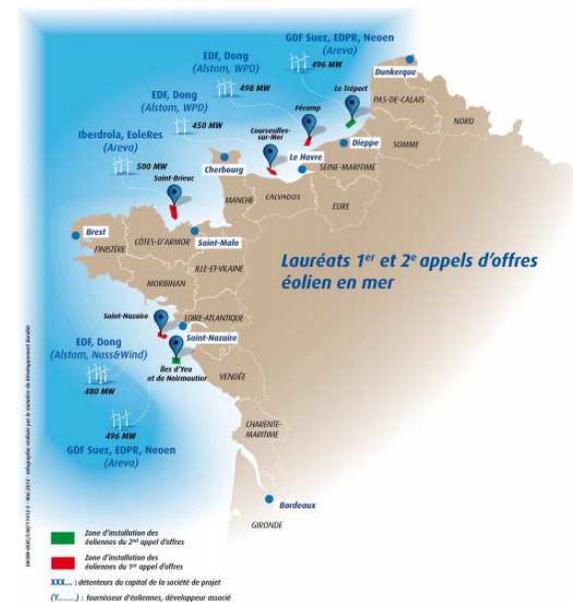
- ✓ “Small” size capacities
- ✓ Level of the FIT may be modified in accordance with the European Guidelines

## 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)

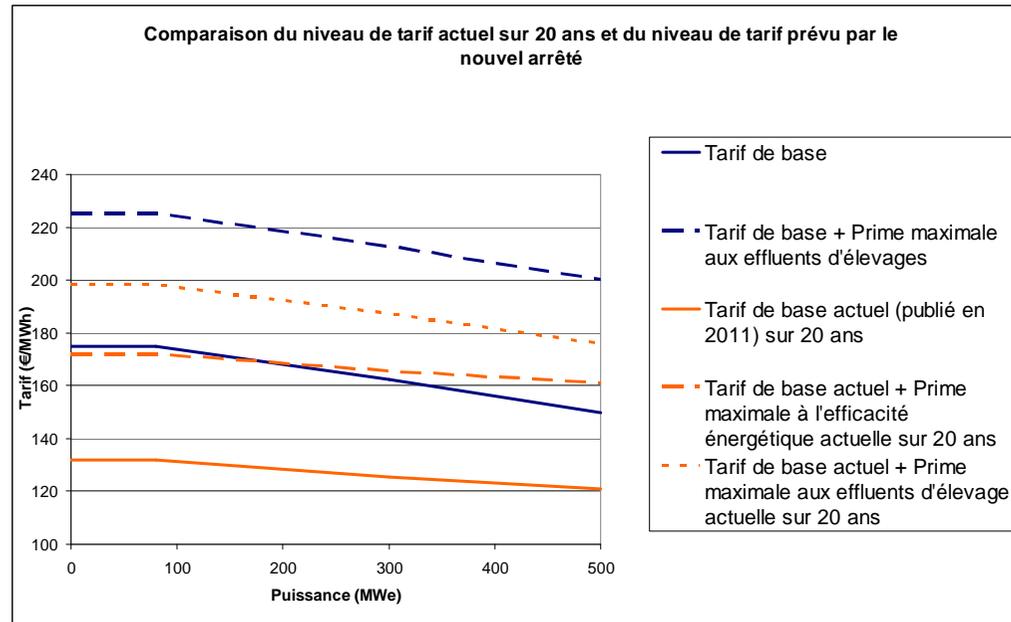


# General view of the new support schemes

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

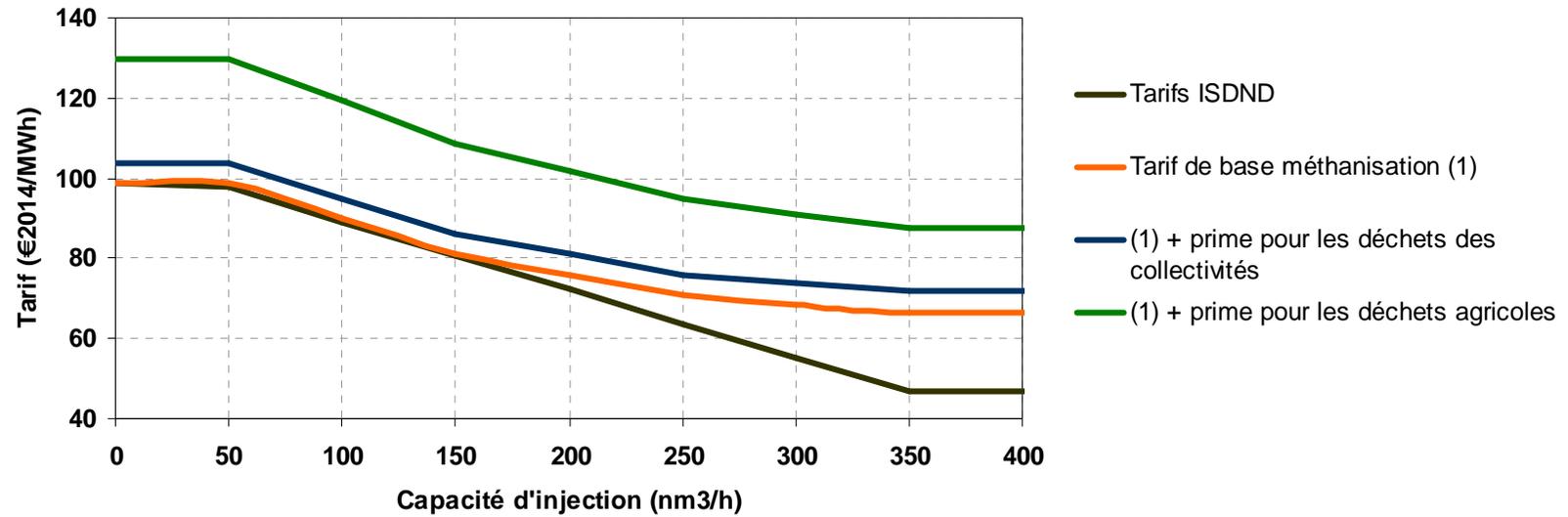
# New schemes for biogas (methanazation)

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



## Tender procedure combined with FIP scheme for installations above 500 kW

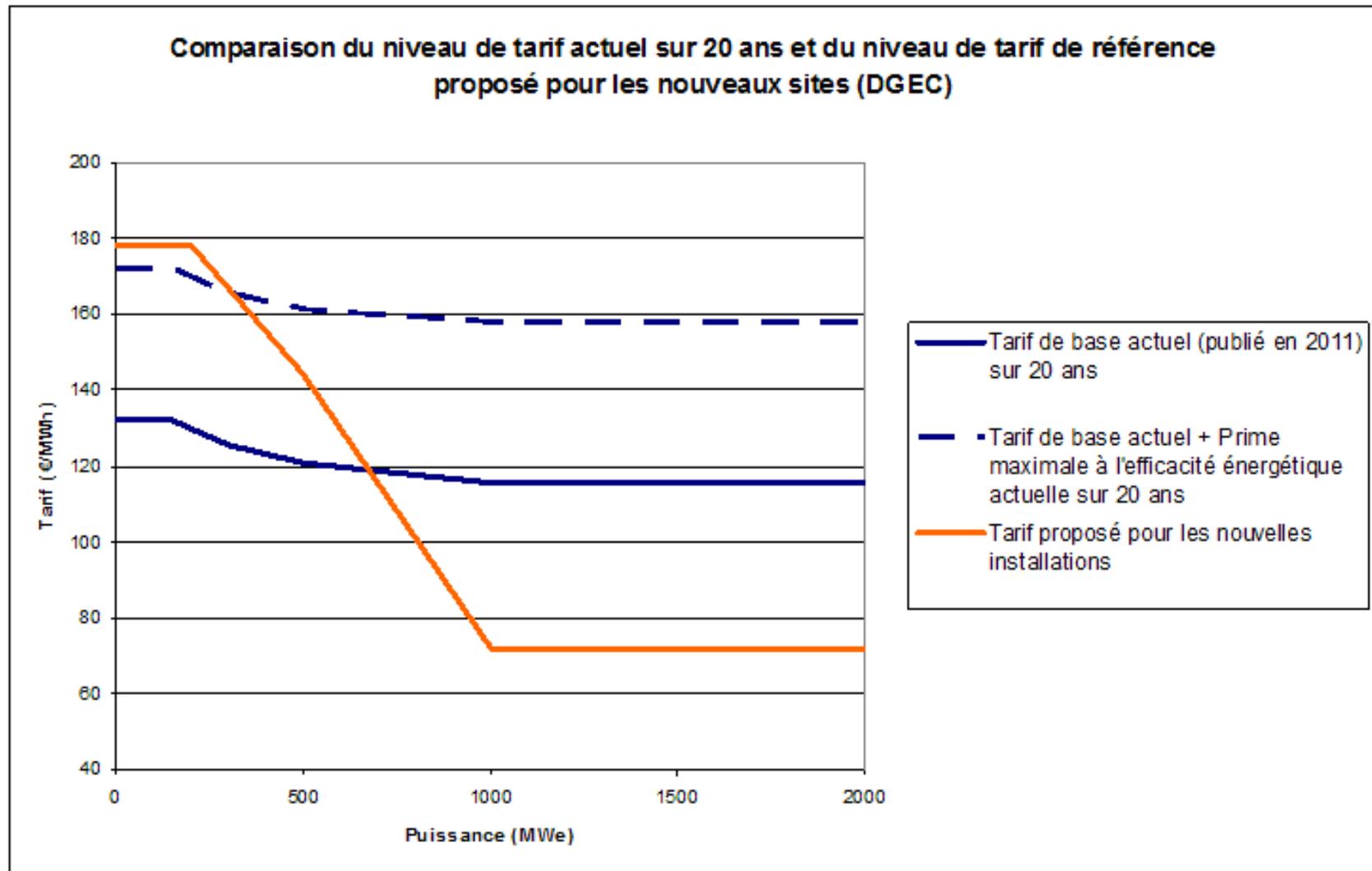
# FIT scheme for biomethane



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

