

# Climate Recon 2050: Dialogues on Pathways and Policy

France  
Yves Marignac, Association négaWatt

## The négaWatt 2017-2050 scenario

### Main options and results

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## 1. *négaWatt 2017-2050 scenario* for France – Overview

- Title: négaWatt 2017-2050
- Developed by Association négaWatt on own funds, voluntary work, crowd-funding, and with support of the Fondation pour le progrès de l'homme (FPH)
- Publication: January 2017 (French version) / November 2018 (English summary)
- Two scenarios:
  - Existing Measures Scenario (realistic implementation of existing policies) → Reference scenario
  - **négaWatt 2017-2050** → Exploring the systematic, sectorial and cross-sectorial implementation of a three-step approach (sufficiency / efficiency / substitution by renewable resources)  
*Scenario coupled with Afterres 2050, developed by Solagro (land use, agriculture and forestry)*
- Bottom-up modelling of energy consumption and production (+ hourly basis for electric demand-supply)
- Cautious approach to technological disruption,  
Physically based rather than economically based modelling
- Holistic approach of sustainability issues (pollutions, land use, raw materials, etc.)



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## 2. Key options

### ➤ **Sufficiency:**

- Urban planning, size and mixity of buildings, sharing of working or living spaces
- Shift mode in transports, car sharing, servicial access to cars adapted to different needs
- Reduced need of goods and equipments through optimisation of use, sharing etc.
- Change in food diet (meat consumption)

### ➤ **Efficiency:**

- Deep and comprehensive thermal retrofitting of existing buildings
- Increased performance of all vehicles, appliances, heating systems, etc.
- Improved efficiency of industrial processes

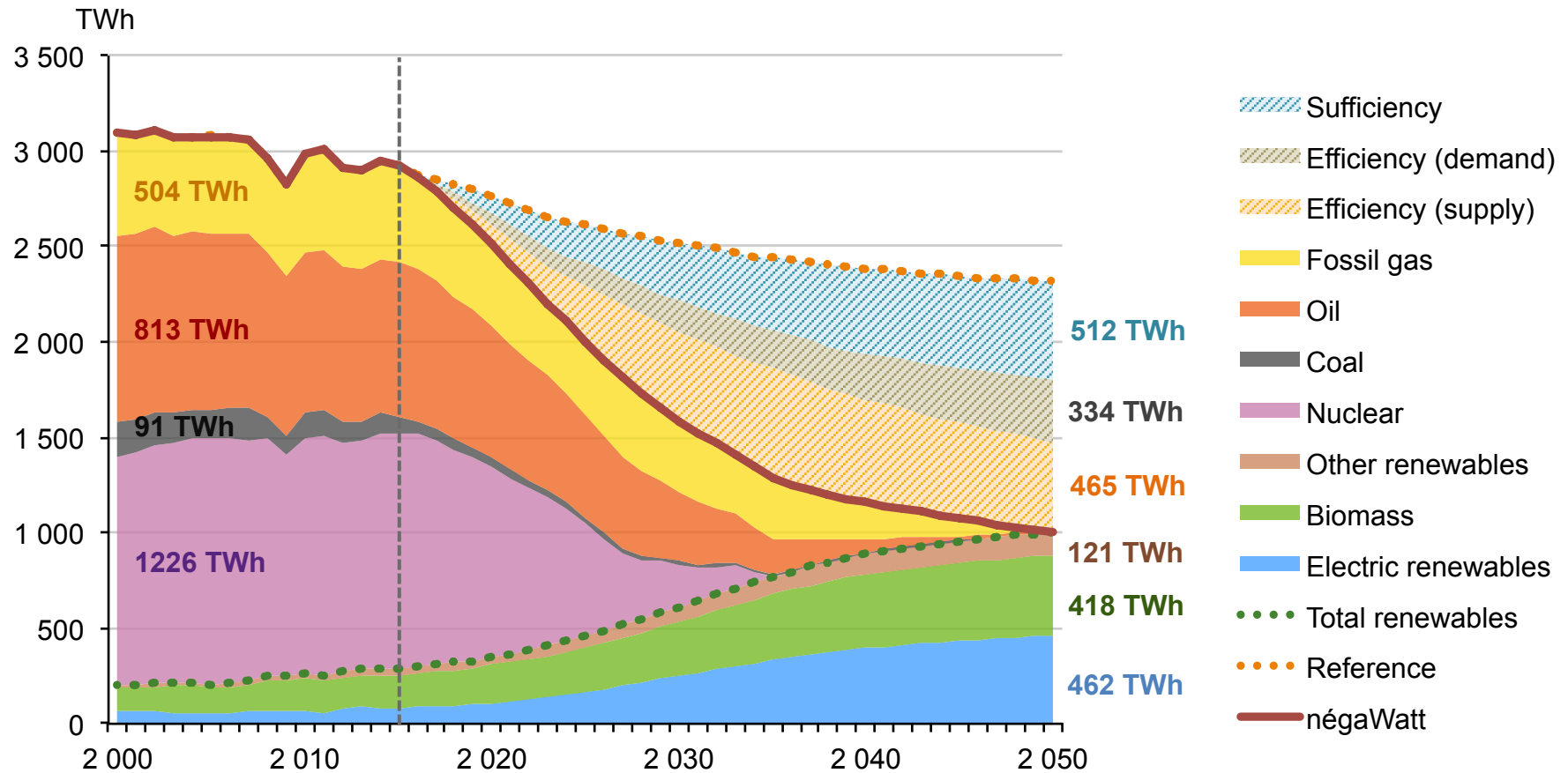
### ➤ **Substitution:**

- Prioritary development of electric renewables and bioenergy (avoiding dedicated culture)
- Balanced use of electricity and gas (especially for mobility), key role of power-to-gas
- Use of biomass also to substitute to non renewable primary materials

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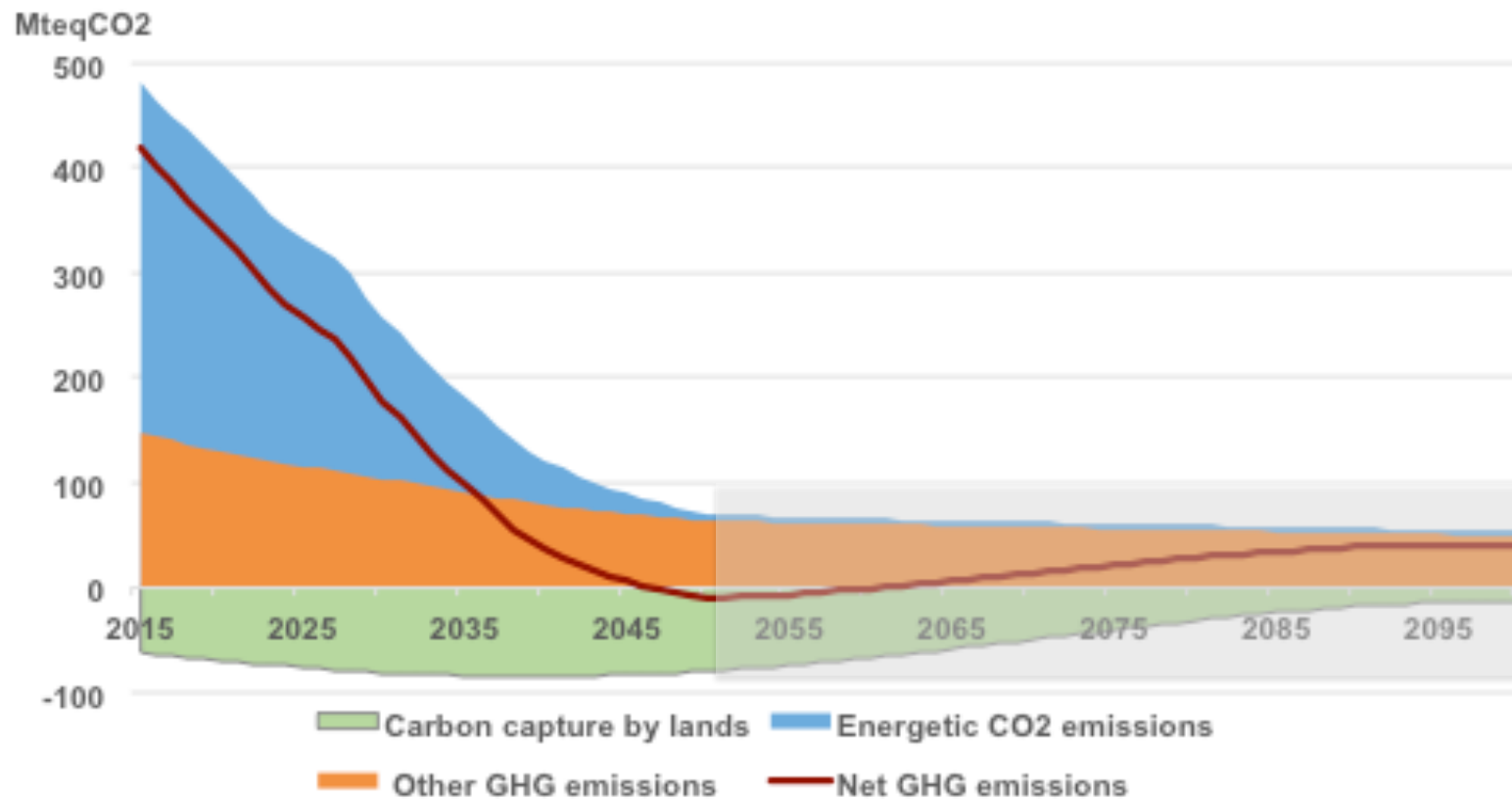
## 3. Evolution of the energy system



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## 4. Reduction of net GHG emissions



Evolution of raw and net GHG emissions by 2050 (and extension to 2100)