Contributions of farms in Nouvelle-Aquitaine to renewable energy production

Thomas FERENC
ADEME Nouvelle-Aquitaine
Agriculture in Nouvelle-Aquitaine

1st agricultural region in France and Europe

Agriculture 1st Regional economy

1st rank in France with 15% of national utilised agricultural area (UAA)
Crop production accounts for 69% of agricultural income compared with 31% for animal production.

However, 54% of farms in Nouvelle-Aquitaine are involved in livestock farming.
40% of farms produce at least one product with the **french label SIQC** (official quality and origin logo)

**2nd** region in number of certified organic producers

**European Quality procedures:**
- Protected Geographical Indications
- Protected Designation of Origin
- Traditional Specialty Guaranteed
- Organic Agriculture (French: AB)

**French Quality Steps:**
- Appellation d’Origine Contrôlée (AOC)
- Label Rouge (LR)
Renewable energy production in Nouvelle-Aquitaine in 2018

60% of renewable energy production comes from solid biomass (wood, wood by-products, waste) recovered in the form of heat:

- Solar, geothermal, urban waste, biogas
- Urban waste, biogas, electric biomass

41,100 GWh in 2018
Share of the agricultural sector in RE production in Nouvelle-Aquitaine

- The RE sectors that can be carried by agriculture are:
  - Some thermal renewable energies: thermal biomass (boiler plants), geothermal energy (except for private individuals), thermal solar energy (except for private individuals), thermal biogas (methanisation, excluding ISDND), biomethane (grid injection), etc.
  - Some electrical RE: PV, wind power, electrical biogas (methanisation, excluding ISDND)

- Concerning PV / wind: the legal porting is mostly private (developers)
  - No data on the "agricultural" nature of the portage.

- Concerning biofuels: food industry portage or cooperatives

Identification of the RE sectors that can be carried by the agricultural sector:

<table>
<thead>
<tr>
<th>Filière</th>
<th>Production 2018 (GWh)</th>
<th>Part du secteur agricole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomasse thermique (hors bois particulier, biogaz thermique et déchets urbains)</td>
<td>12 312</td>
<td>1%</td>
</tr>
<tr>
<td>Solaire thermique hors particuliers</td>
<td>23</td>
<td>7%</td>
</tr>
<tr>
<td>Géothermie (hors particuliers)</td>
<td>140</td>
<td>28%</td>
</tr>
<tr>
<td>Biogaz thermique (méthanisation)</td>
<td>70</td>
<td>33%</td>
</tr>
<tr>
<td>Biométhane (méthanisation)</td>
<td>64</td>
<td>30%</td>
</tr>
<tr>
<td>Eolien</td>
<td>1 737</td>
<td>19%</td>
</tr>
<tr>
<td>Photovoltaïque</td>
<td>2 990</td>
<td>30%</td>
</tr>
<tr>
<td>Biogaz électrique (méthanisation)</td>
<td>131</td>
<td>42%</td>
</tr>
</tbody>
</table>

Total: **28% excluding thermal biomass**
Rate of mobilization of the methanizable resource 2030

15.5 million tonnes of methanizable resources by 2030
i.e. 9.7 TWh

4.4% of the potential methanizable resource by 2030 is methanized in 2018 (2.0% by agricultural type units).
Examples (Haute-Vienne)

**SAS (French Simplified Joint Stock Company) Amisoleil**

Formation of a group of farmers around PV production

- End of 2008: canvassing of PVs and reflection to bring added value back to the agricultural sector.
- End of 2009: formation of the group, 24 building permit filed for 26 connection applications.
- 2010: regulatory procedures and bank financing.
- Dec 2010: Moratorium and exclusion of 2/26 technical and financial proposals, new filings and choice of "tariff mutualisation".
- 25000 m² PV surface on agricultural buildings for 3.385 MWe (13.7 M€)
SAS (French Simplified Joint Stock Company) Bioénergie 123

Continuing the adventure around biogas production

- Sept 2017: Creation of the SAS, constitution of 3 colleges including 1 reserved for retirees.
- 77 farmers, 3 biogas plants (2 Regions), 270 Nm3/h each
- Multi-objective: to take current work forward by achieving ambitious environmental targets (CO2 equivalent of - 4600 new cars)
- Similar mindset to that of Amisoile: pooling of resources to be implemented, risks incurred and economic benefits (pooling of logistics).

Examples (Haute-Vienne: continued)
Examples (Dordogne)

**Project of agricultural organic valorization for agricultural mobility (GNV)**

- Willingness to valorise "surplus" biogas produced in cogeneration
- Finding a form of independence from the price of fossil fuels
- Optimizing the impact of agriculture on energy transition and climate change
- 1 to 1.3 Nm$^3$ BioGNV/h for 6000 L of fuel, i.e. 6 light vehicles + 2 commercial vehicles
- Difficulties: availability of the tractor on the French market, need for support to achieve an economic balance facing fossil fuels.
Conclusion

- Significant room for improvement (100% regional green gas in 2050...)

- The potential of the agricultural sector being a determining factor in a framework that goes beyond the energy transition (agroecology, social responsibility, etc.).

- Position of ADEME Nouvelle-Aquitaine as a facilitator and accompanier (technical, financial, etc.), from the emergence to the implementation of initiatives.

- With systematic technical and environmental monitoring, adapted to ongoing developments
Thank you for your attention!

All about the ADEME on www.ademe.fr

Contact: thomas.ferenc@ademe.fr