Purchase of environmentally verified biogas

Project presentation:
As part of a low-carbon trajectory contributing to collective carbon neutrality, Gecina has been integrating biogas into the gas supply of its buildings since 2019, with this share rising from 10 to 60% between 2019 and 2021 and increasing to 100% of supply in 2024.

<table>
<tr><td>Starting date of the project</td><td>Contract signed in 2018 on gas supply from 2019</td></tr>
<tr><td>Project Localisation

Places of implementation of the project at this stage and targeted geography if replicable.</td><td>Biogas produced in France
Buildings supplied in France</td></tr>
<tr><td>Project objectives

Type of climate innovation of the project with a description of the problem/issue addressed</td><td>This renewable energy purchasing strategy is driven by three goals:
to reduce the supply of fossil fuels in favor of a renewable, low-carbon energy resource(5 times less carbon intensive than conventional gas), produced in France;;
to extend the circular economy approach by purchasing energy from waste recovery;
to support a business that generates further income for French agricultural activity.
To ensure these goals are met, Gecina has examined the recommendations of expert studies on the development of the biogas sector in France and has incorporated them into its supply contracts in the form of specific, verifiable clauses.</td></tr>
<tr><td>Detailed project description</td><td>Since 2019 Gecina has been integrating biogas into the gas supply of its buildings, this share has increased from 10 to 60% between 2018 and 2021 and will be increased to 100% of the supply in 2024.

In real terms, the biogas purchased by Gecina will be produced in the Île-de-France region and will come from the recovery of agricultural waste and fallow crops which help soil regeneration. The biogas plants used for its production were developed between 2018 and 2019 with the support of local elected officials and the assurance that no nuisance was generated for local residents. Lastly, these biogas plants were developed without any additional land artificialization and will be subject to regular checks to reduce exposure to the risk of environmental accidents. These qualitative guarantees will be monitored via a prerequisite developed by Gecina during negotiations for its gas supply contract: the identification in the contract of the biogas plants from which the guarantees of origin will come, supplied to Gecina for the length of the contract.

The traceability of the biogas supplied meant Gecina could secure buy-in from its teams to ensure compliance with the responsible purchasing criteria set, in particular by contacting local stakeholders.
In identifying biogas plant partners, Gecina is also consistent with its strategy of helping suppliers to improve their environmental performance. This is achieved primarily through the supplier’s commitment to audit the carbon footprint of the biogas supplied, ensuring that the carbon footprint it provides is better than the market average.</td></tr>
<tr><td>Main project's drivers for reducing the greenhouse gas emissions

Enter the information in the appropriate boxes</td><td>
<table>
<tr><th>Reduction levers</th><th>Details on the aspects of the project</th></tr>
<tr><td>☐ Energy and resource efficiency (including behaviour)</td><td></td></tr>
<tr><td>☒ Energy Decarbonisation</td><td>Purchase of renewable energy to replace fossil fuel supply</td></tr>
<tr><td>☐ Energy efficiency improvements</td><td></td></tr>
<tr><td>☐ Improving efficiency in non-energy resources</td><td></td></tr>
<tr><td>☐ Emissions absorption: creation of carbon sinks, negative emissions (BECCS, CCU/S, ...)</td><td></td></tr>
<tr><td>☒ Financing low-carbon producers or disinvestment from carbon assets</td><td>Actively supports low-carbon energy producers</td></tr>
<tr><td>☐ Reduction of other greenhouse gases emission</td><td></td></tr>
</table>
</td></tr>
<tr><td>Emission scope(s) on which the project has a significant impact and quantification of GHG emission reductions per emission scope</td><td>
<table>
<tr><th>Aspects of the project contributing to the reduction of emissions by emission category</th><th>Quantification of associated GHG emissions by emission category</th></tr>
</table>
</td></tr>
</table>

<table>
<tr><td>Indicate the aspects of the project that contribute to the reduction of emissions per category of emissions considered (left-hand column) and the quantification of associated emissions.

Indicate the main hypotheses and calculation steps in the intended section (below the table)

For further details, please refer to the methodology guidelines.</td><td>
<table>
<tr><td></td><td></td><td>Please follow the quantification methodology used in the Afep guidelines.</td></tr>
<tr><td colspan="3">Reduction of the company's carbon dependency</td></tr>
<tr><td>Scope 1
Direct emissions generated by the company's activity.</td><td>Supply of biogas up to:
10% in 2019
20% in 2020
60% in 2021</td><td>-984 tCO_2 in 2019
-1640 tCO_2 in 2020
-5130 tCO_2 in 2021</td></tr>
<tr><td>Scope 2
Indirect emissions associated with the company's electricity and heat consumption.</td><td></td><td></td></tr>
<tr><td>Scope 3
Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.</td><td></td><td></td></tr>
<tr><td colspan="3">Increase of carbon sinks</td></tr>
<tr><td>Emissions Absorption
Carbon sinks creation, (BECCS, CCU/S, …)</td><td></td><td></td></tr>
<tr><td colspan="3">GHG emissions avoided by the company at third parties</td></tr>
<tr><td>Avoided Emissions
Emissions avoided by the activities, products and/or services in charge of the project, or by the financing of emission reduction projects.</td><td>Emissions avoided by farmers activities</td><td>720 tCO_2/year from 2021</td></tr>
</table>

Clarification on the calculation or other remarks: The gas supply of Gecina's buildings represents 6500 MWh/year on average.
The emission factor of natural gas is 214 gCO_2/KWh and that of biogas is 39.5gCO_2/KWh. Considering the share of biogas in the total supply (60% in 2021), the emission reductions are obtained.
Furthermore, the production of biogas from agricultural inputs avoids the emissions induced by their storage in the open air by farmers. It can be estimated that the emission of 110 gCO2/kWh is avoided by farmers, i.e. nearly 720 tCO_2 in 2021.
</td></tr>
<tr><td>Modality of verification of the quantification.</td><td>Calculation standard used (ADEME base, GHG protocol, etc.): ADEME database for gas and biogas emission factors, Carbone4 study for avoided emissions (https://www.google.com/url?q=https://www.grdf.fr/institutionnel/actualite/dossiers/biomethane-biogaz/etude-biomethane-gaz-effet-serre&sa=D&source=docs&ust=1653754262750423&usg=AOvVaw1nxaXvio5r9KqdOv-IX00G)

Verification of the calculation (internal or external): audit and emission factor of biomethane validated by an Independent Third-Party Organisation</td></tr>
<tr><td>Other environmental and social benefits of the project

If possible, list the impacts and Sustainable Development Objectives concerned</td><td>Among the 17 Sustainable Development Goals, this project aims to achieve:
SDG 7 Use of renewable energy: 100% biogas supply by 2024
SDG 9 Innovation, industry, infrastructure: Development of partnerships with new biogas plants
SDG 11 Sustainable cities and communities: Development of sustainable energy supply to cities and partnerships with biogas plants supported by local politicians
SDG 12 Responsible consumption and production: Development of sustainable energy supply to cities and partnerships with biogas plants with the assurance that no nuisance has been generated for local residents and without additional land artificialisation</td></tr>
<tr><td>Project maturity level

Tick the corresponding current maturity level</td><td>☐ Prototype laboratory test (TRL 7)
☐ Real life testing (TRL 7-8)
☐ Pre-commercial prototype (TRL 9)
☐ Small-scale implementation
☒ Medium to large scale implementation

Remarks: in 2021, 60% of the gas supply is biogas, and this share will be gradually increased to 100% in 2024. This supply concerns 100% of the buildings for which Gecina controls the energy supply</td></tr>
<tr><td>Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential</td><td>In 2021, the supply of biogas already represents 60% of the gas supply of 100% of the buildings for which Gecina manages the energy supply and will be gradually increased to 100% in 2024.</td></tr>
<tr><td>Amount of investment made (in €)</td><td>The amount depends on the extra cost of biogas supply and the end of financial compensations, this extra cost is estimated at 5€/MWh</td></tr>
<tr><td>Economic profitability of the project (ROI)</td><td>☒ ST (0-3 years)
☐ MT (4-10 years)
☐ LT (> 10 years)</td></tr>
</table>

Engaged partnerships	The project is carried out within a client-supplier framework as part of a strategy to support suppliers in improving their environmental performance
Open comments from the project owner	
More about the project	
Contact the company carrying the project Please specify an ad hoc e-mail address that will allow the reader to contact the project company directly	Mathilderamos-guerrero@gecina.fr
Project URL links	https://www.gecina.fr/sites/default/files/2022-03/gecina_-_document_enregistrement_universel_2021_0.pdf Description du projet p.163
Illustrations of the project 3 photos/videos minimum (in HD format to be attached)