How do biogas models coexist ? Understanding the interactions between agricultural actors and energy developers in the deployment of methanisation in two departments of the Nouvelle-Aquitaine region

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Abstract

To achieve its biomethane production and injection targets, the Nouvelle-Aquitaine region, with its Together for 100% Green Gas in 2050 strategy, is declaring its support for all types of methanisation models. Already studied in the academic literature, mainly from an economic and geographical point of view (Carrosio, 2013; Berthe et al., 2020; Berthe et al., 2022; Valve et al., 2021), this diversity of methanisation units is also highlighted within the region by the institutions and observatories supporting biogas production (AREC, 2021; OREGES, 2022). While many guidance notes, reports and scientific articles propose different types of unit (agricultural, industrial, territorial ; cogeneration, injection), depending on various variables (type of input, recovery method, traceability of financial resources allocated to the project, network of players), little is known about the interactions between the different types of project within a given area.
Drawing on work in sociology and political science that highlights the dynamics of expropriation within farming sector (Hervieu & Purseigle, 2013; Smith & Ansaloni, 2021), and following a framing in terms of 'energy justice' (Jenkins et al., 2016; Yenneti et al., 2016), this paper explores the effects of the arrival of industrial biogas players on agricultural worlds and pre-existing forms of on-farm methanisation. Field visits to biogas plants (n = 4) and semi-structured interviews (n = 20) with farmers and representatives of the Chambers of Agriculture and CUMA federations in Corrèze and Pyrénées-Atlantiques enabled us to identify the ways in which contrasting 'biogas models' coexist at local level, illustrating what the neighbouring installation of an energy company means for farmers. While acknowledging the diversity of biogas production methods at the local level, this paper aims to show how the strategies of dominant players in the energy sector who are invested in biogas production can be deployed to the detriment of smaller, initial players. It answers 3 questions:

1) *Landing* : How do multi-energy companies become biomethane producers? From a descriptive point of view, we are highlighting the way in which agricultural players are approached by energy companies, through various canvassing practices.

2) *Distribution* : How does 'industrial' methanisation affect the surrounding agricultural world? Through supply and deposit contracts, the industrial units link up with farms to operate their units and redistribute the digestate, sometimes altering the farms' agronomic

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plans. At the same time, certain methanisable resources previously destined for agricultural units, such as bio-waste, are sometimes captured by new industrial units.
3) *Recognition* : What boundary-work is at stake ? As a " objet-frontière ", methanisation – and the legitimacy of producting biogas – is claimed by actors from different professional backgrounds, drawing on competing forms of expertise.

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