

Biogas Sector in Spain: state of the art

David Fernández
Vicepresident of AEBIG



Founding Partner and Member of EBA



Biomethaverse

28-NOV-2024

Barcelona

Spanish Biogas Association - AEBIG



Non-profit organization founded in 2009

- Dissemination and promotion of Renewable Gases:
 - environmental improvement
 - renewable energy
 - rural development
- Contribution to Circular Economy and sustainable Agroecology
- Development of Bioproducts (e.g. biofertilizers)
- Defense of the interests of the Renewable Gases sector
- Interlocution and collaboration with public/private organizations at national and international level
- Support for policies for the production/consumption of Renewable Gases and technological developments

Founding partner and Member of the European Biogas Association - EBA



Biogas/biomethane and the Carbon cycle



Bioenergy is the only renewable energy capable of acting positively on the Carbon cycle.

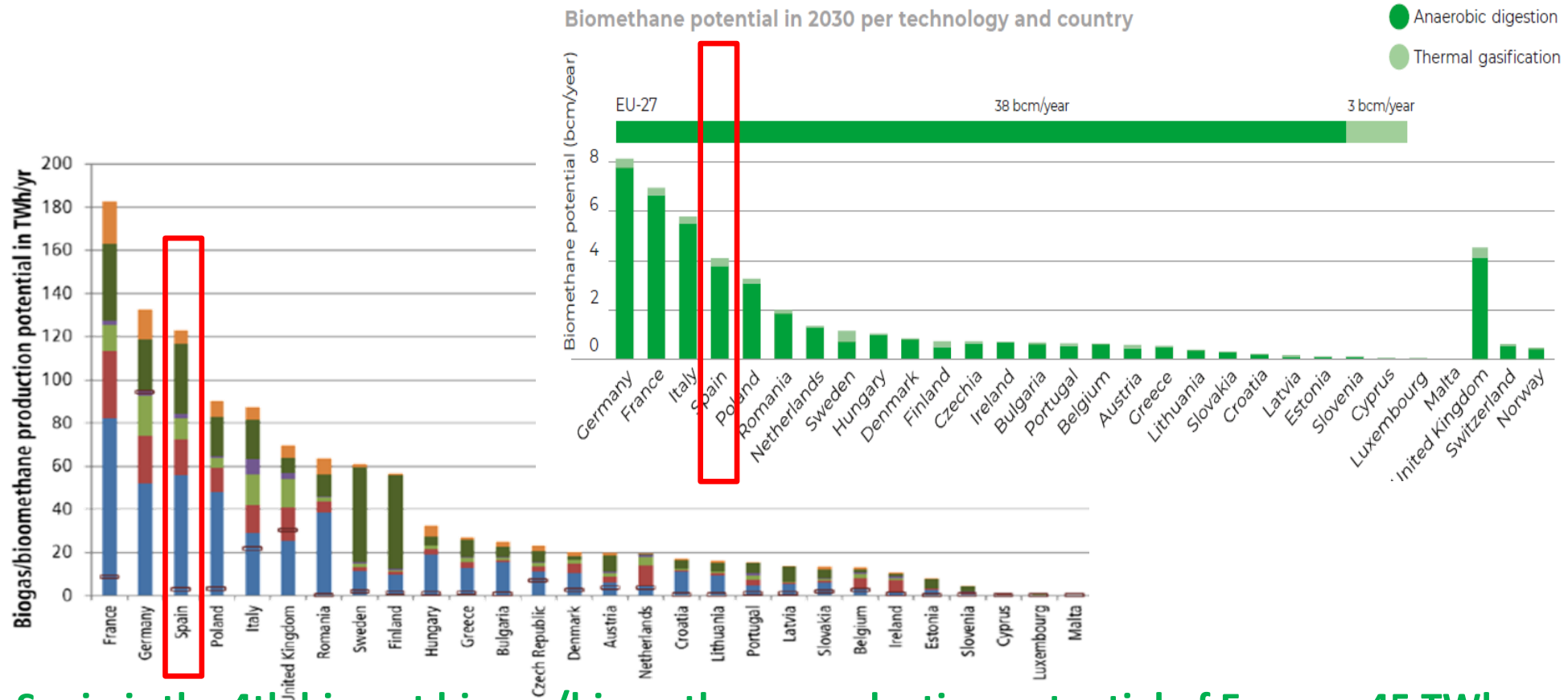
Biogas/biomethane...

- Renewable Energy: waste origin (Circular Economy paradigm).
- Total Carbon Footprint: neutral CO₂ emissions (even negative considering the complete production cycle).
- Bioproducts: nutrient-rich biofertilizers to optimize carbon management in soils.
- More eco-efficient solution: technology with already mature experience and with the lowest possible costs (equipment)

Biogas/Biomethane Sector: Europe and Spain



Biogas/Biomethane production potential 2030 (GfC) and 2050 (EC):



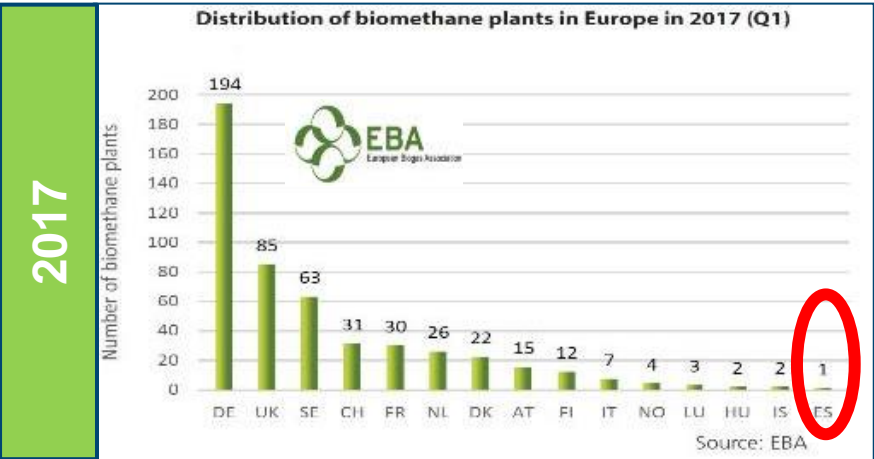
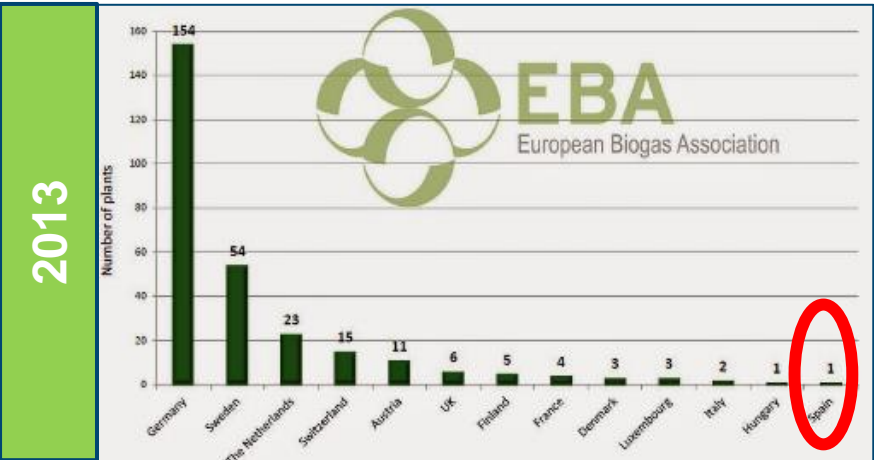
2030 – GfC: Spain is the 4th biggest biogas/biomethane production potential of Europe: 45 TWh

2050 – EC: Spain is the 3rd biggest biogas/biomethane production potential of Europe : 122 TWh

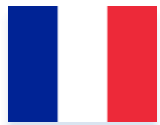
Biogas/Biomethane Sector: Europe and Spain



Biomethane Plants



Plantas Biometano	2013	2017
Alemania	154	194
Reino Unido	6	85
Francia	4	30
Dinamarca	3	22
España	1	1



Development support programs MM.EE.

Economic Incentive Programs

Guarantee of Origin Systems

Feed-in Tariff



Feed-in Tariff



Feed-in Tariff



Feed-in Premium



Biogas/Biomethane Sector: Europe and Spain



Spain - year 2023

Biogas plants in Spain (electricity generation -mainly-): 282

- Agriculture feedstocks: 82
- Sewage sludge: 133
- Organic municipal solid waste: 37
- Landfill: 30

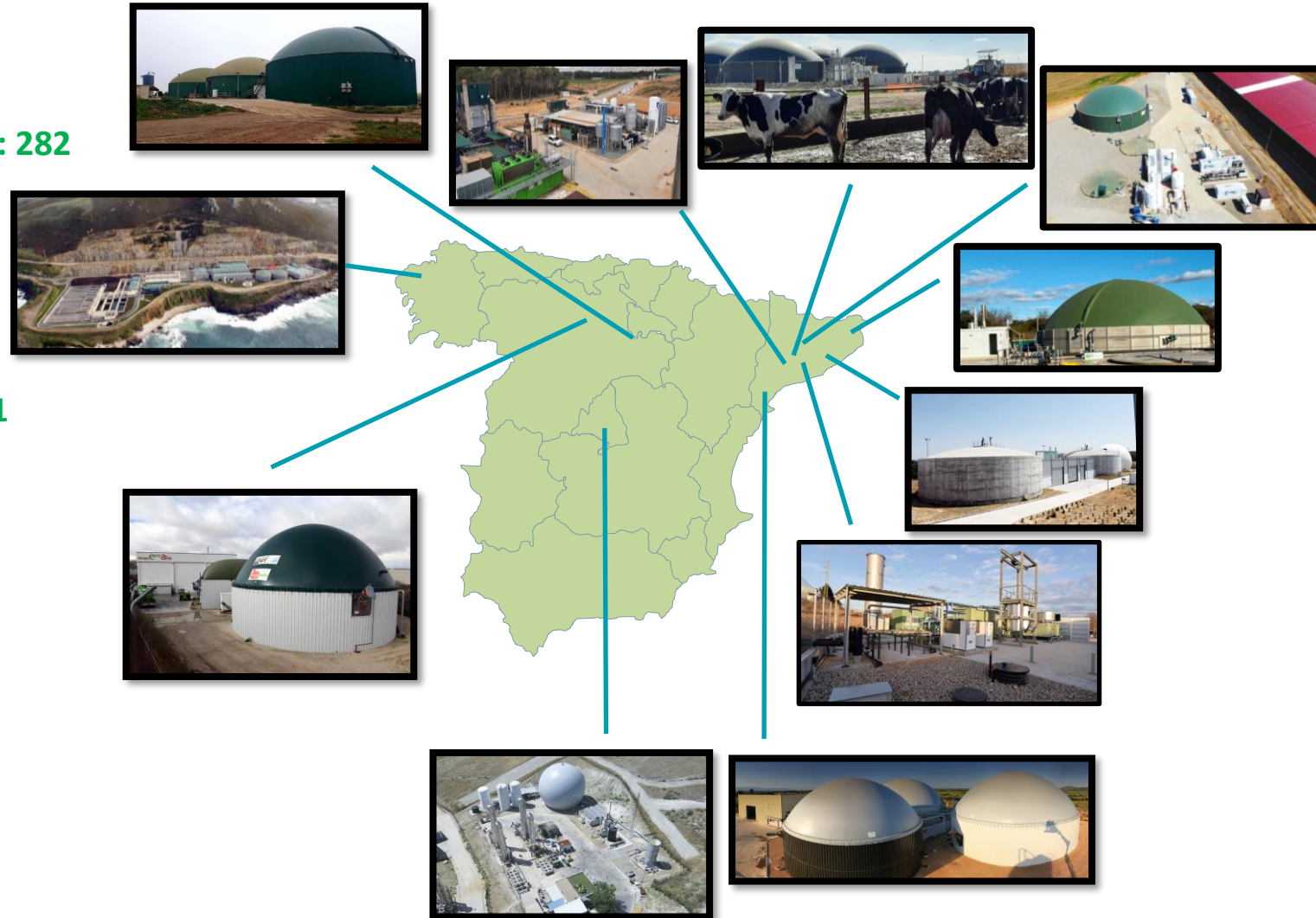
Biomethane plants in Spain(grid injection -mainly-): 11

- Agriculture feedstocks: 5
- Sewage sludge: 2
- Organic municipal solid waste: 1
- Landfill: 2
- Industrial solid waste: 1

More than 20 new biomethane plants in development (permitting, construction,...).

Biomethane production in Spain 2023

- 250 GWh



Biogas/Biomethane Sector: Challenges



Update current Policies based on new EC-aligned National Energy And Climate Plan: legal uncertainty for the development of projects

- unambitious targets
- minor developments
- financial support not aligned with EC
- completed GoO systems still to be implemented

Establish a stable regulatory framework and long-term forecast to attract investments

- foster both supply and demand
- in accordance with the European Green Deal and with the European priorities identified in the recent Gas Package

Set annual consumption targets systems with quotas for gas traders

- increasing percentages over time

Biogas/Biomethane Sector: Challenges



Speed up the response of the Administrations in the processing of authorizations and permits

- reduction of times and harmonization at national level of the procedures

Establish a system of economic and fiscal incentives for the development of projects

- investment mechanisms (FiT, FiP, tax benefits, etc.)

Obtain a better social acceptance of biogas/biomethane plants

- best design and operation practices
- best dialogue actions with the communities
- best environmental commitments actions
- best beneficial actions for the plant environment community

Biogas/Biomethane Sector: Challenges



Establish appropriate policies to make a better use of the energy potential of Producers

- Prioritization of biomethane injection into the grid
- Adopting other solutions where the grid is not accessible
- Producer's investment in the infrastructure for connecting biomethane plants to the grid:
 - % will be facilitated with CAPEX aid as investment for the reinforcement of gas infrastructures
 - Another % will be facilitated with paid care with annual quotas to the grid operator

Active and involved role of the Public Administration

- Interministerial Roundtable: including Ministry of Ecological Transition, Agriculture, Livestock, etc. Including relevant intersectorial stakeholders in order to establish a more fruitful collaboration
- Municipalities: obligation to valorize into biomethane all municipal waste
- Enhancing the environmental understanding of the biomethanisation in the waste recovery
- Assessing environmental value (including the economic value), even prioritizing it over its economic value alone (e.g. Waste and other directives)

Biogas/Biomethane Sector: Opportunities



Spanish private companies push in biomethane production plants...

...with focus in the EU market

Spanish focus on positive externalities: biogas/biomethane is much more than an energy solution...

...is a solution for the Environment + Agriculture + Livestock + Demographic challenge of depopulation

Spanish commitment to biogas/biomethane is a key energy vector for the fulfillment of...

...decarbonization targets

...waste management

...and energy transition (identified in the REPowerEU)

Spanish contribution to REPowerEU objective of 35 bcm...

...the objective of 10% of gas consumption being biomethane in 2030 is achievable in Spain establishing measures that encourage projects that are tractors in the sector

Thank you very much for your attention!

David Fernández
Vicepresident of AEBIG
dfernandez@aebig.org



Asociación Española de Biogás
www.aebig.org

C/ Nuñez de Balboa, 120
28006 – Madrid