



REGATRACE

Renewable Gas Trade Centre in Europe

Biomethane potential and evolutions in Belgium

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Expertise platform for anaerobic digestion in Flanders

→ Sustainable development of biogas sector

- Knowledge transfer
 - Sector development
 - Policy support
 - Network
- More info: www.biogas-e.be/english





Presentation



- Biogas sector in Belgium
- Biomethane potential
- Roadmap biomethane
- Prospects biomethane

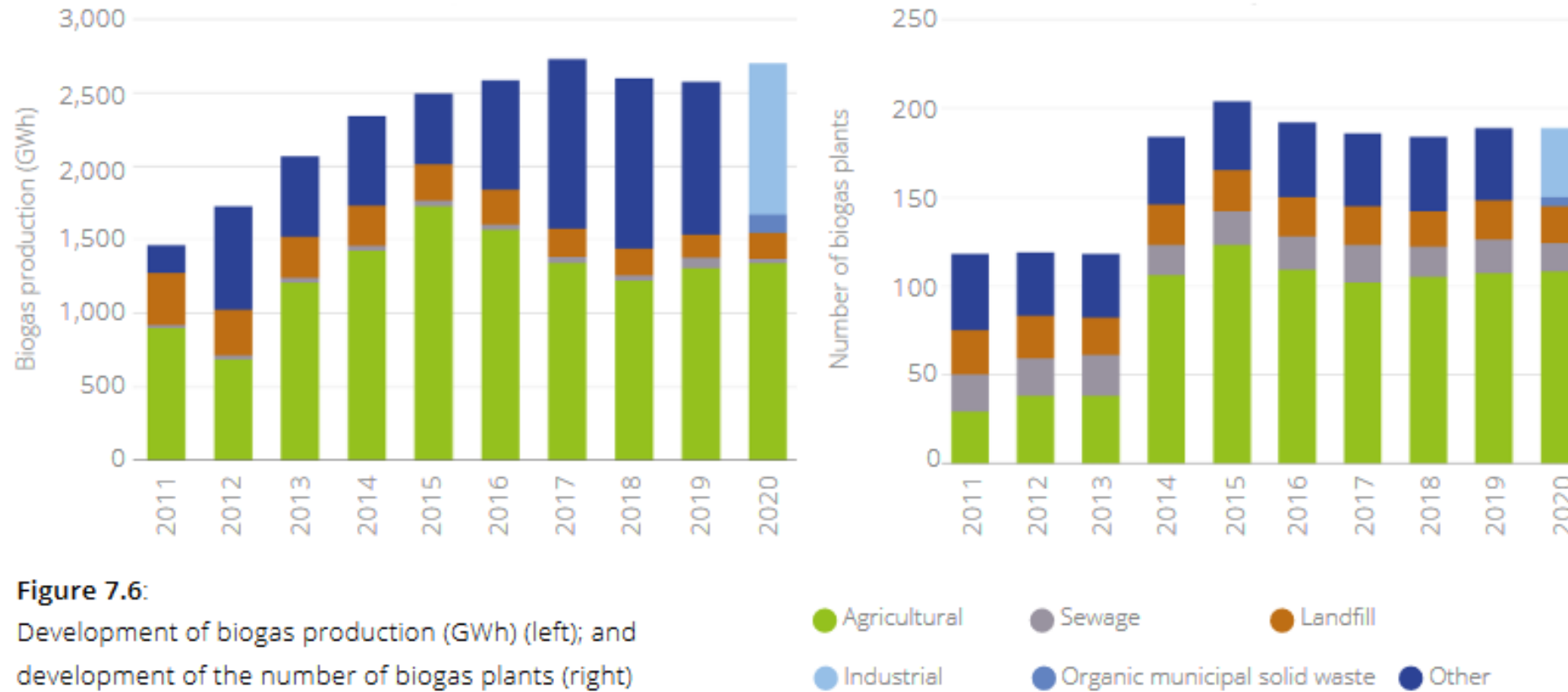


Biogas sector Belgium



- Responsibilities regions:
 - environment
 - mobility
 - infrastructure
 - energy
 - agriculture
 - ...
- ‘land-bound’

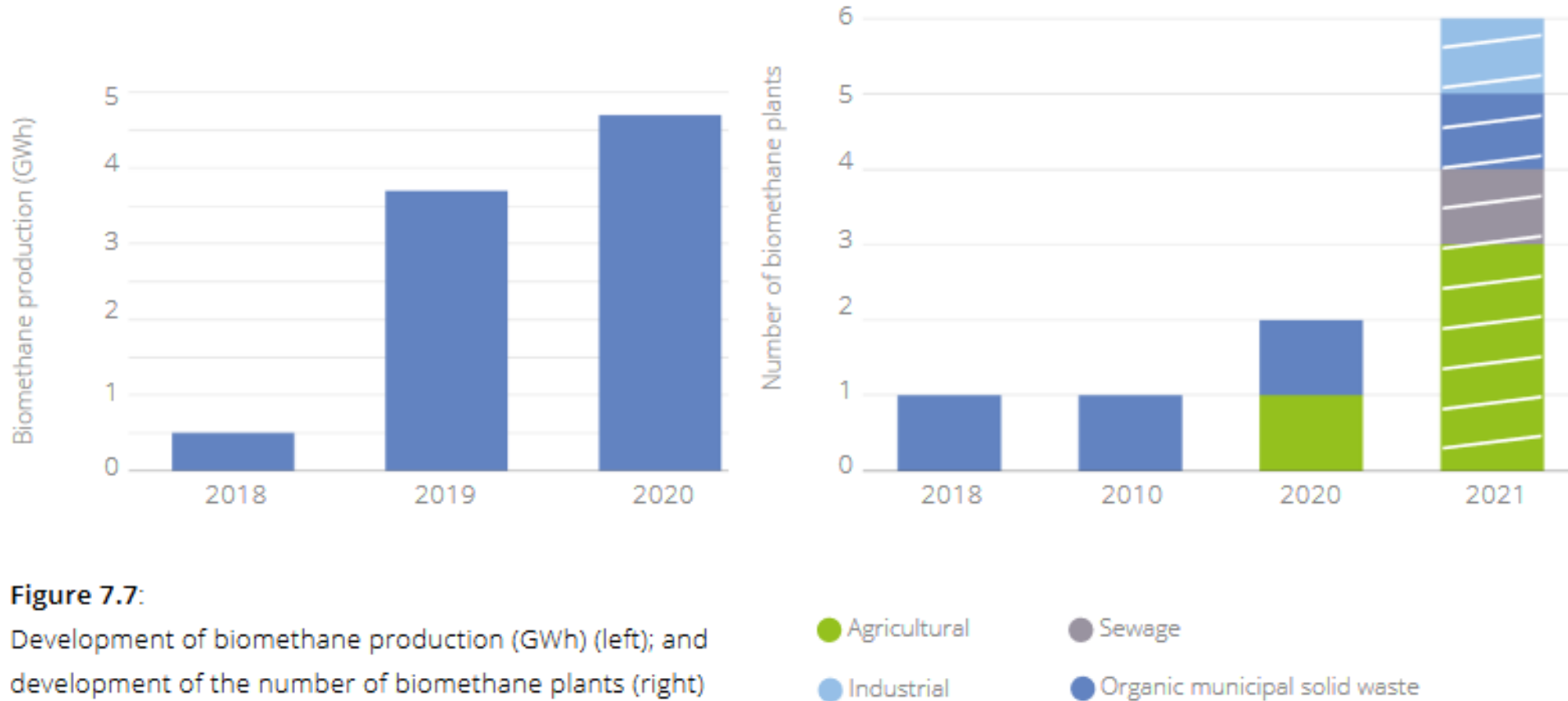
Biogas sector Belgium



Source: EBA statistical report 2021



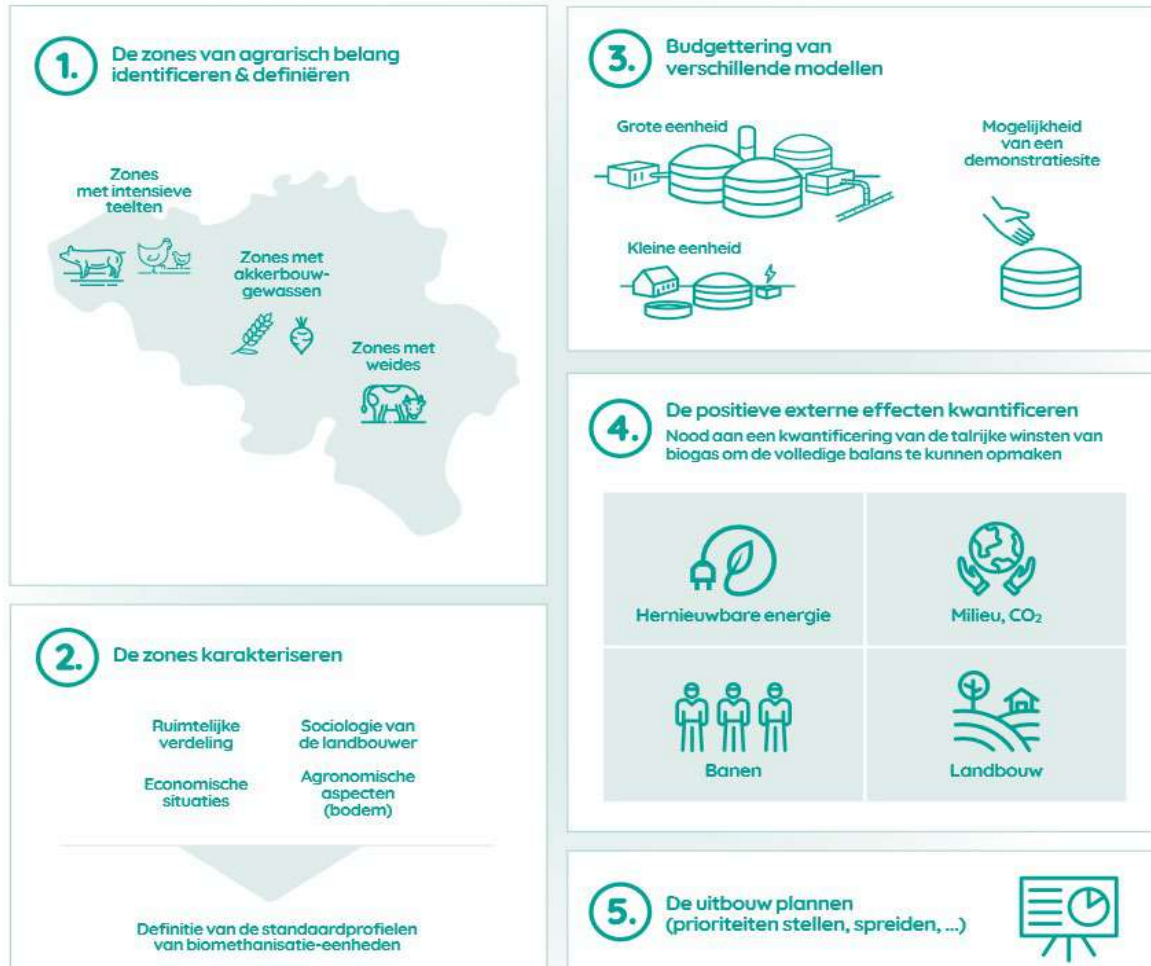
Biogas sector Belgium



Source: EBA statistical report 2021

Biomethane potential

Deep Dive Study

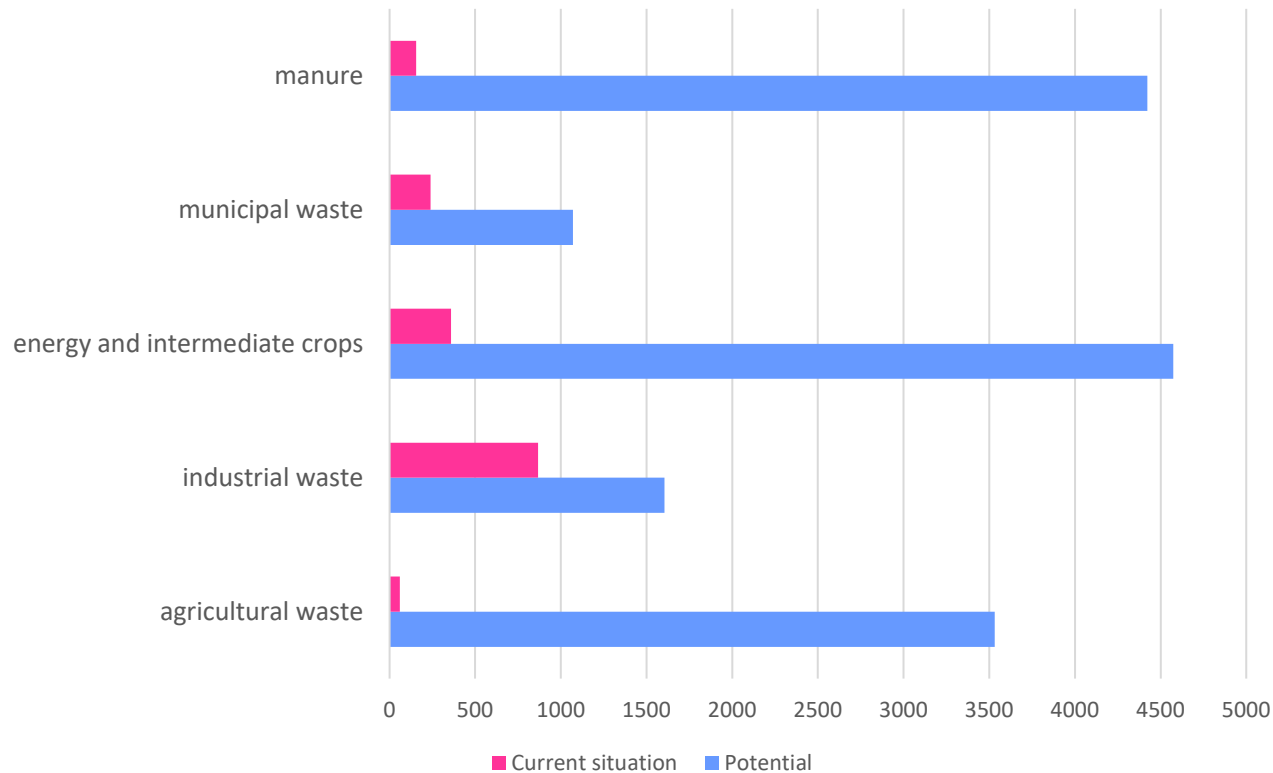


1. Identification of relevant agricultural zones
2. Characterisation of agricultural zones
3. Economic analysis
4. Quantification of positive externalities
5. Development roadmap

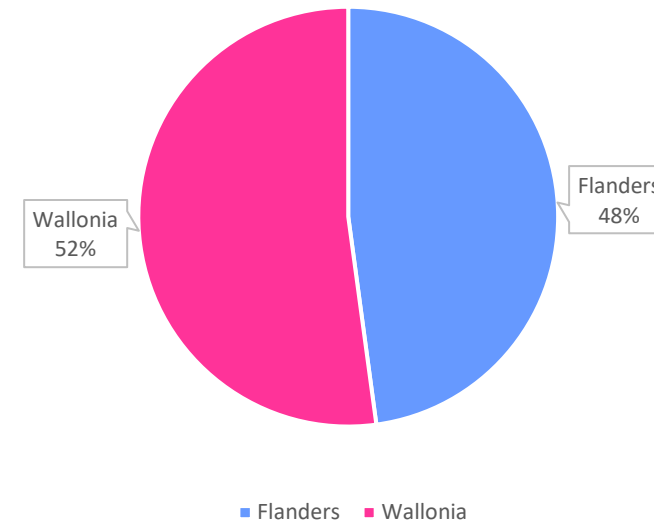


Biomethane potential

Current and potential energy production (GWh)

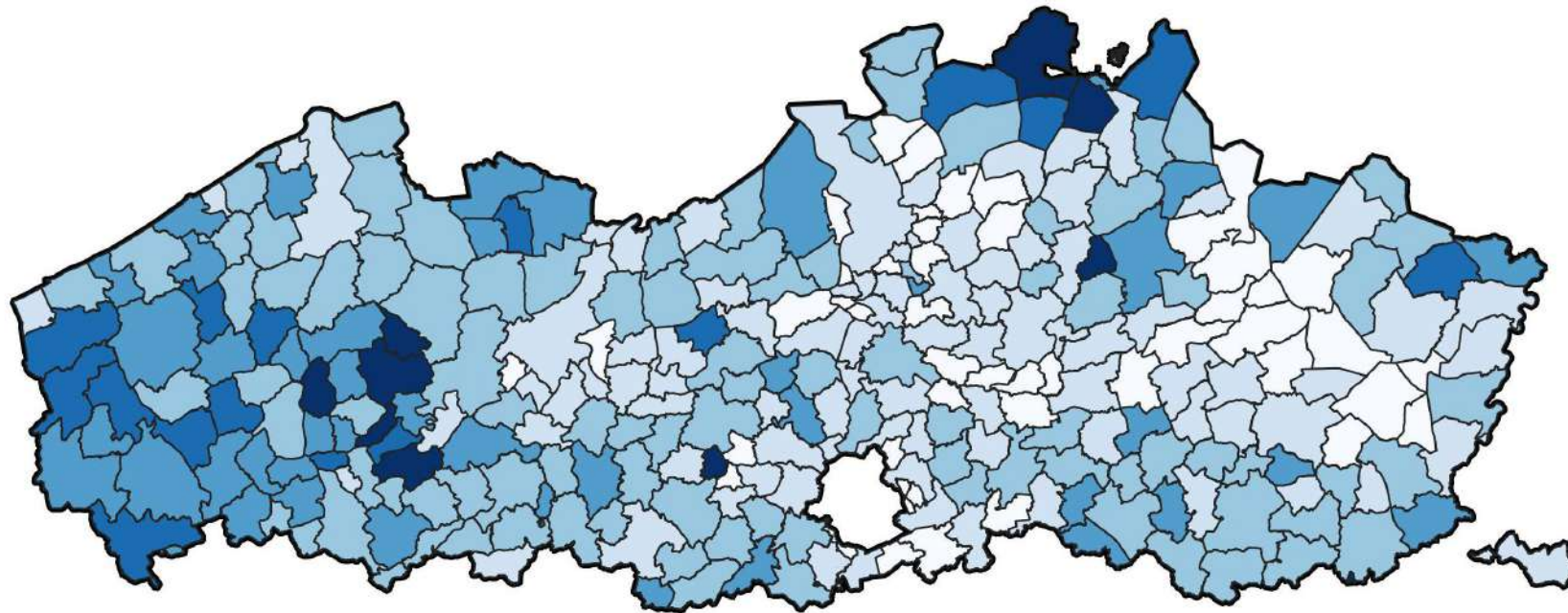


Potential energy production (GWh)

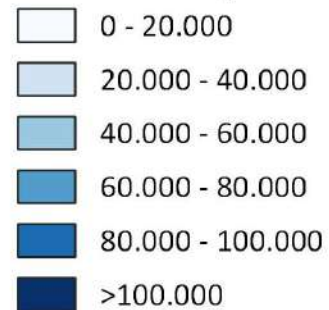


Total = 15,2 TWh

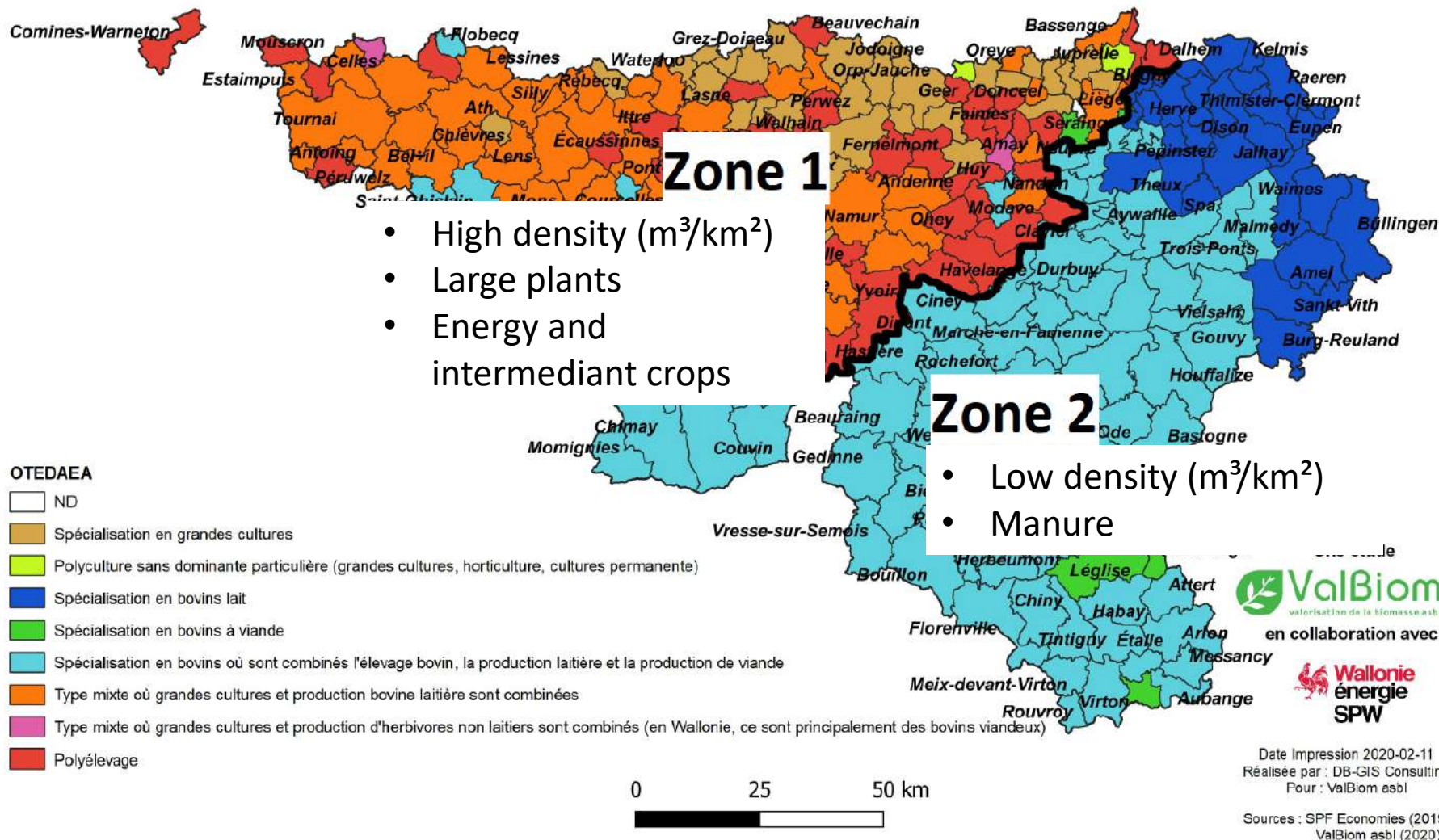
Biomethane potential



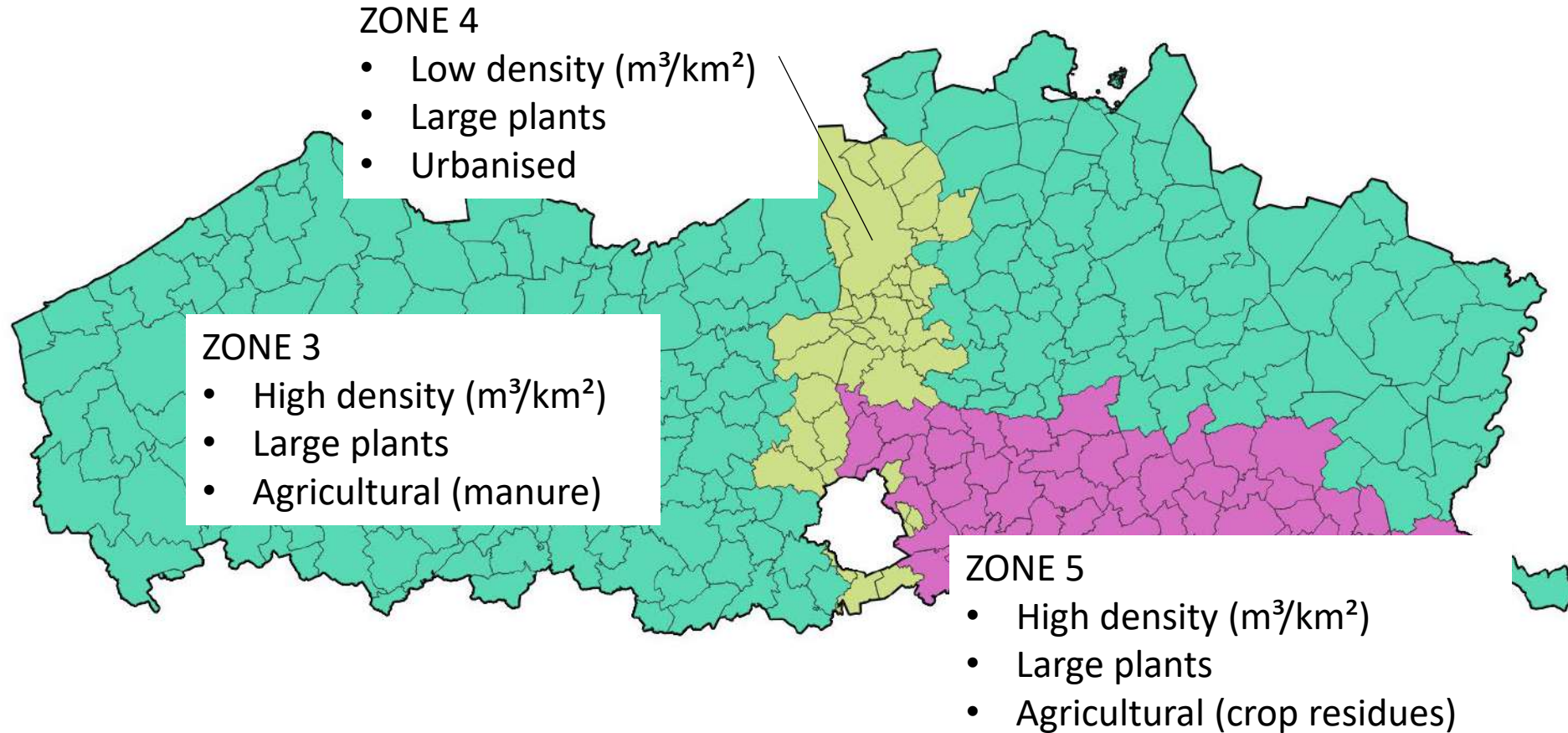
Biomethaanproductie (Nm³/km²)



Characterisation of agricultural zones



Characterisation of agricultural zones



Roadmap biomethane

Production cost
(€/MWh)

- CAPEX
- OPEX
- Digestate application



Value energy component
(cfr. Gas price)

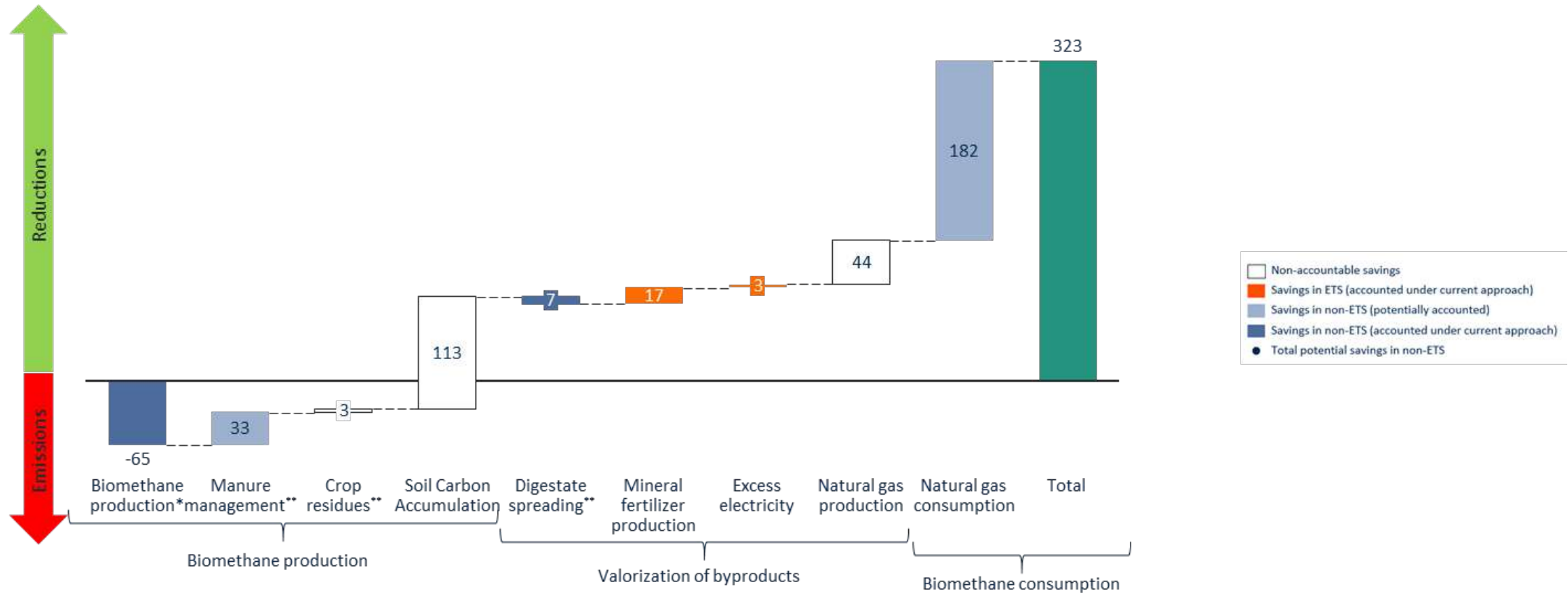
Externalities:

- Job creation
- Balancing energy system
- GHG-reduction

Cost per ton avoided CO₂,eq

Externalities biomethane

GHG reduction



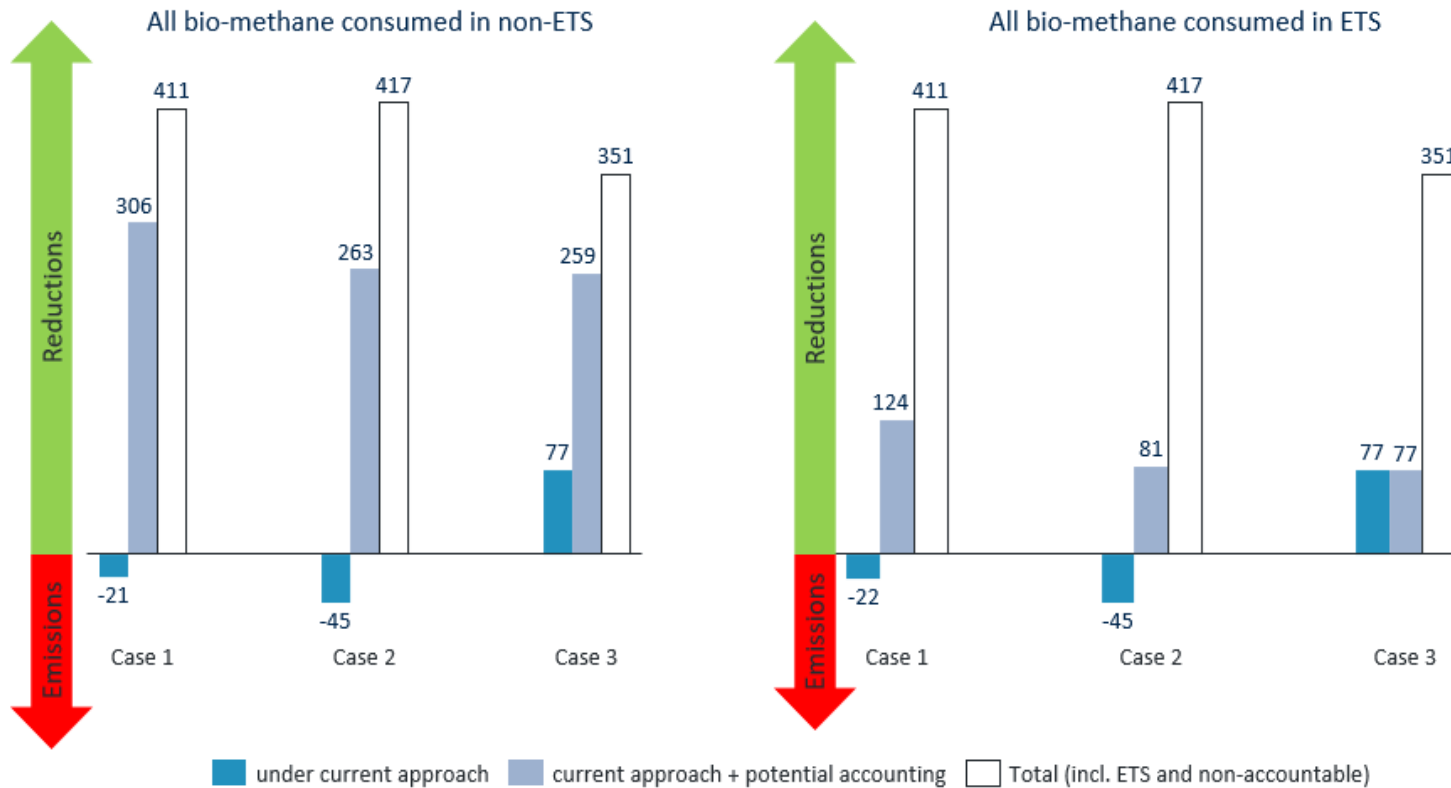
* Including injection and transport of biomethane, excluding emissions from manure during pre-digestion storage and the digestion itself, which are accounted under the 'manure management' category

** Net impact compared to counterfactual scenario

Externalities biomethane

Biomethane's externality values

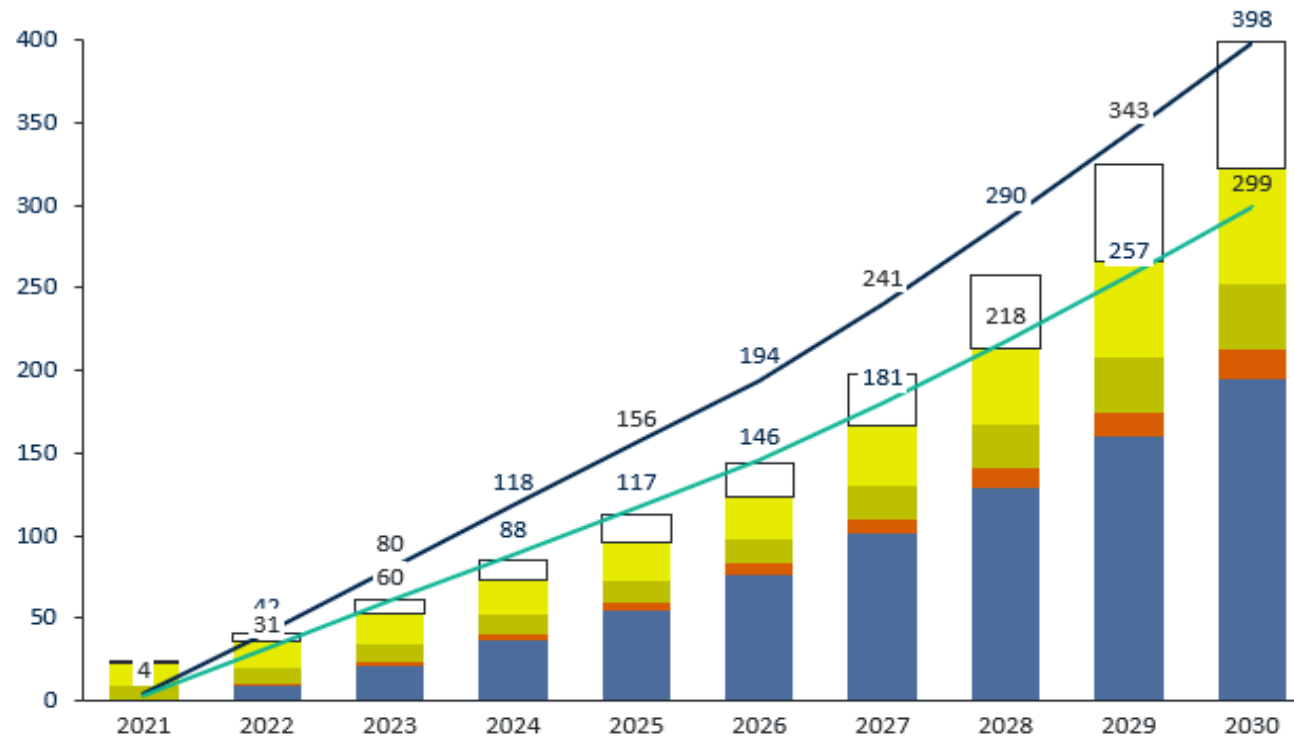
[kg CO_{2eq}/MWh_{hvh} biomethane]



Externalities biomethane

Biomethane's externality values vs. required support - Flanders

[€ million/year]



Main assumptions:

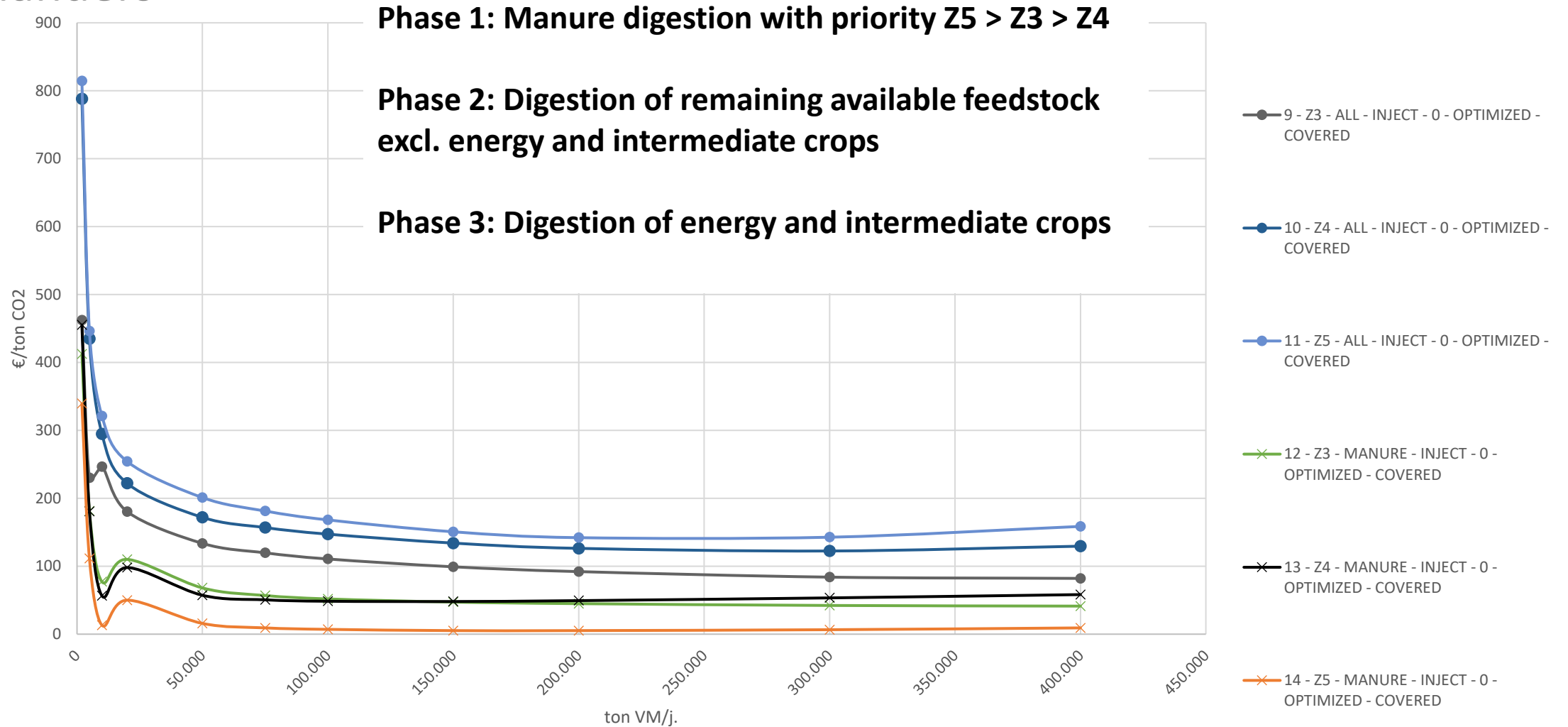
- Support for bio-methane ranges between €60 and €80/MWh
- Non-ETS carbon value increases from €50/t in 2021 to €150 in 2030 (same for 'non-accountable')
- ETS carbon value increase from €35/t in 2021 to €75 in 2030
- Avoided cost from intermittent renewable energy estimated between €9/MWh (MIN) and €25/MWh (MAX)*

- Required support MAX (at €80/MWh)
- Required support MIN (at €60/MWh)
- Externality GHG savings non-accountable
- Externality renewables MAX
- Externality renewables MIN
- Externality GHG savings ETS
- Externality GHG savings non-ETS

Roadmap biomethane

Preliminary results!

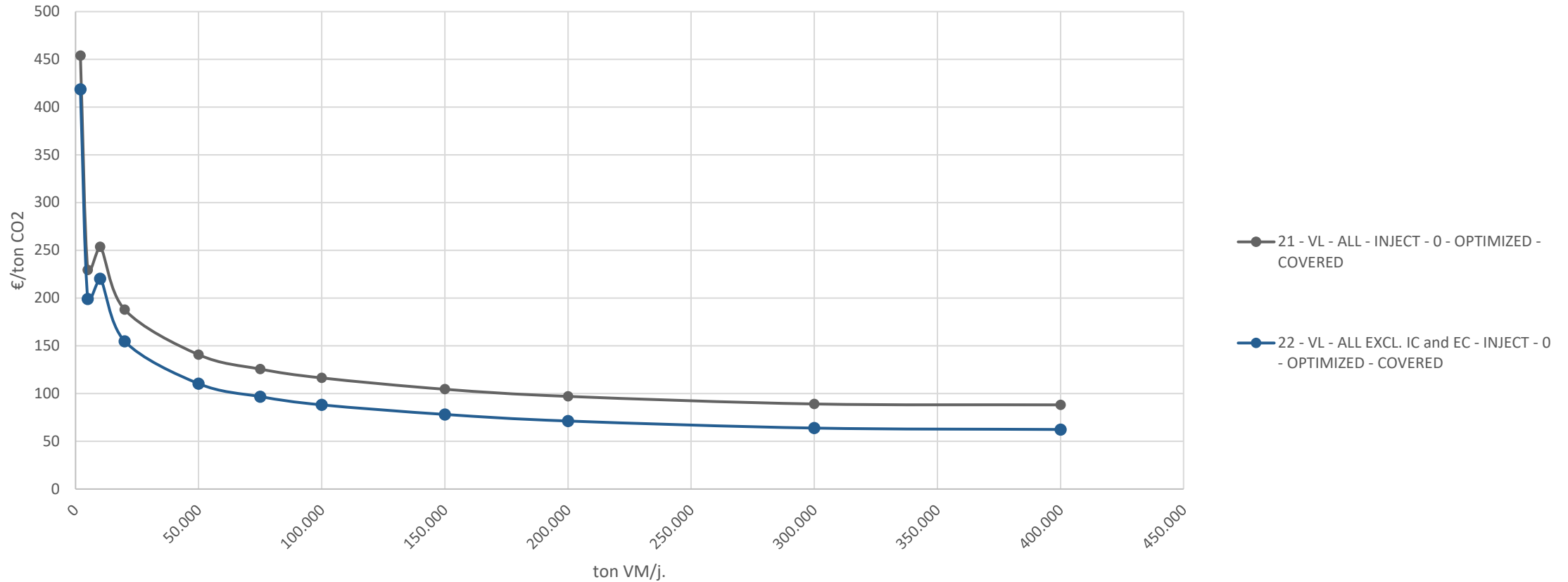
Flanders



Roadmap biomethane

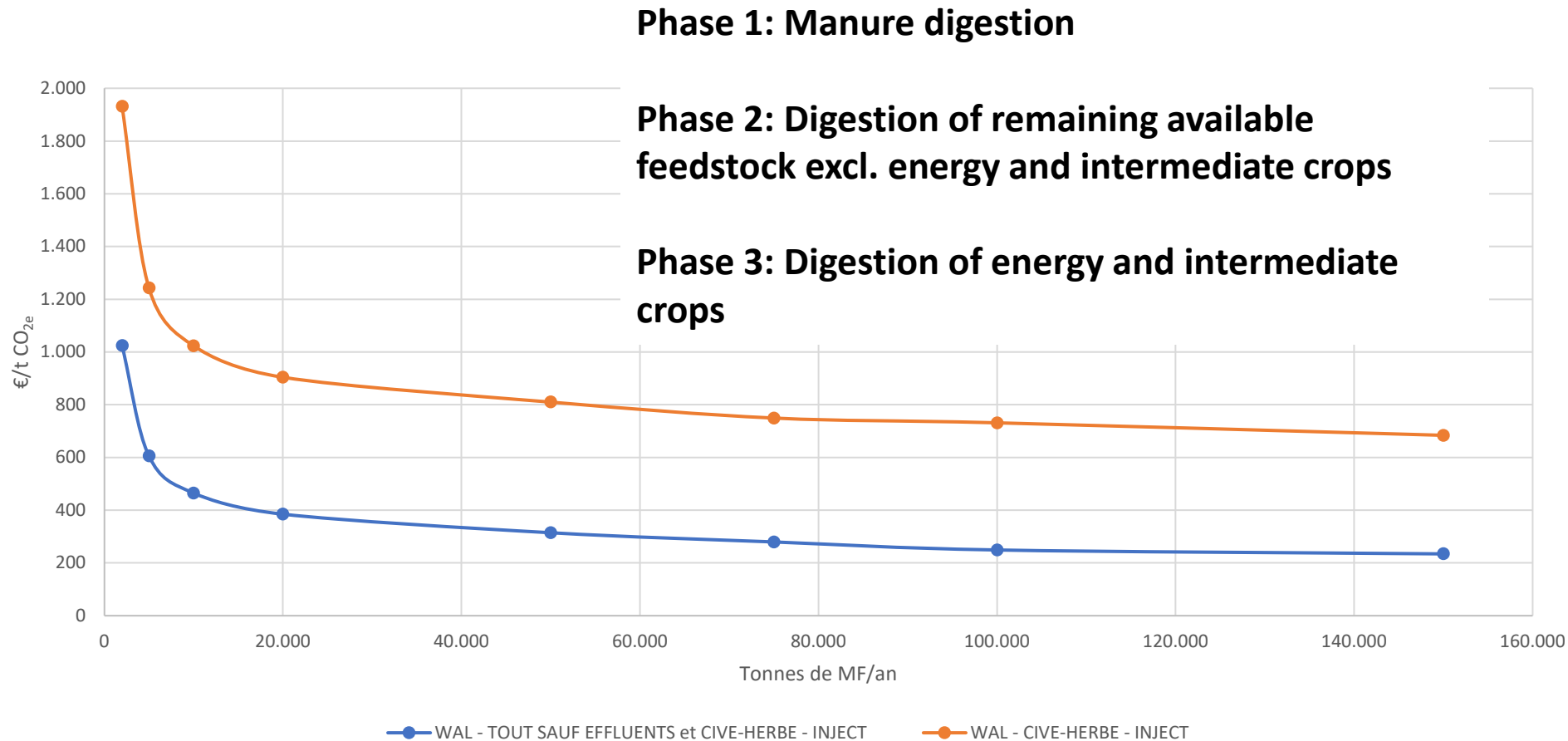
Preliminary results!

Flanders



Roadmap biomethane

Wallonia

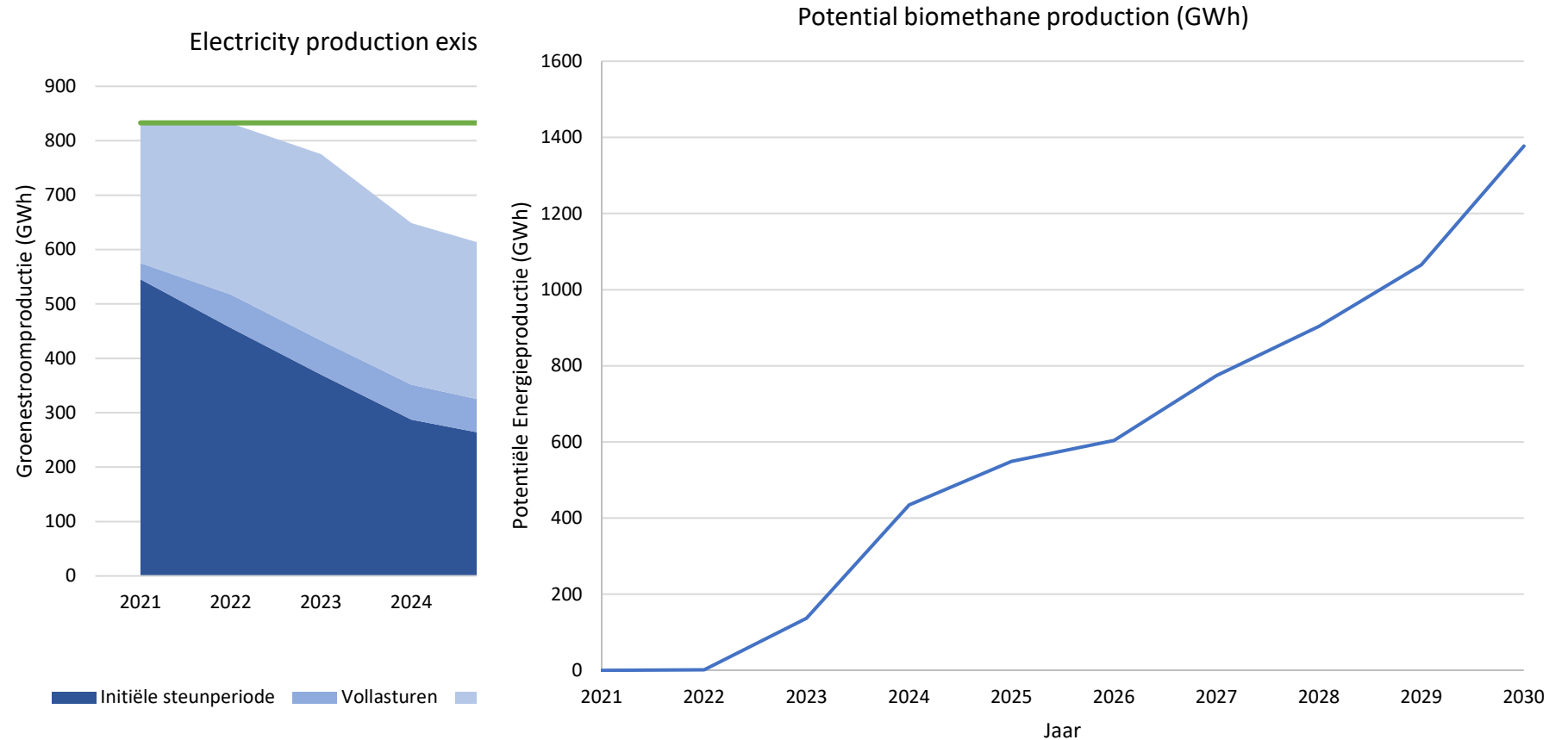


Prospects biomethane

Flanders

- No legislative incentive for biomethane production or consumption
- Large-scale installations → European transport fuel market
- Interest of ETS-companies?
- Quota for bio-CNG?
- Installations at end of support period?

Prospects biomethane



More information

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Flanders:

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Thanks for your attention!

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