WEBINAR

Biomethane purchase agreements:
Unlocking biomethane's full potential

16 SEPTEMBER 2026
10:00 - 11:05 CET

EBA
European Biogas Association

info@europeanbiogas.eu
www.europeanbiogas.eu

AGENDA

10:00 I Welcome
Harmen Dekker, Chief Executive Officer, EBA

10:05 | Presentation of Biomethane Purchase Agreement Playbook
Sacha Alberici, Associate Director, Guidehouse

10:20 | How BPAs support biomethane producers?
Antoine Sabatier, Head of Renewable Gas, ENGIE Energy Management & Supply

10:30 | How BPAs support biomethane offtakers?
Mark Allen, Snr Sustainability Director, PepsiCo

10:40 | How BPAs support biomethane financiers?
Wouter Lakeman, Vice-President Energy Sector Coverage at ING

10:45 | Q&A
Moderated by Angela Sainz Arnau, Communications Director, EBA

11:00 | Wrap up
Angela Sainz Arnau, Communications Director, EBA

The webinar is moderated by Angela Sainz Arnau, Communication Director, EBA

Get the Biomethane Purchase Agreement Playbook

- The full report is free of charge on the EBA website www.europeanbiogas.eu

- For any questions, please contact us at info@europeanbiogas.eu

European Biogas Association

Welcome

Harmen Dekker

Chief Executive Officer
European Biogas Association

Presentation of Biomethane Purchase Agreement Playbook

Sacha Alberici

Associate Director

Guidehouse

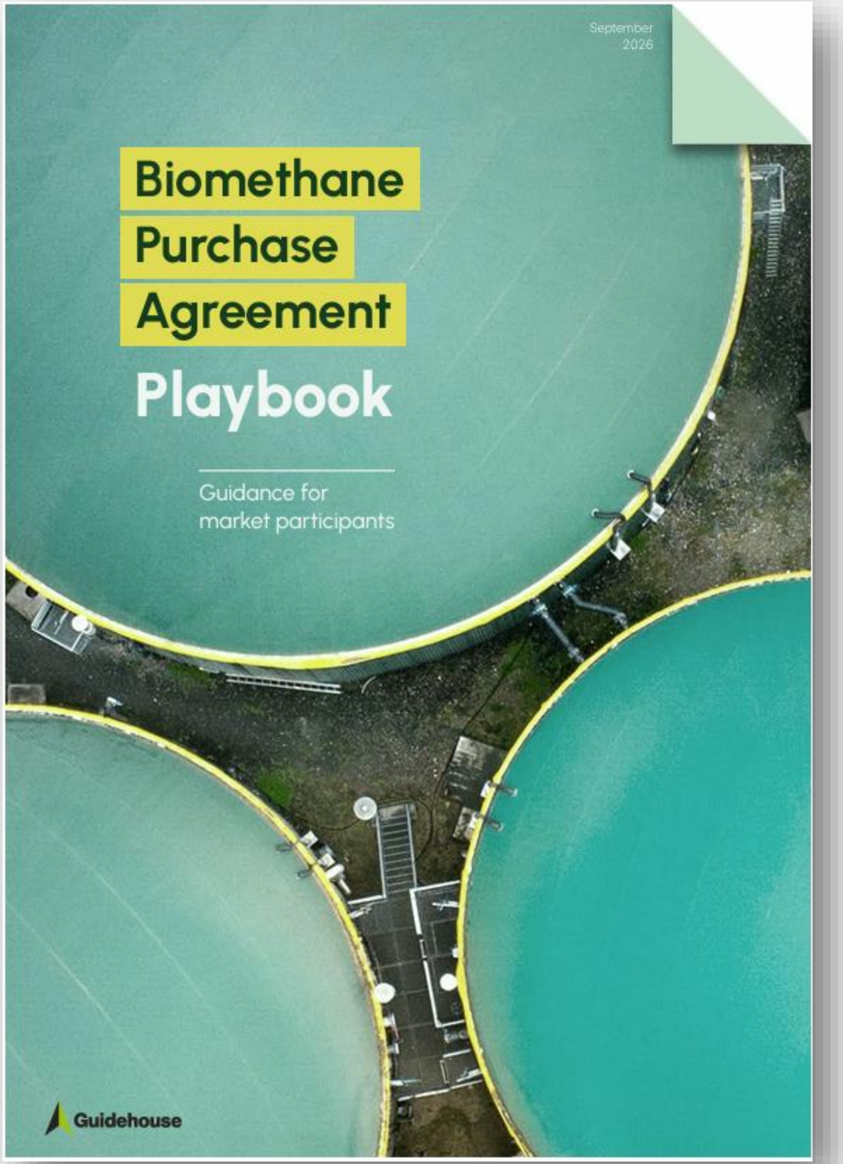
Guidehouse

16 September 2026

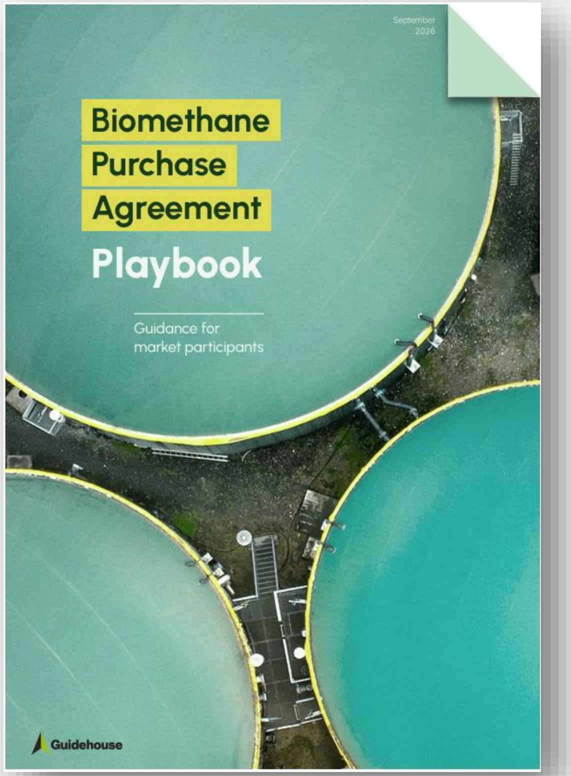
Biomethane Purchase Agreement - Playbook

Sacha Alberici

outwit complexity™



The aim of this Playbook



- BPAs are emerging as a key mechanism to support biomethane market growth and long-term investment across Europe
- However, BPA structures, contracting approaches and financing considerations remain complex for many industry participants
- This Playbook provides practical guidance and insights to support producers, offtakers and financiers to develop and implement BPAs successfully

Some of the organisations we consulted:

Agriportance	Energy Traders Europe	ING	PreZero
Ashurst Perkins Coie	ENGIE	Kanadevia Inova Capital Limited	Renera Energy
Axpo	Ferrero	Macquarie Asset Management (MAM)	SUMA Capital
BASF	Future Biogas	Osborne Clarke LLP	SWEN Capital
CMA-CGM	Gasum	PepsiCo	Uniper

EBA European Biogas Association

BPA Playbook contents

8 chapters covering the BPA journey, from market fundamentals to commercial structuring and finance

What is a BPA?

A BPA is a contractual arrangement between a biomethane producer and an offtaker to purchase a specific volume of biomethane at an agreed price, quality and duration

Common features of a BPA

1. **Long-term agreement**: BPA terms typically range from 5 to 10 years, and in some cases longer, providing price and volume certainty for both producer and offtaker

2. **Stable producer-offtaker linkage**: BPAs establish a durable commercial relationship that can help the producer to secure project financing while enabling the offtaker to meet decarbonisation or compliance objectives

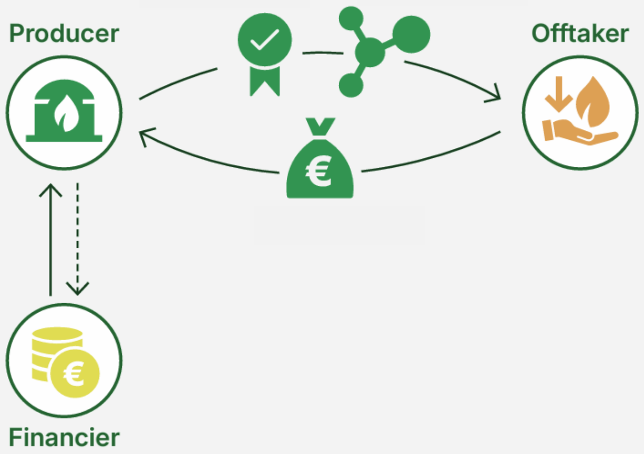
3. **Flexible contract structures**: Commercial and contractual terms are generally negotiated on a case-by-case basis and tailored to reflect the risk allocation, preferences and objectives of both counterparties

BPA structures

Two main BPA structures exist - 'direct' and 'indirect'. Of these, 'indirect' BPAs are understood to be most commonly applied across Europe

Direct BPA

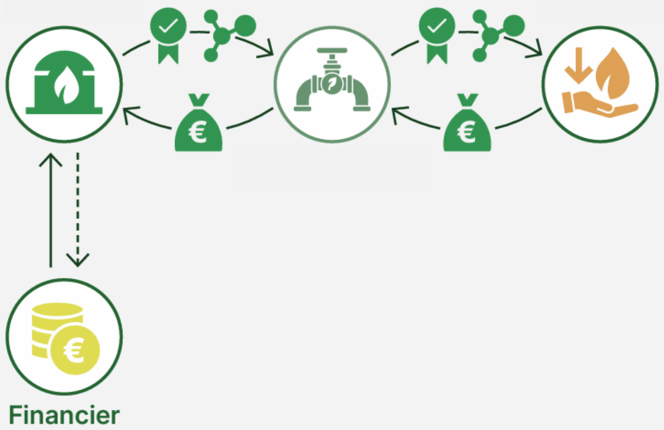
A contractual agreement between a biomethane producer and the end offtaker



- Provides greater price transparency for end offtaker and establishes a direct relationship with producer
- More operationally complex – and requires either party to hold the relevant gas shipper license.

Indirect BPA

A contractual agreement where a gas supplier acts as an intermediary between the biomethane producer and the end offtaker



- Reduces complexity for end offtaker and may also provide access to a more diversified supply base
- Generally offer less price transparency and provide a weaker link to a specific production asset

What are the main drivers for setting up a BPA?

While motivations differ, BPAs primarily provide revenue certainty, risk allocation and long-term supply security across the value chain

	Producer	Offtaker	Financier
Revenue certainty	✓		✓
Supply security		✓	
Decarbonisation objectives or regulatory compliance		✓	
Price visibility		✓	
Risk allocation	✓	✓	✓

European BPA market overview

Over 19 TWh of biomethane contracted through publicly announced BPAs since 2023

Public BPA market

30 BPAs	publicly announced since 2023
20 BPAs	relate to unsubsidised biomethane
19+ TWh	contracted biomethane volume for delivery between 2024-2042
7 BPAs	have a contracted biomethane volume >1 TWh
40%	of contracted volumes relate to French production and consumption

Private BPA market

>100	additional private BPAs estimated across Europe

Growing demand across diverse sectors

- Energy utilities & gas suppliers
- Pharmaceuticals
- Food & Beverage
- Chemicals
- Industrials

Best practices in setting up a BPA

Industry stakeholders shared several best practices that should be considered when setting up a BPA

Best practices

	Best practice	
1	Build internal readiness for early-stage BPA transactions	• Engage key internal stakeholders early (e.g. Legal, Risk and Sustainability teams)
2	Develop reusable BPA templates and internal playbooks	• Develop material after first deal to shorten negotiation timelines for future transactions
3	Treat BPAs as strategic partnerships rather than one-off transactions	• Establish collaborative and transparent partnership approach from outset to support long-term contract delivery
4	Maintain flexibility in procurement strategy to respond to market realities	• Adapt to evolving market realities to ensure that the BPA remains viable for both parties
5	Align early on sustainability and additionality priorities	• Agree sustainability and additionality requirements upfront to reduce delays, misalignment or avoid renegotiation

Commercial structures

Commercial structures determine how revenue certainty, pricing risk and market exposure are allocated between BPA counterparties

Contract duration
Typical term: 5 – 10+ years

- Longer terms improve project bankability and support investment recovery
- Shorter terms provide greater flexibility for offtakers

Pricing model
Fixed price | Index-linked | Hybrid

- Fixed pricing provides long-term price certainty
- Index-linked pricing reflects prevailing market conditions
- Hybrid pricing combines fixed-price certainty with some exposure to market movements

Revenue model
Subsidised | Unsubsidised

- Subsidised revenue model reduces financial risk and lowers overall price
- Unsubsidised revenue model relies on BPA to cover project costs and producer returns

Delivery structures

BPAs can be structured in different ways to balance volume risk, scalability, traceability and security of supply

Delivery commitment Take-or-Pay | Pay-as-Produced	• Defines how volume risk is allocated between the producer and offtaker
Asset structure Single Asset | Multi-asset Portfolio	• Balances traceability, flexibility and security of supply
Delivery model Physical | Virtual (Mass Balance | Book-and-Claim)	• Determines environmental integrity, bankability and relative ease of implementation
Supply geography Cross-border | Domestic	• Cross-border BPAs can enable linkage of biomethane supply and demand markets across Europe, but equally can introduce greater complexity

Key contractual terms in a BPA

The Playbook outlines the perspectives of producers, offtakers and financiers for each contractual term

1 Volume and delivery terms

- Production start date
- Delivery commitments and flexibility provisions
- Performance guarantees

2 Extraordinary event terms

- Change in control
- Change in law
- Force majeure

3 Other relevant terms

- Counterparty guarantees

Key takeaways

1

Long-term BPAs provide the **revenue certainty producers** need to finance new projects, while for **offtakers** they provide **security of supply**

2

30 public BPAs have been announced since 2023, with a total volume of **>19 TWh**. **Several hundred additional agreements exist privately**

3

BPAs are bespoke, requiring choices on **commercial and delivery structures**, as well as on **risk allocation**

4

Applying **industry best practices** can help to reduce BPA set up time and support successful BPA implementation

Thank You

Sacha Alberici | Associate Director
sacha.alberici@guidehouse.com

Poppy Watts | Senior Consultant
pwatts@guidehouse.com

Geoffrey Ho| Associate Director
geoffrey.ho@guidehouse.com

Curtis McNeice| Associate Director
cmcneice@guidehouse.com

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Q&A session

Moderated by Angela Sainz Arnau

Communications Director

European Biogas Association

How BPAs support biomethane producers?

Antoine Sabatier

Head of Renewable Gas

ENGIE Energy Management & Supply

Biomethane Purchase Agreements (BPAs)

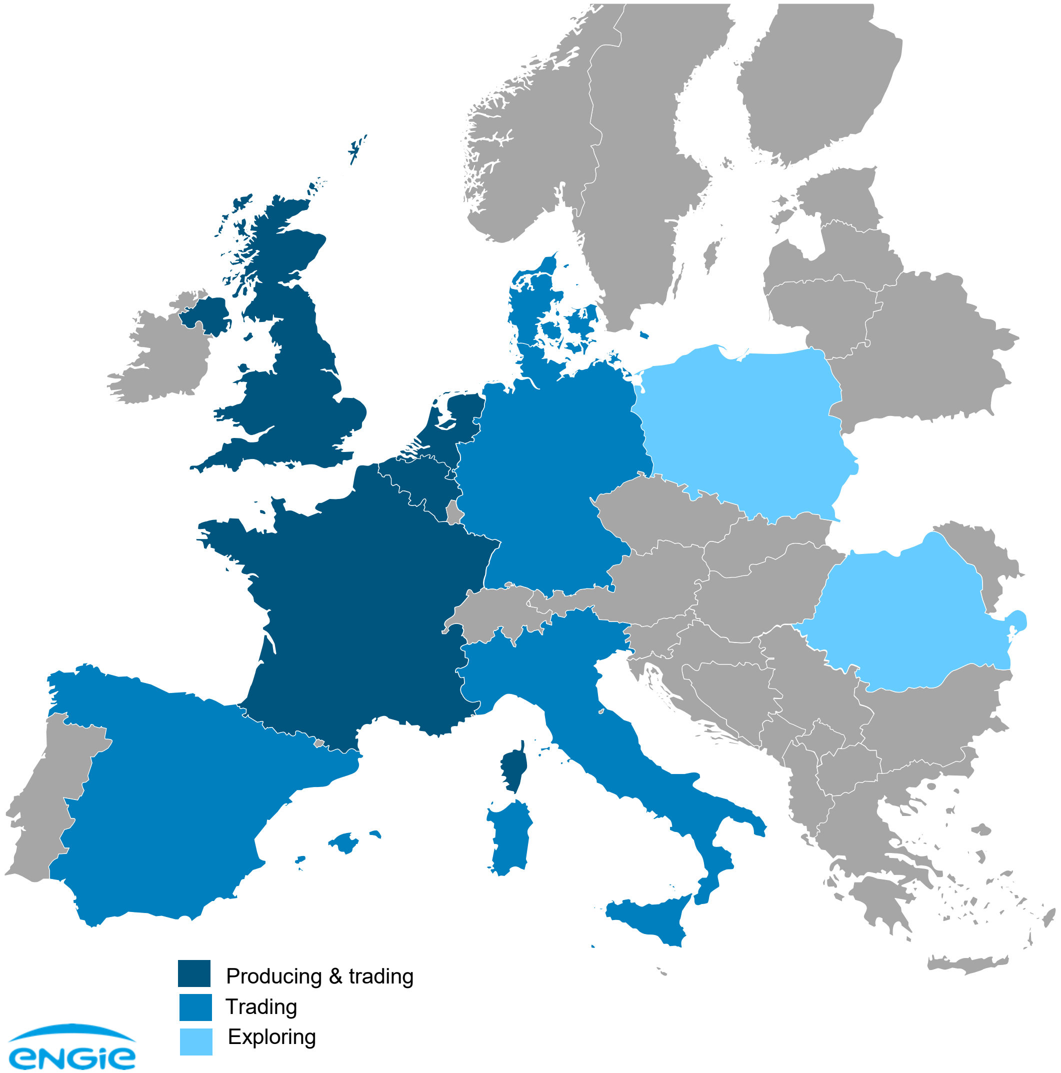
Unlocking biomethane’s full potential

16 September 2026

ENGIE

ENGIE's biomethane ambitions

Assets and project pipelines in several European countries



ENGIE provides energy and energy management solutions to support our own and our clients' **transition towards a carbon neutral economy**.

Supply

1.2 TWh
production

8 TWh
portfolio

45%
FR Market share

B2B

200 K
Clients

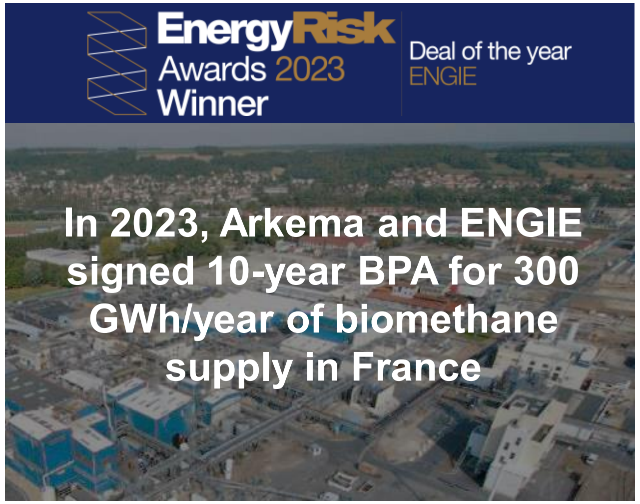
190 TWh
Gas delivered

174 TWh
Electricity delivered

ENGIE's BPAs

ENGIE is a pioneer in the field of BPAs (after being global leader in PPAs)

ENGIE inks sector-first biomethane supply deal with PepsiCo UK



ENGIE signs major biomethane supply agreement with Arkema to further reduce the carbon footprint of its bio-based polyamide 11 materials

BASF and ENGIE signed a long term Biomethane Purchase Agreement in Europe

Veolia, Waga Energy et ENGIE s'allient pour contribuer au développement de la filière biométhane en France

Characteristics of a BPA

- BPA = a contract for supply from (a) dedicated production asset(s)
- Bilateral and non-regulated
- Bundled product : CH_4 + POS + GOs
- Contract duration: rather long-term (5 – 15 years)
- Type of asset:
    - Greenfield: longer lead times, mostly unsubsidized, longer contract duration, additionality
    - Brownfield: immediately available (or after refurbishment), subsidies in the past, shorter contract duration

With a BPA, the customer can closely specify the product according to his needs

What is driving demand for biomethane (BPAs)?

Voluntary market

- ❑ **Decarbonization targets / emissions reporting**
  - Reduction of scope 1 emissions under SBTI / GHG Protocol (current uncertainty: up to auditors)
- ❑ **Labels, premium end-product**
  - Labels such as ISCC+, …
  - Product carbon footprint (PCF), Environmental Product Declarations (EPD), …

Voluntary markets: No specific requirements or depending on the label / use case

Compliance market

- ❑ **EU ETS: Reduce emission allowances in EU-ETS**
- ❑ **National incorporation quotas**
  - Transport fuel quotas
  - Green gas quota on fuel suppliers (e.g. CPB in France)
- ❑ **FUEL EU Maritime**

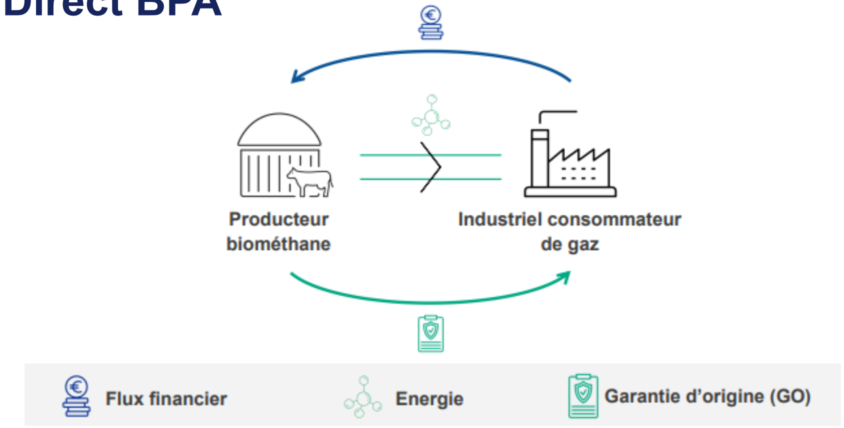
Compliance markets: Mandatory compliance with sustainability and GHG saving criteria – POS is (or will be) required, often alongside with GOs

Different customer needs:

- ❑ Optimized CI?
- ❑ Specific feedstock constraints?
  e.g. RED Annex IX A, exclusion of food and feed crops, vegan …
- ❑ Subsidized / unsubsidized biomethane
- ❑ Geographical origin (domestic vs imported)

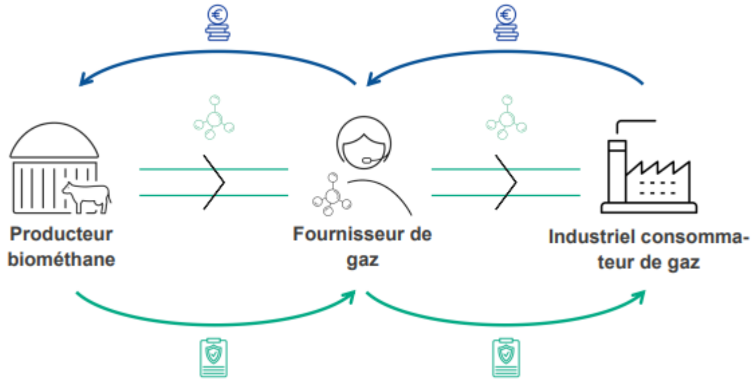
Types of BPAs

Direct BPA



- Contract between biomethane producer and final consumer
- Producer or consumer needs to have a supply license and take care of moving the gas through the grid (or outsource this service).
- Model adapted to cases where consumer is already active on gas market.

Indirect BPA (with intermediary)



- Gas supplier as intermediary between producer and final consumer acts as shipper and balancing responsible party.
- Gas supplier manages differences between production and consumption profile.
- Model adapted to the majority of cases.

BPA : clauses and conditions

1. Seller/Buyer	**ENGIE S.A. / CLIENT**
2. Project & Feedstocks	Description & volumes : From 20 to 100 GWh/y rather 10 to 15 y for greenfield. Could be less for existing.
3. Product	Product: Biomethane (Gas+PoS+GO) as produced Maximum Carbon Intensity = 16 $gCO_{2eq.}$/MJ
4. Delivery Point	Hub/PEG
5. Price	Fixed/inflated or Indexed.
6. Credit	LT question & Termination Amount

Risks coverage

- ❑ (Project development risks)
- ❑ Commercial risks (late payment, market disruptions …)
- ❑ Regulatory risks (changes in law, new taxes, …)
- ❑ Operational risks (underproduction, missing certificates, balancing, …)
- ❑ Other (early termination, force majeure, …)

BPAs – A win-win solution

PRODUCER

- ✓ Long-term visibility on volumes and prices
- ✓ Business case for investment in new assets / refurbishments
- ✓ Bankability

CONSUMER

- ✓ Long-term visibility on energy price and decoupling from natural gas price
- ✓ Local supply
- ✓ Competitive decarbonization (without own investment)
- ✓ Marketing / CSR value
- ✓ Fulfilment of legal obligation (if applicable)

What is needed to make it happen (more often):

- Encourage biomethane demand and long-term engagement (implementing laws with long term visibility, limit the arbitrages between countries through transposition)
- Full recognition of biomethane certificates by the GHG-P
- Clear certification rules (no more vague wording, interpretation, changes of rules)
- Golden rules for BPAs (clear risk sharing)

engie.com

Q&A session

Moderated by Angela Sainz Arnau

Communications Director

European Biogas Association

How BPAs support biomethane offtakers?

Mark Allen

Snr Sustainability Director

PepsiCo

PEPSICO EMEA

Biomethane GPA

Sept 2026 EBA Webinar

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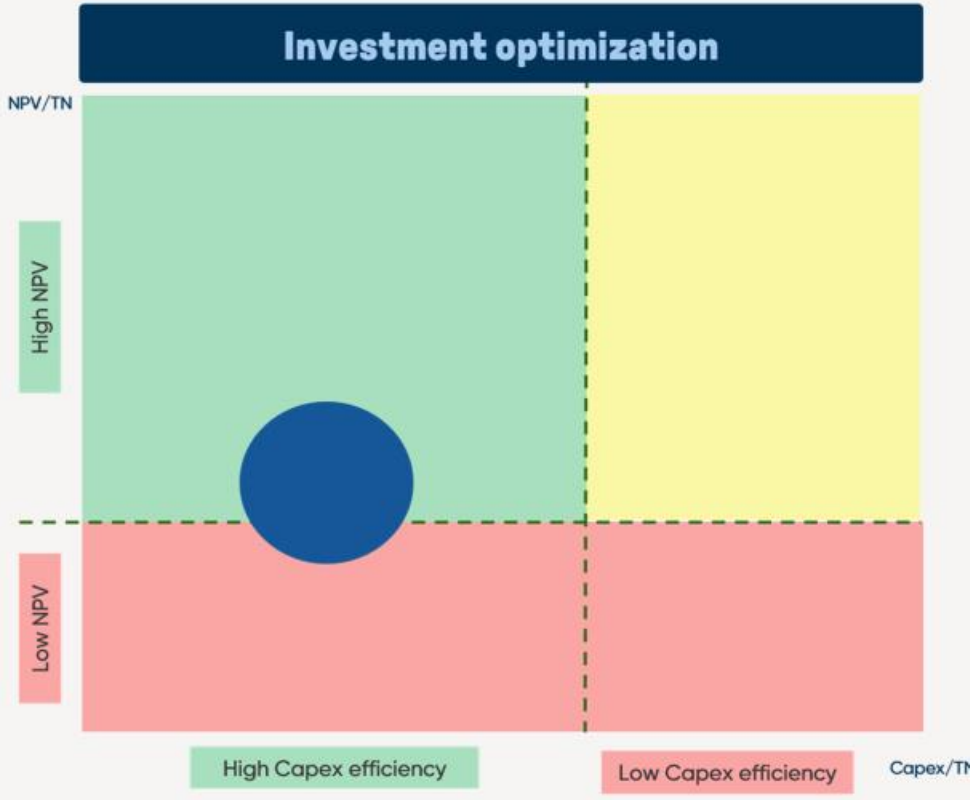
WHAT ROLE DOES BIOMETHANE PLAY IN PEPSICO'S BROADER DECARBONISATION STRATEGY?

1. Biomethane has a targeted role within PepsiCo's wider decarbonisation approach

2. Market Maturity of decarbonisation levers guides how it is deployed

3. For high thermal-load sites it acts as a bridge: immediate reductions, circular use of waste feedstocks, and greater energy resilience.

4. One example is a UK 10-year BPA covering 60 GWh annually, set to cut over 10,900 tonnes of emissions per year.



OUR MOTIVATION?.... IMPACT, CREDIBILITY, BANKABILITY

- Measurable Scope 1 reductions that scale across markets toward 2030 - no site-level complexity.
- Credibility: production-linked BPA with traceability, mass balance and additionality as well as circular use of our agricultural scale
- Bankability: long-term offtake finances new capacity and gives us supply, price and delivery visibility
- Not the cheapest versus natural gas, but compelling on carbon, ETS, resilience and deliverability

WHAT WOULD MAKE PEPSICO, SIGN MORE BIOMETHANE PURCHASE AGREEMENTS IN EUROPE?

- Stability: consistent rules on how biomethane counts under carbon accounting, SBTi, GHG Protocol and the EU ETS
- Harmonisation: simpler, joined-up traceability, Guarantees of Origin, Proofs of Sustainability, mass balance and cross-border allocation
- Robust sustainability standards: waste- or residue-based feedstock, credible certification, clear evidence trail
- Fairer transition cost model: policy support, demand aggregation and incentives to offset the green premium and first-mover disadvantage
- Easier execution: standardised bankable contracts, clearer risk allocation, better alignment across the value chain

Q&A session

Moderated by Angela Sainz Arnau

Communications Director

European Biogas Association

How BPAs support biomethane financiers?

Wouter Lakeman

Vice-President Energy Sector Coverage

ING

EBA Webinar

Biomethane Purchase Agreements Playbook

ING Wholesale Banking

Wouter Lakeman

September 2026

do your thing

ING is an early adopter of biomethane with a leading position in Europe

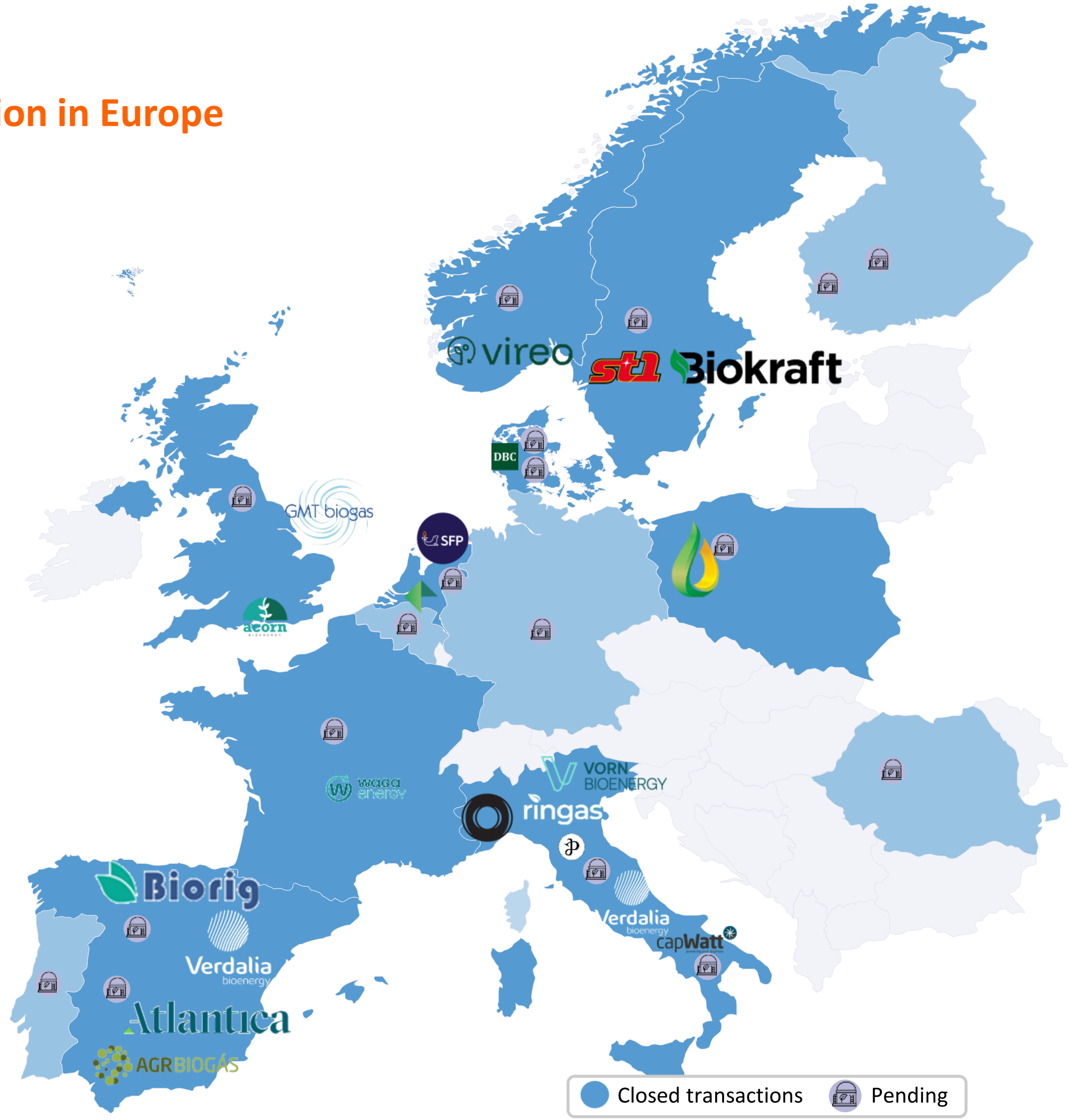
Asset attractiveness to lenders

- Proven Technology
- Stable cash flows
- Environmental benefits
- Governmental support
- Scalability & flexibility
- Multiple products & end-markets

ING market position

14	20+	#1
Global Energy teams	Biomethane financings closed	Biomethane League Table position[1]

Note (1): Europe 2025 – 2026YTD MLA, Source: IJGlobal



High level bankability and structuring factors for biomethane projects

Typical risk factors

Construction Risk
- Prefer experienced EPC contractor, Lump Sum Turn-Key contract but multiple contracts accepted
- Interface risk
- Sufficient budget contingency (~10%), cost-overrun coverage
- Independent technical advisor

Offtake Risk
- Ensure bankable offtake agreements
- Assess credit quality of offtakers
- Blend-in requirements mitigate volume/utilization risks for merchant offtake
- Review offtake structure, price competitiveness

Feedstock Supply Risk
- Local feedstock suppliers' due diligence for availability
- Prefer longer term feed-or-pay contract, if available, and/or offtake of digestate
- Review feedstock strategy, supply options
- Assess competition for feedstock
- Ensure sufficient storage and logistics
- Ability to have flexible diet for digester

Technology / Performance Risk
- Feedstock composition for planned capacity
- Anaerobic Digestion generally considered proven technology, but devil is in the detail
- Integration with liquefaction and CO_2 capturing

Operational & Maintenance
- Sponsors' experience in similar assets
- Operational track record preferred

Regulatory / Social
- CfD structures vs VPA
- Capex subsidy available on country or EU level
- Social opposition (positioning of local communities)

ESG / Sustainability
- Only organic waste and cover crops to be considered (no food crops)
- Independent ESR consultant review
- EU Taxonomy compliance

What makes an offtake agreement bankable?

Selected observations from debt perspective

Security of cash flows

- Creditworthy offtaker, backed by appropriate parent or bank support
- Contract tenor in sync with debt maturity
- Robust pricing structure
- Meaningful contracted volumes and merchant exposure clearly managed

Operational deliverability

- Realistic start date, commissioning and ramp-up period, plus long-stop
- Take-or-pay matched by credible producer delivery obligations
- Tolerance bands, make-up rights and replacement-volume mechanisms
- Clear requirements for delivery, certification, feedstock and CI score

Downside protection

- Defined treatment of force majeure, change in law and change of control
- Limited termination rights, cure periods and lender step-ins
- Termination compensation that protects debt repayment
- Credible re-contracting and downside cases if the BPA falls away

BPA need to allocate risk clearly, credibly and to the party best able to manage it

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Q&A session

Moderated by Angela Sainz Arnau

Communications Director

European Biogas Association

Conclusion and wrap up

Angela Sainz Arnau
Communications Director
European Biogas Association

Get the Biomethane Purchase Agreement Playbook !

- The full report is free of charge on the EBA website www.europeanbiogas.eu

- For any questions, please contact us at info@europeanbiogas.eu

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