

PROMOTION OF BIOMETHANE PRODUCTION AND USAGE IN EUROPE

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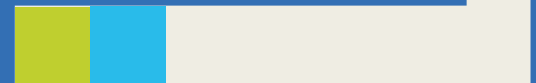


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SUPPORT SCHEMES IN GENERAL



About support schemes in general

- Support schemes on the promotion of renewables are intended to **cover the gap** between costs of energy and revenues.
- General requirements are set in the **EU guidance document** (SWD(2013)-439).
- **Support schemes should**
 - *be flexible enough to account for changes,*
 - *reflect the need to address longer term goals,*
 - *adjust to the falling cost of renewables,*
 - *be predictable (as well as investment revenues),*
 - *be able to incentivise gradually market instruments,*
 - *provide stability of regulatory framework.*

Different forms of support

- Feed-in-Tariffs
- Feed-in-Premiums
- Green Certificates linked to mandatory quota
- Investment grants
- Preferential treatment for grid connection
- Priority dispatch
- Full or partial exemptions from specified financial contributions (taxes, levies)
- Dedicated financing programs (i.e. credit lines for investments)

Remark to support schemes 1:

1. The Communication from the Commission „**Guidelines on State aid for environmental protection and energy 2014-2020**” (2014/C 200/01) set the general rules for national renewable energy support schemes:
 - *Aid is considered to be proportionate if the aid is limited to the **minimum needed** to achieve the environmental protection or energy objective aimed for;*
 - *FIT can be provided only **up to 500 kW** electrical capacity;*
 - *Aid is to be granted in a **competitive bidding process** on the basis of clear, transparent and non-discriminatory criteria;*
 - ***Substantial changes in national support measures to be approved by the Commission.***

Remark to support schemes 2:

Several **European Court of Justice** rulings (i.e. Case C-573/12 Alands Vindcraft, Case C-549/15 biomethane E.ON Sweden vs. Swedish Energy Agency) confirmed that **member states are allowed to determine to what extent they support renewable energy produced in and imported from another member state.**

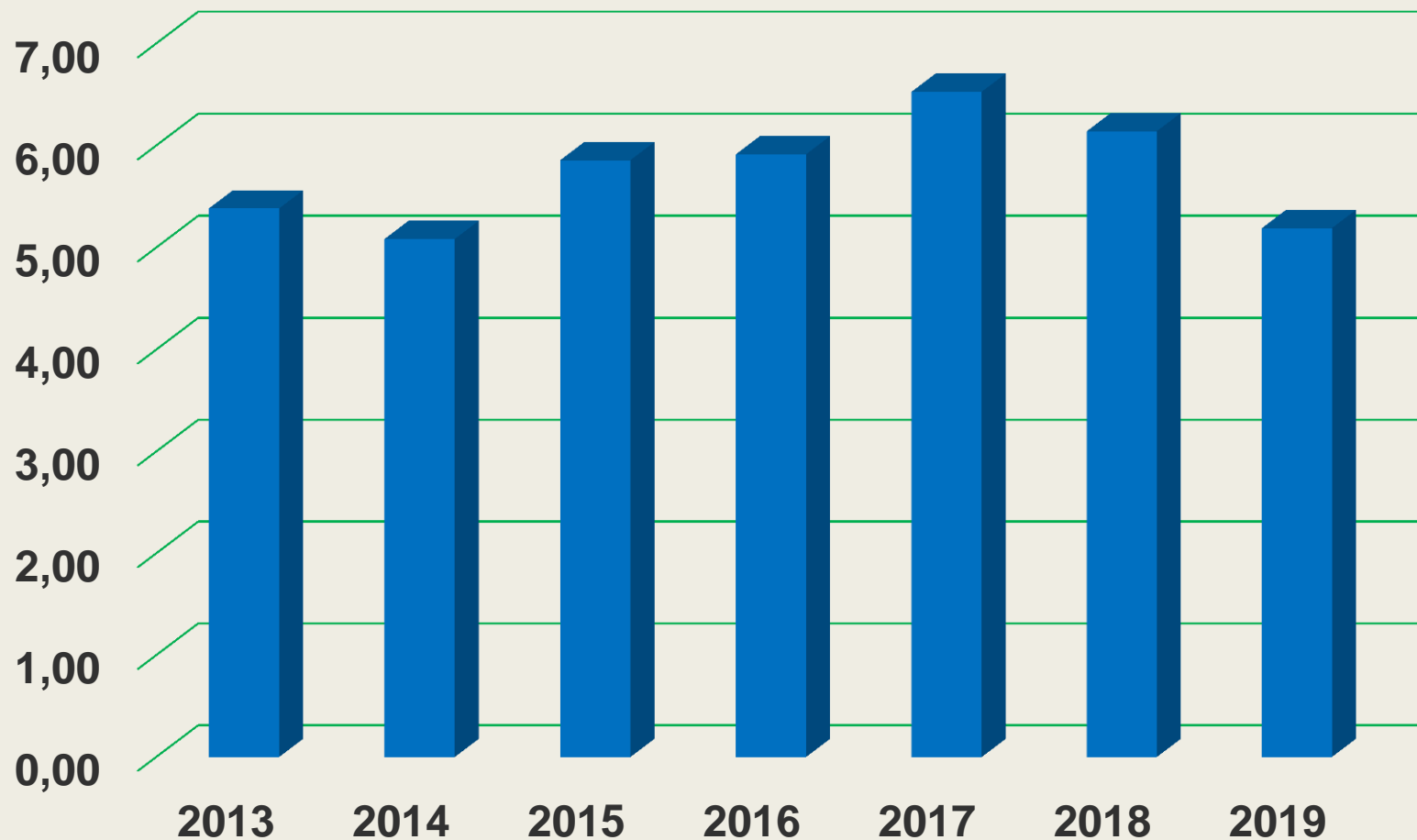
DENMARK



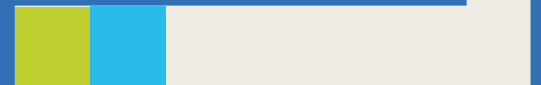
Denmark FIP system supporting grid injected biomethane

- Feed-in-Premium
- Biomethane injection support scheme in valid until end 2023.
- 3 components
 - *Base premium - inflation indexed*
 - *Correction reflecting natural gas price changes*
 - *Yearly degression from 2015 to 2019.*
- Support period: 12 years

Denmark: biomethane Feed-in-Premium €/kWh (with exchange rate 20Sep19)



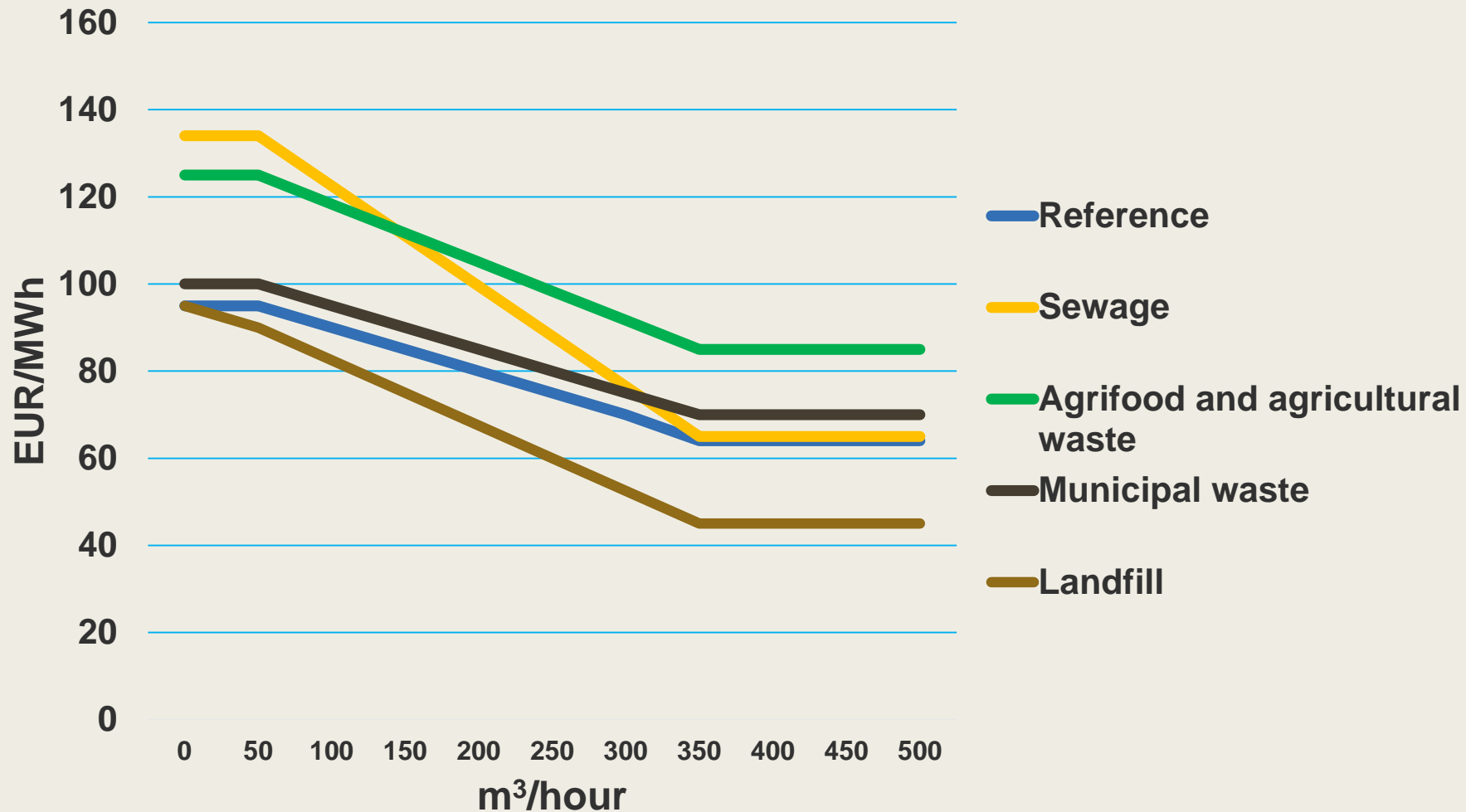
FRANCE



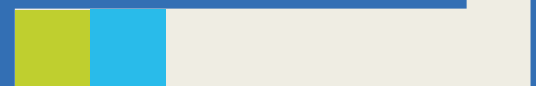
France

- Feed-in-tariff for injected biomethane
- Dependent on size/capacity and raw materials – *see graph*
- Support period: 15 years
- Since introduction 100 biomethane installations were constructed
- Long-term political commitment
- Adaptation to State-Aid-Guidelines and RED II is under preparation

Feed-in-Tariff in France



ITALY



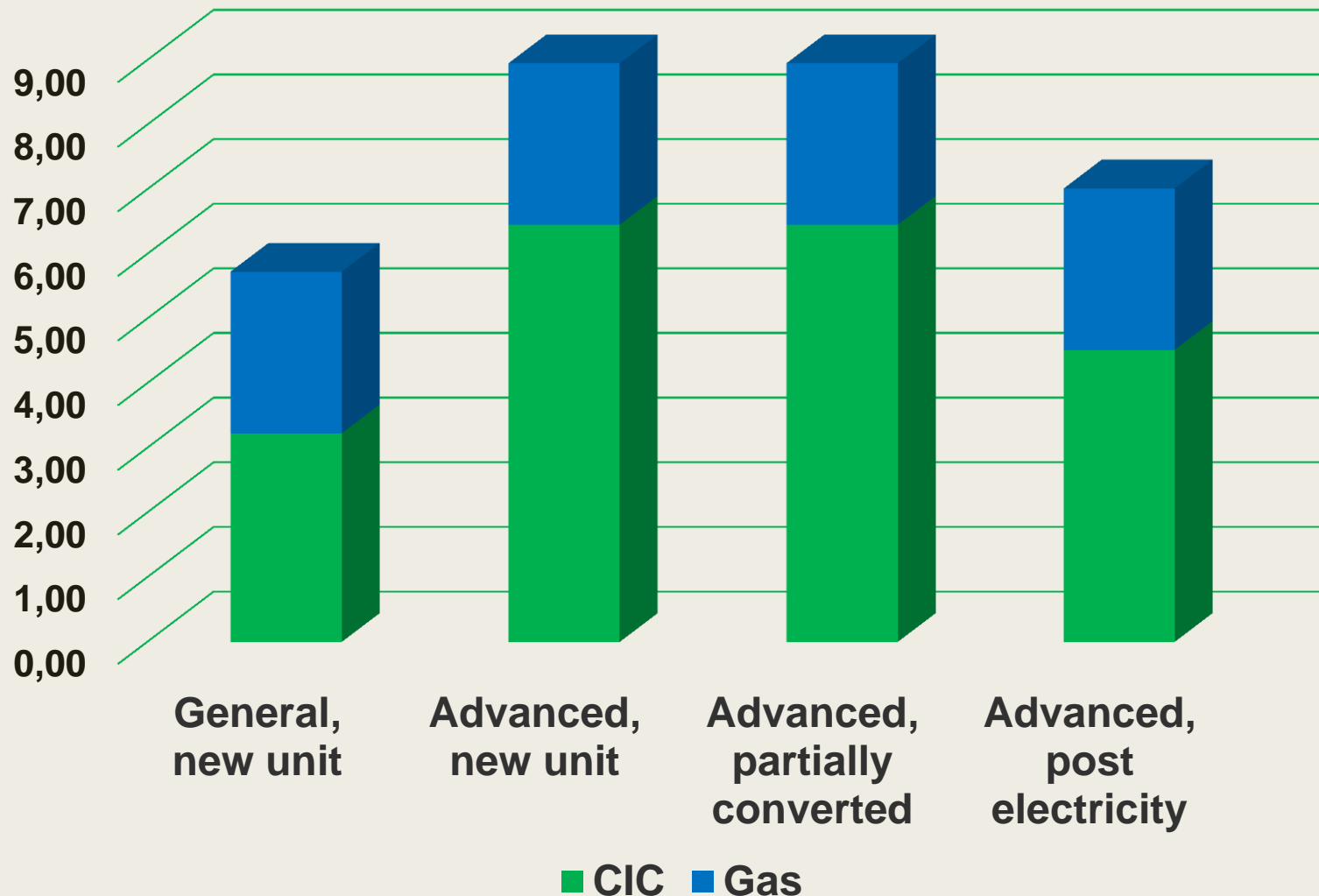
Biomethane support in Italy

- Article 5 of the 2018 Biomethane Decree establishes that CICs ("Certificati Immissione in Consumo") are allocated by the GSE to the biomethane producer, who can transfer these certificates to fuel suppliers subjected to a quota obligation.
- The CIC certificates are issued for a period of 20 years.
- Article 6 of the 2018 Biomethane Decree provides a **specific incentive regime for advanced biomethane** (*biometano avanzato*).
- Compressed and liquified renewable methane from PtG are both considered as „advanced biomethane” classified as “renewable gaseous and liquid fuels of a non-biological origin” (*combustibili rinnovabili liquidi e gassosi di origine non biologica*).

Support in Italy via CICs

- Advanced biomethane (including renewable methane from PtG) can, at the request of the producer, be directly sold to the GSE, awarding **a premium of €375 per CIC in addition to the physical product market value** (*which is equal to the weighted average price at the virtual trading point in the month of sale, reduced by 5 %*). The level of this premium will be evaluated every year in order to avoid over-subsidisation.
- The advantage for advanced biomethane is that **one CIC** certificate is issued **for 5 Gcal** (while normally a CIC is issued for 10 Gcal), .
- **So, 6,45 €ct/kWh certificate (CIC) purchase price is guaranteed for 10 years** for „advanced“ biomethane producer – in addition to the market price of the gas.

Biomethane revenue in Italy, €/ct/kWh, estimated



THE NETHERLANDS

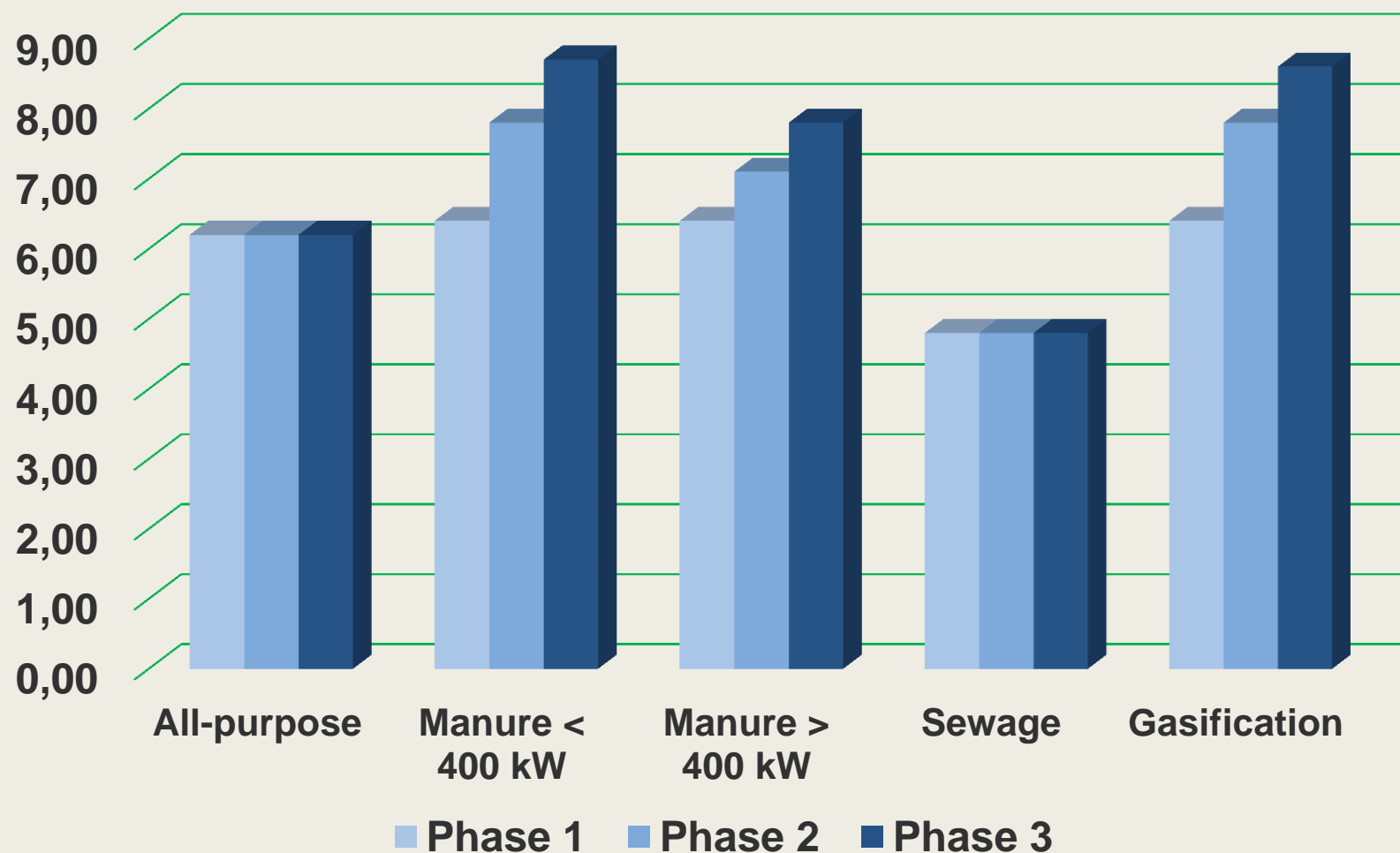


SDE + scheme in NL

- Tenders 2 times a year – all renewables, but base price is differentiated among renewables
- 2019 spring budget: 5 billion EUR
- 3 phases of awarding in every tender, following each other, phase 3. is realised only if funds remain after Phases 1. and 2. (*Offers in 1st phase have higher chances, while there will be no awards if the budget is consumed in the 1st phase – the same is valid for offers provided under 2nd phase.*)
- There is no increase from 1st phase in case of all-inclusive fermentation, but there is an increase in case of manure fermentation and gasification (*see graph*)
- The SDE+ contribution moves up/down from year to year to reflect market prices for fossil equivalent (the base price is guaranteed for 12 years).
- Winners have 4 years to start production.

SDE + scheme in NL - spring 2019 tender

€/ct/kWh



UNITED KINGDOM



United Kingdom – biomethane support

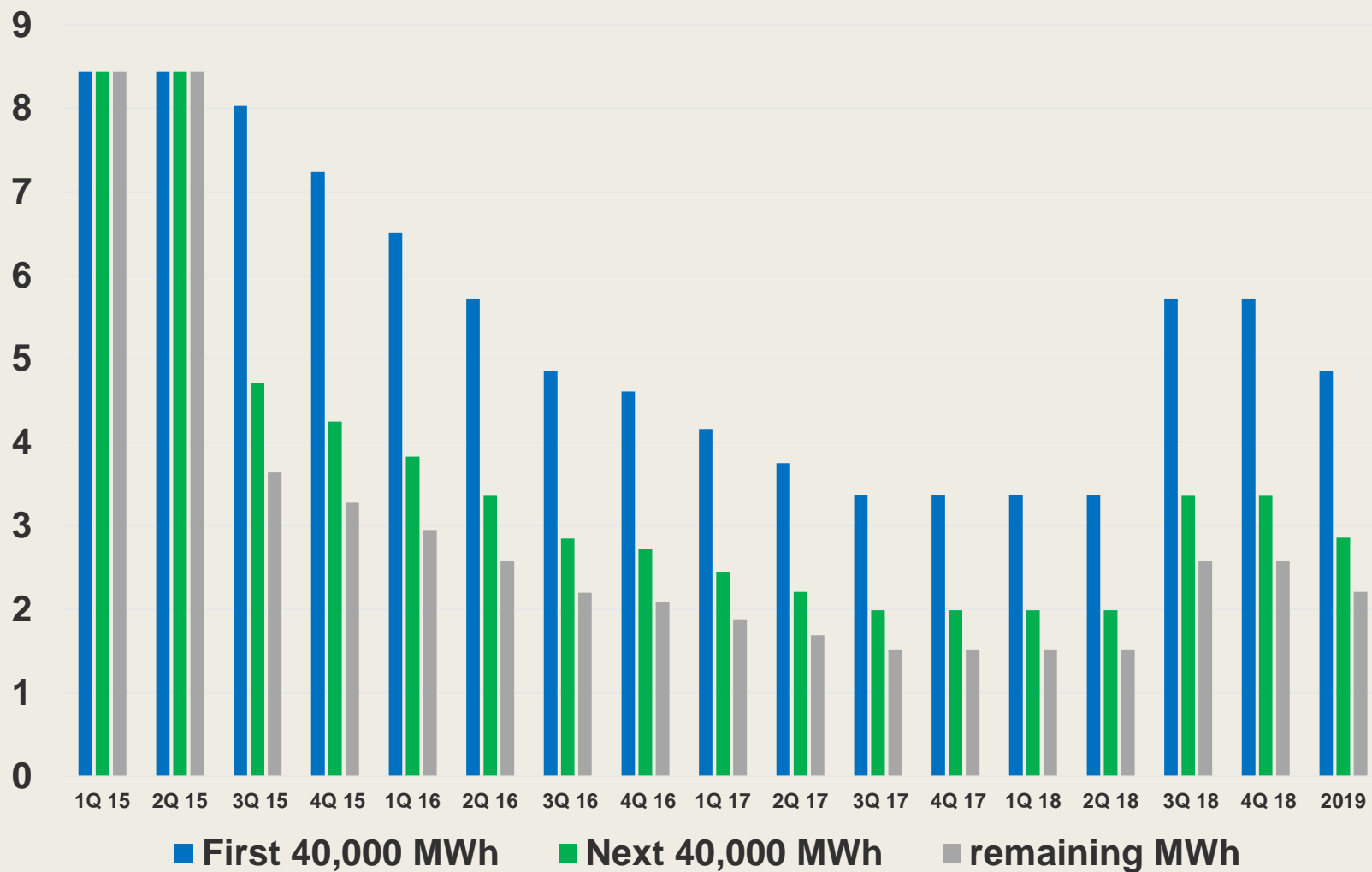
1. RHI

The FIP system of the UK called Renewable Heat Incentive (RHI) is the most developed support system dedicated to using renewable methane in heating&cooling in Europe. RHI supports the injection of biomethane into the natural gas grid under the assumption that the renewable gas will be consumed (blended with natural gas) for heating of buildings.

2. RTFO – RTFC

Renewable Transport Fuel Obligation can be fulfilled through acquiring RTF certificates, which are traded on the market.

UK Biomethane RHI tariff, pence/kWh



SUPPORT FOR ELECTRICITY GENERATION



Renewable electricity from grid injected biomethane

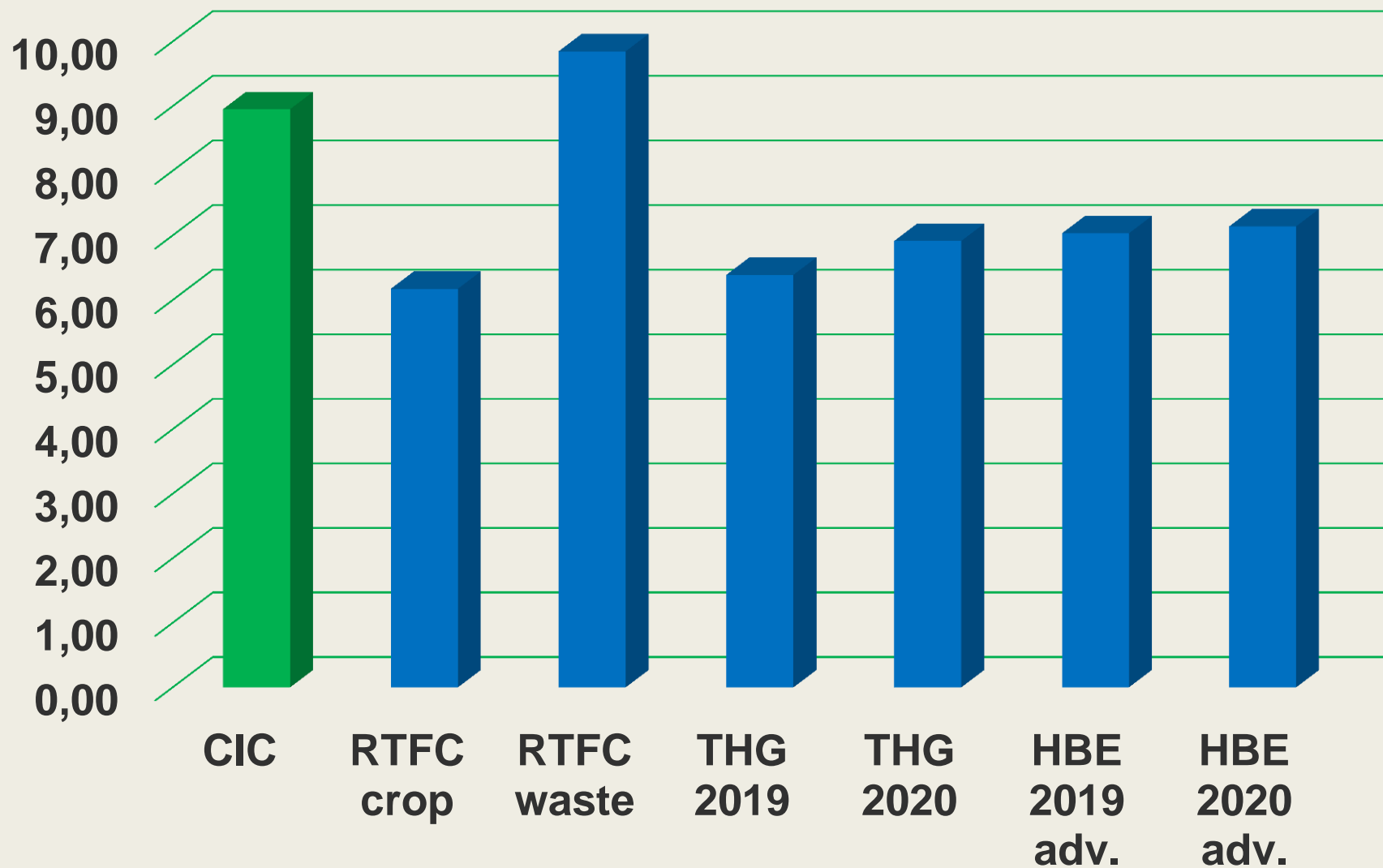
- Proper administration (mass balancing) is required
- No premium compared with local CHP
- FIT up to 500 kW_{el}
- FIP above 500 kW_{el}
 - *awarded under tender procedure*
 - *same FIP as for other renewables*
 - *technology specific tender is allowed by EC but most of the national governments do not use this possibility*
 - *Environmental benefits of biomethane are not recognised*

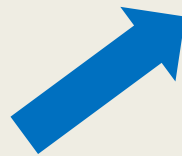


TRANSPORTATION FUEL USE



Estimated income from the sale of biomethane as biofuel, €/ct/kWh – 20Sep19





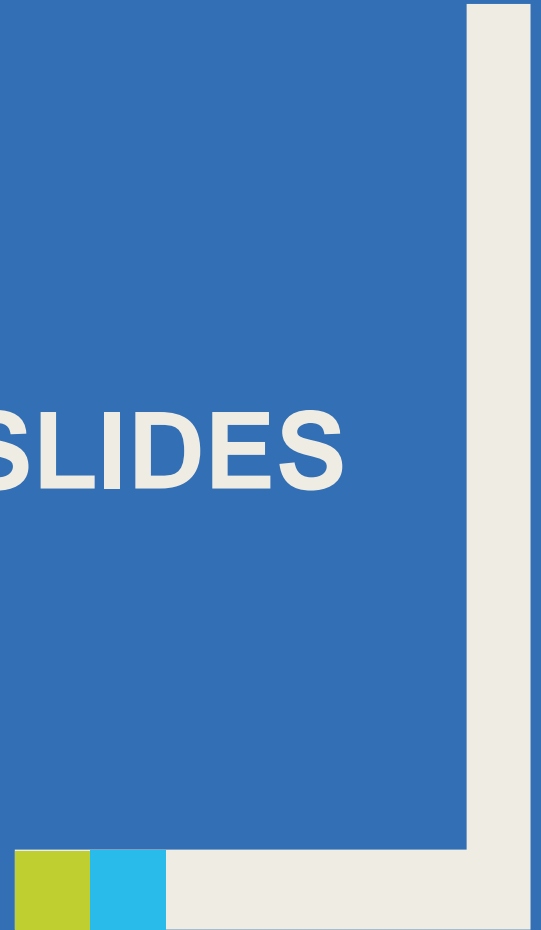
**Let's
believe in
progress !**

THANKS FOR YOUR ATTENTION!

Attila Kovacs, Secretary General
kovacs@ergar.org



BACK-UP SLIDES



ABOUT ERGAR



Basic data:

- **European Renewable Gas Registry**
- Established on 28th September 2016
- Aisbl – International no-profit organisation
- 26 members from 14 countries
- Contact Person:
 - *Attila Kovacs, Secretary General*
- Website www.ergar.org
- Address: Rue d'Arlon 63-65, 1040 Brussels

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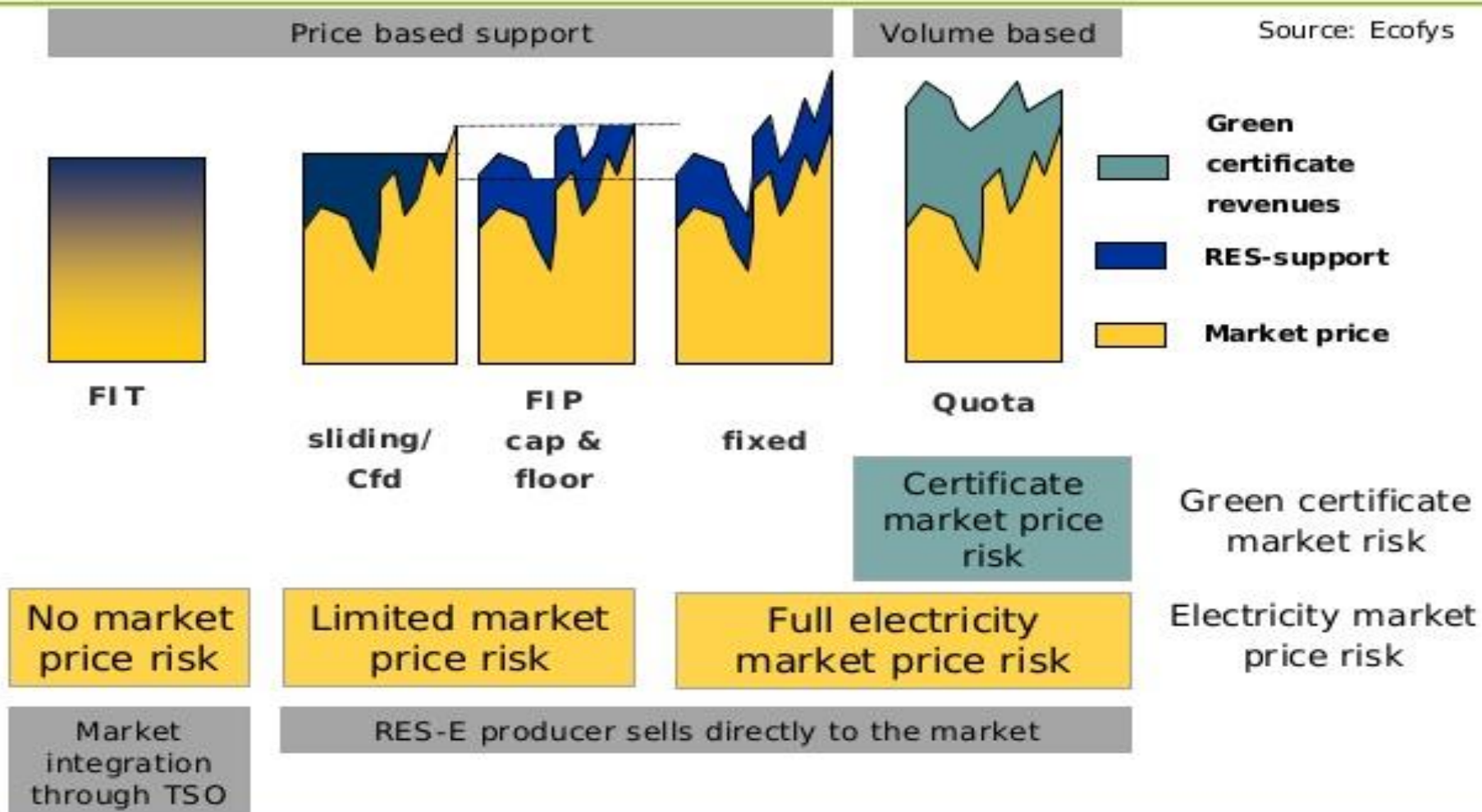


Find out more @
www.ergar.org

ERGaR: cooperation between the natural gas and biogas industries

- ERGaR is a **joint undertaking** of the biogas and natural gas industries.
- **Several TSOs and DSOs have already joined ERGaR:** Amber Grid, Energinet.dk, ENAGAS, Energie 360°, GRDF, Gasunie/Vertogas, NEDGIA, SWEDEGAS
- **Other ERGaR members are from the natural gas industry:** AGCS, Gas.BE, RGFI, VSG
- The biomethane GO issuing bodies should be **closest linked to the natural gas TSOs and DSOs**, who are the direct source of injection/withdrawal information.

The main support schemes expose RES-E producers to different levels of risk



Gas network connection rules in Germany

The relevant legislation, the GasNZV (“Gasnetzzugangsverordnung”) stipulates:

- priority for biomethane facilities at connection to the gas grids,
- preferred injection and transport of biomethane (provided the natural gas quality standards are fulfilled),
- grid connection costs to be shared: network operator covers 75 % - biomethane owner 25 % (up to max. EUR 250.000),
- no entry fees for biomethane transport customers,
- biomethane related additional costs of network operator to be passed on at exit points (biogas levy – “Biogasumlage”),
- network operator to ensure operation of the injection facility for at least 96 % of the annual hours,
- biomethane transport customers receive avoided network tariffs of 0,007 €/kWh.