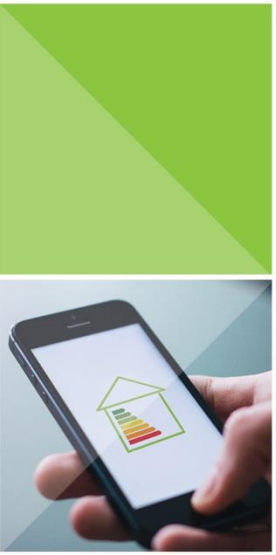





Recast of the Renewable Energy Directive – *Implications for Renewable Gas*

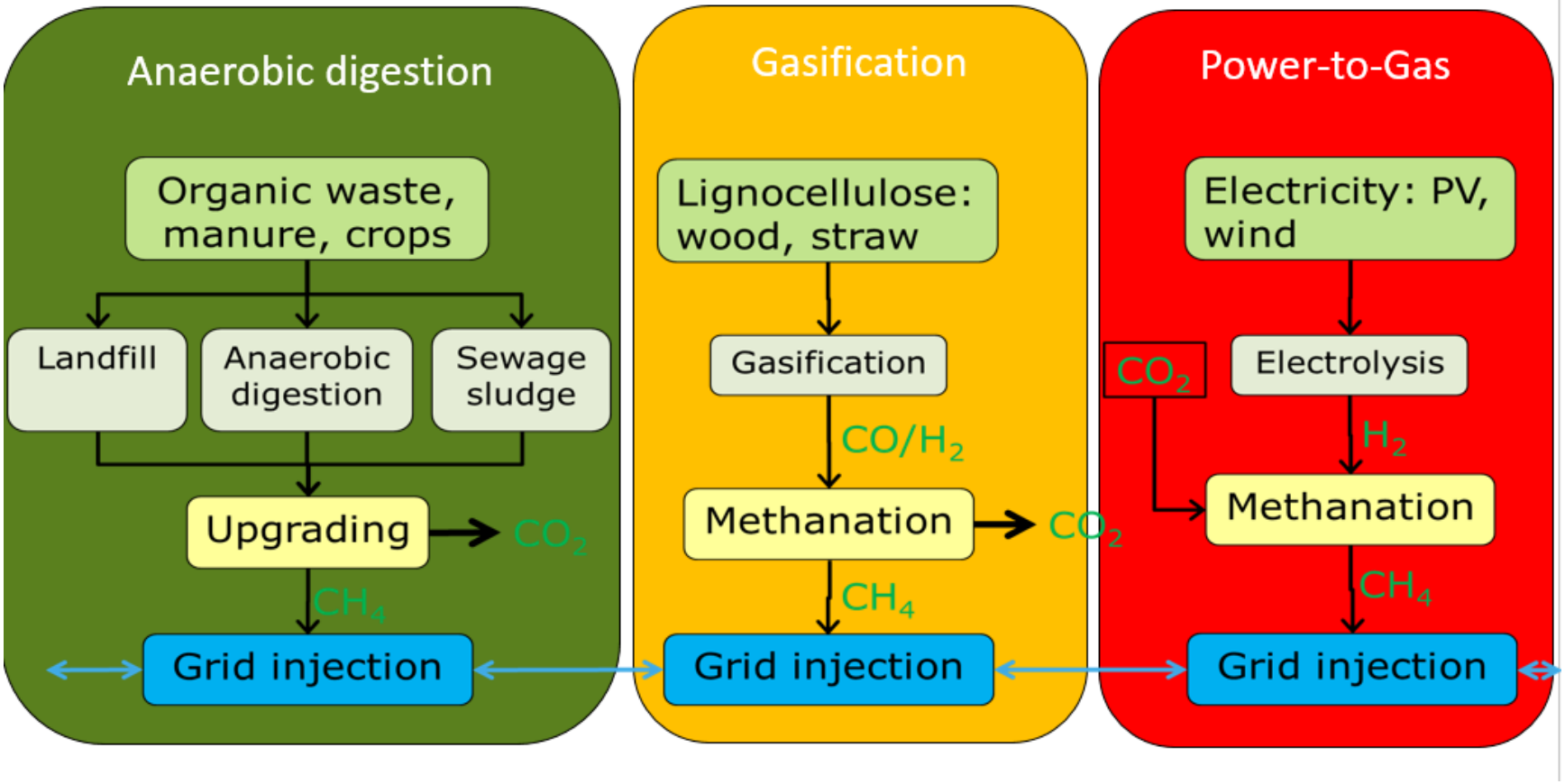
Malcolm McDowell, DG Energy, European Commission

4th European Biomethane Conference
Dublin, 20 September 2018

Part 1:

Setting the scene/providing the context

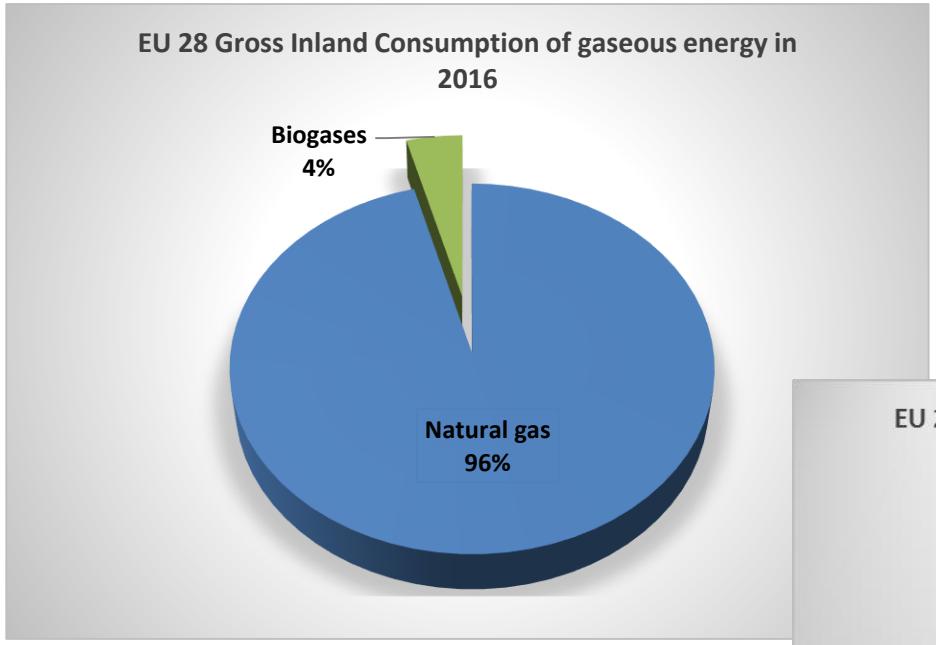
What is meant by renewable gas?

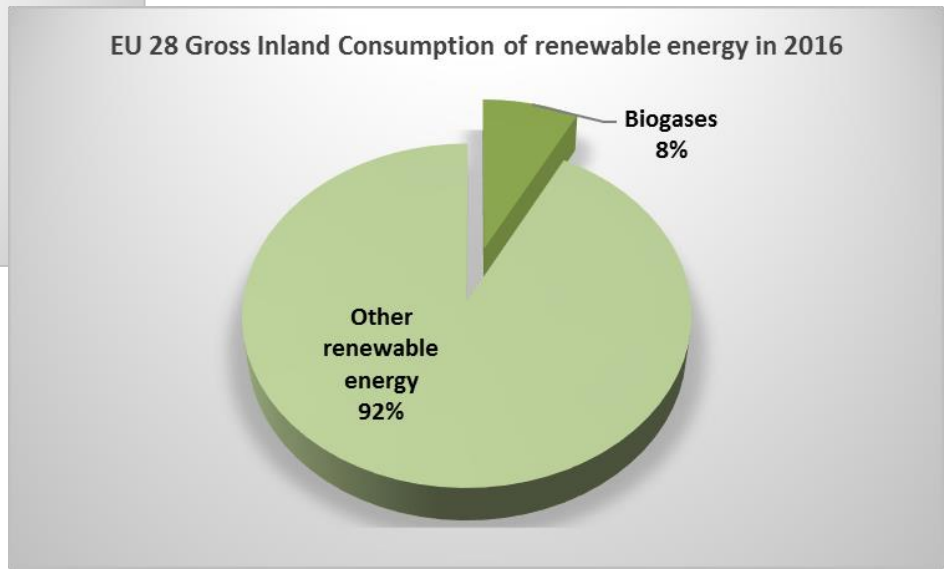


Source: European Biogas Association

European Commission

Renewable gas consumption in the EU

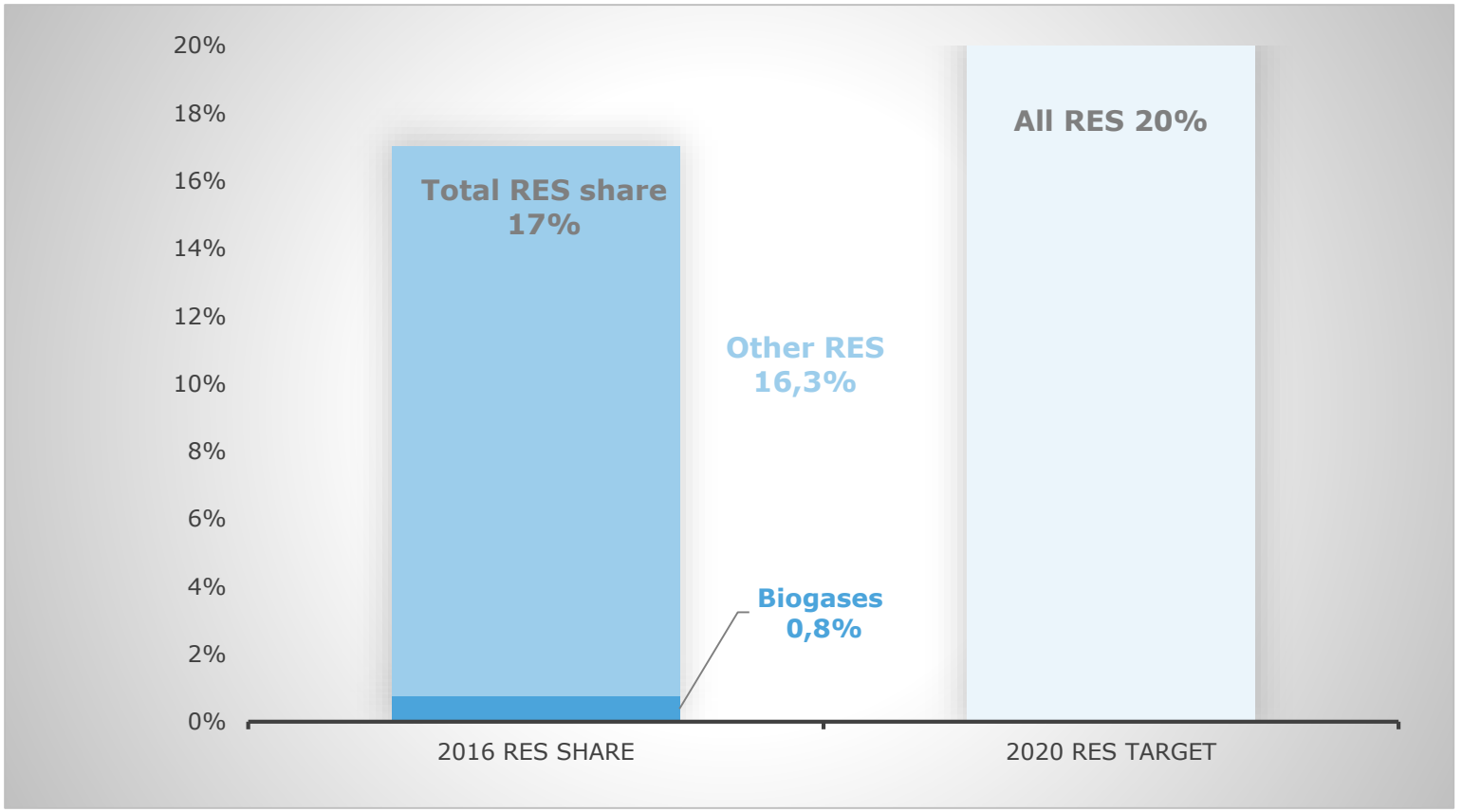




Source: European Commission based on Eurostat data

European Commission

Renewable gas consumption in the EU – compared to RES target



Source: European Commission based on Eurostat data

European Commission

Some examples of recent projections of renewable gas

CE DELFT: biogas production for the EU28 in 2030 could range between 28.8 to 40.2 Mtoe (ca 34 to 48 BCM), counting only sustainable sources for AD

Gas for Climate Group: potential EU production of biomethane of 98 BCM by 2050 (63 BCM of AD, 35 BCM of thermal gasification), and 24 BCM of renewable power to gas; using the existing gas infrastructure would save 138 billion Euros compared to a gas-free scenario.

Eurogas: 80% GHG reduction by 2050 can be met by a combination of natural gas and renewable gas, with similar levels of consumption of gas as today, and with a ratio of 51% power to gas, 12% biomethane, 7% hydrogen and 30% natural gas.

What is the interest in developing further renewable gas in the EU?

New sources of sustainable renewable gas will contribute towards:

1. Further reducing GHG emissions (carbon dioxide, methane…) whether in power production/heating & cooling production/use in transport/use in industrial processes/use in manufacture/agriculture/waste sectors…
2. Increasing security of energy supply
3. Providing a convenient solution to the issue of power storage and electricity grid balancing
4. Providing support for rural development
5. Improving waste management
6. ….

Gas from renewable sources in the Renewable Energy Directive

1. Counts towards both 20% share of RES target and 10% RES target in transport
2. Defines sustainability criteria for liquid and gaseous fuels consumed in transport
3. Provides ready-to-use GHG emission savings values for typical biomethane CNG production pathways
4. Biogas/biomethane produced from waste streams count double towards the transport target, whereas food and feed based are capped

Part 2:

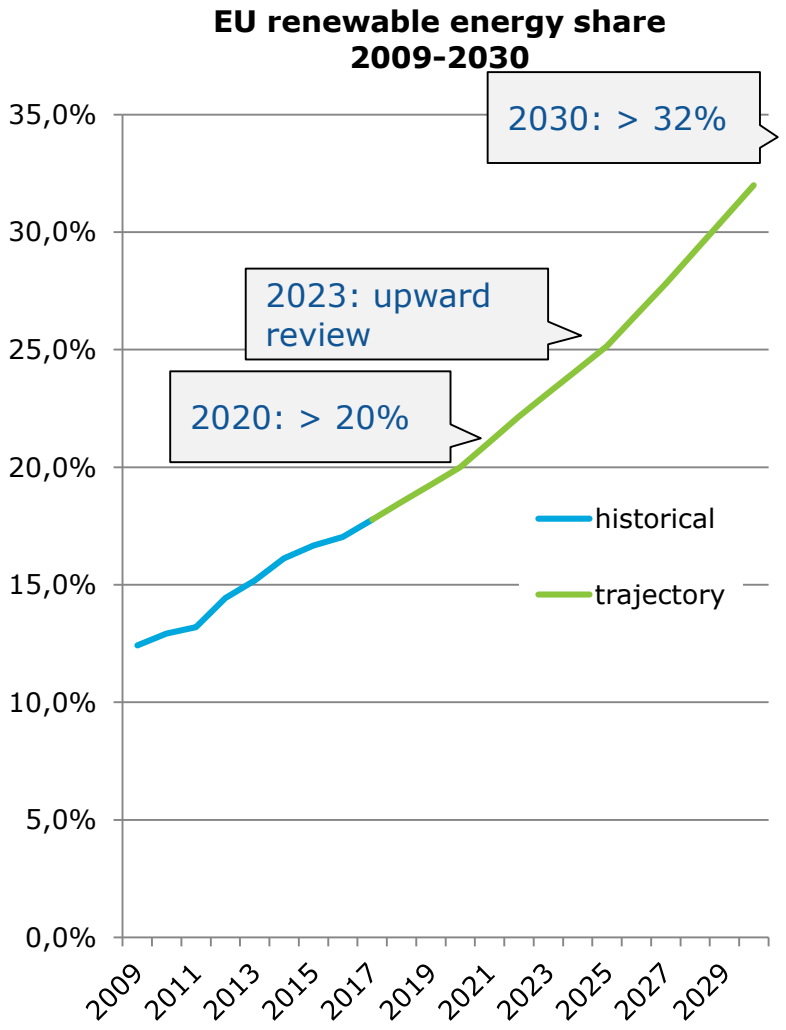
Treatment of gas from renewable sources in the new Renewable Energy Directive

Gas from renewable sources in the NEW Renewable Energy Directive (REDII)

Measures that will support sustainable renewable gas:

1. Overall increased ambition for RES & other facilitating measures
2. Extension of Guarantees of Origin to renewable gas
3. Setting a new target for Heating & Cooling
4. Measures to further increase renewables in transport
5. Adaptation of the RED's system of sustainability compliance
6. Reinforced sustainability criteria
7. Facilitating compliance with the greenhouse gas savings criteria
8. Facilitating access to and operation of the grids

1. Overall increased ambition for RES & other facilitating measures



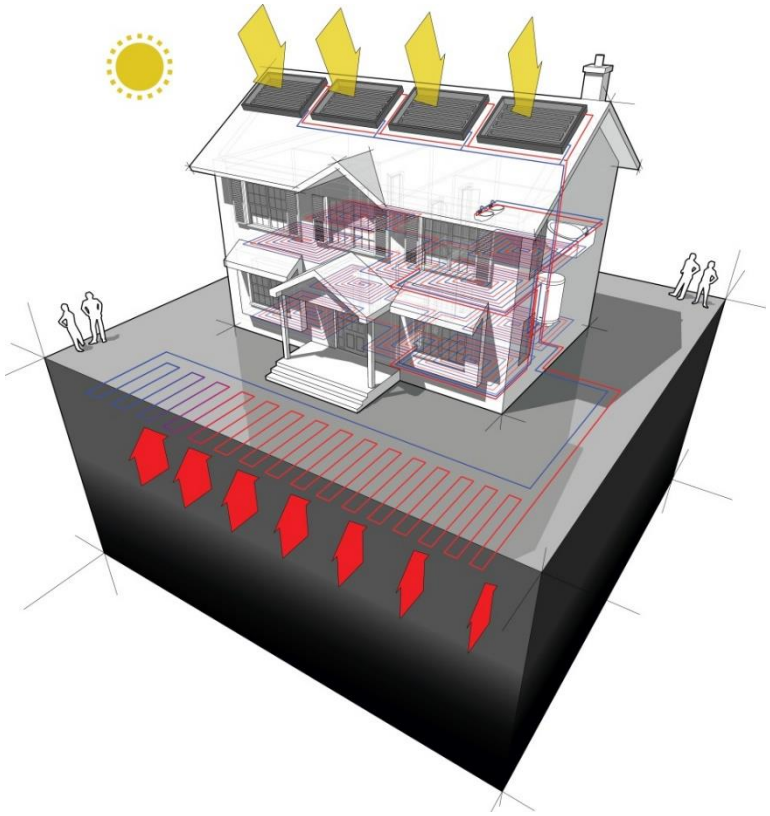
- Binding EU-target of at least 32% (upward review in 2023)
- Improving the design and stability of support schemes for RES
- Delivering streamlining and reduction of admin procedures
- Establishing clear and stable regulatory framework on self-consumption

2. Extension of Guarantees of Origin to renewable gas

- ✓Guarantees of Origin (GOs) for all types of RES (before: RES electricity and RES H&C)
- ✓Should facilitate greater cross-border trade in renewable gases
- ✓Admin aspects of GOs improved
- ✓Commission to assess establishment of a EU-wide labelling system for the promotion of RES from new installations

3. Setting a new target for Heating & Cooling

✓ Target to increase renewables in heating and cooling by 1.3 percent point per year (2020-2030):



✓To accelerate the rate of rewenable energy deployment in H&C

✓MSs to define the measures, i.e:

- Physical incorporation of RES energy or waste heat or cold in energy and energy fuel supplied for H&C

4. Measures to further increase renewables in transport

Measures that will support sustainable renewable gas in transport:

1. Obligation on fuel suppliers to enable achievement of min. 14% binding RES-t target
2. Sub-target of 3.5% on advanced biofuels and biogas, may be counted twice
3. Capping of biofuels and biomass fuels from food or feed crops consumed in transport, with a phase down of high ILUC-risk fuels with expansion in high carbon land
4. Synthetic renewable gaseous fuels included in the obligation
5. Multipliers of 1.2 for non-food and feed crop based biofuels and biogas consumed in aviation or maritime

5. Adaptation of the RED's system of sustainability compliance

Mass balance system of compliance with RED's sustainability criteria adapted to realities of biogas production. It will have to:

1. allow consignments of raw material or fuels with differing sustainability and greenhouse gas emissions saving characteristics to be mixed [as per RED]… for instance in a container, processing or logistical facility, transmission and distribution infrastructure or site [new REDII text].
2. allow consignments of raw material with differing energy content to be mixed for the purpose of further processing, provided that the size of consignments is adjusted according to their energy content [completely new REDII text]

6. Reinforced sustainability criteria

1. Scope extended to cover solid biomass and biogas for H&C and power generation [current RED: only biofuels and bioliquids].
2. Small installations opt-out: threshold of 2MW in terms of thermal capacity for gaseous biomass fuels
3. As per RED, biofuels and biomass fuels from waste and residues only have to fufill the GHG savings criteria
4. GHG savings criteria:
   i. **Min. 65% for biofuels and biogas consumed in transport produced in installations in operation from 2021**
   ii. **Min. 70% for renewable liquid and gaseous transport fuels of non-biological origin from 2021**
   iii. **Min. 70% for electricity, heating and cooling production from biomass fuels used in installations starting operation after 1 January 2021 and 80 % for installations starting operation after 1 January 2026**

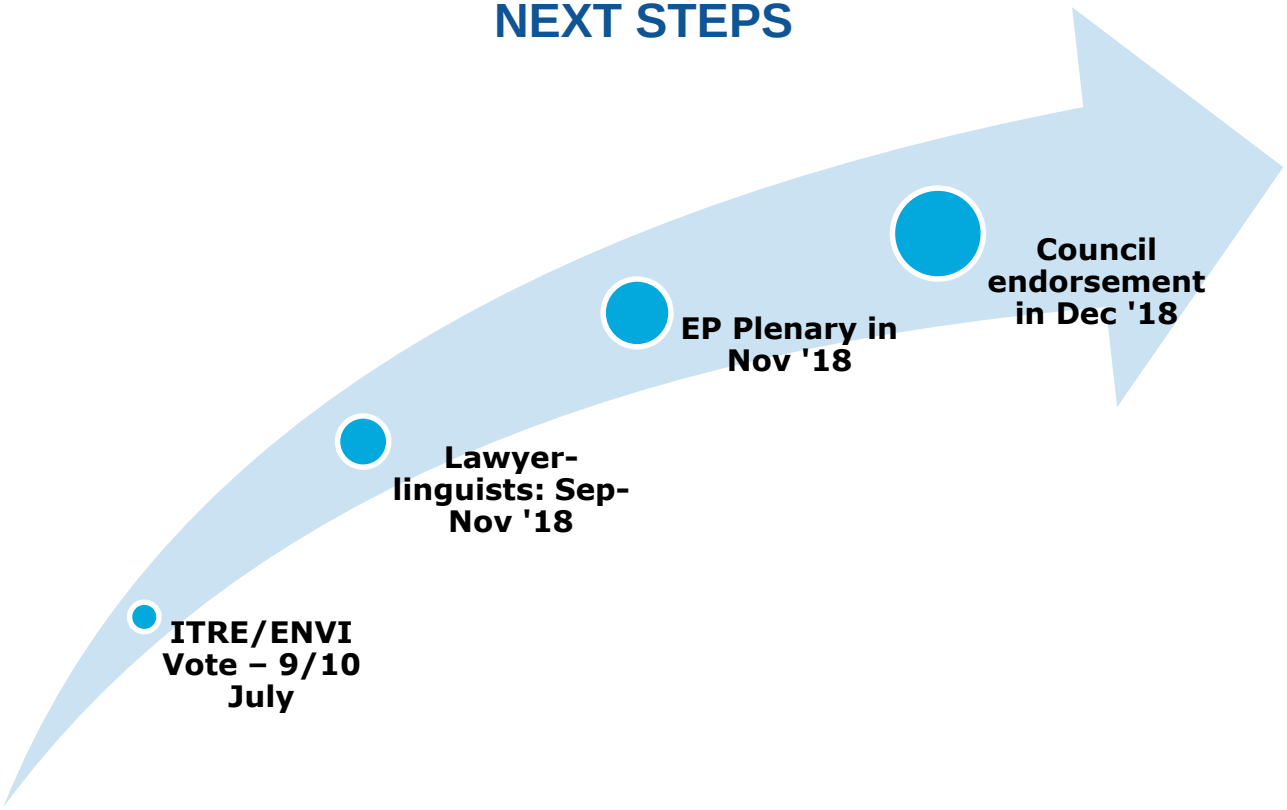
7. Facilitating compliance with the GHG savings criteria

1. New default GHG savings values of relevance to biogas/biomethane available:
   i. **Biogas for electricity (wet manure, maize whole plant, biowaste)**
   ii. **Biogas for electricity – mixtures of manure and maize (manure & maize of varying proportions)**
   iii. **Biomethane for transport (wet manure, maize whole plant, biowaste)**
   iv. **Biomethane for transport – mixtures of manure and maize (manure & maize of varying proportions)**
2. Manure bonus benefit of 45 gCO2eq/MJ in calculations of actual GHG emissions of biogas or biomethane
3. Dissagregated default values available for biogas for electricity production and for biomethane

8. Facilitating access to and operation of the grids

1. Member States shall assess the need to extend existing gas network infrastructure to facilitate the integration of gas from renewable energy sources.
2. The costs of connecting new producers of gas from renewable energy sources to the gas grids should be based on objective, transparent and non-discriminatory criteria.
3. Member States shall require DSOs and TSOs to publish the connection tariffs to connect renewable gas sources based on transparent and non-discriminatory criteria.

NEXT STEPS



Transposition by June 2021

Follow Up ("homework"): Delegated Acts, Implementing Acts, Reports etc.