Industrial biomass use

Market update and sustainability requirements

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BIOenergy EUROPE

Our Team at Bioenergy Europe

About Us

Common voice of European bioenergy since 1990

Unites **40+ national associations** and **140+ companies and academia**

EUROPEAN PELLET COUNCIL
A NETWORK OF BIOENERGY EUROPE

INTERNATIONAL BIOMASS TORREFACTION COUNCIL
A NETWORK OF BIOENERGY EUROPE

Hosting 2 **networks**

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Our Activities & Services

- EU Policy Monitoring & Influence
- Market Data
- Visibility
- Networking
- Free & Discounted event
- Quality & sustainability certifications

Our Members

*as of January 2022

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Companies

Associations

Academia

European Energy Landscape

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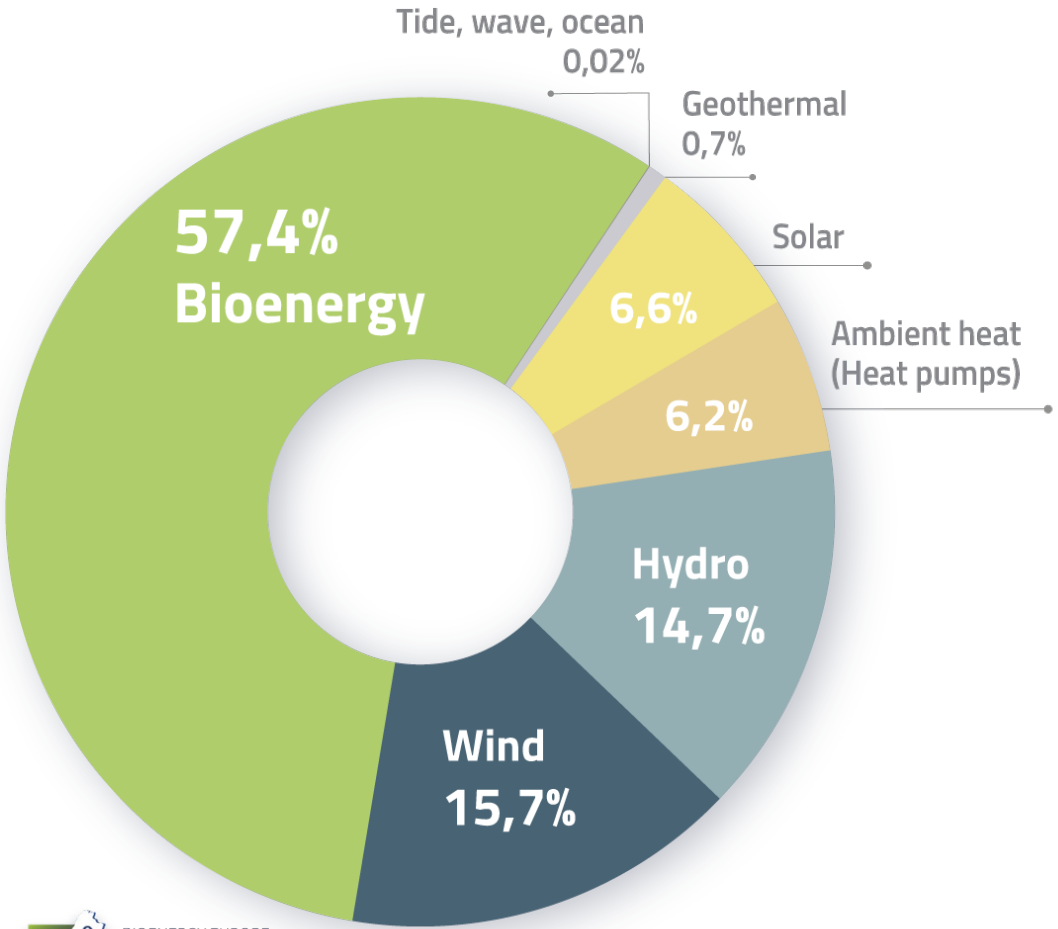
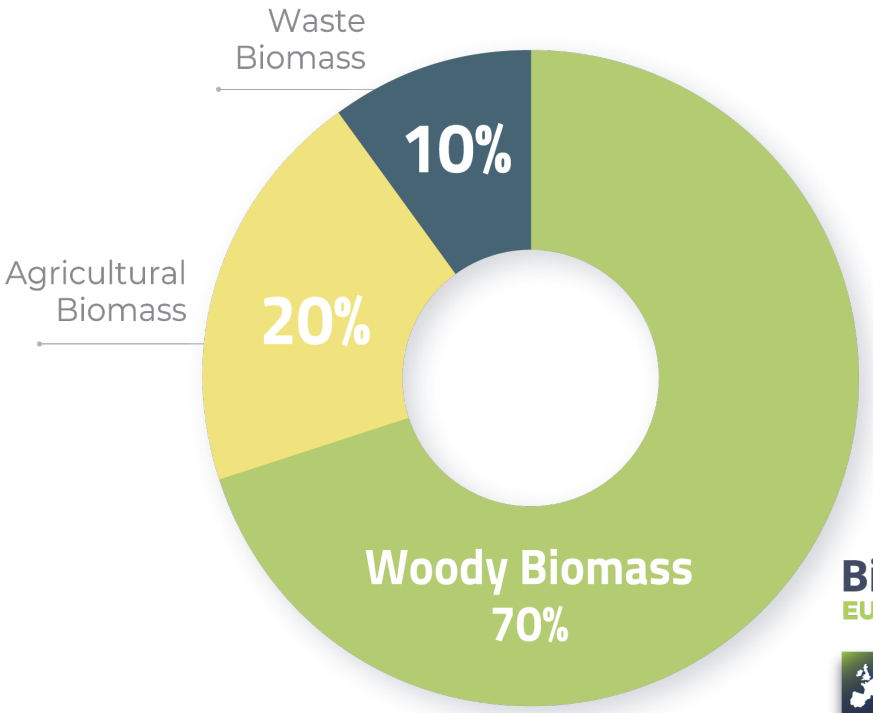
European Energy Landscape

DISTRIBUTION OF RENEWABLE FINAL ENERGY CONSUMPTION IN THE EU27 IN 2019 (%)



BIOENERGY EUROPE STATISTICAL REPORT 2021

DISTRIBUTION OF THE DIFFERENT BIOMASS FEEDSTOCK FOR ENERGY IN 2019(%)



BIOENERGY EUROPE STATISTICAL REPORT 2021

Global Pellet Market Overview

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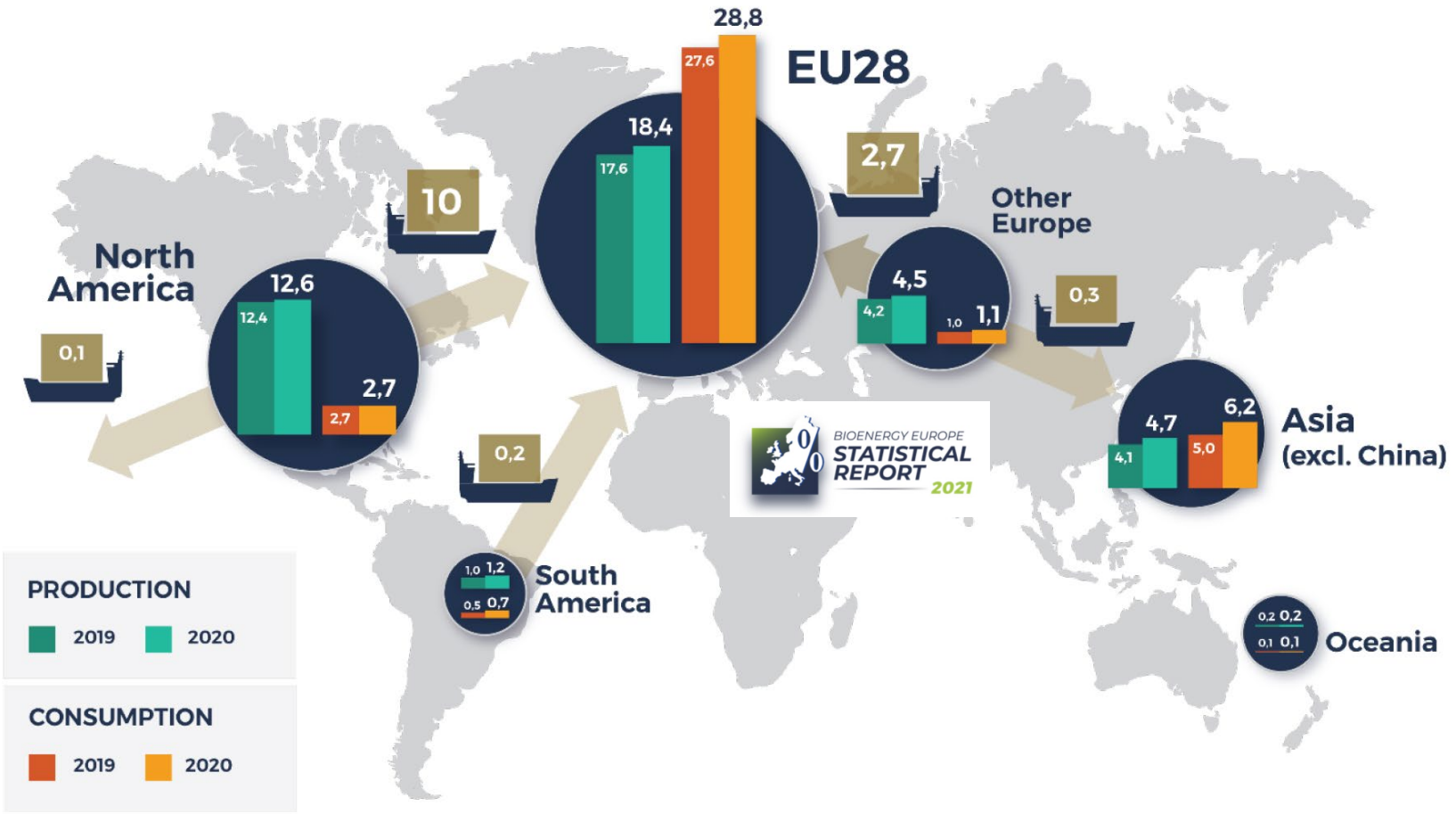
Global pellet market OVERVIEW

World pellet map and trade flow in 2020 (million tonnes)



Industrial Pellet Market
European overview

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Industrial pellet market
European OVERVIEW

GENERAL

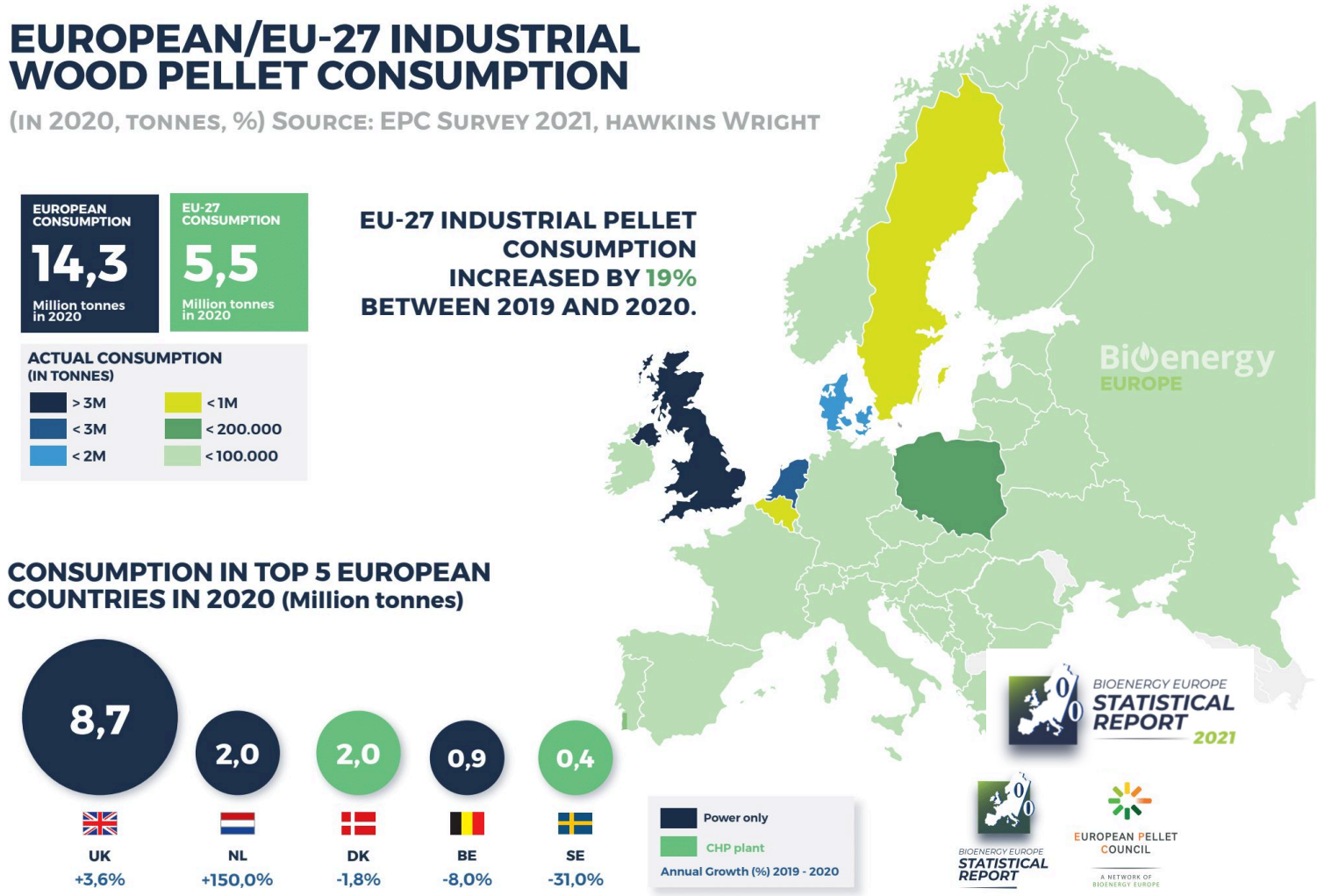
- Higher usage of pellets/biomass in many utilities due to high profitability of bioelectricity production
- High demand, utilities are anticipating with strong order

UK

- MGT Power to start soon
- Drax to show high consumption

THE NETHERLANDS

- RWE's 30% cofiring permit for Eemshaven has been approved, but demand will not exceed 1Mt/y
- Vattenfall progressing plans for 100MWth Diemen plant, has appointed Valmet as EPC contractor, subject to FID



HAWKINS WRIGHT

Industrial pellet market European OVERVIEW

INDUSTRIAL future trends

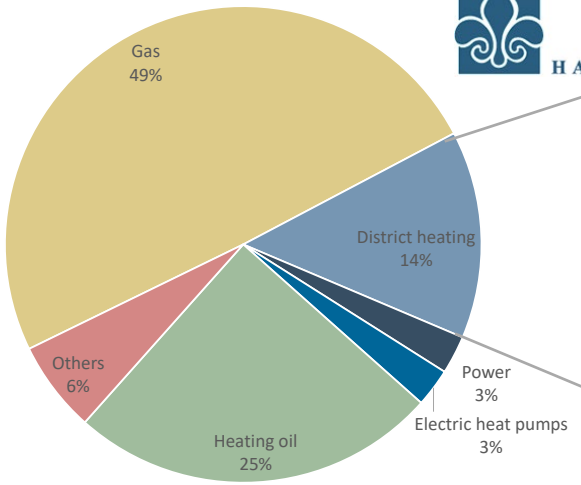
POLAND

- Coal phasing out: unclear plans

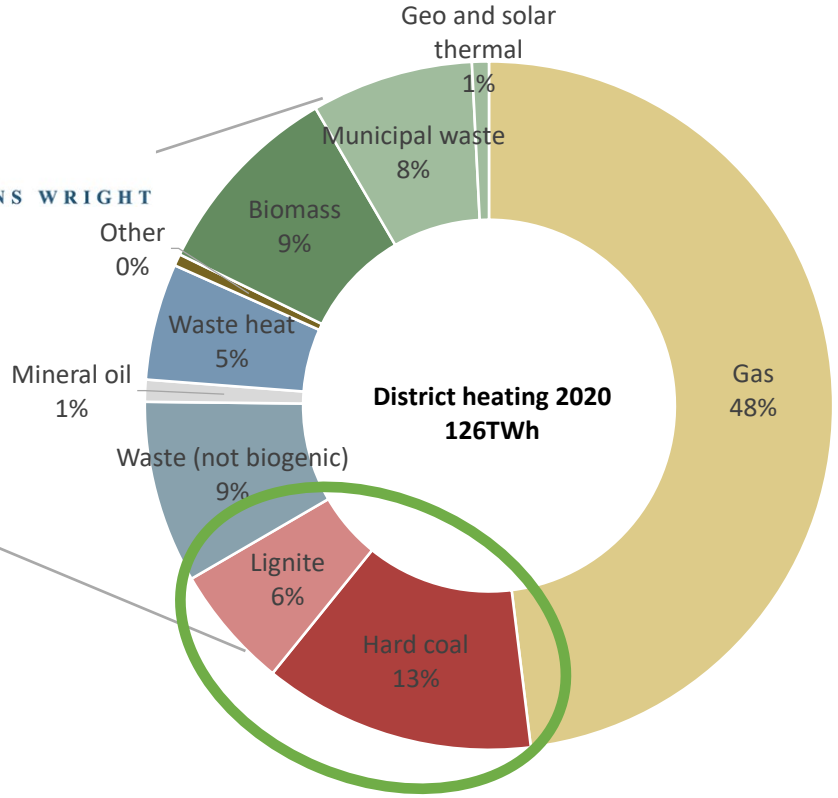
GERMANY

- Coal phasing out: anticipated to 2030 (instead of 2038)
- Biomass for electricity (conversion of coal utilities to biomass)
  => unlikely due to unsupportive policy environment
- Biomass for heat
  - German government is considering introducing the Bundesförderung für effiziente Wärmenetze (BEW).
  - BEW could be introduced by end-2021.
  - Provides funding for feasibility studies and implementation of new networks, as well as for new heat sources on existing networks i.e. a new biomass boiler.

Heating structure of German housing stock 2020



District heating generation 2020, by technology



Industrial wood chips Market European overview

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Industrial wood chips
OVERVIEW

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S1 2021

- Bark beetle intense
- Moderate pulp demand
- High sawmilling activity

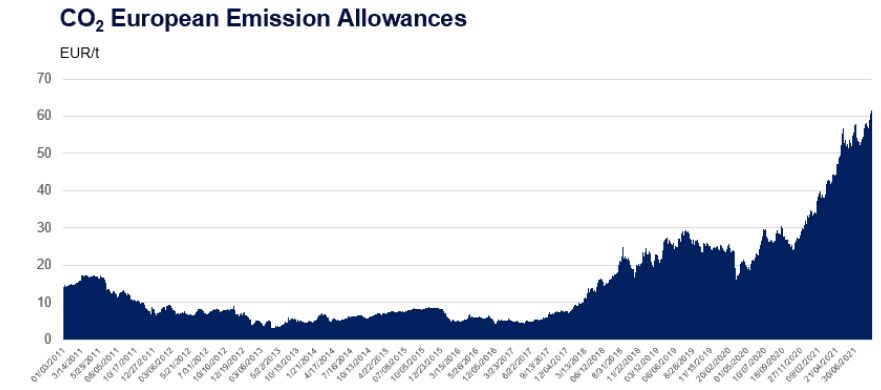
⇒ **Oversupply of wood chips**
⇒ **Depressed prices**

CLEANTEK TRADE
Your biomass partner

From Sept-October 2021

- Higher usage of pellets/biomass in many utilities due to high profitability of bioelectricity production
- Bark beetle relaxing
- Strong wood product demand
- Economy recovery
- High CO_2 allowance
- Supply chain difficulties
- EU regulation constrains

⇒ **Tightening market**
⇒ **Sharp price increase**



Source: Business Insider

Biomass price
European overview

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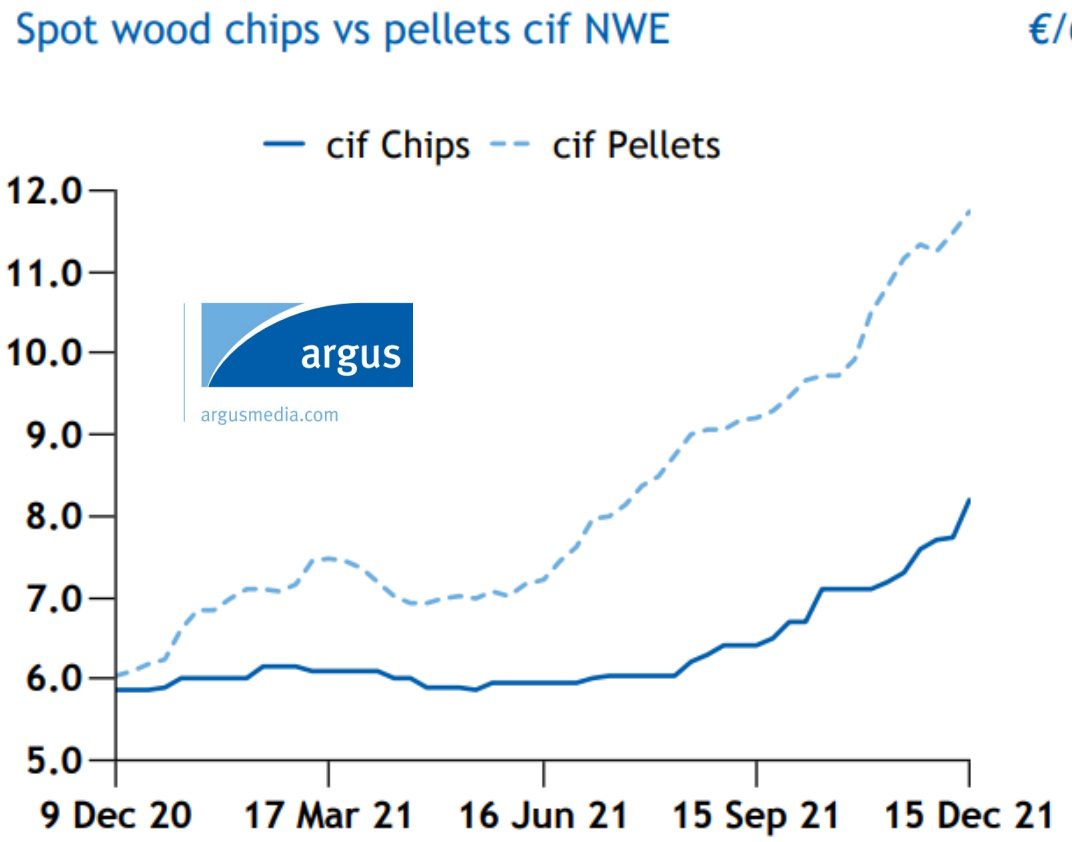
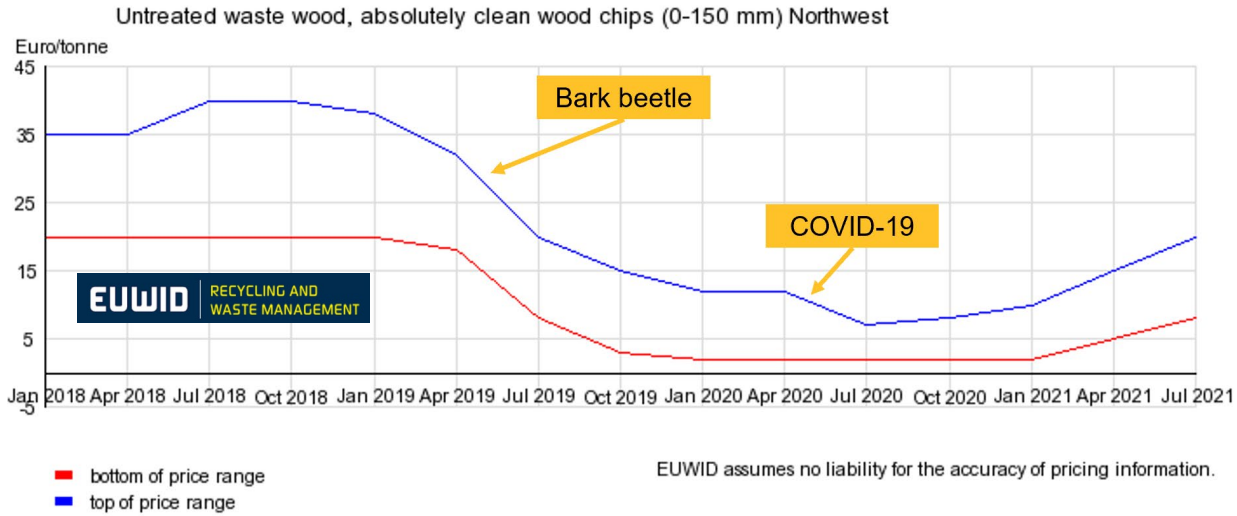
Biomass price
EUROPEAN OVERVIEW

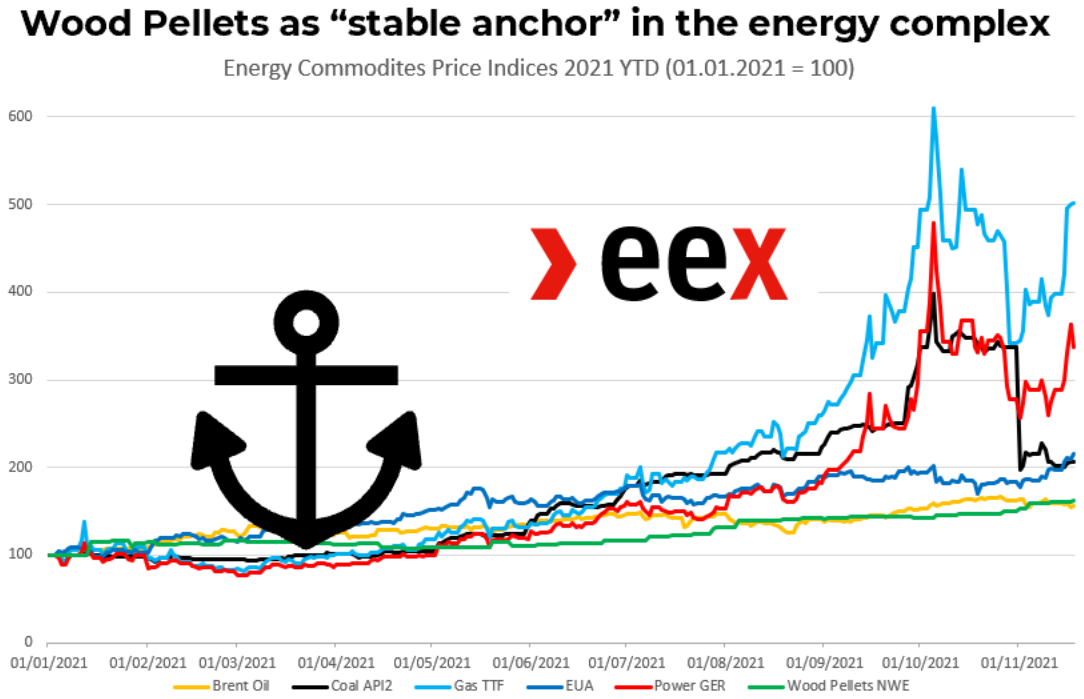
EVOLUTION OF ARGUS INDUSTRIAL INDEX



EVOLUTION OF EUWID WASTE WOOD PRICING



Biomass price vs other fuels



BIOENERGY SUSTAINABILITY POLICY

18 January 2021

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#bepartofbioenergy

1. EU Legislation – Sustainability rules for Bioenergy facilities

2. REDIII – What could be the next legislative framework after 2024?

3. Our position

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1. EU Legislation – Sustainability rules for Bioenergy plants

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Why are these criteria so important?

1. To be accounted for **RES-target** and **sectorial sub-targets**
2. To be elibigible for **public financial support**
3. **be zero-rated in ETS system**

Sustainability requirements

LULUCF requirements

GHG emissions savings requirements

EXEMPTIONS

- **Biomass fuels produced from waste and residues**: only GHG criteria and soil quality requirements for agricultural biomass apply
- **Small installations** below 20 MW for solid biomass fuels and 2 MW for gaseous biomass fuels of thermal capacity are exempted (but Member States may set lower threshold)
- **Energy efficiency criteria** apply only to large-scale bioelectricity installations (above 50 MW)

How to demonstrate compliance?

To demonstrate compliance economic operators submit **third-party audited** information:

National schemes set up by Member States

Voluntary (market-based) schemes that have been recognised by the EC

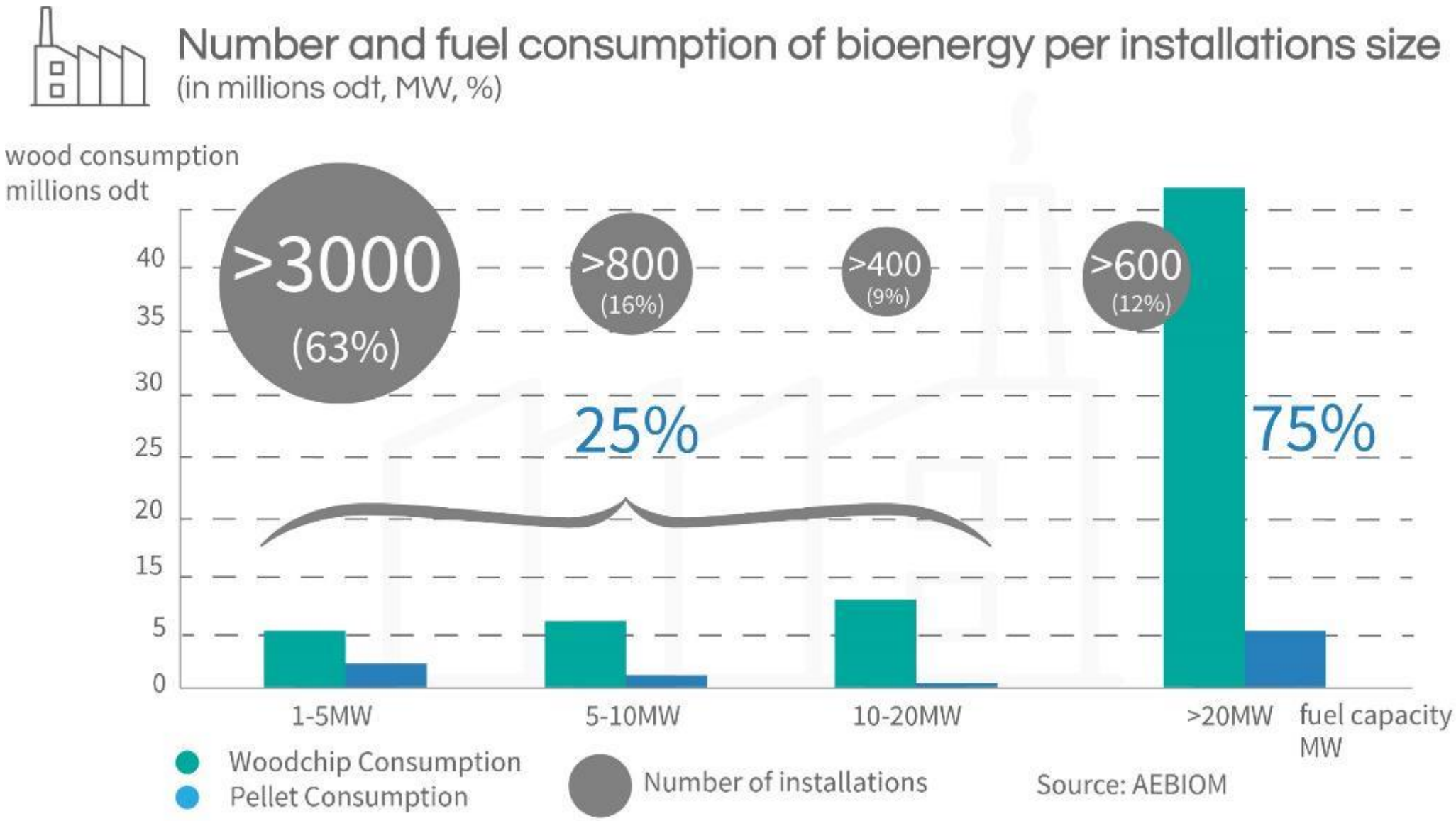
Risk-based approach has been taken for forest biomass:

- ✓ Compliance can be demonstrated either on (sub)national level (level A – in case of low risk countries)
- ✓ or at Forest sourcing area level (level B)

For every criterion, if level A evidence is not available, level B evidence is required

Both Level A as well as Level B compliance are to be verified by third party (no list of high/low risk countries to be maintained by the EC)

How to justify the 20 MW exemption?



END USE CRITERIA

Greenhouse Gas Emissions Saving Criteria

To be accounted towards the Union target and be eligible for financial support, GHG emissions savings from biomass has to fulfil the following criteria

- ✓ **≥ 50% in transport** (in installation in operation before 5 October 2015)
- ✓ **≥ 60% in transport** (in installation starting from 5 October 2015)
- ✓ **≥ 65% in transport** (in installation starting after 1 January 2021)
- ✓ **≥ 70% for electricity, heating and cooling** (in installation starting after 1 January 2021)
- ✓ **≥ 80% for electricity, heating and cooling** (in installation starting after 1 January 2026)

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GHG balance – actual values

- ✓ GHG mitigation against fossil comparator
- ✓ H & E: consideration of exergy
- ✓ Allocation rules for by-products

$$E = e_{ec} + e_{l} + e_{p} + e_{td} + e_{u} - e_{sca} - e_{ccs} - e_{ccr}$$

E = Total GHG emissions from the use of the fuel

eec = emissions from the extraction or cultivation of raw materials

el = annualised emissions from carbon stock changes caused by land-use change

ep = emissions from processing

etd = emissions from transport and distribution

eu = emissions from the fuel in use

esca = emission savings from soil carbon accumulation via improved agricultural management

eccs = emission savings from CO_2 capture and geological storage

eccr = emission savings from CO_2 capture and replacement

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Specific provisions for electricity-only installations

Do not use fossil fuels *as a main fuel*

No cost-effective potential for highly efficient CHP

Size	Efficiency criteria
Below 50 MW	No additional requirements for electrical efficiency
50-100 MW	Best-available technology associated energy efficiency levels or use Biomass CCS
Above 100 MW	Electrical efficiency of 36% or applying Biomass CCS

IMPLEMENTATION TIMELINE (IAs)

Implementing Acts	Deadline
Operational Guidance on Forest Biomass Criteria, Article 29 (8) REDII	31. January 2021
Standards for voluntary schemes, Article 30 (8) REDII	30. June 2021
Recognition of Voluntary Schemes, Article 30 (3) (d) REDII	1. July 2021

Adjustment to the MRR

In Article 38 of Implementing Regulation (EU) 2018/2066, the following paragraph 6 is added:

'6. By way of derogation from paragraph 5, Member States may **consider** as **fulfilled** the **sustainability** and **greenhouse gas emissions saving criteria** referred to in that paragraph for biofuels, bioliquids and biomass fuels used for combustion from **1 January 2022 to 31 December 2022**.'

2. REDII Review - What could be the next legislative framework after 2024?

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NEW SUSTAINABILITY POLICY Proposal : Are the new criteria only about bioenergy?

No-Go areas:
Carbon-rich and Highly Biodiverse environments

Details on SFM practices

Lower exemption threshold, covering smaller plants
(5MW thermal capacity)

2027 end of subsidies for Power only fed with forest biomass installations (with exceptions)

Retroactive application of GHG emissions saving thresholds

Regulation on Cascading use of biomass one year after entry into force, to make sure high quality biomass is used for materials and buildings

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Six Changes to Ensure a Balanced and Successful Bioenergy Sustainability Framework

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Six Changes to Ensure a Balanced and Successful Bioenergy Sustainability Framework

With all this in mind, Bioenergy Europe considers that there are six changes that should be made to the European Commission's proposal to guarantee its successful operationalisation and outcome.

01

Support for installations producing electricity-only from forest biomass to 2030 should be maintained. Aid stemming from support schemes established after that date should still be granted in cases where there is no commercial demand for heating, where it is necessary for the security of the energy supply, the stability of the grid, to prevent the risk of re-carbonisation, in Just Transition territories or where a plant can demonstrate it is a feasible candidate to become a BECCS project. *[Article 1(2)]*

02

When drafting their support schemes Member States should strive to **avoid any undue raw material market distortions.** While an EU determined regulation on cascading would not be the right policy tool to prevent such distortions from happening (as recognised in 2018), Member States could benefit from an updated cascading guidance document. *[Article 1(2)]*

03

The exemption threshold for biomass could be lowered from 20 to 10 MW. Lowering the threshold from 20 MW to 10 MW would certify the sustainability of a larger portion of biomass but avoids placing regulatory burdens and disproportionate cost compliance on the smallest actors with scarce administrative capacity. However, as time and digitalisation will be key to bringing down cost compliance, the exemption threshold should only be lowered to 10 MW starting in 2027. *[Article 1(18)]*

04

The establishment of no-go areas for carbon-rich and highly biodiverse environments can strengthen the biomass sustainability framework only if they can be effectively operationalised. The inclusion of these areas under the risk-based based approach in Article 29(6) would better serve this purpose. The definitions of these areas should be unambiguous and based on existing classifications existing at the international level in agreement with the definitions and mapping used in Member States. *[Article 1(18)]*

05

Forestry is, and should remain, the competence of Member States. Provisions regulating specifics of sustainable forest management should not be covered by European energy legislation, but rather in accordance with the principle of subsidiarity, be addressed by national, regional, or local authorities-including those of third countries. Minimising biodiversity and soil quality impacts are key objectives, but requirements must work for all different forest types, irrespective of where in the world the biomass originates. For this reason, definitions should be based on existing and widely accepted definitions that can be applied locally. The tools to achieve them should be detailed at the national, regional, or local level to ensure the effectiveness of policy actions. *[Article 1(18)]*

06

There should be no retroactive application of measures, including on the GHG savings criteria, to protect legal certainty and ensure businesses trust in the energy transition. For it to be successful, the EU needs a sustainable growth of bioenergy. Regulatory uncertainty will not contribute to this objective. Retroactive introduction of GHG savings criteria will lead to the closure of existing plants and the slowing down or even the possible reversal in the energy transition. *[Article 1(18)]*

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Thank You!

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