

A close-up photograph of a person's hand holding a small pile of wood chips. The hand is positioned on the left side of the frame, with fingers slightly curled. The wood chips are light brown and vary in size. The background is a large, out-of-focus pile of similar wood chips, creating a textured, golden-brown backdrop. The lighting is bright, suggesting an outdoor setting.

German waste wood market

Simon Obert, Bundesverband der Altholzaufbereiter und -verwerter e.V.

Stockholm, 12.09.2019

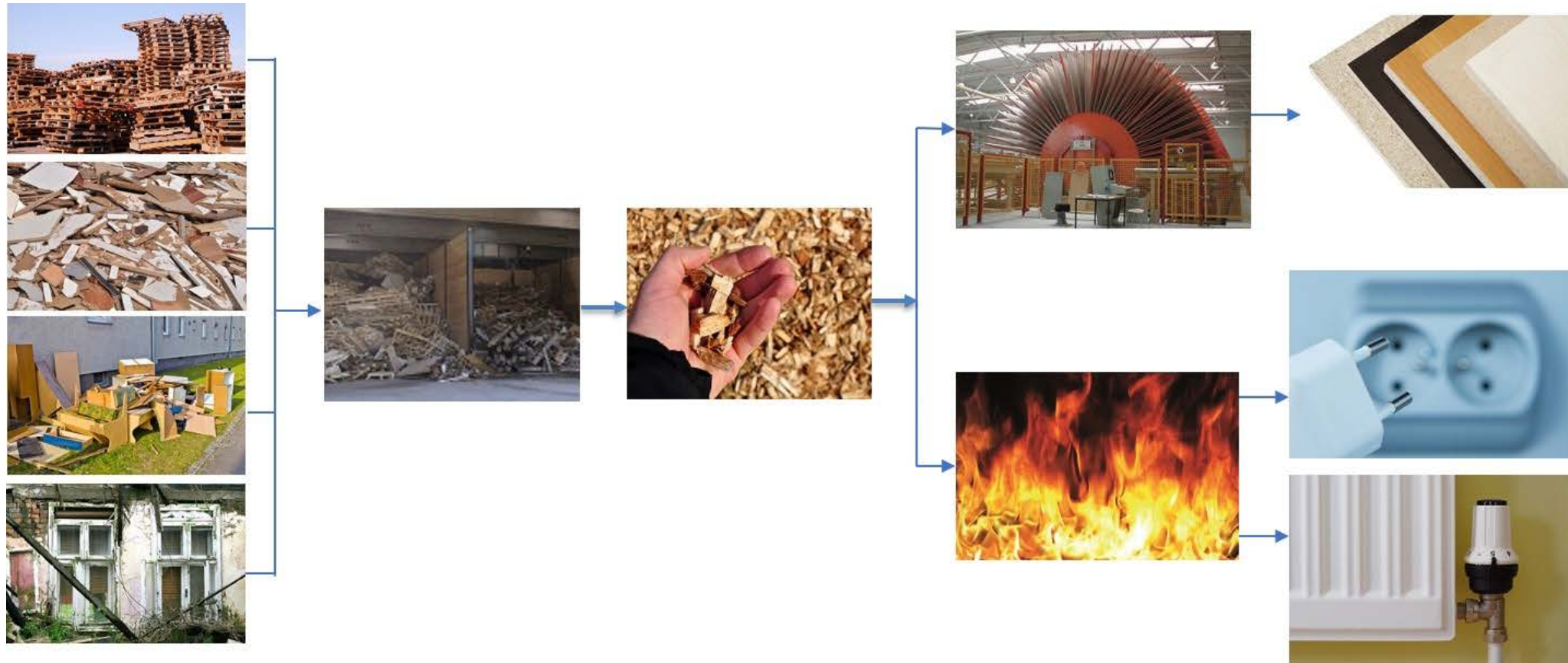
Waste wood in Germany

1 | Agenda

1. BAV – German Waste Wood Association
2. Fundamentals of the waste wood industry
3. „Energiewende“
4. Challenges of the waste wood power plants
5. Market Integration Model

Waste wood in Germany

2 | Usage of waste wood

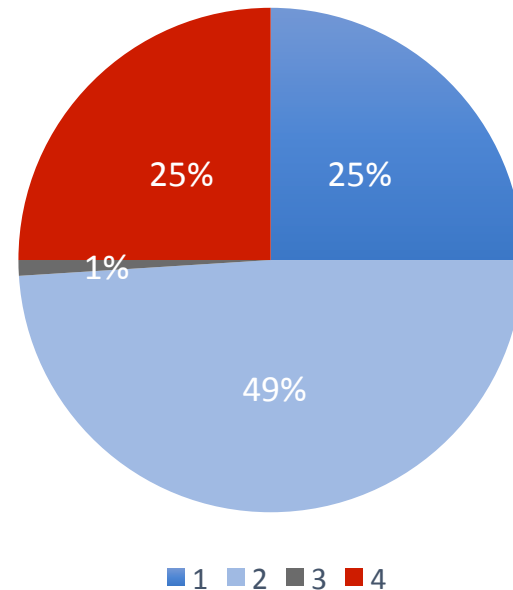


Waste wood in Germany

2 | Waste wood categories

- The Waste Wood Ordinance (Altholzverordnung) is the legal frame.
- In Germany, according to the Ordinance, waste wood is categorized into four categories:

- A I 25%
- A II 49%
- A III 01%
- A IV 25%



Category	Description	Applications
A I	Untreated or only mechanical treated wood	Chips and Shavings to produce wood-based materials, synthesis gas and activated carbon production (possible energy)
A II	Glued or painted wood (No halogen-organic compounds or preservatives)	Chips and Shavings to produce wood-based materials, synthesis gas and activated carbon production (possible energy)
A III	Wood containing halogen-organic compounds; no preservatives	It can be used as material if the varnishes and coatings are removed
A IV	Contaminated Wood, including halogen-organic compounds No PCB	Energy use in large combustion facilities
Polychlorinated biphenyls (PCB)	PCB treated wood	Non-hazardous disposal

Waste wood in Germany

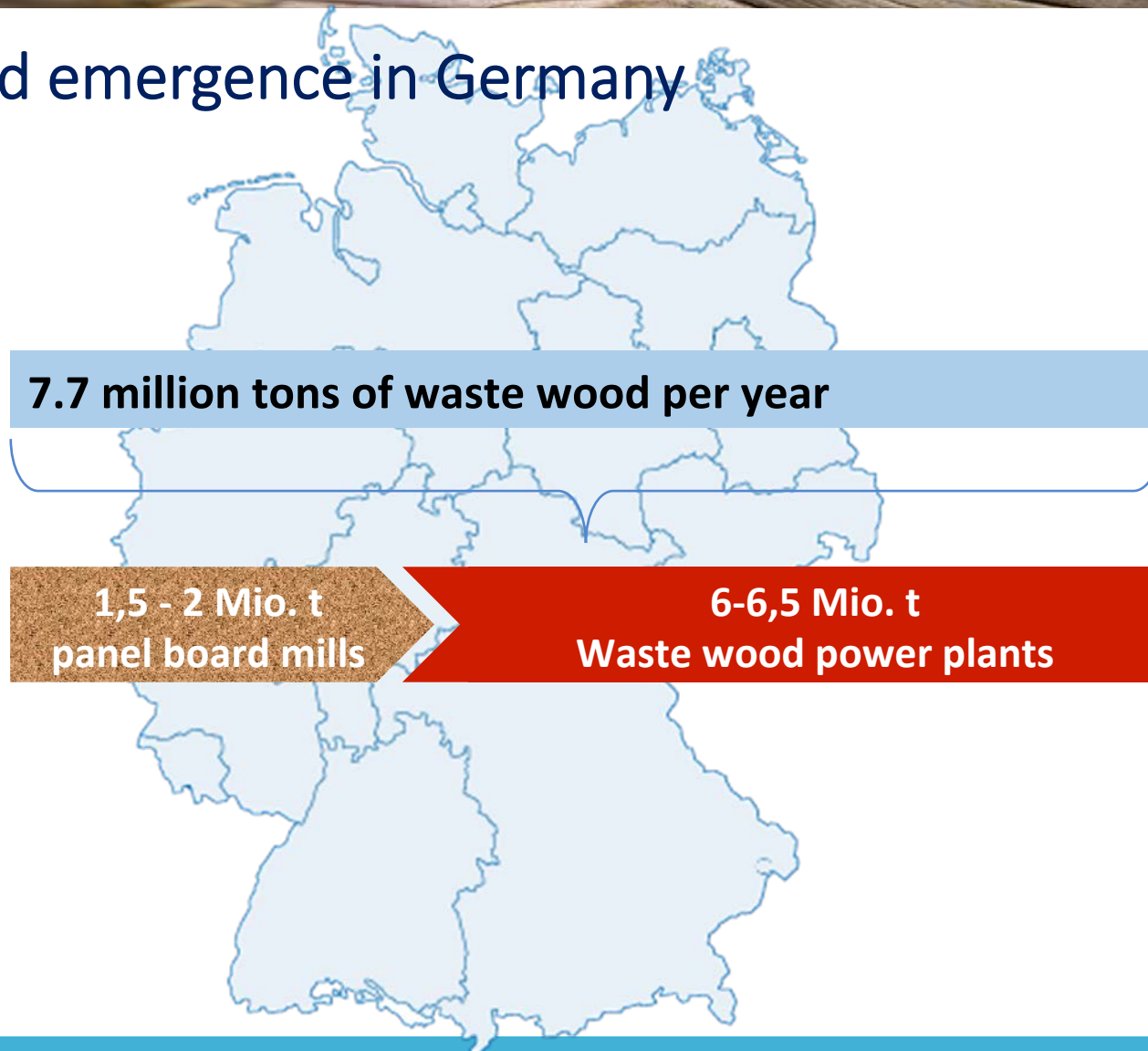
2 | Landfilling ban



Since 2005 - landfilling ban for waste wood in Germany

Waste wood in Germany

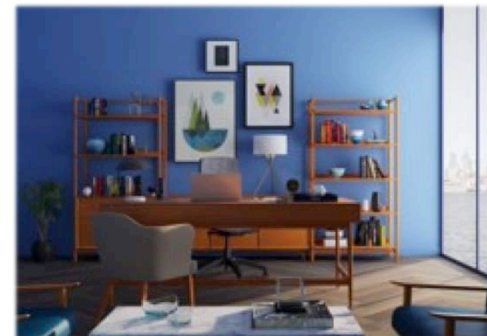
2 | Waste wood emergence in Germany



Waste wood in Germany

2 | Wood panel industry

- 13 chipboard factories
- About 1.5 million tons of waste wood are used annually → about 20 -25 percent of the German waste wood volume.
- The average use of waste wood in the production of chipboard in Germany is 30 - 35 percent on average.
- The production has levelled off at a stable level of approx. 6 million m³ per year in recent years.



Waste wood in Germany

2 | Waste wood power plants

- 72 waste wood power plants
- 68 plants are subsidized (EEG - average 9.2 cent/kwh subsidy)
- Around 6.5 million t of waste wood are utilized → important pillar of waste wood recovery
- 50 (17. BImSchV), 18 (4. BImSchV), rest unknown
- 58 CHP plants (81%) (combined heat and power)



Waste wood in Germany

3 | Energiewende

- With the energy turnaround “Energiewende” Germany plans a fundamental change in its energy supply.
- A move away from nuclear and fossil fuels towards renewable energies.

Waste wood in Germany

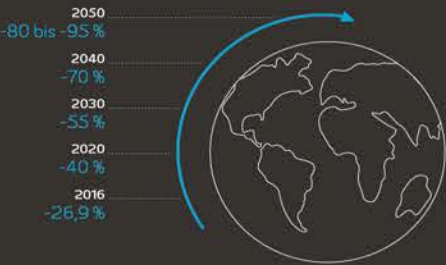
3 | Energiewende



Treibhausgasemissionen

95%*

weniger Treibhausgasemissionen bis 2050



Effizienz

50%*

Primärenergieverbrauch bis 2050



-25%*

Brutto-Stromverbrauch bis 2050



* Alle Zahlen sind Vergleichswert gegenüber 1990
Quelle: Umweltbundesamt

* Vergleichswerte gegenüber 2008

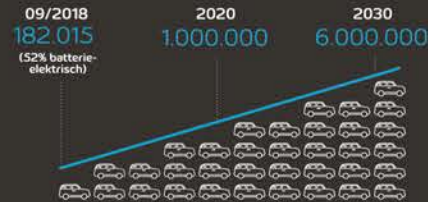


Verkehrsbereich

6.000.000

Elektrofahrzeuge

Die Anzahl der Elektrofahrzeuge soll bis 2030 auf 6 Mio. ansteigen



-40%

Endenergieverbrauch bis 2050

Der Endenergieverbrauch soll bis zum Jahr 2050 um 40 % gegenüber dem Jahr 2005 gesenkt werden.

Quelle: VDA



Gebäudebestand

-20%

Wärmebedarf bis 2020



-80%*

Primärenergiebedarf bis 2050



* Wert beschreibt die ungefähre Größenordnung



Erneuerbare Energien

80%

Mindestanteil Erneuerbarer Energien am Bruttostromverbrauch bis 2050



60%

Anteil Erneuerbarer Energien am Bruttoendenergieverbrauch bis 2050

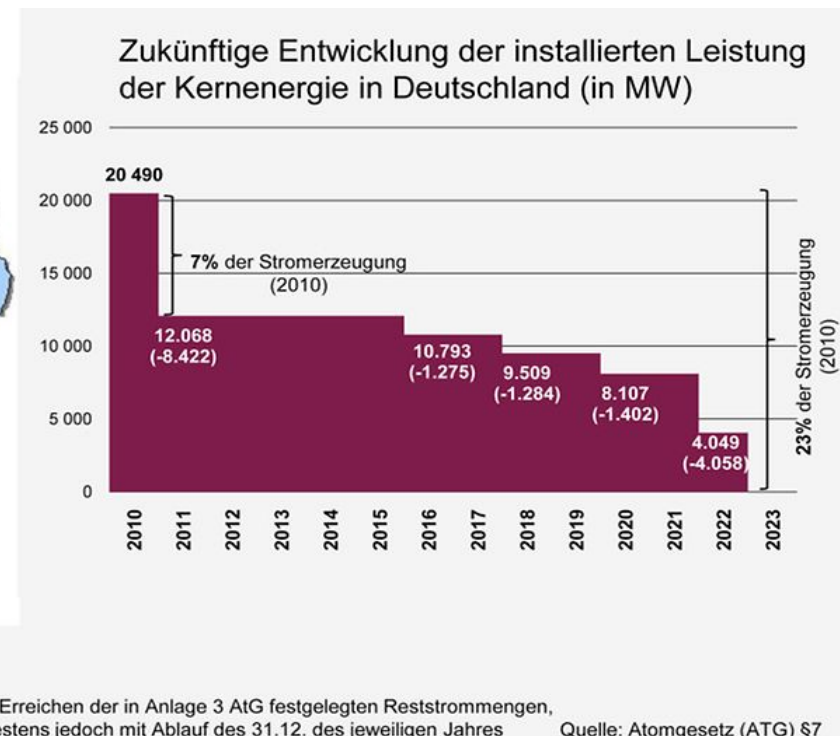
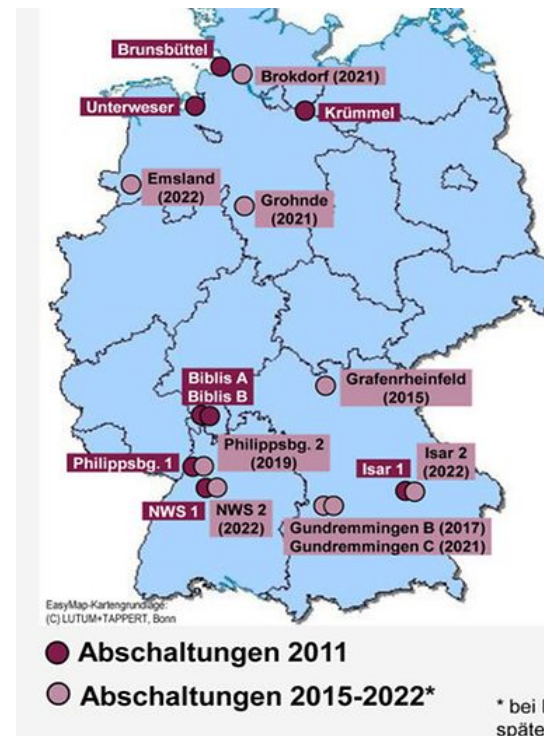


* Mindestanteil am Bruttostromverbrauch
Quelle: BMWi, Eurostat

Waste wood in Germany

3 | Phase-out of nuclear power

- In 2010 Germany had 17 nuclear reactors
- The nuclear disaster in Fukushima, Japan, in March 2011 sealed the exit of nuclear power in Germany
- In 2011 the oldest 8 reactors have been immediately closed
- The last nuclear plants will be offline by 2022.



Waste wood in Germany

3 | Phase-out of coal power

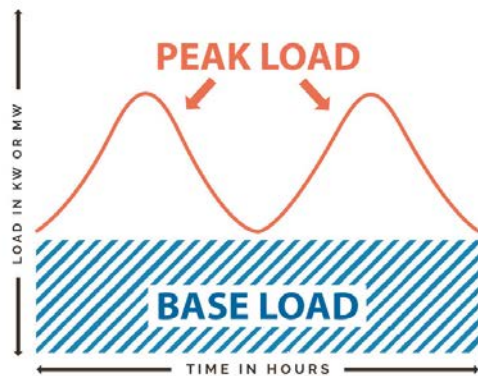
- In less than 20 years, Germany will be phasing out coal.
- The phase-out will take place in three steps
- The last coal-fired power plant will be phased out by 2038 at the latest, and more likely by 2035.

Nettoleistung der Kohlekraftwerke in Gigawatt (GW)

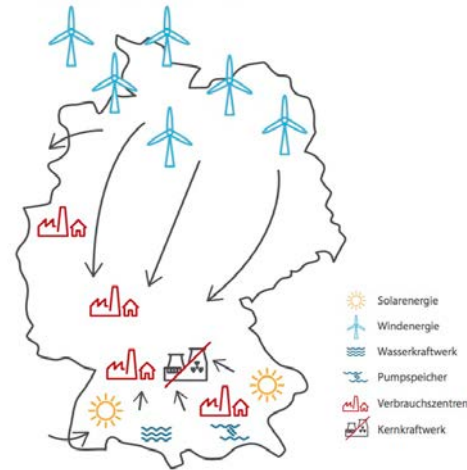


Waste wood in Germany

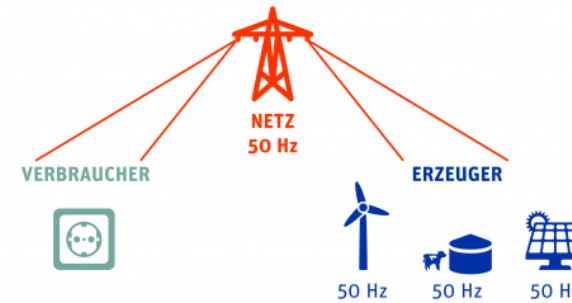
3 | Phase-out of coal power / nuclear power



Warum die Energiewende neue Stromtrassen braucht

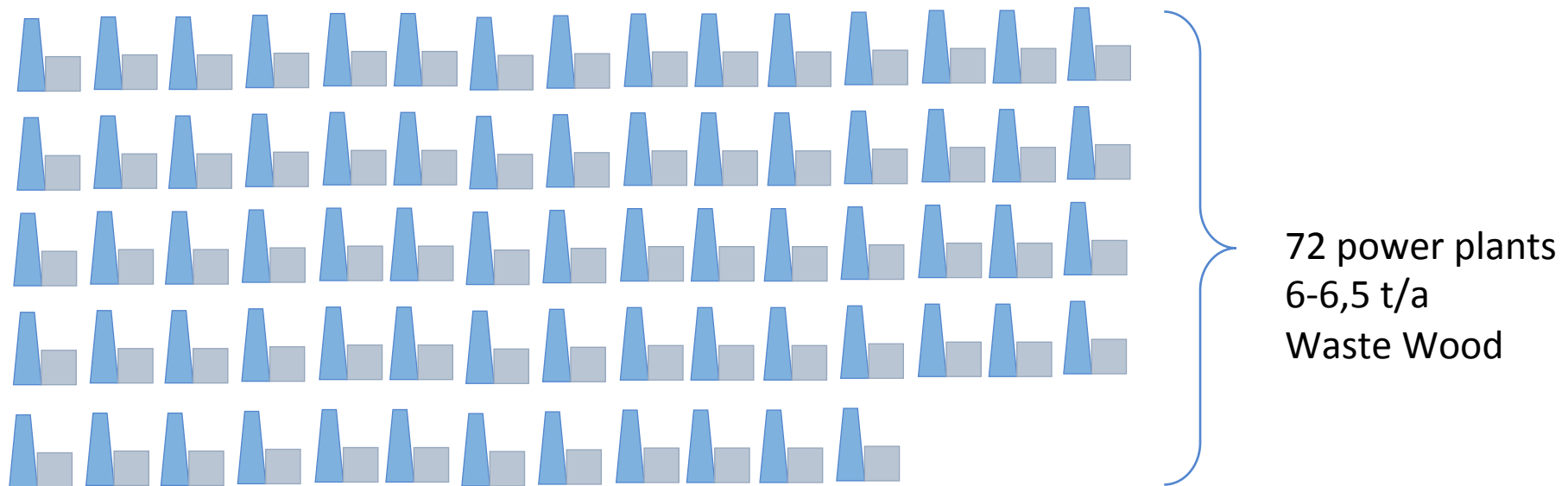


Quelle: Bürgerdialog Stromnetz



Waste wood in Germany

4 | Challenges: waste wood power plants and end of subsidy



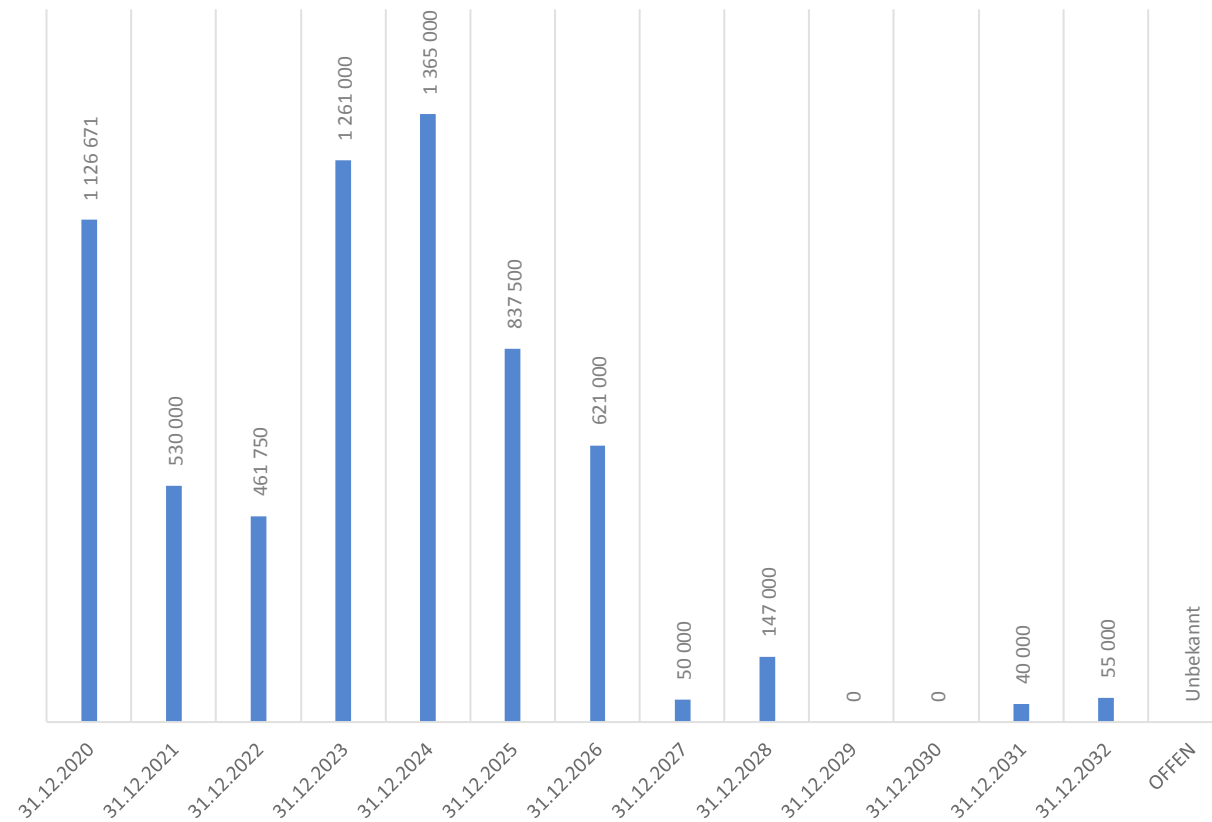
The **end of subsidy** (EEG), especially the **transitional-phase** between 2020 and 2026 could be **existentially threatening** for **waste wood power plants**

Waste wood in Germany

4 | Challenges: waste wood power plants and end of subsidy

Waste wood power plants: End of subsidies for EEG plants / quantities p.a.

- 68 plants are subsidized (Renewable Energy Sources Act (EEG))
- End of subsidy: starting from 31.12.2020 -31.12.2032

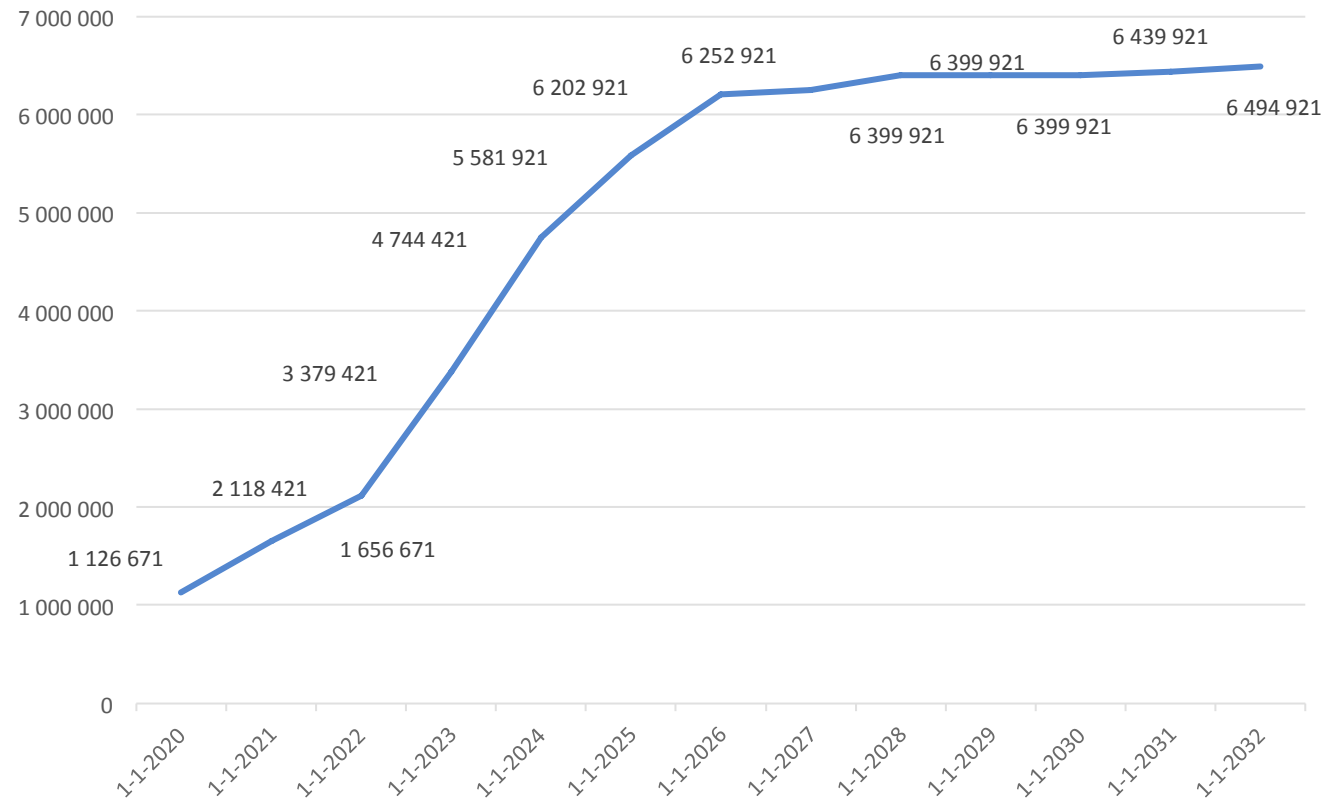


Waste wood in Germany

4 | Challenges: waste wood power plants and end of subsidy

Waste wood power plants: End of subsidies for EEG plants / cumulated quantities

- 68 plants are subsidized (Renewable Energy Sources Act (EEG))
- End of subsidy: starting from 31.12.2020 -31.12.2032



Waste wood in Germany

4 | Challenges: waste wood power plants and end of subsidy

Waste wood power plants / federal states of Germany

Total: 72 plants
EEG-subsidy: 68 plants
without subsidy: 4 plants

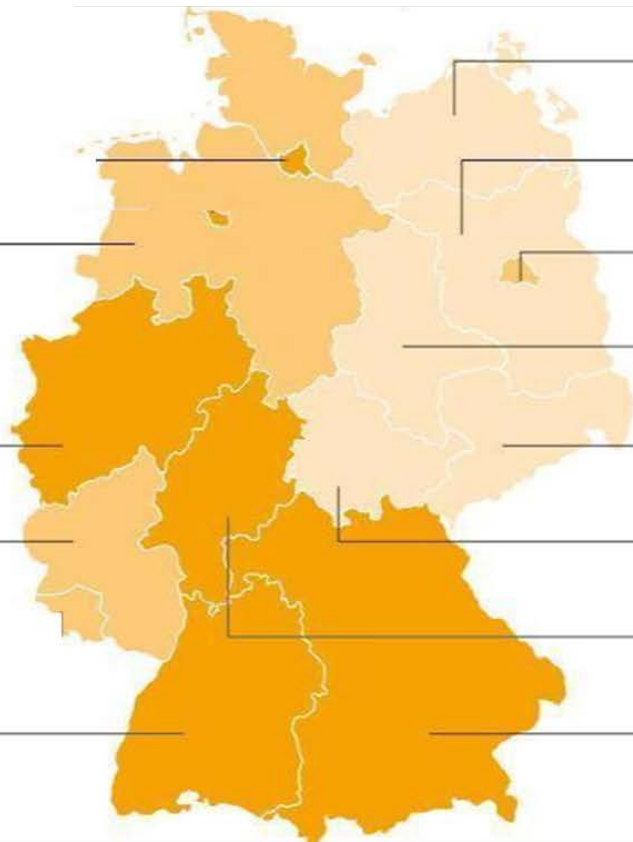
HH: total: 1 / EEG-plants: 1

NI: total: 5 / EEG-plants: 5

NW: total: 13 / EEG-plants: 13

RP: total: 6 / EEG-plants: 6

BW: total: 15 / EEG-plants: 13



MV: total: 5 / EEG-plants: 5

BB: total: 6 / EEG-plants: 6

BE: total: 1 / EEG-plants: 1

ST: total: 1 / EEG-plants: 1

SN: total: 2 / EEG-plants: 2

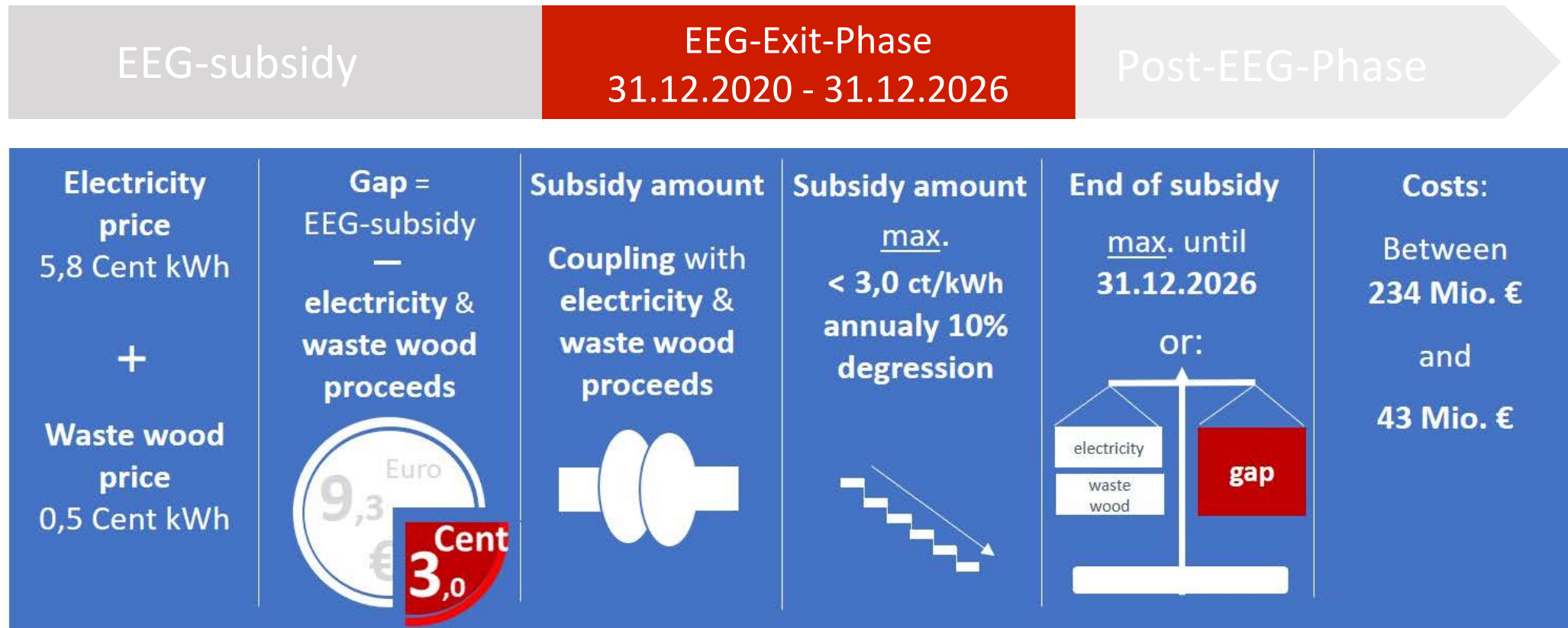
TH: total: 3 / EEG-plants: 2

HE: total: 5 / EEG-plants: 4

BY: total: 9 / EEG-plants: 9

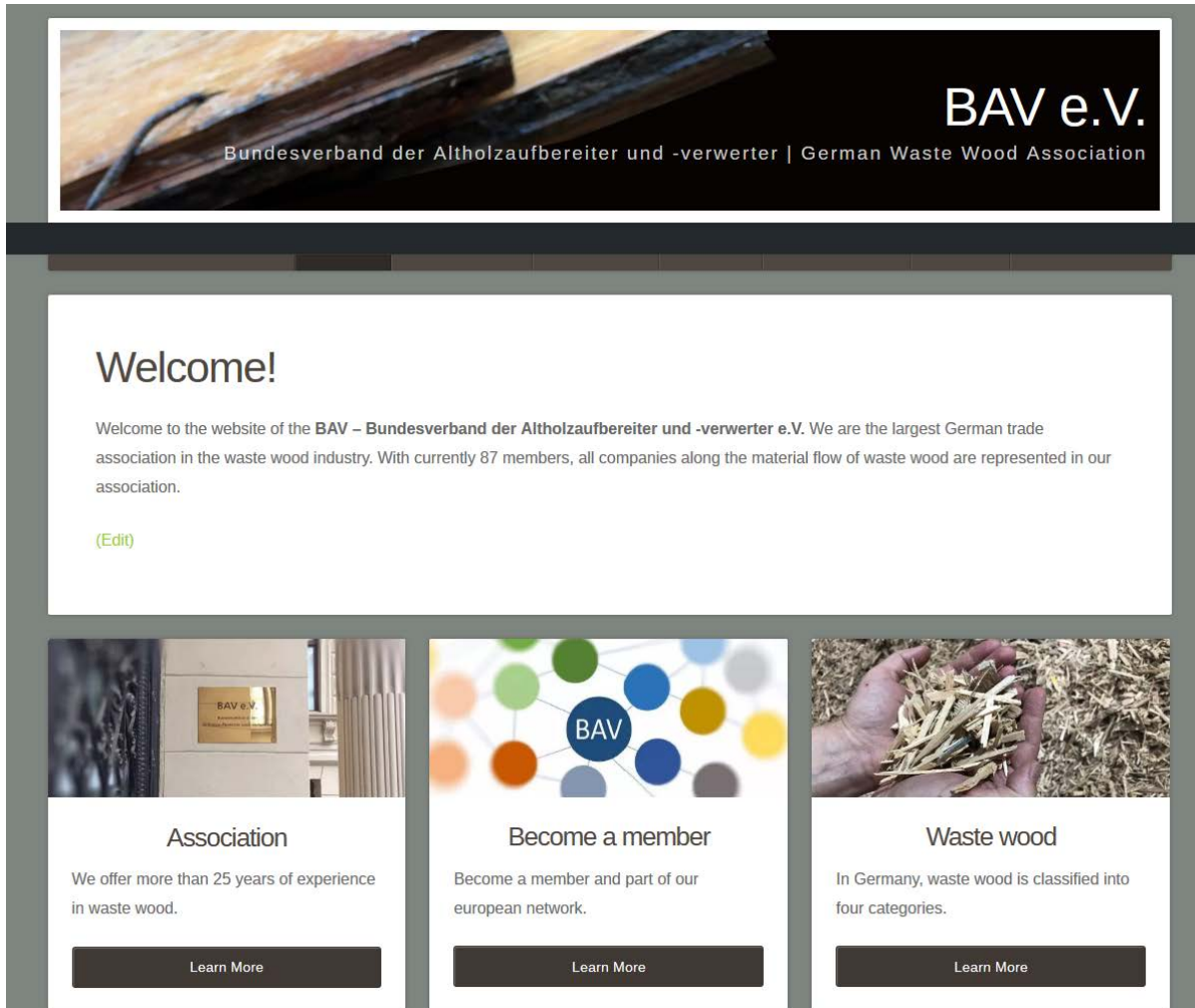
Waste wood in Germany

5 | BAV Market Integration Model



Overview of the BAV Market Integration Model

Waste wood in Germany



The screenshot shows the homepage of the BAV e.V. website. At the top, there is a header with the BAV e.V. logo and the text "Bundesverband der Altholzaufbereiter und -verwerter | German Waste Wood Association". Below the header is a large white section with the heading "Welcome!" and a paragraph of text: "Welcome to the website of the BAV – Bundesverband der Altholzaufbereiter und -verwerter e.V. We are the largest German trade association in the waste wood industry. With currently 87 members, all companies along the material flow of waste wood are represented in our association." Below this text is a green "(Edit)" link. The main content area is divided into three columns, each with a title, a short description, and a "Learn More" button. The first column is titled "Association" and describes the organization's 25+ years of experience. The second column is titled "Become a member" and describes the European network. The third column is titled "Waste wood" and describes the classification of waste wood in Germany.

BAV e.V.
Bundesverband der Altholzaufbereiter und -verwerter | German Waste Wood Association

Welcome!

Welcome to the website of the **BAV – Bundesverband der Altholzaufbereiter und -verwerter e.V.** We are the largest German trade association in the waste wood industry. With currently 87 members, all companies along the material flow of waste wood are represented in our association.

[\(Edit\)](#)

Association

We offer more than 25 years of experience in waste wood.

[Learn More](#)

Become a member

Become a member and part of our european network.

[Learn More](#)

Waste wood

In Germany, waste wood is classified into four categories.

[Learn More](#)

www.germanwastewoodassociation.com

www.altholzverband.de

Waste wood in Germany

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