Press release by ecoprog GmbH, 15 January 2025

Biomass to Power: Japan continues to lead, heat market and BECCS increasingly relevant

The global market for energy from solid biomass continues to grow, and Japan will remain the strongest growth market worldwide. In Europe, the market is driven by the increasing demand for renewable heat. Bioenergy with carbon capture and storage (BECCS) is becoming increasingly relevant. Until 2033, ecoprog expects more than 1,200 biomass power plants with a total capacity of over 18.5 GW_{el} to be operational worldwide.

ecoprog has published the 15th edition of its annual study on the use of solid biomass for energy. In 2024, the number of biomass power plants worldwide grew by around 110 plants, reaching a total capacity of more than 1.5 GW_{el}. Asia is the strongest region by far, with an increase of over 1.1 GW_{el}.

In Asia, Japan remains the market with the largest expected capacity increase. Many projects of various sizes are still being announced and realised here. China has experienced a market slump in recent years, due to reduced subsidies. Some emerging markets in Southeast Asia offer great potential.

In Europe, the market for electricity from biomass is slowing down, while the heating market is becoming increasingly relevant. The demand for renewable heat from biomass is high, both for industry and for district heating. For example, this trend can be observed in Germany. Spain remains an exception, with many larger projects of around 50 MWel that are being subsidised by biomass auctions. This makes Spain the largest European growth market for electricity from biomass over the next 10 years. In addition to the demand for heat, bioenergy with carbon capture and storage (BECCS) will become ever more important as a market driver, with large projects in the UK and Sweden.

In North America, the market outlook is uncertain. On the one hand, the Inflation Reduction Act offers incentives in the USA. Several large BECCS projects are located here as well. On the other, funding under the new government is unclear. In Central and South America, Brazil continues to dominate the market thanks to its strong sugar and ethanol industry. Other countries such as Argentina have great potential but are characterised by political uncertainties.

ecoprog's "Biomass to Power" study is the industry's leading standard work on the conversion of solid biomass into electricity. Further information on the current edition Biomass to Power 2024/2025 is available at www.ecoprog.com.

As a recognised industry insider, ecoprog supports domestic and foreign clients in implementationoriented management issues with a political, technical or economic background in environmental and energy technology. The company is active in strategy consulting as well as market and competition analyses and multi-client studies.

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