

EU Wood Pellet Imports After Russia's Invasion of Ukraine

[Robert Ireland](#), Office of Industries and Competitiveness Analysis

Russia and the United States have long been the European Union's (EU) two largest suppliers of wood pellets, a biomass product used to generate electricity or heat. After Russia's invasion of Ukraine on February 24, 2022, however, the EU has announced import bans on many goods from Russia, including wood pellets. EU imports of wood pellets from Russia then plummeted to almost zero. This briefing examines the impact of the discontinuation of EU wood pellet imports from Russia; the EU's main replacement source, the United States; and the main destination for Russian wood pellets post-EU sanctions, South Korea.

The EU, climate change, and wood pellets

The EU adopted, in April 2009, a climate change policy—the Renewable Energy Directive (RED)—which, among other things, required specific targets for the share of renewable energy in the EU's overall energy consumption. Under the RED, biomass, such as wood pellets, is considered a renewable energy, which means burning wood pellets count towards the EU's renewable energy targets. The revised Renewable Energy Directive (RED III), which took effect in November 2023, maintained the designation of biomass as a renewable energy and raised the EU's binding renewable energy share target for 2030.

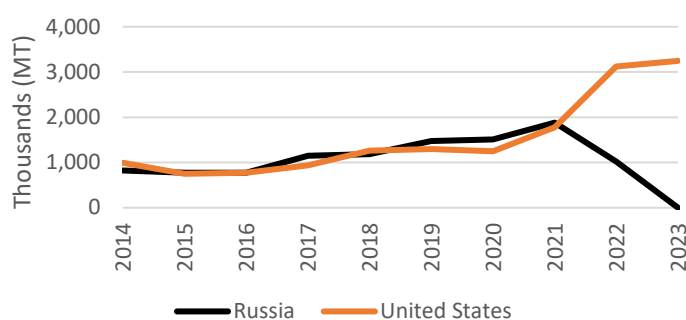
EU wood pellet import demand

EU wood pellet combustion has grown steadily since the adoption of the RED. This trend has continued recently: EU consumption of wood pellets increased 56.9 percent from 15,808 thousand metric tons (TMT) in 2016 to a projected 24,800 TMT in 2022, according to USDA analysis. Several EU members produce a large amount of wood pellets (especially Germany and the Baltic states) for domestic usage and intra-EU trade. The total, however, is insufficient to meet demand, especially that of Denmark, the Netherlands, and Belgium. Several EU members have thus imported a large amount of wood pellets from outside the EU, especially from Russia and the United States.

EU wood pellet sanctions on Russia

Russia invaded Ukraine on February 24, 2022, and the war is ongoing. The EU, in response, adopted a series of “restrictive measures” (sanctions) packages. The fifth sanctions package, adopted on April 8, 2022, banned imports of wood products, including wood pellets, from Russia (and its ally, Belarus), with full effect by July 10, 2022.¹ Legal imports from Russia then largely ceased.² EU imports of wood pellets from Russia dropped 45.7 percent in 2022 from 2021 (figure 1), and in 2023, EU wood pellet imports from Russia dropped to almost zero.

Figure 1: EU wood pellet imports from Russia and the United States



Source: [S&P Global Market Intelligence](#), HS subheading 4401.31, EU import data, accessed January 18, 2024; 2023 total is author's estimate based on 11 months of data.

¹ Separately, the UK also banned wood pellet imports from Russia and Belarus, with full effect in June 2022.

² Media reports and analysis of trade data indicate there was initially a modest amount of EU wood pellet sanctions evasion—via Turkey, Kazakhstan, Kyrgyzstan, and Uzbekistan—but this appears to have been curtailed. *The views expressed solely represent the opinions and professional research of the individual author. The content of the EBOT is not meant to represent the views of the U.S. International Trade Commission, any of its individual Commissioners, or the United States government.*

U.S. wood fills the gap

The end of EU wood pellet imports from Russia required a replacement and this was mostly met by the United States. EU imports of U.S. wood pellets increased from 1,781 TMT in 2021 to 3,125 TMT in 2022—a 75.4 percent increase—and the United States became the EU’s dominant supplier. The U.S. exports are largely provided by Enviva, a company headquartered in Bethesda, Maryland and with most of its wood pellet plants in the U.S. Southeast. Enviva is the largest producer and exporter of wood pellets worldwide.

Despite its steadily increased production and export of wood pellets, Enviva is struggling financially. Analysts suggest this has occurred due to sinking spot market wood pellet pricing, enormous debt, and mounting costs of repairing damaged wood pelletizing machines. Since April 2022, Enviva’s publicly traded stock share price tumbled over 99 percent. On March 12, 2024, Enviva announced it had declared Chapter 11 bankruptcy and would attempt to restructure. Whether or not the restructuring succeeds, this may have future implications for U.S. exports—and EU imports—of wood pellets.³

Russian wood pellets now destined for South Korea

South Korean wood pellet imports have grown immensely over the last decade. In 2023, they totaled 3,727 TMT or 30 times the amount in 2012. South Korea was the world’s third largest importer of wood pellets in 2022—after the UK and Japan—and the largest per capita. The growth has occurred due to South Korea’s adoption of its Renewable Portfolio Standard in 2012, which designated biomass as a renewable energy.

With the EU and the UK no longer options, Russia sought replacement markets. Although overall global imports of Russian wood pellets plunged in 2022—and dropped even further in 2023—they still totaled over 750 TMT in 2023. Nearly all this reduced total was received by one market: South Korea



Source: [S&P Global Market Intelligence](#), HS subheading 4401.31, global import data, accessed January 18, 2024; the 2023 total for the EU, UK, and all other is the author’s estimate based on less than 12 months of data.

(figure 2). South Korea’s wood pellet imports from Russia increased by 587 TMT or 353 percent between 2021 and 2023, and Russia became South Korea’s second largest supplier after Vietnam. The vast majority of Russia’s wood pellet exports in 2023 went to South Korea; in 2021, it was just 6 percent.

Sources: Boraks, [“Australia Says Some Biomass Can’t Count as Renewable,”](#) February 13, 2023; Catanoso, [“The EU Banned Russian Wood Pellet Imports,”](#) January 24, 2023; Catanoso, [“EU Votes to Keep Woody Biomass as Renewable Energy,”](#) September 16, 2022; Enviva, [“Enviva Reports 3Q 2023 Results,”](#) November 9, 2023; European Commission, [“Ukraine: EU Agrees Fifth Package,”](#) April 8, 2022; Ireland, [“The Rise of Utility Wood Pellet Energy,”](#) May 2022; Lesprom Network, [“Russia Cannot Compensate for Stop of Exporting,”](#) December 27, 2022; Li, [“Wood Pellets Fuel New South Korea-Russia Container Service,”](#) June 11, 2023; Walker, Olgun, and Tedesco, [“Russian Wood Pellet Exporters, Turkey Likely Flouting EU Ban,”](#) January 23, 2023; Olsen, [“The ‘Hard Middle Ground’: Denmark’s Positioning,”](#) 2023; Shumway, [“Wood Pellet Production in the U.S. South,”](#) June 9, 2023; UK National Audit Office, [“The Government’s Support for Biomass,”](#) January 2024; USDA, [“Wood Pellets Annual: European Union,”](#) August 20, 2023.

³ For more information, see Stradling, [“Wood Pellet Maker Enviva Declares Bankruptcy,”](#) March 13, 2024;

Catanoso, [“Enviva, The World’s Largest Biomass,”](#) November 20, 2023.

The views expressed solely represent the opinions and professional research of the individual author. The content of the EBOT is not meant to represent the views of the U.S. International Trade Commission, any of its individual Commissioners, or the United States government.