

【NGO Joint Statement】 Co-firing of Biomass in Coal Plants or Conversion of Coal Power Plants to Dedicated Biomass Power Plants is Greenwashing -- Biomass accelerates climate change and destroys forest ecosystems

Appendices

Appendix 1. List of coal-fired facilities with biomass co-firing approved for FIT (Feed-in Tariff)

FIT ID	Company/Operator	Plant name	Location		FIT approval date	Capacity (kW)	Combustion (no. of unit)
			Prefecture	Municipality			
OZ99005D23	JERA	Hekinan Power Station	Aichi	Hekinan-shi	2017/09/29	4,100,000	SC(2)/USC(3)
OF89276C08	JERA	Hitachinaka Power Station	Ibaraki	Naka-gun	2015/05/08	2,000,000	USC(2)
N000185H42	J-POWER	Matsuura J-POWER Power Station	Nagasaki	Matsuura-shi	2013/03/06	2,000,000	SC(1)/USC(1)
O590556B07	Joban Joint Power	Nakoso Power Station	Fukushima	Iwaki-shi	2013/03/25	1,200,000	SC(2)
O943119D23	JERA	Taketoyo Power Station	Aichi	Chita-gun	2017/03/07	1,070,000	USC(1)
O999012F32	Chugoku Electric Power	Misumi Power Station	Shimane	Hamada-shi	2017/09/25	1,000,000	USC(1)
OZ99006D17	Hokuriku Electric Power	Nanao Ota Power Station	Ishikawa	Nanao-shi	2017/09/29	700,000	USC(2)
OZ99018E18	Hokuriku Electric Power	Tsuruga Power Station	Fukui	Tsuruga-shi	2017/09/29	700,000	SC(1)/USC(1)
O999008F34	J-POWER	Takehara Power Station	Hiroshima	Takehara-shi	2017/09/25	600,000	USC(1)
R001332C08	Nippon Steel	Nippon Steel Kachima Thermal Power Station	Ibaraki	Kashima-shi	2013/03/25	522,000	SC(1)
O999009F35	Chugoku Electric Power	Shin Onoda Power Station	Yamaguchi	Sanyo-Onoda-shi	2017/09/25	500,000	SC(1)
O999010F35					2017/09/25	500,000	SC(1)
R830728E28	J-POWER	Takasago Power Station	Hyogo	Takasago-shi	2014/03/26	500,000	Sub-C(2)
N954441H44	Nippon Steel	Nippon Steel Oita Works	Oita	Oita-shi	2014/03/31	330,000	Sub-C(1)
O776801F35	Shunan Power	Tokuyama East	Yamaguchi	Shunan-shi	2017/03/16	300,000	Sub-C(1)
R000216B07	Joban Joint Power	Nakoso Power Station	Fukushima	Iwaki-shi	2013/03/25	250,000	Sub-C(1)
Q000258F35	UBE Corporation	UBE Power Center	Yamaguchi	Ube-shi	2013/03/06	216,000	Sub-C(1)
N000245B03	Nippon Steel	Nippon Steel Kamaishi Works	Iwate	Kamaishi-shi	2013/03/25	149,000	Sub-C(1)
O687010B04	Nippon Paper Industries Ishinomaki Energy Center	Ishinomaki Hibarino Power Plant	Miyagi	Ishinomaki-shi	2015/06/24	149,000	Sub-C(1)
O754071D23	Nakayama Nagoya Kyodo Hatsuden	Nagoya Power Station	Aichi	Chita-gun	2014/03/25	149,000	Sub-C(1)
O554754A01	Kushiro Thermal Power	Kushiro Power Station	Hokkaido	Kushiro-shi	2017/03/15	112,000	Sub-C(1)
OA32915H40	Hibikinada Energy Park	Hibikinada Coal-Biomass Power Station	Fukuoka	Kitakyusyu-shi	2015/03/31	112,000	Sub-C(1)
OA35859H40	Hibikinada Thermal Power Plant	Hibikinada Thermal Power Station	Fukuoka	Kitakyusyu-shi	2015/04/27	112,000	Sub-C(1)
OF27616C08	Kamisu Power	Kamisu Power Station	Ibaraki	Kamisu-shi	2015/01/07	112,000	Sub-C(1)
O674624B07	Soma Energy Park	Soma Coal-Biomass Power Plant	Fukushima	Souma-shi	2015/03/31	112,000	Sub-C(1)
O774864F35	Air Water & Energia Power Yamaguchi	Hofu Biomass-Coal Mixed Power Plant	Yamaguchi	Hofu-shi	2017/02/28	112,000	Sub-C(1)
O775527F34	Kaita Biomass Power	Kaita Power Station	Hiroshima	Aki-gun	2017/02/28	112,000	Sub-C(1)
O754072D23	Nakayama Nagoya Kyodo Hatsuden	Nagoya No.2 Power Station	Aichi	Chita-gun	2014/03/25	110,000	Sub-C(1)
Q000521E28	Sumitomo Osaka Cement	Ako Factory	Hyogo	Ako-shi	2013/03/11	102,500	Sub-C(1)
4526370A01	Nippon Paper	Kushiro Mill	Hokkaido	Kushiro-shi	2013/08/13	88,000	Sub-C(1)
O628817F35	Tokuyama	Central Power Station, No. 7 Facility	Yamaguchi	Syunan-chi	2013/03/06	78,000	Sub-C(1)
Q000254G39	Sumitomo Osaka Cement	Kochi Mill	Kochi	Susaki-shi	2013/03/11	61,500	Sub-C(1)
Q000253G39					2013/03/11	61,000	Sub-C(1)
Q000213F35	UBE Corporation	Isa Cement Factory	Yamaguchi	Mine-shi	2013/03/21	57,150	Sub-C(1)
R000393H45	Asahi Kasei NS Energy	Nobeoka Power Station	Miyazaki	Nobeoka-shi	2013/03/11	50,000	Sub-C(1)
N000406F34	MCM Energy Service	Ushina Power Station	Hiroshima	Hiroshima-shi	2013/02/25	49,800	Sub-C(2)
Q000054C11	Taiheiyō Cement	Saitama Plant	Saitama	Hidaka-shi	2013/01/31	49,500	Sub-C(1)
N963063E18	Rengo	Kanazu Mill	Fukui	Awara-shi	2017/03/17	40,530	Sub-C(2)
R774443F35	Hohu Energy Service		Yamaguchi	Fohu-shi	2017/03/16	36,000	Sub-C(1)
Q632653F35	Nippon Paper	Iwakuni Mill	Yamaguchi	Iwakuni-shi	2013/03/25	35,000	Sub-C(1)

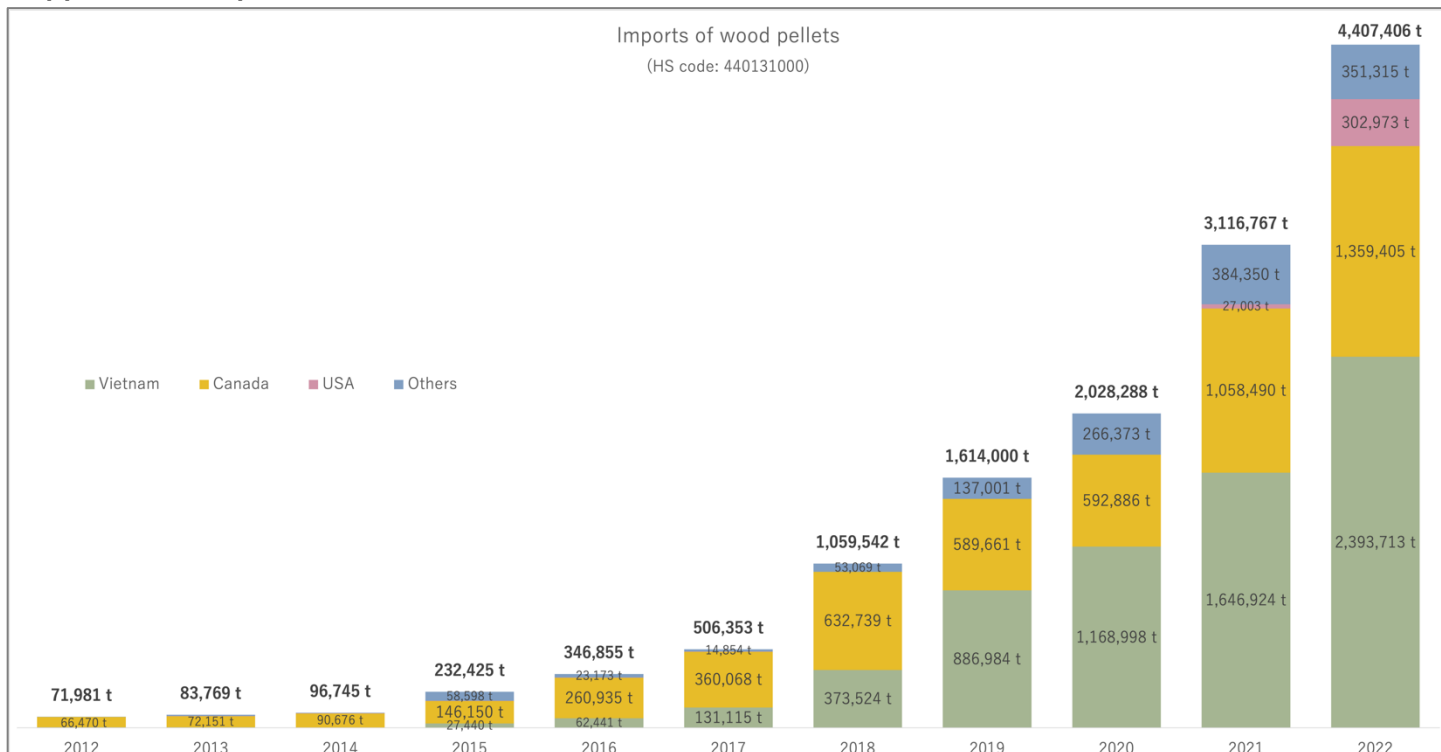
Created by FoE Japan based on the website of the Agency for Natural Resources and Energy (as of 26 January 2022) and the database of Japan Beyond Coal

*USC= ultra-supercritical, SC= supercritical, Sub-C= subcritical and refer to the temperature/pressure the plants are operated at indicating plant efficiency. The 35 power plants designated as “inefficient” (Sub-C or SC) are shown in red.

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Appendix 2. Imported Wood Pellets from 2012 to 2022



Created by FoE Japan, based on the Trade Statistics of Japan

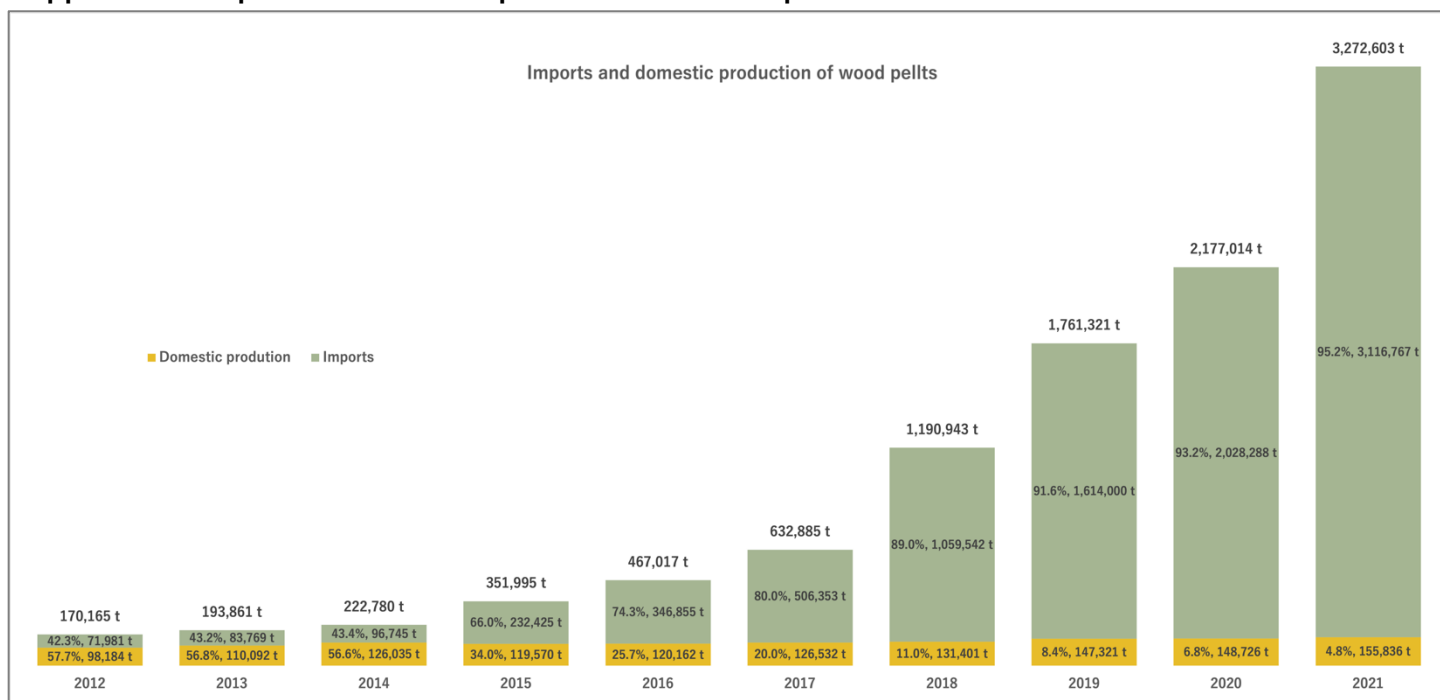
Imports of wood pellets increased 61-fold from 71,981 tons in 2012 to 4,407,406 tons in 2022, when the FIT subsidy system was introduced. In 2022, Japan mainly imported pellets from Vietnam with 2,393,713 tons, Canada with 1,359,405 tons, and the United States with 302,973 tons.

Source: The Ministry of Finance, Trade Statistics of Japan, General Trade Statistics, Commodity by Country (HS code 440131000)

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Appendix 3. Imports vs domestic production of wood pellets from 2012 to 2021



Created by FoE Japan, based on the Trade Statistics and the Survey of Production Statistics on Special Forest Products

Imports of wood pellets in 2021 totaled 3,116,767 tons, while domestic production totaled 155,836 tons. Domestic production of wood pellets has been showing an upward trend since 2012, when the FIT scheme was implemented, and increased nearly 60,000 tons in the nine years to 2021 from 98,184 tons. Imports, on the other hand, have increased about 43-fold from 71,981 tons in 2012. Therefore, the self-efficiency ratio of wood pellets, which was 57.7% in 2012, has dropped to 4.8% in 2021.

Note: The above figure compares the amount of wood pellets imported to that produced domestically, so does not indicate the self-efficiency ratio for all woody biomass fuels. The primary woody biomass fuel produced in Japan is wood chips, and according to the ‘Wood Statistics Survey’ by the Ministry of Agriculture, Forestry and Fisheries (MAFF), the amount of wood chips produced in Japan in 2021 was 6,070,000 tons.

On the other hand, according to the Ministry of Agriculture, Forestry and Fisheries of Japan’s ‘Survey on Woody Biomass Energy Use Trends,’ in 2021 10,693,197 tons of wood chips and 1,809,690 tons of wood

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pellets were among the woody biomass used for energy (a combination of boilers and power plants).

This is one of the problems that there is no centralized system to provide specific information regarding fuels used for biomass power generation.

Sources:

- Imports of wood pellets: The Ministry of Finance, Trade Statistics of Japan, General Trade Statistics, Commodity by Country (HS Code 440131000)
- Domestic production of wood pellets, The Ministry of Agriculture, Forestry and Fisheries (MAFF), Survey of Production Statistics on Special Forest Products, Wood Granular Fuel
- Domestic production of wood chips: MAFF, Wood Statistics Survey, Wood Industry Trend –Wood Chips
- Woody biomass used for energy: MAFF, Survey on Woody Biomass Energy Use Trends, Volume of Woody Biomass Used