EUROPEAN PELLET CONFERENCE

Wels, Austria

March 6, 2024

WOOD PELLET
ASSOCIATION OF CANADA

TABLE OF CONTENTS

Background 3
WPAC / Canada Objectives 3
  Activities 4
  Deliverables & Outcomes 4
Key Observations 4
Recommendations 5
Key Policy Changes Driving Uncertainty 5
Positive Narratives Create Wider Acceptance 6
Global Perspectives Provide Glimpse of Future Opportunities 7
Lead Generation 9
Sharing Information with Canadian Pellet Sector 9

BACKGROUND

With more than 450 participants each year, the European Pellet Conference is the meeting place for the global pellet community. Leading international speakers present the latest trends in markets, policies, technologies and innovations – providing an important avenue for Canadian pellet producers and associations to stay on top of developments in the pellet and bioenergy world.

The 2024 European Pellet Conference—the largest annual pellet event worldwide—focused on regaining the acceptance of pellets as an important element in the clean energy transition and increasing their positive contribution to forest health and the circular economy.

The last year has been challenging for the pellets industry. Sustainability discussions at the European level and in some member states, market fluctuations, and supply chain issues were some of the topics at the conference. Participants also discussed how trust and acceptance of sustainable bioenergy can be restored through positive narratives and how pellets can be positioned as an important element of the energy transition.

Gordon Murray, executive director of the Wood Pellet Association of Canada, moderated a session with representatives from Spain, Vietnam, Austria, Turkey and China, who updated the audience on pellet trends in their respective countries.

Experts also discussed new results of R&D projects and the latest developments in the pellets and bioenergy sector: technological innovations along the value chain from pellet production, supply, and distribution to successful showcases for an accelerated energy transition.

It was clear from the conference that Europe continues to lead in the global development of the pellet and bioenergy sectors on all fronts: domestic and international, residential, commercial and industrial. The conference continues to be an important venue for the Canadian pellet sector, providing unique insights and inspiring paths forward for the pellet industry.

WPAC / CANADA OBJECTIVES

Gordon Murray, Executive Director of WPAC attended the event along with four SMEs. Key objectives included:

1. Sharing Canada’s perspectives to policymakers and regulators in the European Union (EU).
2. Building alliances with like-minded nations.
3. Promoting Canada as a reliable supplier of high quality, sustainably produced, low GHG wood pellets.

Activities

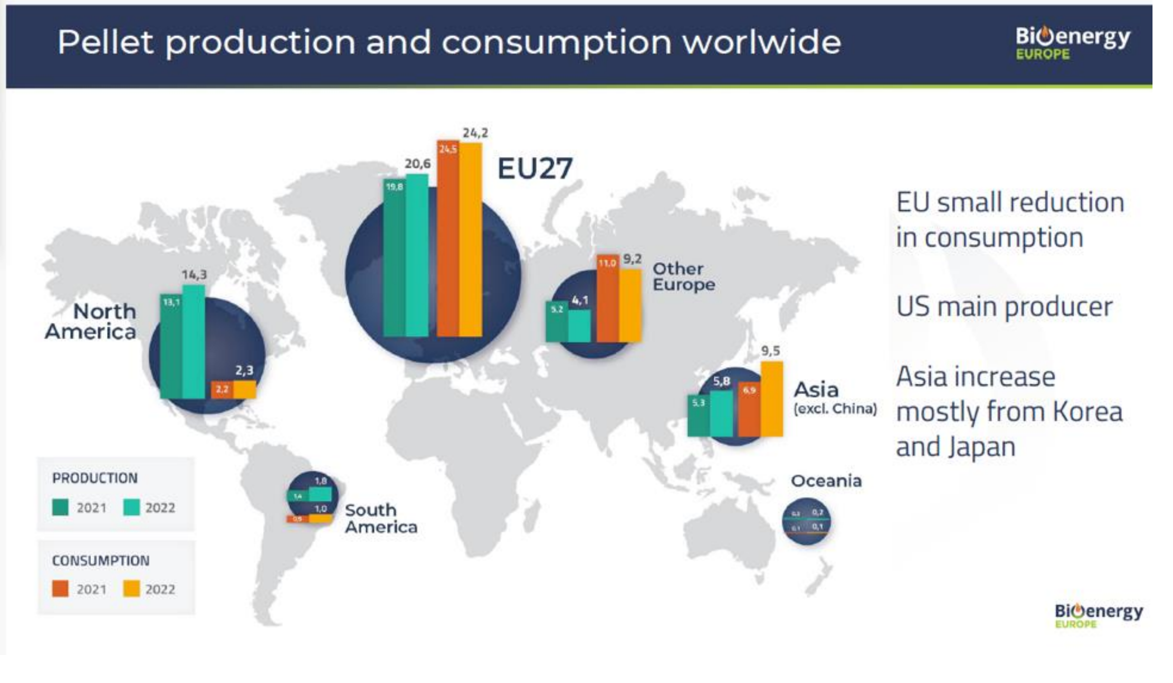
1. Networking with existing and prospective customers, and regulators.
2. Demonstrating Canadian leadership on an international stage by presenting and moderating conference sessions.

Deliverables & Outcomes

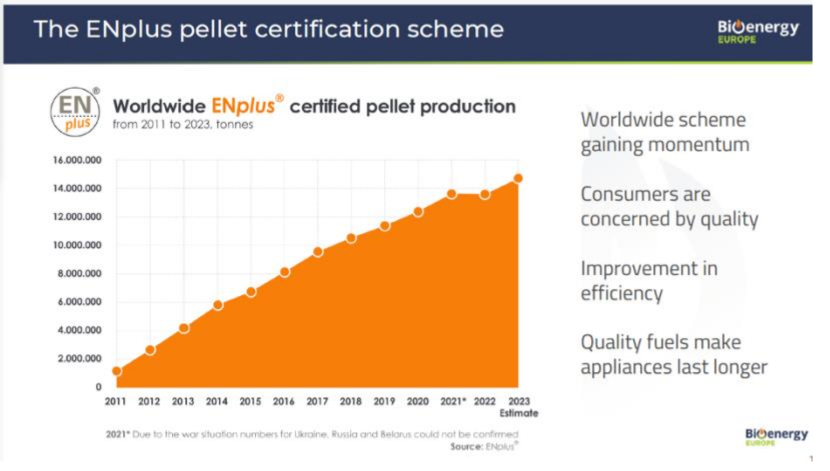
- 8 leads were generated.
- 20 potential foreign partners (agents, distributors, service contractors, etc.) were identified for further outreach.
- 4 Canadian companies expanded their international business development efforts.
- 60 foreign participants interacted with Canadian participants.
- 200 industry personnel were reached by a market intelligence/trip report.
- 0 industry personnel were trained.

KEY OBSERVATIONS

- Solid biomass—primarily wood pellets—continues to grow rapidly as a source of primary energy in Europe. It exceeded coal in 2015 and natural gas in 2017 and now trails only nuclear energy production.
- European bioenergy is 95% sourced in Europe, compared to 63% of coal and just 8% of petroleum. Bioenergy represents just 1% of European energy imports.
- Global pellet production continues to grow rapidly—now 44 million tonnes. Europe accounts for half of production, while North America and Asia, especially Vietnam, are growing rapidly.
- Europe dominates in pellet consumption, while Asia continues to grow rapidly. North American pellet consumption is tiny by world standards.



- ENplus certified pellets dominate the European heating markets. Market share continues to grow, currently accounting for 14 million tonnes per year.



- The main EU policy files are the Renewable Energy Directive (REDIII), the European Union Deforestation Regulation (EUDR) and the Ecodesign and Energy Labelling Directives. The Ecodesign and Energy Labelling Directives are important because they rank biomass combustion devices against heat pumps, and this must be done fairly.

RECOMMENDATIONS

- Continue close engagement with Bioenergy Europe (BE), as a board member, as a general member, and as a member of BE's sustainability working group to ensure that we can have input on EU policy, regulations, acts and directives that impact bioenergy use and trade. The most immediately urgent topics are REDIII and EUDR, and increasingly, the Ecodesign and Energy Labelling Directives.
- Invest in communications to advance Canada's reputation as a stable supplier of responsible, renewable and clean energy in the form of pellets among regulators, policymakers, customers and consumers.
- Continue with consistent and regular communications with allied nations.
- Monitor trends and developments in emerging producing and consuming markets, notably Korea, Vietnam and China.

KEY POLICY CHANGES DRIVING UNCERTAINTY

In addition to her market report, Irene di Padua, Policy Director at BE, provided an overview of three key policies in Europe that may have far-reaching consequences.

She sees the no ban on feedstocks in REDIII as a positive outcome but remains concerned with several other key elements in the directive, including:

- No-go areas: risk-based approach for A-level countries.
- Stricter requirements on forest management: including clear cuts and deadwood extraction.
- Ability to provide support: end of subsidies for certain feedstocks.
- 60% of bioenergy would be derived from waste & residues by 2050.

In terms of EUDR, di Padua highlighted some of the obligations that will be placed on the market and producers when it comes into compliance at the end of 2024 and when SMEs are required to be compliant in June 2025:

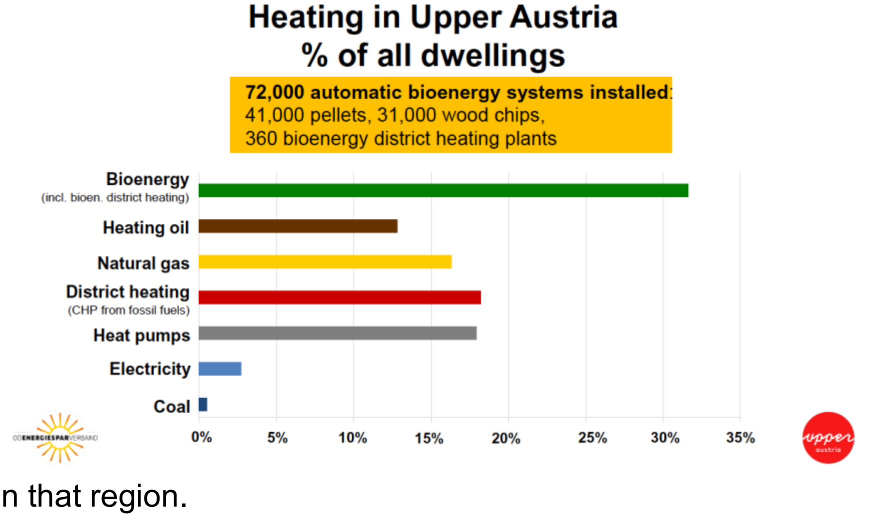
- Forest degradation and deforestation-free.
- Geolocation requirements.
- Due diligence statements.
- Progress in bioenergy is slower than required; expanding the deployment of existing technologies is needed.

One other policy of note on di Padua's radar is the Ecodesign and Energy Labelling Directives which sets emission limits for which products can be commercialized in the EU market. In addition, the energy labelling for local space heaters is a significant concern as it provides a ranking for appliances' efficiency and influences consumers' behaviours. Of note is the extension of the labelling to include electric heaters and heat pumps and a possible merger of the two. BE advocates that the labels should remain separate as financial incentives are connected to the labelling classes and provide an unfair competitive advantage.

POSITIVE NARRATIVES CREATE WIDER ACCEPTANCE

Telling the "pellet and bioenergy" story remains important in the face of climate change, evolving policy environment and competing voices. The European Pellet Conference remains an important forum for learning from other pellet and bioenergy producers and regulators.

Austria remains the preeminent voice in communicating our sector's story, with clear actions and obvious "wins." Christiane Egger, Deputy Manager of the OÖ Energiesparverband in Upper Austria and Manager of Cleantech-Cluster Energy, a network of 250 companies active in sustainable energy and the environment, once again delivered a compelling business case on the importance of communications.



In large part due to the solid work from OÖ Energiesparverband in Upper Austria, 60% of space heating in the region comes from biomass, further supported by a strong domestic equipment sector. Today, 25% of all modern small-scale bioenergy boilers installed in the EU are manufactured in that region.

Egger attributes much of this success to a strong and ongoing communications campaign, a favourable policy environment, and a comprehensive set of subsidies for replacing fossil fuel systems: 50% and 100% for low-income households. Momentum is key to any communications campaign, and 2023 was no exception in Upper Austria with activities that included:

- 10,000 face-to-face energy advice sessions.
- 10,000 telephone or digital sessions, plus more than 50,000 answered calls on the hotline.
- 20+ information campaigns, participation at tradeshows and fairs, 50-100 information talks at events.

Eggers' top recommendations for countries like Canada just embarking on the domestic expansion front:

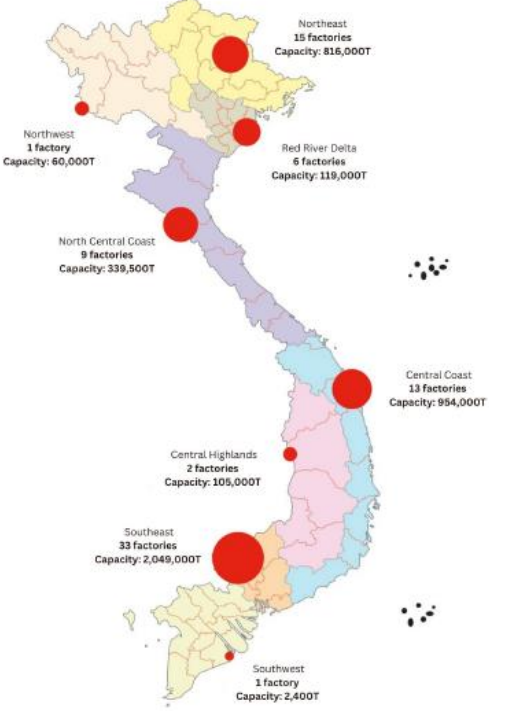
1. Understand, quantify and communicate the benefits.
2. Leverage the consumer groups most likely to be activated and have a plan on how best to reach them.
3. Identify and overcome gaps in the supply chain.
4. Advocate for policies using a "package" approach: financial incentives, effective and practical policies and strong communications.

GLOBAL PERSPECTIVES PROVIDE GLIMPSE OF FUTURE OPPORTUNITIES

Gordon Murray moderated the session "World of Pellets," which included a panel of experts from Spain, Vietnam, Austria, Turkey, China and, of course, Canada.

Kenneth Tran, CEO of Ayo Biomass, presented the future of Vietnam's wood pellet sector. Vietnam is the second largest wood pellet exporter in the world after the United States. Nearly 95% of the country's pellet production goes into two markets: Korea and Japan.

In Vietnam's northern and southern regions, 30% of the raw materials used to make pellets come from domestic plantations, with the remainder coming from wood processing residuals. In the country's central region, 90% of the raw materials are derived from domestic plantations, with the remaining 10% coming from residuals.



Source: Ayo Biomass

Tran noted that there are limitations for the expansion of Vietnam's pellet sector:

- Only 9.5% of the area for their raw materials is from certified forests.
- Small forest growers lack the support to access fair markets.
- Competition from other countries, especially Indonesia and Malaysia.
- It's difficult to enter into long-term contracts with fixed prices for raw materials.

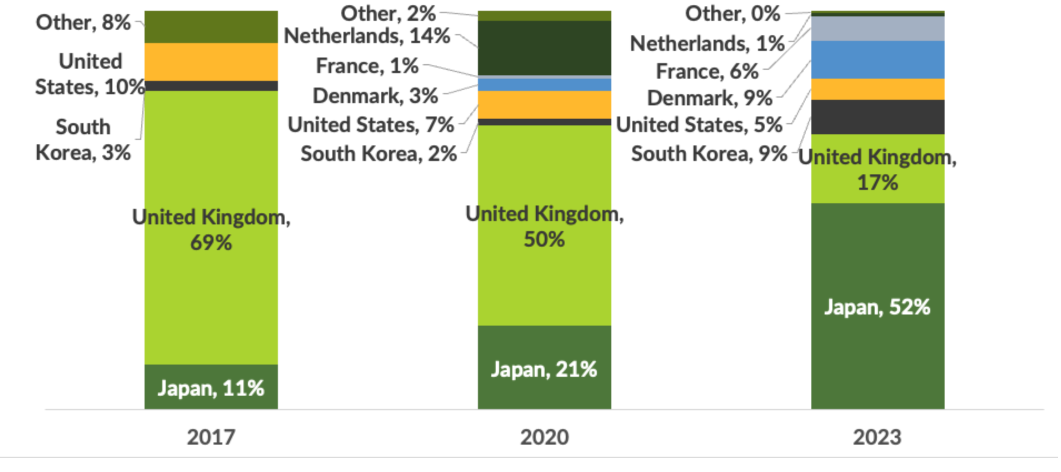
Tran remains optimistic about the future of the sector in Vietnam and sees opportunities to expand demand for wood pellets globally and domestically, much of this opportunity through the government's commitment to reduce emissions and businesses voluntarily transitioning from high-emission fuels to wood pellets.

Professor Guangqing Liu with the Beijing University of Chemical Technology and the President of the China Alliance for Clean Stoves provided a unique insight into that country's efforts to switch to clean cooking and cleaning in rural China. Using more modern appliances in China is driving the demand for switching to cleaner fuel sources. Liu believes there is a significant untapped supply potential in China. He estimates that there are more than 800 million tonnes of agricultural residuals and more than 1,000 million tonnes of forest and orchard waste that could be converted. Today, there are over 2,000 manufacturers of solid biomass solutions in the form of pellets and briquettes.

China's five-year plan for renewable energy plan includes four major steps for biomass:

1. Developing biomass energy for clean heating.
2. Encouraging the use of large and medium-sized boilers for centralized heating.
3. Carrying out biomass energy clean heating demonstrations.
4. Promoting "biomass pellets+household stoves" and centralized biomass boiler heating.

Gordon Murray provided an update from Canada. He highlighted the evolving global market focus for Canadian producers, noting that while the export of Canadian pellets to the UK is on the decline; Japan and Korea markets are growing.



He also noted the growing uptake of bioenergy domestically despite Canada's vast hydroelectricity grid. He pointed to the need for further financial incentives and the removal of trade barriers for European boiler suppliers if Canada is to leverage its biomass potential fully.

Providing an update on last year's catastrophic wildfire season in Canada, Murray believes that until recently, the role of biomass in fire mitigation has largely been overlooked. Today, a growing body of experts believes the pellet sector has a critical role to play in converting excess forest floor debris (fuel) into renewable energy and rehabilitating forests after fire.

LEAD GENERATION

Gordon Murray met numerous existing and potential important contacts:

1. Irene di Padua, Bioenergy Europe
2. Filip Dumitriu, FEDARENE
3. Christiane Egger, OO Energiesparverband, Austria
4. Werner Emhofer, Froling, Austria
5. Matteo Favero, AJEL, Italy
6. Gilles Gauthier, Hawkins Wright, Belgium
7. Megan Gignac, OO Energiesparverband, Austria
8. Doris Holler-Bruckner, Oekonews, Austria
9. Karin Krondorfer, OO Energiesparverband, Austria
10. Stefan Kurz, Glechner, GmbH, Germany
11. Sabine L'Eplattenier-Burri, proPellets, Switzerland
12. Guangqing Liu, University of Chemical Technology, China
13. Bengt-Erik Lofgren, AFAB, Sweden
14. Christine Ohlinger, OO Energiesparverband, Austria
15. Stefan Ortner, OkoFEN, Austria
16. Herbert Ortner, OkoFEN, Austria
17. Dr. Hubert Roder, Germany
18. Pablo Rodero Masdemont, AVEBIOM, Spain
19. Doris Stiksi, proPellets, Austria
20. Kenneth Tran, Ayo Biomass, Vietnam
21. Sarah Ullman, OO Energiesparverband, Austria

SHARING INFORMATION WITH CANADIAN PELLET SECTOR

WPAC has shared this report and its observations and recommendations with over 70 companies, including WPAC members. The report is anticipated to be shared, reaching more than 200 key Canadian industry leaders.