Emerging Pellet Markets in Asia

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Gordon Murray, Executive Director

WOOD PELLET
ASSOCIATION OF CANADA

Topics

- Short introduction to WPAC
- Industry priorities for 2015
- Global overview of pellet trade
- BC pellet sector
- Korean pellet market
- Japanese pellet market
- China

Wood Pellet Association of Canada

- Advocate on behalf of Canadian pellet industry
- 65 members: pellet producers, ports, stevedoring companies, traders, equipment manufacturers, engineers and consultants, insurance industry & universities.

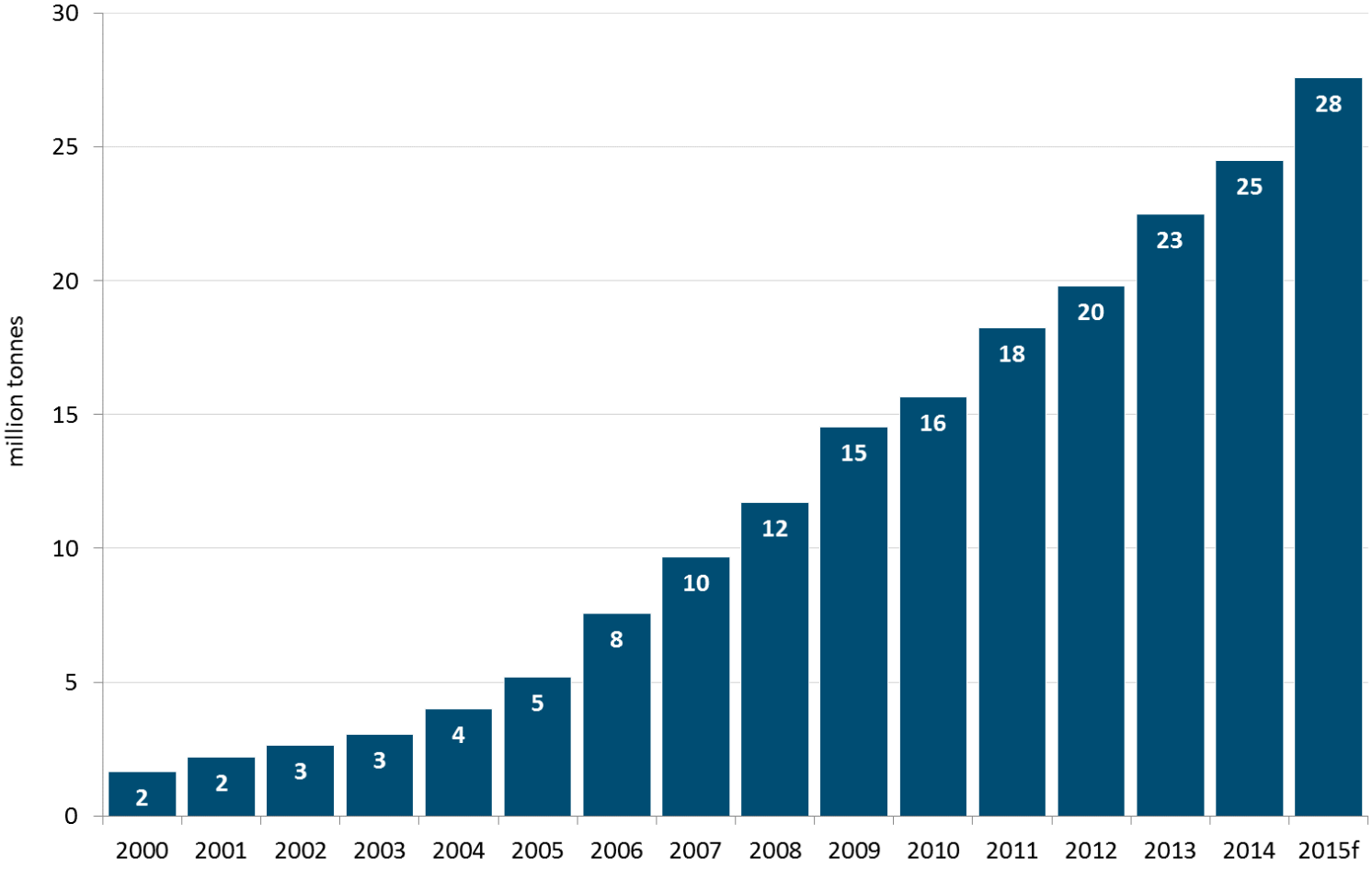
WOOD PELLET
ASSOCIATION OF CANADA

Priorities - 2016

- Promoting Canadian pellet sustainability to Europe
- Getting members SBP certified
- Improving fibre access and security
- Safety
- Advocacy in UK and Netherlands
- Pellet quality certification
- Data collection: boilers, stoves,

Global wood pellet production

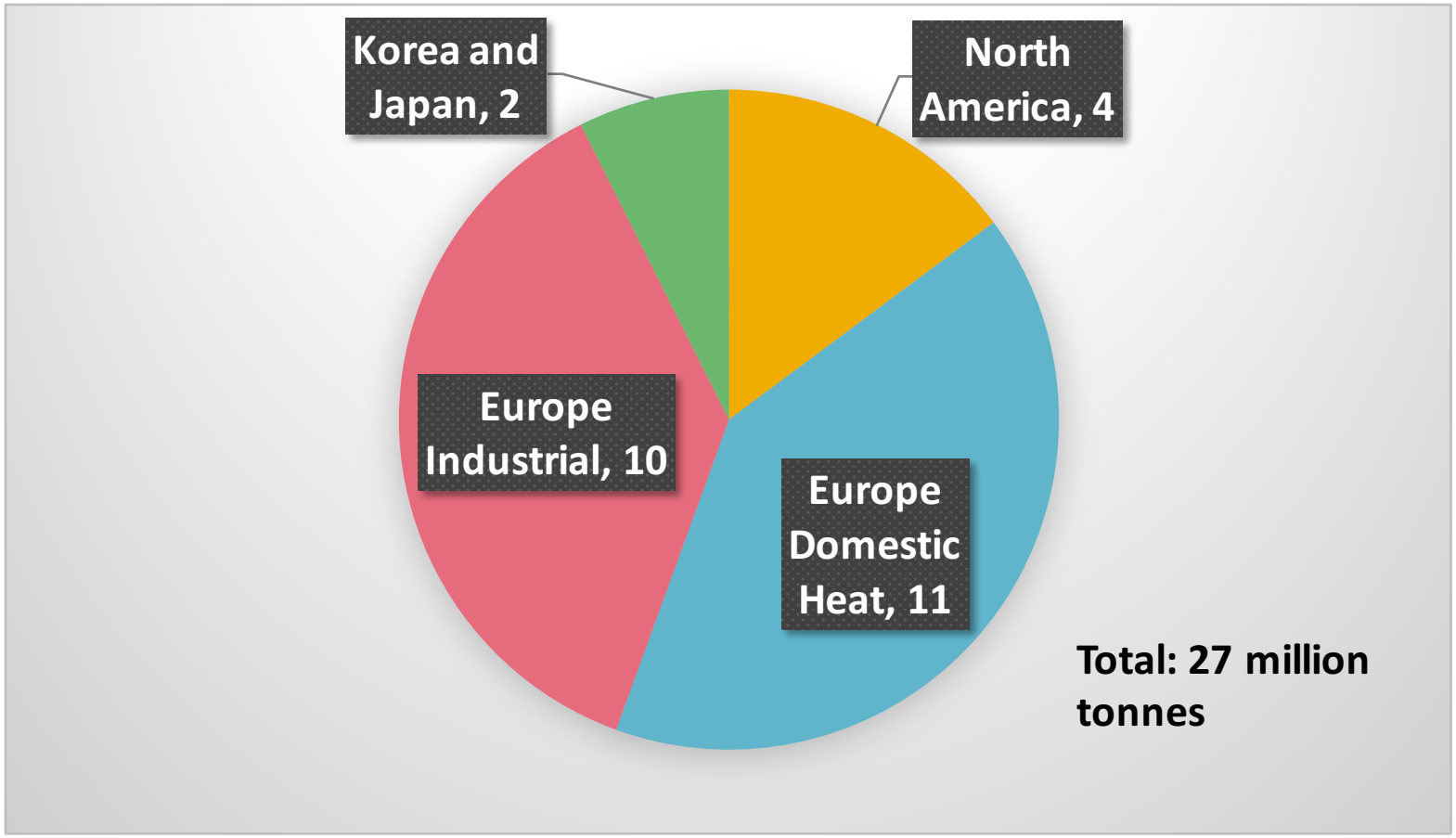
About 28Mt in 2015… (Heating = 15Mt, Industrial = 13Mt)



Source: REN21, FAO and Hawkins Wright

HAWKINS WRIGHT

World regional pellet consumption – millions of tonnes



Sources: Argus Media, Hawkins Wright

BC Export Pellet Plants > 75,000 tonnes

1 Pinnacle Renewable Energy
2 Pinnacle Renewable Energy
3 Pinnacle Renewable Energy
4 Pacific BioEnergy
5 Premium Pellet
6 Pinnacle Renewable Energy
7 Canfor/Pinnacle Pellet
8 Tolko/Pinnacle
9 Canfor/Pacific BioEnergy
10 Canfor/Pacific BioEnergy

Planning Stage: Newpro announced conversion of a particle board plant to produce 80,000 TPY of pellets in Smithers

BC Export Pellet Plants > 75,000 tonnes

	Company	Location	Capacity (000 tons)	Comments
1	Pinnacle Renewable Energy	Williams Lake	200	
2	Pinnacle Renewable Energy	Quesnel	100	
3	Pinnacle Renewable Energy	Strathnaver	220	
4	Pacific BioEnergy	Prince George	360	
5	Premium Pellet	Vanderhoof	190	
6	Pinnacle Renewable Energy	Burns Lake	440	
7	Canfor/Pinnacle Pellet	Houston	220	
8	Tolko/Pinnacle	Lavington	250	Newly commissioned
9	Canfor/Pacific BioEnergy	Fort St. John	75	Commissioning Q1 16
10	Canfor/Pacific BioEnergy	Chetwynd	100	Newly commissioned
			2155	

BC Biomass Energy Plants Under Construction

	Company	Location	Capacity	Comments
1	Veolia Environmental Services	Fort St. James	40 MW	Under construction
2	Veolia Environmental Services	Merritt	40 MW	Under construction

Each plant will consume 200,000 ODT per year., competing with regional pellet plants. This is a sore point with our industry.

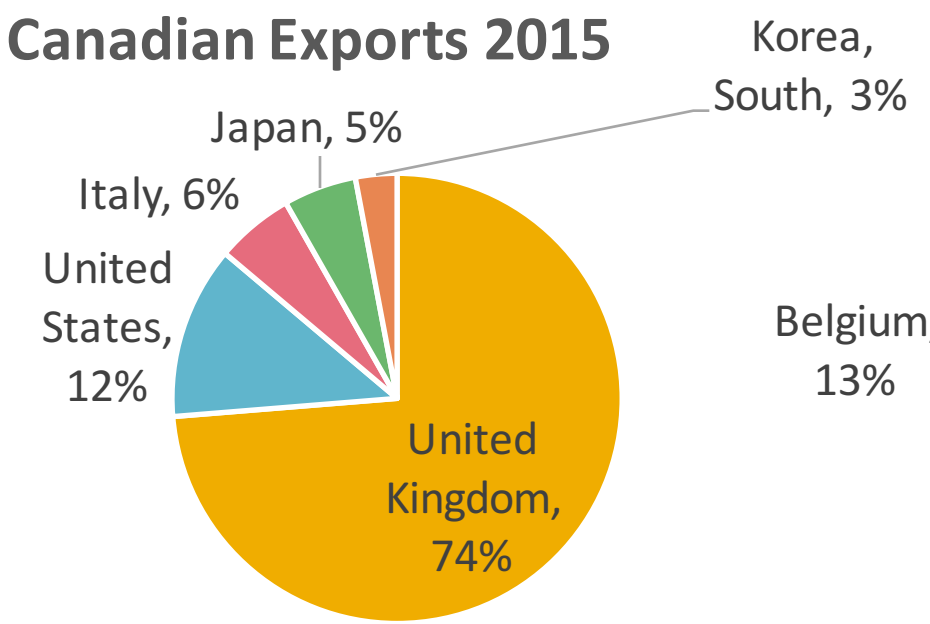
VEOLIA
ENVIRONMENTAL SERVICES

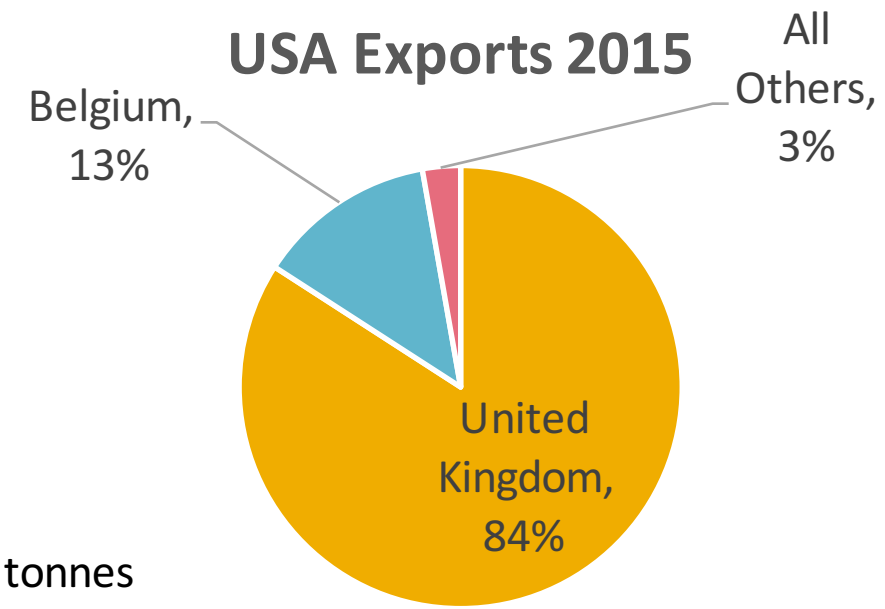
Wood pellet fibre sources

Sawmill residues

Logging residues

North American Pellet Export Destinations

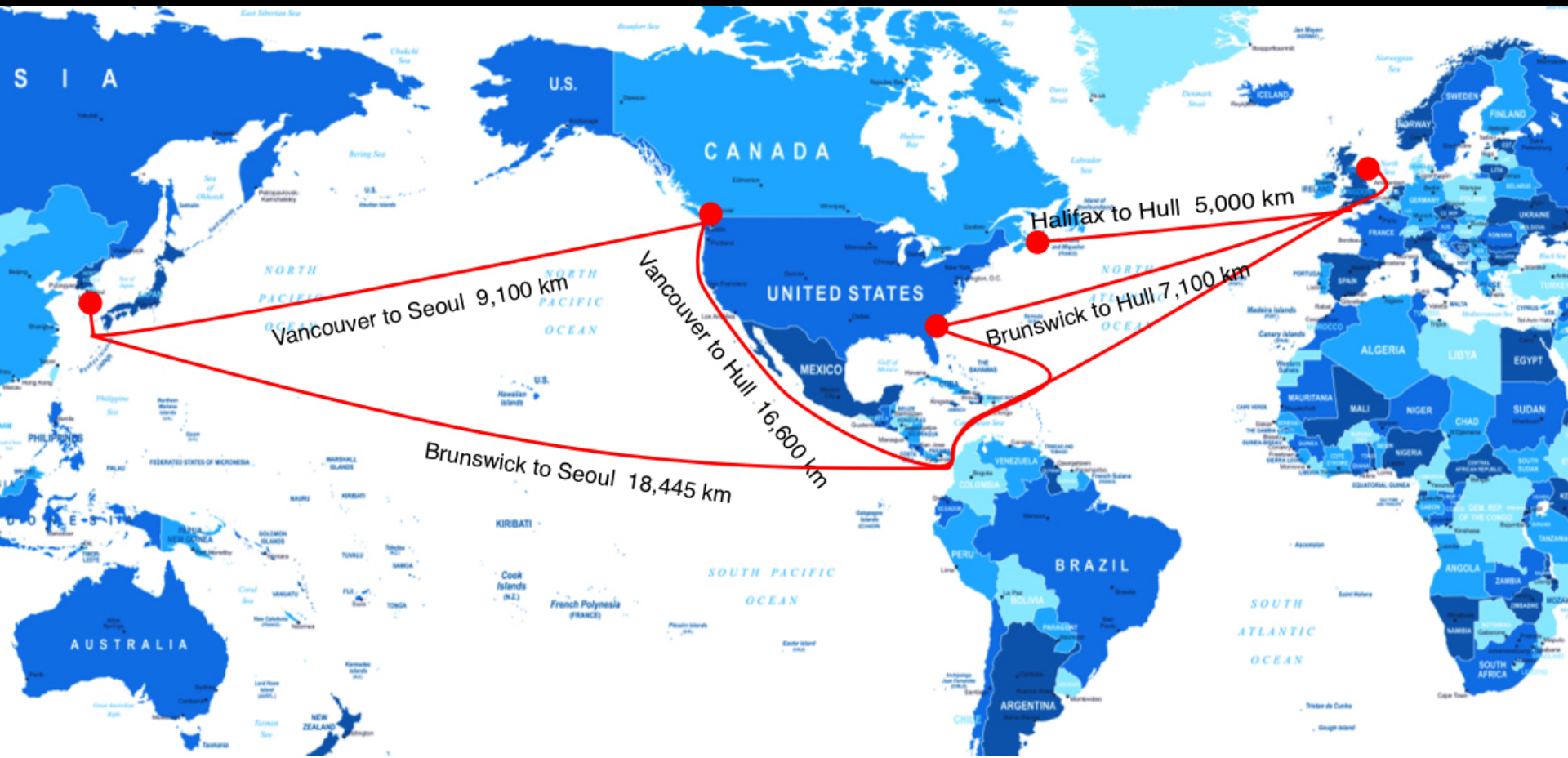




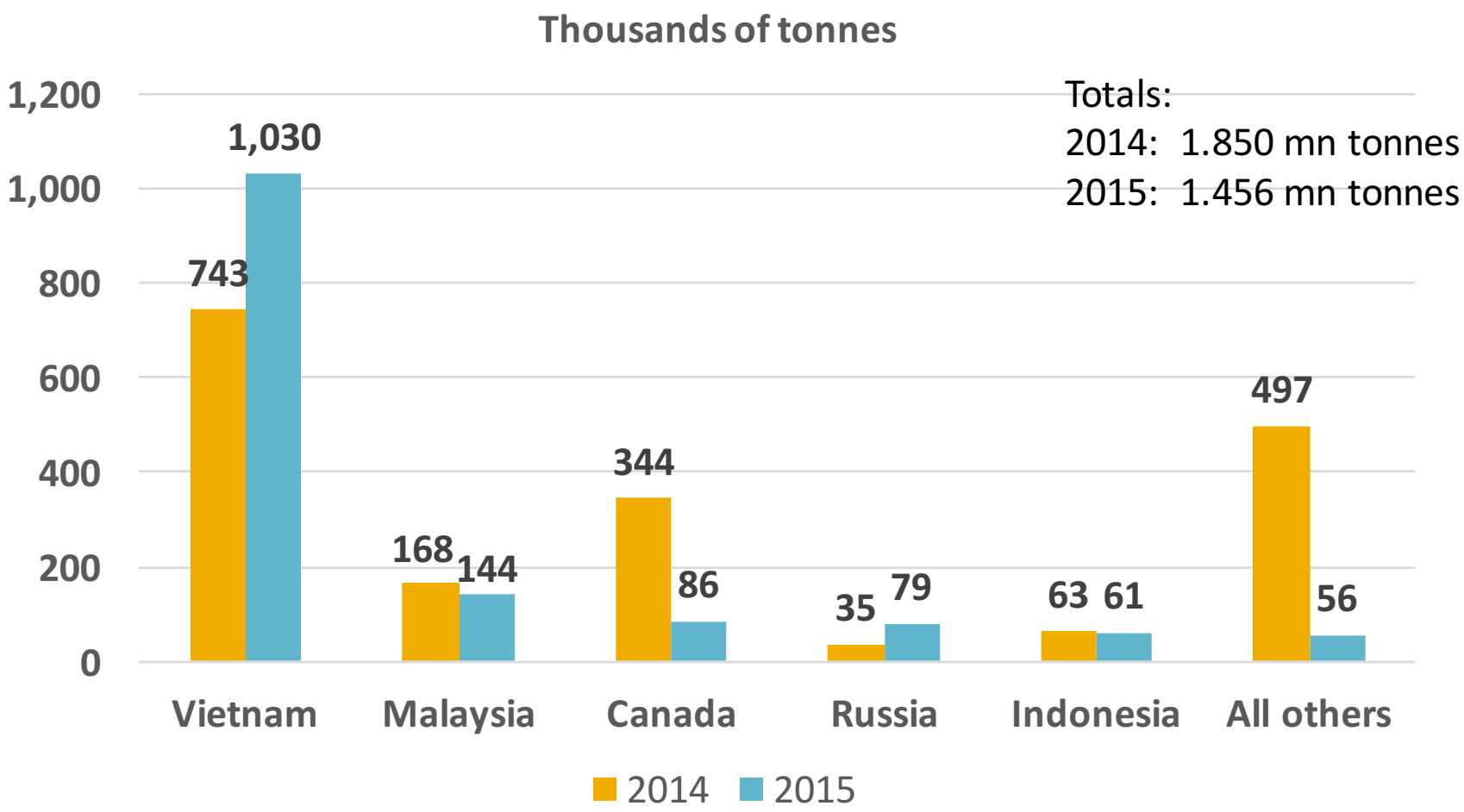
- Global consumption: ~ 28 mn tonnes
- Canadian exports: 1.6 mn tonnes
- USA exports: 4.4 mn tonnes

Source: Global Trade Atlas (note: 2015 estimated as Nov YTD x 12 / 11)

North American pellet shipping routes



South Korea pellet imports – 2014 & 2015



Source: Global Trade Atlas (note: 2015 estimated as Nov YTD x 12 / 11)

South Korean Market Comments (1)

- Coal: 41% of power mix
- Pellet demand is driven by RPS: 2012 – 0%, 2024 – 10%
- Biomass co-firing is cheapest but capped at 30% of renewable mix
- Five state-controlled utilities – 85% of pellet market (KOSEP, KOMIPO, KOWEPO, KOSPO, EWP)

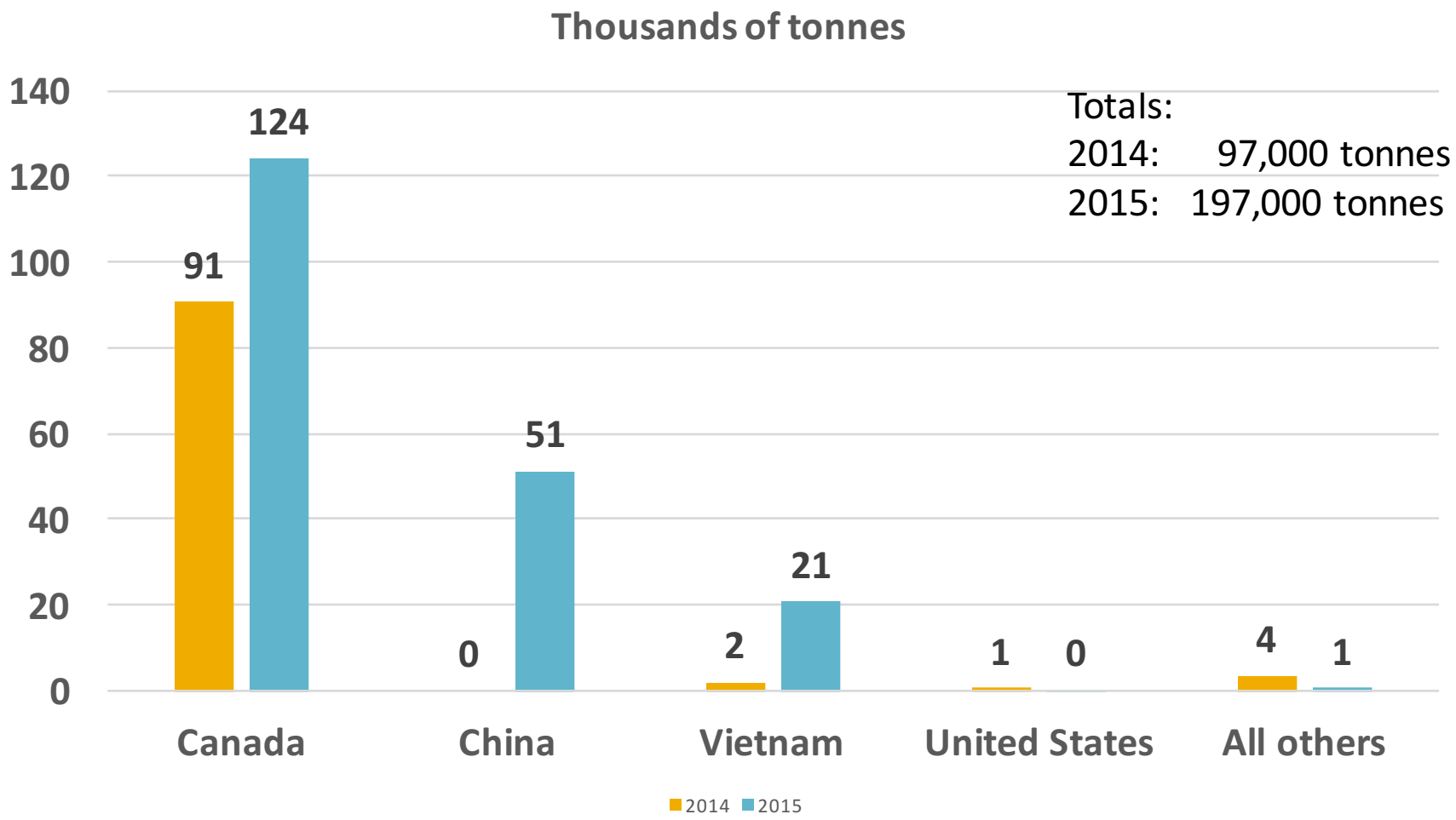
South Korean Market Comments (2)

- All purchases by tender – totally price driven
- Vietnam has 70% of the market
- Canada price 2014: $193 per tonne
- Vietnam price 2015: $95 per tonne
- Vietnam to South Korea shipping: $1 per tonne

South Korean Market Comments (3)

- USA at a disadvantage due to distance and value of USD
- Canada at a disadvantage due to shipping cost
- 2016 Q1: nine tenders totaling 368,000 tonnes
- 2016 All: likely similar to 2015, i.e. 1.5 mn tonnes
- Prices likely to stay low
- Demand forecast ~ 2.7 mn tonnes by 2020

Japan pellet imports – 2014 & 2015



Source: Global Trade Atlas (note: 2015 estimated as Nov YTD x 12 / 11)

Japan's Energy Mix for Power

- Before Fukushima: nuclear was 29%, now 2%
- Renewable energy was 1.2% now 1.6%, increase was mainly solar power
- Interest in solar power is declining because the Japanese government wants more variety in the renewable energy mix.
- The government wants to rapidly increase renewables by 2030 so that solar makes up about 15% and others (biomass and hydro) make up about 10%.

Biomass Energy Development (1)

- Supported by the Japanese Feed-in-Tariff Act 2011
- FIT levels are set annually
- FIT obligation to plant operator: 20 years
- FIT levels are higher for domestic forest residue (32-40 Yen/kWh) than for sawmill residue (24 Yen/kWh).
- There are about 1.45 million kW of approved projects, roughly equally 29 million tonnes of biomass annually in the pipeline. Not likely that all will get built.

Biomass Energy Development (2)

- 2012 – 2015: 340 MW biomass power added.
- 2016 – 2017: 585 MW expected to be added.
- 2018 & beyond: 361 MW co-firing
- Showa Shell (49 MW) – operational 2015, 100% biomass
- Osaka Gas (110 MW) – operational 2015, 30% pellets
- Sumitomo (50 MW) – operational 2018, 100% pellets
- Distribution between local chips, PKS, and wood pellets is uncertain.

China

- No N.A. trade to date
- Commitment to reduce emissions from power sector by 60% by 2020 during COP21
- China's domestic demand for wood pellets is growing, largely in the east and in Guangdong province, where the local government has prohibited coal-fired boilers and the cost of pellets is lower than elsewhere in the country.
- Not an active market for N.A. producers

Conclusions

- Korean market: volatile, not dependable.
- Japanese buyers are more likely to enter long term contracts with NA producers (e.g. recent 10-year contract Sumitomo/Engie for 100kt/y)
- Many new biomass plants set to come on line within 2 years
- Mix between chips, PKS & pellet is still uncertain
- Japan not likely to return to nuclear power
- Good opportunity for wood pellets