

Bio-economy Opportunities for Wawa & Area

Ralph Spaans
Secondary Wood Product Specialist
Sault Ste Marie
705 945-6784

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What is the bio-economy?

- No commonly agreed to definition
- Typically covers: biomaterials, biochemicals, biocomposites, biofuels
- Also includes: traditional products and new products
- Products cover spectrum from R&D to mature

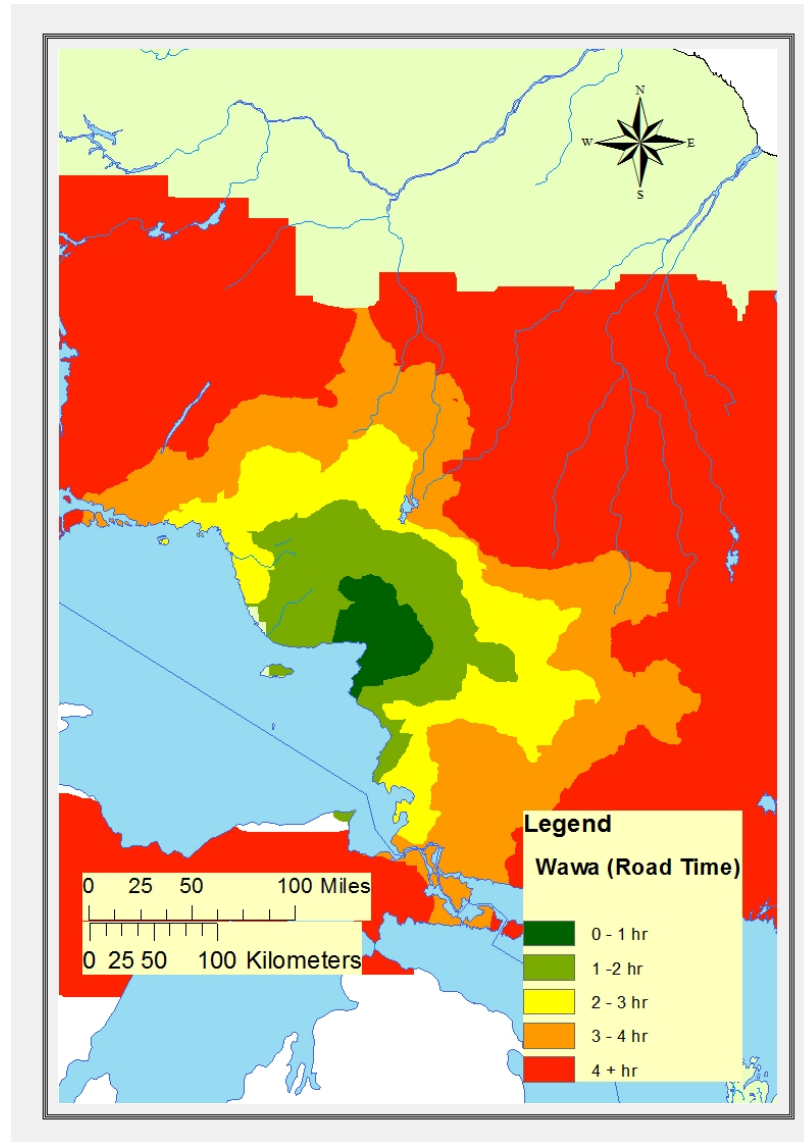
Bio-Fuels: Heat & Electricity

- Residential or ICI [Industrial, Commercial, Institutional]
- Ministry of Environment (et al) requirements
- OPA for electricity generation
- Wood pellet ISO specifications
- WPAC's CANplus pellet certification

Technology

- Not all appliance in same category are equal
- Central heating – air / water; room heaters; district heating &/or CHP – residential and ICI
- ‘Residential’ wood pellet CHP: 1 kW_e and 14 kW_t
- Residential home (central heating) uses about 7 tonnes wood pellets per year
- ICI usage of $1,100 \text{ GJ}$ [$30,000 \text{ m}^3$ natural gas] annually equates to about 70 tonnes wood pellets usage per year

Opportunities for Wawa & Area



FMP Allocations – past and present

FMP 10 YR	SILV SYSTEM	1 HR	1 - 2 HR	2 - 3	3 – 4 HR	4 + HR
Area		11,495	116,002	181,392	276,623	772,819
GTV (est)		90,348	986,269	1,434,198	2,451,084	71,885,252
Past Harvest (ha)						
10 Yr Total		2,982	8446	24,288	45,604	159,887
Annual Average		298	845	2,428	4,560	15,988

Heat Related Opportunities

- “Torrified” or “Normal” wood pellets
- US based torrified wood pellet producer wants to build a demonstration facility where someone purchases the pellets (~20,000 tonnes per year)
- Ontario based company working on vertical integration – pellet production, local distribution, pellet furnace sales & service, pellet furnace financing
- I have on going discussions with Ontario furnace oil distributors for wood pellet distribution