Wood Waste Diversion from Landfill to Energy

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- Recycling company operating in the Waikato and Bay of Plenty regions:
  - Cambridge
  - Kawerau
  - Rotorua,
  - Kinleith
  - Hamilton

- Take a “basket” approach to recycling
- Operate long-term contracts for council and industry
- Operate mobile processing equipment
- Commodity traders, local and export
Residues to Revenues 2005
The Climate of Sustainability

- **The Waste Strategy**- Towards Zero Waste and a Sustainable New Zealand
- Develop and implement tools to reduce waste and maximise reuse, recycling and recovery
- Reduce barriers to using recovered materials
- Develop and implement economic incentives to change wasteful behavior
- Targets e.g. C&D waste 50% by 2008, 95% diversion of organic waste by 2010

- **Emerging Sustainable Business practice**

1. Wood Processing Residues

- To date have been limited by transport distances to suitable combustion
- Seasonal competition for some materials, particularly shavings, limits disposal charge opportunity
- Sawdust, shavings and sander dust ideal pellet stock
- Emerging market opportunities with conversion technologies for fossil fuel fired boilers, particularly in municipal, industrial and commercial sites
- New technologies for smaller scale, local industry (pellet presses, solid wood combustors etc), handling and storage system developments
2. Solid waste diversions

- pallets, timber offcuts, manufacturing waste,

- C&D recoveries, sorting and removal of treated timber, small % increasing with new codes, identification issues, contamination

- Usually very low moisture, less than 15%, high CV

- High volume, low weight = high transport cost

- Emerging separation technologies, “skip waste” separators, volume and disposal cost limited
Skip waste mechanical sorting plant

3. Greenwaste

- requires blending to meet spec, drying (seasoning) prior to hogging or screening to remove fines

- Opportunity to co-operate fuel and compost markets

- Contamination issues, requires vigilance and supervision of dropoff

- Processing cost recovery from disposal charges
4. Landfill Recovery

- Land banked resources at Industrial sites

- Recovery drivers are consented disposal space, removal for alternate land use, other remediation requirements

- Current hog fuel supply and price renders recovery uneconomic for fuel alone.

- Requires specialist separation equipment, mechanical and manual sorting, to attain high recovery rates

- Possible early carbon credit opportunities
Residues to Revenues 2005
What does the waste sector need to advance bioenergy

- **The Will**
  - To take a risk, stop talking and act to improve the industry
  - To diverge from landfill mentality

- **The Incentives**
  - Economic and regulatory instruments such as EU
  - Consistent true cost accounting landfills, accessible grants or tax relief for R&D, landfill levies and differential disposal fees
  - Cleanfill controls and economic instruments to regulate

- **The Markets**
  - Direction to convert to bioenergy, establish local users
  - Consistent disposal market policy, landfill and cleanfill, economic instruments, (e.g. Christchurch, Rotorua)
  - Calorific based pricing mechanisms for bioenergy fuels

- **The Research**
  - Role for SCION, CSIRO
  - Combustion, emissions and pellet component blends
  - Local technology development