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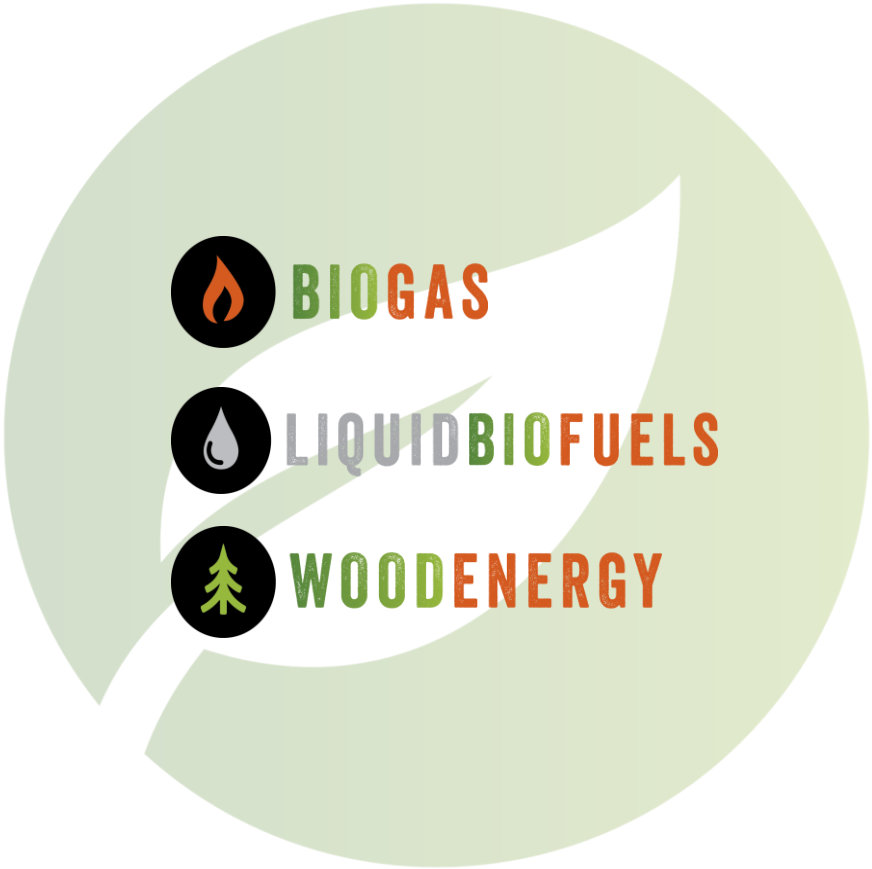
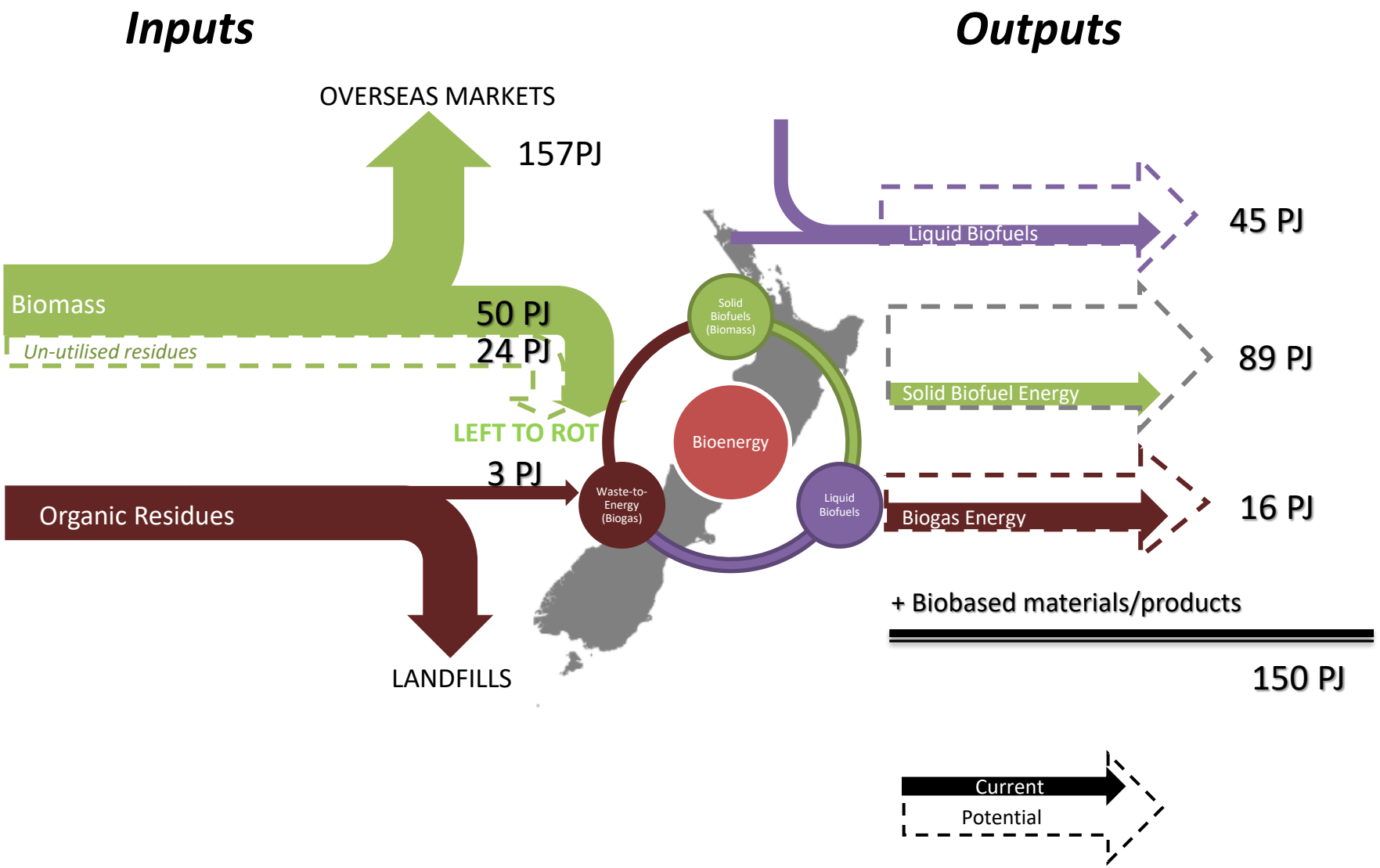


The balance of bioenergy and biomass supply

Brian Cox Executive Officer, Bioenergy Association of New Zealand



The Opportunity

Ref:
P. Bennet - Bioenergy as vital component
EECA (2021) – Biogas and Biomethane in New Zealand

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The demand for biofuels (2050)

Application areas		Energy from bioenergy or biofuels (PJ)
Solid biofuels		
	Residential/commercial	7
	Wood processing (existing)	43
	Stationary heat (fuel switching)	24
	Electricity firming	15
		89
Liquid biofuels		
	Domestic aviation	4
	Domestic marine	2
	International aviation	6
	International marine	6
	Heavy land transport	10
	Rail	1
	Off road land transport	15
	Stationary heat (fuel switching)	1
		45
Gaseous biofuels		
	Electricity	3
	Heat users (Circular own use)	5
	Transport	1
	rLPG	1
	Biomethane to gas network	6
		16
		150

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Biomass from forestry and wood processing

	2050	
	Energy PJ	Quantity
Biomass		
Wood processing		
Existing wood processing	43	
Port bark	1.8	262,000 tpa
Pulp log	5.6	817,000 m^3pa
New wood processing residues	13.1	
Forestry		
Harvested carbon forest	2	
Production thinnings	1.6	232,000 m^3pa
Waste thinnings	3.6	192,000 odt pa
Pruning residues	0.5	25,000 odt pa
Inforest landing residues	11.3	1,643,000 m^3pa
Cutover - ground based	8	1,164,000 m^3pa
Cutover - hauler/cable	1	145,000 m^3pa
Wilding forest	0.2	
New plantation forestry residues	10	
	101.7	

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Biomass from municipal, farm forestry and non residues

	2050	
	Energy PJ	Quantity
Biomass		
Municipal		
Municipal wood wastes	2.4	266,000 tpa
Arborist	0	158,000 tpa
Agriculture and horticulture		
Horticulture	0.9	126,000 tpa
Agriculture crop residues	6.2	351,000 tpa
Shelterbelt	0.6	82,000 m^3pa
New farm forestry	16.9	
Non residual sources		
Sawmill chip	11.6	1,688,000 tpa
Diversion from export K grade logs	31.4	4,546,000 tpa
Douglas Fir production thinnings	0.9	
Energy crops	0	
	70.9	

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Gaseous biofuels from organics

	2050
	Energy PJ
Organic	
Waste	
Municipal WWTP	0.6
Municipal organics	1.5
Food processing residues	1.8
Pulp and paper effluent	0.6
Dairy effluents	6.8
Pig and poultry organics	1.7
Crop residues and supplementary crops	1.4
Gas capture at landfill	3
Non residual sources	
Energy crops	0
	17.4

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Yes we can have enough biomass

- Market needs information
  - Regional demand
  - Regional supply
  - Within the context of a bioeconomy
- Stimulate new sources of biomass
  - Farm forestry
  - Additional domestic processing of wood
  - Incentives for plantation forestry
  - Long term thinking about land use

It is easier to grow an additional tree than get consented and build a new electricity power station

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