



The Process of Independent Certification

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Outline

- Introduction
- Biofuels in New Zealand
- “Real World” Sustainability
- Green Tick™ Certification System
- Certification Process
- Clean Energy Crisis
- Way Forward





Biofuels in New Zealand



- Sustainability key NZ Government policy
- NZ Emissions Trading Scheme – first country to introduce a national scheme
- Energy Target – 90% of energy production by renewables at 2025 (currently 70% - hydroelectric, geothermal, wind, solar). 10 year ban on new fossil fuelled power plants
- Biofuels Bill
 - Mandates 0.53% of petrol and diesel sales by biofuels in 2008, and 3.4% by 2012
 - Sustainability standards to be set in law (Order in Council)
 - Controversy over Clean Energy Crisis
 - Bill in final stages of drafting
- Air New Zealand project with Boeing and Rolls-Royce to power jets with biofuels as soon as possible (Air NZ 80% owned by NZ Govt).





Aviation Biofuels

Boeing is partnering with Air New Zealand and Rolls-Royce to demonstrate the viability of bio-jet fuels for use in commercial aircraft.

A test flight on an Air NZ 747-400 aircraft is planned for late 2008, after a Memorandum of Understanding was signed in NZ on Sept 27th 2007.



Algal feedstock





“2nd Generation” Biofuels



Demonstrating alternative, low-carbon lifecycle fuels
Conducting the first biofuel demonstration on a commercial airplane



Researching potential of future environmentally progressive fuels

Plants, including algae, could supply fuel for the world’s airplane fleet



Accelerating alternative fuel research through industry working groups

Initiated industry collaboration into alternative fuel research





Genesis of Green Tick™

- The New Zealand Approach
 - It can be done
- Green Tick™ Sustainability Certification
 - Susan went shopping one day.....
 - 5 year, privately funded research project to create a sustainability certification system
 - Powerful certification brand, backed by an independent life cycle assessment (LCA)
 - Instant consumer recognition of truly sustainable products and services
 - 13 trademark defenses so far.....
- “Real World” Sustainability
 - ‘Soft’, ‘superficial’, and ‘sham’ sustainability.....
 - Latest consumer protection authority requirements for environmental claims – LCA evidence, eg. UKASA, and Australian ACCC prosecutions
 - “Real world” sustainability – defined by LCA.





Green Tick™ Certification System

- **World's only independent sustainability certification brand** – applies to any product or service anywhere
- **Life Cycle Assessment (LCA) based** with 'cradle to grave' performance standards – 8 for safety, 12 for sustainability
- **Independent audit** by suitably-qualified persons (ISO 14000)
- **Crystal clear branding**
- **Transparent audit and certification process**
- **Only certification that complies with consumer protection authority requirements for LCA.**





Green Tick™ Brands

- certification options -



sustainable



sustainable + organic



sustainable + carbon neutral



sustainable + GE-free



sustainable + natural



sustainable + fair trader





Certification Types

- **Corporate** – where a corporation wishes to have its entire operation, or part of its operation, certified
- **Site** – where a manufacturing site is certified
- **Product** – where a product is certified (manufacturing site/s along supply chain must also be certified)
- **Service** – where a service is certified (operational sites, eg. professional offices, certified).





Certification Standards

- **Safety** – no serious harm (2 days + in hospital) to anybody in the supply chain, safety management system, legal compliance with applicable laws
- **Sustainability** – product origin, product quality, product labeling, resource use, chemical use, energy use, nuisance effects, contaminant discharges, waste management, environmental management system (EMS), legal compliance with applicable laws
- **Why no social or economic criteria?**
 - too complex across all cultures and societies, avoid ‘cultural arrogance’, can ‘bolt on’ local standards if required
 - find if safety standards good, then social/economics ≡ OK.





Key Principles behind the Standards

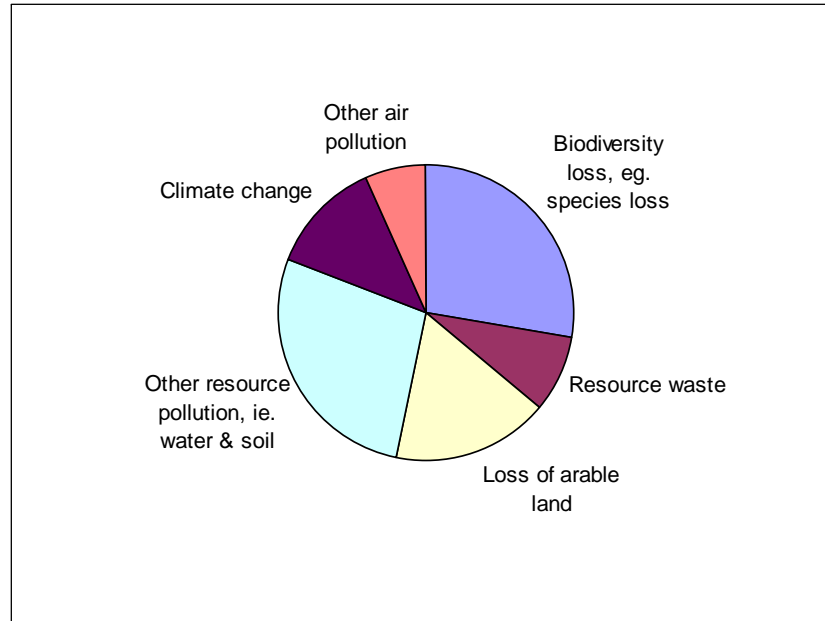
- 1. Operational definition of sustainability** - operations occur without causing any permanent or net harm to people or the environment (includes cumulative effects – very important for biofuel/energy applications)
- 2. LCA audit** down a product's supply chain
- 3. Materiality and Responsibility** – are the *key elements* of an operation *that the company is responsible for* managed so they cause no permanent or net harm to people or the environment?
- 4. Evidential approach** - supply evidence (proof) of sustainable practice. Minimum of 12 months' records required
- 5. Sustainability profile** - key elements of a product's profile must be relevant (material), measurable, bench-markable against best practice, ie, what is the product's **life cycle footprint?**





Life Cycle Footprint

Life Cycle Footprint = GHG + other effects



Sometimes GHG emissions are less important than other effects, eg. over-fishing > GHG





Materiality 'Filter'

What are the key elements that determine a product's sustainability over it's whole life cycle?





Wine



Key Element	Green Tick™ Standard	Measure
1. Water use	Resource use	Legal limit set by water right
2. Pesticide residues	Product quality	Legal limit set by import authority
3. Spray drift	Nuisance effects	Best practice/legal limit
4. Energy use	Energy use	Best practice
5. GHG	Contaminant discharge	Best practice/carbon credits

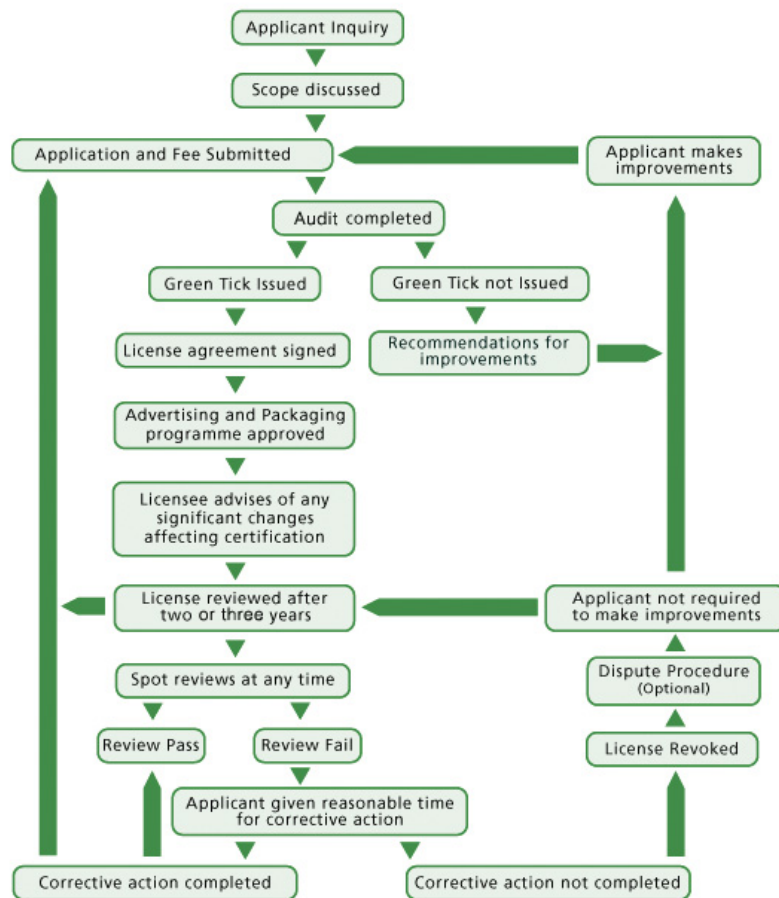


Example: Materiality Filter for Wine





Certification Process - Overview





Certification Process - Detail

- 1. Feasibility** (optional) – applicant checks that they can complete project
- 2. Applicant applies for certification**
- 3. Scope of audit, 'start' and 'stop' points of LCA agreed** based on the part of the supply chain the applicant is responsible for (guidance notes)
- 4. Materiality** – key elements of the product/operation's sustainability profile ('life cycle footprint'), ie. structure of the LCA agreed and defined for measurement and benchmarking (detailed audit criteria)
- 5. Pre-audit Review** (optional) – applicant reviews systems and data, conducts an internal audit, addresses any issues identified
- 6. Green Tick Audit** – by independent auditor
- 7. Audit Report to Certification Board** – recommend award or decline.





Clean Energy Crisis



Time Magazine, 21 April 2008
(NZ edition)





Clean Energy Crisis - Preventable

A Green Tick™ LCA would have prevented the current Clean Energy Crisis





Way Forward 1

1. LCA for Biofuels

- **Use LCA** to define specific sustainability standards for biofuels
- **Materiality 'Filter' critical** – must define this so that the right LCA for each type of biofuel is done
- **Economic modelling** should be included to predict effects on markets (the 'Domino' Effect).





Way Forward 2

2. Good Governance

2.1 History

- Clean Energy Crisis an example of ‘zeal without wisdom’ and market failure because:
 - The race to produce biofuels proceeded before adequate science (LCA) was done; and
 - Markets do not yet include the full environmental costs of commodity production in price signals.
- Good Governance can only happen if backed by Good Science
- Good Governance is critical – the finest LCAs will be no good if policy and the rules of engagement are flawed.





Way Forward 3

2. Good Governance

2.2 'To Do' List

- Codify LCA requirement in law
 - Create LCA-based sustainability standards
 - Require suppliers to submit their LCA to State Energy authority for approval
- Use performance standards rather than prescriptive standards
 - Encourages innovation and 'over-performance'
 - More flexible, creates no favourites
- Amend financial incentives
 - Procurement - State of California will buy biofuels for its fleets that meet or better the State's sustainability standards
 - Re-target funding where necessary





Way Forward 4

2. Good Governance

2.2 'To Do' List continued...

- Create reputational incentives – promotion of 'good' biofuels
- Set market access criteria - prohibit access for 'bad' biofuels, or biofuels offered without a sound LCA
- Legal penalties and enforcement
 - Active enforcement and heavy fines for offenders
 - Institute 'spot' LCA audits by State energy officials
- Carbon trading system – must have the right price signals
- Transitional provisions
 - Help industry transit to sustainable biofuel production
 - May need to revise the State's biofuel goals.





Conclusions

- LCA for biofuels can be done
- LCA must be done
- ‘Domino’ economic modelling must be done
- Pricing mechanisms must be changed to reflect true environmental costs/benefits of energy products
- Carbon trading⁺ ?
- Continuing oil price rises will accelerate biofuel and other alternative energy developments.





Biofuels Materiality Filter

Key Element	Green Tick™ Standard	Measure
	Product source	
	Product quality	
	Energy use	
	Contaminant discharge	
	EMS	





Appendix 1: Green Tick Standards

1. SAFETY

1.1 Accident Record

- No major harm (2 days or more in hospital) accidents, incidents, injuries recorded in past 12 months.

1.2 Staff Health and Safety

- No continuing or unsatisfactorily addressed staff complaints about working conditions in past 12 months.

1.3 Supplier Health and Safety

- No continuing or unsatisfactorily addressed supplier issues with on-site working conditions in past 12 months.

1.4 Customer Health and Safety

- No continuing or unsatisfactorily addressed customer complaints about health or safety issues (including product quality) in past 12 months.

1.5 Safety Management System

- Occupational Safety and Health regulation-compliant health and safety management system in place.





Appendix 1: Green Tick Standards

1. SAFETY continued...

1.6 Minimising Risk

- Annual reviews of potential risk areas and mitigation taken.

1.7 Safety Performance Record

- Less than five minor non-conformances per 100 workers to H&S management system reported in past 12 months.

1.8 Safety Legal Compliance

- i) 100% compliance with all legal requirements;
- ii) No successful enforcement actions by government health and safety agencies in past 12 months.

2. SUSTAINABILITY

2.1 Product Origin

- All product content identified by country of origin.

2.2 Product Quality

- Product meets all quality standards of industry or government food authority.





Appendix 1: Green Tick Standards

2. SUSTAINABILITY continued...

2.3 Product Labeling

- Labeling meets required legal standards.

2.4 Resource Use

- Programme in place to maximise resource use efficiency with defined performance targets;
- Resources used at lowest practical for site/s with current technology per sales unit;
- Programme in place to identify and use recycled materials where appropriate;
- Where resource use is extractive, relevant industry or government sustainability standards met.

2.5 Chemical Use

- Chemical residues comply with industry or government standard.

2.6 Energy Use

- Programme in place to minimise energy use with defined performance targets;
- Energy resources used at lowest practical for site/s with current technology per sales unit.





Appendix 1: Green Tick Standards

2. SUSTAINABILITY continued...

2.7 Nuisance Effects

■ No continuing or unsatisfactorily addressed complaints from neighbours about nuisances in past 12 months.

2.8 Contaminant Discharges

- i) Programme in place to minimise contaminant discharges with defined performance targets;
- ii) Contaminant discharges at lowest practical for site/s with current technology per sales unit.

2.9 Waste Management

- i) Waste minimization and recycling programme in place with defined performance targets;
- ii) Wastes reduced, re-used, recycled, or properly disposed of to authorised facilities.

2.10 Environmental Management System

■ Environmental management programme in place with defined performance targets consistent with industry or government standards.





Appendix 1: Green Tick Standards

2. SUSTAINABILITY continued...

2.11 Environmental Management Performance

▪ Less than five minor non-conformances per 100 workers with Environmental Management System reported in past 12 months.

2.12 Legal Compliance

- i) 100% legal compliance with any environmental consents and applicable plan rules;
- ii) No successful enforcement actions by government environmental agencies in past 12 months.

