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Title of Paper: **Delivering sustainability through the SME business sector**

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Abstract

The small to medium size enterprise [SME] sector consists of 99% of all New Zealand businesses and employ 60% of New Zealanders. The pervasiveness of SMEs means that the day-to-day delivery of the changes required to deliver lasting sustainability improvements in New Zealand will happen in the sector.

For SMEs to move towards sustainability they need to learn to Measure, Mitigate, and Manage their resource intensity. SMEs are generally short of time and the level of skills required to do this.

Measurement tools are widely available. The main hurdles blocking measurement are the time required and understanding what to do with this information.

The mitigation and management of SMEs resource intensity is more problematical than the measurement aspect. Mitigation and management requires a level of skill that may not easily be found within an SME. It is here that professional bodies have to consider what action to take to offer SMEs access to reasonably priced solutions packaged in routine, standardised systems and processes.

Introduction

The authors of this paper, through their consulting business, offer master classes in sustainability and consulting to enterprises in New Zealand and overseas on sustainability and carbon neutrality. Through interactions with clients and class participants, a number of issues affecting the SME sector have become apparent.

While more research, both quantitative and qualitative, is always welcome, we would like to see much more action to assist the small to medium size enterprise [SME] sector contribute to a sustainable future for New Zealand. We have therefore taken a qualitative research approach, reporting what is happening to develop a narrative of climate change and the action required. A review of recent quantitative research into the economics of climate change indicates that quantitative research is lagging behind the developing climate change narrative and action cannot wait for more quantitative research.

While sustainability is a very broad concept, the primary focus of sustainability action in New Zealand at the moment is on greenhouse gas [GHG] emissions reductions. In time, the narrowness of this focus will become apparent as the impact of unsustainable practices on, for example, water quality and availability become more obvious. Therefore, we believe that the path to sustainability must be treated as reducing resource intensity rather than GHG reductions. However, for this paper we will confine our discussion to GHG reductions.

Further research, both quantitative and qualitative would be required to support some of the points being made in this paper while others are well supported by existing research or publications. The intention of this paper is to provoke a reaction from NZSSES members not only to engage in further research but, more importantly, to take action to offer guidance and support to the SME sector.

Identified Points

A call to action – what do NZSSES members have to offer to the SME sector?
Sustainability, the emissions trading scheme and its price impacts on SMEs.
The centrality of the SME sector to the New Zealand enterprise landscape and the positive community effects that a sustainable SME sector will have.
The 4 Ms and their impact on the SME sector

- Measurement and the questions of organisational scope and boundaries
- Management and the use of systems, processes, and technologies
- Mitigation and the remission of sins
- Marketing and the dangers of 'greenwashing'

Confusion and mistrust in the policy and consulting arenas
Taking a stand on advice and direction

Discussion

Sustainability

Sustainability is defined by the NZ Ministry for the Environment, quoting the Brundtland Report, Our Common Future, 1987, as:

> "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (MfE 2008).

This definition encompasses much more than just GHG emissions reductions. However, the main focus of New Zealand's response to sustainability is driven by our obligations under the Kyoto Protocol to the United Nations Framework Convention on Climate Change. New Zealand's Kyoto obligation is to reduce GHG emissions to 5% below the level they were in 1990. The 2006 level of emissions is 26% higher than 1990 (MfE May 2008). The size of the gap and its rate of increase explain why Kyoto obligations for GHG reductions are the government's primary sustainability focus. The main tool in the government's sustainability toolkit is the ETS.

The Emissions Trading Scheme

The Emissions Trading Scheme [ETS] is a 'cap and trade' scheme that places a limit on emissions [the cap] and allows entities with lower carbon emissions to trade their carbon credits with entities with higher carbon emissions [the trade]. The application and technical issues associated with the ETS could cover a whole seminar in itself. In summary, the ETS passed by Parliament is intended to have the following features (MfE September 2008):

- includes all sectors and all gases by 2013 – this is a major innovation in cap and trade schemes with most countries excluding agriculture from their schemes
- is internationally linked with NZ carbon units being fully equivalent to Kyoto carbon units
- prescribes absolute rather than intensity-based unit obligations so that sectors face the full price of emissions at the margin – this could adversely affect new entrants vis-à-vis existing players
- provides for allocation to industry and agriculture based on 90 per cent of 2005 emissions levels – this will make achieving Kyoto obligations harder as the emissions level in 2005 is substantially higher than at 1990 which is the point that Kyoto obligations are measured
- reflects international climate change rules
- is based on a self-assessment model for monitoring, reporting and verification through a limited number of 'points of obligation'.

SMEs will not directly participate in the ETS except in so far as their operating costs escalate due to the pricing of GHG emissions into their input streams. This is the essence of the ETS. Via a cap and trade market mechanism (rather than a carbon tax which would be much simpler), the price of greenhouse gas emissions is internalised into the enterprise's cost structure. So instead of being an unpriced externality (to use an economist's term), the environmental impact of GHG emissions becomes an internal cost factor.

The SME Sector

The SME sector is central to understanding New Zealand enterprises and how they can be engaged on a path to sustainability. SMEs with 19 or fewer people employed consist of 96.4% of all enterprises and sole traders/individual professionals comprise 63.6% of all enterprises (MED June 2007). Approximately 350,000 businesses make up the sector that encompasses businesses employing up to 100 people. Sixty percent of New Zealanders are employed in an SME. SMEs are overwhelmingly owner operated and predominantly domiciled in the same community as the owner. While there is only peripheral research published in New Zealand on this point, we suggest that any positive sustainability impacts in the SME sector are likely to have positive and widespread community effects as well because of the way that small enterprises are embedded into their local communities.

GHGs and their Amelioration

A useful way of looking at GHGs and their amelioration is the 4M model proposed, endorsed and marketed by Landcare Research (see carboNZero website). The four Ms stand for measurement, management, mitigation, and marketing. Measurement is the capture of data on energy usage and its conversion to carbon equivalents. Management is the systems, process, and technological changes required to reduce energy usage and thereby reduce GHG emissions. Mitigation is the offsetting of the remaining GHG emissions by purchasing carbon credits. Marketing is promoting the enterprise as "green" and sustainable thus tapping into the significant market segment that makes purchasing decisions based on an enterprises' sustainability or 'green' credentials.

Measurement and the questions of organisational scope and boundaries

The measurement of GHG emissions requires the SME to gather data on direct and indirect energy use in the enterprise. Before gathering the base data, the enterprise needs to consider which indirect emission sources to track and measure – in the jargon the 'scope' question. The enterprise then needs to determine which parts of the enterprise are going to be measured – in the jargon the 'boundary' question. (see WBCSD/WRI April 2004) Once the scope and boundary questions have been answered, the energy usage data for the defined entity are entered into some form of calculator. These calculators can be found on various websites. However, the complexity doesn't end there. Different countries and regions use different emission factors. These factors convert one measure; say kilowatt-hours of electricity into the equivalent value in carbon dioxide CO2e and then into the equivalent value in tonnes of carbon. The factors for a predominantly fossil fuel driven electricity grid will be different from a largely renewal grid such as New Zealand. For a simple and transparent calculator with a clear differentiation of scope factors and NZ based emission factors see NZBCSD 2007.

Management and the use of systems, processes, and technologies

Once the measurement step has been taken, the enterprise then has to manage a reduction in GHG emissions. This will involve many and varied approaches that will have to be at least semi customised to the enterprises' specific needs and to its choices around scope and boundaries. The sort of actions that can be taken range over:

- better solid waste recycling
- recycling of paper and imaging waste
- capture and recycling of solvents
- reduction in waste volumes
- fleet management reviews and consequent reductions or reorganisation of fleet composition
- travel planning
- green buildings
- supply chain optimisation
- elimination of fugitive emissions of HCFCs

Clearly the expertise required to carry out these management actions vary from using already set up systems from established recyclers through to comprehensive engineering reviews and professional project management delivery for a new or retrofitted green building. Most SMEs, because of their size and scope, do not have the time or expertise to engage with more than a fraction of these management tasks.

Mitigation and the Remission of Sin

Mitigation of GHG emissions consists of buying carbon offsets from programmes such as EBEX21 run by Landcare Research (see EBEX21 website). The problem with mitigation by offset is that it seen by an increasing number of climate change activists as akin to buying papal indulgences for sin.

> Catholic doctrine maintains that to avoid time in Purgatory after you die, you need to expiate your sins via some sort of punishment or task that is an external manifestation of your repentance. The idea was that the clergy were doing more of such actions than their meagre sins demanded, so they effectively had a surplus of good deeds. Under the logic of the emerging market, these could be sold as indulgences to sinners who had money, but not necessarily the time or inclination to repent for themselves. Chaucer's *The Pardoner's Tale* immortalised the sale of such indulgences by

> pardoners, which was essentially how the church took a market-based approach to sinning as a means of income generation. …
>
> Many centuries later, there are new indulgences on the market in the form of carbon offsets. The modern-day Pardoners are companies like Climate Care, the Carbon Neutral Company, Offset My Life and many others. These self-styled 'eco-capitalists' are building up what they claim are 'good climate deeds' through projects which supposedly reduce or avoid greenhouse gas emissions. These wholesale emissions reductions can then be profitably sold back at retail prices to modern-day sinners who have money, but not necessarily the time or inclination to take responsibility for their emissions, and can afford to buy the surplus 'good deeds' from the offset companies. (Transnational Institute – Carbon Trade Watch 2007)

Apart from the dubious morality of carbon offsets, the credibility of the offsets on offer, the complexity of what carbon offsets to buy and the difficulty in acquiring them makes them problematic from the SMEs' perspective. TradeMe, the New Zealand based e-commerce site is offering a limited market in carbon offsets (see TradeMe website) and the New Zealand Stock Exchange has set up TZ1 (see TZ1 website) to act as a market for carbon credits however it is too soon to judge to what extent a deep market in carbon offsets will evolve.

Marketing and the Dangers of Greenwash

And if the difficulties of measurement, management and mitigation weren't enough, the marketing of 'green' credentials is also fraught with problems. The idea that the fourth M has any validity is based on market segmentation studies that show in excess of one million New Zealanders make purchasing decisions based on the social responsibility or green credentials of the enterprise concerned (NJA 2008). To tap into this market segment we have seen market actions such as the commencement of a New Zealand magazine called *Good* (see website) and many organisations becoming certified in the Landcare Research NZ programme called carboNZero[tm] (see carboNZero website) thus allowing them to use the carboNZero certification mark on their goods and services.

Unfortunately for Landcare Research, the first case of greenwashing to come to the attention of the New Zealand Commerce Commission involved Wellington Combined Taxis, a company being advised by Landcare/carboNZero. The Commerce Commission media release number 157 explained that "the growing trend to greenwashing by businesses is cause for concern if the green, eco-friendly or sustainability claims are false or misleading. In fact, the Commission has identified this as a new focus area, due to the proliferation overseas of such claims in marketing hype". [Greenwashing is potentially deceptive marketing designed to portray a company or product as caring for the environment, when the claims can't be substantiated.] (see Commerce Commission website).

Following the involvement of the Commission, Wellington Combined Taxis issued this press release on their website on 7 July 2008:

> Wellington Combined Taxis has joined Landcare Research Ltd's carboNZero programme to assist in measuring and managing our greenhouse gas emissions (carbon footprint) and in turn help reduce our impacts on climate change.
>
> We have signed up with the carboNZero programme - the only New Zealand carbon emissions solution that is based on solid science and is able to meet the very real challenge of robustly and credibly certifying a complex business like ours - because we want to avoid any criticisms of 'greenwash'. Our commitment to reducing our environmental impact is sincere and our relationship with this world-leading programme shows this.

> Landcare Research business manager Mike Tournier says that by partnering with the carboNZero programme Wellington Combined Taxis have taken a clear leadership role in the transport industry.
> "The fight against climate change has shifted into a new gear and with consumers increasingly concerned about carbon emissions and the associated environmental impacts, companies with large emission inventories have very real opportunity to make a difference if they are prepared to engage with and work on the challenge with credibility and integrity. Wellington Combined Taxi's is doing just that through the carboNZero programme".
> The carboNZero programme is an internationally recognised Greenhouse Gas scheme – commonly referred to as carbon footprinting - for organisations, products, services and events, offering optional mitigation strategies through the provision of credible and verified offsets. (see Wellington Combined Taxis website)

The Commerce Commission have made it clear that greenwashing claims will be viewed as misleading the public and will attract legal action. So any SME making marketing claims for any GHG reduction programmes needs to have a fully defensible process backing up their claims. Penalties for breaching the Fair Trading Act include fines up to $60,000 for an individual and $200,000 for a company

Confusion and mistrust in the policy and consulting arenas

When our SME clients and class participants have tried to make sense of what is happening in the public policy and sustainability consulting arenas, they report a sense of confusion and mistrust. The Climate Change Minister, the Hon. David Parker, is seen by many business people as an activist who is unwilling to listen to alternative points of view. The introduction of the ETS legislation into Parliament late in the year of a general election, the minister's failure to build cross party support for the legislation, and the limited time allowed for select committee consideration has attracted substantial criticism (for a reported example see Note 1 below). Likewise, the chief executive officer of the New Zealand Business Council for Sustainable Development, Mr Peter Neilsen has attracted criticism from his own council's members for placing press releases and position papers in the public domain that are not supported by all his members. He has also attracted criticism for releasing position papers that painted an unbalanced picture of the opportunities available to business under the ETS (for a reported example see Note 2 below).

When SMEs have sought consultancy advice, many have got involved with the Landcare Research carbon neutrality programme carboNZero. Many SMEs have been exposed to this programme at the recent Small Business Expos run by Sarah Trotman & Associates (see Small Business Expo website) in Auckland, Wellington and Christchurch. The carboNZero programme is marketed as integral with Landcare Research, a Crown Research Institute [CRI]. Our clients and class participants have drawn the conclusion that the carboNZero programme has explicit Government endorsement when this is not the case. The carboNZero programme promotes a single approach to GHGs with mitigation via offsets as a central part of the programme. The offsets promoted by carboNZero are called EBEX21 offsets. These EBEX21 offsets are an offering of Landcare Research and are only available through the carboNZero programme. The offering by carboNZero of a consulting service that promotes its own product as a central part of the process has called into question the independence of its consulting service in the minds of some of our clients and class participants. Coupled with the comparatively high cost of the programme, in particular the audit component, the carboNZero route may be an inappropriate use of a SMEs limited budget. Certainly, many of our clients and class participants report that the money spent of carboNZero could have been better spent on business development.

As an example of a different approach to the delivery of GHG management processes and delivery of meaningful reductions in GHGs, the Canadian offering called CarbonCounted http://www.carboncounted.com/ perhaps provides an indication of the direction that the NZSSES and its members could consider. An extract from the CarbonCounted website explains:

> CarbonCounted is a **not-for profit organization** created by Andrew Conway, Jeff Rowan and Steve Cox. We are based in Toronto, Ontario, Canada.
> Our goals are to:
>
> - Develop and support our CarbonConnect system which turns the science of greenhouse gas emissions into a simple accounting task for businesses.
> - Empower consumers to reduce their carbon footprints by choosing products and services with lower carbon footprints.
> - Work with environmental consulting firms worldwide to ensure the accuracy of all the carbon footprint data in CarbonConnect.
>
> As Chemical and Professional Engineers with more than 20 years of combined experience in the automotive and general industrial field, we've seen the efficacy of a number of technologies that can reduce energy costs. Our experience in supply chain management inspired us to establish a similar structure for carbon emissions.
> Together with a systems programmer, we spent the early months of 2007 developing the structure for CarbonConnect. We have worked extensively to ensure this accredited structure could grow and adapt to new carbon footprinting requirements and standards.
> In April 2007, CarbonCounted issued a widespread call for comment to gauge acceptance with the "green" community. The response was overwhelmingly positive. Since then, business has begun to register and use CarbonConnect as their method for GHG Inventory Accounting and determining the carbon footprints of their products and services.
> We are always open to questions and feedback as we grow and evolve.

Conclusion

The path to sustainability can be characterised as an archetypal hero's quest. Along the way the SME owner(s) will be exposed to arcane new terms, confusion and obfuscation. They will be assailed by the forces of 'greenwashing' and self-interest. They will rely on the services of guides, some selfless and wise companions, others self interested and foolish. NZSSES and its members can position themselves as those selfless and wise guides and companions by asking how can engineering solutions be made available to the SME sector in a way that supports their journey to sustainability in a cost effective manner. This is not to say that professional advice should be offered for free. However, the use of automated delivery through online solutions or media such as interactive DVD will provide the means to offer this support in a way that pays a fair price for the professional content and intellectual property while offering the SMEs cost effective advisory support.

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http://www.taxis.co.nz/

Note 1 – NZ Herald 17 October 2007 Fran O'Sullivan

Climate Change Minister David Parker is facing fire from business organisations over his plan to rush legislation on the emissions trading scheme into Parliament. Even the leadership panel he has appointed to advise him has deep concerns over issues ranging from the carbon pricing model officials are using through to the effect of climate change policies on New Zealand's economic growth rate.
At issue is whether the Government is on the right track seeking to adopt a "first mover" advantage on climate change - getting NZ's house in order so it won't face a major attack from trading partners.
Or whether it needs to take a bit more time to make sure it's got the modelling right, so that the economy doesn't take a hit when the policies go into effect.
Parker didn't make the first meeting of the 31-strong Climate Change Leadership Forum last Friday, which he has tasked with helping Government develop climate change solutions that will be "durable" and "broadly supported" by the wider community.
The Cabinet minister probably has cast-iron reasons for his absence, but it does contravene statements in Parker's initial press release which his press secretary has yet to provide explanations for. …
The Greenhouse Policy Coalition yesterday wrote to Prime Minister Helen Clark warning her that unless there was an adequate timeframe for consultation and a thorough analysis of the economic and social impacts of the scheme, "there is the risk that it will prove unworkable and chaotic, be economically and politically unsustainable, and hence fail to provide any certainty for business".
The coalition is also worried at the Government's announcement last week that it planned to completely ban any new base load fossil fuel (by regulation if necessary) and aim for a 90 per cent renewable electricity sector.
"This is a draconian measure on top of pricing carbon and inconsistent with a market-based strategy. It will undoubtedly lead to investment decline and increased price and security of supply risk."

Note 2 – NZ Herald 25 June2008 Fran O'Sullivan

Some key members of the New Zealand Business Council for Sustainable Development are steamed up about yesterday's "special report" to MPs promoting a multibillion-dollar bonanza for New Zealand if the emissions trading legislation is passed.
At issue is why the council's executive did not let all its members know it had commissioned special research, did not make copies of its report available to members when asked, and issued media claims that are not fully supported by the underlying analysis.
"We've been blindsided" was one of the more printable comments flying around the traps yesterday as companies ranging from Holcim to Fonterra considered their formal responses in relation to the report.
Like many membership-based organisations, the council advocates positions that are not supported by all its members. But the companies believe that as a matter of good governance they should have known what was about to go into the public domain. Not have to wait until reading it was about to be released in news media reports on Monday.

Disclosure: following the submission in March 2008 of the abstract that forms the basis for this paper, CarbonCounted made an unsolicited approach to Sempre Avanti Consulting to ask if we would act as their agent in New Zealand. As their ethical and corporate social responsibility stance is in complete accord with our own we evaluated their product and service offering and we have chosen to offer CarbonCounted as one of our product offerings.

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