

A MARKETING STRATEGY FOR HAC CONSULTING'S EMISSIONS TRADING CONSULTING SERVICES

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ABSTRACT

HAC Consulting Pty Ltd. (HAC) is currently examining strategic options to grow its consulting services business, specifically in the emissions trading consulting services industry, in anticipation of the implementation of an Emission Trading Scheme in Australia by 2010. Climate change is the driving force for Emission Trading Schemes and the Australian ETS is expected to fuel demand for the next few years. The industry is characterized by high supplier power, threat of entry, Government intervention, low threat of substitutes, moderate customer power and increasing rivalry. HAC faces many competitors in this industry, but the rapid growth of demand and current industry positioning allows it to differentiate its services from its competitors. A SWOT Analysis reveals the internal capabilities of HAC and the strategic alternatives available. It is recommended that HAC establish a marketing plan to promote itself through increasing awareness for the Australian ETS.

Keywords: ETS, Climate Change, Australian ETS, Emissions Trading, Consulting, Marketing Strategy, Demand Estimation, Competitive Analysis

DEDICATION

To my parents, Jawed and Yasmin and my sister, Zohra. For all the sacrifices you have made for me to be able to live here in Canada. Your encouragement, love and unconditional support has been the source of my inspiration and my motivation to succeed.

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GLOSSARY

UN	United Nations
IPCC	Intergovernmental Panel on Climate Change (IPCC)
GHG	Greenhouse Gas
ETS	Emission Trading Scheme
EU	European Union
EU ETS	European Union Emissions Trading System
JI	Joint Implementation
CDM	Clean Development Mechanism
NGER	National Greenhouse and Energy Reporting
HAC	HAC Consulting Pty Ltd
ABS	Australian Bureau of Statistics
SEO	Search Engine Optimization
SCO2CC	Strategic Carbon Credit Consulting

1: INTRODUCTION

1.1 HAC Consulting Pty Ltd

HAC Consulting Pty Ltd (HAC) is a privately owned consulting company with offices in Perth and Melbourne. The company was co-founded in early 2007 by “key leaders of the team that managed Perth’s Hydrogen Fuel Cell Bus Trial” (HAC Australia Pty Ltd, 2008). HAC provides consulting services to both corporate and government clients in a wide range of areas primarily related to sustainability and climate change (Appendix 1). The company has over 30 consultants on staff with expertise in a wide range of areas, and provide their clients with project teams or high-level consultant to provide strategic advice. The company maintains active membership in various sustainability and environment associations. HAC is very closely involved in the Australian Emission Trading Scheme (ETS), providing preparatory consulting and emissions auditing services and contributing to the Garnaut Climate Change Review through their submission “The need to develop innovative policy mechanisms in parallel with the Emissions Trading Scheme”(HAC Australia, 2008).

1.2 Current Product Offering in the Emission Trading Consulting Service Industry

HAC Consulting currently provides the complete set of services that fulfil the needs of Australian businesses to reach compliance with the ETS. The

services are provided individually or as a whole set depending on client needs. Their current value proposition is:

“A holistic approach to emissions trading. A full service solution, including auditing and creation of data workflows that assists in reporting to the NGER and is auditable and traceable. Once workflows are established, customers are presented with the best options of reducing greenhouse energy use and then they are presented the best ROI (for marginal abatement cost). Consulting services include giving advice on how to pass costs on to the customer and managing supply chain effects.”

-Jamie Ally, co-founder of HAC Consulting

1.3 Purpose of Analysis

HAC Consulting Pty Ltd. (HAC) is currently examining strategic options to grow its consulting services business over the next 3 years. The upcoming Australian ETS and the urgent need for companies to comply to the ETS has created a unique opportunity for growth in consulting services for emissions and carbon trading analysis and management. The purpose of this project is to analyze the market for emissions trading consulting services in Australia and propose specific strategic recommendations for HAC Consulting Inc. to refine the services it provides in this segment, and offer better value to its customers.

1.4 Document Overview

Climate change has become the hot button topic of our generation, with the effects of the resource hungry Industrial and Information Revolutions leaving

a visible effect on Earth's environment. This analysis provides evidence of these effects from United Nations reports as it sets the context for Emission Trading Schemes (ETS) in general and the Kyoto Protocol and the Australian Emission Trading Scheme in particular. It provides the economic explanation for how ETSs reduce pollution, and proceeds to define the processes that are involved in the Australian ETS.

HAC Consulting Pty Ltd. (HAC) is a consulting company for sustainability and climate change policy projects. A significant portion of their business is through the provision of niche services, such as climate change consulting for governments, developing sustainability strategies for corporations, and energy and emissions auditing. The principals of HAC have an overall business strategy to expand their consulting services into emissions and carbon trading analysis (identified in this analysis as Emissions Trading Consulting Services).

This project applies a standard strategic analysis framework to the emissions trading consulting industry in Australia. As the Australian ETS is still pending specification, this analysis estimates the market segments in this industry using the processes required by the ETS and the industrial sectors that are expected to be affected by the ETS. Demand size in the industry is approximated using figures from draft ETS reports. In order to define the key success factors for the emissions trading consulting industry, Porter's Five Forces Framework is applied and extended to include Government influence, as the Government of Australia is a significant factor in this industry.

The process of competitor analysis reveals many competitors that can be further categorized into three groups. Positioning the competitors along segmentation lines identifies three possible opportunities. These are emissions tracking services, full-service emissions trading consulting services tailored to a specific industry and full-service consulting services provided to all industries in general.

An internal analysis of HAC Consulting Pty Ltd is performed and its capabilities are determined using the SWOT Analysis Framework. The SWOT Framework is then applied to the process of generating alternate strategies. Using the SWOT analysis as a guide, the project recommends the use of a mixed defensive and adaptive strategy that provides the best path for long-term growth. The primary recommendation is to use the opportunity created by the lack of awareness of the Australian ETS to establish a marketing plan and infrastructure to develop HAC's brand in the industry. This will be accomplished by communicating to customers to be proactive in preparing for ETS compliance. The proposed implementation of this strategy is through an Internet marketing campaign to provide a cost efficient channel and set of tools to provide feedback and results monitoring. The analysis concludes that the current environment is favourable for HAC to pursue a long-term growth strategy in providing emissions trading consulting services to the Australian market.

2: BACKGROUND

2.1 Climate Change

The Industrial Revolutions of the 18th and 19th centuries spawned rapid economic growth around the globe, made way for the emergence of capitalism and set the stage for the modernization of society through the 20th century. These Revolutions hinged on the precepts that natural resources such as fossil fuels, water, forests and land are available in limitless supply, and that the earth is capable of absorbing the effects of the by-products of massive industrialization without any noticeable changes. As society has continued to mature through the Information and Technological Ages, it has come to the realization that earth's resources are in fact, not limitless, and that there is a possibility that human industrial and agricultural activity will result in direct consequences to the earth's environment. Due to this realization, the United Nations (UN) established the Intergovernmental Panel on Climate Change (IPCC) in 1988 (Intergovernmental Panel on Climate Change) as a source of information on climate change to policy makers.

In 2007, the IPCC released the first of four reports on Climate Change, which stated that:

“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures,

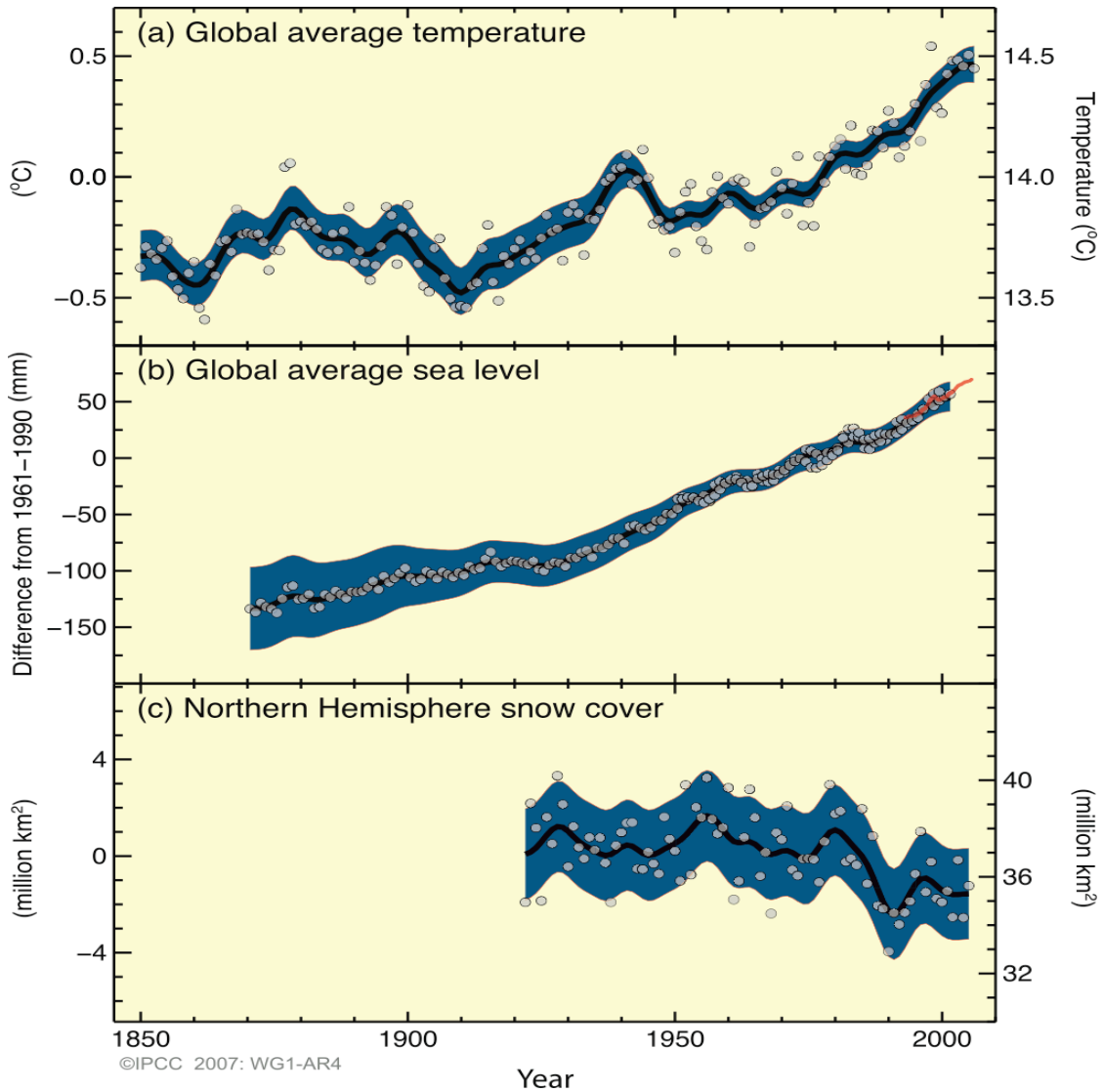
widespread melting of snow and ice, and rising global average sea level”
(Solomon, et al., 2007)

The report also stated that there is a 90% chance that:

“The global average net effect of human activities since 1750 has been one of warming” (Solomon, et al., 2007)

The report concluded that the increase in concentrations of greenhouse gases (GHGs) such as carbon dioxide, nitrogen oxide and hydrocarbons in the atmosphere because of human activities is a significant cause of the warming effect. Figure 1 shows the summary from the IPCC report on the warming trend in average surface temperature and the corresponding increase in average sea level and decrease in snow coverage.

Figure 1 Observed changes in (a) global average surface temperature, (b) global average sea level from tide gauge (blue) and satellite (red) data and (c) Northern Hemisphere snow cover for March-April.



Note: All changes are relative to corresponding averages for the period 1961-1990. Smoothed curves represent decadal averaged values while circles show yearly values. The shaded areas are the uncertainty intervals estimated from a comprehensive analysis of known uncertainties (a and b) and from the time series (c). Solomon, S., Qin, D., Manning, M., Chen, Z., Marquis, M., Averyt, K., et al. (2007). *IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press.

The 2007 report confirmed existing fears and expectations that human activity was having a direct effect on the environment and that drastic measures were required to alter current practices in order to minimize this impact. These measures are part of the New Industrial Revolution (Canada NewsWire, 2004), which advocates the development of technologies, systems and industries to further economic competitiveness with strict environmental considerations. An example of a system that is part of the New Industrial Revolution is the Emission Trading System (ETS).

2.2 Emission Trading Scheme (ETS)

An Emission Trading Scheme (ETS) is a mechanism that employs the concepts of economics to achieve a lowering of emissions. Economists Alfred Marshall and Henry George first came up with the idea of emissions trading 100 years ago with the theory that “assigning property rights to the environment was a good way to protect it” (Financial Times, 2007). They postulated, “Setting limits and then enabling individuals to trade their allowances was a better way to protect the environment at least cost” than assigning participants with fixed limits (Financial Times, 2007). This concept is the basis of the modern “cap and trade” ETS, in which a regulating body imposes a “cap” (or limit) on the total amount of pollution (in the form of credits) that participants are allowed to emit.

In an ETS, the regulating body distributes emission credits amongst the ETS participants. Participants who want to emit more can then purchase extra credits from other less polluting participants who have spare credits to sell. The regulating body monitors the “trade” activity with regard to the exchange of

credits, and then decreases the cap with the passage of time. The theory behind why an ETS will result in a decrease in pollution is that as the cap continues to decrease, the price of spare credits will increase due to scarcity and increasing demand, resulting in the investment in cutting emissions being a more cost-efficient measure for participants. The Kyoto Protocol and the upcoming Australian ETS are examples of cap and trade ETSs.

2.3 The Kyoto Protocol

The Kyoto Protocol is an international agreement between 37 industrialized countries and the European community that commits them to reducing GHG emissions “by an average of 5% against 1990 levels over the five-year period 2008-2012” (United Nations Framework Convention on Climate Change, 2008). A central mechanism in the Kyoto Protocol is Emissions Trading, also referred to as “the carbon market”, which is centred in the London financial marketplace. Reporting will complement this global ETS; registry and compliance systems to assist the UN Climate Change Secretariat regulate transactions and monitor country-by-country emission inventories. At the end of 2012, the Protocol will be renegotiated and ratified in order to meet the emission reductions requirements laid out in the 2007 IPCC Climate Change Report. (United Nations Framework Convention on Climate Change, 2008).

Kyoto member nations are now in the process of implementing their own ETSs and then linking them back to the Kyoto ETS according to the Joint Implementation (JI) and Clean Development Mechanisms (CDM) in the Protocol as part of their commitments to the Treaty. The Kyoto Protocol defines Annex I

countries as industrialised nations, and Annex II countries as a subset of the industrialised nations which have to pay for the developing countries. The JI mechanism is in place so that Annex II countries (rich countries like Canada, Britain, Australia) can generate credits by paying for abatement in poorer countries that are still Annex I (like Romania, Russia, etc), whereas the CDM is used when Annex II countries generate credits by paying for abatement in developing countries like India or China. So, under the Kyoto ETS, countries can buy permits, trade permits within the ETS, or they can generate permits by paying for abatement through JI or CDM.

The European Union (EU) established the first multi-national GHG ETS and linked it backed to the Kyoto Protocol mechanisms (European Union, 2004). The EU ETS covers the European industrial and energy sectors, which are responsible for half of the EU's CO₂ emissions and 40% of its total GHG emissions. New Zealand is currently in the process of designing an ETS, which will incorporate forest carbon in addition to industrial and energy emissions in order to account for deforestation activities. Australia is the next major Kyoto member scheduled to implement a Kyoto-linked ETS in 2010.

2.4 Australia's ETS

“The introduction of emissions trading will constitute the most significant economic and structural reform undertaken in Australia since the trade liberalisation of the 1980s.”

– Minister for Climate Change and Water, Senator the Hon Penny Wong

The Australian Government is implementing an ETS scheduled to become effective no later than 2010. Table 1 shows the expected timeline for the implementation of the Australian ETS. The cap and trade system, expected to be internationally consistent with the Kyoto Protocol, must reduce emissions by 60 per cent by 2050, and be fair and economically responsible for the Australian economy (Australian Government, Department of Climate Change, 2008). The ETS will be implemented using a phased approach, with the initial design being completed in July 2008. The ETS initial design Green Paper is an expected result of the Garnaut Climate Change Review, an independent study by Professor Ross Garnaut, commissioned by The Australian Government to examine “the impacts of climate change on the Australian economy and recommend medium to long-term policies and policy frameworks to improve the prospects for sustainable prosperity.” (Garnaut Climate Change Review, 2008)

Table 1 **Australia ETS Timetable**

Australia ETS Timetable	
July 2008	Public release of the Green Paper on scheme design
July-Sept 2008	Phase 2 consultation on the Green Paper
Dec 2008	Public release of exposure draft of legislative package
Dec 2008-Feb 2009	Phase 3 consultation on exposure draft legislation package
End 2008	Firm indication by Government of planned medium-term trajectory for the scheme
Mar 2009	Bill introduced into Parliament
Mid-2009	Government aims to achieve passage of bill by Parliament at this time
During 2009	Phase 4 consultation on emissions trading regulations
Q3 2009	Act enters into force; scheme regulator established
2010	Emissions trading scheme will commence

Note: Adapted From Australian Government, Department of Climate Change. (2008, April 03). *Emissions Trading Scheme - Timetable*. Retrieved June 14, 2008, from Australian Government - Department of Climate Change: <http://www.greenhouse.gov.au/emissionstrading/timetable.html> (Australian Government, Department of Climate Change, 2008)

As a first step in recording current emissions and energy consumption, the Australian Government passed The National Greenhouse and Energy Reporting (NGER) Act of 2007, which establishes a mandatory corporate reporting system for GHG emissions, energy consumption and production starting from July 1,

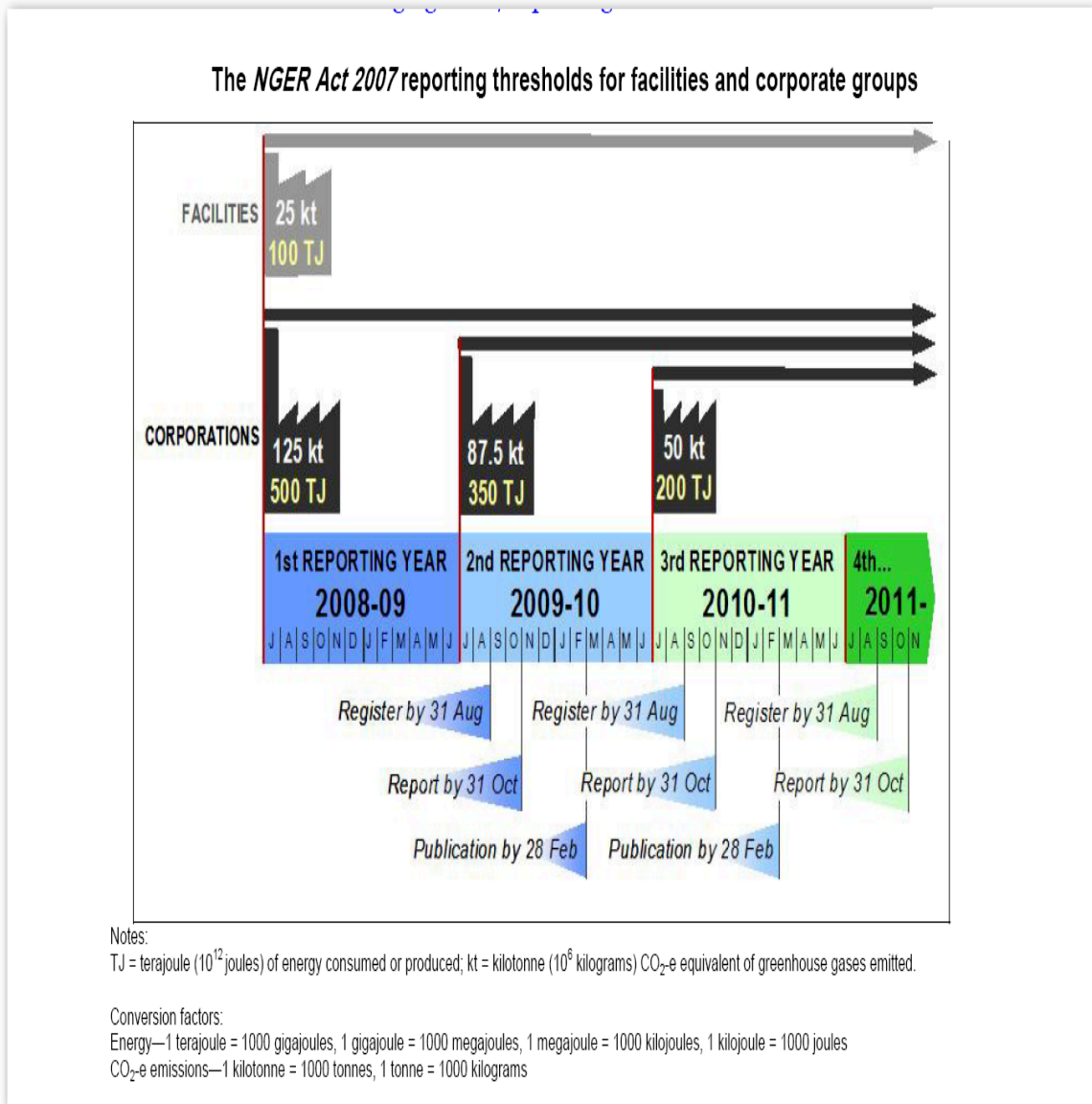
2008. The reporting system in the act is a threshold-based system, with the following rules:

“From 1 July 2008, corporations will be required to register and report for the 2008-2009 financial year if:

- They control a facility that emits 25 kilo tonnes or more of greenhouse gases (CO2 equivalent), or produce or consume 100 terajoules or more of energy; or*
- Their corporate group emits 125 kilo tonnes or more greenhouse gases (CO2 equivalent), or produces or consume 500 terajoules or more of energy.*

Lower thresholds for corporate groups will be phased in by 2010-11. The final thresholds will be 50 kilo tonnes of greenhouse gases (CO2 equivalent) or 200 terajoules of energy.” Figure 2 shows the timetable for the NGER’s adjusting threshold requirements. (Australian Government, Department of Climate Change, 2007). With the strict requirements of NGER in place, companies and businesses in Australia have to start auditing their current emissions and energy expenditures.

Figure 2 NGER Act 2007 Reporting Thresholds Timeline



Note: From Australian Government, Department of Climate Change. (2007, September). Overview of NGER Act 2007. Australia.

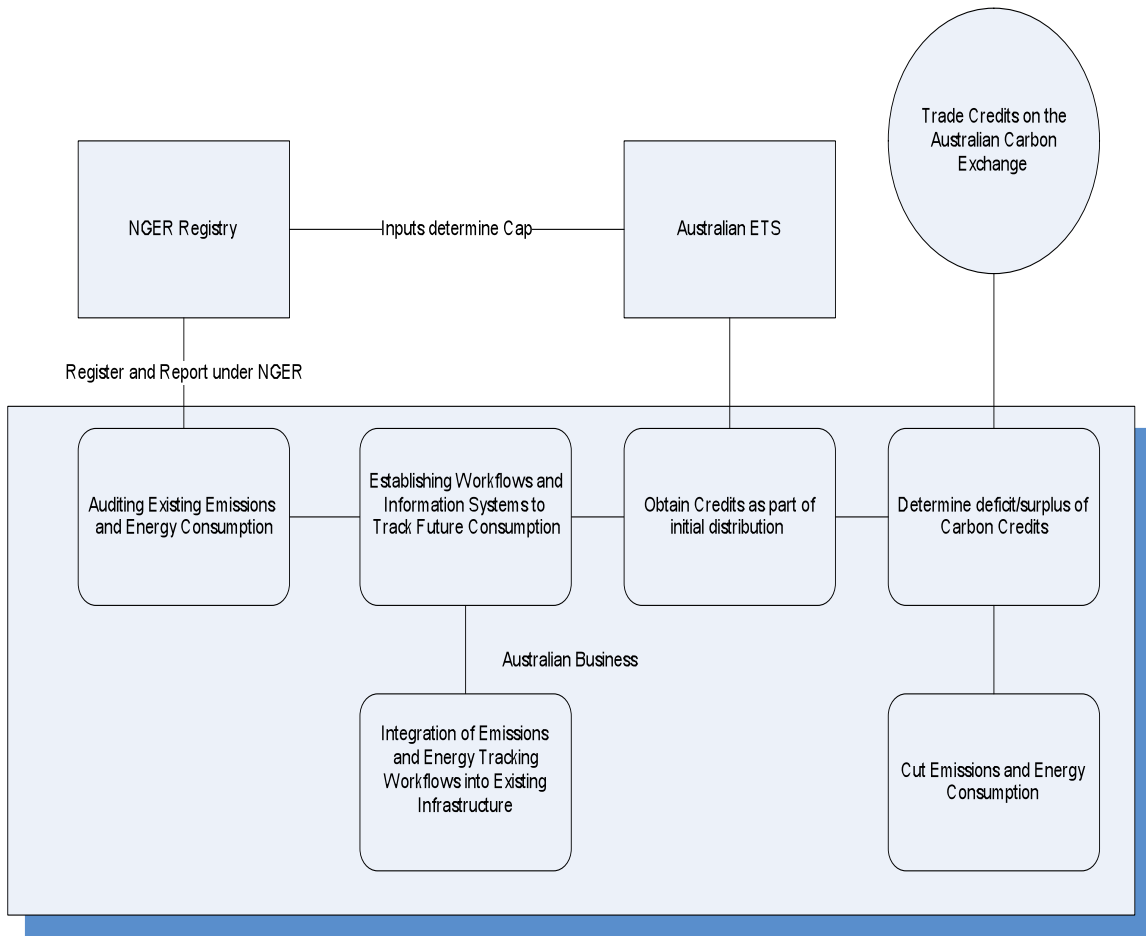
The Australian ETS is expected to cover the six GHG's as defined in the Kyoto protocol and the following sectors of the Australian economy from scheme outset: stationary energy, industrial processes, emissions from fuels, transport and waste. The Agriculture and forestry industries will be included as soon as practical. Households and businesses not included in the first reporting phase of

the NGER Act are not expected to be covered by the scheme (Garnaut Climate Change Review, 2008) .

3: PREPARING FOR AUSTRALIA'S ETS

With the prospect of Australia's ETS going public in 2010, a majority of Australian businesses that fit the reporting requirements threshold under the NGER Act of 2007 have to start preparing to be able to operate under the ETS. Figure 3 breaks down the processes that these businesses must undertake to reach compliance with the ETS. It also shows how these processes interact with the ETS environment, including the government registry and the trading of carbon credits on the Australian Carbon Exchange.

Figure 3 Overview of Processes Required for ETS Compliance



The first step for a business to undertake is auditing its existing emissions and energy consumptions. The auditing process will determine the business' carbon footprint, allow it to report, and register under the NGER guidelines. Best practices recommend companies to follow internationally recognized standards when auditing their emissions and energy consumption in order to be able to facilitate compliance with future international and domestic reporting requirements.

The audit provides the baseline for the business' operations and enables it to meet the initial NGER requirements. However, in order for continued reporting

requirements and compliance under the ETS, the business will have to track its emissions and energy consumption. The best way to do continuous tracking is to implement a tracking system. The tracking system can be either paper-based or an information systems solution. An important part of introducing an emissions tracking system is its integration into a business' existing operations.

Once the ETS begins in 2010, the business will receive an initial allotment of carbon credits (either through allocation or through auction, depending on the mechanism chosen by the Garnaut Review). The company will need to figure out the best way to allocate these credits to its different operations. Once this information is known, the company will be aware of any carbon deficits or surpluses and will have to trade the carbon credits on the Australian Carbon Exchange. Throughout the process, the company will have to evaluate whether buying credits is more cost effective than investing in cutting the emissions themselves.

4: EXTERNAL ANALYSIS

The following section provides a detailed external analysis of the emissions trading consulting services industry in Australia. This analysis defines the segmentation of the market for this industry by services required by customers and by industrial sector and provides an estimate of industry size and growth trends. Next, the application of the Six Forces Analysis Framework for the emissions trading consulting services industry identifies the key success factors for the industry. Finally, a detailed competitor analysis identifies the types of competitors, a full list of competitors in Australia and how they have strategically positioned themselves to service the needs of the industry.

4.1 Emissions Trading Consulting Services Industry

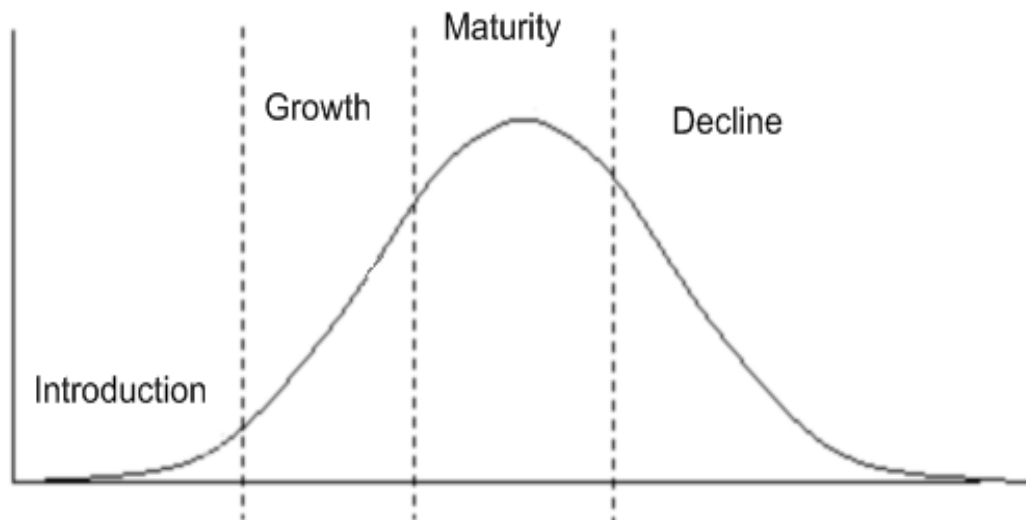
4.1.1 Background

The emissions trading consulting services industry is a part of the climate change industry. The climate change industry provides services and products targeted at assisting traditional industries and businesses cope with the rigours of dealing with regulations and requirements enacted to reduce emissions and energy consumption caused by global climate change. The climate change industry is growing globally due to treaties like the Kyoto Protocol and is experiencing accelerated growth in Australia due to the impending implementation of the Australian ETS.

A major factor in the accelerated growth of the industry is the speed at which the Australian ETS is being implemented. With the specifications for the design due in July 2008, the ETS is expected to become effective in 2010. A recent survey has identified that only 36 percent of business executives were aware of the scheme beginning in 2010 and a very large eighty percent of executives has little knowledge or were only “somewhat aware” of it (ABC News Online, 2008). This leads to the assumption that there will be a rush of demand for emissions trading consulting services in a very short time as businesses scramble to reach compliance.

Figure 4 shows the industry lifecycle and its four stages. The climate change industry in general is in the growth stage of the industry life cycle because climate change itself has been on the official policy radar for only the past decade or so (Kyoto was ratified in 1997), and thus the emissions trading consulting services industry, in Australia in particular, can also be characterized to be in this stage. This stage is identified by the entry of competitors, an increase in the number of customers and few firms exiting the market.

Figure 4 Industry Life Cycle Stages



Note: Adapted from Moore, G. A. (2002). Crossing the Chasm: Marketing and Selling Disruptive Products to Mainstream Customers. New York: Harper Collins

Chapter 3 highlighted the various processes that an Australian business will require to participate in the Australian Carbon Market and be compliant in the ETS. These processes outline the various products and services required serve as separate markets for companies to provide products and services. Thus, the services and products that make up the emissions trading consulting services industry are:

1. Emissions and energy consumption auditing services
2. Information systems to track emissions from operations
3. Consulting services to efficiently allocate credits to existing operations

4. Consulting services to model and project carbon credit deficits and surpluses based on operational usage
5. Consulting services to provide strategic advice into efficient carbon credit trading decisions
6. Consulting services/products to reduce a company's carbon footprint in its future operations

4.1.2 Market Segments

There are two ways to segment the emissions trading consulting services market. The first method is segmentation of the market by the different types of services required by customers to reach ETS compliance. The second is segmentation along industrial sectors.

4.1.2.1 Segmentation by Services

Segmenting the market by services means considering the different services required in the process of companies becoming compliant with the Australian ETS. Chapter 3 provided a broad introduction to the services required by Australian companies to become ETS compliant. Using this as a reference, the list of services are grouped into four broad categories:

Emissions and Energy Consumption Auditing Services

Emissions and energy consumption auditing services are intended to provide a standardized, structured approach to recording and reporting existing emission levels from operations. This is a segment with initial growth potential, as a majority of companies will be requiring these services in order to reach

compliance with the ETS come 2010. But this is a segment which will eventually experience small growth rates after the initial boom, since once auditing services have been used to establish current levels, the process does not need to be repeated as tracking services will maintain the information. According to the Australian Bureau of Statistics (ABS), the average annual rate of growth of the number of Australian businesses over the last four years is 1.6% (Australian Bureau of Statistics, 2007). Considering a majority (90%) of business entries are small businesses (non-employing or employing less than 4 employees), that means the expected annual rate of growth for this segment once the ETS is in full operation can be expected to be less than 0.5%.

Emissions Tracking Services

Emissions tracking services will provide companies with a continuous monitoring of emissions and energy consumption. These services are setup to complement the results of the initial audit. The services in this segment can vary from paper-based systems to complex information management systems setup, along with guidance and education services to clients on how to record emissions. This segment can provide continuous income for companies as the tracking process will be performed throughout the year and will need to be integrated into existing operations, and will be followed by mandatory third-party verification once the ETS is underway.

Carbon Supply-Chain Consulting

The carbon supply-chain consulting segment deals with services that reduce the carbon footprint of a company's supply-chain activities. It involves

monitoring and recording emissions usage from supply-chain operations and providing advice on how to make the operations more carbon friendly to reduce emissions in order to reduce credit usage. These services also include long term planning to reduce carbon output from supply-chain operations.

Strategic Carbon Credit Consulting Services

Strategic carbon credit consulting services segment involves the planning and efficient use of a company's carbon credits. Consulting firms in this segment provide their clients with advice on the most efficient way to perform their carbon trading activities. The services also include the projection and modelling of carbon credit usage to plan investments and activity to achieve the best return on investment for the client's carbon credits.

4.1.2.2 Segmentation by Industrial Sector

Aside from the service segment view of the market, the emission trading consulting market is segmented along industrial sectors. Appendix 2 shows the distribution of Australian businesses by industrial sector. As the Australian ETS will be selectively applied across specific industrial sectors, companies in this market can compete along industrial sectors to take advantage of specialized domain knowledge. For example, a company with expertise in the mining sector and environmental consulting experience would be more adept at providing emissions trading consulting services to the mining industry since they will have an advantage with their wealth of domain specific experience.

4.1.3 Industry Size and Growth Trends

This section estimates the size of the emissions trading consulting services industry and presents probable growth scenarios. Concerning the Australian market, Table 2 is an approximate list of the sectors affected by the ETS according to the preliminary specifications from the Garnaut Climate Change Review (Garnaut Climate Change Review, 2008). Over 850,00 businesses could be affected by the ETS, with the biggest sectors being construction, retail, manufacturing and transport (Table 2).

Table 2 *Potential Sectors Affected by ETS and Their Sizes*

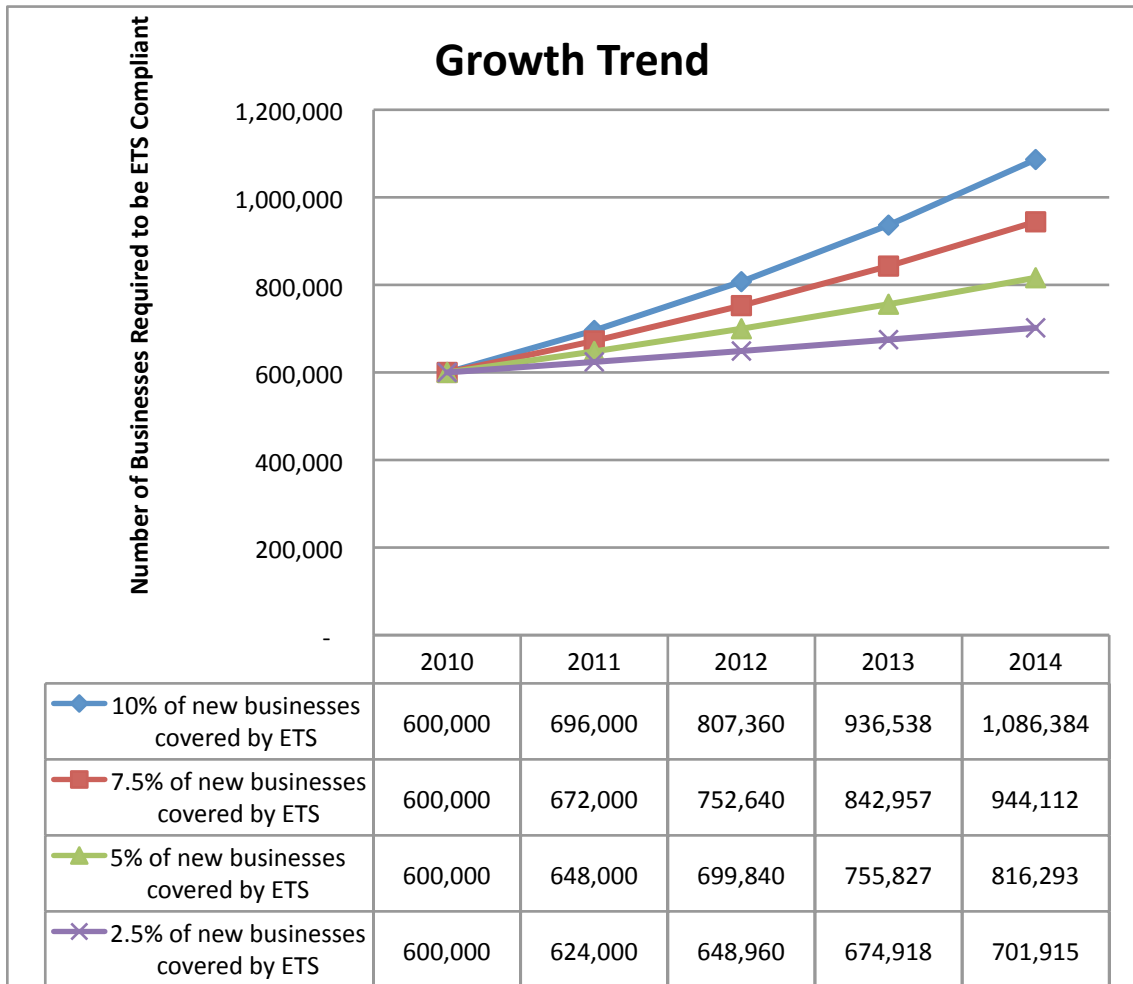
Industrial Sector	Number of Businesses
Mining	7,205
Manufacturing	106,565
Electricity, Gas and Water Supply	1,968
Construction	322,404
Wholesale Trade	85,398
Retail Trade	219,308
Transport and Storage	117,323
Total	860,171

Note: From Australian Bureau of Statistics. (2007). *Counts of Australian Businesses, Including Entries and Exits*. Canberra: Australian Bureau of Statistics.

The NGER Act of 2007 will “improve data coverage to over 70% of greenhouse gas emissions in the covered sectors” (Australian Government, Department of Climate Change, 2007). Using this as an estimation number, the initial industry size for emissions trading consulting services for the Australian ETS is over 600,000 businesses. The initial number does not include the

Forestry and Agriculture industries, which would add another 200,000 businesses to the initial industry size once they are covered by the ETS in the future.

Figure 5 Growth Trend for ETS Consulting



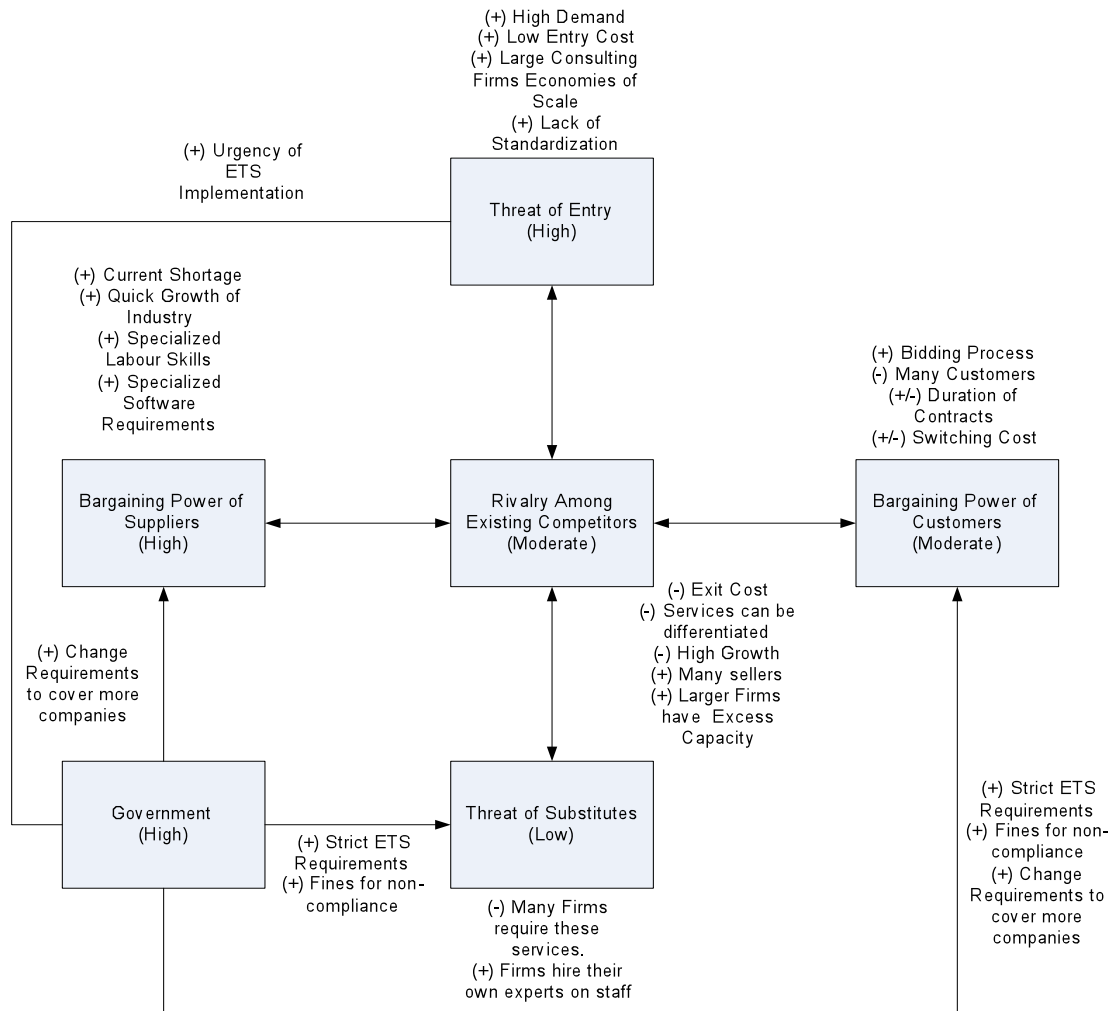
The growth potential of the industry can only be estimated based on assumptions. Figure 5 shows the growth trends based of four different scenarios. The scenarios are based on the assumption that each year a certain

percentage of Australian businesses that are created will need to be covered by the ETS, and that that percentage varies based on the success of the ETS. If the ETS is more successful, then the assumption is that a greater percentage of new businesses will be covered by the ETS. For example, in Figure 5, the highest growth scenario assumes that 10 percent of new Australian businesses are covered by the ETS (based off the estimate that 10 percent of new Australian businesses are in the medium to large size range). Using the average growth of 1.6 percent annually for Australian businesses, the highest growth scenario estimates that the size of the industry will be over a million firms.

4.2 Industry Analysis

An industry analysis provides an assessment of firm and industry performance and identifies key factors that affect profitability in the competitive environment. Michael Porter's Five Forces Framework (Porter, 1979) provides a standard methodology to perform an industry analysis. An extension of Porter's Five Forces is the Six Forces Framework, which takes into account the effect of government on the industry being analyzed.

Figure 6 Porter's Five Forces Plus Government Influence Analysis of the Australian ETS Consulting Services Industry



Note: From Porter, M. (1979). *How Competitive Forces Shape Strategy*. Harvard Business Review

Figure 6 shows the six forces analysis for the emissions trading consulting industry. The diagram shows the sum of the effect of individual variables in the case of each force. A negative (-) sign indicates a variable that reduces the impact of the force on the industry, whereas a positive (+) sign indicates a variable that increases the impact of the force on the industry. A variable that has both a positive and negative sign (+/-) indicates that the variable can affect the force in either way.

4.2.1 Bargaining Power of Suppliers

The bargaining power of suppliers in the emissions trading consulting services industry is very high and has a pronounced negative effect on the attractiveness of this industry. There are two major suppliers to the emissions trading consulting services industry. The most important major supplier is labour in the form of consultants and experts. Many variables currently increase the bargaining power of labour in the industry. With the rapid growth of the industry in Australia with the upcoming ETS, there is a shortage of skilled consultants with expertise in the climate change domain. The shortage is so severe, that the industry is forced to hire labour from overseas in order to fill the void (Warren, 2007). Some companies are going so far as to hire local professionals whose main domain of expertise is not one of environmental engineering, environmental management or climate change (Warren, 2007). The specialization of the skills themselves also increases the bargaining power of labour suppliers to the industry.

The second major supplier is the software industry. This is specifically true for service providers that operate in the emissions tracking systems segment. The software, similar to the labour, is very specialized, as it must be geared towards solving the emissions tracking problem. The software is very specific, as it requires interaction across many functional roles within each organisation, such as finance, legal, operations, environmental and other corporate functions. If the software is outsourced, it must be done from very specific suppliers, and if it is created in-house, the problem domain is so specific

that a team of software developers would require the guidance of an industry expert to create the product. Thus, the suppliers to the emissions trading consulting firms have a very high influence on the profitability of a firm in the industry.

4.2.2 Rivalry among Existing Competitors

The rivalry among existing customers in the emissions trading consulting industry is moderate. There are both enhancing and dampening variables that affect this force. The fact that the industry is in the growth stage of the lifecycle means that there are many customers in the Australian market, which should have an overall dampening effect on the rivalry between competitors, as there will be market share up for grabs. Another dampening effect on the rivalry in the industry caused by the industry being in the growth stage is that the consulting services themselves are not yet in a mature state. There is a lot of room for competitors to differentiate their services based on customizing their offerings to a particular segment.

However, certain conditions are increasing the rivalry in the industry. The first is the fact that there already are quite a few competitors offering services to the customers and contracts are obtained through a tender or Request for Proposal (RFP) process. Secondly, some of the competitors in the emissions trading consulting services industry are larger consulting firms that have excess capacity in terms of consulting staff and thus they are able to bid on and manage more contracts simultaneously.

4.2.3 Threat of Substitutes

The power of substitutes in the emissions trading consulting industry is low compared to the other forces in the six forces framework, making the industry more attractive for competing firms. The reason for this is that the only real substitute for a company offering a contract to a consulting firm is for them to hire a climate change expert on staff and then perform all the services in-house (including the auditing, tracking and credit trading management). This may be an option for some of the larger customer firms in the market, but it is a difficult option to pursue due to the extreme shortage of capable talent available (high power of suppliers) and that shortage promotes the need for firms to outsource the services to a consulting firm that specializes in this area. The other reason why there are not many viable substitutes to emissions trading consulting services in Australia is the requirements set in place by the government to bring in the ETS and the fact that all companies that are covered by the ETS need to be compliant or risk being penalized by the government.

4.2.4 Threat of Entry

The threat of entry into the emissions trading consulting services industry is rated high, which makes the industry less attractive for a firm that is competing in it. The primary reason for this is the low barrier to entry. There are minimal fixed costs to starting a consulting service, and individual experts can start up their own firms and provide services to the smaller customer firms in the market place. This fact also raises another serious issue. There is no standardization of

skills and qualifications to be a consultant in this industry, which opens the possibility of more small firms entering the marketplace.

Another factor that contributes to the threat of entry being high is the presence of large global conglomerate consulting firms. They are able to enter the market easily using their economies of scale when it comes to consulting talent, and with the above-mentioned lack of qualifications, they are able to field teams to challenge for contracts with minimum investment in entry costs. The high demand for these services caused by the rapid implementation of the ETS by the Government of Australia further exacerbates the threat of new entrants in this industry.

4.2.5 Bargaining Power of Customers

Customers in the emissions trading consulting services industry currently have moderate bargaining power, which increases industry attractiveness for competing firms. The demand for the services created by the implementation of the Australian ETS by Government has the biggest dampening effect on the bargaining power of customers because if they are covered under the ETS, then they have to buy these services and become compliant or risk being penalized by the Government. Although a bidding process for contracts increases the bargaining power of the customer, the fact that there are many customers in the market for these services (almost 600,000 according to section 5.1.3) has the opposite dampening effect on the bargaining power of the customer. Although duration of contracts and switching costs can go both ways in affecting the buying power of the customer, these variables fluctuate on a contract-to-contract

basis. For example, some companies offer single instance consulting advice on small issues, which would fall under shorter duration contracts, whereas a team project consulting approach would involve a longer-term contract, which would reduce the ability of the customer to exit the contract. The same applies to switching cost from process to process. That is entirely dependent on the implementation provided by a consulting company. Some companies provide solutions that enable the customer to get future services from a different provider (this would be indicative of a one shot consulting advice) compared to implementations that lock the customer in to every aspect of emissions trading.

4.2.6 Role of Government

The Government of Australia has a very big role in the industry, as it is the primary driver for the demand of emissions trading consulting services. This pronounced Government effect makes the industry less attractive for a competitive firm, as it places a requirement on the firm to be aware of Government Policy and to be able to anticipate any changes to policy with the passage of time. As the ETS matures, the Government will increase its coverage over a larger segment of the economy, which will directly affect the bargaining power of suppliers and customers.

With the ETS being legislated, the Government of Australia has the power to fine businesses for non-compliance, and this punitive ability will put increasing pressure on businesses and thus decrease the bargaining power of customers, as they will scramble to meet the requirements placed on them. This will also directly affect the threat of substitutes as well, since companies will be compelled

to outsource emissions trading consulting services. Since these services are very specifically serving Australian businesses' need to comply, the threat of substitutes that can fulfil these needs becomes reduced even further.

4.2.7 Summary of Six Forces Analysis

The emissions trading consulting services industry is characterized by high bargaining power of suppliers, a high threat of entry, low threat of substitutes and moderate bargaining power for customers and an increasing threat of rivalry from competitors. The role of Government on the forces in the industry is extremely pronounced. The overall attractiveness of the industry is moderate to high, depending on the capabilities of the firm. A firm with specialized capabilities such as experience in sustainability projects, emissions trading and government policy will find the industry more attractive than the average firm.

4.3 Industry Key Success Factors

The key success factors for a firm competing in the emissions trading consulting services industry to be profitable are as follows:

4.3.1 Retain Expertise and Staff

To combat the severe shortage of labour in the industry, it is important that a company reduce turnover and retain its top talent in staff. With many competing firms, employees are being lured to leave existing companies with attractive packages. The other benefit to retaining top talent is to differentiate from those firms that are dealing with the shortage by hiring staff whose expertise

is in non-related fields. This can best be accomplished by including a no-poaching clause in its contracts and improving retention by enhancing benefits and compensation packages.

4.3.2 Setting Standards

The Six Forces analysis exposed the high threat of entry caused by high demand and a lack of standardization for qualifications for staff in the industry. A company can differentiate itself by marketing its staff and its qualifications to the customers. This minimizes the threat of entry as the barriers of entry increase because the incumbent firm is creating an intangible asset advantage to the customer. This strategy is further propagated through the lobbying of standards for consultants working in the industry. These standards could include minimum educational requirements in specific fields of study to limit the variety of professionals entering the field due to the extreme shortage. This does have the counter effect of increasing the bargaining power of suppliers. The concept of setting standards can be taken one-step further through quantitative performance monitoring. This allows a company to introduce benchmarking as a method to create differentiation from its competitors.

4.3.3 Control Software Suppliers

Another measure to mitigate the bargaining power of suppliers is to establish a workable relationship with software suppliers. As the requirements for emissions tracking software are very specialized to the industry, it places a high premium on any software that is available within the industry. If a company

is employing an information systems strategy when providing consulting solutions, it has the option to either develop the software in-house and leverage its existing domain expertise in emissions trading or it will have to outsource and ensure a maintainable contract with a software solution provider. In either case, the company ends up controlling the source of the software, which should reduce the bargaining power of software suppliers when it comes to providing an integrated information systems solution.

4.3.4 Service Differentiation

Since the industry is still in the growth stage of the industry life cycle, there are opportunities for an emissions trading consulting services company to establish differentiation in its service offerings. Differentiation can be achieved through quality of services provided, the quality of staff available to a firm, range of services provided and the industry sectors to which services are targeted. As the industry is still in its infancy a company can achieve differentiation through the effective use of a marketing strategy to educate customers about the .

4.3.5 Understanding of Government Policies

One important key to success in this industry is an understanding of government policies and behaviour. This is due to the pronounced effect that the Government has on the administration of the ETS. Changes in policy can dictate changes in the environment such as demand for services and compliance standards. As a result, it is imperative that a firm competing in the emissions trading consulting industry in Australia has a keen understanding of how

Government policy related to the ETS is formed and be able to predict how policies and the ETS environment can change.

4.4 Competitor Analysis

This section analyses HAC's major competitors in the emissions trading consulting services industry. HAC has many competitors, and all the competitors specified are direct competitors. The reason all these firms are considered direct competitors is because they form partnerships on a project-to-project basis to attempt to fill the gaps in the services that they provide. The competitors can be grouped into three main categories. Section 4.4.1 provides an overview of the direct competitor categories. This is followed by a summary of the major direct competitors and their capabilities in section 4.4.2. Section 4.4.3 provides an industry position map to identify opportunities within the market, which are then summarized in section 4.4.4.

4.4.1 Competitor Categories

4.4.1.1 Specialized Environmental Engineering and Consulting Firms

This group represents the main competition for HAC. These firms provide full-service emissions trading consulting services and are larger firms that also perform other environmental engineering projects. The firms in this group include Energetics Australia, Snowy Mountains Engineering Corporation, Earth Systems and Sinclair Knight Merz.

4.4.1.2 General Consulting and Project Management Firms

Large, well-known consulting firms make up this group of competitors. These firms do not possess core capabilities in engineering, but rather in economic modelling, project management and advisory services. They leverage their core capabilities to extend their consulting services to their climate change departments. The services provided by these firms are related to strategic carbon credit advice, modelling and projections. The major members in this group include PriceWaterhouseCooper Australia, ACIL Tasman, Australian Carbon Exchange (ACX) and Parsons Brinckerhoff.

4.4.1.3 Small Specialized Emissions Trading Consulting Firms

These firms have 100 people or less and specialize in emissions trading consulting services. Some provide full-service consulting; others provide services for specific areas in the industry. Competitors in this group include Carbon Consulting, Prima Consulting, Rare Consulting, Emission Statement, Offset-Go and Carbonetix.

4.4.2 Summary of Competitors Capabilities and Services

Table 3 provides a summary of the capabilities and services provided by HAC's various competitors. This information can then be used to form a position map of all the competitors in the emissions trading consulting services industry.

Table 3 HAC Competitor Comparisons

Company Name	Public or Private	Size (Approx.)	Core Capabilities	Services/Product Offered
Energetics Australia (EA)	Private	Over 150	Sustainability, Emissions Auditing, Information Management and Integrated Business Solutions for Carbon Markets and Carbon Trading	Full-Service provider. Auditing, Tracking (Possesses own custom software solution), Carbon Supply Chain Consulting and Strategic Carbon Credit Consulting Services
Snowy Mountains Engineering Corporation (SMEC)	Private	Over 2000	multidisciplinary consulting services in engineering, project management, environmental science and development activities	Auditing, Carbon Supply Chain Consulting and Strategic Carbon Credit Consulting Services
Earth Systems (ES)	Private	Over 100	Consulting, project management and research and development capabilities in the environmental sector.	Auditing, Carbon Supply Chain Consulting and Strategic Carbon Credit Consulting Services
Sinclair Knight Merz (SKM)	Private	Over 6000	engineering, sciences and project delivery firm	Carbon Supply Chain Consulting and Strategic Carbon Credit Consulting Services
PriceWaterhouse Coopers (PWC)	Public	5000 (in Australia)	assurance, tax and advisory services	Strategic Carbon Credit Consulting Services
ACIL Tasman (ACIL)	Private	N/A	economic, public policy and strategic advice	Strategic Carbon Credit Consulting Services
Australian Carbon Exchange (ACX)	Private	N/A	brokering services, carbon registry, carbon trading platform	Strategic Carbon Credit Consulting Services

Parsons Brinckerhoff (PB)	Private	Over 12000	environmental engineering and program and project management	Strategic Carbon Credit Consulting Services
Carbon Consulting (CC)	Private	Less than 10	carbon trading consulting	Emissions Auditing and Carbon Trading Advice
Emission Statement (ES)	Private	N/A	Emissions Trading Consulting	Auditing, Carbon Supply Chain Consulting and Strategic Carbon Credit Consulting Services
Prima Consulting (PC)	Private	Under 100	Information Management and Business Intelligence Solutions	Emissions Tracking Software
Rare Consulting (RC)	Private	Under 10	Transport and Environment Consulting	Carbon Supply Chain Consulting
Offset-Go (OG)	Private	N/A	Software Development	Emissions Auditing and Auditing and Tracking Software
Carbonetix (C)	Private	N/A	Engineering, Consulting and software development	Emissions Auditing and Auditing and Tracking Software

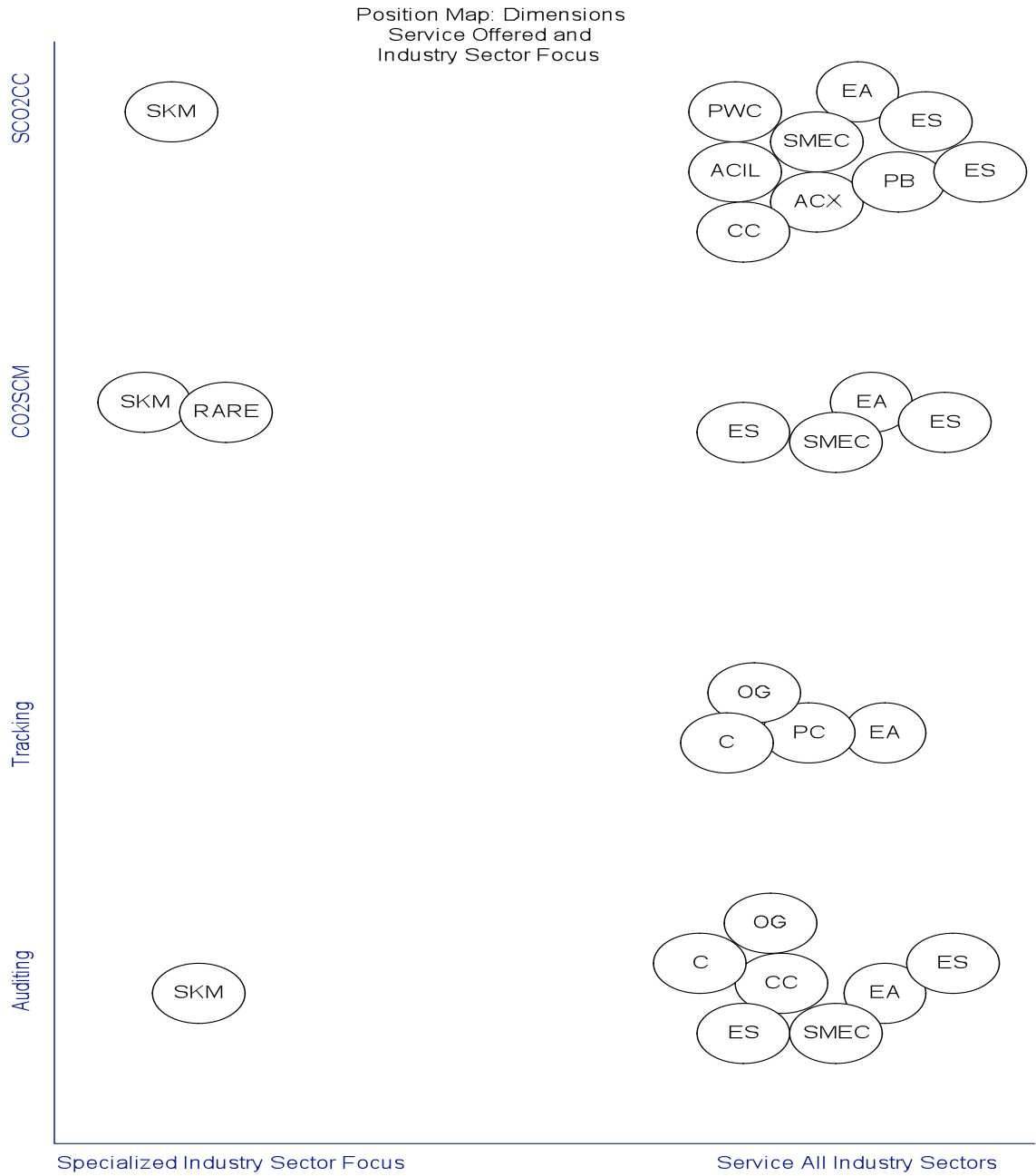
Note: N/A = Not Available

4.4.3 Industry Position Map

Figure 7 shows a position map for the industry and the competitors involved. Note competitor abbreviations are referenced in Table 3. The position map dimensions are the two possible methods of segmenting the market, and it shows that there is a lot of clustering around providing Strategic Carbon Credit Consulting (SCO2CC) for all industries in general. The reason for this is that this area of the industry involves the biggest overlap with other disciplines, such as economics modelling and strategic investment and advisory services. This intersected segment is the most competitive one in the industry.

By examining which competitors appear in multiple positions in Figure 7, it is apparent that of all the competitors, there is really only one true full-service provider for all industries, and that is Energetics Australia. Energetics Australia appears in all positions on the right hand side of Figure 7. This would make Energetics Australia one of the main competitors in the full-service emissions trading consulting segment. It also provides an opportunity to follow Energetics into that segment and attempt to gain market share by differentiating as a full-service provider. Other opportunities include producing a set of services that cater to individual industry sectors (left hand side of figure 7), as it is evident from the position map that this is a segment that not many competitors are targeting and serving the emissions tracking market, as that remains an underserved market as well.

Figure 7 Position Map - Services Offered and Industry Sector Focus



Legend:
 CO2SCM - Carbon Supply Chain Consulting
 SCO2CC – Strategic Carbon Credit Consulting

4.4.4 Opportunities Identified

To summarize the competitor analysis, the position map identified three possible opportunities:

1. There is an opportunity to be a full-service provider to the emissions trading consulting market in all industry sectors.
2. There is an opportunity to market a suite of services that are targeted at individual industry sectors, for example, full-service emission trading consulting service specifically targeted to the mining industry.
3. The emissions tracking market is underserved, especially in markets that target specific industries.

5: INTERNAL ANALYSIS

This internal analysis of HAC determines the core capabilities and resources that it possesses and determines how those fit the industry. This section first examines the management team, structure and resources that are at HAC's disposal. That is followed by a SWOT analysis to identify the strengths and weaknesses that HAC has which will dictate how it should handle the strategic issues it faces.

5.1 Resources

5.1.1 Financial Structure

HAC Consulting is a small start-up venture based out of Perth, WA, Australia. The company was founded less than a year ago and is privately funded. It is a proprietary limited company under Australian law. Its financial information for the current fiscal year is unknown, but is not required for the purposes of this analysis. HAC has limited financial resources at its disposal due to its current proprietary limited company status. The company also does not possess any significant fixed assets, as the overhead for performing consulting services is very low.

5.1.2 Labour Resources

HAC employs a team of more than 30 consultants from a wide variety of backgrounds such as environmental and mechanical engineering, sustainability,

business development, carbon trading consulting and public sector policy development, many of whom are considered experts in their fields (HAC Australia Pty Ltd, 2008). This number, however, is not a large number considering the size of the market and the number of contracts that will be going around as companies scramble to become ETS compliant. HAC might be limited in its capacity to handle multiple contracts simultaneously.

Many of the staff are not full-time employees of HAC, but freelance consultants that are selectively organised into project teams for major undertakings. Although this provides HAC with more flexibility when it comes organizing project teams, it also exposes them to the risk of losing consultants to poaching practices from competitors.

5.1.3 Intangible Resources

Some of the intangible resources or assets that HAC has at its disposal include the reputation of the co-founders for their involvement with the Perth Fuel Cell Bus Trials, aka the EcoBus program. “The EcoBus trial received a number of awards including the 2005 Banksia Award for Government Leading by Example, the 2004 Chartered Institute of Logistics and Transport Outstanding Achievement Award and the 2004 Sustainable Transport Coalition Government Innovation Award.” (Department of Planning and Infrastructure, Government of Western Australia, 2008). The EcoBus association also provides HAC with advanced knowledge about Sustainability practices in the transport industry sector.

5.2 Management Capabilities

The management team at HAC consist of the three co-founders, Colin Cockroft, Glen Head and Jamie Ally. All three have prior management experience from their involvement with Ballard Power Systems Inc. Each co-founder brings a unique set of skills and experience to the management team. Mr. Cockroft has a background in the defence industry engineering and management, Mr. Head has significant public policy experience and held senior roles in State Government, and Mr. Ally brings an engineering and project management background through his experience at Ballard Power Systems. Mr. Cockroft and Mr. Head provide HAC with extensive experience in Australian public and private sector issues.

5.3 Marketing and Sales Capabilities

HAC currently lacks a formal marketing and sales department. The management team is performing most sales duties, which includes procurement of contracts and submission of bids. They are also promoting the company through word-of-mouth, publishing white papers and attending conferences. They do not have a structured sales or marketing plan.

5.4 Organizational Structure

HAC consulting currently has no formal organizational structure. The company follows an ad-hoc structure that adjusts to deal with the current load of projects taken on by the company. Ad-Hoc teams are formed for the duration of

a project and then are reconfigured depending on the needs of the upcoming project. This allows the company to react quickly as it takes on more contracts.

5.5 SWOT Analysis

Table 4 shows the summary of the SWOT analysis for HAC Consulting. The strengths, weaknesses, opportunities and threats are then discussed in detail in this section. The basic SWOT analysis reveals that HAC does have the strengths to be able to compete in the emissions trading consulting services industry, but the high number of weaknesses and threats mean that they have to be conservative in their approach to this market.

Table 4 *SWOT Analysis*

Strengths	Weaknesses
<ul style="list-style-type: none"> • Specialization in transport Industry • HAC's reputation • Existing relationships with other firms • Understanding of the emissions trading industry and of government policy • Qualified staff • Low cost overhead • Wide range of services already provided by HAC allow it to be a full-service provider 	<ul style="list-style-type: none"> • Limited financial resources • Lack of marketing plan/staff • Limited capacity will make it difficult to take on multiple contracts • Default product offering uses a paper tracking system, which precludes it from use in larger corporations • Use of freelance consultants
Opportunities	Threats
<ul style="list-style-type: none"> • Develop specialized product for a specific industry sector • Lack of performance metrics for services • Develop emissions tracking services 	<ul style="list-style-type: none"> • Larger sized competitors have more capacity to take on multiple projects • Some of the more lucrative segments of the market are very crowded • Very high threat of entry into the

<ul style="list-style-type: none"> • Lack of awareness of ETS amongst Australian companies • Only one true full-service provider 	<p>industry</p> <ul style="list-style-type: none"> • Employee poaching and turnover
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5.5.1 Threats

The threats facing HAC in the emission trading consulting services industry are related to the threats from the Six Forces Analysis performed earlier in section 5.2. The larger consulting firms have greater capacity to handle multiple contracts simultaneously than HAC, which will allow them to win more contracts in general. This, coupled with the fact that the more lucrative segments of the industry (such as Strategic Carbon Credit Consulting) are crowded with some of the largest competitors, poses a significant threat to HAC. The threat of new entrants is very high, as is the threat from suppliers, which means HAC must deal with the possibility of losing employees through poaching or turnover.

5.5.2 Opportunities

The opportunities here are a combination of the conclusions from the Industry Key Success Factors in section 5.3 and Competitor Analysis in section 5.4. HAC currently has numerous strategic opportunities available. It can develop a suite of services targeted to a specific industrial sector, such as the transportation industry, which is an opportunity identified by the industry position map in the competitor analysis. The industry position map also identified a couple of other opportunities, namely the underserved emissions tracking services market and the fact that there is only one true full-service provider in the Australian market.

Another opportunity that exists in the market is the general lack of knowledge amongst Australian companies about the ETS. As stated earlier, only 36 percent of business executives were aware of the ETS beginning in 2010 and eighty percent of executives have little knowledge or were only “somewhat aware” of it (ABC News Online, 2008). This lack of knowledge means that a company that can market proactive preparation for ETS compliance and create more awareness about the ETS can potentially build brand recognition within the market.

With the industry in the growth stage, there is also currently a lack of performance metrics for benchmarking a company’s emissions trading services. Thus, an opportunity exists to develop and market a set of performance metrics that enable a company to establish a brand and differentiate itself from the rest of the competitors in the market. This differentiation strategy will also reduce the threats from supplier

5.5.3 Strengths

HAC has some notable strategic strengths in its favour. The experience of the co-founders with the Eco Bus program gives them a two-pronged advantage. It gives them a successful reputation as well as giving them expertise in providing sustainability solutions for a specific industry sector, that is, transportation. This allows them to take advantage of the opportunity to develop a suite of services that tailored to the transportation industry. In the same vein, HAC has existing relationships with another firm in the industry, RareConsulting. RareConsulting is also has a core competency in the Transportation industry which presents a real

opportunity to take advantage of this strength. These combined with their understanding of government policy and their understanding of the emissions trading industry leaves them in a good position to take advantage of numerous opportunities. HAC also has excellent qualified staff, and with the varied backgrounds of their experts, they have the ability to provide the full range of services to be a full-service emissions trading consulting services provider. Being a smaller company, they have a low cost overhead, which should be strength when it comes to moving from project to project. This, coupled with their existing portfolio of services allows them to be a full-service provider within the market.

5.5.4 Weaknesses

One of HAC's greatest weaknesses is their lack of resources, both labour and financial, especially at this time when demand in the emissions trading consulting industry is about to explode. This lack of capacity will adversely affect their ability to take advantage of an opportunity to win a number of contracts. HAC's lack of marketing personnel or a marketing plan is adversely affecting its ability to differentiate its service offerings in this industry. As a majority of HAC's staff are freelance consultants and not full-time employees, HAC is more vulnerable to labour related forces in the industry. They will be more susceptible to turnover and employee poaching, specifically in between projects. Finally, HAC's lack of an information system option in its default full-service offering will turn away the bigger clients who will be more interested in an integrated information system solution.

6: STRATEGIC OPTION ANALYSIS

The SWOT Analysis performed in section 5.5 provides a general framework for generating strategies as it takes into account both internal (strengths and weaknesses) and external (opportunities and threats) factors facing a firm. Table 5 shows how the SWOT Analysis Framework identifies four types of broad strategies. These are offensive, defensive, adjustment and survival strategies.

Offensive strategies are aggressive strategies that enable a firm to take advantage of opportunities utilizing its strengths. These are also known as Strength-Opportunity Strategies (SO). Companies with clear, sustainable competitive advantages use offensive strategies to maintain aggressive positioning in their market.

Defensive strategies (Weakness-Opportunity, or WO), on the other hand, allow a firm to take advantage of opportunities to overcome its weaknesses. An adjustment strategy (Strength-Threat, or ST) is one where a company uses its strengths to abate a threat. Finally, Survival strategies (Weakness-Threat, or WT) involve a firm minimizing its weaknesses to avoid threats.

Table 5 Strategies identified by SWOT Analysis

	<p>Strengths</p> <ul style="list-style-type: none"> • Specialization in transport Industry • HAC's reputation • Existing relationships with other firms • Understanding of the emissions trading industry and of government policy • Qualified staff • Low cost overhead • Wide range of services already provided by HAC allow it to be a full-service provider 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Limited financial resources • Lack of marketing plan/staff • Limited capacity will make it difficult to take on multiple contracts • Default product offering uses a paper tracking system, which precludes it from use in larger corporations • Use of freelance consultants
<p>Opportunities</p> <ul style="list-style-type: none"> • Develop specialized product for a specific industry sector • Lack of performance metrics for services • Develop emissions tracking services • Lack of awareness of ETS amongst Australian companies • Only one true full-service provider 	<p>Offensive (SO)</p> <ul style="list-style-type: none"> • Develop a specialized product for the transportation industry • Develop performance metrics for benchmarking services 	<p>Defensive (WO)</p> <ul style="list-style-type: none"> • Integrate an information system based emissions tracking service into existing product line • Take advantage of the lack of information in the market to develop brand and company recognition
<p>Threats</p> <ul style="list-style-type: none"> • Larger sized competitors have more capacity to take on multiple projects • Some of the more lucrative segments of the market are very crowded • Very high threat of entry into the industry • Employee poaching and turnover 	<p>Adjustment (ST)</p> <ul style="list-style-type: none"> • Market reputation and expertise in the industry 	<p>Survival (WT)</p> <ul style="list-style-type: none"> • Avoid competing against the larger competitors by taking on smaller contracts from smaller companies • Establish a proactive employee/consultant retention system

Based on the description of the strategies outlined above and the SWOT analysis from section 5.5, HAC Consulting has the following broad strategies to consider moving forward.

6.1 Offensive Strategy: Develop a Specialized Service Product for the Transportation Industry

An offensive strategy for HAC is to develop a suite of services for emissions trading consulting that focuses on the transportation industry. This option enables HAC to utilize its experience in the transportation sector and leverages its existing relationship with RareConsulting, another emissions trading consulting firm that has expertise in the transportation industry to take advantage of the opportunity to develop a product that caters to a specific industry sector. The competitive analysis in section 5.4 identified the opportunity that few companies are providing emissions trading consulting services targeted to specific industries. The customers of the targeted industry benefit with solutions that are more suited to their situations.

The disadvantages of this solution are the resources required to modify their existing suite of services into a template to fit the transportation industry. Diverting resources into developing the new services will also reduce the number of contracts HAC can accept for their main product. HAC would have to sacrifice one product line for the other, and this would be detrimental as the specific services line represents a smaller market segment.

6.2 Offensive Strategy: Develop Performance Metrics for Benchmarking Services

Another aggressive strategic option for HAC to pursue is to develop a set of performance metrics. These metrics can be used in conjunction with a marketing plan to benchmark HAC services against its competitors. This strategy leverages HAC's expertise in the area of emissions trading industry to take advantage of the opportunity that there are currently no metrics to differentiate services provided by different providers in the market. This will provide HAC with the differentiation it requires to gain an advantage in the market. This will increase recognition of HAC in the industry, especially if the benchmarks can be used to establish a standard for benchmarking.

There are many pitfalls to pursuing this option immediately. First, it requires an investment of resources into researching metrics and modifying processes to accommodate data collection. These resources include labour, financial and technology for data collection and mining. Secondly, HAC currently lacks the marketing infrastructure required to communicate the performance metrics to the market. Finally, there is a significant sunk cost risk involved if the metrics do not become the de-facto standard.

6.3 Defensive Strategy: Take Advantage of the Lack of Information in the Market to Develop Brand and Company Recognition

This strategic option is a more conservative strategy for HAC Consulting. It involves HAC overcoming its weakness in not having a structured marketing plan, staff or infrastructure to take advantage of the opportunity that is provided

by the lack of information about the Australian ETS amongst Australian companies. It is a cost effective path of action with the benefit that it invests in HAC's assets that will allow it to pursue different strategic options in the future. HAC will also strengthen its brand image by convincing companies to proactively pursue ETS compliance as a path to improve their ROI. The disadvantages to this strategy are it requires HAC to invest in full- or part-time marketing staff and risk not being able to spread its message effectively because its limited resources limit HAC's access to most marketing channels.

6.4 Defensive Strategy: Integrate an Information System Based Emissions Tracking Service into Existing Product Line

A secondary defensive strategy that HAC could pursue is to limit its weakness in its current emissions tracking system, which is a paper-based system and integrate an existing information system based tracking system. This will enable HAC to brand a solution that it could use to take advantage of the opportunity in the emissions tracking services segment of the market. Currently, the emissions tracking system segment is under-served, and HAC could outsource an existing solution and rebrand it under its emissions trading services brand to offer a product to this segment. An alternative to rebranding is for HAC to form a partnership with the software provider to simply provide a channel through which the software provider can place their software solution. This second possible implementation is a preferred solution as it would augment HAC's existing full-service product line, but then it would not allow it to directly take advantage of the opportunity in the emissions tracking system market.

This strategic option, however, is fraught with risks. HAC would have to find a suitable software provider with which to collaborate to provide a product. In addition, in order to provide a rebranded solution, HAC would have to devote resources (financial, labour) to collaborate with the software provider in order to alter the solution to suit HAC's needs that would divert resources from its main full-service product offering.

6.5 Adaptive Strategy: Market Reputation and Expertise in the Industry

An adaptive strategy for HAC consulting to pursue would be to develop a marketing plan to market the qualifications and quality of HAC consultants and HAC's reputation. This avenue uses HAC's strength in the qualification of its staff to avoid the threat posed by entrants. The benefit of this option would be to differentiate HAC's existing services from the competitors by communicating the superior quality of its staff to the customer. This marketing message would allow HAC to increase its recognition within the industry as well. The con of this option is that HAC currently lacks the marketing infrastructure required to communicate this message to its customers.

6.6 Survival Strategy: Avoid Competing against the Larger Competitors by Taking on Smaller Contracts from Smaller Companies

HAC Consulting's weakness of limited resources and capacity can be overcome by avoiding the threat of competing against large competitors who have more capacity to take on more projects. This strategy is suitable for a

short-term growth scenario as it limits HAC to bidding for smaller contracts. However, this strategy fits an industry that has very high threat from competition and is in the maturity or decline phases. Since the emissions trading consulting services industry is in the growth stages of the life cycle, HAC does not have to resort to this survival strategy in order to stay competitive.

6.7 Survival Strategy: Establish a Proactive Employee/Consultant Retention System

The final strategic option available to HAC Consulting is that of establishing a proactive employee/consultant retention system to overcome its weakness of having a majority of its staff as freelance consultants. Although its staff is skilled, and having them as freelance consultants provides HAC the flexibility to form ad-hoc project teams of varying structures quickly and efficiently, it exposes HAC to the high threat posed by suppliers of labour resources in the industry, as a consultant critical for a project may not be available when the project needs to be executed. HAC has to plan to increase its permanent employee staff as it experiences growth and establish contracts and agreements that prevent those employees from being poached by competitors. In addition, HAC needs to plan its project execution in timelines that promote the freelance consultants being under contract with HAC in contiguous stretches to avoid losing them to other projects.

7: RECOMMENDATIONS

7.1 Recommendation: A Mixed Defensive/Adaptive Strategy

The recommended strategic course of action for HAC Consulting is to employ the defensive strategy of developing brand and company recognition by taking advantage of the opportunity created by the lack of information about the Australian ETS in the market. HAC Consulting does not currently have a clear, sustainable competitive advantage over its competitors, which should preclude it from adopting either of the offensive strategies identified in section 6. A defensive strategy such as this provides HAC with a more conservative strategy that allows it to cover one of its major weaknesses of not having a clear marketing infrastructure. This strategic option also provides an investment into HAC's strength by allowing it to concurrently pursue the identified adaptive strategy, that is, fortifying its reputation. This will allow HAC to pursue more offensive strategies such as the one described in section 6.2. There is the risk of the initial investment, but it is an investment into a marketing infrastructure asset. Section 7.2 proposes an implementation for the mixed strategy.

7.2 Suggested Implementation

The implementation for the defensive strategy recommended begins with the hiring of marketing staff at HAC Consulting. The focus of the marketing department will be to develop an aggressive Internet marketing strategy coupled with a strategy to improve the visibility of HAC Consulting through attendance at

major industry events. This means that the marketing staff hired at HAC Consulting will have to be experienced in Internet marketing techniques and web technologies. The marketing staff will also have to have a certain level of domain knowledge in the context of emission trading systems in order to be aware of the important conferences and industry events relevant to HAC Consulting, as well as strong Australian contacts from previous work experiences in key industry sectors.

Creating awareness amongst client companies for the need to employ emissions trading consulting services in preparation for the upcoming ETS is the primary focus of the Internet marketing strategy. The message to clients will be that they need to be proactive in getting on the road to compliance. As there is a visible lack of knowledge in the market place for the need for these services, many companies will appreciate being made aware about these needs and this will translate into recognition of the company's knowledge about Australia's ETS. A secondary focus of the Internet marketing campaign will be to advertise the quality and expertise of the HAC Consulting staff and the existing reputation of HAC based on its prior experience with the EcoBus program (Department of Planning and Infrastructure, Government of Western Australia, 2008).

An efficient channel for HAC Consulting to get this message out to prospective clients is to create a public blog about ETS related topics. In addition, this blog will be used by senior management at HAC Consulting to post their expert opinions on interpreting issues regarding the ETS as the Government of Australia continues to fine tune the scheme. The blog will serve as an informal

channel for prospective clients to get to know ETS subject matter experts at HAC Consulting and gauge their level of expertise. The marketing staff at HAC Consulting will moderate the blog and contribute to it as well.

The blog is in addition to the existing HAC Consulting web site, which will be the main information portal for HAC Consulting on the web, including links to white papers and company information. To complete the Internet marketing blitz, HAC Consulting will also create an official company Wiki. The HAC Consulting Wiki will serve as a manual for prospective clients on preparatory processes that they can perform internally on their infrastructures to be able to receive emissions trading consulting services. This Wiki needs to be carefully monitored, as HAC Consulting should not disclose any information that provides their emissions trading services with a competitive advantage. The Wiki can optionally be implemented in a phased process.

The main goal of the Internet marketing campaign will be to improve the quality and volume of traffic to the HAC Consulting web site, blog and wiki and increase the search rank of these three sites in the context of searches performed for the Australian ETS. An example of a desired search result would be to have HAC Consulting's sites listed in the top 10 whenever the phrase "Australian ETS Compliance" is searched. The primary method of achieving this desired result would be to use standard Search Engine Optimization (SEO) techniques. The marketing staff at HAC will use tools such as Google Adwords to advertise HAC Consulting's service offerings using a pay-per-click advertising

model. The effectiveness of the Internet marketing campaign will be measured using standard tools such as Google Analytics.

The critical success factor for this proposed implementation is the quality of the web content and a slight first mover advantage. If HAC can achieve a critical mass of quality information in its different Internet channels and perform updates with regular frequency, then it can achieve differentiation from its competitors that would enhance the power of its brand in the industry.

7.3 Advantage and Disadvantages of Suggested Implementation

The biggest advantage of the proposed implementation is cost effectiveness. It utilizes low cost channels such as the Internet to communicate HAC Consulting's marketing messages. The added benefit of using the Internet as a medium is the ability to efficiently monitor the results of the marketing campaign, which allows for the creation of a feedback loop to enable the modification and adjustment of the marketing campaign.

The proposed implementation of the strategy fortifies HAC Consulting's Internet presence by establishing a structure with separate channels for different kinds of information. It enables HAC to connect with current and potential customers through both a subscription and non-subscription based infrastructures. The web site is non-subscription based whereas the wiki and blog support subscription-based channels that will allow HAC clients to receive updates from HAC as soon as they are published in either medium. This kind of

communication develops HAC's brand recognition, which will help it pursue strategies that are more aggressive in the future.

However, there are some disadvantages and risks involved in the proposed implementation. First, it requires HAC to invest in full- or part-time marketing staff that have prior experience with current web marketing techniques, which would represent an initial cost investment. Secondly, Internet marketing is not guaranteed to work, and increasing its effectiveness may become a case of hitting a moving target. Finally, this strategic implementation is proposing a generic solution, one that is reproducible by any of HAC's competitors since it utilizes commoditized tools and channels.

8: CONCLUSION

In conclusion, HAC Consulting Pty Ltd has an excellent opportunity to be successful in the current environment. With the Australian ETS looming, there is expected to be a flood of activity concerning compliance needs, and the underdeveloped state of knowledge about the ETS and advertising for Emissions Trading Consulting Services provides HAC Consulting a window of opportunity to establish itself as a recognized company and brand within the marketplace. This recognition should allow HAC Consulting to pursue a long-term growth strategy.

9: APPENDICES

9.1 Appendix 1: Consulting Services provided by HAC

HAC Australia provides consulting services to both corporate and government clients in the following areas:

- Transport Policy
- Energy Policy
- Urban Planning
- Sustainability Strategy
- Risk Management: Climate Change and
- Energy Security (Peak Oil)
- Emissions Audits
- Energy Audits
- Greenhouse Abatement Analysis
- Marginal Abatement Cost Curves
- Emissions-Trading Preparation
- Greenhouse Challenge Plus (GCP)
- Energy Efficiency Opportunities (EEO) Act
- National Greenhouse and Energy

- Reporting (NGER) Act
- Australian National Greenhouse Gas
- Emissions Trading Scheme (ETS)
- National Pollutant Inventory (NPI)
- Carbon Neutrality
- Triple Bottom Line (TBL) Toolkit
- Corporate Strategic Planning
- Corporate Social Responsibility (CSR)
- General and Applied Research
- Life Cycle Assessment (LCA)
- Vehicle Technology & Fuel Assessment
- Project Implementation & Management
- Traditional Engineering Services

9.2 Appendix 2: Counts of Australian Businesses, 2006-2007

9.2.1 Breakdown by Industry

Industrial Sector	Number of Businesses
Agriculture, Forestry and Fishing	214,795
Mining	7,205
Manufacturing	106,565
Electricity, Gas and Water Supply	1,968
Construction	322,404
Wholesale Trade	85,398
Retail Trade	219,308
Accommodation, Cafes and Restaurants	56,678
Transport and Storage	117,323
Communication Services	23,998
Finance and Insurance	136,587
Property and Business Services	507,508
Education	16,265
Health and Community Services	92,318
Cultural Recreational Services	46,808
Personal and Other Services	56,642
Total	2,011,770

Source: Australian Bureau of Statistics (Australian Bureau of Statistics, 2007)

9.2.2 Breakdown by Income

Annual Income	Number of Businesses
0 to less than \$50K	501,467
\$50K to less than \$200K	742,288
\$200K to less than \$2m	646,458
\$2m or more	121,557
Total	2,011,770

Source: Australian Bureau of Statistics (Australian Bureau of Statistics, 2007)

9.2.3 Breakdown by Business Size

Business Size	Number of Businesses
Non-Employing	1,171,832
Employing	
- 1 to 4 people	527,445
- 5 to 19 people	228,313
- 20 to 199 people	78,304
- 200+ people	5,876
Total	2,011,770

Source: *Australian Bureau of Statistics* (Australian Bureau of Statistics, 2007)

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