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BP

The Case on Alternative Energy

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Introduction

The world's fossil fuel supplies are expected to be exhausted within the next century. The consumption of oil by industrialized and industrializing countries is increasing at a rate almost twice as fast as the rate oil is being discovered. With this in mind there are many nations, organizations and companies who are beginning to search for alternative energies, rather than continue dependence on fossil fuels.

Alternative energies include the renewable: wind, solar, hydrogen – inexhaustible and less toxic “green” sources of energy; and other forms of alternative energies: natural gas, coal, nuclear – which are, by nature, alternative products to oil, but provide for some concerns of exhaustibility and toxicity to the environment. Super-major oil companies, such as BP Amoco, Shell and Chevron Texaco are diversifying their energy portfolios to provide alternative energies to consumers; and as a result are competing for world market share to supply the alternative energy demand.

Problem Statement

BP is at the forefront in research and production of oil based and alternative/renewable energies. In the event that oil based energy demand diminishes as the world's supply of oil diminishes, BP needs to be prepared to leverage their first mover advantages in the alternative energy market and emerge as the world's major alternative energy provider. With this in mind, the following facts and figures will answer the question:

How can BP position themselves as the world's foremost provider of alternative energies among the super-major oil producing companies?

Administrative Heritage

In May of 1901, William Knox D'Arcy was given permission to explore for oil in Persia. He struck oil 1908 and in 1909 Anglo-Persian Oil Company (as BP was first known) was founded. This was the first discovery of oil in this region. In 1914 the company received £2 million from the British government in return for a major shareholding and the right to appoint two directors on the board (Wikipedia). In the mid-1920's, exploration was expanded to Canada, South America, Africa, Papua, and Europe. In 1954 company was renamed British Petroleum (BP) Company. BP continued to grow

as it made many acquisitions of other oil companies. BP gained a foothold in the American market when the company made a large oil discovery in Alaska.

In the 1973, BP lost access to most of its supply of OPEC oil, and the OPEC countries took control of oil and prices. As oil prices were pushed upwards, demand for oil fell, and BP's sales decreased significantly (BP Online). The company was only able to survive these oil crises because they had large investment programs in areas outside the Middle East. At this time, BP began to diversify into new areas of activity. They entered the nutrition, mineral, coal, and information technology businesses. Due the entering of all of these new markets, BP underwent major restructuring in 1981 (BP Online).

1987 was a monumental year for BP. They bought the remaining shares of Standard Oil, and formed a new company called BP America, giving them a major foothold in the U.S. market. The British government sold the remaining shares of their stock, diversifying the ownership of BP and reducing governmental control. BP acquired Britoil, which doubled BP's exploration acreage (BP Online).

BP began having trouble managing their diversified business, so the company sold their non-core businesses and focus on hydrocarbon-based activities. In 1998, BP acquired Amoco and formerly became BPAmoco. In 2002, the company returned to marketing itself as BP and adopted the tag line "Beyond Petroleum". The company did this for two reasons; to step away from the connotations of "British Petroleum", so that they may be seen as a global business rather than a British company, and to show the company's new focus on environmental friendly fuels and alternative energy (BP Online). Currently, BP is the leading producer of solar panels and has a twenty percent market share in this industry (Wikipedia). In 2005, BP was ranked second on the Fortune Global 500 list of companies with \$285 billion in sales (Wikipedia).

Business Sectors

Exploration and Production

BP's exploration and production segment accounts for eleven percent of BP's total sales. Sales in this sector increased twenty-two percent from 2003 to 2004 mostly due to increased production and higher oil and gas prices (BP 2004 Annual Report). BP's focus in this area is to invest in large, lower-cost natural gas fields with a great

potential for a strong return on capital. In order to provide opportunities for growth, BP has been developing new profit centers including ones in Trinidad, Angola, Azerbaijan, deepwater Gulf of Mexico, Asia Pacific and Algeria (BP Online).

BP currently has three main strategies for the exploration and production sector. BP believes it is imperative to search out new profit centers with large oil and natural gas potential. They plan to explore these areas successfully and pursue the best projects for development. BP plans to manage their producing assets by only investing in the best opportunities and maximizing operating efficiency (BP 2004 Annual Report).

Refining and Marketing

Refining and Marketing is BP's largest operating segment, as fifty-six percent of sales are accounted for in this segment. There was a seventy-eight percent improvement in sales from 2003 to 2004 (BP 2004 Annual Report). In the marketing division, competitive sales growth is maintained by increasing investments and focusing on operating excellence. In the retail business, BP has been expanding the number of sites that carry the BP helios, thus promoting their new environmental friendly image (BP Online). The refining business has had record performance due to the strong product demand and availability of resources. BP's focus in the marketing division is to generate customer value by providing quality products and offerings. They do this by offering differentiated fuels at convenient locations.

BP has five major strategies for improving their refining and marketing division. They plan to focus on refining locations where scale, configuration and operational excellence can contribute to large returns. They plan to capture retail market share in areas where BP has a supply advantage. They want to focus on automotive-related markets, by leveraging the BP brand name and technology. BP wants to build strong strategic relationships in the business-to-business sector (BP 2004 Annual Report). And they want to enhance their strengths in emerging markets, particularly China.

Petrochemicals

Petrochemicals are chemical substances produced from petroleum in refinery operations. BP production of petrochemicals mostly includes Acetyls, Aromatics, PTA/Polyester intermediates, and Naphthalates (BP Online). BP's petrochemicals segment resulted in a \$900 million loss in 2004 (BP 2004 Annual Report). BP claims

this is due to higher exceptional and non-operating charges. In 2004, BP closed down many of their petrochemical business that did not meet strategic and financial criterion, and they continue to close down more of this business today. BP plans to divest this operating segment enough so that it will no longer be required to report it as a separate segment in the financial reports. More specifically, they plan to divest the Olefins and Derivatives business with an initial public offering (BP Online).

The main strategy of the petrochemicals sector is to restructure this division. Less profitable areas will be sold and higher profit areas will be expanded. The Aromatics and Acetyis businesses will be integrated within the Refining and Marketing segment in attempts to gain operational and organizational synergies (BP 2004 Annual Report). BP will look for areas where they have a competitive advantage and will restructure assets to these areas.

Gas, Power and Renewables

The Gas, Power and Renewables segment has four main revenue producing business areas; liquefied natural gas (LNG), natural gas liquids (NGL), gas marketing and solar. All alternative energy businesses are also included in this segment. This segment accounts for twenty-six percent of total sales, and experienced a sixty-five percent increase in sales from 2003 to 2004 (BP 2004 Annual Report). The largest sales increase in this sector came from the solar business with an increase of thirty-five percent (BP Alternative Energy Online). 2005 was the first year the solar business has been able to achieve a positive operating profit (BP 2004 Annual Report). The strong sales growth in the solar business was due to strong industry demand and becoming more customer focused.

BP's strategy for this sector includes three main goals. To capture world-scale market positions ahead of supply; to expand gross margin by optimizing the gas and power value chains; and to provide original products to selected customers. Their final strategy goal for this sector is to build a sustainable solar business and continue to grow their renewable and alternative energy sources (BP 2004 Annual Report).

Alternative Energy

BP intends to invest \$8 billion into this industry in the next ten years (BP Alternative Energy Online). Recently, BP's main advertising campaign has been focused

on their renewable and alternative energy businesses. These include solar, wind, hydrogen, and natural gas power. The following is BP's view on renewable and alternative energy: "We believe that solar, wind, hydrogen power and gas-fired power technologies have reached the tipping point and that we can create a profitable, high-growth, global business in the course of the next decade" (BP Alternative Energy Online). BP has been taking many steps to try and become the leader in the alternative energy market.

BP is currently one of the world's top solar power companies, and has entered this market in 160 countries (Newswire, 2005). The company is marketing their solar electric systems to residential and business sectors. To reach the residential customer, BP has joined forces with Home Depot and is offering BP Solar Home Solutions, a complete installed solar home power system that can be bought at selected Home Depot stores (BP Alternative Energy Online). To reach the business sector, BP is advertising that their solar products are "[F]or companies that care about environmental stewardship, [and that] switching to solar power is a logical fit, reinforcing company values" (BP Alternative Energy Online). BP also claims that solar energy offers companies the following financial benefits: Cost savings, protection against rising energy prices, energy efficiencies, revenue for solar power, and government incentives.

Wind power is a growing business for BP. It is currently the fastest growing source of low-carbon power. It has grown twenty percent per year, over the last five years (BP Alternative Energy Online). Wind is one of the most cost-competitive regimes in low-carbon power. In the right location, wind can cost less than conventional power generators. Wind has the potential to provide about eleven percent of the world's power needs (BP Alternative Energy Online). BP currently has two wind farms in the Netherlands, and plans to grow their position in this industry.

BP is also working on hydrogen power as an alternative energy source. Hydrogen power is a new technology that creates low-carbon electricity. Using hydrogen power as a fuel produces virtually no greenhouse gas emissions and the main byproduct is water. Hydrogen has the potential to generate large amounts of clean electricity using existing fossil fuels. BP has the technology for hydrogen power and is working to develop and commercialize this new clean energy (BP Alternative Energy Online).

BP is also making significant investments into natural gas plants. Natural gas is the cleanest fossil fuel available, and it produces fifty-five percent less carbon dioxide than traditional coal-fired power (Purdy, 2004). BP believes that “natural gas is the ideal lower carbon solution to help bridge between a world once wholly dependent on fossil fuels and a future where renewables and alternatives are among the primary source of energy” (BP Alternative Energy Online). BP currently has interest in a series of gas-fired power stations with enough generating capacity to power ten million homes. These plants are located in the US, Spain, Vietnam, and South Korea (BP Alternative Energy Online).

MACRO ANALYSIS

The External Business Environment

BP is making major progress in their efforts to diversify their business and supply the demand for energy all over the world. There are certain external business environment factors which BP must ascertain and manage, so that they can continue to be profitable in their core business and continue to profitably innovate with their alternative energy sector.

Political/Legal

The energy industry has been closely tied to politics since the days of the industrial revolution. BP needs to continue to have strong ties with governments, as the geopolitical climate has a direct effect on the energy industry that cannot be ignored by any energy company.

The energy industry lobbies heavily for changes in legislation and regulation as pertaining to reduction in control over production, prices, and emissions. However, it is in BP's best interest to do just the opposite: lobby governments for stricter environmental laws and heftier fines for violations. This will help the company in two ways. First, it will show that BP is supporting the protection of environmentally sensitive regions and this will differentiate themselves from their competitors, many of which are developing plans to open protected and sensitive regions for oil exploration. BP can lobby in support of the changing energy paradigm and that they are searching for long term solutions to the energy problem. Second, getting “greener” laws in place will help level the playing

field on energy prices, especially with alternative energies, which are currently higher priced, compared to many fossil fuel energies.

To help reduce the cost of green energy to a point at least equal to non-green energy, BP must push for governments to increase subsidies and tax breaks for companies and individuals who choose to use renewable energy. Currently in the U.S., oil producers receive large subsidies and tax reductions. The non-oil industries are taxed at a rate approximate to eighteen-percent, while the oil industry is taxed at a mere eleven-percent (Albion Monitor). BP must at least level the playing field, and they should seek subsidies for renewable infrastructure constructions to further lower the cost of alternative energy.

As BP lobbies and supports for long term changes in the political control over energy, BP will be able to stay ahead of the energy demand. By the time that fossil fuels are no longer viable energy options, BP will have already created a political infrastructure which supports alternative energy and long term solutions.

Economic/Social/Environmental

The oil industry is a very profitable industry, and it is foreseen to remain so for at least the next 50 years (Wikipedia: Hubbert Peak Theory). However, BP must also react to the changing paradigm of energy usage, the fact that oil is a short term energy solution for a long term demand, and that cleaner energies are becoming the future. Marketing campaigns, alternative energy demonstrations, and bringing to light selective scientific studies will help them accomplish this. BP should emphasize the benefits of green energy, while simultaneously reprimand the effects of oil disasters on the environment, global warming originating from byproducts of oil consumption, and global addiction to oil.

It is also predicted that as public demand for renewable energies increase and subsidies for infrastructure development increase, renewable energy prices will drop significantly due to economies of scale (Union of Concerned Scientists). Research has shown that many customers are willing to purchase renewable energy even if it costs somewhat more than conventional power (Albion Monitor).

Closely linked to social issues, the environmental effects of the oil industry have become more prominent in the last few decades. Oil in its crude form is toxic to living

organisms, and refined forms are extremely flammable. Accidental leakage of oil into the environment is extremely devastating, as the 1989 Exxon Valdez oil spill in Alaska exemplified. Oil related accidents and clean up must be paid in large part by the public in the form of subsidies (Wikipedia: BP) and volunteer workers. In economics, this is known as negative externalized costs. It is in BP's best interest to emphasize these facts in order to draw more attention to its alternative energy solutions and their environmental safety.

Technological

BP currently is involved in four alternative energy technologies: solar, wind, and hydrogen power, and natural gas. BP must continue its trend of investing in these technologies, as their demand will increase. BP's success relies on its ability to control costs to keep alternative energies competitive with conventional energy. This success also relies on developing and implementing the alternative energy infrastructure and keeping the public informed on the benefits of how alternative energies work in comparison to fossil fuel, oil based energies.

BP is currently the world's leader in solar panel production since its purchase of Lucas Energy Systems and Solarex (BP Alternative Energy: Solar). Solar energy can be utilized using two different methods. The first is often referred to as "solar heating". This rather primitive but effective technique involves direct heating of fluids by focusing the sun's rays. This is especially useful for heating swimming pools which can take a large amount of energy using conventional methods. The second type of solar power is using photoelectric panels. Photons from light rays are converted to moving electrons, and electricity is the result.

Wind power is an alternative to solar power, as BP has stationed wind power plantations throughout the world where solar power would not have been as fruitful (BP Alternative Energy: Solar). Wind power is one of the fastest growing alternative energy sources, and contrary to popular belief, does not require strong winds to be effective.

Hydrogen power is an area of high promise, as the burning of hydrogen fuel does not pollute the environment. Currently, obtaining hydrogen is a problem because it takes more energy to produce hydrogen fuel, than the amount of energy hydrogen provides when burned. However, by investing more into research, BP can find new and more

efficient methods of producing hydrogen fuels, so that the gains of using it as a fuel outweigh the costs of producing it.

While natural gas is not a renewable energy, it is often considered an alternative energy because it pollutes far less than petroleum based fuels. It is an ideal power source for home heating, as opposed to using it to generate electricity. BP can leverage its already existing exploration and drilling assets to obtain more natural gas.

MESO ANALYSIS

The Super-major landscape

BP operates in an oligopoly market among the super-major oil companies. While creating a first mover advantage is currently the best strategy for BP, they must continually watch the competitive environment and be prepared to react one step ahead of their competitors actions in the alternative energy markets.

Among the super-major integrated oil companies, most of them are building renewable energy businesses with a long term view. Moreover, several small companies are entering the energy industry with small-scale power generation projects in reaction to of governmental support (many of these “pure play” renewable energy companies are European).

There is growing pressure worldwide to drive emissions down and drive alternative energy use up. Over one-third of U.S. states have made commitments to increase the use of cleaner energy sources - even in Texas, the heart of the U.S. oil industry. In Europe, several countries have passed laws requiring emissions reductions of up to eighty-percent. Worldwide renewable energy investments are bringing cleaner energy to customers for the first time and displacing more polluting energy sources (Campaign ExxonMobil). The Energy Information Administration, known for conservative growth estimates for renewables, indicates that solar photovoltaic supply is expected to grow by more than twenty-two-percent between now and 2020 (more than double the growth rate ExxonMobil cites for renewable), compared to a 1.7% growth rate for motor gasoline. Wind power is also predicted to grow by nearly eight-percent in that time (Campaign ExxonMobil).

BP and Competitors

BP is now a leading producer of solar technology, with a seventeen-percent market share for solar cells. In 1999, BP invested \$45 million in its solar energy business. BP bought the fifty-percent stake of Solarex to create world's largest solar company (BP Global). From the success of investment in solar energy, BP expects to deliver revenues of \$1 billion in 2008 (BP Global). In 2005, BP announced that it plans to double its investment in the alternative and renewable energies with high growth potential and they expect to deliver revenues of about \$6 billion per year within the next ten years (BP Global). BP has more recently supported these efforts in announcing a joint venture with Edison International to build a \$1 billion hydrogen-fueled power plant in Southern California in February 2006 (Douglass).

Shell

Shell has now invested over \$1 billion in alternative energies, making it one of the world's leading companies in the sector as well. Shell Renewables is one of the five core businesses of the Shell Group, which were established in 1997 to develop commercial opportunities in both solar and wind energy. Shell also has a global hydrogen unit. Among other projects, it operates a hydrogen-refueling station for fuel-cell cars in suburban Washington, D.C. (Shell). Shell's website lists its corporate climate strategies, tips for how customers can reduce emissions, and greenhouse gas mapping projects and reporting (CoopAmerica).

Chevron

Spokesman Donald Campbell of Chevron said that Chevron has spent \$1 billion since 2000 developing alternative energy, renewable energy and methods of using energy more efficiently. Among those projects is a partnership with automaker Hyundai on a hydrogen-refueling station in Chino, California, for the handful of non-polluting fuel-cell vehicles being tested in the U.S. (Healey). Chevron believes renewable and alternative energy sources are important in the overall energy mix for the global economy. However, the widespread use of renewable energy sources depends on many factors, including technological progress, market acceptance, and economic viability (Chevron).

ExxonMobil

Although the worldwide trend of emissions is down and alternative energy use is up, ExxonMobil does not have plans to invest substantial earnings in developing

alternative or renewable energy. Exxon spokesman Dave Gardner says, “We’re an oil and gas company. In times past, we tried to get into other businesses, we didn’t do it well. We’d rather re-invest in what we know” (Healey). ExxonMobil is currently unwilling to use its record breaking profits for alternative energy development (Healey), however ExxonMobil may change this strategy in the future when fossil fuels begin to exhaust. In this event, ExxonMobil could become a big competitor of renewable energy because of the size of their capital.

The forces at play

Threat of entry

The threat of new player entering into the renewable energy market is low. Alternative energy industry is, by its nature, capital intensive industry and recoverability of that cost is low at its current stage. Favorable government policy for existing players also creates barriers for a new player in the market. However, this should not be underestimated as the business climate and acceptability of alternative energies change.

Bargain power of suppliers

There are no definite suppliers in alternative and renewable industry by its definition. Players in this industry will be in the mercy of its major supplier–nature.

Bargain power of buyers

Buyers of alternative energy also threaten the profitability of the energy providers, but this bargaining power will be in the short-run, and will decrease in the long-run. Due to current high capital requirement and geographical limitation of alternative energies, players in the alternative energy industry will be dominated by consumers who are highly sensitive to price changes and substitutes in the early stage. However, the continuing evolution of technology in generating alternative energy and favorable political climates will enable firms to gain control over the buying power of consumers.

Threat of substitutes

It is premature to determine which alternative energy will dominate future energy industry, but one can say with absolute certainty that fossil fuel based energy is the most sought after and cheapest source of energy right now. No one can accurately predict when fossil fuel domination will end. Therefore, fossil fuels pose as a significant substitute to renewable energy.

Rivalry among existing competitors

Trends show that nearly every super-major oil firm recognizes that fossil fuels will eventually be exhausted and alternative energy will become the way of the future. Nearly all of them are investing large amounts of capital in developing alternative energy. Firms in the energy industry not only use investment to position themselves as early starters in emerging alternative energy markets, but they also use this market to promote positive images of themselves. Due to geographical limitations, competition in the alternative energy industry will come from whichever company successfully positions itself to provide energy from the different sources of alternative energy.

Genetic Strategies (Energy industry)

BP has positioned itself as the leader in solar energy market by investing vast amounts of capital early on. The question is how effectively can solar energy compete against other sources of alternative energy and conventional fossil fuel energy? The answer lies with how well BP can generate revenue from its major business unit, oil production and refinery, to fund further investment in the alternative energy market. As the world witnessed during recent oil price surge, energy industry is volatile and unstable. BP's ability to sustain its commitment in developing alternative energy sources is important because BP will be unable to recover its investment in alternative energy if oil market turns for worse and BP decides to exit from alternative energy market.

Differentiation

Comparing the super-majors, BP and Shell are utilizing differentiation strategies (SEE APPENDIX A) but are close to cost leadership because they are involved in alternative energy market, yet still competitive in the oil business, respectively. Although both companies increase product lines of alternative energy, they are not yet profitable enough that customers can tell which companies' products and services are better. BP will have to further brand itself as an environmentally friendly energy company in the future to bypass Shell's alternative energy undertakings. In an oligopoly market, corporate image is one of the major determining factors in consumers' minds. Every firm in the energy industry is trying to paint their corporate image as an environmentally friendly company. No other company can claim to be 'No. 1' in solar energy market, a

distinctive competitive advantage for BP – but they will have to continue this feat with the other alternative energies.

Cost Leadership

In comparison, ExxonMobil is the cost leader in the oil business, as they have not yet distinctively diversified their energy portfolio to include alternative energy. Chevron is between a cost leadership and differentiation strategy, but has not invested in alternative energy to the extent that BP and Shell have (SEE APPENDIX A).

MESO Conclusion

The alternative energy industry is still in the formation stages, but BP has committed to supporting alternative energy and becoming one of the first to offer these energies to their customers. Having a first mover advantage is particularly important in the energy industry because this early starter position gives BP a distinctive advantage over its competitors. Due to high capital requirement, competitors who enter into the alternative energy market now, will have to reflect the cost and prices, while BP has a head start in observing initial cost and will be able to engage in price wars with potential entrants in the alternative energy market. Even though BP positioned itself as front runner in alternative energy, BP should continue to concentrate on its current business in fossil fuel, as alternative energy still requires continuing investment and development, which can be derived from the revenues of their core business. BP must continue to nurture the changing energy paradigm and support the search for long term solutions for energy supplies. They will be able to accomplish this if they can out-market and out produce their super-major competitors in the alternative energy market.

MICRO ANALYSIS

Mirroring the internal success

BP must proactively react to the political, social and technological barriers that currently hold the alternative energy market at bay. They also must manage to stay one step ahead of their super-major competitors and the consumer's demands for energy. The ways to accomplish this is by identifying their core competencies and advantages in their oil business, as well as their alternative energy business, and then expand on them.

A firm's value chain is a series of value-creating activities linked together in sequence from which a firm can isolate its competitive advantages. A firm uses its core competencies, based on capabilities and resources, to most efficiently and effectively operate value-creating activities in the value chain. From this efficient and effective usage of the value-creating activities, firms stay competitive in their respective industries. A value chain analysis is important for any firm because, using this method of evaluation, a firm can isolate its value added activities and analyze exactly in which areas exist value-creating and value-destroying activities. From this analysis, a firm can work to build efficiencies where they may be lacking and remove or outsource non-value-added activities or value-destroying activities.

BP has five value-creating activities from which it derives its competitive advantages including extraction, crude shipment (inbound logistics), refining (operations), light transport/distribution (outbound logistics) and marketing and sales through its retail network. In addition to these primary value-creating activities, BP has five support activities that aid their value chain in operating as efficiently and effectively as possible. These support activities include firm infrastructure, human resources management, exploration, technology development and government relations management (SEE APPENDIX B).

Extraction

One way in which BP and other oil companies are unique is that, unlike manufacturing firms, BP's first value-creating activity is not inbound logistics—as Michael Porter's generic value chain model alludes. Oil companies must first partake in exploration and extraction before they can even begin their inbound logistics. BP, unlike companies such as the United States' ExxonMobil, focuses on cost rather than on profits in its business model. And this is visible in BP's first value-creating activity, extraction. Operating in oil and gas fields globally, BP works to create maximum efficiency in its extraction process. This efficiency aids in lowering costs, which BP posits as leading to one of their competitive advantages: the ability to keep costs low. By creating these efficiencies at the beginning of the value-creating process, the costs stay low all the way to the end user. This aids in elevating their profit margin.

Crude Transport (Inbound Logistics)

The second value-creating activity in which BP operates is inbound logistics, or crude oil shipment. BP's inbound logistics activities, global in scale, are comprised of a series of many pipelines, oil tankers and other forms of transportation that transport the extracted crude oil to refining plants world wide. BP's massive global operations create efficient and effective logistics operations that help keep the costs of transporting crude oil low. This efficient global network of transporting crude supply creates more cost advantage for BP.

Refining (Operations)

In the operations area of Porter's generic value chain, BP performs its refining activities. The refining activities of this massive company are distributed strategically around the world, with close proximity to its demand markets. With strategically-placed refineries, BP has the ability to reach maximum efficient balances between inbound and outbound logistics—that is, BP positions its refineries to have proximity to their oil and gas fields while also having close proximity to its markets.

Light Transport (Outbound Logistics)

BP utilizes its global logistics network to perform its outbound logistics—light transport and distribution of refined oil. The enormous supply and distribution logistics network allows BP to perform its outbound logistics with great efficiencies, which help in lowering costs for BP.

Marketing and Sales

The final value-creating activity is BP marketing and sales. The company markets its oil and gas through its global retail network, which is primarily comprised of its BP Service Stations. BP has excelled in sales due to its advertising campaign, which markets BP's commitment to sustainability and cleanliness in the biotic community. The company has re-branded itself, as to appear more green-friendly. It has done this by changing its name from British Petroleum to BP, inferring but not asserting that it stands for "Beyond Petroleum". The "Beyond Petroleum" campaign includes BP's new logo, a green and yellow helios, which asserts the company's commitment to sustainability. No other oil company has re-branded itself in the way in which BP has. Thus, the advertised commitment to sustainability and green energy has created a competitive advantage for BP.

Support Activities

In addition to the five value-creating activities in BP's value chain, there are five support activities that aid in the value creation in the value chain. These support activities include: firm infrastructure, human resources management, exploration, technology development and government relations management. These activities, although not directly value-creating in themselves allow BP to operate in its value chain as efficiently and effectively as possible.

Firm Infrastructure and Exploration

Firm infrastructure plays an important role in the competitiveness of the company. The company's vast supply and distribution logistics network is a prime example of the infrastructure lowering costs for BP. Another way in which BP keeps its costs low is by seeking out only the least-costly oil and gas fields. BP finds easily-extractable oil and gas fields and operates their low-cost and efficient extraction operations. When a field's profitability starts to wane, the field is sold as to not lower the profitability levels of the company as a whole. As BP and other oil companies are unlike manufacturing firms, which must focus on procurement from outside suppliers, the supply for BP comes from within. Therefore, oil and gas exploration (procurement) support activities tie directly in with the firm infrastructure. BP focuses on cost in its procurement/exploration operations. The company generates superior returns through obtaining a greater share of low-cost oil fields.

Human Resource Management

Human resources management is a support activity that aids in the creation of competitive advantage for BP. BP prides itself on its ability to manage change, corporate culture and create a learning organization. BP has a tradition of acquiring other businesses in the oil and gas industry; such companies include: Amoco, Atlantic-Richfield, Burmah Castrol and Veba Oil. Through these acquisitions, BP has not only benefited from greater supply, logistics and customer base, but the company has also made a point to create organizational knowledge synergies between BP and each company that it acquires. This promotion of corporate learning leads BP to be more competitive than firms who conduct hostile takeovers and learn nothing. BP also actively manages corporate culture in order to develop synergies between existing BP employees

and employees of other acquired firms. BP is also very effective at managing change. BP has anticipated the paradigm shift to a focus on clean energy and has been able to stay ahead of the evolving paradigm in order to be one of the first big oil companies to market green energy and cleaner gasoline.

Technology Development

Technology development is also an important support activity for a company such as BP. As BP is constantly focusing on costs, the company is always investing in research and development that will create new technologies to aid in generating efficient processes. The company focuses on lowering costs at extraction and refining and is, thus, always looking toward research, development and the creation of new technologies to make their operations more cost effective. The other way in which BP looks at technology development is for their alternative energy sector. BP Alternative Energy is a new and emerging business that BP is creating in response to the anticipating change in paradigm, that needs much research and development, as it is an emerging concept.

Government Relations Management

The final support activity involves government relations management. As many of the oil and gas fields around the world are state-owned or in countries which do not allow private ownership of oil operations, BP must be involved in government relations. It is important for BP to be constantly in contact with foreign governments, as there are many different laws and regulations for the company's operations. Also, in countries where the state runs the oil operations, BP must manage contracts that it has with these governments in order to turn adequate profits in these endeavors.

Capabilities/Resources, Core Competencies and Competitive Advantage

By analyzing BP's existing value chain and support activities it is possible to look at the series of capabilities and resources that form the company's core competencies, which ultimately generate BP's competitive advantage. One of BP's primary core competencies is its vast logistics network. This network is based on BP's ability to efficiently and effectively transport its oil in its pre-existing global supply and distribution lines. BP's usage of low cost fields is another core competency. As BP only fully operates in the largest and most productive fields and has only partial ownership in the least-productive fields, the company can focus on its capability to run its extraction operations efficiently.

The way in which BP markets its processed oil products is also a core competency. With the capability of evolving just ahead of the consumer paradigm, BP has been able to be one of the first oil companies to start a marketing campaign oriented towards the environmentally-friendly consumer.

The company's capability to manage change, corporate culture and create a learning organization leads to a core competency. Other firms partake in hostile takeovers for the sole reason of increasing supply or customer base. BP does not partake in hostile takeovers, but mergers and acquisitions in which synergies are developed between the two merging organizations. These synergies lead to an increased level of knowledge in the company and thus to a knowledge-based competitive advantage.

Alternative Energy Suggestions, Intro

In order to grow a business within the BP group, such as BP Alternative Energy, it is important to utilize the capabilities and resources of the company. The core competencies of a corporation, according to Prahalad and Hamel, are the root of the firm's competitive advantage. Therefore, BP should, in order to most efficiently and effectively grow its Alternative Energy business, conform to its core competencies that are exhibited across the whole organization.

Global Logistics Network

One of the most noted aspects of BP's value chain is the existence of a massive global network for supply and distribution. BP should utilize this vast network in its alternative energy business. Many of the supplies for BP's solar, wind, hydrogen and natural gas operations need to be shipped to and from all points on the globe. For this reason, it is very efficient for BP to use its pre-existing supply and distribution channels for its alternative energy business. For example, BP already uses its logistics networks to transport heavy crude and refined oil and gas and could use these existing logistics channels to ship hydrogen and natural gas. The company could also outfit its containers to ship important supplies for wind and solar operations as well.

Research and Development, Learning Organization

As BP is committed to research and development for the purposes of making their oil and gas operations more efficient, the company can also shift many resources over to alternative energy for the purpose of developing that business to its full potential. One

way in which BP could grow its research and development for alternative energy is to continue to merge with or acquire alternative energy companies. One of BP's core competencies is its ability to manage corporate culture and create a learning organization. For this reason, it would be entirely possible for BP to purchase a smaller solar, wind or hydrogen alternative energy – producing company for the purpose of learning from this organization. Knowledge from a company that specializes in alternative energy combined with the global power and leverage of BP could create amazing synergies that would greatly benefit the company.

Government Relations

Similar to the need to work with governments in the field of oil and gas operations, it is still necessary to work closely with governments in alternative energy as well. With operations such as electricity production from hydrogen and natural gas, it is still necessary to procure the hydrogen and natural gas. For this extraction, it may be necessary to work closely with governments, especially in regions where private ownership of resources is not allowed. BP already has a global network of government relations managers that are employed for the sole reason of working closely with governments. This management team can easily begin to persuade green-friendly governments to create sustainable energy plants that use wind, solar or hydrogen. BP must also work closely with governments in order to isolate energy demands so that it knows where and when to build large facilities.

Marketing

One final important core competency that BP should mirror in BP Alternative Energy is the company's ability to efficiently and effectively market their products to a consumer group that is more and more impacted by the green energy movement. BP is already very effective at marketing its oil-based products using a green approach, such as the "Beyond Petroleum" campaign. If the company could facilitate similar campaigns for alternative energy, the company could reach a larger number of consumers and customers.

Value Chain Conclusion

Through the process of conducting a value chain analysis, it is possible to isolate core competencies and thus competitive advantages of a company. In the case of BP and

BP Alternative Energy, it is possible to evaluate value-added activities and analyze where exactly on the value chain efficiencies need to be improved.

It is possible to see that BP should transfer much of its value chain over to BP alternative energy in order to conform to the core competencies of the parent company and also to be as efficient and effective as possible to make profits in alternative energy.

In the end, BP Alternative Energy should use the pre-existing global supply and distribution network already set up by the parent company. The company should maximize effectiveness of research and development by acquiring smaller alternative energy firms, similar to the way in which BP improved organizational knowledge through acquisitions and mergers. BP should also create governmental knowledge of alternative energy through its pre-existing relationships with foreign governments.

Finally, BP should continue mirror efforts in marketing to their alternative energy business. With these value-creating and supporting activities in place, BP Alternative Energy should have a superior value chain that is efficient, effective and able to create competitive advantages for the company.

Alternative Energy: Feeding the Future

Scenario Analysis

BP has the opportunity to take advantage of an energy market that is expected to replace the current oil based world energy market. However, there are unforeseen factors – both negative and positive, in the energy market, and it is important to consider different possibilities and scenarios.

One most extreme scenario is that we will not exhaust our oil supplies. There is no way to absolutely, undeniably foresee that the world's oil supply will be completely exhausted. It is possible that two, ten or fifty years into the future, an oil company could discover an oil field so fertile, that our insatiable appetite for oil based energies will be satisfied and that the world will not run out oil for the next 500 years. In this case, we would hope that it would BP to be the founding company, but in the event of an inexhaustible oil field discovery, renewable energy demand may cease to exist, therefore deeming renewable energy production in replacement of oil demand, moot. At least until 500 years has passed. However, the chances of finding inexhaustible oil fields are slim,

given the high-tech oil finding technologies currently utilized. We can say that beyond a reasonable doubt that we will eventually exhaust the world's oil supply.

The other extreme case scenario is that the world we run out of, or be completely cut off of oil. For example, oil field's productions may have been miscalculated and we will exhaust the useable oil supplies in the next decade. Or diplomatic relations with major oil producing countries will deteriorate, causing them to alienate themselves and cut off oil supplies to the rest of the world. In either of these cases, the greater populations and major consumers of oil for energy will have to search for alternatives to oil based energies. In the event that alternative energy will be demanded at a greater amount and sooner, BP will have a definite contributing supply of alternative energies.

However, we can assume that our high-tech oil finding and approximating technologies have given us a reasonable estimate of the amount of recoverable, usable oil that is left in the earth. And in the event of deteriorating diplomatic relations, we have the United Nations and other international bodies whose job it is to oversee fair trade and reparation of diplomatic relations – being cut off of oil, based on diplomatic relations, is an unlikely scenario in the long run.

With this being said, there will be enough time between now and exhaustion of fossil fuels, in which BP will have innovated and perfected the art of producing renewable and alternative energies to provide the masses.

Final Recommendations and Conclusion

Based on the facts and arguments presented **BP can position themselves as the world's foremost provider of alternative energies among the super-major oil producing companies** by dynamically supporting and participating in the following activities which will diversify themselves from other super-major oil companies also participating in alternative energy production:

- Lobby for more environmental protections which require cleaner energy and less emissions. By participating in governmental lobbying that supports legislation for cleaner energies, BP can also lobby for better tax treatment and subsidization for the alternative energy market. Currently, there are many governments which do not support alternative energy as much as they subsidize and protect the oil based energy market – the U.S. is a prime example. If BP can succeed in passing lower taxes, more

tax write-offs and increased subsidization and support for alternative energy production and technologies, they could be more profitable with their alternative energy innovations.

- BP must invest gains of their oil based market into alternative energy technologies and production. BP needs to continue to innovate on current alternative energy technologies, while simultaneously expanding their production and market share of alternative energy to the areas of the world demanding it (ie. wind power in the Europe; solar power in Africa). This will also help them maintain their first mover advantage in merging alternative energy demanding areas around the world (for example, once BP has established a wind farm on the coast of Maine, U.S., no other company would benefit from setting up a wind farm in the same place).
- BP will continue to merge and acquire renewable energy companies. With the acquired expertise of incumbent alternative energy producers, BP can create synergies in innovation, knowledge management and ultimately production and market share.
- Continually renew the “greener” image. Informing the public and saturating the market with information about alternative energies will nurture the changing energy paradigm. This will result in more consumers demanding and accessing alternative energies. If BP can continue to stay one step ahead of the changing energy paradigm and support it by associating their name with their corresponding production availability of renewable energy, BP’s name will equate to the foremost provider of alternative energy.
- Utilize existing structure. BP as already realized effective and efficient economies in the many elements of their value chain. They can use the successful elements of their value chain activities and apply them to their alternative energy activities.

Conclusion: Sustainability, Acceptability, Risk/Feasibility

Science has shown the world that fossil fuels are running out and that beyond a reasonable doubt, we will eventually run out of the efficiently extractable fossil fuels to supply our insatiable hunger for energy. The world’s nations need energy to power growth, but the world’s nations are realizing that the energy may not always come from fossil fuels, especially oil. No one can tell for certain when our oil and fossil fuel

supplies will be exhausted, but everyone can see that there is a way to bypass this problem, and that is through alternative and renewable energies. There are also many efforts to decrease dependence on fossil based and other un-renewable energies because of their detrimental environmental effects. These observations are where the energy paradigm is changing.

Alternative energies should be the way of the future. Not only could they decrease international diplomatic tensions between nations – every nation depending only on their own renewable energy sources, saving consumers money from volatile markets etc.; they could also help reduce the pollution and environmental damage caused from oil, nuclear and coal products and by-products. Alternative and renewable energies could solve and prove moot, many of the energy problems we face today.

Super-major oil company BP, has already taken the first steps in capitalizing on the changing energy paradigm and they are managing to stay ahead of it just enough to profit from alternative energies. While BP has a first mover advantage in alternative energy production, such as the hydrogen plant being developed in southern California; and in alternative energy demanding markets such as Europe, Indonesia and Africa, the only way for BP to sustain this advantage is to continually improve, invest and innovate on their current alternative energy operations.




BP could change the face of energy in certain areas of the world, but they must foresee the demand before it arrives. As long as BP takes full advantage of the oil based energy market while it lasts, they can continue to benefit from the high profitability that this market is providing. They must also continue to invest their record reaching oil business revenues into alternative energies, so when the world's oil supply begins to diminish and prices start to rise, we will be at a point where we no longer depend on oil, and BP will be a dynamic supplier of alternative energy.

Failure to capitalize on the alternative energy market, or failure stay one step ahead of the demand, would cause BP to risk potential advantage of becoming the foremost supplier of energy – whatever source that energy comes from. In the future, we see green.

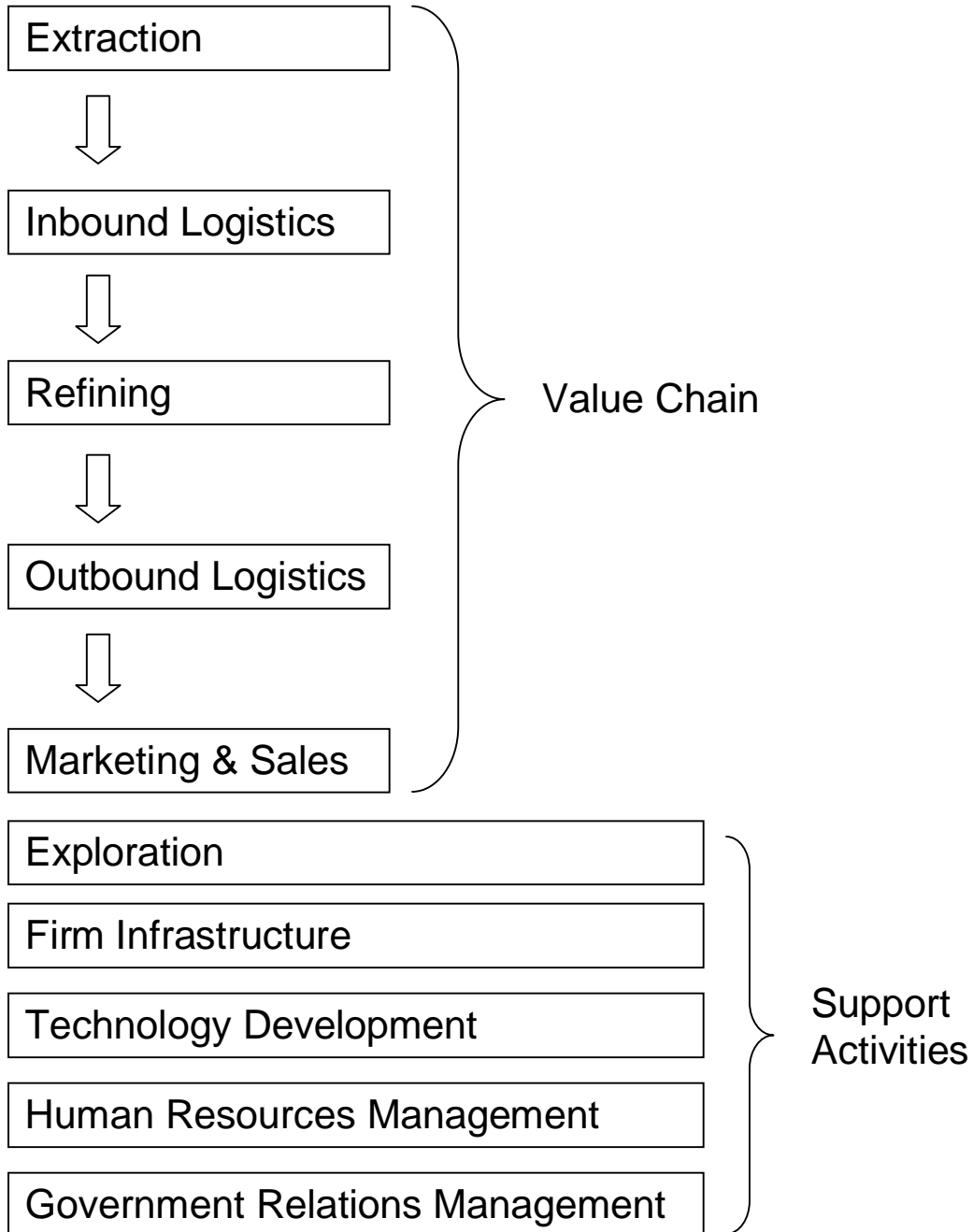
APPENDIX A

Generic Strategies (Energy Industry)

Competitive Strategy

| | | Lower Cost | Differentiation |
|--------------------------|---------------|---|---|
| <u>Competitive Scope</u> | Broad Target | <p>Cost Leadership</p> <p>ExxonMobil</p>  | <p>Differentiation</p>   |
| | Narrow Target | <p>Cost Focus</p> | <p>Differentiation Focus</p> |

APPENDIX B
BP Oil and Gas Value Chain



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