

AN ORGANIZATIONAL STRUCTURE ANALYSIS FOR BCHYDRO, POWER SMART

by

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ABSTRACT

Power Smart is BC Hydro's demand-side management (DMS) initiative to encourage energy efficiency by its customers. Currently, they are in the midst of a very significant program redesign to influence their largest transmission voltage customers to use energy efficiently without the capability to award a capital incentive. From their internal operating model perspective, Power Smart is considering moving from an audit based function to a more consultative role. This project aims to provide and evaluate organizational structure alternatives for Power Smart's Industrial Marketing division to support the organizational change. The current organizational structure situation, the drivers to change and a stakeholder analysis are provided. In addition, an application of the organization design theories will be applied to determine and evaluate possible structure alternatives. The analysis concludes with recommendations on organizational structure, which is based on divisional and matrix forms, to help them accommodate and implement the consulting services initiative.

***Keywords:** Power Smart, BC Hydro, Energy Efficient Programs, Electric Supplier, Demand-Side Management, Organization Design, Organizational Structure Design, Consulting Services, Human Resources, Demarketing, Strategy.*

DEDICATION

To my niece Julia who makes me smile.

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“To win without risk is to triumph without glory.”- Pierre Corneille

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GLOSSARY¹

British Columbia Utilities Commission (BCUC), an independent regulatory agency of the provincial government operating under and administering the Utilities Commission Act. Its responsibility is the regulation of public utilities under its jurisdiction and to ensure customers receive safe, reliable service and non-discriminatory, reasonable rates.

Clean Electricity is defined as "alternative energy technologies that result in a net environmental improvement relative to existing energy production." Examples may include hydro, wind, solar, photovoltaic, geothermal, wave and biomass energy.

Customer-Based Generation: BC Hydro initiative to buy electricity from large customers through a competitive bidding process.

Demand-Side Management (DSM): Actions that modify customer demand for electricity, helping defer the need for new energy and capacity supply additions.

Gigawatt hour (GWh): One billion watt hours; one million kilowatt hours (an amount of electric energy that will serve about 100 residential customers for one year).

Hydroelectricity: Electricity produced by harnessing the power of falling water or stream flow.

Kilowatt (kW): One thousand watts; the commercial unit of measurement of electric power. A kilowatt is the flow of electricity required to light 10 100-watt light bulbs.

Kilowatt Hour (kWh): One thousand watts used for a period of one hour; the basic unit of measurement of electric energy. On average, residential customers in B.C. use about 10,000 kWh per year.

Megawatt (MW): One million watts; one thousand kilowatts. A unit commonly used to measure both the capacity of generating stations and the rate at which energy can be delivered.

MWh: Megawatt hour (1,000 kilowatt hours/kWh).

Peak Capacity: The maximum amount of electrical power that generating stations can produce in any instant.

Peak Demand: The maximum instantaneous demand on a power system, normally the maximum hourly demand.

Power Smart is the BCHydro's demand-side management (DSM) initiative to encourage energy efficiency by its customers. Launched in 1989, Power Smart includes a full range of DSM programs aimed at BC Hydro's residential, commercial and industrial customers.

Self-Generation: Generation of electricity by an industry or commercial enterprise whose principal product is not electricity. Self-generation can reduce the amount of electricity purchased from the utility, or surplus electricity may be sold to the utility as a supply-side resource.

Stepped Rate is a rate structure for transmission class customers, prescribed by the B.C. Energy Plan that will use different price levels so incremental consumption will be priced at incremental cost.

Stakeholder: Individuals, groups or representatives of groups who have an interest in BC Hydro's activities. First Nations, municipal governments, environmental organizations and employees are a few examples of BC Hydro's stakeholder groups.

¹ Adapted from BC Hydro Annual Report (2005). Used with permission.

1 INTRODUCTION

1.1 Background

1.1.1 BC Hydro, Power Smart, and the Industrial Marketing Division

BC Hydro is the largest electric utility in British Columbia, Canada where its primary business activities are the generation and distribution of electricity. Serving more than 1.6 million customers, approximately 94% per cent of the province's population¹, BC Hydro is one of North America's leading providers of renewable hydropower, with 90% of its total generation capacity of 11,311 megawatts (MW) coming from this system. The company claims to offer customers some of the lowest electricity rates in the world, has approximately 4,000 direct employees, and revenues of \$ 3,725 million².

Power Smart is BC hydro's division and demand-side management (DMS) initiative to promote efficient use of electric energy, developing and fostering a conservation culture in the province. By offering energy savings programs for residential, commercial, government, and industrial customers, Power Smart had achieved savings of 1,315 GWh by the end of fiscal 2005, the third year of its 10-year plan, whose goal is to save over 3,600 GWh.³ One of the top priorities for Power Smart is to encourage large/industrial customers to integrate energy efficiency into their business practices. A partnering approach combined with the use of financial grants and incentives has been used to convince top customers to implement energy savings projects. However, for their

¹ BC Hydro Annual Report (2005)

² For the 2005 fiscal year ended March 31st.

³ Adapted from the BC Hydro Annual Report (2005)

largest transmission voltage customers they have replace their incentive model with a price-based model to provide the financial incentives for customers to use electricity more efficiently.

Industrial Marketing is the Power Smart's marketing division that develops and manages the DMS programs for BC Hydro's largest transmission voltage customers. This segment represents less than one per cent of customers, but accounts for about 21% of domestic revenue¹ (see Figure 1-1 Revenue per segment).

Figure 1-1 Revenue per segment

<i>Revenues</i>	<i>in millions</i>		<i>in gigawatt hours</i>	
	2005	2004	2005	2004
<i>Domestic:</i>				
<i>Residential</i>	\$ 1,016	\$ 960	15,814	15,646
<i>Light industrial and commercial</i>	967	912	17,459	17,175
<i>Large industrial</i>	573	525	16,177	15,505
<i>Other energy sales</i>	148	156	1,755	1,825
Trade	\$ 2,704 1,021	\$ 2,553 871	51,205 29,706	50,151 28,373
Total	\$ 3,725	\$ 3,424	80,911	78,524

Extracted from BC Hydro Annual Financial Report (2005). Used with permission.

Industrial Marketing's long-term objective is to convince major industrial customers to develop and implement Strategic Energy Management Plans (SEMPs). However, these programs have been faced with several market barriers due to the lack of customer awareness in terms of their benefits to the bottom line of the business, and the

¹ BC Hydro Annual Report (2005)

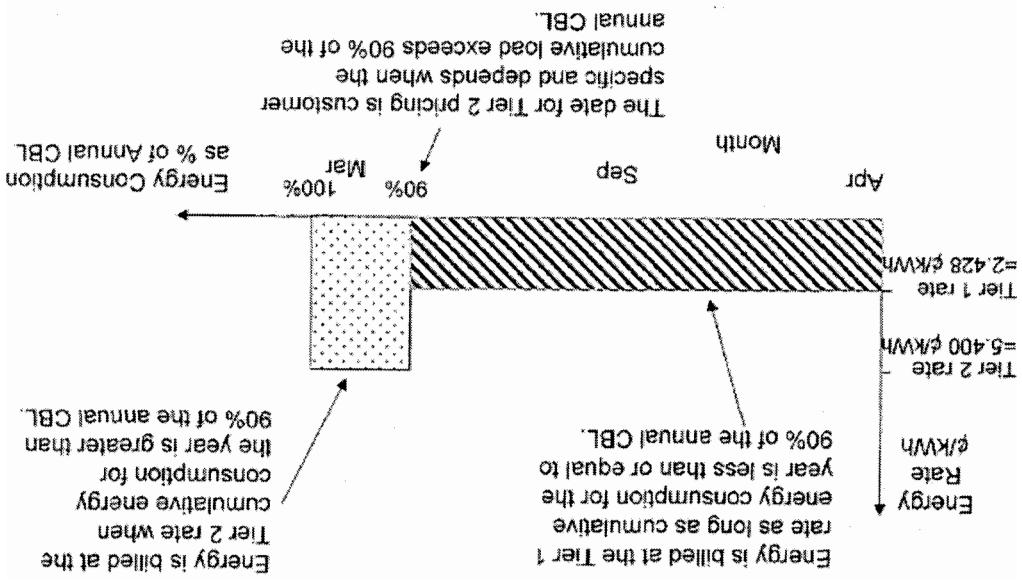
lack of technical, management expertise, and resources required to enhance customer engagement.

The current Industrial Marketing manager is redesigning their programs, establishing a new approach for Power Smart to address the barriers related to the adoption of the energy savings projects. This new approach involves focusing on the development of specific activities to access market demand, providing customized solutions depending on the current customer stage in terms of energy efficiency management.

1.1.2 New Pricing Model for Large Industrial Customers

BC Hydro has recently implemented an innovative pricing model, in April 2006, called 'The Stepped Rate'. This pricing initiative consists of using different price levels so that incremental consumption will be priced at incremental cost. Instead of charging a flat rate, large transmission voltage customers will have energy rated according to a two tiered demand charge: A tier 1 rate, for the 90% initial consumption and a higher tier 2 rate for the remaining 10% and for further consumption. However, if the stepped rate customer does not change its consumption relative to its Customer Baseline Load (CBL – which is based on historical consumption data), the customer's energy bill should remain unchanged after the implementation of the new pricing model. Figure 1-2 illustrates the stepped rate format.

Figure 1-2 Annual Stepped Rate¹



Extracted from BC Hydro Stepped Rate Application (2005). Used with permission.

BC Hydro expects that the stepped rate will create the financial incentives for these customers to implement projects to reduce energy consumption. However, in the context of Power Smart programs, this new model replaces the capital/grants incentive program that was used to lever projects. This change will require Industrial Marketing to redesign their programs focusing on “enabling” customers to use a price signal which offers a higher cost-saving stream as the financial motivator.

1.1.3 The Impact of the Stepped Rate Pricing Model on Power Smart Programs

Customers may have different perceptions about the advantages of the Stepped Rate Pricing Model in terms of promoting energy efficiency programs. This perception, which will define the degree of motivation, may depend on the company’s corporate

¹ CBL stands for Customer Baseline Load, which is based on historical consumption data.

strategy. For example, firms planning to reduce production (cancelling/closing plants) might find the investment in energy management projects an extra cost since savings will come naturally and have a positive impact on the overall electricity bill. In addition, companies running a 'sustaining' strategy (neither increasing nor reducing production) may agree with the 'same' energy cost since the stepped rate does not penalize those who do not increase energy consumption. On the other hand, Power Smart may find those customers pursuing a growth strategy the least resistant group since an increase in consumption represents a tremendous increase in cost of the extra KWh.

1.2 Purpose, Structure, and Methodology

This research has the objective of providing organizational structure alternatives for Power Smart's Industrial Marketing division, which is considering moving from an audit based function to a more consultative role. From their internal operating model perspective, their organizational structure was set-up to accommodate an incentive based model where their staff basically audited transactions in order to determine if all their policies, procedures, and due diligence was completed before releasing the incentive funds for the energy efficiency programs. However, the incentive model based on grants was replaced with a price-based model (stepped rate) to provide the financial incentive for customers to use electricity more efficiently. Therefore, a new organization structure is required to enable a consulting type environment where Power Smart will espouse a customer-centric model. In this context, Power Smart aims to provide a comprehensive offer of services that will address customer needs in terms of identifying opportunities, developing strategic plans, and helping them with the energy initiatives.

This research starts with a literature review including key elements of the Organizational Structure Design theory, central concepts of knowledge management, and major issues of the customer centric strategy. This provides a context for the subsequent organization structure analysis and recommendations. At the division level, a stakeholder analysis in Chapter 4.5 examines the impact of the new process on the current stakeholders of the Industrial Marketing division. The subsequent positioning analysis intends to assess the requirements for the organizational structure alternatives that are described and evaluated in detail in Chapter 6.

In this research, the author relied on public material, secondary data, and informal interviews with Power Smart Program Managers, who clarified concepts and internal organizational structures. The author acknowledges the results of this research may be influenced by the fact that interviews were restricted solely to this division. Further assessments with customers, alliances, and other BC Hydro divisions should be considered.

1.3 Scope

This is not a complete organizational structure design plan for BC Hydro. The scope is limited to the impact that the new price-based model may have on the current structure of the Industrial Marketing division and which structure alternatives should be considered. There are many other opportunities and threats that are not considered. However, Power Smart's current strategy is analysed in order to be able to determine the best organizational structure response to the "customer intimacy" strategy that the division is pursuing.

This project is restricted to the development of no more than 3 alternatives to the current stage of the Industrial Marketing division, and will not include the change management process and the implementation plan.

2 LITERATURE REVIEW

This chapter provides a review of the Organizational Structure theory at the level necessary for understanding the case analysis as well as supporting the recommendations presented in the conclusion section. Section 2.1 mentions a number of central concepts that should be addressed when analysing the structure of any organization. In addition, section 2.2 illustrates the basic forms of structure: Functional, Divisional, Matrix, and Network.

2.1 Organization Structures – Central Concepts

The structure of an organization is a mechanism composed of roles, relationships, and procedures that exist to enable a group of people to effectively work together¹. This is more complex than just drawing an organization chart with lines linking a couple of boxes. Division of labor, coordination mechanisms, authority & decision rights, and organization boundaries are key issues that must be addressed when analysing an organizational structure. A summary of these central concepts is described below.

Division of labor: This addresses how responsibilities and tasks should be divided among the members of an organization. The major concern is to define the extent of job specialization, i.e., whether grouped in terms of the knowledge and skills to proceed with a specific activity or according to the activities necessary to produce the goods and services the firm markets. While highly specialized jobs permit the

¹ Adapted from Nohria (1991)

development of skills necessary to speed up the delivery of certain activities, extreme specialization might lead to monotonous work due to repetition and standardization as well as increasing coordination costs in case of cross-functional activities.

Coordination mechanisms: This is crucial for effective integration between members of an organization. Several mechanisms can be used to leverage coordination such as meetings, committees, task forces, formal procedures. However, routine versus exceptional activities determine which coordination mechanism should be used. For example, formal rules and direct supervision can be used for coordination of integration across an assembly line. On the other hand, committees and task forces are applicable when there are limited resources such as people, budget, and time. While it is important to ensure smooth coordination in any organization, the trade-off of the collaborative approach is that it may increase the cost of coordination and reduce the pace of deliverables since decisions are likely to be made by the group.

Authority & decision rights: This defines how information flows should be organized and who should make decisions (Nohria, 1991). The central problem here is determining the appropriate degree of centralization or decentralization of the decision-making process. One may agree that decisions should be made by those who have the most valuable information. However, decisions should be aligned with the best interest of the organization as a whole and specialists may lack relevant factors that affect other division among the firm. This leads to the discussion of understanding the legitimate basis of authority. While many organizations use formal position, rank and title to define the picture of who has authority in that organization, one should observe the informal degree of legitimacy based on one's expertise, charisma, and social status.

Organization boundaries: This defines how an organization interacts with its environment, i.e., deciding what to do inside and outside the boundaries of the firm and who should be involved in doing so. Nevertheless, formal roles and relationships are not the only basis of people's interaction in organizations. Informal structures are equally important when understanding of how organizations work. These are relationships, mainly based on friendship, proximity, and shared interests, which are strongly important in determining how information flows and influences people's perceptions.

2.2 The Elements of Configuration Structure

Mintzberg (1981) describes a list of elements of structure that are present in any form of organization. These elements interact in a system, defining the characteristics of the corporate environment that managers should pay attention to when designing effective organizations. A summary of the most relevant elements is provided below.

Specialization of tasks: This refers to the number of tasks and their degree of specialization and control. "A job is horizontally specialized to the extent that it encompasses few narrowly defined tasks, vertically specialized to the extent that the worker lacks control of the tasks he or she performs."(Mintzberg, 1981)

Job and training formalization: This refers to the degree of standardization of work, procedures and processes within an organization. Firms that rely on formalization for coordination and controlling generally have a centralized decision-making process. In addition, innovation is unlikely to flourish in an environment with high standardization.

Groups of units: Groups in organizations are generally created to perform a specific function/job/project or to serve a specific market/customer. They share common

resources, coordination, and supervision. However, the decision-making process may differ for each type of structure.

Unit size: This refers to the number of positions contained in a specific unit and how close supervision is likely to be. The number of workers a manager can supervise is directly related to the degree of standardization of the jobs.

Liaison devices: These are mechanisms that companies use to motivate employees to share experiences, improve the learning environment, and encourage mutual adjustments. They are particularly important when bringing together members of many different departments.

2.3 Understanding Types of Organization Structures

Although a very large number of organization structures can be defined, in practice there are four basic structure forms – functional, divisional, matrix, and network. However, in today’s dynamic and fast pace environment, most companies have chosen hybrid solutions depending on their size and complexity of the products and services they provide to customers. This section summarizes the aforementioned four basic structure forms, which advantages and disadvantages are illustrated in the end of this section in Table 1.

Functional: In this form, labor is organized in terms of the main activities or functions that need to be performed by the firm in order to carry out its business. For example, as shown in Figure 2-1, a group of people that share common expertise or use the same resources may be organized into production, sales, marketing, product & development, finance, and administration divisions. Activities are coordinated vertically

within the function and a strong hierarchical supervision is common. Members of functional divisions start acting similarly, encouraging collaboration and improving efficiency within the department. However, since employees are focused on achieving goals of their respective departments, cooperation with other divisions tends to be more difficult.

Figure 2-1 Example of a Functional Structure



Adapted from Hitt, Ireland, Hoskisson, Rowe, Sheppard (2006).

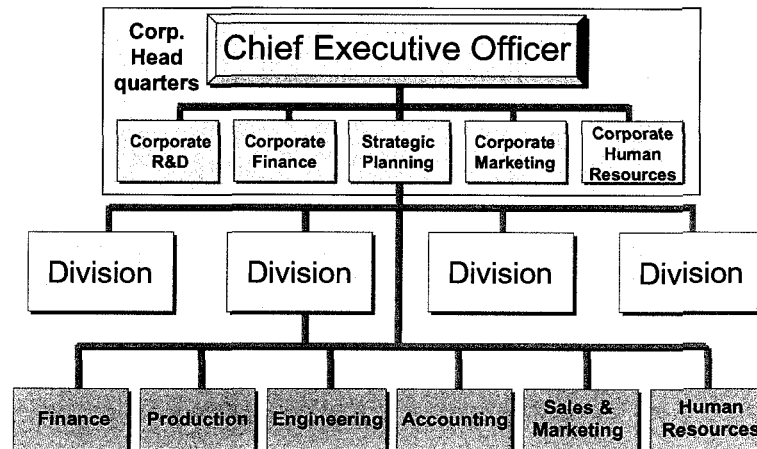
The functional form is more effective in a relatively stable environment with low degree of uncertainty. This is because economies of scale are produced as a result of gains in specialization. In addition, decisions may pile up since decision making tends to be centralized, which explains why top management cannot always respond fast enough. Overall, this form is best suited to small and medium-sized organizations with a small number of similar products, in one or a few locations, to one general type of customer.

Divisional: The divisional structure is organized according to the specific demands of products, markets, or customers. Therefore, several functions are grouped

into divisions and are operated as a separated business, which makes it appropriate for related-diversified business. While coordination across function within each division is maximized, corporate managers have the challenge of exploiting synergies among divisions. As a result, the organization may lose economies of scale since resources may be duplicated for each division. Another disadvantage is that divisions may work at odds with each other. For example, divisions may have common customers and start competing with each other for their attention. Moreover, since divisions share limited capital resources among the organization, the goal is to maximize the firm's overall performance by creating opportunities through initiatives of cooperation.

Overall, this structure is suitable for medium or large sized organizations in a moderate or highly uncertain environment that have a portfolio of a large number of different products, in multiple locations, to many types of customers. The ability to easily adapt to the changes in customer demand enables the company to emphasize innovation and coordinated action to satisfy clients, or maintain a market segment. Figure 2-2 shows an example of a divisional structure form.

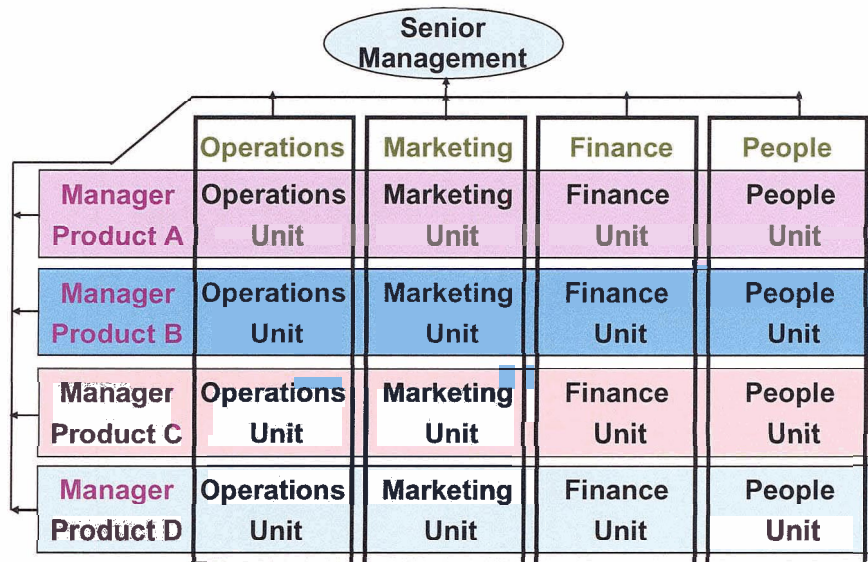
Figure 2-2 Example of a Divisional Structure



Adapted from Hitt, Ireland, Hoskisson, Rowe, Sheppard (2006).

Matrix: In this form, both divisional and functional structures are implemented simultaneously in a way that groups of people of different divisions share resources and work together, especially on assigned projects. However, due its unique dual reporting system in which employees report to two supervisors (the product team manager and the functional manager), coordination of scheduling, priorities, and resource allocation may raise conflicts between groups. While a matrix structure enables the organization to meet multiple demands from the environment, a basic problem is determining responsibility and degree of authority. People in a matrix spend a large amount of time in meetings, which require management and the ability to resolve issues that pertain to both groups. Because this structure is strongly based on power-sharing and collaboration, many companies may find the challenge of balancing authority very difficult to maintain. Figure 2-3 illustrates a matrix structure with a product and function combination.

Figure 2-3 Example of a Matrix Structure



Adapted from Hitt, Ireland, Hoskisson, Rowe, Sheppard (2006).

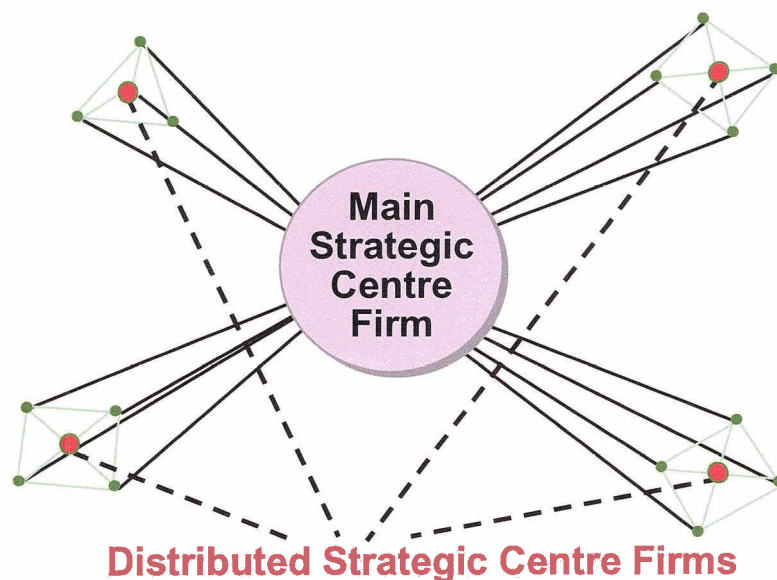
Overall, a matrix structure is suitable for an environment with high uncertainty. Teams should be of a moderate size and work with a few product lines. The goal is to achieve both low cost and product quality/innovation.

Network: This structure is defined by an arrangement (or a cluster) of different organizations (or individuals) whose actions are coordinated by contracts and agreements rather than through a formal hierarchy of authority¹. In other words, this is a “knowledge” network in which “workers” act in terms of the expertise they provide to the cluster in a cooperative way. This type of arrangement, also called a strategic alliance, is usually managed by a “centric firm” which identifies actions that create value for the group, increasing the opportunity for each firm to achieve success through the network. Traditionally, decisions are made by the knowledgeable workers directly. This structure

¹ Adapted from Hitt, Ireland, Hoskisson, Rowe, Sheppard (2006)

is known for its flat form, with fewer levels of hierarchy and broader spans of control, which enables fast response to environmental demands. However, resources can be duplicated and accountability can be poorly defined. Adaptability is by far the main advantage of the network structure over traditional, which makes this form highly appropriate for environments where innovation is core, such as research and product development units. Figure 2-4 illustrates an example of this structure. To keep this structure working properly, the central firm must create incentives that reduce the possibility of any single partner pursuing an independent strategy, jeopardizing the collective-mutual atmosphere.

Figure 2-4 Example of a Network Structure



Adapted from Hitt, Ireland, Hoskisson, Rowe, Sheppard (2006).

Table 1 Strengths and weaknesses of each structure form

	Strengths	Weaknesses
Functional	<ol style="list-style-type: none"> 1. Economies of scale within functional departments 2. In-depth skill development 3. Enables org to accomplish functional goals 4. Peer supervision; norms and values emerge 	<ol style="list-style-type: none"> 1. Slow response time to environmental changes 2. Hierarchy overload 3. Poor horizontal coordination; communication problems 4. Results in less innovation 5. Restricted views of org goals
Divisional	<ol style="list-style-type: none"> 1. More responsive to change in environment; 2. High horizontal coordination across functions 3. Adapted to differences in products, regions, clients 4. Decentralizes decision making 	<ol style="list-style-type: none"> 1. Higher cost; eliminates economies of scale of functional structure; some duplication 2. Leads to poor coordination across divisions; communication problems 3. Makes integration and standardization across divisional lines difficult
Matrix	<ol style="list-style-type: none"> 1. Achieves coordination across functions 2. Flexible sharing of human resources across products 3. Very flexible and responsive; suited to complex decisions and frequent changes in unstable environment 4. Provides opportunity for functional and product skill development 	<ol style="list-style-type: none"> 1. Ambiguity; high levels uncertainty 2. Authority not clearly defined 3. Good interpersonal skills required 4. Time consuming – frequent meetings 5. People may bond with their project team and resist being moved
Network	<ol style="list-style-type: none"> 1. Production costs are reduced (access low-cost and functional expertise) 2. Avoids high bureaucratic costs of operating a complex organizational structure (flat hierarchy; small and flexible) 3. Can act in an organic way, quickly altering network in response to changing environment 	<ol style="list-style-type: none"> 1. Requires high degree of integration and coordination across various groups to ensure they mesh 2. Difficult to obtain learning and build core competencies 3. No loyalty to the org 4. Requires trust not to give proprietary information to competitors

Based on Jones, Gareth R. (2004)

2.4 Summary

This chapter has described a number of business theories, concepts and tools needed to understand the research and its results. The central concepts presented in section 2.1 will be used to describe and analyse the current organizational structure as well as to support the alternatives proposed. The strengths and weaknesses analysis mentioned in section 2.2 are the references for evaluating which forms match Power Smart's overall strategy.

Mintzberg's theory about elements of configuration structure (1981) is used to develop the structure alternatives in section 6.

3 CURRENT ORGANIZATIONAL STRUCTURE

This chapter provides an overview of BC Hydro's current organization configuration, especially the Power Smart Marketing division in terms of structure and situation. Some elements of structure described in section **Error! Reference source not found.** are used to illustrate how the division interacts internally and externally. Section 3.4 gives a simplified explanation of the current process at the Industrial Marketing unit, which is implementing a new process for its "transmission programs".

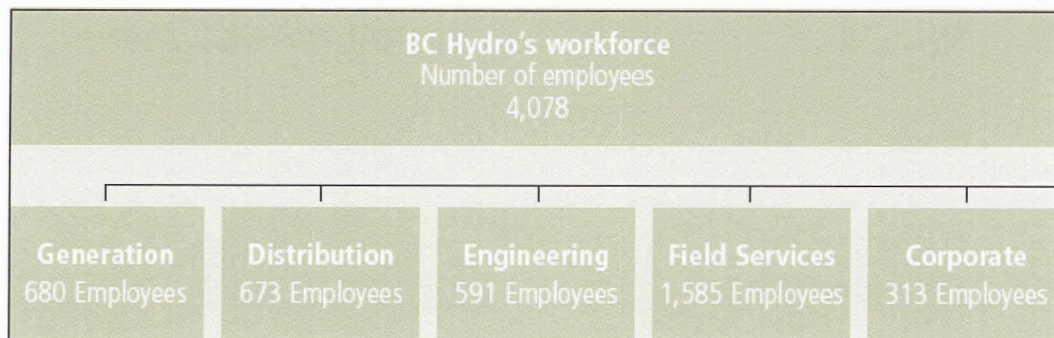
3.1 BC Hydro Corporate Structure

BC Hydro is owned and regulated by the Government of British Columbia. Work procedures, rules, policies, and process are generally standardized within the corporation. The firm adopts divisional and functional forms to integrate the company at the corporate level. The corporate headquarters, which centralizes the budget and strategic planning, relies on performance control systems as an important tool to manage and measure each division's performance. In general, divisions are treated as an integrated entity and goals tend to be subdivided into more specific sub goals, encouraging bureaucratization.

BC Hydro's organizational structure (see Figure 3-1) is composed of a corporate unit that provide services to four lines of business: Generation, Distribution, Engineering, and Field Services. Generation manages and operates the generation plants. Distribution is responsible for acquiring energy through demand-side and supply buying options, and delivering it to customers. Engineering provides the technological expertise for the

company in strategic areas including project management, maintenance, design, construction, and environmental support. Finally, Field Services is responsible for emergency response and maintenance services.

Figure 3-1 Business Units



Extracted and Adapted from BC Hydro Annual Financial Report (2005). Used with permission.

3.2 Power Smart Structure

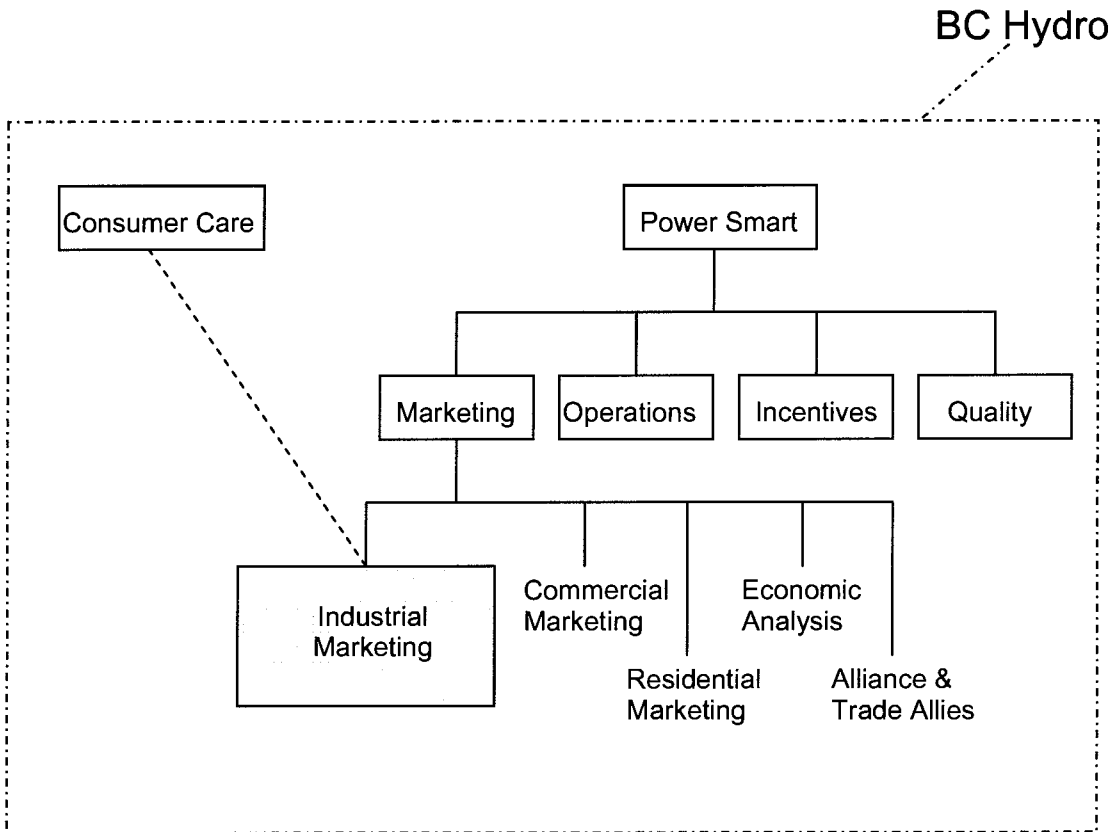
Power Smart is the BC Hydro's Demand Management Side and is responsible for delivering energy saving programs to customers. The division is broken down into 5 major departments: Marketing, Operations, Program Incentives & Rates, and Quality Assurance & Evaluation (see Figure 3-2 for a simplified organization chart). In general, divisions have two basic roles: to develop & manage the programs, and to ensure that customers are applying the capital incentives wisely. The Marketing unit is responsible for program development, Operations ensure that programs are delivered, Program Incentives & Rates provides the financial and risk management support, and Quality Assurance evaluates the programs in terms of customer satisfaction.

The Marketing unit is divided into Industrial Marketing, Commercial Marketing, Residential Marketing, Alliance & Trade Allies, and Economy Analysis & Legislative

Strategy. Little interaction between the first three divisions is noticed, considering that they are focused on their restricted market segment. However, they all work collaboratively with the other two units, which provide support on external issues such as trade alliances contracts and legislation.

Power Smart has its peculiarities in terms of interacting with other divisions within the organization. For example, the division operates in a collaborative way with the Customer Care, as shown in Figure 3-2. Both divisions became separate units in November 2005. Power Smart remained focused on managing the operational and technical staff necessary to deliver energy saving programs to customers, while Customer Care took over the Customer Relationship Management initiatives. In other words, the key account managers belong to the Customer Care unit and are responsible for the 'business' contact with clients.

Figure 3-2 BC Hydro Power Smart’s Organizational Structure Diagram



Based on BC Hydro organizational chat (May,2006).

3.3 The Industrial Marketing

The Industrial Marketing mission is to develop, manage, and deliver energy efficient programs to large industrial/ voltage customers. Currently, program development is executed by a team of 7 (seven) Product Specialists, also called Program Managers, with backgrounds in engineering and marketing. They are supervised by the Industrial Marketing Manager who is responsible for designing the strategies for the business unit. Currently, program management and delivery activities are restricted to ensure that the incentive programs designed have met the energy savings expectations, which does not imply hands-on participation in implementation activities. The Industrial

Marketing Manager uses the amount of energy saved (reduced) by customers as a tool for performance measurement.

Most of the program managers are medium vertically and horizontally specialized. Generally, they are not deeply specialized in a specific sector or industry and have little autonomy in the decision making process within the division. This situation may have occurred due to the fact that they have to collaborate with people from other divisions to gain the expertise necessary to design the programs while not exercising power over them. For example, Program Managers work closely with Key Account Managers due to the high interdependence of their objectives, but both are located in separated divisions and have a completely different reporting system.

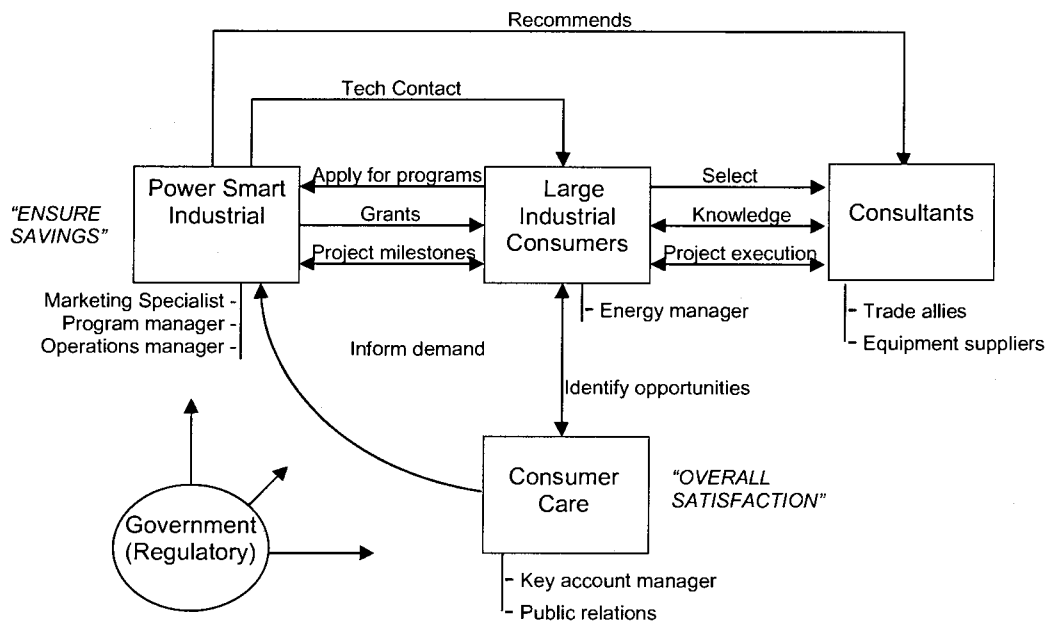
The Industrial Marketing has redesigned its programs in order to be more responsive to customers. The plan is to identify specific energy management needs for each customer and become involved with the implementation of the energy savings initiatives. However, to succeed, the division has to develop mechanisms which can provide rapid response to customers' inquiries. This may depend on empowering the team with the resources necessary to solve customers' needs on time and on budget.

3.4 Current Process – Grant Based Programs

Based on a ten year plan initiated in 2002 within a budget of \$670M, Power Smart had used incentives and grants to subsidize energy saving initiatives for their largest voltage customers until April, 2006. The process model, which is summarized and shown in Figure 3-3, has two distinct attributes: a) to develop and make available generic energy savings programs; and b) to evaluate customer's application and ensure that funds are

applied wisely. As shown in the diagram below, both Consumer Care and Power Smart work together to deliver the program initiatives.

Figure 3-3 Grant based programs – simplified process



Marketing Specialists and Program Managers in the Power Smart’s Industrial marketing Division develop the energy saving programs based mainly on new technologies available (e.g. incentives for replacing the heating system), feedback from Customer Care, and lessons learnt from previous projects. The Key Account Managers in the Consumer Care are generally the first to identify opportunities for Power Smart programs. In addition, they put customers in touch with the Industrial Marketing Manager to provide further technical assistance. Once customers decide to apply for the grants through various programs, Power Smart ensures that the application meets the program

requirements and reject or approve projects. Subsequently, subsidies in the form of grants are made available to the customers.

Power Smart has certified consulting firms, also called alliances, equipment suppliers, and other allies to supply customers with the extra resources necessary to implement the energy savings programs. However, recommendations are made upon customer request and Power Smart does not manage, guarantee, or interfere in any contract affairs between the parts. Once involved in a project, consulting firms work tied to customers designing and implementing strategic energy management plans. This close relationship may contribute to the speeding up of projects by getting customers quick response to an eventual technical demand. Both customers and consultants have experienced a great opportunity to improve their knowledge by learning throughout the implementation of the projects.

Power Smart keeps track on customer projects by requesting periodic information about the implementation phase. However, there are limited opportunities for improving 'lessons learnt' of project casualties since Power Smart has little participation in project management.

4 DRIVERS TO CHANGE

BC Hydro has introduced the stepped rate pricing model (see section 1.1.2) for transmission voltage customers in order to meet the BC Government's energy plan proposed in 2002¹. Believing that the new price-based model will provide the financial incentives for their customers to use electricity more efficiently, Power Smart has decided to eliminate the capital/grant incentive. As a result, they had to redesign their programs and processes to support the intent of stepped rates while promoting energy savings initiatives.

Consequently, a change in the organization structure is necessary to accommodate the new positioning and a plan to move towards a consulting type environment has been developed. This new approach is the way Power Smart chose to gain "customer intimacy", e.g. to strengthen the relationship with customers, and motivate them to pursue energy efficiency, reducing their energy consumption cost.

From the internal operating model perspective, the Industrial Marketing division was set-up to accommodate an 'auditing' model where their staff basically audited transactions to determine if all program requirements were completed before releasing the incentive funds. The new positioning will require a different set of arrangements in terms of team work, reporting systems, and decision making process to accommodate a model which they espouse a customer-centric model.

¹ For more information see the BC Government document called "Energy Plan for our Future: A Plan for BC" (Ministry of Energy and Mines , November 2002)

4.1 The New Program

The new program aims to provide a package of services and technical incentives to customers to help them implement energy efficiency initiatives. This new approach is labelled as “Enablers”. Examples of Enablers that will be offered are: Energy Studies and Audits, Energy Management Assessment, Strategic Energy Management Plan, and others.

Under the new program, the transmission customers will be segmented based on their capability and capacity to manage energy efficiently. Two segments are defined. For those with a high degree of energy management, Power Smart will design a package of enables to suit specific requirements. On the other hand, for the majority of customers who are initially unwilling to make a significant commitment to energy savings programs or lack the capability to do that, general Enablers will be offered to them by Key Account Managers.

The Energy Management Team & the Industrial Steering Committee

The program plans to set-up a multi-disciplinary team-based operating model, previously defined as EMT – Energy Management Team, to implement a customer-centric approach. EMTs will be defined by the Industrial Steering Committee, a group of people from both Power Smart and Customer Care divisions, and offered to a limited number of customers. Once formed, the EMT will work together with customers to develop and implement multi-year Strategic Energy Management Programs (SEMP).

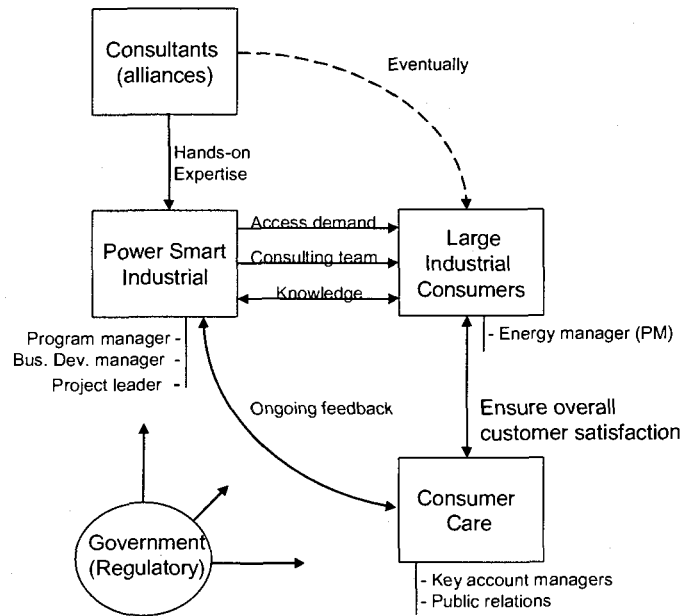
4.2 The New Process/Approach

The new process aims to establish better relationships with customers for deeper understanding of their capability and capacity to manage energy. Therefore, Power Smart will begin approaching customers to determine their demand for energy savings programs. The package of Enablers should be offered to most of the largest voltage customers. However, since customized programs will be designed for a limited number of customers, Power Smart wants to be involved during the implementation phase to gain hands-on expertise and be able to replicate them.

In the context of the new process, Power Smart Industrial will use assessment tools to establish the customer current situation in terms of energy management. The second stage is to identify the customers that Key Account Managers will approach to offer a general package of Enablers. In this new model, Customer Care will have better arguments to assist in selling Power Smart programs since greater information will be available.

A major change is noticed regarding the Consultants' participation on the process. As Figure 4-1 illustrates below, Consultants will have more commitments with Power Smart. If necessary, they will join Power Smart teams, or eventually be assigned to specific assignments on the customer's site. The objective of having Consultants and ETMs working together is to leverage a learning environment and facilitate knowledge exchange between the parts.

Figure 4-1 New Approach



The new process will also strengthen the relationship between Customer Care and Power Smart Industrial since both will combine forces to establish a customer-centric model focused on mastering energy savings while ensuring overall customer satisfaction. In addition, by joining the Industrial Steering Committee, Customer Care will actively participate throughout the implementation of the programs. On the other hand, the Industrial Marketing will be able to improve their expertise in customized solutions, contributing to effective improvements in the programs.

4.3 The Alignment with Consumers' Strategy

The replacement of the grant incentives with the new program based on offering customers a package of services and technical support to leverage energy saving initiatives may not be attractive to all customers. For example, economic trends and plant

expansions might affect customer's motivation. Table 2 illustrates the current situation for the largest voltage consumers.

Table 2 Transmission Customers & Current Economic Trends

Sector	Percent of Transmission Sector's Consumption	Forecast Growth over next 5 years	Current Profitability	Plant Expansion
Chemicals	10%	Stable	Profitable	Stable
Coal	2%	Stable	Profitable	Growing
Mining (Metals)	10%	Increasing	Highly Profitable	Substantial
Other	5%	Increasing	Profitable	Significant
Petroleum Refining	1%	Stable	Stable	Stable
Pulp & Paper	67%	Declining	Low to losing	Low
Wood Products	5%	Increasing	Profitable	Substantial

Based on BC Hydro Power Smart PSP-T Redesign project (May, 2006). Used with permission.

Customers that are reducing production capacity anyway might not feel motivated to invest any extra capital in energy management programs since solely reducing production will represent a significant drop in the electric energy bills. In addition, customers that have no plant expansion plan might accommodate because the stepped rate does not penalize those who do not reduce energy consumption. On the other hand, customers with plant expansion plans are likely to be the most interested in moving forward in implementing the programs since they want to avoid the overpriced Tier-2 rates.

4.4 Challenges for Power Smart

For the Transmission Industrial sector, Power Smart had identified, based on previous projects, a list of market and entry barriers to energy efficiency programs that falls basically into three groups: general lack of awareness of the energy management

programs as well as the benefits that could be obtained by implementing them; the lack of resources in terms of capital for equipment acquisitions and availability of skilled people to implement process changes; and last , but not least, the alignment of the energy management with the corporate and senior management agenda.

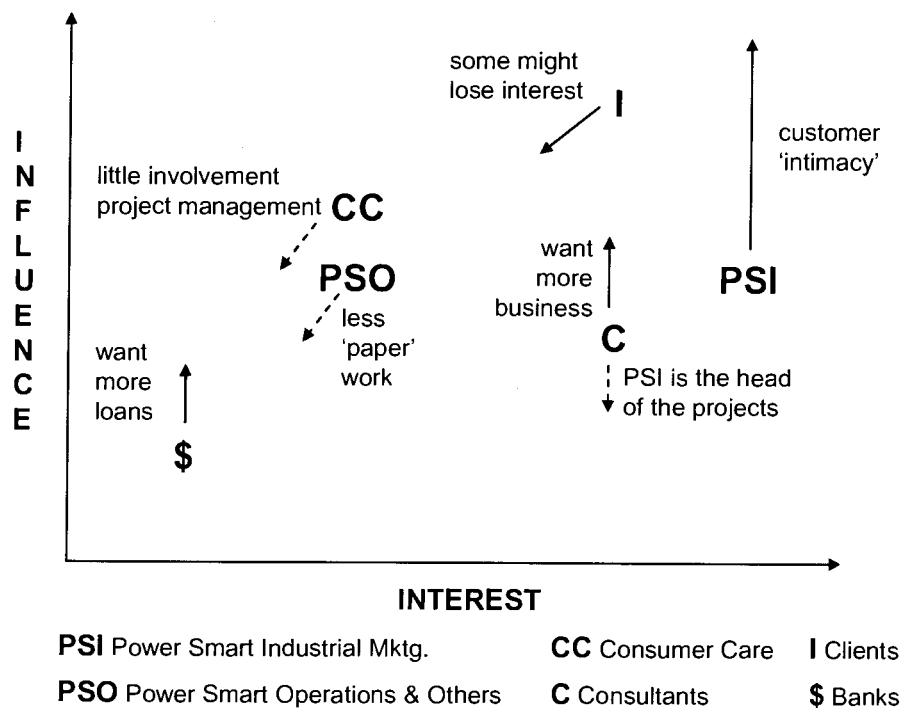
However, under the stepped rate, the new incentive programs raise a couple of questions that should be addressed when approaching customers or implementing the projects. For example, a) how will Power Smart measure program success since customers are no longer required to submit periodical feedback on projects; and b) since Customer Care and Power Smart will have an active participation role during implementation of the programs, how should this relationship be managed to avoid leadership conflicts?

Changes in the current organizational structure may contribute to solving the aforementioned questions. Power Smart and Customer care may decide to implement a dynamic and collaborative model to enable information to flow, facilitate collaboration, and share decision making. Members of the cross-functional teams should become accustomed to reporting to more than one boss as well as dealing with an ambiguous working environment. In addition, by establishing mechanisms to share experiences and improve the learning environment, team members can help to measure short term success. Power Smart may find it interesting to implement Knowledge Management tools to support this idea. Long term success can be measure by analysing the gains in energy savings over time.

4.5 Stakeholder Analysis

The new program may modify stakeholder positioning in terms of the influence and importance they have in the process. For the purpose of this analysis, Stakeholders are segmented into six groups: Power Smart Operations & others, Power Smart Industrial Marketing, Consumer Care, Consultants, Clients/Consumers, and Banks. As shown in Figure 4-2, some of them may lose relevance. However, managers should design alternatives to minimize the downsizing effects, for example, involving them in strategic committees or cross-functional teams.

Figure 4-2 Stakeholder Analysis



Power Smart Industrial Marketing (PSI): may increase its influence significantly as the customer-centric model takes off. In addition, the fact that PSI's will be conducting

the customer current situation assessment to segment customers for general or customized offers will represent strategic participation in the new process.

Power Smart Operations & Others (PSO): Operations, Technology Solutions, Incentives & Rates, Delivery, and Evaluation & Quality Control may perceive losing influence and importance in the process. For example, most of their work of auditing transactions in order to determine if all policies and procedures have been completed will no longer exist. However, they can gain motivation through participation in the Energy Management Teams.

Consumer Care (CC): CC may perceive losing influence since they will be approaching customers based on previous analysis/assessment made by Power Smart. On the other hand, this shouldn't be a concern since they will have better quality information in terms of the customers' current energy management situation to base their recommendations and offers on. In terms of project management, CC will continue to have little participation in the implementation process.

Consultants (C): Consultants may be afraid of losing control of the project management/implementation since they will now be invited to join the Energy Management Team instead of being just recommended by Power Smart. However, they will have an active participatory role in the overall process and consequently more business opportunities will arise.

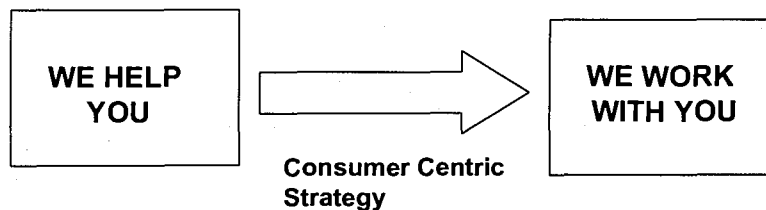
Clients/Consumers (I): As mentioned in section 4.3, some customers might lose interest/motivation for energy management programs. Power Smart should design strategies to align the new programs with the customer business strategies. By focusing

on customers that are either planning plant expansion or expanding production, Power Smart can establish an entry strategy to gain market exposure and expertise that could be used to further marketing arguments.

Banks (\$): Since Power Smart no longer provides capital funding incentives, Customers may rely on Bank loans to finance their projects. Banks should get more influence.

5 POSITIONING

For the largest voltage consumers, Power Smart's new positioning is to focus on developing people and business process to better manage energy¹. In a marketing context, they want to become a solution provider and have acknowledged the importance of their new role. Therefore, Power Smart is considering building a consumer-centric strategy based on collaboration and know-how exchange to strength partnership with customers and have them committed to Strategic Energy Management Plans (SEMPs) as Power Smart gains more operational and strategic involvement.



This chapter aims to analyse Power Smart's new positioning as well as touch on the fundamentals of consulting services such as the importance of building reputation and developing a learning-type environment. Section 5.2 presents the 'knowledge center' idea suggesting how consultants, Energy Management Teams, and customers could combine forces towards collaboration. In addition, section 5.2.1 highlights key points that Power

¹ Based on BC Hydro Power Smart PSP-T Redesign project (May, 2006) Used with permission.

Smart may consider when implementing a consumer-centric strategy. Finally, section 5.3 points out the four principles that Power Smart can use to develop a good reputation.

5.1 SWOT Analysis

The Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis for the Power Smart Industrial Marketing Division is summarized in Table 3 and may be described as follows:

Strengths:

a) *Close relationship between Power Smart and Customer Care.* Given that both divisions work closely together, as well as the interdependence of their objectives being high, Power Smart can rely on the Customer Care's expertise to develop a customer-centric model more efficiently. For example, Key Account Managers could participate effectively in designing the new programs to ensure customer satisfaction;

b) *Historical information, statistics, and quantitative data.* Power Smart has accumulated large amount of data that could be used to develop customized solutions for customers. In addition, the successful cases from the past years can be used to motivate them and promote the new programs ("tangible" evidence).

c) *Customer trust BC Hydro as an energy supplier.* BC hydro can use its good image and reputation in the market to develop an effective entry strategy. For example, "who would be better to talk to about energy management than your energy supplier"?

d) *The already established network of suppliers, consultants, and technical specialists.* This saves time and Power Smart can use its network of allies to offer solutions that combine different technologies to attend to one specific problem.

Weaknesses:

a) *Lack of consulting philosophy.* The previous organizational structure was set-up to accommodate an 'audit' model. However, under the new program, Power Smart will be changing the way in which they approach client's issues. For example, in resolving a particular customer's problem, they will work closely with members of the client's staff to discuss, investigate, design, and implement solutions.

b) *Industrial Marketing has limited exposure to clients.* A key component for the new program is that the Energy Management Teams should use the relationships and trust they build to gain a better understanding of the customer's issues. Thus, the greater the exposure to clients they have, the better chances of success.

c) *Financial funding and government (regulator) image.* Customers might see Power Smart more as a source of capital funding and regulator than energy management specialists. This image will change once EMTs start implementing the new program and first results appears.

Opportunities:

a) *Savings for Tier-2.* Stepped rate brought new opportunities for Power Smart since Tier-2 customers might feel motivated to implement more energy savings measures due to the high KWh prices.

b) Program extension. The new programs for the largest voltage customers can be extended to commercial and medium-sized customers in the future. In addition, Power Smart can apply lessons from the new experience to better design programs and increase operational management efficiency.

c) Strengthen relationship with customers. The better involvement with customers will not only help Power Smart to ensure the implementation of the projects but also provide a great opportunity to build a good reputation within the industry.

Threats:

a) Stepped rate may reduce motivation. Customers who are not planning production /plant expansion may not be strongly motivated to invest in energy savings programs since the stepped rate does not penalize customers that do not reduce energy consumption.

b) Consulting companies might see Power Smart as competitor. In the context of the new programs, Power Smart will have more participation during the implementation of the projects with consulting firms (allies), suppliers, and technical specialist working under the Power Smart umbrella. These partners may see themselves losing control of the relationship with their customers. However, as long as there is an increase in business for them, this should not be a major concern.

c) Human resources. Power Smart will need to bring talented and experienced people into its team of consultants. However, they might not be able to find enough professionals in the short term to fill the positions necessary to meet a high demand for the programs.

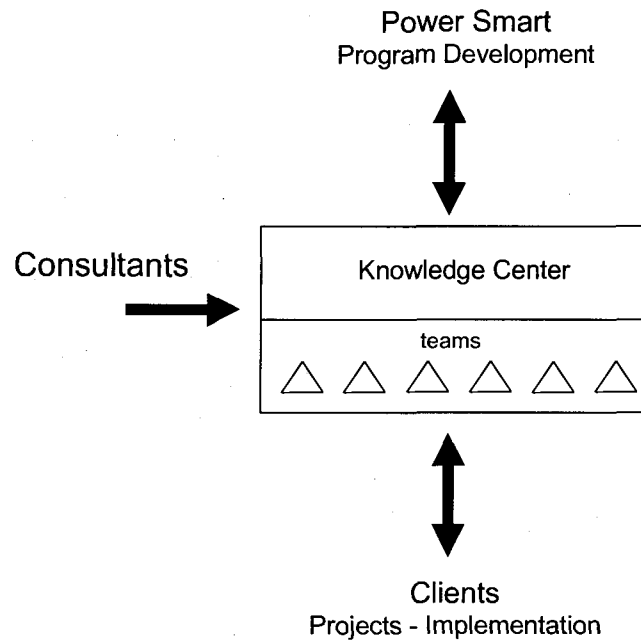
Table 3 SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Close relationship between Power Smart and Customer Care • Historical information, statistics, and quantitative data • Customer trust BC Hydro as energy supplier • The already established network of suppliers, consultants, and technical specialists 	<ul style="list-style-type: none"> • Lack of consulting philosophy • Industrial Marketing has limited exposure to clients • Financial funding and government (regulator) image
Opportunities	Treats
<ul style="list-style-type: none"> • Savings for Tier-2 • Program extension • Strengthen relationship with customers 	<ul style="list-style-type: none"> • Stepped rate may reduce motivation • Consulting companies might see Power Smart as competitor • Lack of specialized people.

5.2 Consumer-Centric, Value-Based Strategy

Power Smart’s strategy is to deliver a complete mix of services to address the market barriers for energy efficiency programs. The plan is to design customized solutions to meet specific customer needs and work closely with customers to implement them (see Figure 5-1). This strategy is based on designing a consulting approach model where Power Smart could gain ‘consumer intimacy’, strengthen relationship, and ensure long term commitment to strategic energy management programs. Sections 5.2.1 and 5.2.2 present more detail of this approach.

Figure 5-1 Knowledge Centre



5.2.1 The 'Consulting' Approach

Essentially, clients hire consulting firms to design and/or implement projects to solve specific problems that they are unable to work out alone due to lack of business knowledge, technical skills, and/or resources. Because each customer tends to see their project as unique, the more customized a solution is, the greater the chance of having customers commit to projects¹. Power Smart plans to address customer' needs individually and gain customer "intimacy" to ensure continuous improvement in energy management. Therefore, a checklist of major concerns and activities that should be done (or defined) before starting to offer the services is described below:

¹ Based on Fiona Czerniawska and Gilber Toppin (2005)

1. Define the business consulting philosophy: Power Smart should define its role and find the right balance between internal staff and allies in terms of who brings the expertise, who plays the facilitating role, and who manages each process.
2. Design a strategic plan to build good reputation in consulting: Focus on credibility, reliability, responsibility, and trustworthiness (see section 5.3). This starts with reducing bureaucracy and paper work to speed up response to customers.
3. Design consulting methodology and problem solving approach: This includes defining how information & knowledge are structured and shared to enable value chain integration within the team.
4. Cases/Industry demos, benchmarking and measurement tools: Given the small number of transmission customers, the application of these tools will help Power Smart to promote their programs, motivate customers, and measure accomplishments throughout the implementation.

In addition, Power Smart must have deep understanding of the customer's industry and market as well as how macro and micro economic trends/factor may affect their business. This is essential to align energy savings programs with customer's business strategy.

5.2.2 Knowledge Management

As defined by Czerniawska & Toppin, “knowledge can take many forms: documentation, technical data, a specific skill, or simply an attitude of mind.”¹ The ability to learn from experience and transfer knowledge - the training and educating of client staff - is crucial in consulting. The implementation of the new programs will provide a tremendous opportunity for learning and it should not be dismissed. Although this may seem obvious, designing a dynamic environment where knowledge can be reused is very challenging. Power Smart’s ability to transfer knowledge in energy management will contribute significantly not only to the successful implementation of the projects, but also to increasing customers’ commitment to long term strategies in terms of energy savings. Therefore, the organizational structure must support and facilitate the implementation of the following items:

Knowledge repositories: These are the “lessons learnt” documents such as user manuals, project plans, and implementation summaries. There are various software solutions available for content and knowledge management available in the market that simplify the upgrade and data access.

Methodologies: This is used to describe everything underlying the consulting approach. The consulting team should design and apply a methodology that enables a given project to be easily replicated. Customers should be able to learn the methodology so they can improve the project in the future when the consulting team has left.

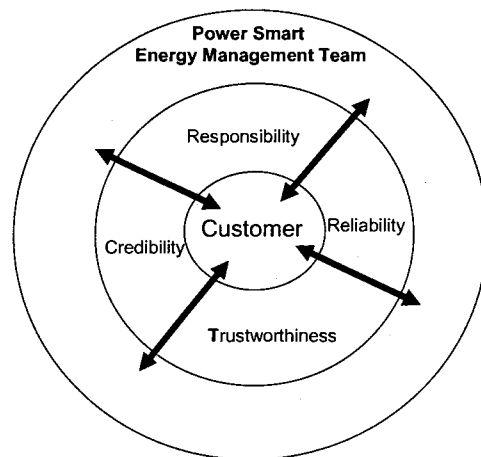
¹ Fiona Czerniawska and Gilber Toppin. (2005). *Business Consulting*. 201

Trained staff: The training and education of client staff is the most significant element of knowledge transfer. The consulting team should establish effective mechanisms to transfer important knowledge to the people responsible for carrying on the project.

5.3 Building Reputation

A good reputation is a key element in consulting, and demonstrating a track record of successful cases is essential to gaining the respect of customers. However, since moving towards consulting represents a new approach for the company, Power Smart should develop a strategic plan to build its reputation in the new arena. Therefore, the Energy Management Teams that will deliver the energy efficiency projects to the largest voltage costumers may build good reputation by focusing on strengthening four reputational principles¹: credibility, reliability, responsibility, and trustworthiness. See Figure 5-2 below for more detail.

Figure 5-2 Four Reputational Principles



Adapted from Mark N. Wexler (2003)

¹ Based on the four reputational principles proposed by Dr. Mark N. Wexler (2003); notes from his lecture.

Credibility: You have credibility if you are believable. In the context of the new program, this may be translated as being able to efficiently identify customer's stage in energy efficiency and offer the 'right' programs that meet their needs.

Reliability: You are reliable when you are focused. Power Smart can promote this principle by establishing realistic project milestones and achieving the implementation done on time and on budget.

Responsibility: You are responsible when you learn from your mistakes. Each customer has an environment with unique processes and staff. Energy Management Team should be prepared to face different challenges, recognize mistakes when they occur, and offer alternative solutions to solve them.

Trustworthiness: It starts with choosing the right people to work with. Power Smart can build trustworthiness by focusing on solving relevant issues that have major impacts on projects' success.

6 ORGANIZATIONAL STRUCTURE ALTERNATIVES

This chapter presents three organizational structure alternatives for Power Smart to implement the Transmission Program Redesign Program. Section 6.1 addresses the strategic goals that Industrial Marketing wants to achieve in terms of customers, internal structure, and learning & growth. Section 6.2 aims to determine which structure form meets Power Smart's organizational requirements. Finally, section 6.3 describes the alternatives, defines job description, and analyses the pros and cons of each in terms of division of labor, coordination mechanisms, authority & decision rights, and organization boundaries.

6.1 Developing Evaluation Criteria

The organizational structure should support Power Smart's initiatives to meet overall objectives described in Table 4. These goals are segmented into three categories: customer, internal, and learning & growth. The first category represents the group of initiatives necessary to engage the largest voltage consumers in the energy management programs. Industrial Marketing's strategy of moving towards consulting has required them to develop a customer-centric structure focused on delivering results and ensuring customer satisfaction. The second objective addresses the requirements for an efficient working environment where cross-functional teams collaborate and work together to find the 'right' solutions for each customer. The third objective represents the initiatives to leverage the learning process as the team gains exposure to the projects. Power Smart

wants to reduce operational cost through gains in economy of scale by sharing resources and reusing methodologies.

Table 4 Strategic Goals

	Goal	Weighting	Description
Customer	Ensure energy saving	High	Power Smart wants the largest voltage consumers to engage in energy saving measures. The long term strategy is to have them committed to implement strategic energy management plans. PS can infer its success in this dimension by comparing the amount of GWh saved.
Internal	Dynamic operations	Medium to High	To successfully move towards a consulting model, Power Smart needs to implement an efficient cross-functional team dynamic and provide fast response to customers.
Learning	Technology experimentation	Low to Medium	Teams should easily adapt to differences in customers. A learning environment should promote experimentation and the reuse of successful methodologies.

6.2 Evaluating Structure Forms

The functional, divisional, matrix, and network structure forms, as described in section 2.2, will be evaluated according to the ten most relevant criteria identified during the interviews with Industrial Marketing managers. Section 6.2.1 will match Power Smart's organizational structure objectives in terms of Low, Medium, and High relevance with the applicability of each form, as summarized in Table 1. Section 6.2.2 presents the recommended structure form to be used to design the organizational structure alternatives in section 6.3.

6.2.1 Evaluation based on Power Smart Criteria

The ten most relevant criteria appointed by Power Smart managers are in accordance to the strategic goals aforementioned in section 6.1. Enabling learning environment, supporting a consumer-centric strategy, ensuring employee commitment, and leveraging coordination are the criteria that received the highest weight.

Industrial Marketing plans to reduce bureaucracy and facilitate collaboration to provide fast responses to specific customer needs. Therefore, managers have found that a medium-high degree of centralization and coordination in the decision making process is necessary. They also stated that since the Energy Management Team is a cross-functional team composed of internal members of different divisions and external consultants, the chosen structure must facilitate communication, coordination across functions, and enable the team to easily adapt to differences in customers. In addition, managers believe that project managers should gain deeper understanding of the customer business, so in depth technical skills was graded medium.

Power Smart expects to achieve economy of scale and reduce operational cost as long as the new program starts gaining momentum since the largest voltage customers can be segmented into a few groups and have similar environments. Therefore, criteria 7 and 8 received low to medium weight by the managers. Table 5 summarizes the evaluation criteria that should be considered when designing the organization structure for the Industrial marketing division.

Table 5 Evaluation Criteria

Criteria	L/M/H	Func	Div	Mat	Net
1) Job specialization – in depth skill development	M	H	M	M	H
2) Centralized Decision Making	M/H	H	M	L	L
3) Knowledge Management – learning envir.	H	L	H	H	L/M
4) Customer Centric – Satisfaction	H	L	H	M/H	L
5) Coordination across functions	M/H	L	L/M	M/H	L
6) Easy to adapt to differences in customers	M/H	L	H	H	H
7) Focus on reducing operational cost – E. Scale	M	L	L	L/M	H
8) Fast changing environment	L/M	L	L/M	M	H
9) Loyalty to the organization \ Commitment	H	H	H	M	L
10) Coordination & sharing human resources	H	L	M	H	L/M

6.2.2 Recommendation – Structure form

The aforementioned Table 5 identifies divisional and matrix structures as the most appropriate forms for Industrial Marketing. Moreover, when combining both forms, 100% of the requirements are satisfied. The matrix structure is strongly indicated to facilitate coordination, promote learning environment, and enable teams to easily adapt to differences in customers. On the other hand, the divisional structure is likely to speed up deliverables and the decision making process since it enforces staff commitment to processes and chain of command.

A hybrid structure combining both divisional and matrix forms is recommended and will enable Power Smart to:

- a) Achieve coordination across functions;
- b) Provide opportunity for functional and product skill development;

- c) Pursue customer satisfaction strategy;
- d) Efficiently share human resources across projects;
- e) Easily adapt to differences in projects, industries, and customers;
- f) Decentralize decision making; and
- g) Be flexible and responsive for complex decisions.

However, the new organizational structure should contemplate elements and mechanisms to adapt to a bureaucracy system. For example, program managers should continue to report to the Industrial Managers, as well as Key Account Managers to the Customer Care division. Politics will play an important role and the pace of changes should not be disruptive to the current situation as the relationship between divisions should remain positive.

6.3 Organizational Structure Alternatives

This section presents two structure alternatives for Industrial Marketing to support the new programs. Both of them are hybrid structures and combine divisional and matrix forms. While few changes are noticed in terms of the number of staff, job description, and liaison devices, the two alternatives present significant differences when it comes to grouping, delegation of power, authority, and reporting system. The first alternative, which is described in section 6.3.1, gives the Industrial Marketing Manager direct management over the implementation leaders, who are responsible for managing the implementation of the projects. On the other hand, section 6.3.2 presents a structure

alternative where the Energy Management Team shares the project management role and reports directly to the Industrial Steering Committee.

6.3.1 Alternative A

This alternative is a hybrid solution that combines a Matrix structure under divisional form, with emphasis on the second. It gives Industrial Marketing more autonomy in terms of managing the implementation of projects. Customer Care and other Power Smart divisions interact with them through cross-functional teams formed to support the project's implementation (see Figure 6-1).

The program development team formed by Program Managers and Marketing Specialists under a Program Development Manager's supervision reports directly to the Industrial Marketing Manager and provides technical support to the entire division. They are responsible for designing the programs and major activities are product development, technical research, market analysis, and public relations.

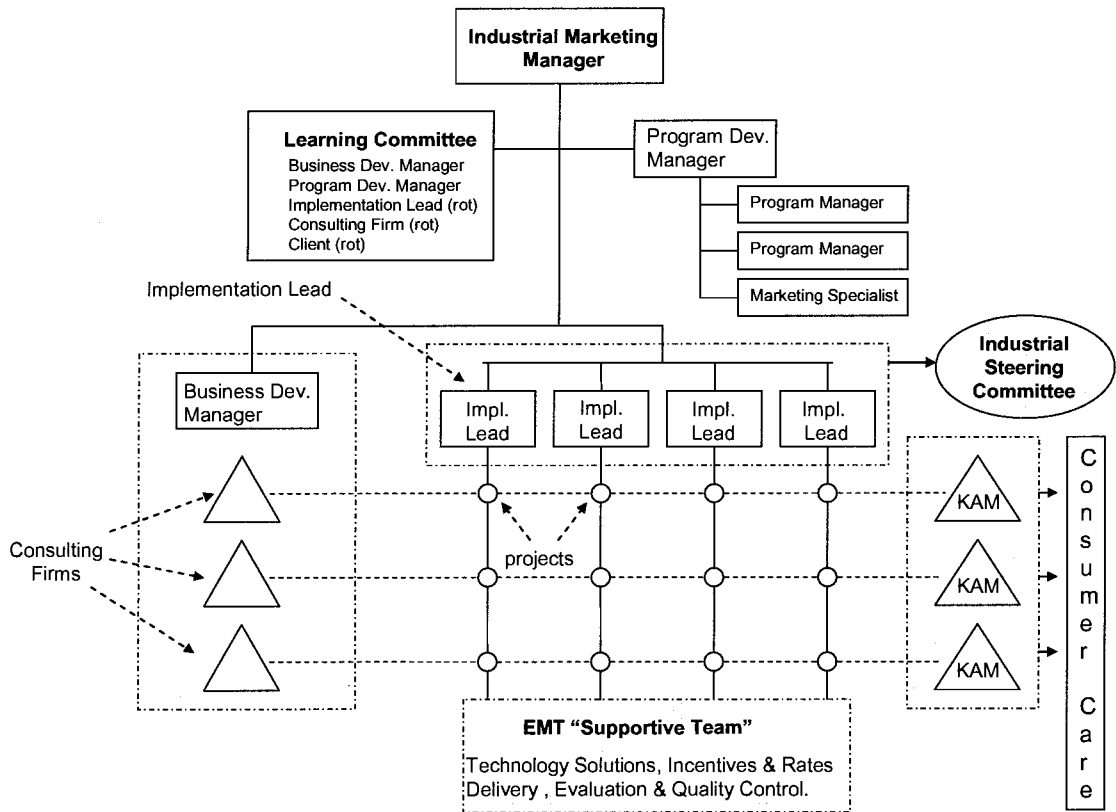
The Industrial Marketing Manager's major role is to oversee the division to ensure that programs satisfy market demand and projects meet Power Smart's energy saving goals. In addition, this manager is responsible for resolving conflicts with other divisions, managing program budget and milestones, recruiting staff, and supervising Implementation Leaders.

The Business Development Manager, who reports directly to the Industrial Marketing Manager, manages the partnership between Industrial Marketing and external consultants to ensure a win-win situation. The manager will assign them to projects, so consulting firms will work together with Energy Management, and resolve conflicts when

they arise. In addition, he or she will provide industry & trend analysis to the Industrial Marketing Manager and is expected to have great communication and negotiation skills as well as backgrounds in marketing and business.

Program Managers and Marketing Specialists accountability is to develop the programs as well as suggest strategic changes. They report directly to the Program Development Manager and major activities are product development and marketing planning.

Figure 6-1 Alternative A



Implementation Leaders' accountability is to ensure that customer projects meet the energy savings goals, doing so on time and on budget. From the rest of the Energy

Management Team staff (Technology Solutions, Incentive & Rates, Delivery, and Evaluation & Quality Control) they will require the support necessary to accomplish the projects. In addition, they will work together with Key Account Managers from Customer Care on customer relationship issues. They have a dual reporting system. Daily project management issues should be reported to the Industrial Marketing Manager. However, strategic and policy decision should be addressed at the Industrial Steering Committee. The ability to deal with an ambiguous environment represents the major challenge for this position.

The Learning Committee is formed by Industrial Marketing staff such as Industrial Marketing Manager, Business Development Manager, Program Development Manger, and one Implementation Leader – rotating, as well as by client representatives, and consulting firms, both of them on a rotating basis. The Committee aims to promote learning process and knowledge management initiatives. They are expected to meet periodically.

Key Account Managers integrate the Customer Care division and both of them were described in section 3.4. The Industrial Steering Committee as defined in section 4.1. More detail about the Energy Management Teams can be found in section 4.1.

Overall, alternative A facilitates quick customer responses because Implementation Leaders act as project managers on the Power Smart side. They are responsible for managing project implementation's inquiries internally and giving feedback to customers. Moreover, they are accountable for project milestones and budget.

On the other hand, there is a potential risk of raising conflicts with Customer Care if Implementation Leaders overlap Key Account Managers duties.

6.3.2 Alternative B

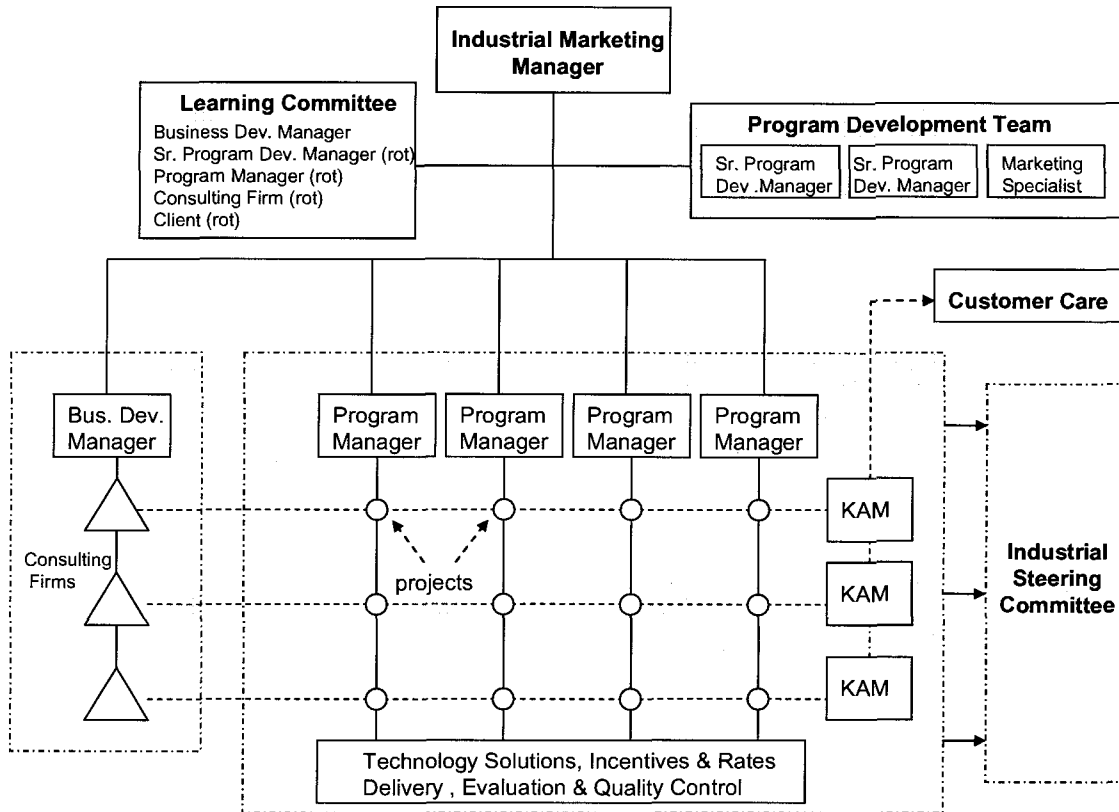
Alternative B is a variant of alternative A and emphasizes the Matrix form. Both maintain the basic structure and job descriptions. However, there is a significant difference when it comes to project management. Under this solution, Program Managers, who are under Industrial Marketing Manager's supervision, are not responsible for managing project implementations. The project management role is shared with Key Account Managers and both daily and strategic issues as well as policy inquiries are submitted directly to the Industrial Steering Committee (see Figure 6-2 for more detail).

Program Managers that are assigned by the Industrial Steering Committee will join the Energy Management Teams and collaborate and share project management activities with Key Account Managers from Customer Care division and other supportive staff from Power Smart. In the context of the Industrial Marketing division, their role is to provide the Industrial Marketing Manager and the Program development Team - formed by Senior Program Development Managers and Marketing Specialists, ongoing feedback in terms of the program's efficiency.

The Industrial Marketing Manager is still accountable for overseeing the division to ensure that programs satisfy market needs and projects meet Power Smart's energy saving goals, as well the other duties aforementioned in section Alternative A6.3.1.

However, the manager is no longer responsible for supervising the implementation of the projects.

Figure 6-2 Alternative B



The advantage of this alternative is that the Energy Management Team, as a whole, shares the decision making. However, this does not necessarily bring speed to that process since this structure is more ambiguous. For example, nobody in particular is assigned to manage the project budget and milestones, additionally the customer might not have a clear understanding of who they should contact when conflicts arise. The risk is to have customers overwhelming Key Account Managers and the Industrial Steering Committee with implementation issues as well as an increasing machine bureaucracy.

7 CONCLUSION & RECOMMENDATION

This analysis sought to determine structure form alternatives for Power Smart Industrial Marketing to support the implementation of a new business strategy, a new approach for its largest voltage customers. To address this challenge, the primary purpose was to assess the context of this particular need, including goals, strategy, work processes, coordination, and control. Together, these elements provided a holistic approach to the secondary purpose of determining which structure forms match Power Smart's needs, including the suggestion of two structure alternatives.

The structural alternatives presented in this report were restricted to the Industrial Marketing division. However, the relationships between this division and other Power Smart's units, as well as with Customer Care, played a pivotal role in defining the recommendations. In addition, it was discovered that the already established network of suppliers, external consultants, and technical suppliers may facilitate the implementation processes.

Power Smart has to redesign their programs and processes to support the intention of stepped rates while promoting energy savings initiatives. Consequently, a change in the organization structure is necessary to accommodate this new positioning. Their plan is to move towards a consulting type environment.

The new positioning strategy towards consulting will require Industrial Marketing to implement consulting philosophy, design methodologies, and gain more exposure to consumers. This report concluded that a strategy based on building reputation should be strongly considered. Thus, Energy Management Teams might gain access to a project's implementation and influence project management to ensure that they meet Power Smart's goals since the stepped rate may reduce customer's motivation in some cases. However, the new structure should integrate Customer Care and Consulting Firms into the new model in order to avoid conflict of interests, and political issues.

Industrial Marketing plans to reduce bureaucracy and facilitate collaboration within cross-functional teams to provide fast response to specific customer needs. However, the analysis concluded that an initial bold change in terms of organizational redesign plan may jeopardize its implementation. This is to say that moving from a divisional, machine bureaucracy system to a network, dynamic and more ambiguous environment could raise tension among employees who are familiar with the current structure. Therefore, the research identified that a hybrid structure, combining both divisional and matrix forms, is recommended for the first stage. For example, during the interview processes, managers argued that a medium-high degree of centralization and coordination for the decision making process is still necessary.

Finally, the new organizational structure should contemplate elements and mechanisms to adapt to a bureaucratic system. Moreover, the pace of the implementation should not be disruptive to the current situation as the relationship between divisions should remain positive to avoid raising political issues.

7.1 Alternative Recommended

The best structure alternative for Industrial Marketing should be strongly aligned to the customer, internal, and learning & growth objectives. When the strategic goals are analysed in detail, as shown in Table 6, alternative A appears a better fit. This alternative combines Divisional and Matrix structure forms with emphasis on the first. It gives Industrial Marketing more autonomy in terms of managing the implementation of the projects. Customer Care and other Power Smart divisions interact with them through cross-functional teams formed to support project's implementation.

Table 6 Alternatives - Balanced Scorecard

Strategic Goals	Weighting	Alternative A	Alternative B
Ensure Energy Savings - Increase program adoption - Facilitate info exchange - Less political issues	High	✓✓ ✓ -	- ✓ ✓
Dynamic Operations - Faster decision making - Reduce insulating problems - More team collaboration - Less ambiguity	Medium to High	✓✓ ✓✓ ✓ ✓	- ✓ ✓✓ -
Technology Experimentation - Easy to adapt to different envir. - Reuse ideas - Methodology well defined	Low to Medium	✓ ✓✓ ✓✓	✓✓ ✓ -

Overall, alternative A facilitates quick customer response because Implementation Leaders ensure that project inquiries find their way internally, enhancing feedback. Moreover, project milestones and budgets are closely managed by them since they are accountable for project management on the Power Smart side. However, political conflicts with Customer Care and other Power Smart division may occur since the Industrial Marketing Manager plays a significant role during the implementation of the energy management projects.

Although alternative B provides an environment in which decision making is shared by the entire Energy Management Team, the ambiguity of the structure may reduce the pace of the implementation of the projects as customers do not have a clear definition of who should be the interface with Power Smart. In addition, the emphasis on the matrix form may require Power Smart and Consumer Care staff to adapt to a structure that is far different than what is usually common in a machine bureaucracy system, multi-divisional structure.

This analysis concludes that alternative A maintains significant characteristics of the actual management and controlling system while adding elements of the matrix structure that promote team dynamic, efficiency, and adaptability. Therefore, this solution should enable Industrial Marketing to make a smooth transition towards a more dynamic and responsive environment without challenging the corporate organizational structure.

7.2 Recommended Alternative

Initially, a top-down approach is recommended to reduce ambiguity and avoid political issues with other divisions. Alternative A should be implemented in three stages,

depending on market demand and degree of program development, prototyping, and adjustments.

During the first stage, job descriptions, work processes, people coordination and control, and incentive mechanisms must be better defined. Special attention should be given to external stakeholders such as consulting firms and technical suppliers, which will be required to choose the Business Development Manager at the beginning of the implementation. Developing the “consulting” methodology should be top priority and count with active participation of the learning committee. Customer Care and other divisions should be invited to participate during this process and make their contribution as well.

The second stage comprehends assigning EMT’s first project. Program Managers who were directly involved in designing the programs might be considered to play the Implementation Leader role for the first case. The reporting system must be reviewed. Special attention should be given to the daily relationship with Key Account Managers, as well as to the first couple of meetings with the Industrial Steering Committee.

Finally, the third stage represents the point when there are more than three Energy Management Teams operating. Given that each team may be implementing projects for several customers at the same time, a change in the structure should be considered to avoid overwhelming the Industrial Marketing Manager. One option is to have one (or two) Senior Implementation Leader(s) supervising Implementation Leaders.

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