MSc Research Report on:

Studying the Diversification Strategy: a case study of Bhutan Power Corporation Ltd, Bhutan

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ABBREVIATIONS

BPC  Bhutan Power Corporation Limited  
RGoB  Royal Government of Bhutan  
BEA  Bhutan Electricity Authority  
DoE  Department of Energy  
DoP  Department of Power  
RE  Rural Electrification  
NEC  National Environment Commission  
MCDA  Multi Criteria Decision Analysis  
MCA  Multi Criteria Analysis  
MCDM  Multi Criteria Decision Making  
MAUT  Multiattribute Utility Theory  
SMART  Simple Multiattribute Rating Technique  
AHP  Analytical Hierarchy Process  
DM  Decision Maker/Making  
NPD  New Product Development  
NAIADE  Novel Approach for Imprecise Assessment and Decision Evaluations  
SCA  Strategic Choice Approach  
STRAD  Strategic Advisor  
MECE  Mutually Exclusive and Collectively Exhaustive  
SMART  Specific, Measurable, Achievable, Relevant, Time Bound  
ROR  Rate of Return  
ROI  Return on Investment  
ROE  Return on Equity  
ROA  Return on Assets  
GNH  Gross National Happiness  
GNP  Gross National Product  
SAIFI  System Average Interruption Frequency Index  
SAIDI  System Average Interruption Duration Index  
GENCOS  Generating Stations/Companies  
DHI  Druk Holding and Investments  
GLC  Government Linked Companies  
DGPC  Druk Green Power Corporation  
TD  Transmission Department  
DCSD  Distribution & Customer Services Department  
DCD  Development and Construction Department  
PSD  Procurement Services Department  
EDD  Engineering Design Department  
FD  Finance Department  
HRA  Human Resource and Administration  
MDO  Managing Director’s Office  
DG  Diesel Generator  
SCADA  Supervisory Control and Data Acquisition  
MW  Megawatt  
GM  General Manager  
PMS  Performance Management System  
BICMA  Bhutan InfoComm and Media Authority  
JBIC  Japan Bank for International Cooperation  
Dzongkhag  District  
Ngultrum  Bhutanese Currency (Nu.)

Currency Exchange Rate
1 Euro = Nu.66.00
ACKNOWLEDGEMENT

It was impossible to carry out research of this kind as an individual without the help and support from supervisors and the staff of the Bhutan Power Corporation (BPC). Therefore, I would like to take this opportunity to thank the people who helped me directly or indirectly to complete this research.

Firstly, I would like to thank my committee members Dr. ing. M. A. Zegveld (Chairman), Dr. Erik den Hartigh (First Supervisor) and Dr. ir. L. J. de Vries (Second Supervisor) who were always there to guide and support me. It would have been very difficult to finish this research without the guidance of the committee members.

Secondly, I would like to thank the management of the BPC for giving me permission to carry out this research at the BPC head office. I would also like to thank them for their support, cooperation and encouragement during my stay in Bhutan for data collection.

Thirdly, I would like to thank all the senior staff of the BPC who agreed to share their experiences during the interview. It would have been very difficult if all the staff at the BPC had not cooperated and if they had not encouraged me to work on this research.

Fourthly, I would like to thank all the staff of TU Delft and the BPC who helped me directly or indirectly during the research and to the staff of the BPC for giving me all the required information needed for this research.

Lastly, I would like to thank my wife for her support and for always encouraging me to be away from home even when she needed me to complete my education.
EXECUTIVE SUMMARY

This research was carried out as a case study for the Bhutan Power Corporation Limited (BPC), Bhutan, to study its strategic growth options. The BPC is the only power utility in Bhutan and is entirely responsible for the distribution of safe, reliable and cheap electricity and for providing access to transmission lines.

At the moment BPC offers only one product, electricity; presently BPC is undertaking a large number of rural electrification projects which require a large amount of monitory investment, much of which is supported by external loans. At the same time the BPC operates in a regulated environment, where the tariff for electricity is set low so it is not enough to recover all the costs of rural electrification and supply. BPC states it spends approximately Nu.4 for every distribution unit of service delivery where the cost to consumer is only 0.75 Nu/unit. This massive imbalance has caused the BPC to explore ways of expanding its business to increase its revenue. The BPC already, has considerable assets, and it is also looking into businesses where it might optimally utilize its resources. Moreover, the BPC feels that there is a need to offer new products to its customers but this can only be done by diversifying into other areas. So, the main objective of this research was to determine to what extend the BPC will need to extend its business in the future.

The Companies looking for growth have four options according to Ansoff. They are market penetration, market development, product development and diversification. Thus the focus of the research project, presented here, was to determine the most preferable growth options for the BPC. It is difficult to choose a most preferable growth option without developing list of criteria. Thus the most applicable method to use for the research was the multi criteria decision analysis. MCDA is the method of choice when attempting to determine (solution to the problem) if there are more than two options as it allows less viable and non viable options to be filtered out using relevant criteria.

The top management at the BPC was interviewed to determine the current situation at the company. Every one reflected that BPC is doing much better than it used to do. The main reasons were seen to be the implementation of Performance Based Incentive Scheme (PBIS) and the commissioning of the Tala Hydroelectric project: but all the top managers were looking for possibilities to expand business into another sector. This is because after the formation of the Druk Holding and Investment (DHI), it is now mandatory for the BPC to show that it is profitable and commercially viable. The BPC is a state owned company and has no experience in planning and expanding into other businesses: the BPC recognizes this and has opened up new unit for corporate planning and business development. This new unit is responsible for looking for ways to expand the BPC’s business portfolio, and thus its future revenue.

A list of criteria was developed for selecting growth options. Once the list was completed it was circulated to the BPC’s top management as they were in a position to assign weights and scores to the various criteria. The result of the analysis was that diversification is the most preferred option for the BPC. This result is also inline with feedback received from other staff during the interview session. Everyone feels that the only possibility to expand or generate more revenue at the BPC is to diversify.

Once it was clear that growth based on diversification was the preferred option for BPC, it became necessary to identify the areas into which the BPC might expand. Then the options in which BPC might be interested were identified by interviewing the BPC’s top management and senior staff what they believed might be best for the BPC. Four options were identified: diversifying into ICT & Telecom, Investment in Hydropower, Manufacturing Electrical Accessories and providing Services & Consultancy.
The four options for BPC to diversify were identified and the reasons for diversifying elaborated: but now the question is: is it possible for BPC to invest in all these four business possibilities simultaneously.

More stringent criteria were developed to help the BPC’s managers to decide which was the best option(s). A thorough technical and financial analysis was not carried out for these options as it fell outside the scope of this research. However, the options were ranked based on the more stringent set of criteria; strategy, fulfillment processes, information processes and business development activities together with the internal and external criteria developed for choosing the growth options. These criteria were used to rank the options based on how such a business must be carried out, and which would be most favorable for the BPC given the present situation at the BPC.

The results of the second criterion analysis showed that Services and Consultancy ranked first to ICT/Telecom which ranks second but any final selection will also depend on a more thorough analysis, and finally will also depend on the implementation plans of the BPC.
1 CHAPTER 1: Introduction

In this section the reasons for a need of corporate growth at the BPC and studying those growth options are introduced.

The companies would like to see itself expanding in terms of size and revenue, these are part of what causes companies to initiate growth plans, however, it is not easy to grow if, the growth is not planned and managed properly.

There are different options a company’s managers can select to expand their business such as mergers and acquisitions, joint ventures, diversification etc. For this research we selected the growth options given in Ansoff’s matrix as it is a proven model. According to Ansoff’s matrix there are four growth options namely market penetration, market development, product development and diversification.

The essence of this research was to determine growth options suitable for the BPC the only power utility in Bhutan to expand its core business in such a ways that it can begin to make a profit. To carry out this study the list of criteria was developed to help the top management of the BPC rank the different growth options following Ansoff and help them to select the best option.

This research is very relevant for the BPC because the company is very interested in expanding its core business to make a profit for the BPC. As yet no studies have been carried to determine what growth options would suit the present situation at the BPC. Therefore, the aim of the study was give an opportunity for the BPC’s managers to see if the direction in which they are heading is correct or not.

1.1 Introduction to Bhutan

The Kingdom of Bhutan is landlocked and is located at the heart of the Himalayan range, it shares borders with China to the north, the Indian territories of Assam and West Bengal, to the south and east, and Sikkim to the west. It is one of the smallest nations in the world with a very small population of a little over 700,000 as of 2006. The Kingdom has a total area of about 38,394 square kilometers, about the size of Switzerland, and extends roughly 170 km from north to south and 300 km from east to west. Bhutan has one of the most difficult terrains of any country and has elevations ranging from 160 meters above sea level to more
than 7,000 meters above sea level, and 72.5 percent of the Kingdom is covered with forests. Until the 1960s, Bhutan was relatively closed to the outside world and avoided modernization but Bhutan stepped into the 21st century and opened up to the outside world in order to achieve economic development. (Rasaily, 2007).

According to Rasaily, “Bhutan strongly believes in the philosophy of Gross National Happiness (GNH) – a holistic concept combining material, spiritual, emotional and cultural well-being and propounds that it is more important than Gross National Product (GNP)”. This has helped Bhutan to build an economy which exactly fits the culture and values of Bhutan, and as per Rasaily, “In addition, the policy seems to be reaping the desired results as in a recent survey organized by the University of Leicester in the UK, Bhutan was ranked as the planet’s 8th happiest nation”.

Bhutan believes in preserving and conserving its pristine environment and has always incorporated this in all developmental activities or decisions. At present Bhutan has 72.5% of its land area under forest cover including 26.3% in protected areas. Rasaily mentions, “Bhutan is among the top ten percent of countries with the highest species densities in the world and has been listed as among the ten global “hotspots” for the conservation of biodiversity”.

Bhutan is blessed with abundant hydropower resources. Since, Bhutan is so concerned about preserving its natural environment, and with few other resources it has already identified hydropower sites where this power can be harnessed. The revenue earned from sales of electricity to its neighbours is the largest contribution of funds for the economic development of the country (Rasaily, 2007).

1.2 Present Scenario

At present the BPC’s main responsibility is to distribute electricity throughout the country, in this it has a monopoly. The BPC is also driven by social motives along side the profit motives since “Electricity for all Bhutanese”, is a major policy objective of Royal Government of Bhutan (RGoB). Presently, only some 40-50% of the population has access to electricity. Electricity sector has been highly regulated and subsidized by the Royal Government of Bhutan (RGoB). Alongside its work across Bhutan the BPC also has the work to distribute electricity and provide transmission access to the generating stations, additional responsibility of providing for and complementing Rural Electricity (RE) Projects as mandated by RGoB.

To support these activities the BPC is at present making use of soft loans from financial institutions like the Asian Development Bank (ADB) to support all the RE activities. BPC has to carry out all the work but is finding the task difficult to sustain due to the high costs incurred for constructing transmission and distribution lines, and small local projects where central distribution and transmission is not feasible. These problems arise in the main in response to the mountainous terrain of most of Bhutan and the isolated nature of many of the countries small villages and given the situation described above. Repayment of these loans in the present circumstances will take years for the BPC if they have to rely on the returns from the electric power sales. This is because the RGoB has set a very low tariff for the sale of electricity units which in no way reflects the accrual costs per unit to the BPC. At the moment the BPC is only involved in the business of electricity distribution, the risks of investing in one core business are very high. Therefore, it is very necessary for the BPC to explore areas in which they might invest and make profit, using its present resources to work efficiently in a related business(es), which in turn would allow the profit to be re invested into ongoing project of providing electricity for all Bhutanese. BPC states it spends approximately Nu.4 for every distribution unit of service delivery where the cost to consumer is only 0.75 Nu/unit. This massive imbalance has caused the BPC to explore ways of expanding its business to increase its revenue. The BPC already, has considerable assets, and it is also looking into businesses where it might optimally utilize its resources.
In response to these needs the BPC’s top management have shown an interest in expanding into other profitable businesses. The management are interested in making the optimum use of the BPC’s present infrastructure base.

1.2.1 Company Background

The Bhutan Power Corporation (BPC) is the only power utility company in Bhutan and it was launched as a public utility on the 1st of July 2002. At this time it was mandated to distribute electricity throughout Bhutan and to provide transmission access to generating stations for domestic supply and export. The BPC’s mandate was to supply electricity to all Bhutanese citizens and to make sure that this electricity supply was reliable, adequate and, above all, it affordable for all Bhutanese consumers. The then Department of Power (DoP) under the Ministry of Trade and Industry was split into three separate entities namely the Bhutan Power Corporation, a public utility; The Department of Energy (DoE), a government department responsible for policy, planning and coordination activities for the energy sector; and The Bhutan Electricity Authority, Regulatory body controlled by the Department of Energy (BPC About Us, 2007).

To quote from the BPC website the reason for the BPC to become a public corporation was: “The reason why BPC was corporatised is many but the basic premise was to remove conflict of interest and reconcile commercial, social and policy objectives, and also to accept worldwide trend of restructuring that was happening in the power sector and accept the best practices. Running of electric utility is a business activity and by corporatization BPC has been able to bring this focus into its operations”.

1.2.1.1 Organogram of BPC

The organogram below shows the organisational structure of the BPC, which is comprised of 8 departments with one office directly under the managing director, i.e the Procurement Services Department (PSD), the Managing Directors Office (MDO), the Engineering and Design Department (EDD), the Human Resource and Administration Department (HRAD), the Finance and Accounts Department (FAD), the Distribution and Customer Services Department (DCSD), the Transmission Department (TD), the Distribution Construction Department (DCD) and Rural Electrification Department (RED).
1.2.1.2 Market Structure of the Market in which the BPC is active

The BPC is the only power utility in the Kingdom of Bhutan and as such they have a monopoly in power utility sector.

The core business of the BPC is to distribute electricity throughout Bhutan but at the same time responsible to provide access to generating stations (GENCOS) to wheel electricity for export to India its major export power. Therefore, the main sources of income for the BPC come from the sale of electricity within Bhutan and the payments received from GENCOS for using the BPC’s transmission network.

The market structure of the BPC and the environment in which the BPC has to operate are depicted in figure 1.4 below.

![Market Structure of BPC](image)

Figure 1.3: Market Structure of BPC

1.3 Research Objectives

The main objective of this research was to determine to what extent the BPC needs to diverge its core businesses in the future.

1.3.1 Sub-research Objectives

The sub-research objectives of this study are to:

1. Create a base work for carrying out the detailed analysis of the businesses identified in future by any other people interested.

1.4 Scope of the Research

This research was carried out to determine a number of possible growth options for the BPC, this study is restricted to the growth options used in Ansoff’s matrix. A case study approach
was used to study the most feasible growth options for the BPC after carefully evaluating the options based on Ansoff’s Matrix and the criteria used to determine the matrix for the BPC.

This study is mostly based on data obtained from the BPC and secondary sources, and only the finding for growth options for the BPC as per the criteria set are used. The areas into which BPC might expand are identified but a detailed financial and technical falls beyond the scope of this research as does suggestions for the implementation of any preferred options, these are all suitable and necessary topics for future research based on the results presented here.

### 1.5 Research Questions

The main research question is: How should BPC develop its business in the future to improve its performance?

The sub-research questions that are needs to be answered are:

1. What are the strategic growth challenges for the BPC?
2. According to theory what are the different strategic growth options?
3. According to theory, what is Multi Criteria Decision Analysis and how can it be used?
4. What are the possible strategic growth options for the BPC to overcome existing constraints?
5. What are the relevant criteria for the BPC managers when selecting strategic growth options?
6. Which strategic option would be most suitable for the BPC to meet its goals?

### 1.6 Research Design

#### 1.6.1 Stages of Analysis

This research was basically divided into three different stages, which are discussed below in detail:

**Stage 1**

The main purpose of this stage was to determine the problems faced by the BPC in the present. It was designed to help us determine if there is really a problem. A problem analysis was used for this stage based on the goal and performance of the BPC. The corporate goals and present performance of the BPC were determined. Financial performance like profit, Return on Equity (ROE), Return on Assets (ROA) were analysed and technical performance was included as percentage losses and technical efficiency (SAIFI & SAIDI).

The data was collected by reviewing the annual reports of the BPC and other technical and financial documents. The RGOb’s energy policy guidelines and its 10th five year plan documents were reviewed, and data on total number of households still to be electrified, total investments and financial status was also collected.

This stage will be discussed in detail on chapter 2, the problem analysis.

**Stage 2**

Once stage 1 was completed, and the BPC’s problems and their causes determined, Ansoff’s model was used to study different growth options that the BPC might use to solve its problems. This is a proven model and it is very good method to use to find out under what conditions a company might decide to opt for different options.
The data for this stage was compiled from data in the company’s annual reports and by interviewing the top management and the senior staff of the BPC and using a questionnaire.

Some parts of this stage are included in chapter 2; the problem analysis where the causes of the problems identified in stage 1 is discussed to arrive at a definition of the strategic problem. Then the theory on strategic growth options and multi criteria analysis is discussed in Chapters 3 and Chapter 4. This helped us to understand the different growth options according to theory and to determine the criteria to use to select the most preferable option(s) for the BPC.

**Stage 3**

Having completed stage 2 the next step is to analyse in detail the basis upon which any viable option for growth might be chosen. A list of criteria was compiled to enable the BPC top managers to choose suitable growth options and evaluate them. The criteria were developed holding discussions with the consultant and further discussing with the senior managers of the BPC, weighting and scoring was carried out using interviews with the top management of the BPC. A multi criteria analysis finally was carried out to determine the best option for the BPC. The drawback of multi criteria analysis is that the outcome depends on the criteria chosen prior to the analysis and the preferences of the interviewees. Therefore, in order to reduce error a mutually exclusive collectively exhaustive (MECE) set of criteria was set to meet the SMART\(^1\) (Smart, Measurable, Attainable, Relevant, and Time Bound).

The Data collection in this stage was done using interviews and questionnaires. The interviews were designed to determine growth options for the BPC and top management. The next step was designed to determine how they were evaluated by the criteria the experts felt were relevant. Finally the top management at the BPC were asked to fill in a weight and score against each option.

This stage will be discussed in Chapter 5 where the field methodology to carry out this study is discussed. The different options identified for the BPC to use to overcome its problems are discussed in Chapter 6. The lists of criteria developed for the BPC are explained in Chapter 7. This discussion is further used to select optimal strategic growth options for the BPC in Chapter 8 consists of a discussion of the results of the research. See figure 1.2 below for a schematic description of the research and report layout.
CHAPTER 1: INTRODUCTION

Layout of the Report

Figure 1.4: Layout of the Report
1.7 Methodology

An explorative study was carried out to determine the growth options of the BPC. Initially the literature review upon which our research was based was carried out at the Technical University of Delft (TUD) and other TUD experts were also consulted during the process. This literature helped us to understand the importance of corporate growth and the growth options according to Ansoff matrix was used in this research. According to Ansoff there are four growth options which are market penetration, market development, new product development and diversification. However, in our case we have only considered new product development and diversification as the first two options was not relevant for the BPC. The literature on new product development and diversification helped us to come up with the framework for new product development and diversification, which was used in Chapter 6 to discuss about the options for BPC. The actual data collection was done by working at the BPC head office for two months.

This research was carried out in three stages in order to come up with the growth options for the BPC. In the first stage the problem analysis was carried out to determine the problem faced by the BPC. To answer this data was mostly collected through interview questionnaire by working with the head office of the BPC in Bhutan. These interview questionnaires helped us to evaluate the performance of the company to determine how well it was performing both financially and technically. Then it helped us further to study the current situation of the BPC and helped us determine the environment in which they are working, its challenges, constraints and its growth options. The other relevant documents were also reviewed at the BPC head office and other government organization for additional information. Once the problem faced by the BPC was known it was necessary to come up with the option(s) which would solve the problems faced by the BPC.

Therefore the second stage was to come up with the set of criteria which could be used to select the most preferred growth option(s) for the BPC. The set of criteria for selecting the growth option(s) was developed by working with the consultant working with the BPC and then finalized by discussing with other senior staffs of the BPC. The list of criteria was circulated to top management of the BPC asking them to assign weight and score against each option. These data were used to carry out the analysis to determine the growth option(s) for the BPC.

Once the preferred growth option(s) was known the third stage was to select the most preferable and profitable businesses in which the BPC could venture. The different business in which the BPC were interested was identified through interview(s). Then second set of criteria was again developed to help management choose the most preferable option. The list of criteria was circulated to top management of the BPC together with the first set of criteria asking them to assign weight and score against each option. These data were used together to carry out the analysis to determine the options for the BPC and the businesses in which they could venture in future.

The table 1.1 below clearly describes the steps carried out to answer all the research questions indicating the type and sources of data collected for this research. However, the field work methodology is described in detail in chapter 5.

1.8 Data Collection

In order to complete the research, the data needs to be collected from various sources for proper analysis. Therefore, this section will mention the sources from where these data would be collected.
1.8.1 Primary Data

The primary data was collected by using the following methods:

- working at the BPC head office for two months and talking with experts and managers to determine the current situation at the BPC.
- semi-structured interviews with top managers, using a pre prepared questionnaire, to elicit criteria for selecting the options.

1.8.2 Secondary Data

Secondary data for the research was obtained from:

- outcomes of previous studies on the research topic and relevant literature reviews.
- staff working at the BPC
- government organization like Department of Energy (DoE) and Bhutan Electricity Authority (BEA) to determine RGoB policy.

The table below explains the methodological framework for carrying out this research.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Required</th>
<th>Source(s) of Data</th>
<th>Collection Methodology</th>
<th>Chapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the strategic growth challenges for the BPC?</td>
<td>Corporate goals Profit, ROA, ROE, Losses, SAIFI, SAIDI Number of households to be electrified, tariff Policy guidelines</td>
<td>Company website. Company Reports. Annual Report. Office Records. Top Management and Senior staff at the BPC. DOE, BEA</td>
<td>Reviewing documents. Interviewing 12 people. Primary data obtained from the BPC by reviewing documents and interviewing people. Secondary data obtained from DOE and BEA</td>
<td>Ch 2</td>
</tr>
<tr>
<td>According to theory what are the different strategic growth options?</td>
<td>Ansoff Matrix</td>
<td>Journals</td>
<td>Literature Review</td>
<td>Ch 3</td>
</tr>
<tr>
<td>According to theory, what is Multi Criteria Decision Analysis and how can it be used?</td>
<td>Theory on MCDA</td>
<td>Journals</td>
<td>Literature Review</td>
<td>Ch 4</td>
</tr>
<tr>
<td>What are the possible strategic growth options for the BPC to overcome existing constraints?</td>
<td>List of strategies</td>
<td>BPC top management &amp; senior staff</td>
<td>Interviewing 7 top management and 5 other senior staff.</td>
<td>Ch 6</td>
</tr>
<tr>
<td>What are the relevant criteria for the BPC managers when selecting strategic growth options?</td>
<td>List of criteria for choosing options and to evaluate</td>
<td>BPC management, expert &amp; senior staff</td>
<td>Working with consultant and discussing with senior staff for finalization.</td>
<td>Ch 7</td>
</tr>
<tr>
<td>Which strategic option would be most suitable for the BPC to meet its goals?</td>
<td>Criteria, Analysis of Criteria</td>
<td>Top Management</td>
<td>Interviewing 6 top management at the BPC.</td>
<td>Ch 8</td>
</tr>
</tbody>
</table>

Table 1.1: Methodological Framework
CHAPTER 2: Problem Analysis

2.1 Goal of this Chapter

The main goal of this chapter is to present an in-depth study of the Bhutan Power Corporation (BPC).

2.2 Vision

It is important to determine the vision of a company when attempting to understand the goals and aspirations of a company. To quote from the BPC’s 2006 report: “Bhutan Power Corporation, as an entity entirely responsible for transmission, distribution and supply of electricity throughout the kingdom of Bhutan, and recognizing its role in the socio-economic development of the nation, would like to be customer-centric, commercially viable and socially conscious Corporation” (BPC Annual Report, 2006).

2.3 Mission

The vision statement of the BPC is given above, but a vision statement without guidelines designed to help managers achieve this vision is useless. Thus there is a need for mission statements to help managers realise the BPC’s goals.

The mission statements of the BPC, framed at the BPC by integrating the working philosophies of different departments and units of the BPC, and designed to help managers work towards a common goal are quoted from annual report out below.

- "To be a socially and environmentally conscious leading corporate entity.
- To ensure uninterrupted availability of transmission network for transmitting and supply of electricity to domestic and export markets.
- To provide adequate, reliable, good quality and affordable electricity in a customer friendly, safe and efficient manner.
- To ensure optimal and efficient utilization of resources and improve the financial strength of the corporation.
- To build a dynamic corporate culture through a team of professional and productive employees who are motivated, dedicated and well informed.
- To undertake power infrastructure expansion programs to improve reliability of supply and achieve electricity for all by 2020.
- To provide the best value for goods and services in a consistent, transparent and timely manner.
- To be the best public sector company and a role model of corporate governance in the country" (BPC Annual Report, 2006).

2.4 Measuring Performance

To evaluate a company on whether it is performing well or not, it is necessary to use certain preset indicators. In this section we discuss how we carried out the performance evaluation at the BPC.

Hubbard (in press) in his article “Measuring Organisational Performance” states that measuring organisational performance is very difficult, especially when the organisation that
you are trying to evaluate is clearly working within a continuously changing internal environment.

Today in addition to traditional financial indicators there are many other indicators that can be used to evaluate a company’s performance, these include internal processes, customers/market and learning and development (Hubbard, in press).

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Financial</th>
<th>Internal Processes</th>
<th>Customers/Market</th>
<th>Learning Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sales Growth</td>
<td>Productivity</td>
<td>Market Share</td>
<td>New Products Developed</td>
</tr>
<tr>
<td>2</td>
<td>Return on Sales</td>
<td>Labour Turnover</td>
<td>No.of New Customers</td>
<td>New Markets Entered</td>
</tr>
<tr>
<td>3</td>
<td>Return on Assets</td>
<td>Avg.Unit Production</td>
<td>Product Return Rate</td>
<td>R&amp;D Spend/Sales</td>
</tr>
<tr>
<td>4</td>
<td>Return on Equity</td>
<td>Working Capital/Sales</td>
<td>Defects</td>
<td>Training Spend/Sales</td>
</tr>
<tr>
<td>5</td>
<td>Gearing</td>
<td>Capital Utilization</td>
<td>Order Cycle Time</td>
<td>Investment/Total Assets</td>
</tr>
</tbody>
</table>

Table 2.1: Performance Indicators from Hubbard (in press)

Eilon (1993) argues that analysis of corporate performance is an essential exercise. This helps company to know how well it has been/is performing. Based on the findings of such an analysis the company can learn from its mistakes to determine the causes and make better plans for the future.

Corporate performance is the heart of a company, to help management plan efficiently, the following steps need to be taken to plan well for corporate performance.

- Objectives need to be expressed in the form of various performance criteria, usually as part of a corporate plan
- Measurement procedures need to be set in place to determine the state of the system (the enterprise) in terms of the stated criteria
- Obtain feedback on performance levels (past and present)
- Carry out an analysis to ascertain why the system has behaved as it has (modelling)
- Review of the company’s objectives in the light of past performance and other information, e.g. regarding the state of the market and strategies of competitors
- Explore alternative courses of action and expected outcomes
- Finally having achieved the set of course of action and expected outcomes it is necessary for management to decide which of the courses is best and then implement the decision

A performance analysis is done by making a comparison to a baseline. For example by comparing how a company has performed in the previous year(s) to present performance levels. Performance of a company is affected by managerial actions and external factors (Eilon, 1993).

The performance of every department of a company should be measured which gives an opportunity for a company to see if they have been performing well or not. If performance is poor the company will need to set out counter measures that can be taken to solve the problems found with in a company and increase performance once more.

For the BPC case study the following performance indicators were chosen:

- Net Profit
CHAPTER 2: PROBLEM ANALYSIS

- Return on Assets
- Return on Equity
- Revenue Loss Impact Factor
- Losses
- Reliability
- Number of Customers

2.4.1 Net Profit

Net Profit/Losses for the BPC for the years 2003 through 2007 are shown in table 2.2 below.

<table>
<thead>
<tr>
<th>Financial Year Ending</th>
<th>Profit (Nu.million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2003</td>
<td>-68.103</td>
</tr>
<tr>
<td>December 2004</td>
<td>-27.785</td>
</tr>
<tr>
<td>December 2005</td>
<td>-129.971</td>
</tr>
<tr>
<td>December 2006</td>
<td>269.139</td>
</tr>
<tr>
<td>December 2007</td>
<td>432.868</td>
</tr>
</tbody>
</table>

Table 2.2: Net Profit
Note: 1 Euro = 66 Nu, 1 US dollars = 40 Nu

As can be seen from the table 2.2, the BPC for the first three years after its establishment performed badly and made losses. Since 2006 the company's financial performance increased drastically and it made a profit for the first time. This was because in 2006 the largest hydro electric power plant in Bhutan, the TALA came on line, this plant has a generating capacity of 1020 MW and much of which is sold to India.

This is a very positive figure and very encouraging for the BPC’s management as the company is now out of the red. These indicators are discussed in more detail, using data relevant to the BPC, below.

![Figure 2.1: Net Profit](image)

The data was obtained from the BPC Annual Report (2006) and the BPC financial statement for 2007.
2.4.2 Return on Assets

This section is going to mention about the return on assets including its meaning and how is it calculated. Further this section also reflects the ROA of BPC. Return on Assets is an indicator of how profitable a company is relative to its total assets. A ROA gives an idea as to how efficient a company’s management is at using its assets to generate earnings. The ROA is calculated by dividing a company’s annual earnings by its total assets, and it is displayed as a percentage. Sometimes this indicator is referred to as “return on investment” of a company.

\[
\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}}
\]

A ROA graph for the BPC is presented below. This graph shows that the BPC is improving in terms of asset management but still need to improve further.

Figure 2.2: Return on Assets

The ROA for the BPC was calculated using data drawn from the company’s balance sheet and profit & loss accounts for 2004 – 2007.

2.4.3 Return on Equity

We have discussed about the ROA in the above section but now the other indicator ROE would be discussed in this section. ROE is a measure of a company’s profitability that reveals how much profit a company generates using shareholders investments in the company.

ROE is calculated as follows:

\[
\text{ROE} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}
\]
From figure 2.3 one can conclude for the ROE indicator that BPC has been performing much better now. The values were calculated using the data drawn from BPC’s balance sheet and profit & loss accounts for 2004 – 2007.

2.4.4 Revenue Loss Impact Factor (RLIF)

The Revenue Loss Impact Factor would be discussed and measured for the BPC. RLIF is a reliability index used to calculate the loss of electrical energy during an energy outage and the effect of this loss on company, in our case the BPC. RLIF increases as the number of hours of power outage is reduced.

RLIF is calculated as follows:

$$\text{RLIF} = \frac{\text{Actual Energy Transferred}}{\text{Total Energy Available for Transfer}}$$

Actual energy transferred = total energy transferred during the period under consideration

Total energy available for transfer = the actual energy transferred plus energy lost during outage

How reliable the BPC electrical system is and its impact in terms of revenue loss due to system failure is shown in table 2.3 below.

The data for table 2.3 was taken from the BPC Annual Report 2006, and calculated for 2007 from data supplied by the BPC head office.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
</table>

Table 2.2: Revenue Loss Impact Factor
As can be seen from figure 2.4 above the transmission system of the BPC is 99.99% reliable and the loss of revenue due to system failure is minimal.

### 2.4.5 Losses of Electrical Power

The losses would be measured in this section. This loss percentage is calculated to find out whether the total energy generated has been billed or not. If not then how much energy is lost during transmission or distribution. In any system it is impossible to run the system without any technical losses but it has to be maintained within the permissible range.

This is calculated as follows:

\[
\text{Loss\%} = \frac{\text{Total Energy Input} - \text{Total Energy Sold}}{\text{Total Energy Input}} \times 100\%
\]

Where;

\[
\text{Total Energy Input} = \text{Energy bought from generating companies in Bhutan} + \text{energy wheeled (transmitted) for export to India} + \text{internal energy generation by the Bhutan Power Corporation} + \text{energy import from India.}
\]

\[
\text{Total energy sold} = \text{energy consumed inside Bhutan} + \text{energy wheeled for Export to India}
\]

The result of this calculation gives a measure of the energy lost during distribution. The losses consist of technical losses and losses due to other unavoidable problems. See table 2.4 below.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Losses</td>
<td>3.3</td>
<td>4.56</td>
<td>4.73</td>
<td>2.85</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Table 2.3: Losses
Unbilled losses for the BPC are shown in fig.2.5. As can be seen the losses are not high but the BPC will have to try to keep these losses as low as possible otherwise it will be losing in terms of revenue.

The data was obtained from the PBIS document from the BPC head office.

### 2.4.6 Reliability

The reliability of distribution system are an important indicator to determine the overall reliability of a power supply system, it is also a good indicator of the performance of a power utility. Several critical factors contribute to reliability such as proper network planning, good operation and maintenance practice, proper asset utilization, ability to take timely rectification measures, general preparedness to handle contingencies, etc. Reliability has a direct bearing on general customer satisfaction and on the revenue stream of a corporation, in our case the BPC.

Reliability indices, as standardized by the Institute of Electrical and Electronic Engineers (IEEE), such as SAIFI (System Average Interruption Frequency Index) and SAIDI (System Average Interruption Duration Index) provide a good measure of the overall reliability of an electrical supply to the individual customer. SAIFI provides an indication of the number of interruptions that an average customer will experience in a year, and SAIDI tracks the total duration of outages suffered by an average customer. The BPC has started keeping track of IEEE Reliability indices such as SAIFI and SAIDI in 2004. SAIFI and SAIDI can be calculated as follows where:

\[
SAIFI = \frac{\text{Total Number of Customer Interruptions per year (Interruptions/Customer/Year)}}{\text{Total Number of Customers served}}
\]

\[
SAIDI = \frac{\text{Sum of Customer Interruption Duration per year (Hours/Customer/Year)}}{\text{Total Number of Customers served}}
\]
The BPC results for SAIFI and SAIDI are shown in table 2.5 and figure 2.6.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAIFI</td>
<td>20.57</td>
<td>5.2797</td>
<td>4.417</td>
<td>5.729</td>
</tr>
<tr>
<td>SAIDI</td>
<td>7.65</td>
<td>5.9384</td>
<td>2.885</td>
<td>7.039</td>
</tr>
</tbody>
</table>

Table 2.4: Reliability of distribution system using SAIFI & SAIDI

![Figure 2.6: Reliability of distribution system using SAIFI & SAIDI](image)

The BPC has been working towards reducing its SAIFI and SAIDI results by implementing very efficient systems to increase its reliability.

All the data was obtained from the BPC annual report for 2006 except data for 2007, which was calculated using data supplied by the BPC head office.

### 2.4.7 Number of Customers

In a competitive supply situation one way to determine how well a company is performing is to look at increases in its customer base. An increase in number of customers will indicate that the services offered by a utility are seen to be better than those offered by competitors who are therefore losing customers. In the case of the BPC this indicator is invalid as it is the only power utility in Bhutan. In our case we use the gains in customers per year to show how fast the BPC is able to attract customers, see table 2.6 below.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Customers</td>
<td>45801</td>
<td>51017</td>
<td>55823</td>
<td>67417</td>
<td>77433</td>
</tr>
</tbody>
</table>

Table 2.5: Customer growth per year in numbers

The BPC has grown rapidly in terms of number of customers connected with a power supply, and this explains (in part) why the revenue has been increasing over the years. Every additional customer would mean additional revenue for BPC.
At the moment around 52% of the total population of Bhutan has a source of electricity, so there is still a huge task ahead to achieve the government’s target of electricity for all by 2020. However, as can be seen from the indicators and results given above, and if you evaluate its performance to date, one can see that the BPC has made impressive strides towards the Bhutanese government’s target of electricity for all by 2020. Another strong indicator of the BPC’s progress is its jump from losses, thus negative revenues in 2003 to positive in 2006.

### 2.5 Rural Electrification Work

In the first chapter it was briefly mentioned that BPC is also responsible for carrying out the rural electrification (RE) projects being carried out in Bhutan. In this section we will discuss the RE projects, the targets that have to be met and the financing of these projects.

One of the BPC’s mandates is to carry out all the rural electrification work required in Bhutan and so far the BPC has performed well in terms of meeting the targets.

At present only 52% of the total population has electricity and the BPC still has a long way to meet the government’s target of electricity for all by 2020. The achievement so far and the target is mentioned below:
A today’s rate of progress the BPC expects to complete its RE works by 2013. The BPC is not in a position to fund the RE works because it requires huge investment of funds that it currently does not have. The only option for BPC is to take up loans from financial institutions.

The BPC has taken out soft loans with low interest rate from Asian Development Bank to finance its RE work to date, which is mentioned in table 2.7 below. The Tala loan is for the electrical infrastructure which was transferred from TALA hydroelectric project to the BPC.

<table>
<thead>
<tr>
<th>Debts</th>
<th>Total Loan (in million Nu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian Development Bank 1</td>
<td>469.595</td>
</tr>
<tr>
<td>Asian Development Bank 2</td>
<td>439.820</td>
</tr>
<tr>
<td>Asian Development Bank 3</td>
<td>435.298</td>
</tr>
<tr>
<td>Tala Loan</td>
<td>1758.183</td>
</tr>
<tr>
<td>Total Loan</td>
<td>3102.896</td>
</tr>
</tbody>
</table>

Table 2.6: Total Loan

If you compare the amounts outstanding in these loans to the profit made by the BPC in 2006 & 2007, it is very obvious that BPC will take long time to clear its loans.

### 2.6 Confrontation of Goals and Performance

So far we have discussed the performance of the BPC by using various indicators to measure its progress. In this section we compare the BPC’s goals and the performance to help us understand how the BPC is able to achieve its goals. Such a comparison will help us then look for ways to rectify the problems that the BPC is presently facing.

In table 2.8 below we clearly set out a list of the BPC’s goals and the steps taken to achieve these goals.
CHAPTER 2: PROBLEM ANALYSIS

<table>
<thead>
<tr>
<th><strong>Goals</strong></th>
<th><strong>Performance/Steps Taken</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>To be a socially and environmentally conscious leading corporate entity.</td>
<td>The BPC is one of the leading corporations in Bhutan and it has already created an image as Bhutan’s leading corporation, one that still manages to be socially and environmentally responsible. The RLIF value shows the BPC is increasing the reliability of its transmission system.</td>
</tr>
<tr>
<td>To ensure uninterrupted availability of transmission network for evacuation and supply of electricity to domestic and export markets.</td>
<td>The SAIFI &amp; SAIDI values are improving. The ROA value indicates that the BPC is improving its utilization of its resources however there is still a need to improve. The BPC’s financial health is increasing, but it must still take out loans to support all its RE works.</td>
</tr>
<tr>
<td>To provide adequate, reliable, good quality and affordable electricity in a customer friendly, safe and efficient manner.</td>
<td>The BPC has implemented a performance management system and PBIS to encourage and motivate people to work harder while holding in mind its special requirements to always consider Bhutanese people and protect its environment. The RE targets will be met much before 2020 and at the moment the BPC is carrying out RE works wherever necessary.</td>
</tr>
<tr>
<td>To ensure optimal and efficient utilization of resources and improve the financial strength of the corporation.</td>
<td>The BPC is working towards this continuously.</td>
</tr>
<tr>
<td>To build a dynamic corporate culture through a team of professional and productive employees who are motivated, dedicated and well informed.</td>
<td>The BPC has achieved this objective and it has become the role model for other corporations in Bhutan.</td>
</tr>
</tbody>
</table>
| To undertake power infrastructure expansion programs to improve reliability of supply and achieve electricity for all by 2020. | |}

Table 2.7: Confrontation of Goals and Performance

2.7 Problem Analysis

After confronting the goals and the performance in the above section, we analyze the strategic problem in this section.

If you look at table 2.8 above where the goals of the company and its performance to date are compared to see if there are any problems, then it seems that the BPC is been performing so well now and there could be no problem.

However, the problem statement that underlies this research is that the Bhutan Power Corporation Limited is making huge investments in rural electrification as there are still four dzongkhags (districts) which still have to be provided with sources of electricity and there is a problem in financing all the activities required. This is mainly due to the low tariff for electricity set by Bhutan Electricity Authority (BEA). This means there is a financial gap, the BPC cannot fund all the RE projects out of its own revenue and thus it must take out loans. Simply achieving electrification of these four dzongkhags is not enough because the time it will take to pay back loans also has to be considered and loan repayment will continue for a number of years after the completion of the RE work.

In some cases the BPC had problems with implementing RE works and there are also problems from the contractor’s side due to inexperience. One General Manager (GM) further commented that present government policy in Bhutan encourages the use of local contractors in all the construction activities in and around the country. Therefore a major problem faced by the BPC is finding enough experienced contractors locally who can deliver good quality work.
CHAPTER 2: PROBLEM ANALYSIS

One of the respondent of our questionnaire pointed out that the major problem at the moment is a shortage of manpower skills. According to him so many capital works have been taken up by the BPC for the 10th five year plan (2007 – 2012), that there is a lack of qualified manpower to support all the activities. One of the senior staffs member mentioned that there are also still things that need to be improved on the distribution side.

Therefore the BPC has been forced to take out loans from financial institutions like the ADB to finance all its projects. In response to the questionnaire the finance department mentioned that the BPC has started making profit but still need to depend on external loans. So, the BPC feel a need to expand its business into other areas which could be profitable. Revenue from this is turn could be used to finance the project(s) or to service loan repayment. The other problem at the moment is that Bhutan’s hydro electrical resources are under utilised at present and organisations like Druk Holding & Investment (DHI) are encouraging the BPC to expand into areas where they could optimally use their resources.

At the moment the BPC enjoys a monopoly as the only power utility in the Kingdom of Bhutan but according to a recent hydro electric policy statement of the government, private parties and foreign investors could be invited to invest in harnessing the rich hydroelectric resources of Bhutan. If the government starts up a similar policy for the distribution and transmission sector then the BPC will definitely be set back due to competition. Therefore, the BPC while enjoying the privilege of a monopoly should also try to develop their competencies in other businesses. The management of the BPC are already showing interest in expanding into other areas as they feel a need to optimally utilise their existing infrastructure.

If you sum up all the problems mentioned above, we arrive at one strategic problem that of managing of the huge task of electrifying all Bhutan, and the limited funds available to carry out this work. Therefore, the question faced by the BPC at the present is: Should it stick to just its existing business or does it also need to expand into other profitable business area?

There are various causes of these problems and it is worth mentioning these to clearly see what needs to be improved or changed if you want to solve these problems.

1. The high cost of electrifying the rural villages. The costs will further increase as the new RE projects are for all the remotest most inaccessible places in Bhutan and costs are going to escalate.
2. The time required to recover such costs is very long due to the low regulated tariff set by the BEA.
3. The BPC cannot fund the RE projects from its revenue, so it need to rely on international financial institutions for loans.
4. There is limited growth in the power supply market due to the geographical constraints faced in Bhutan, and even if growth is possible there is limited profitability at present.
5. It is difficult to complete the BPC projects due to time and budget constraints.

2.8 Policy of the BPC & the Royal Government of Bhutan

Before coming up with any plans to improve or solve the above problems it is very important to understand the policy of the BPC and that of the Royal Government of Bhutan. A clear understanding of both policies should prevent rejection of projects suggested by the BPC to the authorities.
2.8.1 Policy of BPC

The BPC’s main mandate is to ensure that each and every person in Bhutan is connected to an electricity supply by 2020. Therefore, all the policies of BPC are guided by this vision 2020.

The BPC at the moment has small, mini and micro hydro power plants with total installed capacity of just 8.6 MW. Therefore, the BPC is interested in increasing their generation capacity to help them meet their demands during the dry seasons in winter. If more than enough electricity is generated by the small capacity hydro plants this can be sold to the grid, if a connection is available, to earn more revenue for the BPC. Over production can also be sold to its neighbor India to generate revenue.

The policy at the moment of the BPC is to meet the rural electrification target so that the major works requiring heavy investments will be completed as soon as possible. Moreover, the RGoB’s target for electricity for all by 2020 would also be met.

The BPC is also working towards ensure that safe, cheap and affordable power is available to all its customers again a government’s requirement. So, the BPC has been upgrading its infrastructure and lines both for distribution and for transmission to make the electricity network reliable and stronger. The BPC is also planning to connect the whole of Bhutan via a national grid by end of the tenth five year plan (2007-2012). The BPC has already laid fiber optics cable in some parts of the country and it is planning to extend this to all parts of the country. This cabling is intended to be used for ICT business in the future.

2.8.2 Policy of Government

In Bhutan the major source of electricity generation is hydro power plants and this hydro-electricity plays a very important role in the socio economic development of the country.

Around 45% of the government’s revenue is obtained from power sector sales of electricity to India. Bhutan has been blessed by abundant hydro resources. The total estimated potential of Bhutan is 30,000 MW but only 23,523 MW is techno-economically feasible (Rasaily, 2007).

So far Bhutan has an installed capacity of 1,479 MW and the government has carried out feasibility studies for adding to this capacity (Rasaily, 2007).

Existing power plants in Bhutan, excluding the BPC’s generation capacity are listed below.

1. Tala Hydro Power Project - 1,020 MW
2. Chukha Hydro Power Project - 336 MW
3. Basochu Hydro Power Project - 64 MW
4. Kurichu Hydro Power Project - 60 MW

Feasibility studies for the following project have already been carried out.

1. Bunakha - 180 MW
2. Mangdechhu - 360 MW
3. Punatsangchhu - 870 MW
4. Wangchhu - 900 MW
5. Sunkosh Multipurpose Project - 4,060 MW

The RGoB supports the use of clean, safe energy and renewable energy. Therefore, the hydro power development is well supported by the government since it is one of the renewable sources of energy.
CHAPTER 2: PROBLEM ANALYSIS

The RGoB also supports other renewable sources of energy like solar and the production of bio gas in remote places where there is no access to the national grid.

The Electricity Act was passed by government in order to provide for:

1. the restructuring of the electricity supply industry
2. the establishment of the Bhutan Electricity Authority
3. the technical regulation of the electricity supply industry
4. private sector participation in the electricity supply industry and
5. to empower the RGoB to participate in the formation of any company for the purpose of carrying out all or any of the requirements laid down in the act. (purpose of the Act, Royal Government of Bhutan’s Electricity Act, 2001).

The BPC was formed only after the Electricity Act (2001) was passed by the National Assembly.

Recently the Cabinet has endorsed the “Bhutan Sustainable Hydropower Development Policy”, which allows private parties and foreign investors to develop or harness Bhutan’s hydropower resources (Lamsang, 2008).

2.9 Main Challenges of BPC

The main challenge that the BPC is facing today is that there are still 4 dzongkhags not connected to the electricity grid or provided with sources of renewable power. Therefore, at present the BPC is spending heavily on running diesel generator (DG) sets to provide access to electricity for remote villages. So, the challenge is how the BPC can provide access to renewable electricity to these places. Before the RGoB used to fund all the RE activities and the BPC was just the implementing agency. But now the BPC has to arrange for funds and execute the work and pay the loans to the financial institutions. Therefore, the BPC is finding difficult to pay the huge loan especially when they just have to rely on income from the sales of energy.

In 10th five year plan (2007 – 2012), BPC estimates to carry out work which will cost some Nu.19 billion. The biggest challenge is whether the BPC would be able to meet this target or not. The BPC also lacks knowledge on corporate culture and corporate social responsibility.

The BPC so far has been running as a public utility with the social objective of electrifying the whole Bhutan, following government policy set out in 2001 (Royal Government of Bhutan’s Electricity Act, 2001). Now the BPC also feels a need to expand into different businesses where it can also make profit but it lacks expertise in this field. The biggest challenge for the BPC is how well it could diversify into different businesses due to its lack of expertise. The other challenge facing the BPC is how well it can blend the social objectives of RGoB and with its need to achieve the commercial objective of the company.

One of the tasks of the DHI, after its formation, is to monitor continuously the Bhutanese corporations that fall under this agency. Therefore, all the corporations need to perform well and achieve the targets set. So, the BPC need to show that it is sustainable and that it is a profitable organization. Now the main challenge for the BPC is how to be self sustainable and how to increase its revenue.

2.10 Constraints Affecting Decision

Once you are clear about the main challenges to be faced when making a decision, it becomes necessary to understand the constraints that affect the decision. This is critical as
any decision that is taken should comply with at least the minimum restrictions placed on making such a decision.

The main constraint affecting decision making at the BPC at present is lack of or obtaining sufficient capital to carry out projects. The BPC does not have enough revenue to support most of its activities and still has to depend on external loans. The other important constraint is that the BPC cannot raise electricity tariffs without consulting the Bhutan Electricity Authority. The RE works are very expensive, this is because the costs of providing electricity in the rural areas of Bhutan are very high due to Bhutan’s tough terrain and sparse rural population which lives often, in small inaccessible villages: this is particularly so in the four dzongkhags that still have to be electrified.

The BPC also faces a major constraint in the form of a shortage of specialized staff. If the BPC wants to diversify into new businesses it will have to open up a new division to look after the new business as yet it lacks the human resources and expertise required to run such businesses as manufacturing.

2.11 Conclusion

We discussed the background of the BPC, and its market structure and described how the BPC operates its revenue. We also looked at the BPC's performance using common economic indicators. According to these indicators the BPC at present is in much stable condition compared to past years.

The BPC started making a profit for the first time since 2006. The main reason behind the increase in revenue was the commissioning of the TALA hydropower project, and even according to other indicators the BPC is now making progress. This may be due to improvements in the BPC's overall system leading to higher efficiency. The BPC has also been able to cut its costs and decrease its losses. The BPC also believes that the implementation of PBIS in 2006 has helped the BPC to achieve this result as the employees have started working towards achieving set targets, which is really good for the BPC as a whole.

Then there is the DHI, this was established to oversee the performance of the organizations under it. Therefore, the BPC has to meet the targets set jointly by itself and the DHI. Overall, the company has been performing well and the management is confident that their profit is going to further increase over the years.

Background information on the implementation of PBIS and information on the formation of the DHI are attached as Appendix 3 and Appendix 4 respectively for further reading. The tariff structure and Corporate Strategic Plan of the BPC is attached as Appendix 5.

However, the main challenge of the BPC at present is that still 4 dzongkhags are un-electrified and has a huge task of rural electrification. The other challenges are to fulfill the social mandates of providing electricity and at the same time being commercially viable to be self sustainable. The major constraints affecting the decision are the shortage of capital and human resources.
CHAPTER 3: Literature Review

Goal of this Chapter

In this chapter we will discuss the background of corporate growth, to help us understand the importance of corporate growth and give an insight into the reasons for companies to look for growth.

Companies commonly seek to grow, the reasons behind this can be many and varied among the types of business and markets, but in general a business will seek to increase its overall financial growth.

This chapter is included to help the reader understand the basics of corporate growth. This chapter does provide an initial link to our research topic and creates a foundation upon which to explain later parts of the report.

3.1 Background to Corporate Growth

The companies should aim at long term corporate development but they are not always able to fulfil goal due to the changes that can occur in a company's environment over time. Therefore, corporate development needs to be reviewed periodically and wherever necessary changes need to be made and adjustments made to revitalise the company's corporate development aims and planning; i.e to eliminate existing (non-profitable) businesses or to develop new businesses.

In recent years many companies have been facing extreme environmental pressure, a mature market and intense competition from all over the world. Therefore, to tackle these issues companies have been continuously trying to change their business strategies by, for example, cutting costs, improving efficiency, sticking to its core business, or launching new businesses.

Littler (1987) argues that the following issues influence decisions on corporate growth and hence the corporate development.

- The time span of the growth: this means that a short-term increase in profit could be made by restraining investment in new technology and product development. It can also be done by selling off easily marketable parts of the company. However, Littler says such measures may result in the sacrifice of the company in the longer term.

- The quality of any growth: Littler says that the quality of the growth is very important to see if the longer-term future of the growing business is going to be adversely affected by environmental factors or not.

- The extent of managerial commitment to growth for its business. Lastly Littler states that commitment is very important, especially by top management, as they are the decision makers and they should be comfortable with the idea of company growth.

Hax (1994) distinguishes three perspectives in a formal strategic planning process which are the corporate, business, and functional. These perspectives are different in the way that they address the decisions made with respect to growth. There are also differences in terms of the organizational units and managers involved in formulating and implementing the programmes developed during the strategy formation process (Hax, 1994).
In the same article Hax also segregates the three different strategic corporate tasks depending on whether a company is concerned with shaping the vision of the firm, increasing its profitability or assuring proper coordination and managerial capabilities.

**The Leadership Imperative:** This imperative is commonly associated with the CEO or top management of a company and they are expected to define a vision for the firm. This vision should provide a sense of purpose to the organization, it should also help to determine the direction to pursue or fulfill the challenges that have been set to make your company successful it is always important to have visionary and competent leaders who can define a company’s vision (goals) and then motivate others to achieve it.

Even for the BPC which is a young and dynamic organisation, it is necessary to have a visionary leader who could make use of opportunities and take the BPC to the heights of success. However, if leaders are not supportive or committed this will lead failure rather than success.

**The Economic Imperative:** This imperative is concerned with creating value at the corporate level. The company should determine whether the business(es) of a firm benefit from being together, or if they would be better served as separate and autonomous units. Therefore, it is very important to determine overall benefits to be gained from individual, but jointly managed, businesses and making a business section independent.

This is also very important for the BPC since it needs to keep in mind that any new business it might add to its portfolio should add value (revenue) and not just increasing problems.

**The Managerial Imperative:** This imperative is the major determinant for a successful implementation of corporate strategy. It involves two additional important corporate tasks: the design of the firm managerial infrastructure, and management of its key personnel (Hax, 1994). This would also be very useful for the BPC in planning, as the overall success of the firm depends on how well its resources, both capital and human, are managed. So, the BPC’s management should see that its resources are effectively and optimally utilised.

Piest (1993) mentions that it is difficult to achieve all the activities planned by companies. The reasons can be many for these difficulties, for example a plan may not reach the implementation phase. Even if it reaches implementation phase, the company may lack the necessary instruments to implement the plan(s). Therefore, it is crucial to take into consideration during the planning phase all the possible problems you might experience in the future; and if you do anticipate then you need to improve or build up the capacity the company has so that the implementation is smooth (Piest, 1993).

Canals (2001) mentioned that the main motive of company growth should not be an increase in revenue in the short term, but the increase in a firm’s value should be added in the long term, and this can be achieved by innovation and the development of sustainable competitive advantages. It is clear from this argument that the growth in some cases is not just pursuing a larger scale or a higher market share (Canals, 2001).

A company being in increasing growth of the firm seems to be natural. According to Canals (2001) the restructuring processes of the early 1990s and the massive lay-offs that took place have demonstrated the importance of thinking about corporate growth. A company that has not grown for many years, or the growth of which is not financially healthy has a problem. Canals also adds that a lack of growth over a long period of time does not necessarily mean decreasing profitability but it could mean that the company lacks innovation skills or has a bad relationship with its customers. Therefore, it can be summarised that the growth is very important for any company as it will increase its revenue, but it is also true that growth is a part of the business cycle and growth outside a company’s cycle can lead the company to failure (Canals, 2001).
3.2 Importance of Corporate Growth

It is also necessary to know the importance of corporate growth and what leads corporate growth.

It is necessary to have corporate growth for any company to succeed. Growth is indispensable and it is one of the most important challenges that a company has to tackle. Canals (2001) states that growth will always involve risk, but the absence of growth would mean an even higher risk due to stagnation. Corporate growth is necessary for finding and developing talent, managing the risk of substitution, attracting capital for growth and finally breaking the mature industry (Canals, 2001).

The internal and external reasons for corporate growth developed by Canals (2001) are shown in table 3.1 below.

Table 3.1: Importance of Corporate Growth

<table>
<thead>
<tr>
<th>Internal reasons</th>
<th>External reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruit talent</td>
<td>Attract capital</td>
</tr>
<tr>
<td>Retain talent</td>
<td>Positioning in capital markets</td>
</tr>
<tr>
<td>Break the mature-industry mindset</td>
<td>Manage the substitution risk</td>
</tr>
</tbody>
</table>


### 3.2.1 Recruiting and Retaining Talent

Successful companies consist of very skilled and experienced people. Now-a-days it is the most important thing for a company to have the right people with the right skills working for it to leverage the performance of the company (Canals, 2001).

For companies it is not enough to have technical capabilities and resources alone, ultimately it is crucial to have the right kind of people for right kind of job. At present almost all companies have the policy to recruit, retain and train their employees so that their staff becomes their competitive advantage.

This is very relevant for the BPC as they need to have the right kind of experienced people if they want to consider investing in any new businesses. Therefore, it need to realise the full potential and skills of its employees and try to retain these people once trained or it already has talented people in the organisation. Otherwise the BPC will need to recruit people with the right kind of skills for starting up new business.

### 3.2.2 Need to Attract Capital

Attracting capital today will definitely improve a company’s prospects of attracting it in the future if it has performed well. This helps a company to convince possible investors that the company has a good future. Thus growth potential is an important factor for both public and private firms.

Investors make their decisions based on their expected return on their investment. Therefore, companies need to develop their business prospects to attract investors to put in money. A company needs to ensure healthy and sustained growth of the company to pay dividends to the investors or to their stake holders.
Canals (2001) in his article “How to think about corporate growth” states that the reason behind the success of the privatisation of previously state owned companies in many European countries is due to the growth prospects the companies have shown (Canals, 2001).

This is also one of the reasons why the BPC’s management is looking at strategies for growth: it is looking forward to attracting capital which can be pumped in to financing the huge and costly rural electrification works in Bhutan. So, the any new businesses it would take up would be used as a tool to attract the required capital for corporate growth.

### 3.2.3 Managing the Risk of Substitution

The new products and services are the platform upon which companies build their future. Products and services are the main source of revenue for companies, if revenue is good then the company grows faster.

Every product has its life cycle. It will do very good initially but once it reaches saturation, in the market and stagnation sets in growth and profitability decreases for a company. In order to revive profitability a company will have to either come up with a new design of an old product or new products, and in doing this the value combination within the company changes.

Firms should not only try to prevent their products sales from declining they need also to be careful not to let their competitors make their product obsolete. Product substitution or imitation take place in all industries, particularly once patents run out, and may seriously endanger the stability of a company’s revenues. Thinking about new projects that can generate growth enables companies to tackle the challenge of substitution and imitation, by getting ahead of other companies or becoming different. The risk of substitution is high when new good quality products are sold by another competitor company at a cheaper price.

The risk of substitution is not relevant for a company like the BPC at present as it enjoys the monopoly in the power utility sector. Therefore, this is not the reason for corporate growth but at the same time it is also true that the BPC will always want to improve its service quality and offer a reliable product. This is not because it fears saturation at least at this point in time, however the BPC may have competitors in the near future.

### 3.2.4 Beyond the Mature Industry Mindset

Maturity, as a business concept refers to the products and not to industry as a whole. Therefore, one can only refer to mature products but not mature companies.

Canals (2001) gives, the Swiss watch manufacturer SWATCH as a good example of a company that has revived its mature industry by developing new business concept in 1960’s and 1970’s. It shows that even a mature company can revive, and can win back, a lost battle in the market. Instead of just thinking that you as a manager are doing, it is necessary to think beyond and change your concepts to regain or retain a market (share).

It is important to mention that this is definitely not the reason for the BPC to seek to promote corporate growth. The BPC is a young, and growing, company and it still has to reach the maturity stage.

### 3.3 Strategic Growth Options

Up to now we have discussed corporate growth and its importance for a company: but companies need to understand growth options so that they can focus on developing
themselves to achieve growth. Therefore, in this section we will discuss growth options using Ansoff’ Matrix (Ansoff, 1987).

For decades management has used various methods to analyse the alternative means by which a company might grow. Ansoff’s matrix (or product-market- matrix) is a well known method of categorization for growth strategies, consisting of the following four strategies.

- **Market Penetration:** with present products and present markets, growth can be achieved using market penetration. Higher sales from existing markets can either be obtained by attracting current non customers, who either do not buy products in the offered categories at all or who buy from competitors. Therefore, the loyalty of the customers is important and needs to be retained by improving and offering good services.

- **Product development:** this is characterised by offering new products to an existing market. This can be done by providing the existing customer base with new product categories in the existing store.

- **Market development:** a current product offer can be targeted at a new customer segment, often in a new geographic area. For example, regional retailers expanding their traditional store formats to other regions or national retailers expanding to new countries in an attempt to increase revenue for the company with this strategy.

- **Diversification:** this means offering new products to new markets. If there is a saturated market or if it is a mature market then often company diversifies into other areas. But company can also diversify to decrease their risk by doing more than one business (Ansoff, 1987).

Figure 3.1: Ansoff Matrix

![Ansoff Matrix](image)

**Source:** Igor Ansoff. "Corporate Strategy", McGraw-Hill. 1987

### 3.4 Market Penetration

In the above sections we only introduced the option of market penetration now we will discuss it in detail.

Market penetration can be achieved by offering present products in present markets. Higher sales from existing markets can either be obtained by attracting current non customers, who
either do not buy products in the offered categories or who buy from competitors. Therefore, customer loyalty is important and needs to be retained by improving services to existing customers and offering excellent services to potential new customers.

This option was not considered in this research due to the reasons given in section 6.2, in Chapter 6.

### 3.5 Market Development

A current product offer can be targeted at a new customer segment, often in a new geographic area, which is called market development, i.e. regional retailers expanding their traditional store formats to other regions or national retailers expanding into new countries in an attempt to increase revenue for the company using this strategy.

This option was also not considered in this research due to the reasons given in section 6.2, in Chapter 6.

### 3.6 New Product Development

Only product development and diversification was considered in this research as a possible growth option, we will now discuss it in depth.

#### 3.6.1 Introduction

New product development (NPD) has become a very important strategy for companies to leverage the performance of their organizations. New product development is the key to the corporate prosperity. Cooper in his book, “Product Leadership”, mentions that the business of new product performance is supported by three pillars or cornerstones.

According to him the organization needs to rest on the strong cornerstones to support growth. The three cornerstones are a high quality product process, a new product strategy and resource commitment (Cooper, 2005).

Cooper (2005) also gives success factors which, if implemented with caution, would lead to the successful launch of the product. They are listed below:

1. Management stressing on doing the up-front homework during the process, both market and technical assessments before projects move into the development phase.
2. The new product process has a strong market orientation, and is developed keeping in mind the voice and need of the customers throughout.
3. A high quality new product process includes sharp, early product definition, before development work begins.
4. There are tough Go/Kill decision points in the process.
5. There is a focus on quality of execution.
6. The new product process is complete or thorough, where every vital activity is carried out, but the process is also flexible, where stages and decision points can be skipped or combined, according to the nature and risk of the work.

The winners are separate from losers depending on how well and effectively they can implement the above success factors (Cooper, 2005).

In order to obtain the best performance from NPD, it is vital to have very efficient and effective management. The chances of failure for NPD are high and carries high costs. Therefore, NPD should be executed with caution.
Krishnan and Ulrich (2001) state that NPD is defined as the transformation of a market opportunity; but according to Haque (2000), NPD can not be done independently in a company and it requires contributions from all disciplines, i.e marketing management, organization, engineering design, and operations management for either upgrading or improving an existing product or developing new products (Haque, 2000). NPD activities are aimed at creating value for enterprises while renewing and developing product lines for the company (Matheson and Matheson, 1998).

Buyukozkan (2004) states that NPD is highly uncertain and it will also disturb decision making processes. Therefore, it is important to balance strategic management decisions to develop the right product while allocating resources for tactical management decisions like execution of projects to minimize the risks factors of NPD. Therefore it is important to answer the following issues for any NPD to be successful:

- to determine if we are allocating our budget to the right new product proposal
- to determine if we have the right balance of risk and return, of long and short term projects
- to determine if we are working on the right projects and programs with the appropriate effort

It is critical to determine what is right for the company if the NPD is to succeed (Buyukozkan, 2004).

The new product development process is critical for the growth of a company, but at the same time it is very challenging for the managers. The new product development process is based on layers of development stages, which are evaluated using evaluation stages (Tzokas, 2004).

Tzokas, Hultink and Hart (2004) have identified the following evaluation criteria for new product development.

Table 3.2: Dimensions and Evaluation Criteria

<table>
<thead>
<tr>
<th>Market-based</th>
<th>Financial-based</th>
<th>Product-based</th>
<th>Process-based</th>
<th>Intuition-based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer acceptance</td>
<td>Break-even time</td>
<td>Product performance</td>
<td>Stay within budget</td>
<td>Marketing chance</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>Profit objectives</td>
<td>Quality</td>
<td>Introduced in time</td>
<td>Intuition</td>
</tr>
<tr>
<td>Sales objectives</td>
<td>IRR/ROI</td>
<td>Product uniqueness</td>
<td>Time-to-market</td>
<td></td>
</tr>
<tr>
<td>Sales growth</td>
<td>Margin</td>
<td>Technical feasibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market share</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales in units</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market potential</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


The continuous development and introduction of new products into the market is very important for the long term sustainability of a company, and the new products open up new
opportunities, the risks associated with new product development should not be overlooked (Ernst, 2002).

### 3.6.2 Types of Products

Companies can offer different types of products, for example a product could be new to the market or new to the company, it could also be 'new' in the sense that just minor modifications have been made to an existing product.

Griffin and Page (1996) categorised the products according to newness to the market and newness to the company (Griffin, 1996).

1. **New to the world:** this kind of product is one which creates an entirely new market.

2. **New to the company:** as the name suggests this type of product is new to the company meaning that the company is offering a product that is new to it, such a product allows a company to enter an established market.

3. **Additions to existing product lines:** this is just an extension to the existing product lines of the company and the product is not new, however, it supplements the company’s established product lines.

4. **Improvements in/revisions to existing products:** this kind of product is just some improvements to an existing product that the company has made i.e caused it to perform better, provide it at a better value price and which eventually, replaces the existing product.

5. **Repositioning:** here the strategy is to target a new market with an existing product.

6. **Cost reductions:** such products perform similarly to the existing product but are sold more cheaply. For example a 'new' phone that does everything that existing products do, but not what a more advanced phone might do, so now the phone is sold cheaply to those who want a simpler product or who cannot afford a more expensive product.

Figure 3.2: Types of Product

<table>
<thead>
<tr>
<th>Newness to the Market</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>New-to-the-Company</td>
<td>New-to-the-World</td>
</tr>
<tr>
<td></td>
<td>Product Improvements</td>
<td>Add to Existing Lines</td>
</tr>
<tr>
<td>Low</td>
<td>Cost Reductions</td>
<td>Repositionings</td>
</tr>
</tbody>
</table>

CHAPTER 3: LITERATURE REVIEW

The above products matrix helps us to understand how products are categorised based on the newness to the market and newness to the firm. Once this is clear then a company has to choose which products it would like to introduce, and determine the strategies it will use to introduce the product.

3.6.3 New Product Strategy

A new product strategy is a strategic plan that can be used to guide the process of introducing a new product. Developing a new product strategy is very difficult as it involves many people and top management especially must be committed to the process and involved with the planning.

A new product initiative taken without a strategy will inevitably lead to a string of adhoc decisions being made independently by a mixture of people from middle management to higher managements which will cause the whole business process of promoting and introducing a new product to fail. Failure in this case will be due to lack of planning with respect to such things as target market for the new product, funding for the product, type of technology to use, and ownership of the project by a higher manager who will promote and support the new product within the company, etc.

Therefore, Cooper (2005) has come up with the five different strategies that organizations could opt from for their new product strategies.

3.6.3.1 Type A: The Differentiated Strategy

Businesses using this strategy have a technologically sophisticated and aggressive approach, a high degree of product fit and focus, and a strong market orientation. They usually target attractive high growth, high potential markets where competition is weaker. This results in new products being priced high, and features strong differentiation and competitive advantage, high quality products that meet customer needs, which are better than competitors and products with a strong customer impact that offer unique features and benefits to the customer.

3.6.3.2 Type B: The Low-Budget Conservative Strategy

Organizations using this strategy often have the following characteristics low spending and copying competitors while offering undifferentiated products. Their new product efforts are focused and highly inline with their base business. New products however match the businesses production and technological skills and resources, fit into the businesses existing product lines, and are aimed at familiar and existing markets.

In spite of this companies lack spending capacity; organizations adopting this strategy achieve moderately positive results, a high proportion of successes, and low failure and kill rates. This conservative strategy results in an efficient, safe and profitable new product initiative, but it does not have a dramatic impact on the business.

3.6.3.3 Type C: The Technology Push Strategy

Businesses using this strategy have a technologically driven approach to product innovation, and are technologically sophisticated, technology oriented and innovative, but the new
product effort will lack a strong market orientation, and there is little fit, synergy, or focus in the types of products and market needs.

This technology push strategy generally leads to mediocre performance because it fails to meet the businesses new product objectives. This strategy also yields a high proportion of project cancellations and product failures, and it is less profitable than Type A or B mentioned above. This strategy produces a technologically aggressive, moderately high impact initiative, but is costly, inefficient, and plagued by failures because of a lack of marketing orientation and input.

3.6.3.4 Type D: The Not-in-the Game Strategy

Businesses that adopt this strategy simply lack technological sophistication. They develop new products that are low technology and low risk, and rely on simple, mature technologies. These developments prove to be a poor fit with the existing technology and the production base of the business. These enterprises lack an offensive stance, and attempts to serve market needs that they have not served before.

Their new product initiatives are rated in the lowest in terms of meeting the businesses objectives and on impact on the organization’s sales and profits.

3.6.3.5 Type E: The High Budget Diverse Strategy

This strategy features heavy spending and there is no direction, no synergy, no focus, and no fit. Businesses that use this strategy attack new markets and new technologies, and use unfamiliar production technologies. This strategy is also rated as the worst strategy for performance.

3.6.4 Benefits of New Product Development

A company can benefit a lot from the introduction of new product. Storey and Easingwood (1999) have identified the benefits, which are discussed below (Storey, 1999):

1. Enhancing the profitability of other products: according to Storey, a company can see enhanced profitability of its products for several different reasons. One, new customers might start becoming users of existing products. Two, profitability can be enhanced due to shared delivery systems helping a company achieve cost efficiencies. Three, the company may increase sales of existing products to its existing customers.

2. Attracting new customers: attracting new customers with a new product is very important to increase profitability. The benefit of attracting customers is that they may also become users of existing products. This means the company will make a profit on its existing product and the new product.

3. Improving the loyalty of the existing customers: maintaining the loyalty of existing customers is very important as each customer lost leads to a loss of revenue for a company. The loyalty of the customer can be maintained by offering new products, which suit their requirements so that the customer is satisfied. Or, it can be done by promoting real satisfaction with the company’s existing products. Satisfied customers tend to stay loyal to a company, and more importantly perhaps promote the company’s products to friends and acquaintances.

4. Improving the image of the company: a firm’s reputation is very important for customers as a good reputation reduces risk perception in the customer when they are thinking about buying a product and a good reputation adds value to a
company’s name. Additionally a new product launch can help to create an image for a company, this can also improve, or add to, a company’s image.

5. Producing a platform for future new products: there are three benefits you can reap from this. One, the technical infrastructure you have established for new product development can be further used to launch new products in future. Two, a company’s workers, its human resources will have gained experiences in design, production and marketing. Therefore, they will be much more comfortable when launching future new products as they are already experienced in overcoming the barriers to new products. Three, the company will have a better understanding of the market requirements for a new product launch, again an advantage for future product launches.

6. Opening up market opportunity: there may be nonfinancial goals for launching a new product like opening up a market opportunity. To survive in a competitive market, it is crucial for firms to create or establish themselves in the eyes of their customers. Even if the new product is not profitable in the beginning, it can help a company to get a competitive advantage in a new market.

7. Repositioning the company: lastly, it is possible to reposition a company in the market. A new product will help the companies to change the perceptions of its customers within an existing market. Companies can also introduce a new product to increase their profile in a market where they are weak.

The above are the most important benefits a company can reap from developing new products according to Storey (1999).

3.6.5 Risks of New Product Development

Mullins and Sutherland (1998) suggests that firms operating in rapidly changing markets need to practice NPD practices that can reduce the risk, manage uncertainty and to finally to make the new product successful (Mullins, 1998).

Mullins (1998) further adds that in today’s world there are lots of uncertainties due to rapid technological changes. He classifies the uncertainty into three categories as 1) uncertainty associated with the inability of customers to articulate their needs, 2) the uncertainty of the possibilities of new technology and 3) as the uncertainty of top managers in make resource commitments.

As discussed above the major risk of a new product development introduction is that the company faces lots of uncertainties, but this is not the only risk for new product development. Akomode, Lees and Irgens (1999) state that one of the risks could be that managers are just overwhelmed by all that is involved in launching new product, and that they then fail to incorporate the needs of the customer. Ultimately this results in companies selling what they have made rather than making what they can sell (Akomode, 1999).

According to Keizer, Vos and Halman (2005), international competition and rapidly changing technology coupled with (rapidly) changing customer’s expectations have made the outcome of most new product launches unpredictable. They state that success rate of new product development is low (Keizer et al, 2005). They have also identified a number of different risks associated with new product development: 1) commercial viability risks, 2) competitor risks, 3) consumer acceptance and marketing risks, 4) public acceptance risks, 5) intellectual property risks, 6) manufacturing technology risks, 7) organization and project management risks, 8) product technology risks, 9) screening and appraisal risks, 10) supply chain and sourcing risks and lastly 11) trade customers risks. Therefore, according to them all of the above mentioned risks, if not met and dealt with, can lead to the failure of the new product (Keizer et al, 2005).

Table 3.3 below gives an overview of benefits and risks of new product development.
### 3.6.6 Framework for New Product Development

The table 3.4 below gives the overview or the framework of new product development which will be used later to plot the product of BPC in Chapter 6:

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Products</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A – New to the World</td>
</tr>
<tr>
<td>2</td>
<td>B – New to the Company</td>
</tr>
<tr>
<td>3</td>
<td>C – Addition to Existing Product Lines</td>
</tr>
<tr>
<td>4</td>
<td>D – Improvements in/Revisions to Existing Products</td>
</tr>
<tr>
<td>5</td>
<td>E – Repositioning</td>
</tr>
<tr>
<td>6</td>
<td>F – Cost Reductions</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A – The Differentiated Strategy</td>
</tr>
<tr>
<td>2</td>
<td>B – The Low Budget Conservative Strategy</td>
</tr>
<tr>
<td>3</td>
<td>C – The Technology Push Strategy</td>
</tr>
<tr>
<td>4</td>
<td>D – The Not-in-the Game Strategy</td>
</tr>
<tr>
<td>5</td>
<td>E – The High Budget Diverse Strategy</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A – Enhancing the Profitability of Other Products</td>
</tr>
<tr>
<td>2</td>
<td>B – Attracting New Customers</td>
</tr>
<tr>
<td>3</td>
<td>C – Improving the Loyalty of the Existing Customers</td>
</tr>
<tr>
<td>4</td>
<td>D – Improving the Image of the Company</td>
</tr>
<tr>
<td>5</td>
<td>E – Producing a Platform for Future New Products</td>
</tr>
<tr>
<td>6</td>
<td>F – Opening up Market Opportunity</td>
</tr>
<tr>
<td>7</td>
<td>G – Repositioning the Company</td>
</tr>
<tr>
<td><strong>Risks</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A – Uncertainty</td>
</tr>
<tr>
<td>2</td>
<td>B – Not being commercially viable</td>
</tr>
<tr>
<td>3</td>
<td>C – Not accepted by the customers as their needs are not answered</td>
</tr>
<tr>
<td>4</td>
<td>D – Intense Competition</td>
</tr>
<tr>
<td>5</td>
<td>E – Technological difficulties</td>
</tr>
<tr>
<td>6</td>
<td>F – Project Management Problems</td>
</tr>
<tr>
<td>7</td>
<td>G – Supply Chain and sourcing risks</td>
</tr>
</tbody>
</table>

Table 3.4: Framework for New Product Development
3.7 Diversification

We will now discuss product diversification, and its risks and benefits for the company.

3.7.1 Understanding Diversification

Diversification means offering new products to new markets. If there is a saturated market or a company's market is mature, then to grow a company must diversify into other areas. A company can also diversify to decrease its risks by doing more than one type of business (Ansoff, 1987).

The basic notion of diversification involves spreading a portfolio over many investments to avoid excessive exposure to a single source of risk. This helps to reduce the risk of failure inherent in investing in just one business.

According to Silverman (1993) there are four important decisions a utility company needs to make before deciding to diversify. The four questions the utilities have to consider are:

1. the direction of the diversification
2. the mode of diversification
3. the extent of diversification
4. organisational structure and systems to be used to support diversification efforts

He mentions that it is crucial to answer these questions to make the diversification effective (Silverman, 1993).

Some of the companies prefer just to concentrate on their core activities. This is because they want to do the business in which they feel they have the competitive advantage over competitors. It depends on how well a firm can manage its valuable, rare, and inimitable resources and those that lack substitutes (King, 2001). Therefore, the companies that have these resources will be successful even if they concentrate on their core competencies. Other company's will need to diversify to grow in size and financially. Thompson (1998) discusses what he calls the diversification or focus on core competencies dilemma. He mentions that the trend today is for companies to divest themselves of unrelated businesses whereas they will tend to acquire related businesses (Thompson, 1998).

3.7.2 Framework for Diversification

The following framework can be used to find out if a company stresses on diversification or not, if it is, then what are the areas they are looking into and this framework can thus be further segregated into the different types and forms of diversification. This framework can be used to help a company understand the path or pattern of diversification taken by companies in their areas of interests for diversification. This framework would be used to plot the different options of BPC to understand the types and forms of diversification they would be interested in Chapter 6.
### Table 3.5: Framework for Diversification

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Details</th>
</tr>
</thead>
</table>
| 1     | Stress on Diversification  
        A – Yes  
        B – No |
| 2     | Types of Diversification  
        A – Related  
        B – Unrelated |
| 3     | Form of Diversification  
        A – Horizontal  
        B – Vertical  
        C – Geographical |
| 4     | Benefits  
        A – Efficient allocation of resources  
        B – Utilization of excessive productive factors  
        C – Market Power  
        D – Increase in Product & Services in related field |
| 5     | Risks  
        A – Uncertainty  
        B – Transaction cost  
        C – Overstretching resources |
| 6     | Performance  
        A – Financial Growth  
        B – No of Employees  
        C – Net Assets |

### 3.7.3 Benefits of Diversification

Chakrabarti (2007) states that, “Diversification can be driven by a range of perceived benefits associated with greater market power and penetration, more efficient allocation of resources through internal capital markets, utilization of excess productive factors, more efficient utilization of existing resources in new settings, and/or reduced performance variability by virtue of a portfolio of imperfectly correlated set of businesses”. He further states that the benefits of diversification decline after expansion beyond an optimal or threshold level, meaning that there is an inverted U relationship between diversification and performance. This is because greater diversification increases managerial, structural and organisational complexity. It requires more integration and coordination cost, strains top management resources and limits organisational attention. Therefore according to Chakrabarti, Singh and Mahmood (2007), the performance of a company decreases if diversification is extended beyond control, this means that the diversification needs to be balanced against the benefits a company wants to derive by diversifying (Chakrabarti, 2007).

The other benefits of diversity as pointed to by Palich, Cardinal and Miller (2000) are market power advantages, internal market efficiencies, opportunity to use underutilised resources which are unutilised and unsold due to transaction costs (Palich, 2000).

Carow, Heron and Saxton (2004) believe that there is always the first mover advantage. Therefore, the company who reacts fast to the market need will try to acquire the resources which are rare, inimitable, valuable and non-substitutable (Carow, 2004). This means that the companies which react fast will diversify earlier and this will give them a competitive advantage.
The benefit(s) obtained from diversification is an increase in the value of a diversified company. This value increase may come from many sources. For example, benefits may arise from managerial economies of scale, more efficient resource allocation through internal capital markets, a diversified company’s ability to internalize market failures, or through the higher productivity of diversified companies (Li, 2006).

According to Lee and Jang (2007), although business diversification is not guaranteed to improve profit, it is believed to be one of the most important strategic management concepts for achieving long-term financial goals while minimizing business risk (Lee, 2007).

Hanser and Graves (2007) give reasons for power utilities to diversify. One, diversity can be useful if there is no capacity to use other risk management tools to limit exposure. Two, diversity may offer value from flexibility or an option ability that is not readily or typically quantified. Three, diversity is also seen as political, in that companies diversify even if the cost of diversification is high just to increase the customer satisfaction (Hanser, 2007).

### 3.7.4 Risks of Diversification

The big question is whether companies will be able to manage their diversified environments with their characteristic by uncertainties. It is also important to note that the diversified companies will be affected by multiple environments simultaneously while undergoing changes. The companies will also have to face the multiple challenges simultaneously due to diversification (Chakrabarti, 2007).

Thompson (1998) mentions that the downside of diversification is problems while integrating two (or even more) cultures in cases of geographical diversification. Growth in size happens, but it may not be accompanied by increased profitability and the synergy required to generate real growth. An acquisition will use up any spare cash, managerial expertise and managerial time, which are considered all scarce resources within a company (Thompson, 1998).

A number of corporate strategic investments require companies to commit resources to future growth under conditions of uncertainty (Reuer, in press). Rajan (2000) also reflected on the cost of diversification and inefficient investment. According to him there is a cost involved in diversification and the impact of misallocation of resources. He also mentions that an investment decision is the most important of corporate decisions and that it differs in resource allocation between diversified firms and focussed firms (Rajan, 2000). Li and Jin (2006) also support the idea that there is a cost for diversification. A company might fail sometimes due to misallocation of resources or because of diversifying into the wrong businesses (Li, 2006).

The other risk is that the companies will also have to deal with the changing environment and uncertainty. Therefore, the company has to adapt as per the situation to reap maximum benefits: but at the same time, it is very risky as the company cannot fully anticipate the future in uncertain environments. Delmas (2005) concludes that the deregulation of a market has a negative impact on the efficiency of a company in the short term. It is important to acknowledge the transitory costs of deregulation, as they may otherwise endanger the long-term success of deregulation. Policy-makers however may not anticipate these costs when they start a deregulation process (Delmas, 2005). Palich et al (2000) points out that the diversification necessarily does not mean there will be an increase in a company’s performance. Performance is positive up to a certain point but beyond this problems will appear. According to Palich et al (2000) the related diversifier outperforms the unrelated diversifier (Palich et al, 2000).

Singh, Nejadmalayeri and Mathur (2007) have a different understanding of diversification. They suggest that the performance of diversification has eroded due to a rise in capital market sophistication, reduced regulation, information transparency and globalisation.
However, they also mention that the cost of diversification has gone up due to the uncertainty in the business environment. In the same article that there is evidence that diversification adversely affects performance in terms of long-term stock performance. Singh et al (2007) analysed 889 Indian firms and concluded diversified firms perform significantly worse than focussed firms.

It is clear from the literature above that there are many benefits that can be gained from diversification: but simultaneously it is also not free of risks, see table 3.6 below.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Benefits</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Efficient allocation of resources</td>
<td>Uncertainty</td>
</tr>
<tr>
<td>2</td>
<td>Market Power</td>
<td>Transaction cost</td>
</tr>
<tr>
<td>3</td>
<td>Increase in Product &amp; Services in related field</td>
<td>Overstretching resources</td>
</tr>
<tr>
<td>4</td>
<td>Decrease in Risk</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Utilisation of excessive productive factors</td>
<td>Merging of different culture</td>
</tr>
<tr>
<td>6</td>
<td>Economies of scale</td>
<td>Chance of reducing performance</td>
</tr>
</tbody>
</table>

Table 3.6: Benefits and Risks of Diversification

### 3.7.5 Types of Diversification

There are basically two types of diversification. The companies can either diversify within its related business types. In this type of diversification the company uses existing resources, using them efficiently to optimise the performance.

The second type of diversification takes place when the company expands into an unrelated business. This means going into an entirely new business compared to the company’s existing business. This is done to try to reduce risks to the company and to add another source of diversified revenue (Kotelnikov, 2007).

According to Busija, Niell and Zeithaml (1997), differing views persist concerning the form of the relationships between the type of diversification and the mode of diversification. They believe that the type of diversification and mode of entry are related. They state that the company choosing a related strategy would favour internal development because acquisitions do not bring long term advantage: but if the company chooses an unrelated strategy then external development should be favoured. This is because the company needs to acquire the skills to compete with their competitors in the, diversified into, market (Busija, 1997).

Kochhar and Hitt (1998) believe diversification is costly to implement and that it often requires huge resources. They also think the type of diversification also depends on the financial decision made by management and financial resources available to a company. The distinction between related and unrelated diversification is closely tied to the characteristics of the resources controlled by the existing businesses of the company. If the company possesses specialised assets, especially tacit then it favours more related diversification then unrelated diversification (Kochhhar, 1998).

According to Kochhar and Hitt (1998), related diversification would allow firms to share their resources and activities across the business to increase company value. This strategy can benefit from economies of scope and of integration, and from an internal capital market: but in contrast, unrelated diversification must rely on financial synergies to increase the value to the company. They also state that related diversification can be a potential source of value increases at both the corporate and business levels and unrelated diversification only produces value at the corporate level, entry into a related business provides more opportunities to increase company value than entry into an unrelated business. Therefore, compared to unrelated diversification, diversification into related businesses can be viewed as
the addition of relatively more firm-specific assets (Kochhar, 1998). Stern and Henderson (2004) also concludes that related diversification outperforms unrelated diversification (Stern, 2004). Kochhar and Hitt (1998) conclude that equity financing is to be preferred for related diversification and debt financing is to be preferred for unrelated diversification (Kochhar, 1998).

Park (2003) has a different understanding of diversification. According to him instead of diversification affecting the performance of the company, it can be just the opposite. He believes that prior performance of the company determines whether management should go for related or unrelated diversification. If the company is structurally unattractive and unprofitable then management should go for unrelated diversification rather than related diversification in a form of defensive acquisition. This is because the companies try to diversify into areas which they find profitable without restricting themselves only to their core business (Park, 2003).

Silverman (1993) studied 33 diversified electric utilities and confirmed that utility pursuing investment in closely related businesses, rather than in other, unrelated or less related, fields have a dramatically greater chances of succeeding (Silverman, 1993). He mentions that there are various strategic advantages for closely related diversification. One, it helps utilities to prepare them for a more competitive, deregulated environment in the core utility business by allowing them to gain experience in competitive arenas. Two, it helps utilities to stay ahead of competitors in the field of electric-generating technologies as it gives a utility an opportunity to enter into alternative power production businesses. Finally, three, it helps utilities to achieve a more appropriate risk/return profile than that provided by the utility’s current financial business diversification (Silverman, 1993).

### 3.7.6 Forms of Diversification

There are three forms of diversification as per the area into which a company wants to diversify. We will discuss these below.

#### 3.7.6.1 Vertical Integration

**One: Vertical Integration** – i.e integrating business along a company’s value chain, both upstream and downstream, so that one efficiently feeds the other.

The greatest advantage of vertical integration comes from multistage economies. Economies of scope are said to exist if it is more efficient to produce several different products at a single diversified company than to split up the production of each product, or subset of products, between separate specialized companies. Economies of vertical integration in the electricity industry may arise from various sources as listed by Arocena (2006): (i) joint planning and investment decisions regarding plant size/location and transmission/distribution systems; (ii) reduction of transaction costs associated to better information about downstream demand and load; (iii) coordination of scheduled shutdowns for maintenance (iv) reduction of the overhead costs by sharing labour (Arocena, 2006).

#### 3.7.6.2 Horizontal Diversification

**Two: Horizontal Diversification** - moving into more than one industry; the new business usually somehow relates to the company’s existing one, although a few conglomerates pursue a strategy of unrelated diversification.

The advantage of horizontal diversification is a product of mix strategies. Arocena (2006), defines economies of diversification as the cost savings that may result from an increase in the number of simultaneously produced different products (Arocena, 2006).
3.7.6.3 Geographical Diversification

**Three: Geographical Diversification** - moving into a new geographical area to overcome limited growth opportunities in the local market and/or to gain global leadership positions.

Claessens, Djankov, Fan and Lang (2003) studied corporate diversification in 10,000 firms in Asia. They found that firms in more developed economies, such as Japan, are more successful in vertical integration, in terms of both higher short-term profitability and higher long-term market valuation. This is because, they believe, the costs of learning and the probabilities of capital misallocation are smaller in more developed economies as their markets are more efficient in facilitating learning and capital allocation than those in less developed economies. The companies in less developed economies have more opportunities for short-term profits as they are able to explore complementarities, this is because a low degree of learning required. However, the long-run result shows that firms in more developed economies are subjected to smaller capital misallocation problem when they pursue complementary diversification. This could be because markets in these economies are more effective in monitoring resource allocation (Claessens et al, 2003).

3.7.7 When Firms Diversify

So far we have discussed diversifying based on types, means and reasons for diversification: but how firms decide to diversify is not very clear, it is a critical strategic decision for any company because one wrong decision can completely bring down the company. Therefore, it is important for companies to ensure a balance between their existing resources and the resources they would require if they decide to diversify. The decision should not be made, if it means stretching the resources of a company as this will not be efficient and can lead to failure.

Ansoff (2007) had developed a matrix which can be used to help companies to decide to diversify.

**Figure 3.3: Ansoff 9-Box Grid**

<table>
<thead>
<tr>
<th>Figure</th>
<th>The 9-Box Grid</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>Partial Diversification</td>
</tr>
<tr>
<td>Markets Expanded</td>
<td>Market Expansion</td>
</tr>
<tr>
<td>Existing</td>
<td>Market Penetration</td>
</tr>
<tr>
<td></td>
<td>Existing Products &amp; Services</td>
</tr>
</tbody>
</table>


However, the above matrix is only useful to decide whether to enter a new or existing market, or to use existing or new products or services. There are other factors which also need to be considered like the resources required to diversify and time needed to diversify:
but still much of the decision making can be based on Ansoff’s Matrix (The Ansoff Matrix, 2007).

Rijamampianina, Abratt and February (2003) state that a company can leverage its competitive advantage using concentric diversification. They list the characteristics of successful concentric diversification as follows:

- existence of a strong core business
- diversification into adjacencies that are close to the core business and
- leveraging of the skills from the core business

It is important for the firm to go for concentric diversification if they want to leverage their performance (Rijamampianina et al, 2003).

### 3.8 Conclusion

There are various reasons for corporate growth and this chapter mentioned the importance of the corporate growth. Canals (2001) mentioned that the importance of the corporate growth are recruiting and retaining talent, need to attract capital, managing the risk of substitution and beyond the mature industry mindset. However, only the first two points are the reasons for growth for the BPC and the last two is not relevant.

There are four growth options according to Ansoff and they are market penetration, market development, new product development and diversification. The market penetration and market development was not considered for study in this research as this was not relevant for the BPC.

However, this chapter helped us to come up with the framework for new product development and diversification which can be used to plot the different options identified by the BPC in this framework. The framework for new product development would help us understand about the type of product, the product strategy, benefits and risks of new product development.

### Framework for New Product Development

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Products</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
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</tr>
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<td></td>
<td>B – New to the Company</td>
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<td></td>
<td>C – Addition to Existing Product Lines</td>
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<td></td>
<td>D – Improvements in/Revisions to Existing Products</td>
</tr>
<tr>
<td></td>
<td>E – Repositioning</td>
</tr>
<tr>
<td></td>
<td>F – Cost Reductions</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>A – The Differentiated Strategy</td>
</tr>
<tr>
<td></td>
<td>B – The Low Budget Conservative Strategy</td>
</tr>
<tr>
<td></td>
<td>C – The Technology Push Strategy</td>
</tr>
<tr>
<td></td>
<td>D – The Not-in-the Game Strategy</td>
</tr>
<tr>
<td></td>
<td>E – The High Budget Diverse Strategy</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>A – Enhancing the Profitability of Other Products</td>
</tr>
<tr>
<td></td>
<td>B – Attracting New Customers</td>
</tr>
<tr>
<td></td>
<td>C – Improving the Loyalty of the Existing Customers</td>
</tr>
<tr>
<td></td>
<td>D – Improving the Image of the Company</td>
</tr>
<tr>
<td></td>
<td>E – Producing a Platform for Future New Products</td>
</tr>
<tr>
<td></td>
<td>F – Opening up Market Opportunity</td>
</tr>
<tr>
<td></td>
<td>G – Repositioning the Company</td>
</tr>
</tbody>
</table>
CHAPTER 3: LITERATURE REVIEW

<table>
<thead>
<tr>
<th>4</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Uncertainty</td>
</tr>
<tr>
<td>B</td>
<td>Not being commercially viable</td>
</tr>
<tr>
<td>C</td>
<td>Non acceptance by the customers</td>
</tr>
<tr>
<td>D</td>
<td>Intense Competition</td>
</tr>
<tr>
<td>E</td>
<td>Technological difficulties</td>
</tr>
<tr>
<td>F</td>
<td>Project Management Problems</td>
</tr>
<tr>
<td>G</td>
<td>Supply Chain and sourcing risks</td>
</tr>
</tbody>
</table>

Framework for Diversification

Similarly the framework for diversification would help us know the type, form, benefits and risks of diversification. This means that this framework would be useful to explain about the options identified by the BPC.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Details</th>
</tr>
</thead>
</table>
| 1 | Stress on Diversification  
A – Yes  
B – No |
| 2 | Types of Diversification  
A – Related  
B – Unrelated |
| 3 | Form of Diversification  
A – Horizontal  
B – Vertical  
C – Geographical |
| 4 | Benefits  
A – Efficient allocation of resources  
B – Utilization of excessive productive factors  
C – Market Power  
D – Increase in Product & Services in related field |
| 5 | Risks  
A – Uncertainty  
B – Transaction cost  
C - Overstretching resources |
| 6 | Performance  
A – Financial Growth  
B – No of Employees  
C – Net Assets |

These options are discussed in Chapter 6 and the growth options are plotted in the framework to explain it further.
4 CHAPTER 4: Theory on Criteria and Evaluation

4.1 Goal of this Chapter

The main goal of this chapter is to present the findings on theory of criteria and evaluation. It also provides us with an introduction to multi criteria analysis, this method is used to select different growth options for BPC in Chapter 7.

4.2 Evaluating Business Strategy

Business strategies cannot be formulated or changed according to changing circumstances unless there are processes of evaluation. Evaluation forms an important part of business strategic thinking because it provides an opportunity for companies to adapt to their changing environment by making changes to their business strategy if they need to, and a strategy helps managers to guide a company (Rumelt, 1993).

Rumelt (1993) states an evaluation of the company’s business strategy will help its executives to determine if the company has been doing well or not. This becomes a check point to help companies to focus on, and even change, their business strategy if they feel there is something wrong in the process (Rumelt, 1993).

According to Rumelt (1993) the following questions are asked during the evaluation process.

- Are objectives of the business appropriate for carrying out the business?
- Are the major policies and plans appropriate for business?
- Do the results obtained confirm or refute to critical assumptions on which the strategy rests?

Drucker (1999) believes that the challenge or the questions to be asked for every business have three goals:

(1) to make the present business effective
(2) to identify and realize its potential
(3) to change it into a different business for a future that will inevitably be different

All three challenges have to be faced, simultaneously, in the present while evaluating the business strategy of a company.

4.2.1 The Challenge of Evaluation

Rumelt (1993) states that finding adequate answers to these questions is neither simple nor straightforward. It requires a whole lot of situation based knowledge and a higher level of insight into the problems.

The things which make evaluation of a strategy difficult for the analyst according to Rumelt (1993) are basically the following:

- each business strategy is unique. No strategy is wrong nor right, all may be right or wrong for the firms in question. Strategy evaluation must, then, stress on situational logic, meaning that there is no one best way, strategy must be tailored to meet each problem that is faced.
• Strategy formation is mainly based on the selection of goals and objectives for a company and done by its executives. Even the most experienced executives find it easier to set goals than to achieve and evaluate them.

• Formal systems of strategic review can create conflicting situations. Therefore, the evaluation process is not easy as it seems and one needs to be very careful when evaluating a business strategy as a poor evaluation can lead to wrong decisions being made.

4.2.2 The Principles of Strategy Evaluation

It is difficult to determine why a particular strategy works, it is also difficult to determine if a strategy is an appropriate strategy or not, and if it is going to work in the context and setting in which it is used.

One cannot test a strategy for critical flaws or errors but as per Rumelt (1993), a strategy should meet one of the following broad criteria:

• "Consistency: the strategy must not present mutually inconsistent goals and policies"

• Consonance: the strategy must represent an adaptive response to the external environment and to the critical changes occurring within it

• Advantage: the strategy must provide for the creation and/or maintenance of a competitive advantage in the selected area of activity

• Feasibility: the strategy must neither overtax available resources nor create unsolvable sub problems”.

Rumelt also mentions that a strategy which fails to meet one or more of the above criteria is suspect and it may fail to help managers perform the key functions necessary for the survival of a business (Rumelt, 1993).

4.3 Success and Failure Pattern of Strategic Change

In this section we discuss further the success and failure patterns of strategic change, reflecting on the fact that success and failure is (almost) inevitable during a change phase.

The success and failure of a company is part of business. Companies are expected to have a life span as do human beings. According to Davies (1993) the estimated life of western company is around 35-40 years.

Davies (1993) states that when the competition becomes intense and the companies start going global, then the life span of the company reduces further as there are more threats encountered by the company. Davies believes that the cause of failure of companies are many and complex; usually multiple system and structural failures are compounded by human error (Davies, 1993). See figure 4.1 below.
Following Davies (1993) there are different stages in the strategic planning process which we discuss below.

**Stage One: Performance, Vision and the Role of Strategy**

Davies (1993) mentions that a strategy as a simply a coherent pattern of actions to improve the organisation’s long term competitiveness. Strategy serves as a bridge that links, or provides a means of access from the firm’s current resources and capabilities to the future competitive reality expressed in its vision.

Davies (1993) explains that in recent years concepts like vision, purpose, mission and strategic intent have become increasingly popular with both managers and academics. According to Davies, “These terms are often, and confusingly, used interchangeably. Here vision refers to a clear, measurable and challenging description of a desired future goal which when achieved will give the organisation a significant advantage over its competitors. The vision of the company has to be recreated once the specific vision has been accomplished to keep the momentum” (Davies, 1993).

Missions is used in a much broader sense as it encompasses a statement of purpose, a specific performance related vision, a set of strategic guidelines about how and where the firm will compete, and a set of corporate values. Davies also states that purpose and vision expresses what the organisation intends to achieve, while the strategic guidelines and corporate values are used to lay out how to achieve these goals.

A company can often fail to achieve its vision and mission and the results of such failure can be many. Davies points to the three most important reasons for failure, one, company fails because vision & mission are not shared throughout the company; two, the terms vision & mission are too generic and not readily measurable; or three, because the vision and/or mission as laid out are not competitively relevant to the company and have no connection with the real needs of the company’s customers (Davies, 1993).
Stage Two: Evaluate Stage

Once a company has come up with a vision statement indicating where it would like to head, it is then important to come up with a strategy to achieve this, once set in place progress within the company needs to be monitored. The evaluate stage, in the strategic action process focuses on this task of assessing a company's current performance and its future prospects.

It became clear during Davies (1993) works that the manager's perception of a company's performance is distorted by a too narrow focus on financial indicators. Financial indicators only show the results of what a company was doing yesterday, i.e. its history and they provide little clue to the current strategic health of the business or its underlying competitiveness. Therefore, Davies says there is often a considerable delay before the erosion of a company's competitiveness is signalled by a serious decline in profits, thus considerable damage can be done before senior management is even aware that there is a problem.

Davies (1993) concludes that managers in the west stress mostly on financial indicators like return on investment and share price performance compared to their counterparts in Japan. The Japanese managers use the same financial indicators as mentioned above but they also include indicators to measure the current health of a company. This is done using rate of product innovation, and rate of improvement in operational efficiency.

Every company needs to ask the following questions when designing an evaluation system (Davies, 1993).

1. Customer satisfaction: whether we are generating and maintaining the loyalty of customers and distribution channels relative to competitors or not?
2. Product and service innovation: How effectively we are commercially exploiting new products, services and markets?
3. Operational improvement: How fast are we improving the operational efficiency and effectiveness of our core value creating processes in terms of quality, elapsed time and cost?
4. Employee morale and commitment: How good are we at attracting, developing and retaining staff?
5. Financial Health: Do we generate enough cash flow and returns necessary to achieve and sustain our business over our competitors and are we satisfying our shareholders?

In this research we only looked at the first two stages, the remaining stages fall beyond the scope of the work presented here.

4.4 Multi Criteria Decision Making

It is difficult to make decisions when there are more than two alternatives. Multi criteria decision making (MCDM) is a widely used technique which is used to help decision makers choose the most preferable options for their company based on certain specific criteria developed.

We will now discuss MCDM, why it is needed, explain how it is used and further we will discuss the different methods of MCDM that can be used by companies.
Multi criteria decision making is commonly used to evaluate and select, from available alternatives, actions etc. that are optimal for a company. MCDM helps to streamline the options by filtering the alternatives through a preset set of criteria. This kind of analysis is very useful and necessary when you have to choose the most appropriate options from many, possibly very similar options (Shee, 2008).

Stewart (1992) suggests that the aim of any MCDM technique is to provide help and guidance to the decision maker that is trying to discover his or her most desired solution to a problem: which solution will best achieve the decision maker’s long term goals (Stewart, 1992).

Therefore, it is important to carry out this kind of analysis beforehand so that the decision makers are able to make informed, hopefully correct decisions based on the outcomes of a MCDM analysis.

While the final decision will be made based on the performance of alternatives, a well-defined criterion set and preference structure are key influential factors in MCDM and these should be prepared in advance. The quality of the result(s) of a MCDM is highly dependent on how well the selection and evaluating criteria are set.

There are different processes involved during multi criteria analysis (MCA) as mentioned below.

**Listing the Options**: the first step is to list the most relevant options for solving the issues at hand. This is begun by exploring the most probable options with an open mind so as not to miss the good options.

**Selecting Criteria**: once you know the options, it is important to choose the options. Often decision makers make wrong decisions due to lack of proper information beforehand. As mentioned above the result of the MCA depends strongly on the criteria you select. Therefore, this is a very important stage in MCA and it has to be worked out carefully.

**Ranking the Options**: in this situation, it becomes necessary to rank the options based on the preferences of the experienced and qualified people in the relevant fields. Ranking is done by adding the values placed on an opinion of the respondents.

**Evaluating**: once the options are ranked in an order of preference, then becomes easier for the decision maker(s) to choose the option(s) ranking first or very high.

This kind of MCA can be used when a company has a problem with choosing one possible options from many other possibilities.

Henig (1996) states that the typical decision making process includes the following three steps carried out iteratively, and not necessarily in a linear or sequential manner:

1. **Component Identification**: Identify alternatives and criteria.
2. **Mappings**: Identify attributes and associate the alternatives with the attributes. Then associate the attributes with the criteria.
3. **Understand and Expand**: Finally the decision makers need to understand and confront the preferences. Then expand the set of alternatives to choose from (Henig, 1996).

The decision-making process finishes when the decision maker exhausts the time and resources that can be devoted to the decision-making process, or is convinced that the
benefits of continuing further, in terms of defining the mappings, are negligible (Henig, 1996).

A MCDM approach can vary from very simple, requiring very little information, to using difficult analysis methods based on mathematical programming techniques, which will require extensive information to be available on each of the options and on the preferences for proper decision making.

Kain and Soderberg (2008) see decision making as an iterative and participative processes that can be further divided into the following four different modes or steps:

- relevant problems are identified and selected to understand the situation at hand
- different options are identified and, out of these, potential strategies for addressing the problems are framed
- to evaluate potential strategies by selecting criteria for assessment which is used to compare different strategies
- then finally while choosing between the potential strategies, the process enters into decision making and building of commitment among stakeholders.

Kain and Soderberg (2008) discuss the different MCDA methods and explain, with the help of case studies, the applicability of these methods (Kain, 2008).

### 4.4.1 MCDM Methods

In this section we will discuss various MCDM. However, only the method which was used for this research is explained in detail here. See Appendix 6 if you need further clarification of the MCDM.

Experiences have shown that the outcomes of the MCDM methods are strongly influenced by the methods used to make the value judgements. This is mainly because ill defined and incoherent preferences lead to biased judgements based on methods used by the decision makers and on their ideas (Greening, 2004).

There are different methods for carrying out MCDM but for this research the weighting or scaling methods was chosen as this is the most commonly used method. Moreover, it is very convenient to apply and suitable for this kind of research (Greening, 2004).

#### 4.4.1.1 Weighting or scaling Methods

Here as the name suggests, the weights are assigned to the attributes of the different alternatives. This weight helps us to determine the preference of the decision makers.

Other interpretations of the meaning of the weights may be made depending upon how the preferences of the decision maker are derived. Greening mentions that if this is not carefully designed and conducted then it could affect the selection process due to biases, leading to altering the ranking of the alternatives. Using the weighted groups of attributes, a composite score is developed for each alternative. The alternative with the highest rank or score is then considered to be preferred over all other available choices (Keeney and Raiffa, 1976).

Brugha (2004) states that there are basically three different ways to do the analysis using this method. They are the simple multiattribute rating technique (SMART), the multiattribute utility theory (MAUT) and the analytical hierarchy process (AHP) (Brugha, 2004).
MAUT is used to score alternatives using intervals such as that between 0 and 10 with respect to some criterion. MAUT uses importance weights to synthesise multiple attributes. Winterfeldt Von and Edwards (1986) introduced SMART as a simple version of MAUT (Winterfeldt, 1986). It commonly uses swing weights used to identify how much the swing between best and worst on one attribute contributes to the overall value compared with that of another; frequently either the most or the least important attribute. The AHP method compares pairs of alternatives with respect to criteria (Brugha, 2004).

Brugha (2004) make a clear statement that SMART should not be used with only two or three alternatives because the practice of giving a zero to worst and 100 to best alternatives can be distorting if there are huge differences in the relative importance of criteria. The AHP’s requirement of pair wise comparisons between alternatives only becomes a major problem with large numbers. SMART requires very little effort to use, MAUT requires more because decision makers (DMs) have to make a judgement about a utility score between zero and 100 for each alternative and criterion combination. The AHP tends to require excessive effort, particularly when dealing with many alternatives. This should not be a major problem in the choosing phase where there should be only two or three alternatives remaining. Otherwise, the amount of effort required for carrying out the methods tends to be appropriate; although AHP’s pairwise comparisons amongst multiple criteria are somewhat excessive even if there are only three alternatives (Brugha, 2004; Loken, 2007).

Weights can be determined in different ways. The easiest and simplest way can be to ask experts in the particular field to assign weights as they are in a position to produce valued weights due to their expertise and experience. Simos’ procedure can also be used to calculate the weights but this is a complex process which requires more time to be spent on the weight process.

### 4.4.2 Problems with MCDM

Every method or technique has its drawbacks and MCDM is no exception. Therefore, in this section we will reflect on the problems associated with MCDM.

Matsatsinis and Samaras (2001) state that group decision making is the most important and frequently encountered processes within companies and organisations, both in the private and public sectors. Most of the decision making centres on complex problems involving many decision makers all of whom will have their own point of view.

Matsatsinis et al also, state that the understanding, analysis and support of the process becomes intensely difficult in an ill-structured, dynamic environment, as is common in decision making, and the presence of multiple decision makers, having his or her own viewpoint on the way the problem should be handled and the decision to be made. Matsatsinis et al (2001) also further point to four properties of group decision problems which render these problems hard to attack: (1) they are social problems not mathematical or scientific problems; (2) it is difficult to satisfy all constraints and requirements when dealing with the problem; (3) they are more difficult to model than single no complex problems; and (4) there are few methodologies as yet that can be used to verify fairness, a concept that is closely related to the aggregation of preferences (Matsatsinis , 2001).

Henig (1996), states that everyone is interested in making good and correct decisions which have good outcomes, and he sees MCDM as a useful tool that can be used to help decision makers to make the right decisions.

In Henig’s (1996) article he states that objective investigation of the impact of the alternatives is studied, whereas the evaluation is subjective. This means that even though an
investigation is done properly, the selection will be done based on the preference(s) of the decision maker(s), reflected as criteria for evaluation (Henig, 1996).

There has been tremendous developments in multicriteria decision-making methodology and, even though the popularity of computerized MCDM methods has increased MCDM only provides management scientists with a set of tools that can be used for solving problems using multiple criteria for individual decision makers. However, most decision situations need require the decision making to be tackled collectively by a group of people rather than an individual. Therefore, the effectiveness of MCDM methods when used by multiple decision makers acting independently within a group remains unproven (Matsatsinis, 2001).

### 4.4.3 Reasons for using MCDM

The above section discussed about the problems associated with using multi criteria analysis but still it was been chosen for this research as this is one of the simple and easy to use method.

Even though it has problems but it is one of the widely used methods and to overcome the problems mentioned above the extensive list of criteria (internal and external) have been developed so that all the criteria were covered and the error of choosing wrong option by not including the criteria was minimized. Further to make it less biased the criteria was developed by working with the consultant of the BPC and finalizing by holding discussions with the other senior staffs of the BPC. The one of the problems of weighting or scaling methods is that the outcome depends on the understanding of the respondent. So to overcome that, the whole top management was asked to assign weight and score. Then the average of the total value was used to rank the options.

### 4.4.4 Testing Criteria

One of the problems with MCDM is that any decision that is made depends on how well the criteria are framed, coupled to this a decision may be biased if the criteria are not very good. So, to overcome the criteria need first to be tested to determine if the final decision is as accurate as possible. We will now briefly discuss how the chosen criteria can be tested.

The problems of not choosing the right criteria can be minimized by making a mutually exclusive and collectively exhaustive (MECE) set of criteria. Such a set of MECE will help the decision makers tackle the problem(s) from all possible aspects and should therefore help prevent a decision being made on weak grounds.

Moreover, the criteria should be framed accordingly to meet the SMART standard. SMART is the acronym for (Wikipedia, 2008):

**Specific:** the criterion should state exactly what has to be achieved.

**Measurable** - an objective should be achievable and that achievement measurable so that it is possible to determine whether (or how far) the objective has been achieved.

**Achievable** - the objective should be realistic given the circumstances in which it is set and the resources available to the business.

**Relevant** - objectives should be relevant to the people responsible for achieving them.

**Time bound** - objectives should be set with a time-frame in mind. These deadlines also need to be realistic.
4.5 The List of Factors

Above we discussed about the theory on multi criteria analysis and the methods used for carrying out MCA. Now in this section the list of factors to be used for choosing the growth options would be discussed.

While evaluating the company it is necessary to consider both the internal as well as the external factors as they have influence on the decision making. Therefore, the internal and external factors are considered in this research to help top management of the BPC to choose the growth options. The one of the problems with the MCA is the risk of coming at the wrong conclusion due to the criteria selected. It means that the list of criteria developed should be mutually exclusive and collectively exhaustive and should not leave any criteria. So, in order to minimize the risk of not including all the criteria both the internal as well as the external factors were addressed in this research.

The internal factors were chosen for addressing the internal competency of the BPC for carrying out the new business. Therefore the factors which are internal to the BPC were chosen and which were within the control of the BPC.

The DEPEST model was selected for evaluating the external factors as it is widely used for analysing external factors. This is similar to other model called PESTLE model and it addresses the same issue but it is named differently. So, it is just matter of choice and for this research DEPEST model was selected (Wikipedia, 2008).

This helped to reduce the error of not including all the factors for choosing the right option for the BPC. This was done in order to overcome the problems of MCDM of not making the list of criteria mutually exclusive and collectively exhaustive.

The following was the list of internal and external factors considered in this research:

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>External Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial/Economical</td>
<td>Demographic</td>
</tr>
<tr>
<td>Organizational</td>
<td>Economical</td>
</tr>
<tr>
<td>Technological</td>
<td>Political</td>
</tr>
<tr>
<td>Social/Legal</td>
<td>Ecological</td>
</tr>
<tr>
<td>Ecological</td>
<td>Social</td>
</tr>
</tbody>
</table>

Table 4.1: List of Internal and External Factors

The above table listed the internal and external factors used for choosing the growth options. But once the growth options are known then the areas where BPC would like to diverge is also found out. Since, it is not possible for them to start investing on those options simultaneously. So, the options need to be ranked according to their importance.

In order to do this the different criteria was selected. This criteria would help rank the options based on what things need to be carried out if they venture into that businesses and see which options is most preferable based on this criteria.

The table below shows the list of criteria used for evaluating the options:
<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strategy</td>
</tr>
<tr>
<td>2</td>
<td>Fulfillment Processes</td>
</tr>
<tr>
<td>3</td>
<td>Information Processes</td>
</tr>
<tr>
<td>4</td>
<td>Business Development Activities</td>
</tr>
</tbody>
</table>

Table 4.2: Criteria for Selecting Options

The criteria above were selected as per the discussion with the supervisor. It was not possible to rank the options based on thorough technical and financial analysis due to time limitations. So, it was agreed to at least rank the options based on above criteria.

### 4.6 Conclusion

Rumelt (1993) mentioned that the evaluation of the business strategy helps the executives to determine if the company had been doing well or not. This becomes a check point to help companies to focus and even change their business strategy if they feel there is something wrong in the process (Rumelt, 1993).

Kain and Soderberg (2008) see decision making as an iterative and participative processes that can be further divided into the following four different modes or steps:

- relevant problems are identified and selected to understand the situation at hand
- different options are identified and, out of these, potential strategies for addressing the problems are framed
- to evaluate potential strategies by selecting criteria for assessment which is used to compare different strategies
- then finally while choosing between the potential strategies, the process enters into decision making and building of commitment among stakeholders.

MCDM is commonly used to evaluate and select the alternatives available. There are different methods for carrying out the MCDM but for this research the weighting or scaling method was chosen as it is simple and widely used method. There are many problems associated with MCDM like it is difficult to carry out this as everybody in the organisation has their own viewpoint. Therefore, in order to overcome this issues the list of criteria (internal and external) was developed to make an extensive list of criteria covering all the factors influencing the decision making. The criteria was further tested if it meets the SMART principle or not to make it more specific and measurable.

The criteria were developed by working with the consultants and was finalised by discussing with other senior staffs of the BPC. Then top management was approached for asking them to assign the weight and score against each option. Afterwards it was ranked accordingly.

This MCDM is used to select the most preferable options based on the criteria developed for the BPC in Chapter 7 and Chapter 8 according to the list of criteria developed for the BPC.
CHAPTER 5: Field Work Method

5.1 Goal of this Chapter

The main goal of this chapter is to describe our field work methodology. We will include details about how the field work was planned to make this research successful, and then discuss the work done in the field. The chapter is divided into three sections. Section 1 deals with field work methodology. Section 2 consists of a short summary of the findings from the interviews held at the Bhutan Power Corporation (BPC). In section 3 we discuss the answers in relation to the results of the field work.

5.2 Methodology

The field work was carried out at the BPC, which is the only power utility company in Bhutan. The field work, in this case data collection, was planned for two months as this was felt to be enough time for data collection including the interviews with the top management and the senior staff of the BPC.

It was necessary to work at the company because most of the data required are not available online. Moreover, input was needed from the top management at the BPC and it was felt ‘face to face’ interviews would be best for this aspect of the research. The data was collected using interviews and from reports written within the BPC, and externally.

There were basically four things which had to be carried out in the field. One, to interview the people from the BPC, to determine current situation and the problems faced by the BPC. Two, to come up with criteria for an analysis of the company by working closely with the BPC to help it to choose its preferred growth options. Three, to identify the business area where the BPC might expand in the future. Four, to collect data on the BPC’s performance from annual reports, internal financial data, etc.

The top management was the target group for the interviews because they are the policy makers and they are in (should be) in the best position to make decisions and express the needs of the BPC clearly. Moreover by virtue of being top management, they have more information regarding the future plans of the BPC. However, the senior managers were equally important and could not be neglected, as will have practical experience of what could be best for the BPC due to their vast experience in their field of work.

Twelve members of higher and senior management were chosen from the BPC to be interviewed. The reason for choosing so few people is that the BPC has 7 top management people and one was out of station, moreover there were few senior staff working in the office where I was stationed. The other reason was time constraints as it was difficult to meet people. Then 3 external experts were identified for interview to understand their views regarding the growth of the BPC and to find out more about the performance. When I reached their office I could only interview 1 external expert from Druk Holding & Investment (DHI) because one was out of station and second one was attending seminar. He was interviewed to find out whether the decisions made by the BPC to venture into new businesses are supported by government or not. This interview took about 30 – 45 minutes.

The list of criteria was framed in close consultation with the consultant working at the BPC. It was decided to work with the consultant because he knew the overall picture and status of the BPC. He was the right person to consult as he is well versed in the business of the BPC and knows where the BPC can expand in future. The criteria were only discussed with other senior staff and not with top management to finalize the list because it was difficult for top management and senior staff to find time to spend on a discussion. A wider discussion would
have taken too long for me and would not have been completed within the two field work months. A further reason for this was that it would have been difficult to work with top management to come up with the criteria list because they were very busy. While framing the criteria both internal and external factors were considered as it is not possible to make correct decision without such a broad perspective, both the internal and external factors should be considered during decision making as they will influence any final outcome. Once all the interview data was collected four different options for the BPC was identified. Then the criteria for these options were developed to use to determine if it was in position to fulfill the options or not.

Once the work of framing the list was completed, it was circulated to the BPC’s top management only for them to weigh and score the list. Top management was asked first to give the weighting to the different criteria and then they were asked to score the different growth options. Based on their ratings the different growth options were ranked to determine the best option for the BPC, even the different businesses identified were ranked as per the scores given by the BPC’s top management to determine the best possible option for the BPC’s future growth.

Finally, part 4, data was collected from various departments mostly from official documents published by the BPC like its annual reports, PBIS document and corporate strategic plan.

The section below summarizes the interview but however please note that the interview data is made anonymous as per the request made by the interviewees.

5.3 Summary of Interview Questionnaires

A short summary of interview questionnaire is given below following the sequence of questions used in the questionnaire.

5.3.1 General

1. Can you describe the present scenario at the BPC?

BPC has made a profit for a second year in 2007 and is out of red now. One of the general managers (GM) also pointed out that the BPC has been making a profit for the last two years and that the BPC has started developing in-house capabilities. Until now it was carrying out turnkey projects using external consultants. Some GM’s also mentioned that the BPC at the moment is carrying out the RE projects and it is investing in new projects. As one of the GM’s pointed out the BPC has become the largest corporation in Bhutan at present.

2. How is company performing at the moment?

The GM’s mentioned that the BPC is performing well both financially and technically. One of the GM’s said that the BPC has started paying 30% corporate income tax to the Royal Government of Bhutan (RGoB) starting in 2007. One of the GM’s further stressed that service quality has improved when looking at the PBIS report.

One GM mentioned that overall the company is performing well according to the reports and presentations made to management, but he mentions that the procurement system has to be streamlined. Some GM’s remarked that the BPC was the first organization to introduce performance management system (PMS) and PBIS in Bhutan in 2006. This has also motivated the employees to work harder. The finance department mentioned that though the company started to make a profit in 2006 the cash flow is not adequate, keeping in mind the huge investment the BPC must make to complete its part in the 10th (2007-2012) five year plan. They further mentioned that tariff charged for electricity is just sufficient to run the system and it will take longer to recover the cost of investment.
3. Has the BPC been able to meet the targets set for it?

The one of the department heads mentioned that all the RE works are going well as per target and the BPC is confident it will complete RE on time. He further commented that the targets for all departments, sections and units were set as per the PBIS document and bonuses have already been paid according to how far they were able to meet the target. However, he said that some targets were not met because a few industries did not start their operation as anticipated. Further the wheeling charge from Tala hydropower had not increase as forecast as the plant was not operating on full load due to insufficient water flow.

Some pointed out that the BPC could not meet the target due to a shortage of technical staff. Even the PSD pointed out that earlier it was difficult to meet the target as they had to wait for a requisition from the unit. Now that the procurement manual and infrastructure is in place the PSD will be in better position to complete the work on time. It was pointed out that the BPC has not been able to achieve the physical and financial progress targets in terms of capital budget.

One of the GM’s said that after the introduction of PMS and PBIS, the BPC is now able to meet its target because employees have started working harder as they have a bonus based on their performance. However, a few targets were not met due to unforeseen problems like delays in the delivery of materials, inexperienced contractors and external factors.

4. What are the major problems faced by the BPC at present?

One GM said the major problem at the moment is that there are still four dzongkhags which are un-electrified and there are huge tasks to complete all the electrification works. He further said that Diesel Generator (DG) sets are presently used in these dzongkhags and it is very expensive.

When it comes to procurement there are no major problems at the moment but the same GM said although in the past there were problems with procurement and inventory management. PSD further commented that yes they had problem in the past, as they did not have a fully fledged head. Then said that the PSD had to depend on a lot of external factors as it has to deal with lots of parties outside the company, and this is taking more time than was first estimated.

Some GM mentioned that the BPC has a problem implementing works and that there are also problems from the contractor's side due to their inexperience. One GM further commented that the present government policy encourages the use of local contractors in all the construction activities in and around the country. Therefore, a major problem faced by the BPC is finding experienced contractors who can deliver good quality work.

One of the GM stated that the major problem at the moment for the BPC is a shortage of manpower skills. He says that there are so many capital works taken up by the BPC during the 10th five year plan (2007 – 2012), that the BPC lacks the manpower to support all the activities. One of the senior staff mentioned that there are still things that can be improved on the distribution side.

The senior managers also mentioned that the major problems faced by the BPC at present are 1) lack of human resource planning, resource allocation and utilization; 2) a lack of organizational planning and succession planning; 3) a lack of skills in the highly technical jobs; 4) work is done in a more ad-hoc way than there is planned; 5) more of manager culture than an engineering culture; and 6) there is too much dependence on external experts.
5. What are the indicators used for measuring the performance of the company?

The indicators used for measuring the performance of the company are profit, reliability, losses, SAIFI and SAIDI. However, when measuring the performance of work, budgetary compliance, material reconciliation and resolving audit issues are also included.

The financial indicators used at the BPC are ROA, ROE, Capital Investment Ratio and Debt Equity Ratio.

6. In your view is it necessary for the BPC to grow? Why?

Most of the staff interviewed believed that it is necessary for the BPC to grow because it is important as a company to explore and invest in different areas to increase revenue. Some mentioned that, yes, it is necessary to grow to optimize the use of the existing resources.

One GM pointed out that it is important for the BPC to grow as this will increase mobility for staff working in the organization if they are interested in working with different business units. One of the GM mentioned that in future electricity transmission and distribution will be bifurcated. Therefore, he says that then it is necessary for the BPC to look into other business areas to increase revenue.

One of the senior staff mentioned that the BPC should grow as we have now more qualified people and we need to make use of these resources. Some of them even mentioned that yes, it is necessary for the BPC to grow as we need to move with the times, as there are so many changes going on everywhere. Growth is necessary as it can create opportunities in growth and expansion. This will also instill a sense of pride in the staff as they are working in an ever evolving organization.

7. What is government’s policy regarding growth?

Everybody mentioned that the government would support growth as they are now encouraging competition and the entry of new players into the market is not restricted. The BPC has already been issued with an ICT license by the Bhutan InfoComm and Media Authority (BICMA).

One GM pointed out that whatever the BPC is planning, it is based on the directive given by the government. He mentioned that the BPC will be issued a license for generation capacities up to 25 MW for hydropower plants along side its existing license for the transmission, distribution of electricity and ICT connections.

5.3.2 Finding Options

1. If the BPC needs to grow then what might the growth options be?

One GM remarked that the BPC at the moment is considering diversification as a growth option but he says that the BPC should also concentrate on market penetration and product development to meet the RGoB’s vision 2020 of electrifying every household in Bhutan. Another GM also pointed out that service needs to be developed but believed that the BPC can go for diversification.

Some staff pointed out that the BPC could invest in areas where private firms would not be able to invest due to limited resources. Therefore, the BPC could diversify into other businesses where it could monopolize the market. One GM pointed out that the BPC is mainly looking to diversify into other businesses to create synergy for its existing business. However, he further stressed that the BPC should not neglect other growth options.
The one of the senior staff mentioned that the formula to calculate profit is Revenue – Cost = Profit. Therefore there are basically two options to increase profit. One, to improve business processes to decrease costs and, two, to increase revenue by diversifying into other areas. A few staff also believed that a good growth options would be market penetration, product development and diversification but one of them mentioned that diversification is the best option for the BPC at the moment.

2. What would be the major constraints?

The GM pointed out that if the BPC needs to expand into new businesses then the BPC does not have enough man power resources. He believes that the BPC needs to open up a new business unit for looking after the new businesses. He also mentioned that staff are sent abroad for studies in different fields and once they are back then they would be the right people to work in the new business units.

Some pointed out that the major constraint would be a lack of the skilled man power required for handling new businesses, another pointed out that the infrastructure needs to be developed for new businesses and people in the relevant field needs to be trained.

As pointed out above, one of the major constraints on the BPC is a lack of trained manpower but some GM believed that another strong constraint would be arranging loans to obtain the huge amount of capital required for investment.

One of them mentioned that the BPC’s present staff are only trained to carryout its current works. Therefore, if the BPC enters into new business it will have to build up the human resources required for this and train them. Initially when new projects are carried out the BPC will have to work with developing partners for a few years to build in-house expertise in the field.

3. Will government policy support the growth option?

The GM’s believed that the RGoB will definitely support the growth option as pointed out in an answer to an earlier question.

4. Is this option going to solve the problems mentioned above?

Some pointed out that the growth option would definitely solve the problems of the BPC in the sense that the BPC would increase its revenue and would be able to support and fund all the activities required of it without relying on external funding.

The GM’s pointed out that this growth would both increase revenue and create mobility for staff as they could shift between business units within the company. They believed that such growth would provide an opportunity for the BPC to utilize its resources to the optimum.

5. What are the areas that the BPC is looking into expand its business?

According to one GM, the BPC is looking into ICT and Telecom to start with. He also mentioned that the BPC is also looking at investing in the construction of hydropower stations. He says at present the BPC is only considering building 5 MW plants but later this might go up to 25 MW.

One of the GM’s explained that the BPC could invest in the construction of convention centers, providing mega advertisement services and in setting up a TV station. One pointed out that the BPC could be the ICT infrastructure provider for Bhutan. The BPC can become an Internet service provider and also become a multi service operator for TV. One staff believed that the BPC could also start manufacturing electrical accessories as there is huge
requirement for MS materials within BPC and in Bhutan. The BPC could also expand into consultancy services and start a Power Training Institute to train workers within Bhutan.

6. Will the BPC be able to support the growth options?

One of the GM’s believed that the BPC can support such growth only if it expands into areas where it can use existing infrastructure, at least in the beginning. Then the BPC could slowly make investments plans to enter into new businesses.

Everybody believed that the BPC is now in the position to support the growth option. One of the GM believed that even if the BPC is not able to support the growth option the financial institutions are approaching the BPC to finance new businesses. This is because they know that energy sector is growing in Bhutan and it is a very profitable sector in which to invest.

The finance department pointed out that the BPC cannot fund all its projects at the moment. However, also said that the BPC could use external funding from the Japan Bank for International Cooperation (JBIC) and the Asian Development Bank (ADB) if required.

5.4 Summary of Interview Questionnaires (Rural Electrification)

1. What are the targets for the rural electrification projects?

The target for 10th five year plan (2007-12) is to electrify 25000 households in Bhutan; 10 dzongkhags funded by the JBIC and 8 dzongkhags funded by ADB.

2. Are you able to meet the targets?

This depends on the financial support available as there is no problem when it comes to implementation. So, far we are completing RE works ahead of schedule and we will electrify the whole of Bhutan before we reach the 2020 vision.

3. What are the major problems you have been facing?

In the past we faced major problems due to delays in material delivery, which hampered the completion of work. The contractors were inexperienced and they had a problem with many of the potential beneficiaries of electrification as they would not let the BPC construct lines through their fields.

The other problem was obtaining clearance from other organizations like Department of Forest and National Environment Commission, which used to be a long procedure, where too much time was spent following up clearance permissions. The major problem faced today is the transportation of poles and transformers to a site as it can take weeks to reach a site.

4. How do you overcome them?

The contractors are now more experienced and they are able to handle the work efficiently. A no objection certificate is first obtained from the public, dzongkhag and forest authorities and then forwarded to the NEC for final clearance.

The BPC is going for single phase transformers instead of 3-phase transformers to reduce the weight of the transformer, we also use single phase HT line wherever necessary.

5. Do you recognize the need for the BPC to grow in future?

Yes the BPC needs to grow as the RE project is planned to be completed by 2017 and thereafter the staff will need to be absorbed into other departments or into new business units. Moreover, once the RE project is completed the BPC will not have to invest further in
or take out loans for RE works, which means the BPC will have enough cash to invest in other business.

5.5 Summary of Interview Questionnaires (External Expert)

1. Can the BPC make investment into new businesses if they are interested?
   
   Yes they can go ahead with the investment but they should support growth. All investment needs to be approved by the board.

2. Are there any policy guidelines for making such investments?
   
   At the moment no policy guidelines have been framed.

3. Will the DHI allow the BPC to venture into the telecom business?
   
   The BPC getting into telecom would create competition which is very good.

4. What are the requirements of the DHI if companies want to invest?
   
   The companies will have to carry out detailed feasibility studies before presenting them to the DHI for approval.

5. How can the DHI help companies find the financial resources required for investment?
   
   The DHI can help mobilize funds within a company to support the investment.

6. How is the DHI going to evaluate the performance of the companies?
   
   Every year companies have to sign a compact agreement which will include key performance indicators, based on these, the companies will be evaluated to determine their progress.

7. What are the indicators used to measure company performance?
   
   Physical targets, financial performance, quality service, operational efficiency and other company performance indicators.

8. How is the BPC performing according to you?
   
   The BPC is much ahead compared with other corporations.

5.6 Arriving at the List of Criteria

In this section we will discuss the answers to the research questions based on the data obtained during the field work period. In section 4.5 in Chapter 4 we discussed about the internal and external factors used in this research for choosing the growth options. Those factors were already identified during the literature review and before carrying out the field work.

The answer to most of the research questions was dependent on the list of criteria and in this section the details on how I arrive at those lists would be discussed. The selection of the options discussed in Chapter 8 is based on this list of criteria developed.

As mentioned the internal and external factors were identified to make the comprehensive list of criteria in order to make the selection as accurate as possible. Then during the field work...
work the list of criteria under each factor was listed out by working closely with the consultant because it was difficult to work with the top management as it was not possible to get time. So, instead of waiting, it was decided to work with the consultant and then when the list was ready other senior staff of the BPC was approached to discuss about the criteria and to find out if it requires any changes on it or not. So, the list was finalized by discussing with some of the senior staff and then the list was circulated to top management asking them to assign the weight and score against each criterion.

The criteria are discussed in detail in Chapter 7.

5.7 Answering Research Questions

This section will mention which research questions were answered by field work.

The main research question central to this research is:

1. How should BPC develop its business in the future to improve its performance?

The BPC will have to diversify into Services/Consultancy, ICT/Telecom, Hydropower and Manufacturing of Electrical Accessories in order to improve their performance. This would help them to increase their revenue using its existing resources. This is further explained in Chapter 9 of this report.

The following sub-research questions are also dealt with in this report.

1. What are the strategic growth challenges for the BPC?

The main challenges faced by the BPC are that still 4 dzongkhags are un-electrified and need to invest huge amount of capital to complete all RE works. The BPC is running as a public utility with social mandates but at the same time needs to be commercially viable. Therefore, the main challenge ahead is how to balance this in order to be self sustainable. The major challenges and constraints affecting the decision are lack of capital and expertise in new businesses. This is discussed in detail in Chapter 2 of this report.

2. According to theory what are the different strategic growth options?

According to Ansoff’s matrix there are four strategic growth options for companies to choose from. They are market penetration, market development, new product development and diversification, see Chapter 3 of this report.

3. According to theory, what is multi criteria decision analysis and how can it be used?

The journals on multi criteria analysis were reviewed to study the different kinds of multi criteria analysis method. The MCDA is a method used to select the most preferable options by ranking them by using preset criteria. There are different methods but for this research weighting or scaling method has been used, see Chapter 4 of this report.

4. What are the possible strategic growth options for the BPC to overcome existing constraints?

This question designed to help us determine the growth options for the BPC was answered using an interview questionnaire for top management and senior managers. This was done because it was necessary to determine views of all the BPC’s employees regarding the growth option. As per the feedback received during the interview the BPC is considering only new product development and diversification as the growth options, see Chapter 6 of this report.
5. What are the relevant criteria for the BPC managers when selecting strategic growth options?

The various criteria were developed by working with the consultant for the BPC and then finalised by discussing with the senior staff. The reason for working with the consultant for developing criteria was because he knew the overall picture and status of the BPC, and he was the right person to consult as he was well versed in the business of the BPC. Moreover, it was difficult to meet the top management and work with them to develop the list, see Chapter 7 for a discussion of the list of criteria.

6. Which strategic option would be most suitable for the BPC to meet its goals?

The different options mentioned above were filtered using the criteria developed for selection. The BPC’s top management was asked to assign weights and scores for each option against each criteria, and the options were ranked according to the scores to select the best option. According to this analysis diversification was found to be the most suitable option for the BPC. Then the four options identified under diversification were also ranked to see the most preferable option. The result was that the Services/Consultancy ranked first and this was the most preferred option for the BPC, see Chapter 8 of this report.

The main reason for carrying field work was to obtain data that could be used to answer the above mentioned research questions. It would have been difficult to answer these questions without collecting information using interviews and the sources available at the BPC.

5.8 Conclusion

The BPC is the only power utility in the Kingdom and is responsible for distributing electricity throughout the Kingdom. The main challenges for the BPC at the moment are that they have social mandates to fulfil but at the same time they need to be commercially viable. The low tariff set by the Bhutan Electricity Authority (BEA) is not enough to recover costs of the BPC.

Therefore, the BPC has major constraints due to lack of capital. To increase its revenue the BPC wants to expand into other businesses which can help them to use its existing resources optimally. As per analysis carried out diversification ranked first as top management want the BPC to diversify its businesses, but they want to diversify only into the related businesses.

The four businesses were identified as per the interview and it was also ranked according to the list of criteria. The four options were ICT/Telecom, Services/Consultancy, Hydropower and Manufacturing of Electrical Accessories. The BPC’s top management assigned the weight and score for this and the analysis were carried out. The Services/Consultancy ranked first which means that this is the most preferred option for the BPC and would like to diversify into this business in future.
CHAPTER 6: Options for BPC

6.1 Goal of this Chapter

In this chapter we discuss the various growth options for the BPC. According to Ansoff’s matrix there are four growth options namely; market penetration, market development, new product development and finally the diversification, however, the market penetration and market development was not considered in this study (see below for reasons). Therefore, the main focus of the chapter is the last two options of Ansoff’s matrix, product development and diversification. The chapter continues with a discussion of the various business opportunities that BPC management has identified to promote the future growth of the company.

6.2 Reasons for not including Market Penetration and Market Development

We will now discuss the reasons for only touching briefly in this research, on the market penetration and market development options as laid out in Ansoff’s matrix.

6.2.1 Market Penetration

Growth obtained by offering a company’s present products in its present markets is known as market penetration. This can be achieved by attracting ‘new’ current non customers, who either do not buy products in the offered categories, or who buy their similar products from competitors.

In terms of the BPC this would mean adding new customers by connecting them to an electricity supply this is not considered here because in the case of the BPC, market penetration would be difficult for the following reasons:

- costs will escalate because the remaining electrification projects now are those for the remotest areas of Bhutan
- even if you penetrate the market, returns will be few and the additional market growth is unlikely to cover the costs of the penetration
- constraints placed on penetration by the geography of Bhutan
- there are no hydro power stations near the remote areas, therefore, the BPC needs to wait for the national grid to be completed.

6.2.2 Market Development

Market Development is the other growth option where growth of a company is obtained by offering current products but, in this case to new markets.

In the case of the BPC this could be done by selling electrical energy to a third party i.e a country like India or any other of the neighbouring countries. However, it would be difficult for the BPC to choose this growth option because of the following constraints:

- The BPC’s mandate at the moment is only to distribute electricity within Bhutan
- therefore, there is only limited market growth
the revenue obtained from the export of energy goes directly to Royal Government of Bhutan
RGoB’s policy does not support international market development at present, this may change in the future

6.3 Possible Strategies

There are a number of different options for the BPC to expand its business in the future, here we will discuss these options. The reasons for not considering market penetration and market development are mentioned above, thus leaves the BPC with two options for expansion. In this section we discuss the types of business into which the BPC might wish to expand.

The BPC wants to develop its expertise in its existing field to provide services to its customers. At the same time the BPC also wants to make optimum use of its existing resources. Therefore, it would also like to diversify into other businesses using its existing infrastructure and resources to earn revenue. Two major options remain open in Ansoff’s matrix product development and diversification.

6.3.1 Product Development

The theory on product development was discussed in depth in section 3.6 of chapter 3. A framework which can be used to plot the type of product, strategy, benefits and risks of product development was developed using relevant theory from the literature. Using this framework, it becomes easier to identify what kind of product and strategy, the BPC is interested in, the framework also allows managers to determine the various benefits and risks associated with a certain kind of product once chosen.

There are no big product development plans for the BPC at the moment as it just has one product to offer electricity. If it adds a new product then it will need to diversify so what ever it does the end result will be diversification for the BPC.

The BPC’s is making every effort to make revisions to its existing product, to build up the image of the company. For example the BPC now has spot billing, internet billing and it intends to introduce an internet payment system. Moreover, the BPC is continuously trying to improve its services by providing very reliable power to its customers.
The types of products, strategies, benefits and risks of these new products are described in table 6.1 below.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Details</th>
<th>Improvement in Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Type of Products</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A – New to the World</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>B – New to the Company</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C – Addition to Existing Product Lines</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D – Improvements in/Revisions to Existing Products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E – Repositioning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F – Cost Reductions</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td><strong>Strategy</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A – The Differentiated Strategy</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>B – The Low Budget Conservative Strategy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C – The Technology Push Strategy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D – The Not-in-the Game Strategy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E – The High Budget Diverse Strategy</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><strong>Benefits</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A - Enhancing the Profitability of Other Products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B – Attracting New Customers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C – Improving the Loyalty of the Existing Customers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D – Improving the Image of the Company</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E – Producing a Platform for Future New Products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F – Opening up Market Opportunity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G – Repositioning the Company</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><strong>Risks</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A – Uncertainty</td>
<td>E &amp; F</td>
</tr>
<tr>
<td></td>
<td>B – Not being commercially viable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C – Non acceptance by the customers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D – Intense Competition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E – Technological difficulties</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F – Project Management Problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G – Supply Chain and sourcing risks</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.1: New Product Development Framework for the BPC

### 6.3.2 Diversification

If you refer back to the interview summary in Chapter 5, you will see that most of the interviewees believe that diversification is the preferred option for the BPC to use to grow and obtain more revenue. This information on the areas into which the BPC might diversify is summarized in section 5.3.2. The theory on diversification was discussed in depth in section 3.7. Without this theoretical background it would be difficult to understand the types, forms, benefits and risks of new diversified businesses. Above we discuss the framework that was developed for new product development, similarly a framework was also developed for diversification. The different options were plotted in this framework and to give us a clear picture of the possible options and to help us understand them.

A lot of possible businesses in which the BPC can venture were mentioned by the interviewees and these are listed below.

1. Hydropower Development.
2. Manufacturing of Electrical Accessories
3. ICT/Telecom
CHAPTER 6: OPTIONS FOR BPC

4. Services/Consultancy
5. Investment in Convention Centers
6. Providing Mega Advertisement Services

The BPC had a few criteria for diversification, and these were used to eliminate the unrealistic options. However, they could consider all the options listed above in future if they really feel and support it.

**Initial Options**

<table>
<thead>
<tr>
<th>Hydropower Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing of Electrical Accessories</td>
</tr>
<tr>
<td>ICT/Telecom</td>
</tr>
<tr>
<td>Services/Consultancy</td>
</tr>
<tr>
<td>Investment in Convention Centers</td>
</tr>
<tr>
<td>Providing Mega Advertisement Services</td>
</tr>
</tbody>
</table>

**Criteria**

- Related Businesses
- Make use of existing infrastructure

**Outcome**

<table>
<thead>
<tr>
<th>Hydropower Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing of Electrical Accessories</td>
</tr>
<tr>
<td>ICT/Telecom</td>
</tr>
<tr>
<td>Services/Consultancy</td>
</tr>
</tbody>
</table>

Table 6.2: Filtering Initial Options

After applying criteria only the first four options were selected, these are discussed below. A SWOT analysis for each option has also been included as this information can be used to support the preferred option and this will help to understand whether the preferred option selected in Chapter 8 is well supported by SWOT analysis or not.

This is also important to determine if the BPC really has the capacity and resources to diverge into the most preferred options and if it knows its strengths, weaknesses, opportunities and threats for each option.

### 6.3.2.1 Hydropower Development

The BPC already owns around 20 micro and mini hydro power plants in and around the country, these plants were commissioned in the 80’s and 90’s and at the moment they are not running at their rated capacity. Therefore, there is shortage of power in some region in the lean (dry winter) season and the BPC wants to meet this demand from its own power plants.

The government has given approval to the BPC to invest in hydro power development and there are lots of opportunities for hydro power developments in Bhutan. In the case of the BPC it is only licensed to build hydro power plants up to 25 MW, project above this capacity will be the domain of the Druk Green Power Corporation (DGPC).

The main advantage for the BPC to invest into hydro electricity production is that it already has expertise in this area since for a long time since it was the then Department of Power.
Moreover, this will also solve the problem of meeting internal demands for electricity and the BPC can also sell excess power to the Bhutan’s national grid, as this will bring in revenue for the BPC.

### 6.3.2.1.1 SWOT analysis for Hydropower Development

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BPC has experience in this field as BPC already owns around 20 mini/micro hydels.</td>
<td>1. BPC however does not have experiences with larger hydropower projects.</td>
</tr>
<tr>
<td>2. Ability to take additional loan.</td>
<td>2. The environment is highly regulated.</td>
</tr>
<tr>
<td>3. There is support from the management.</td>
<td>3. No experiences with newer hydropower technologies.</td>
</tr>
<tr>
<td>4. BPC already has experts on hydropower working in the organization.</td>
<td></td>
</tr>
<tr>
<td>5. Good management practices.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bhutan has lots of hydro power potential.</td>
<td>1. There could be restrictions from Druk Green Power Corporation (DGPC).</td>
</tr>
<tr>
<td>2. BPC can sell excess energy to the grid.</td>
<td>2. There is a risk that DGPC may not allow 15% of the generation as royalty energy.</td>
</tr>
<tr>
<td>3. There is a huge market in Bhutan as well as in India.</td>
<td>3. Customers may not be willing to pay due to raise in tariff.</td>
</tr>
<tr>
<td>4. There is power shortage during the lean season.</td>
<td>4. Competition from Independent Power Producers in future.</td>
</tr>
<tr>
<td>5. Government supports renewable energy.</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3: SWOT analysis for Hydropower Development

**Strengths Vs Opportunity**

S1O1: The BPC has lot of experience in this field which it can use to harness the huge hydro electric potential of Bhutan.

S4O1O3: The BPC has hydro electric power experts working within its organization, who could be entrusted with the responsibility to carry out the study to develop more hydro electricity power plants since there is a huge market for electricity in Bhutan and in neighboring India.

S2S3O4O5: The BPC’s management supports the idea of investing in hydro electric power development and it is possible to raise additional loans to cover costs. Investment in hydro electric power would help solve the problems of power shortages in the lean season. The development of hydro electric power is supported by the government as it is a renewable energy.

**Strengths Vs Threats**

S1T3: The BPC has lots of experiences in hydro electric power, which would enable it to choose only those hydro electric power projects with minimum cost to keep the tariff of electricity low.

S1S4T4: Due to the fact that the BPC has already has experience in developing hydro electric power plants it has as advantage over competitors.
CHAPTER 6: OPTIONS FOR BPC

Weaknesses Vs Opportunity

W1O3: The BPC does not have experiences with bigger hydro electric power projects but it could always bring in experts initially to gain experience and then train its employees as there is a huge market for hydro electric power in Bhutan.

W3O1O2: The BPC need to adopt newer technology power plants and then sell the power to the Bhutanese grid if there is an excess.

W2O3: If the environment is highly regulated in Bhutan then the BPC might think about exporting excess power to India.

Weaknesses Vs Threats

W1T1: The BPC can initially concentrate only on smaller power plants (up to 25 MW), to comply with the RGoB policy, thus it will not meet restrictions from the DGPC.

W1W3T3: The BPC does not have experience with bigger hydro electric power plants and moreover with newer technology. Therefore, the BPC could opt for plants which require high investment costs and choose inefficient technology that has higher running and maintenance costs. This would escalate rises in the electricity tariff and which BPC’s customers may not be willing to pay. Therefore, the BPC should be careful when selecting the type of technology it will use.

W2T4: BPC’s environment is restricted at the moment, but in future this will definitely open up once the RGoB gives approval for independent power producers to move in.

6.3.2.2 Manufacturing of Electrical Accessories

The BPC requires a huge amount of electrical accessories like poles, angles, channels and other miscellaneous mild steel (MS) material for the construction of distribution and transmission networks. So, the BPC is interested in establishing a manufacturing plant which could meet their internal demand for MS materials and reduce the need for these materials to be procured externally.

Later the BPC could sell its products to the new industries coming up in Bhutan. Therefore, there is a huge scope for this type of diversification but there are also risks involved. The major risk is that the BPC might be facing competition from other manufacturing plants in Bhutan. At the same time the BPC does not have the necessary expertise in manufacturing and this would be entirely new business for it.

This seems to be a very lucrative business for the BPC to venture into but a thorough analysis, including a financial, technical and market survey has to be carried out before investing in any such firm to avoid all sorts of risks.
### 6.3.2.2.1 SWOT analysis for Manufacturing of Electrical Accessories

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BPC has the expertise in material selection and hence can maintain a high standard of quality.</td>
<td>1. Inexperience in associating with business partners.</td>
</tr>
<tr>
<td>2. Ability to take additional loan.</td>
<td>2. BPC does not have the technical know how and will have to depend on external experts.</td>
</tr>
<tr>
<td>3. The external partners would be interested to be associated with BPC.</td>
<td>3. BPC at the moment does not have guiding principles in doing business.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is ready internal market.</td>
<td>1. Risk due to market fluctuations resulting in high cost of production compared to direct procurement.</td>
</tr>
<tr>
<td>2. The demand for this is high.</td>
<td>2. Competition from other companies.</td>
</tr>
</tbody>
</table>

Table 6.4: SWOT analysis for Manufacturing of Electrical Accessories

**Strengths Vs Opportunity**

S3O1O2: If external partners are interested in being associated with the BPC, then it would be good for the BPC to start up a manufacturing company and partner with the suppliers in India or in the region to obtain a supply of cheap and good quality raw materials. This will help the BPC to meet internal demand.

S1O2: Given the fact that the BPC already has the expertise in material selection and hence, can maintain a high quality, the same experience could be used to oversee manufacturing of high quality products to capture the huge market in Bhutan.

**Strengths Vs Threats**

S1S3T1T2: The BPC's experience in material selection and the willingness of the external partners to be associated with the BPC could be an added advantage for it compared to its competitors. The BPC could sign contractual agreements with the major suppliers of raw materials to avoid the risk of market fluctuations.

**Weaknesses Vs Opportunity**

O1O2W1W2: The BPC does have experience with associating with business partners, BPC's present lack of sufficient technical knowledge still forces them to depend on external experts, but the BPC could always call in experts to carry out detail feasibility studies and for technical assistance. The BPC could also start up a joint venture company with a reputable company in the region if they are not confident. The company with whom the BPC would be entering into joint venture would be responsible for carrying out the detailed study and explain, to the BPC the viability, or lack of it, of a project. This will help the BPC to meet their internal demands and to capture the huge market for MS materials in Bhutan.

**Weaknesses Vs Threats**

W1W2T1T2: There would be competition from other companies in Bhutan and moreover, there is a risk of market fluctuations resulting in higher prices for raw materials. At the same time the BPC does have the technical know how and experience to deal with such problems. Therefore, it would be better for the BPC to carry out a through feasibility study before venturing into this area as it could be risky. The BPC could also think of starting a joint venture company with a reputed company in the region, the other company could provide...
the knowledge required to start up the venture with in its field while initially the BPC could stick to its own core competences with cross over learning coming later.

### 6.3.2.3 ICT/Telecom

At the present the BPC is laying fiber optics cable along its transmission lines in some parts of Bhutan and very soon the whole of Bhutan should be connected.

Therefore, the BPC wants to make use of this existing infrastructure to diversify into ICT & Telecom services. The BPC has already been given a license for ICT and Telecom services. The great advantage for the BPC at the moment is, it is well placed to grab ICT opportunities as they present and ICT sector is booming in Bhutan. At present Bhutan lacks an ICT and the RGoB is very supportive of those developing this business.

The BPC will not have to invest much in producing an ICT infrastructure as they already have an infrastructure for electricity supply thus adding ICT capability would be only incremental cost. The BPC has also been chosen as the focal organization for providing international links in Bhutan, which means the BPC should take the lead in developing or providing international links to other Internet providers in Bhutan.

#### 6.3.2.3.1 SWOT analysis for ICT/Telecom

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Infrastructure incremental cost is low as BPC has already laid fiber optics cable.</td>
<td>1. BPC lacks ICT people.</td>
</tr>
<tr>
<td>2. Ability to take additional loan.</td>
<td>2. It is totally a new business.</td>
</tr>
<tr>
<td>3. Good management practices.</td>
<td>3. Management’s commitment is low at the moment due to RE works.</td>
</tr>
<tr>
<td>4. Have established brand as power utility company.</td>
<td></td>
</tr>
<tr>
<td>5. BPC has already availed ICT facility license.</td>
<td></td>
</tr>
<tr>
<td>6. BPC is the focal organization for providing international link in Bhutan.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. At present Bhutan lacks ICT backbone structure.</td>
<td>1. The growth could be limited due to limited market volume.</td>
</tr>
<tr>
<td>2. Government is supporting and promoting e-initiatives.</td>
<td>2. There could be restrictions from DHI.</td>
</tr>
<tr>
<td>3. There is a huge market as ICT sector is booming.</td>
<td>3. There could be competition from Bhutan Telecom and other ICT services provider.</td>
</tr>
</tbody>
</table>

Table 6.5: SWOT analysis for ICT/Telecom

**Strengths Vs Opportunity**

S5O1: Bhutan lacks an ICT backbone structure at the moment and there is definitely a good opportunity for the BPC as it already has an ICT license.

S1O3: Since the added cost of an ICT infrastructure is only incremental as the fiber optic cable has already been laid, or is in the process of being laid in Bhutan it is the right time for the BPC to expand into this area as there will be a huge market as the ICT sector is booming.
S6O2: The BPC has become the focal organization for providing international links to the internet service provider in Bhutan and the RGoB is supporting and promoting e-initiatives.

S4O3: The BPC has established a brand name as a power utility company, and the same brand name can be used to capture the booming ICT sector.

**Strengths Vs Threats**

S1T3: The BPC can lower its costs because an ICT backbone/infrastructure is just the incremental cost for this company enabling it to compete with competitors like Bhutan Telecom.

S5T2: Since the BPC has already been granted an ICT license by the regulatory authority, the question of restriction by the DHI should not arise.

**Weaknesses Vs Opportunity**

W1O2: The BPC definitely lacks people with experience in these services, and to improve the quality of services it will have to bring in experts to execute the contract. However, it will have to have a knowledge transfer agreement and train its own employees so it becomes less reliant on externals.

W2O3: This would be a totally new business for the BPC. Therefore, experts need to be brought in to help BPC execute and run the business properly.

**Weaknesses Vs Threats**

W2T3: The BPC has good brand image as the power utility company, but venturing into totally new business with the hope that their brand image would help them to capture market could be risky. Moreover, to compete with players like Bhutan Telecom who are in this business could also be doubtful. Therefore, a thorough analysis needs to be carried out to determine if it is really worth investing in such a move for the BPC.

**6.3.2.4 Services/Consultancy**

The BPC at the moment enjoys a monopoly in the power utility sector. There are no other players in the market who are competent and more capable than the BPC. Therefore, the BPC would like to take advantage of the situation and make use of its expertise and resources to generate revenue.

The BPC has immense expertise in power distribution and transmission. Moreover, it has trained people who could handle all the problems related to electrical design and installations. The BPC has also been carrying out small deposit works for private parties starting from design, procurement to the commissioning of electrical infrastructures, but this is only done if there are enough resources like manpower and time.

Now the BPC is interested in using its expertise and resources to give all kinds of energy related services including consultancy to the industry or those who require the service. So, the main interest of BPC is to get into the service related businesses.

As mentioned by the senior consultant at the BPC, lots of new industries will be founded in Bhutan and they will definitely be requiring consultancy on installing, procuring and commissioning electrical infrastructures. It would be very expensive for industries if they had to look for external experts. Therefore, there will be a huge demand for such kinds of services in the future as most industries will approach the BPC due to its respected competency in the field.
The BPC’s interest is not only to add technical services they are also interested in management consultancy for bigger corporations in Bhutan. The BPC is one of the most established corporations in terms of good management practices and it was the first one to implement a performance based incentive system and performance management system.

6.3.2.4.1 SWOT analysis for Services/Consultancy

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BPC has technical know how.</td>
<td>1. There is shortage of manpower.</td>
</tr>
<tr>
<td>2. It involves low cost.</td>
<td>2. Dependence on external suppliers and contractors.</td>
</tr>
<tr>
<td>3. It is a related business.</td>
<td></td>
</tr>
<tr>
<td>4. The tools required are readily available to solve the problems.</td>
<td></td>
</tr>
<tr>
<td>5. There will be no coordination problem with power supply authority.</td>
<td></td>
</tr>
<tr>
<td>6. Have the expertise in selecting standard equipments.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lots of industries coming up.</td>
<td>1. Additional risks with associated business.</td>
</tr>
<tr>
<td>2. There is huge market.</td>
<td>2. There could be problems with external suppliers and contractors.</td>
</tr>
<tr>
<td>3. Possible market share from neighboring regions.</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.6: SWOT analysis for Services/Consultancy

**Strengths Vs Opportunity**

S1S2S4O2: The BPC has the technical know how to provide these kinds of low cost services as the tool required are readily available with the BPC. Therefore, there is lots of opportunity for the BPC at the moment to capture this huge developing market.

S3S5O1: Since offering the related kind of services would be beneficial for the BPC as there would be no coordination problems with the power supply authority. New industries in the future will definitely be requiring services from the BPC to carry out their work.

**Strengths Vs Threats**

S1S6T2: The BPC already has the technical know how and expertise with selecting standard equipment. However, there could be problems due to external suppliers and contractors. In order to overcome this, the BPC should select reputable firms and contractors to supply and execute the work.

S1T1: This kind of services involves low costs so the risk involved is also low in terms of financial loss if anything happens, even so, this risk could be minimized by taking up those contracts in which the BPC is strongly confident.

**Weaknesses Vs Opportunity**

O1O2W1: Man power could be recruited in future to extend the BPC expertise if it feels that the existing man power will not be able to handle the additional business. Therefore the BPC should recruit more people to help it capture business as there are so many industries are being started up in Bhutan, which in turn will lead to huge opportunities for any company that is ‘ahead in the game’.

O1W2: The BPC has to depend on external suppliers and contractors but the BPC could always select reputable suppliers and contractors and sign an agreement to work with them.
Moreover, since the BPC has very good image there will be lots of business partners looking for an opportunity to be associated with company like BPC.

**Weaknesses Vs Threats**

W1T1: Man power can always be recruited if there is a really huge market for offering these kinds of services in the market. The people could be trained in specialized fields if required, and initially, the BPC could only take up smaller services where they have full confidence in order to minimize the risk.

W2T2: The BPC definitely has to depend on external suppliers and contractors, but they could always select or sign a contract agreement with a reputable company as a service partner. This will help to reduce the risks due to suppliers since the BPC will know that it is one of the execution partners and thus it will definitely meet the standards.

The types and form of diversification if BPC goes into these businesses are listed below in table 6.7.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Details</th>
<th>Hydro Power Development</th>
<th>Manufacturing of Electrical Accessories</th>
<th>ICT/Telecom Consultancy</th>
<th>Services/Co</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Types of Diversification</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>A – Related</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B – Unrelated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Form of Diversification</td>
<td>B</td>
<td>B</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>A – Horizontal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B – Vertical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C – Geographical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A – Efficient allocation of resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B – Utilization of excessive productive factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C – Market Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D – Increase in Product &amp; Services in related field</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Risks</td>
<td>C</td>
<td>A, B &amp; C</td>
<td>A, B &amp; C</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>A – Uncertainty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B – Transaction cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C - Overstretching resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Performance</td>
<td>A, B &amp; C</td>
<td>A, B &amp; C</td>
<td>A, B &amp; C</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>A – Financial Growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B – No of Employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C – Net Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.7: Diversification Framework for BPC

**6.4 Conclusion**

There are many challenges for the BPC at the moment; the BPC as a company has to fulfill its social obligations but at the same time it needs to be commercially viable. In order to overcome all this the BPC now feels the need to diverge into new businesses where they feel they are competent to increase the profitability of the company.

So far BPC has only carry out the social mandates, set out by law, of electrifying Bhutan and they lack the expertise to deal with other commercial aspects of power generation etc. Recently, the BPC has opened a new division called Corporate Planning and Business Development. This shows that the BPC is planning ahead and that it has recognized the need of future expansion to grab opportunities to generate revenue.

The BPC at the moment has difficulty financing the RE works due to shortage of capital. So, the BPC would like to venture into only those businesses which would require less investment
but with higher returns like ICT/Telecom and Services/Consultancy because it requires less investment as most of its existing resources could be utilized. Even the SWOT analysis favors these two options besides hydropower development, which is very good option as the BPC has expertise in this business.

The table 6.8 below is used to compare the four different options based on investment required and the expected rate of return.

<table>
<thead>
<tr>
<th>Sl. #</th>
<th>Details</th>
<th>Hydro Power Development</th>
<th>Manufacturing of Electrical Accessories</th>
<th>ICT/Telecom</th>
<th>Services/Consultancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Investment</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>2</td>
<td>Expected Rate of Return</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>3</td>
<td>Time to Market</td>
<td>Long</td>
<td>Long</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>4</td>
<td>Risks</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>5</td>
<td>Payback time</td>
<td>Medium</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
</tbody>
</table>

Table 6.8: Comparing different options

However, it is not easy to just choose an option and go with it as any diversification has to be planned properly. Therefore, a list of criteria was developed to help the BPC's management to rank the options and choose the most relevant and appropriate options based on context, expertise and resources.
7 CHAPTER 7: Criteria for BPC

7.1 Goal of this Chapter

In this chapter we discuss the criteria developed for the BPC in order to help it to select viable growth options. The criteria are then tested using the SMART principle to make the test more specific and measurable. This was done to see if all the criteria developed for the BPC meets these principle or not. Then the result using the list of criteria before and after the test is compared to see if the result remained same or has it changed.

7.2 Introduction

An extensive list of criteria was developed for BPC to make sure that all the criteria were mutually exclusive and collectively exhaustive. It is very necessary to include all the possible criteria in such a list so that you do not miss an important criterion, which could lead to an incorrect outcome of an analysis.

Here the internal and external factors are considered because both these factors will affect the decision making. Sometimes it is possible that an internal factor might support one option, but when considering external factors, the same option could be bad.

7.3 List of Criteria

7.3.1 Internal Factors

In this section we discuss the internal factors. These criteria were developed to determine the internal capability and capacity of the BPC to understand whether it would be in a position to support the growth options or not. These criteria were used to help the BPC management to understand the company's strengths and limitations and to choose between different growth options, thus the criteria should help the managers in their decision making.

7.3.1.1 Financial

This criteria was included to see if the company runs any financial risks and if the new businesses they are venturing into are sustainable.

1. Sustenance capability within statutory limits (allowable expenditure)

Does the option sustain itself within the allowable expenditure?

2. Amenability for strategic segregation / integration with present operations

Would the option require strategic segregation of operations to ensure that the return on one licensed operation does not impact another and the acceptability of the apportionment mechanism for common infrastructure, including manpower, to the multiple licensing agencies?

3. Effect on future operational risks

In case that the product development and diversification covers hiving-off part of the BPC's operations, a risk assessment for possible future scenarios is needed when the hived-off operations (due to mere low volume of works the hived-off operations could be held by a
single entity) could cost the company more, since it might have already lost control of manpower and operations.

4. Financial Risk

Given the scenario of the business, how do you rate the financial impact of doing such business unless the selected option is least-cost, note: it may not be immediately but in the long run, and proven? What are the chances of the selected option being a financial risk?

The financial criteria for BPC are discussed above but now we need to test whether these meet the SMART principle. The one(s) which do not meet the requirement will be rejected and will not be considered for analysis. Later an analysis using the criteria which are qualified will be carried out compared with the existing result.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustenance capability within statutory limits</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>(allowable expenditure)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amenability for strategic segregation / integration with present operations</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Effect on future operational risks</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>NS</td>
</tr>
<tr>
<td>Financial Risk</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table 7.1: Testing Internal Financial Criteria

Note: S means Selected, NS means Not Selected

Explanations

Having tested the criteria to see if they meet the SMART requirements as shown above, it was found that only two criteria met these requirements. The two criteria which did not meet the requirement were rejected and are not considered further.

The second criterion was selected but it can be only measured by asking experienced top management working in the organization to comment on it because they are in a position to understand the overall scenario of the BPC’s business. So, top management was asked score to the criteria against different growth options.

7.3.1.2 Organizational

In this section we will look at the organizational criteria. This is to see if the BPC has the organizational capacity to support a growth capacity. It is important for the BPC to evaluate its capacity.

1. Adequacy of present staff (Quantity)

This is done to determine if the present staff strength would be adequate in terms of quantity to handle new business units.

2. Adequacy of present staff (Qualification and experience)

The qualifications and experience of present staff are adequate if the BPC ventures into new businesses.

3. Impact of engaging specialist services in terms of disparity in salary / other emoluments structure
CHAPTER 7: CRITERIA FOR BPC

To see the impact of engaging technical experts and consultants for new businesses in terms of salary and other benefits as they need to be paid higher wages compared to local staff.

4. **Present physical infrastructure adequacy**

Is the present infrastructure enough or adequate if BPC wants to start a new businesses.

5. **Impact on Organization structure**

If BPC ventures into new businesses, then what would be the impact on the organizational structure? Will it require restructuring that affects the businesses or will the present structure be appropriate?

6. **Availability of specialist (local + foreigners)**

Venturing into new businesses will demand new skills and experts in the area. So, this criteria is set to determine the availability of specialist, both local and foreigners, to get to functional new units.

7. **Requirement of additional profit centre with independent operational autonomy**

Diversification requires the setting up of additional profit centers with independent operational autonomy and has an impact on overall organizational hierarchy and reporting.

Again the above list of criteria would be tested as was done for the financial criteria and then the criteria not meeting the SMART principle are rejected.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequacy of present staff (Quantity)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Adequacy of present staff (Qualification and experience)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Impact on engaging specialist services in terms of disparity in salary / other emoluments / structure</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Present physical infrastructure adequacy</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Impact on Organization structure</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Availability of specialist (local + foreigners)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Requirement of additional profit centre with independent operational autonomy</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table 7.2: Testing Internal Organisational Criteria

**Note:** S means Selected, NS means Not Selected

**Explanations**

One of the organizational criteria, No. 7, did not meet the SMART requirement as these goals are not measurable and therefore difficult to achieve. The third criterion was however not selected even though it is specific and measurable because the sixth criterion also addresses the same point. All the criteria mentioned above are measurable, but the fifth criteria listed above regarding the impact on organizational structure was only measured by asking top management to give score as they will be the concerned people involved in the decision making. Top management should know the impact of a new business on the overall structure of the present company.

These criteria will help the BPC’s managers evaluate their own competencies and help them to understand whether the existing staff strengths are adequate. The criteria list is also used
to see the impact of the postulated change(s) on the organization as a whole. Therefore, it is crucial for the BPC to first evaluate its competencies before diverging into other areas.

7.3.1.3 Technological

After discussing the financial and organization criteria, it is now time to discuss the technological criteria. This is very important because every company starting a new business needs to evaluate and see if the new technology will be appropriate, and if it is, in line with existing technologies. It is also important to understand these criteria because this will help the BPC in our case to see their technological competencies and see how they will fit their businesses.

1. Coherence with present operations

Does this involve embedded operations or new operations?

2. Adaptability of present skill level

How can the present skill levels be dovetailed to meet partial / full requirements?

3. Is the technological requirement cutting edge?

Is the technology required is a cutting edge? i.e does the BPC gain the full benefit or effect of using the cutting edge technology in terms of operation, maintenance and skills requirement.

4. Present customer base coverage

Adoption by existing customer base, e.g exploiting the advantages of the present customer base for diversification.

The above are the list of criteria developed for the BPC. All the criteria were tested to see if they follow the SMART principle.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coherence with present operations</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Adaptability of present skill level</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Is the technological requirement cutting edge</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>NS</td>
</tr>
<tr>
<td>Present customer base coverage</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
</tbody>
</table>

Table 7.3: Testing Internal Technological Criteria

Note: S means Selected, NS means Not Selected

Explanations

If you look at the table above, it is easy to understand why the third criterion is not selected as it is not measurable and hence not achievable. The rest of the criteria could be measured by asking the top management whether the new businesses are in line with existing businesses and how well they could adapt the present skill of staff to meet needs in the new businesses.

The top management will also be in a position to mention whether the present customer base could be used, and it will be an advantage for the new business into which they are venturing in. Therefore, these criteria can help the BPC top managers determine if the new businesses they are interested in are favorable to their, and the company’s goals.
7.3.1.4 Social / Legal

Using only financial, organizational and technological criteria is not enough to choose an option. It is also necessary to see if the option is going to be socially and legally accepted as per the laws and regulations, and if it would bring social benefits to the company’s staff in general.

Therefore, in this section we discuss the social/legal criteria that are relevant to the BPC.

1. Customer Acceptance

It is necessary to determine whether a new business will be accepted by present customers as they might feel a new business field might cause the BPC to cease to give them priority and thus affect their current levels of electricity supply.

2. Legal Acceptance of use of existing infrastructure

The possibility of legal implications if a competitor contests, in a regulated environment, the lack of a level playing field, might lead to a reduction in rates for offered products thus affecting the financial viability.

3. Employee’s Increased Emoluments

Does it result in increased payouts to the employees?

4. Compliance to Licensing Conditions

Will the new business comply with the licensing conditions set out in any licenses held by the BPC as the new businesses will require clearance from the regulatory authorities?

5. Acceptability by DHI

The performance and investment plan will be monitored and approved by the DHI. So, is the new business going to be accepted by the DHI?

6. Impact on social obligations of present operations

The BPC has social obligations to supply electricity, but if it concentrates on new businesses this may impair its ability to meet its social obligations.

The table below can be used to help managers select the criterion which fulfill the SMART principle and this can be used for further analysis.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Acceptance</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Legal Acceptance of use of existing infrastructure</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Employee’s Increased Emoluments</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Compliance to Licensing Conditions</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Acceptability by DHI</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>NS</td>
</tr>
<tr>
<td>Impact on social obligations of present operations</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
</tbody>
</table>

Table 7.4: Testing Internal Social/Legal Criteria

Note: S means Selected, NS means Not Selected
Explanations

The first and the last criteria are very specific but they can only be measured by asking top management at the BPC to express their views as these are generic issues which cannot be ignored, especially when looking at the environment in which BPC is operating at present.

The second, third and fourth criteria are measurable as it is possible to check whether the new businesses are meeting legal requirements, however, the fifth criterion was not selected even though it is specific and measurable. This is because it is not relevant at the present because once you have legal acceptance then there is no question of getting rejected by the DHI. These criteria were important to consider for the BPC as they it needs to make sure it does not impair the social obligations of the company with new policies.

7.3.1.5 Ecological

It is also important to look at ecological criteria. Since the BPC is working in a highly regulated environment and since Bhutan places so much on environmental issues, it is extremely necessary to consider these criteria if a company wants government support.

1. Adherence to statutory requirements of NEC and / or acceptance of mitigations measures

Meeting the statutory requirements of the RGoB like not causing pollution, environmental considerations and the possibility of acceptance of mitigation measures considered in the financial impact

2. Risk assessment of future requirements (more stringent)

A stringent risk assessment needs to be carried out to choose environmentally the businesses and to avoid starting new businesses which might prove to be very risky environmentally in the long term.

3. Possibility of eco-friendly acceptance

Is the new business eco-friendly meaning safe, clean and affordable so that it will be readily accepted by the authorities as they place such high value on environmental protection.

Now the list of criteria would be tested as was done in earlier sections to make the selection.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adherence to statutory requirements of NEC and / or acceptance of mitigations measures</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Risk assessment of future requirements (more stringent)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Possibility of eco-friendly acceptance</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table 7.5: Testing Internal Ecological Criteria

Note: S means Selected, NS means Not Selected

Explanations

These criteria are also specific and measurable as you can always see if new businesses are in line with the Royal Government of Bhutan (RGoB) policy and whether they are meeting the government’s requirement in terms of pollution units and environmental considerations. However, the last criterion was not selected because the first criteria already took care of this issue, leading to repetition if it is used.
These criteria are very important for the BPC as the RGoB has stringent rules when it comes to issuing environmental clearance licenses for projects. Therefore, the BPC needs strictly to assess and make sure that their new business is not going to be objected to by National Environment Commission (NEC) due to environmental concerns.

### 7.3.2 External Factors

Until now we have been discussing internal factors, those within BPC, but the external factors are also equally important while deciding to choose an option. This is because external factors also influence decision making and have to be considered to make sure options are acceptable and viable. We will now discuss external factors.

#### 7.3.2.1 Demographic

These criteria are used to determine if there are any possibilities for regionalized differential pricing and to see whether this affects regulatory conditions.

1. **Regional Impact (Region Specific / All regions in the country)**

   Coverage in Western, Central, Eastern

2. **Applicability of regionalized differential pricing**

   Applicability of differential pricing policies, possible involving cross-subsidies – e.g. due to infrastructure availability, it may be cheaper to establish business in one region, say the Western, but the customers in the Western region may be prepared or able to pay more.

3. **Statutory limitations to differential pricing principle**

   Does differential pricing affect the regulatory conditions?

   The criteria are explained above below we present the SMART test of the criteria.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Impact (Region Specific / All regions in the country)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Coverage in Western, Central, Eastern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applicability of regionalized differential pricing</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Statutory limitations to differential pricing principle</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table 7.6: Testing External Demographic Criteria

**Note: S means Selected, NS means Not Selected**

**Explanations**

The above criteria are specific but they can only be measured by asking top management at the BPC to express their views by giving score according to what they expect. The criteria can also be measured by putting up the proposal and see if they are agreed to by the
regulatory authorities. This would be helpful to the BPC to find out this which, could help them to plan ahead to set the tariffs accordingly.

The last criteria was not selected as the second criteria already takes into account the limitations of the differential pricing principle while studying the applicability as mentioned in the second criteria.

### 7.3.2.2 Economical

This criteria is included to see if the chosen option is economical and if it helps to reduce costs and improve productivity and economic benefits.

1. **Cost reduction to customer**

   Does this result in cheaper costs to the customer?

2. **Overall Economic benefit to the Country**

   What is the impact on the economy as a whole?

3. **Productivity Improvement / Enhanced Operating conditions**

   Does this provide for improved productivity or improved leisure?

4. **Cross-competition with other products and the impact of the same**

   What is the impact on other products, affecting the overall economy?

5. **Requirement of subsidies from government**

   Is there a need to obtain subsidies from the government?

6. **Contribution to Gross National Happiness (GNH) - indirect economic benefit measurement**

   Does this help Bhutan to achieve high Gross National Happiness figures?

The SMART test for the above criteria is given below.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost reduction to customer</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Overall Economic benefit to the Country</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Productivity Improvement / Enhanced Operating conditions</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Cross-competition with other products and the impact of the same</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>NS</td>
</tr>
<tr>
<td>Requirement of subsidies from government</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Contribution to GNH (indirect economic benefit measurement)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
</tbody>
</table>

Table 7.7: Testing External Economical Criteria

**Note:** S means Selected, NS means Not Selected

**Explanations**
These criteria are very specific and are measurable. All the above criteria meet the SMART principle except the fourth criteria as it is not measurable and hence not achievable. These economic criteria are required to determine if the new business will reduce the costs and whether it will benefit the economy of Bhutan as a whole.

The new businesses should improve the productivity of the BPC and should also contribute to Bhutan Gross National Happiness. Such a study will also help to pinpoint if any government subsidies are needed in the start up period.

These criteria will help the BPC management to understand that the need to consider these important criteria when venturing into a new line of business. Otherwise, if the criteria are not considered then there could be chance that the new business will not be supported well by the authorities.

### 7.3.2.3 Political

The political criteria are very important to see if the BPC is complying with the norms and policies of the government. These criteria are measured by asking the top management to express their views via a score for each criterion, the scores can be cross checked by referring to government policies to determine if the government really supports the ideas.

1. **Synergy with policy**

   Is the new business in line with the government policy?

2. **Possibility of acceptance by policy makers (even if it involves policy change)**

   Is the new business very lucrative and safe for the policy makers to accept the proposal without too many problems?

3. **Necessity or otherwise of additional incentives from Government**

   Will the new businesses require any additional support or incentive(s) from the government?

Below we give the results of a SMART test.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synergy with policy</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Possibility of acceptance by policy makers (even if it involves policy change)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>NS</td>
</tr>
<tr>
<td>Necessity or otherwise of additional incentives from Government</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table 7.8: Testing External Political Criteria

**Note: S means Selected, NS means Not Selected**

**Explanations**

The first criterion was selected as this is very important and needs to be considered. Moreover, it is specific and measurable. The second criterion was not selected because it is understood that if the first criteria is fulfilled then the second one is already answered. The third criterion is also not included, because this was included under the economic criteria.

These criteria will help the BPC management not to venture into businesses which are not supported by the government. So, this will reduce the chance the BPC being blocked at a later stage, especially for utility like BPC, it is important to look into these criteria as they are operating within a regulated market.
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7.3.2.4 Ecological

The ecological criteria are also important, especially for the BPC in Bhutan as the government has stringent ecological rules, at the same time there is also repetition of the internal ecological criteria.

The criteria are explained below:

1. **Meeting statutory requirements of Government like not causing pollution, environmental considerations and the possibility of acceptance of mitigation measures considered in the financial impact**

   This involves meeting the statutory requirements of the RGoB like not causing pollution, meeting environmental considerations and the possibility of acceptance of mitigation measures considered in the financial impact.

2. **Risk assessment of future requirements (more stringent)**

   Is the stringent risk assessment been carried out to avoid long term risks?

3. **Possibility of eco-friendly acceptance**

   Is the new business eco-friendly meaning safe, clean and affordable so that it will be readily accepted by the authorities, which in Bhutan place a high stress on the need for environmental protection.

The SMART test is given below.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting statutory requirements of Government like</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>causing pollution, environmental considerations and the possibility of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>acceptance of mitigation measures considered in the financial impact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk assessment of future requirements (more stringent)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>NS</td>
</tr>
<tr>
<td>Possibility of eco-friendly acceptance</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table 7.9: Testing External Ecological Criteria

**Note: S means Selected, NS means Not Selected**

**Explanations**

These are also very generic criteria but very important at the same time. These criteria will help BPC’s managers to understand whether the BPC is complying with the statutory requirements of RGoB. Bhutan places a high stress on preserving its pristine environment. Therefore, it is very necessary to meet these standards if BPC wants to do anything within Bhutan.

If all the criteria are evaluated properly then all the external and internal ecological criteria are addressed and it is not necessary to have separate internal and external factors ecological factors.

The first criterion is selected as it is important just to cross check if the BPC meets the requirements of the government. This can be measured by seeing if the new business is meeting the requirements and thus can be easily done by getting the approval of the concerned authorities at the planning stage. However, the second criterion was not selected...
as it has already been considered in internal factors. The third criterion was rejected because it is not measurable.

7.3.2.5 Social

It is important to consider social criteria as the BPC has social objectives it has to achieve. Therefore, any addition to the present business should not hamper the important mandate to supply safe and cheap electricity to Bhutan. The authorities would not allow the BPC to venture into other businesses if they do not fulfill the core business of the BPC.

1. Impact on present licensed operations – any deterioration or add-on to the facilities to the customer.

Does this have an effect on the current licensed operations? Will this lead to deterioration or add value to the facilities provided to the customer.

2. Possibility of legal implications in case the competitor contests, in a regulated environment, about level playing field, thus requiring possible reduction in rates of offered products, and thus affecting the financial viability

3. Does it impair the social obligations of the company?

Will this have an impact on the present business in terms of effecting the social obligations of the company?

The SMART test is shown below:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on present licensed operations – any deterioration or add-on to</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>NS</td>
</tr>
<tr>
<td>the facilities to the customer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possibility of legal implications in case the competitor contests</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>S</td>
</tr>
<tr>
<td>Does it impair the social obligation of the company?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>NS</td>
</tr>
</tbody>
</table>

Table 7.10: Testing External Social Criteria

Note: S means Selected, NS means Not Selected

Explanations

The first and the last criteria were not selected as the first criterion is included in the technological set, which will be discussed in the next section. The last criterion was not selected because it has already been addressed during the discussing of internal social criteria. The second criterion was selected as this is very relevant for the BPC which is operating in a heavily regulated environment.

These criteria were included to help management understand the impact of new business in terms of social obligations. These are specific criteria and can be measured by asking the top management to score the criterion.

7.3.2.6 Technological

The technological criteria were considered to determine if new technology would help the BPC to improve its services. Moreover, the BPC also needs to know whether it has the resources to adopt a particular technology.
Therefore, this should help managers to evaluate options based on the technological criteria and help them to understand if the technology that the BPC wants to adopt is correct for the situation.

1. **Availability of expertise / manpower in country and / or educational institutions capacity to gear up for the same in the long run**

Is there enough manpower and expertise to take on new business?

2. **Cost of technological adoption**

Does it involve high costs if this new technology is adopted?

3. **Additional infrastructure requirements at customer premises (required or not) for product use and the associated cost**

Will this demand additional infrastructure at a customer’s premises in order for them to use the new services?

4. **Synergy with other available infrastructure at customer premises**

Can this new technology be easily used and if it is compatible with the available infrastructure at customer’s premises?

5. **Is entry barrier low?**

Is it easy to get into this business or not?

The SMART test is outlined below.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of expertise / manpower in country and / or educational</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>institutions capacity to gear up for the same in the long run</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of technological adoption</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Additional infrastructure requirements at customer premises (required or</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>NS</td>
</tr>
<tr>
<td>not) for product use and the associated cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synergy with other available infrastructure at customer premises</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>Is entry barrier low?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>S</td>
</tr>
</tbody>
</table>

Table 7.11: Testing External Technological Criteria

**Note: S means Selected, NS means Not Selected**

**Explanations**

These are specific and measurable criteria as they can be easily evaluated. The first two criteria are included to see if there is in house capacity and skills if the BPC takes up a new business, and to find out the costs of adopting new technology. The third criterion was not selected as it is similar to the fourth criteria.

It is also important to evaluate if the new technology requires adding new infrastructure to work if works in synergy with the available structures at a customers premises. Understanding these requirements is useful when choosing the right kind of technology and services to minimize the costs.
7.4 Weights for Criteria

The list of criteria was developed for the BPC by working with the consultant and it was discussed with a number of other senior staff to finalize it. The full lists of criteria can be found in Appendix 2.

The top management at the BPC was approached to ask them to assign weights and scores to each criterion. Top management was chosen in this case because the weighing and scoring involves a lot of policy issues and only top management is in a position to answer as they have an overview of the present situation at the BPC and of the plans for its future.

The table below summarizes the weights assigned by the top management:

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Criteria (Internal)</th>
<th>Weights (%age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Financial/Economical</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Organizational</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Technological</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>Social/Legal</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Ecological</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Criteria (External)</th>
<th>Weights (%age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demographic</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Economical</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Political</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Ecological</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>Social</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Technological</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 7.12: Weights for BPC

7.5 Conclusion

We discussed the criteria for selecting the growth options for the BPC. Internal and external factors need to be considered as both are important and cannot be neglected. It is also true that a good proposal meeting all internal competencies can be stopped because it does not meet government standards. So, it is always necessary to have an extensive list of criteria to help you to avoid making wrong choices. Some of the criteria are very specific and measurable, but some are very subjective. These can also be measured by giving the scores for each of the criterion against the different options. This task should be given to top management as they are at the policy level and have a clearer picture of the overall situation at the BPC and can understand what will be good for the company.

All the criteria was tested to determine if it meets the SMART principle and only the criteria meeting this was selected for further analysis to select the most viable option for the BPC.
8 CHAPTER 8: Selection

8.1 Goal of this Chapter

Once a list of criteria has been developed as discussed earlier in chapter 7, selection is now applied to choose between the different options. In this chapter we discuss on the selection process and its outcome after applying the chosen criteria.

The list of criteria developed for the BPC was tested to see if it meets the SMART principle or not. Accordingly a new set of criteria was developed by selecting only those criteria which actually met the conditions. The results are then compared to see if the outcome remains the same or it changes, see Appendix 2 for the new list of criteria.

8.2 Selection of Growth Options

8.2.1 Selection Based on Original List of Criteria

There are four growth options according to Ansoff’s matrix, the choice is made based on the options preferred by a company according to its resources, capabilities and opportunities.

In the same way it was necessary to evaluate the BPC for what growth option could be most favorable for them given the situation and context in where they are operating. Although as mentioned in chapter 6, market penetration and market development are not preferred options for the BPC, they have been included in the selection process. This was done to see if these options are really not relevant for the BPC.

The list of criteria for selecting growth options were framed by working closely with the BPC. After the list was completed and reviewed, it was given to top management to fill up the form.

Once the forms were filled in, the scores and weights assigned by the top management were used for the analysis. The weights for the different criteria were discussed in Chapter 7. The scores were given by the BPC’s top management based on how they rated the different strategic options against each criterion. The score was given on a scale of 0 – 10. The weights were multiplied with the score to arrive at the total scores for individual respondents. The total was then summed up to see which option ranks first.

The sample of the filled up form is given below.

<table>
<thead>
<tr>
<th>Sl. #</th>
<th>Criteria</th>
<th>Market Penetration</th>
<th>Market Development</th>
<th>Product Development</th>
<th>Diversification</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Financial/Economical (20%)</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>Amenity capability within statutory limits (allowable expenditure)</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>Effect on future operational risks 3%</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>Financial Risk 8%</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>20</td>
<td>20</td>
<td>23</td>
<td>27</td>
</tr>
</tbody>
</table>

Table 8.1: Sample of filled up form
The filled up form is attached as Appendix 7.

The table below shows the ranking of the four options as per the analysis.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Growth Options</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diversification</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Product Development</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Market Penetration</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Market Development</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 8.2: Ranking of Strategic Options

It is very clear from the table above that the most preferred choice for growth options for the BPC was diversification. In the interviews everyone mentioned that diversification was the best option for the BPC and the results of the growth option selection process agree with this.

8.2.2 Selection Based on Shortlisted Criteria

Now as mentioned earlier, when the list of criteria was tested against the SMART principle we arrived at the different list of criteria. Therefore, a further analysis was also done using the criteria list produced using the SMART principle, and then we arrived at the final result.

The result (see below) show that diversification is still the most preferred option as it ranks first yet again.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Growth Options</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diversification</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Product Development</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Market Development</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Market Penetration</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 8.3: Ranking of Strategic Options after Test

8.3 Selection Based on Strategy together with Internal and External Factors

We will now discuss the types of business into which the BPC would like to expand. The four options listed in chapter 6 as mentioned by the BPC top management and the senior staff were selected. It was also important to determine whether these options would be well supported or not within the BPC. The list of criteria was further developed to see which business(es) is well supported or favored according to the strategy and processes of the BPC. The criteria used to rank the four options together with the internal and external factors developed earlier are presented in table 8.4 below.

<table>
<thead>
<tr>
<th>Sl. #</th>
<th>Criteria</th>
<th>ICT/Telecom</th>
<th>Investment in Hydropower</th>
<th>Manufacturing of Electrical Accessories</th>
<th>Services/Consultancy</th>
<th>Do Nothing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Use of present customer base for marketing the product</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Use of present operations like billing for cost effective and effective advertisement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Synergy with current</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 8: SELECTION

The above criteria were circulated to the top management at the BPC who were requested to assign weights and scores to each criterion. The weights for different criteria were tabulated as follows (table 8.5):

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Criteria</th>
<th>Weights (%age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strategy</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>Fulfillment Processes</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>Information Processes</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>Business Development Activities</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 8.5: Weights for Selection Criteria

These criteria would direct the BPC on how to carryout the business if they at all venture into these businesses in future. Therefore, these criteria were developed in order to find out what are the things to consider or evaluate if they get into these and then it was ranked accordingly to see which option is most appropriate.

But since the list of criteria for choosing growth options as mentioned in Table 7.12 in Chapter 7 has been already framed, it was decided to use the same criteria together with the criteria mentioned in Table 8.5 to reduce the error of making wrong selection. According to this result, the BPC can get into Services/Consultancy businesses as it ranks first.

The results are given below in table 8.6.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Business Options</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Services/Consultancy</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>ICT/Telecom</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Investment in Hydropower</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Manufacturing of Electrical Accessories</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Do Nothing</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 8.6: Ranking of Businesses
The above criteria were useful in ranking the options based on the internal factor, external factor, strategy and different processes the BPC has to follow.

8.4 Conclusion

In this chapter we discussed the selection process for determining solutions to problems. There are two stages in this selection process. One, to determine the most appropriate growth option and then, two, to rank the businesses which have been identified.

In the first process, it was concluded that the diversification is the best option for the BPC at present. Then the four businesses into which the BPC might diversify were identified as ICT/Telecom, Investment in Hydropower, Manufacturing of Electrical Accessories and Services/Consultancy.

A list of criteria was developed to rank these options. The list includes all those criteria that are important and that need to be considered when deciding to choose a diversification options. The internal and external factors developed for choosing growth options was also included for choosing the options to give more accurate result. According to this the Services & Consultancy ranks first. This is because the BPC already has the capacity and resources required to do this work and it therefore would not have to invest very much to start working in this new, for the BPC, field of business.
9 CHAPTER 9: Conclusion & Recommendations

9.1 Answering the Problem of this Thesis

This research was carried out as a case study at the Bhutan Power Corporation (BPC), Bhutan to study their strategic growth options. The BPC is the only power utility in Bhutan and is entirely responsible for the distribution of safe, reliable and cheap electricity in Bhutan and for providing access to transmission lines.

The BPC at the moment offers only one product, electricity, and at the present the BPC is carrying out a lot of rural electrification (RE) work which requires a very high level of investments, most of which comes from external loans. At the same time the BPC is operating in a regulated environment. In Bhutan, the electricity tariff is set low and thus revenue from electricity sales is not enough for the BPC to recover the costs of these RE projects. As present the BPC spends around Nu.4 for every unit of electricity it distributes whereas they can only charge 0.75 Nu/unit. Recovering the discrepancy between costs and revenue is hardly realistic, therefore, the BPC is exploring other possibilities to expand its business to increase its revenue. The BPC has huge assets and it is looking into businesses where it might optimally utilize its resources. Moreover, the BPC also feels a need to offer new products to its customers but this can only be done by diversifying into other areas. So, the main objective of this research was to determine to what extent the BPC needs to extend its business in the future to increase its revenue.

Before discussing further about the growth options, it is very important to discuss if it is really necessary for the BPC to grow especially when they are making profit at the moment. There are various reasons for the BPC to pursue further growth which are as follows:

1. to increase the revenue
2. optimum use of resources
3. leverage the performance
4. absorb the resources of RE after the completion of the project
5. to take first mover advantage in establishing new businesses
6. to be self sustainable in future even if the subsidy granted by the government is lifted
7. to take the advantage of its brand name to establish and market new products

It is clear now that there are various reasons for the BPC to diversify but now the question is will it be able to support the new businesses or not and if it can really leverage their performance. As per the information received from the BPC it is mentioned that the BPC is in position to support the growth options as it does not require huge investment. Even if they have to look for external financing then the top management states that the financial institutions would be willing to provide financial support.

Once it is clear that the BPC has to grow then now it is necessary to find out what could be the growth options. A company looking for growth has four options according to Ansoff, 1. market penetration, 2. market development, 3. product development and 4. diversification. Following Ansoff’s philosophy in our research we set out to determine the most preferable growth option for the BPC. It is difficult to determine how to choose a most preferable growth option without developing a list of criteria to be met to support the decision. Thus the chosen method for this research was the multi criteria decision analysis (MCDA). This MCDA is helpful when one has to choose from more than two options as it allows the choice to be made filtering all the options through the criteria.
The market penetration was not considered in this research because the cost of this is very high due to tough terrain and it is not commercially attractive. At the same time the revenue from the market development is good but it has nothing to do with the BPC revenue as the revenue from sale of export of power goes directly to government. So, we were left with just two possible growth options and the BPC is looking at both the options for improving their performance and revenue.

The BPC offers only one product at the moment and they just want to focus at the moment in improving the reliability and efficiency of this product. This would help the BPC in reducing the cost of offering services and it would increase their profit.

Therefore, the last option left was the diversification and the result in Chapter 8 also concluded that it is the most preferred options. There are various benefits if the BPC goes for diversification. Firstly, they could generate more revenue, secondly optimally utilize their existing resources, thirdly the growth is limited if they stick to existing business and finally they will have more products to offer in the market.

But as pointed out, the BPC would like to stick to their related businesses and the literature also mentions that the performance of related business diversification is better than the performance of unrelated business diversification. It means that the BPC can create a synergy between the businesses in order to leverage the performance.

The four options for diversification identified for the BPC are described in detail in section 9.3 below.

9.2 Answering the Research Questions

The main research question central of this research was:

1. How should BPC develop its business in the future to improve its performance?

The sub-research questions that needed to be answered were:

1. What are the strategic growth challenges for the BPC?
2. According to theory what are the different strategic growth options?
3. According to theory, what is Multi Criteria Decision Analysis and how can it be used?
4. What are the possible strategic growth options for the BPC to overcome existing constraints?
5. What are the relevant criteria for the BPC managers when selecting strategic growth options?
6. Which strategic option would be most suitable for the BPC to meet its goals?

Data to answer the above questions was collected from the BPC head office via interviews with top management and other senior staff, and by reviewing the documents.

We will now briefly discuss the answers to the sub questions.

1. What are the strategic growth challenges for the BPC?

The BPC at the moment is the only power utility in the Kingdom of Bhutan and it has the social mandate to electrify the whole Bhutan by 2020. Therefore, they have huge task, rural electrification and the cost of electrification is very high due to the tough terrain of Bhutan. The BPC has to depend on external loans to finance all the RE activities. It is very difficult for the BPC to recover its costs due to the low electricity tariff set by the regulatory authorities.
Therefore, the major challenges faced by the BPC at the moment to support all the activities and to fulfil all its social obligations while at the same time looking for sustainability.

2. According to theory what are the different strategic growth options?

According to theory, and as per the Ansoff Matrix, there are four different strategic growth options for companies. They are market penetration, market development, product development and diversification.

In this research market penetration and market development were not considered as they are not relevant for the BPC at present.

3. According to theory, what is Multi Criteria Decision Analysis and how can it be used?

MCDA is a tool or method which as a framework to help managers select most preferred options based on a list of. This is helpful if there are more than two options to choose from, and there are many different methods that can be used to carry out this analysis. The weighting method was used in this research as it was felt this was the most very relevant method to use given the BPC’s position in Bhutan and its stage of development as a utility company.

4. What are the possible strategic growth options for the BPC to overcome existing constraints?

Top management and senior managers from BPC were interviewed to find out their preferred strategic growth options. Everyone interviewed believed that diversification would be the most preferred option but they also said that they would only consider diversification into related businesses.

The interviewees also mentioned that product development is also equally important and cannot be ignored, thus there has to be constant improvement in product reliability and efficiency.

5. What are the relevant criteria for the BPC managers when selecting strategic growth options?

A list of criteria was developed for selecting the growth options, internal and external factors were considered because both are equally important and both influence the decision making. The factors considered are listed below:

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>External Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial/Economical</td>
<td>Demographic</td>
</tr>
<tr>
<td>Organizational</td>
<td>Economical</td>
</tr>
<tr>
<td>Technological</td>
<td>Political</td>
</tr>
<tr>
<td>Social/Legal</td>
<td>Ecological</td>
</tr>
<tr>
<td>Ecological</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>Technological</td>
</tr>
</tbody>
</table>

Note: A detailed criteria lists is attached as Appendix 2.

6. Which strategic option would be most suitable for the BPC to meet its goals?

Once the list of criteria was completed it was circulated to the top management at the BPC as they were in a position to assign weights and scores. The analysis was carried out, and diversification was the most preferred option for the BPC. This result is also inline with the
feedback received from other staff during the interview period. Everyone felt the only possible way to expand or generate revenue was by diversification.

As mentioned in the problem analysis that the problem with the BPC at the moment is the underutilization of the existing resources. So, the new businesses would help the BPC to utilize their resources efficiently and earn more revenue than keeping it idle. Moreover, the major constraint faced by the BPC at the moment is the capital. Therefore, the BPC would be able to fund only those businesses which would require less investment but promises higher returns. If you refer back to table 6.8 of chapter 6, the Services/Consultancy and ICT/Telecom requires less investment but has high returns. But at the same time though the investment in Hydropower is high but it guarantees higher return as you could always consume or sale the power generated from these hydro electric power plants.

9.3 Recommendations

Once it became clear what the best growth option for the BPC was, it was also necessary to identify the areas in which BPC might expand. The options in which the BPC would be interested were identified using interviews, asking top management and senior staff what would be best for the BPC at present. Four options were identified, 1. diversifying into ICT & Telecom, 2. Investment in Hydropower, 3. Manufacturing of Electrical Accessories and 4. Services & Consultancy. BPC is looking at vertical diversifications except for ICT/Telecom which is horizontal.

All the options are in line with the government policy and the DHI supports this growth options if they are very profitable for the BPC to venture. This would definitely help the BPC to leverage their performance as they would be generating revenue by optimally using their existing resources with incremental investment to start up the business.

9.3.1 Hydropower Development

The BPC has the expertise in this field as they already own around 20 mini and micro hydels all over the country. Since the plants are old and do not generate their rated capacity there is a shortage of power in the lean (dry) season. Therefore, to combat this problem the BPC would like to invest in hydro electric power development since Bhutan is blessed with some of the best potential hydro electric power resources.

The government has already given approval to the BPC to invest in hydro electric power development projects but the BPC can only build hydro power plants up to 25 MW, project above this capacity fall under the Druk Green Power Corporation (DGPC).

The main advantage for the BPC to invest into hydro electricity is that they already have expertise in this area since they have been in this business for a long time. Moreover, this will also solve the problem of meeting internal demands and it could sell excess power to the national grid to generate more revenue. This is also inline with the Royal Government of Bhutan’s (RGoB) support for clean and safe energy. It is also supported because Bhutan has huge hydro electric power potential so far only 1, 479 MW has been exploited.

A SWOT analysis was done, see section 6.3.2.1.1 and the following strategies are recommended for the BPC based on the findings.

9.3.1.1 Strategy for Hydropower Development

1. **Award turnkey projects:** since the BPC does not have the experience with bigger hydro electric power projects; it is recommended to award the first work as a turnkey project. During this project the employees should be given opportunity to learn and get experiences for future projects.
2. **Build In House Capability:** for future it is highly recommended that the BPC develops in house capability. This is because you do not need to be dependent on external experts and it gives an incentive for company people to develop their competencies.

3. **Choosing Appropriate Technology:** the BPC should be very careful when choosing the hydro electric power equipment so as not to have problems due to bad choices for sophisticated and difficult to maintain equipment. Problems like availability of spare parts, operation and maintenance costs and ease of maintenance also have to be considered.

### 9.3.2 Manufacturing of Electrical Accessories

The BPC is carrying out a lot of RE work which requires vast amount of electrical accessories like poles, angles and channels etc. Therefore, there is a huge in house demand for all these materials, and at the moment these materials are procured either from Bhutan or from India. So, the BPC is spending large amounts of its money on material procurement. In response to this the BPC is planning to establish its own manufacturing unit so that it can meet its own demand for materials and service the new industries coming up in Bhutan.

There is a huge scope for the above but there are also risks involved. The major risk the BPC might be facing is competition from the manufacturing plants in Bhutan. At the same time the BPC does not have expertise in manufacturing and this will be an entirely new business for them. There are risks that the costs of manufacturing might be higher than the costs of procurement due to high raw material costs, much of which will have to be purchased from India or other countries.

Producing its own electrical accessories seems to be a very lucrative business for the BPC to venture into but a thorough analysis like financial, technical and market survey has to be carried out before the BPC invests in this business. Such an analysis should help the BPC determine the risks of inherent in its plans and help top management decide if they should go into the new business.

#### 9.3.2.1 Strategy for Manufacturing of Electrical Accessories

**Joint Venture Company:** establishing a joint venture company could be the most appropriate approach for the BPC to take in this case, given that BPC does not have any technical know how and the experiences in manufacturing. Moreover, to minimize the risk of market fluctuations and competition, it will also be favorable to associate with big companies.

### 9.3.3 ICT/Telecom

At present the BPC is laying fiber optic cable over its transmission lines as they implement a supervisory control and data acquisition (SCADA) system. Once completed, the entire network will be connected to the grid.

The BPC wants to make use of this existing infrastructure to diversify into ICT & Telecom services and it already has a license to supply ICT and Telecom services. The greatest advantage for the BPC at present is to get into this business is to take advantage of the opportunities their network gives as the ICT sector is booming in Bhutan. At present Bhutan lacks an ICT backbone structure. The RGoB is also very supportive of this business.

The BPC will not have to invest much in this project as they already have the infrastructure in place so the costs will be low. Further to this the BPC has also been chosen as the focal organization to provide international links to other service providers within Bhutan.
So, the BPC is in a very good position at the present, and it is well supported by the RGoB to venture into this business. The risks are also low because the BPC will be using its existing infrastructure with a minimum need for extra investment.

### 9.3.3.1 Strategy for ICT/Telecom

**Low Cost Strategy:** the BPC can provide services at low costs mainly because they only need to make incremental investment due to the availability of the fiber optic cable network. This will attract customers and is in line with the RGoB to seek increased gross national happiness for its people.

**Branding:** the BPC has good brand image as a power utility company and they will have to establish the same brand image as an ICT service provider to help them capture the market.

**Pre-adoption Strategy:** the BPC is in the process of establishing a National Load Dispatch Center (NLDC) which will require dedicated, secure and real time data connectivity. A successful implementation of this work will help the BPC to build its image as an ICT service provider.

**Customer Awareness:** The customer needs to be educated by organizing campaigns and explaining the benefits of these services.

### 9.3.4 Services/Consultancy

BPC at the moment enjoys a monopoly in the power utility sector. There are no other players in the market who are more competent and capable than the BPC. Therefore, the BPC would like to take advantage of the situation and make use of the expertise and resources to generate revenue.

The BPC has immense expertise in the field of power distribution and transmission. Moreover, it has trained people who could handle all the problems related to electrical design and installations. Now the BPC is interested in using its expertise and resources to give advice and related services including consultancy, to industry or others that might need such skills. So, the main interest of the BPC is to get more into the service related businesses.

Services could be offered to new industries coming up in future, it would be very expensive for industries if they have to look for external experts. Therefore, there should be a high demand for such kinds of services in future as most industries would approach BPC due to their competency.

The BPC’s interest is not only to add technical services, it is also interested in management consultancy for bigger corporations in Bhutan. The BPC is one of the most well established corporations in terms of good management practices and were the first one to implement performance based incentive system and performance management system in Bhutan. So, new corporations will be looking to the BPC for management consultancy and advice.

### 9.3.4.1 Strategy for Services/Consultancy

**Low Cost Services:** the BPC can initially start offering low cost services which do not require huge amount of man power. This way the risks associated with new business could be lowered.
Training Staff: more staff could be trained in the specialized fields where there is large shortage in the market so that the new industries coming up could come to the BPC for these services.

Selecting Suppliers and Contractors: once the BPC starts receiving bigger projects from internal industries or from external clients, the BPC could select suppliers and contractors and sign agreements with them for supply and work execution. This would also give the company an incentive to be associated with reputable company like the BPC and at the same time it will help to maintain the quality of services, which is really necessary for future offers.

Recruit Manpower: if the BPC starts receiving offers, and if it is not in a position to handle the work with the existing manpower strength, then it can always recruit additional staff; but this would depend on the work volume and also on how well the BPC is doing in this area.

Final Remark

Four options for BPC to diversify into were identified and the reasons for diversifying elaborated. Now the question is: Is it possible for BPC to invest in all these four businesses simultaneously?

More stringent criteria need to be developed which to help the BPC managers to decide which option(s) to choose. Financial criteria like total investment, IRR, payback time etc have not been used to rank the above options, this requires a thorough analysis.

In our case the options were ranked based on the criteria developed based on strategy, fulfillmet processes, information processes and business development activities together with the internal and external factors.

Services/Consultancy ranks first, but the final selection will also depend on a thorough analysis being done and finally it will depend on the implementation plans of the BPC. The BPC is looking for diversification into related businesses which is well supported by the literature.

Diversification in different businesses will definitely help the BPC to address most of its issues and moreover if they invest in these businesses then they would get the first mover advantage. So, even if there is competition later on, it would be difficult for new companies to compete as the BPC would have already been established by then.

9.4 Limitations of this Research & Suggestions for Future Research

When carrying out research there are always limitations to the process and there was no exception for this research. Some limitations were due to the need to carry out the work in the time allowed to complete it. Below we give a list of the most important limitations we met during our research.

1. The allowed time for data collection was relatively short since it was very difficult to get an appointment with the top management team.

2. A thorough analysis of the individual businesses was not carried out as it was beyond the scope of this research. Therefore, the options selected based on strategy and other processes may not be enough to confirm the preferability of the options.

3. The Ansoff matrix was selected for studying the growth options, but at the beginning we rejected the two growth options, market penetration and market development, as for us these options were not relevant. We were just left with two options, product
CHAPTER 9: CONCLUSION AND RECOMMENDATIONS

development and diversification. The criteria developed for this research could also be used to evaluate market penetration and market development.

4. Every attempt was made to make the list of criteria used in this research mutually exclusive and collectively exhaustive, and to make it more specific and measurable the SMART principle was used to select the criteria. However, it is important to note that other criteria might have been used had a different perspective been taken.

5. The weight and score for do nothing option was assigned by me for ranking the options as it was left out earlier during field work. It should have been filled up by the top management but it was not possible now due to time limitation.

Now there are few suggestions I would like to make in order to carry out this research successfully:

1. The planning for data collection has to be done very well otherwise it would be difficult to complete this work on time.

2. This research has used multi criteria analysis and the major drawback of this method is that you may come to wrong conclusion because of the criteria you have selected. Therefore, the criteria have to be developed which are very specific and measurable so that it could avoid biasness. Moreover, as mentioned it has to be mutually exclusive and collectively exhaustive in order to include all the criteria.

3. Some of the criteria developed in this research are only relevant for the BPC due to nature and environment they are operating in. Therefore, if the similar kind of research is carried for other companies then some of the criteria has to be revised in order to use this.

9.5 Reflection

The case study of the BPC was designed to study its growth options. The BPC is the only utility in the kingdom of Bhutan, and it is faced with the challenges of balancing between social mandates and sustainability of the company. Therefore, this research was carried out to help us understand the problems faced by the BPC and then come up with a strategy which could help it generate more revenue in the future.

The Chapter 3 of this research was really useful in understanding the reasons for strategic growth and the importance of such kinds of growth. Then in the same chapter we also saw the different growth options mentioned by Ansoff which was necessary to guide us to choose the various options available for growth. Then this literature was useful in studying in depth about the new product development and diversification. The framework developed for product development and diversification was used to plot the different options of the BPC, which give a very clear picture of where and how these products fit into. But it is worth mentioning here that, may be the right literature is not chosen or it does not fit the context of the BPC as they operate in regulated market having social mandates.

Then the Chapter 4 on multi criteria analysis was very good in understanding about the multi criteria analysis and the various methods since this was the core of the research. The various growth options was selected based on the criteria developed.

The literature review would definitely help the BPC to understand in depth about the new product development and diversification. It is necessary for them to understand the advantages and disadvantages of choosing any options before making any concrete decisions. So, this literature could be used by the BPC to help them to make good decisions. The overall outcome of the BPC will be very good if they implement as per the findings. This
is because this would help them to make quick and good decision based on the findings of the report.

Overall, this study enriched our work skills and helped us understand the problems faced by the BPC and, at the same time, we have addressed issues like how to solve the BPC's problems. The results of this study should provide a firm foundation upon which the BPC can grow and evolve in the future.

Options selected would definitely be useful in meeting the goal of the company, and referring back to table 2.7, we will find that these new options would help the BPC to meet the following goals.

1. To ensure optimal and efficient utilization of resources and improve the financial strength of the corporation.

2. To build a dynamic corporate culture through a team of professional and productive employees who are motivated, dedicated and well informed.

3. To provide the best value for goods and services in a consistent, transparent and timely manner

4. To be the best public sector company and a role model of corporate governance in the country.
10 References:


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REFERENCES


REFERENCES


Royal Charter for Druk Holding and Investments (2007).


Appendix 1: Interview Questionnaires

Questions for General Managers (Customer Services, Transmission, Development & Construction and Procurement)

General
1. Can you please discuss the present scenario of the BPC?
2. How is company performing at the moment?
3. Has the BPC been able to meet the targets?
4. What are the major problems faced by the BPC at present?
5. What are the indicators used for measuring the performance of the company?
6. In your view is it necessary for the BPC to grow? Why?
7. What is the government’s policy regarding growth?

Finding Options
1. If the BPC needs to grow then what could be the growth options?
2. What would be the major constraints?
3. Will government policy support the growth options?
4. Is this option going to solve the problems mentioned above?
5. What are the areas that the BPC is looking to expand its business into?
6. Will the BPC be able to support the growth options?

Questions for Senior Staffs

General
1. What are the major problems faced by the BPC at present?
2. In your view is it necessary for the BPC to grow? Why?

Finding Options
1. If the BPC needs to grow then what could be the growth options?
2. What would be the major constraints of this option?
3. Is this option going to solve the problems mentioned above?
4. What are the areas the BPC can expand the business into?
5. Will BPCL be able to support the growth options?

Questions for General Manager, Finance Department

1. Can you please tell me how is the company performing financially?
2. What are the financial indicators used for measuring performance?
3. Is the BPC able to finance all its works?
4. If not then how are these works financed?
5. What are the main sources of revenue for the BPC?
6. Do you feel that the BPC would make profit by sticking to its present business alone?
7. What could be the other options for BPCL to increase its revenue?

Questions for Sr.Manager, Rural Electrification

6. What are the targets for the rural electrification projects?
7. Are you able to meet the targets?
8. What are the major problems you have been facing?
9. How do you overcome them?
10. Do you recognize the need for the BPC to grow in future?
11. What could be the possible areas for the BPC to expand its business?

Questions for General Manager, Human Resource & Administration

1. What is the present staff strength?
2. Is the present strength enough to carry out all the BPC’s works?
3. Do you feel that the BPC will need to recruit more people if it decides to expand in the future?
4. If the BPC expands then do you have sufficient qualified staff or do you need to train more people?

Questions for Sr.Consultant, BPCL

1. Do you feel that the BPC can expand in future?
2. If the BPC needs to expand then what are the areas where it can expand?
3. Does the BPC have the required technical capabilities at the moment?
4. If not, then what needs to be improved or developed?
5. What could be the possible areas of expansion for the BPC?
6. What are the major drawbacks of the BPC?
### Appendix 2: Criteria for BPC

#### Internal Factors

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<tr>
<th>Sl. #</th>
<th>Criteria</th>
<th>Market Penetration</th>
<th>Market Development</th>
<th>Product Development</th>
<th>Diversification</th>
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<td>Financial/Economical</td>
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<td>B Amenability for strategic segregation / integration with present operations</td>
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<td>C Effect on future operational risks</td>
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<td>D Financial Risk</td>
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<td>Organizational</td>
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<td></td>
<td>A Adequacy of present staff (Quantity)</td>
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<td>B Adequacy of present staff (Qualification and experience)</td>
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<td>C Impact on engaging specialist services in terms of disparity in salary / other emoluments structure</td>
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<td>D Present physical infrastructure adequacy</td>
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<td>E Impact on Organization structure</td>
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<td>F Availability of specialist (local+foreigners)</td>
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<td>G Requirement of additional profit centre with independent operational autonomy</td>
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<td>Technological</td>
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<td>A Coherence with present operations</td>
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<td>B Adaptability of present skill level</td>
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<td>C Is the technological requirement cutting edge</td>
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<td>D Present customer base coverage</td>
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<td>Social/Legal</td>
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<td>A Customer Acceptance</td>
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<td>B Legal Acceptance of use of existing infrastructure</td>
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<td>C Employee’s Increased Emoluments</td>
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<td>D Compliance to Licensing Conditions</td>
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<td>E Acceptability by DHI</td>
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<td>F Impact on social obligations of present operations</td>
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<td>Ecological</td>
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<td>A Adherence to statutory requirements of NEC and/or acceptance of mitigations measures</td>
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<td>B Risk assessment of future requirements (more stringent)</td>
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<td>C Possibility of eco-friendly acceptance</td>
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### External Factors (DEPEST)

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<th>Sl. #</th>
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<th>Market Penetration</th>
<th>Market Development</th>
<th>Product Development</th>
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<td><strong>1</strong></td>
<td>Demographic</td>
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<td>Regional Impact (Region Specific / All regions in the country)</td>
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<td>B</td>
<td>Applicability of regionised differential pricing</td>
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<td>Statutory limitations to differential pricing principle</td>
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<td>Cost reduction to customer</td>
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<td>Overall Economic benefit to the Country</td>
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<td>C</td>
<td>Productivity Improvement / Enhanced Operating conditions</td>
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<td>D</td>
<td>Cross-competition with other products and the impact of the same</td>
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<td>E</td>
<td>Requirement of subsidies from government</td>
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<td>Contribution to GNH (indirect economic benefit measurement)</td>
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<td>Political</td>
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<td>Synergy with policy</td>
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<td>Possibility of acceptance by policy makers (even if it involves policy change)</td>
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<td>C</td>
<td>Necessity or otherwise of additional incentives from Government</td>
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<td>Meeting statutory requirements of Government</td>
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<td>Risk assessment of future requirements (more stringent)</td>
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<td>Social</td>
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<td>A</td>
<td>Impact on present licensed operations – any deterioration or add-on to the facilities to the customer</td>
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<td>Possibility of legal implications in case the competitor contests</td>
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<td>C</td>
<td>Does it impair the social obligation of the company?</td>
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<td>Technological</td>
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<td>Availability of expertise / manpower in country and / or educational institutions capacity to gear up for the same in the long run</td>
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<td>Cost of technological adoption</td>
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<td>C</td>
<td>Additional infrastructure requirements at customer premises (required or not) for product use and the associated cost</td>
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<td>Synergy with other available infrastructure at customer premises</td>
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<td>E</td>
<td>Is entry barrier low</td>
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In chapter 7 we have tested all the criteria against SMART criteria and the table below shows the compiled list of criteria of the selected ones.

### Internal Factors

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<tr>
<th>Sl. #</th>
<th>Criteria</th>
<th>Market Penetration</th>
<th>Market Development</th>
<th>Product Development</th>
<th>Diversification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Financial/Economical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Sustenance capability within statutory limits (allowable expenditure)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Amenity for strategic segregation / integration with present operations</td>
<td></td>
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<tr>
<td>2</td>
<td><strong>Organizational</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>A</td>
<td>Adequacy of present staff (Quantity)</td>
<td></td>
<td></td>
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<tr>
<td>B</td>
<td>Adequacy of present staff (Qualification and experience)</td>
<td></td>
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</tr>
<tr>
<td>C</td>
<td>Present physical infrastructure adequacy</td>
<td></td>
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<tr>
<td>D</td>
<td>Impact on Organization structure</td>
<td></td>
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<tr>
<td>E</td>
<td>Availability of specialist (local+foreigners)</td>
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<td>3</td>
<td><strong>Technological</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>A</td>
<td>Coherence with present operations</td>
<td></td>
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</tr>
<tr>
<td>B</td>
<td>Adaptability of present skill level</td>
<td></td>
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<tr>
<td>C</td>
<td>Present customer base coverage</td>
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<tr>
<td>4</td>
<td><strong>Social/Legal</strong></td>
<td></td>
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</tr>
<tr>
<td>A</td>
<td>Customer Acceptance</td>
<td></td>
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<tr>
<td>B</td>
<td>Legal Acceptance of use of existing infrastructure</td>
<td></td>
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<tr>
<td>C</td>
<td>Employee's Increased Emoluments</td>
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<td></td>
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<tr>
<td>D</td>
<td>Compliance to Licensing Conditions</td>
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<tr>
<td>E</td>
<td>Impact on social obligations of present operations</td>
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<tr>
<td>5</td>
<td><strong>Ecological</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>A</td>
<td>Adherence to statutory requirements of NEC and / or acceptance of mitigations measures</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>B</td>
<td>Risk assessment of future requirements (more stringent)</td>
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</tbody>
</table>
### External Factors (DEPEST)

<table>
<thead>
<tr>
<th>Sl. #</th>
<th>Criteria</th>
<th>Market Penetration</th>
<th>Market Development</th>
<th>Product Development</th>
<th>Diversification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demographic</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>A  Regional Impact (Region Specific / All regions in the country)</td>
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<tr>
<td></td>
<td>Coverage in Western Central Eastern</td>
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<td></td>
<td>B  Applicability of regionised differential pricing</td>
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<tr>
<td>2</td>
<td>Economical</td>
<td></td>
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<tr>
<td></td>
<td>A  Cost reduction to customer</td>
<td></td>
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<td></td>
<td>B  Overall Economic benefit to the Country</td>
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<td></td>
<td>C  Productivity Improvement / Enhanced Operating conditions</td>
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<td>D  Requirement of subsidies from government</td>
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<td></td>
<td>E  Contribution to GNH (indirect economic benefit measurement)</td>
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<td>3</td>
<td>Political</td>
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<tr>
<td></td>
<td>A  Synergy with policy</td>
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<td>4</td>
<td>Ecological</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>A  Meeting statutory requirements of Government</td>
<td></td>
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<tr>
<td>5</td>
<td>Social</td>
<td></td>
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<tr>
<td></td>
<td>A  Impact on present licensed operations – any deterioration or add-on to the facilities to the customer</td>
<td></td>
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<td></td>
<td>B  Possibility of legal implications in case the competitor contests</td>
<td></td>
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<tr>
<td>6</td>
<td>Technological</td>
<td></td>
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<tr>
<td></td>
<td>A  Availability of expertise / manpower in country and / or educational institutions capacity to gear up for the same in the long run</td>
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<td></td>
<td>B  Cost of technological adoption</td>
<td></td>
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<tr>
<td></td>
<td>C  Synergy with other available infrastructure at customer premises</td>
<td></td>
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<tr>
<td></td>
<td>D  Is entry barrier low</td>
<td></td>
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</tbody>
</table>
Appendix 3: Implementation of PBIS

Objectives of the PBIS

The Corporate Strategic Plan (CSP) clearly outlined the targets and strategies for the BPC, but it did not address the issue of how BPC could actualize the plan. Therefore, BPC implemented The Performance Based Incentive System (PBIS) which would help it to operationalize the CSP by laying out clearly defined targets and measuring achievements against them on an annual basis. The PBIS is a mechanism which aligns the individual sections/units/divisional goals with the overall objective of the company by clearly defining the targets, PBIS is also used to keep track of the performance of various sections/units or divisions.

Since the Corporatization, there has been a drastic improvement in the BPC's performance. The mindset of the people has also changed and they have become more proactive and are ready to take challenges. This, in turn, has led to improved performance, financially and otherwise, from year to year. The performance of the BPC has improved significantly with the introduction of the PBIS in 2006 as it is much easier to quantify the gains/improvement made from year to year, and track progress in various facets of the BPC's business (BPC Performance Based Incentive System, 2007).

Mechanism and Structure of PBIS

To quote the PBIS document, "With the introduction of PBIS and its implementation in 2006, there has been marked improvement in operational efficiency, employee productivity and motivation. PBIS has led to coordinated and concerted efforts amongst the Departments/Division/Units resulting in outstanding performance as compared to the previous years".

The overall mechanism of the PBIS is to set targets at the beginning of the year and measure achievement against the targets at the end of the year and provide bonus/incentive payments based on the proportion of the targets achieved. It is a performance based system which allows the BPC to pay incentive based on the achievement of the various units/sections/departments. This helps to create a link between achieving targets/results and receiving rewards in the form of end-of-year incentive/bonus payments. Therefore, it follows the management by objectives model (MBO), where objectives are clearly defined and direct the approach to everyday work. It promotes a work culture that values initiatives and results and encourages dynamism and innovation.

In considering the structure of the incentive/bonus payouts to be made to employees, there are two main issues to consider:

1. the link between performance and reward must be strong enough to actually incentivise employees to work harder, perform better, and, in some cases, change their attitude or behavior. This means that, as far possible, the rewards should be targeted in such a way that all company employees will not receive the same payouts, as has been the practice for corporate entities in Bhutan - e.g. a 2 or 3 months bonus across-the-board. Ideally, the bonus payouts should differ, and be tied to individual performance.

2. the overall wellbeing of the company must be kept in mind. Even if certain employees/units performed well, if the overall company performance declines, then it would be very hard to justify bonus payouts to anyone.
The proposed structure is to incorporate performance at the section/division level and the department level, and further at the corporate level. Thus, the PBIS is aimed at linking targets at division/section, department and corporate level and then rewarding the performance of the same in achieving the set targets at these different levels. This helps to give a strong incentive for the employees working in the organisation to work harder as they know that they will be rewarded based on their performance. Depending on the performance at each of these levels, an employee may be eligible to receive incentive/bonus payouts that will vary between 0 – 25% of the annual salary (i.e., equivalent to between 0 – 3 months salary payout). Whereas the payout would vary between 0 to 3 months, the average payout for the whole corporation shall be limited to 2 months, exceeding which, the payout shall be prorated to 2 months average.
Appendix 4: Establishment of DHI

The Royal Bhutan Government established a government holding company called the Druk Holding and Investment (DHI). There are presently 7 corporations under DHI and BPC is one of them.

<table>
<thead>
<tr>
<th>DHI – Owned Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basochhu Hydro Power Corporation Ltd.</td>
</tr>
<tr>
<td>Kurichu Hydro Power Corporation Ltd.</td>
</tr>
<tr>
<td>Chhukha Hydro Power Corporation Ltd.</td>
</tr>
<tr>
<td>Bhutan Power Corporation Ltd.</td>
</tr>
<tr>
<td>Bhutan Telecom Ltd.</td>
</tr>
<tr>
<td>Druk Air Corporation Ltd.</td>
</tr>
<tr>
<td>Natural Resources Development Corporation Ltd.</td>
</tr>
</tbody>
</table>

The primary purpose of Druk Holding and Investments Limited is to ensure that its companies are able to meet the challenges and requirements of the corporate sector in a highly competitive economy (Royal Charter for Druk Holding and Investments, 2007).

In order to create and maximize returns to DHI’s shareholders, the people of Bhutan, it has the following responsibilities.

a) Act as the holding company for the government-linked companies (GLCs) transferred to DHI.
b) Strengthen corporate governance by ensuring clear separation of the ownership and management of DHI.
c) Enhance the performance of the GLCs by making them responsible and accountable for their performance.
d) Raise funds for investment.
e) Maximize return on investment by optimal utilization of resources.
f) Lead, complement and spearhead the growth of a dynamic private sector.

The following are the primary functions of DHI.

a) Improve corporate governance of the GLCs by appointing their Board of Directors and CEOs who are professionally qualified, well experienced, highly motivated and of high integrity.
b) Improve performance of the GLCs by tracking their performance to ensure sound business management and financial control through setting of performance targets and benchmarks for the GLCs and holding the GLCs responsible for meeting those targets and benchmarks.
c) Achieve optimal capital efficiency by consolidating resources of the GLCs. Provide guarantees, if required, for the GLCs, if deemed appropriate by DHI.
d) Invest in the existing GLCs to revitalize, restructure, and expand their business and also invest in new companies and businesses.
e) Make investments outside Bhutan.
f) Promote and encourage entrepreneurship and business development through venture capital and other required institutional support.
g) Act as incubator and initiate businesses in new areas.
h) Divest shares in the GLCs with no strategic interest to the government or where government participation may not be necessary.
i) Raise funds through borrowing from domestic and international financial institutions and through the issuance of debt, equity or other securities in the domestic and international capital markets.
j) Subscribe or purchase equity, debt or other securities.
APPENDIX 4: ESTABLISHMENT OF DHI

k) Provide managerial and other support services on a fee basis to both public and private sectors.
l) Undertake investments in reserved sectors and activities.
Appendix 5: Tariff Structure and Corporate Strategic Plan of the BPC

Tariffs

The Bhutan Electricity Authority, Royal Government of Bhutan has approved a three year tariff revision for the period beginning July 1, 2007 to June 30, 2010. The first phase tariff revision is effective from July 1, 2007 (Managing Director Tariff Revision Notification, 2007).

The table below shows the tariff of the BPC and it is one of the lowest compared to the power tariffs in the region.

<table>
<thead>
<tr>
<th>For Low Voltage - Domestic Customers:</th>
<th>July 1, 2007 onwards</th>
<th>July 1, 2008 onwards</th>
<th>July 1, 2009 onwards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block I (Lifeline)</td>
<td>Up to 80 kWh/month</td>
<td>0.75</td>
<td>0.75</td>
</tr>
<tr>
<td>Block II</td>
<td>81 to 300 kWh/month</td>
<td>1.25</td>
<td>1.35</td>
</tr>
<tr>
<td>Block III</td>
<td>Above 301 kWh/month</td>
<td>1.55</td>
<td>1.70</td>
</tr>
<tr>
<td>For Low Voltage - Bulk Customers</td>
<td></td>
<td></td>
<td>1.55</td>
</tr>
<tr>
<td>For Medium Voltage Customers (33/11/6.6 kV)</td>
<td>Energy Charge Nu./kWh</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>Demand Charges Nu./kW/Month</td>
<td>65</td>
<td>75</td>
</tr>
<tr>
<td>For High Voltage Customers (66 kV and Above)</td>
<td>Energy Charge Nu./kWh</td>
<td></td>
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<td></td>
<td></td>
<td>1.29</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td>Demand Charges Nu./kW/Month</td>
<td>65</td>
<td>75</td>
</tr>
</tbody>
</table>

Source: www.bpc.bt

Corporate Strategic Plan of the BPC

Reasons for such Plan

The motives for framing such corporate strategic plans are many but the most important reasons as mentioned in corporate strategic plan are highlighted below.

a. “To map out challenging short and long term goals for BPC that will direct the organization toward its Vision over the years to come.

b. To increase understanding about the BPC mandate so that BPC staff and stakeholders can work toward a common vision.

c. To create an awareness about BPC values and how it operates.

d. To understand the core business of BPC and look at outsourcing opportunities and new avenues for value creation.

e. To provide a commitment to the vision of BPC so that BPC is accountable.

f. To foster ongoing communication between BPC and its stakeholders” (BPC Corporate Strategic Plan, 2007).

The BPC has come up with different strategies to help them to achieve their objectives and the goals of the company (BPC Corporate Strategic Plan, 2007).
Objectives and Strategies

Objective 1: To provide best services to customers

STRATEGIES

1. Offer innovative and user friendly services and support
2. Ensure transparent procedures
3. Ensure fair tariffs relevant to the market
4. Assess and improve customer satisfaction

Objective 2: To advocate social and environmental responsibility

STRATEGIES

1. Provide “Electricity for All” by 2020
2. Maintain a lifeline tariff that supports the basic electrical needs of people
3. Engage in environment friendly activities
4. Promote understanding and cooperation with the communities

Objective 3: To transmit, distribute and supply electricity in a safe, reliable and efficient manner

STRATEGIES

1. Develop National Grid
2. Extend grid infrastructures to all Dzongkhags
3. Undertake timely system up-gradation
4. Ensure efficient and reliable system performance
5. Practice safety standards

Objective 4: To reliably and efficiently wheel electricity for domestic consumption and export

STRATEGIES

1. Develop National Grid and tie-lines for export of electricity
2. Establish system operator functions
3. Ensure efficient and reliable system performance

Objective 5: To practice prudent financial management and corporate governance

STRATEGIES

1. Rationalize expenditure and maximize revenue
2. Optimize the use of resources
3. Strengthen management control and management information systems
4. Explore new revenue streams
5. Outsource low-value adding activities
6. Provide best value for goods and services
7. Seek tariffs to reflect true cost of business

Objective 6: To build professionalism and inspire enthusiasm

STRATEGIES

1. Streamline human resource utilization and enhance productivity
2. Ensure transparent and fair human resource and administration system
3. Build HR capacity to reduce external dependency
4. Introduce competitive pay and benefits
5. Provide conducive work environment that fosters learning, growth and teamwork
Appendix 6: MCDM Methods

Dominance Methods

This is the MCDM method which requires the least information in decision making environment. This method is used to determine if an alternative is dominated by alternative that is superior in one or more attributes to the remaining attributes. This method can be used in a deterministic or probabilistic form.

Greening (2004) discusses the difference between the deterministic and probabilistic methods. The main difference according him is, that the dominance occurs if the probability of one alternative achieving a superior outcome is equal to or greater than the probability of another alternative achieving the same outcome rather than working with the alternatives in the case of probabilistic method. Whereas for the deterministic dominance method, a pareto optimal or efficient frontier (tradeoff curve) can be drawn as a locus of alternatives that are not dominated (Greening, 2004).

Dominance methods do not require the quantification of values, or the initial choice of alternatives to be considered in the process. As a result, dominance methods are the least information intensive of all of the methods considered, and requires the least consensus formation among participants.