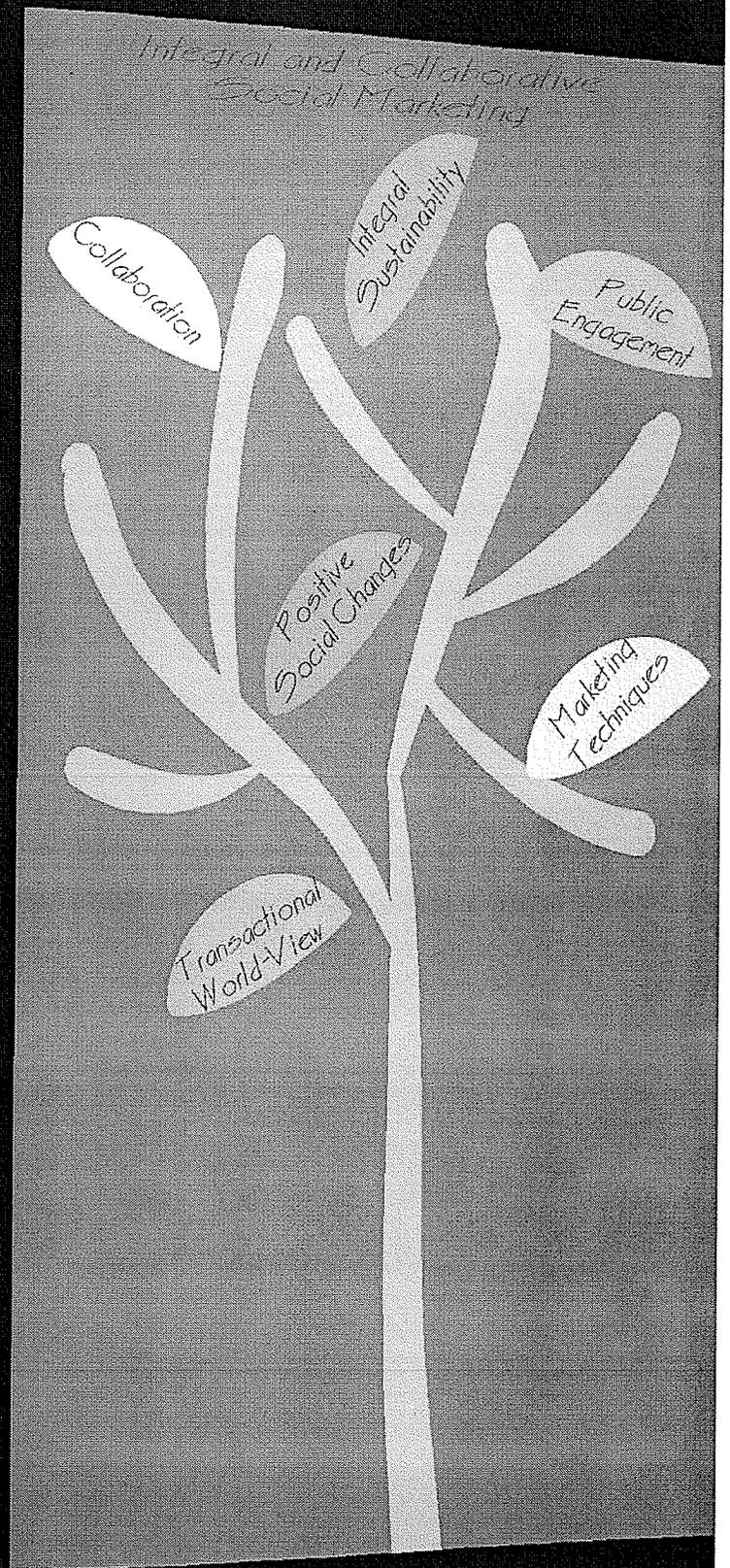
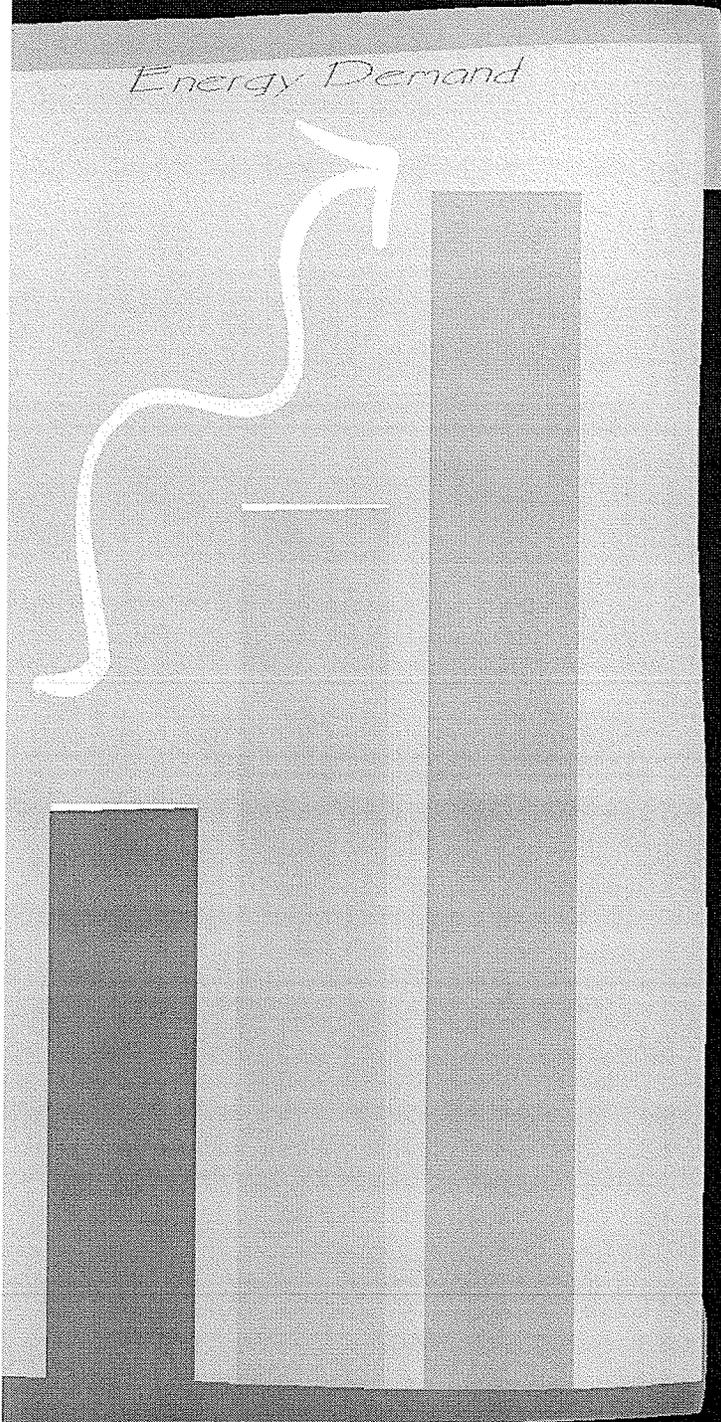


THE ROLE OF PLANNING IN ADDRESSING RESIDENTIAL ENERGY EFFICIENCY AND
DEMAND SIDE MANAGEMENT IN WINNIPEG
TOWARDS AN INTEGRAL AND COLLABORATIVE SOCIAL MARKETING APPROACH



THE UNIVERSITY OF MANITOBA
FACULTY OF GRADUATE STUDIES

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**The Role of Planning in Addressing Residential Energy
Efficiency and Demand Side Management in Winnipeg:
Towards an Integral and Collaborative Social Marketing Approach**

By

Fereshteh Moradzadeh

A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of
Manitoba in partial fulfillment of the requirement of the degree

Of

Master of City Planning

Fereshteh Moradzadeh©2009

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DEDICATION

This thesis is dedicated to the memory of my father Ali Moradzadeh, the man who generously devoted his life to his family. To my mom, Motahareh Mirzakhanelou, who inspired me to be different and to follow my dreams. To my husband, Ebrahim Rahimi, who has been the source of strength for me. To my son, Kian Rahimi, who taught me the meaning of love.

Abstract

The primary objective of this research project is to address residential Demand Side Management (DSM) or Energy Demand Management challenges through behavioural change strategies. Manitoba Hydro's residential DSM program has been chosen as a case study.

Social marketing is an effective behavioural change tool to address housing energy efficiency. However, a critical review of social marketing demonstrates its limitations in fully addressing DSM challenges. Some of its limitations include the technical rational planning process, a focus on individual rather than community-level intervention, output rather than outcome based evaluation criteria, and a lack of community engagement in the design and implementation of the initiative.

To address social marketing limitations, I propose a model of Integral and Collaborative Social Marketing (ICSM), which integrates social marketing and planning methods, in order to promote social equity and environmental goals at a larger community scale.

ICSM involves the target market and stakeholders in identifying the target market's collective values and developing a series of individual or collective actions, toward adoption of the desired behaviour. Furthermore, development of the actions is based on the target market's capacity, skills and assets of its individuals and their neighbourhood(s).

SECTION ONE: Introducing the Project

Chapter 1: Introduction

1.1 Opening Statement

Historically, planning,—including community, town, city, urban and regional planning,—has been seen as “management of a product, the physical shape and form, the morphology and spatial organization of the urban region” (Healey, 1997, p. 8). However, over time the culture of planning has dramatically changed toward appreciation of the link between environmental and social issues. Planners began to recognize “the social processes underpinning spatial organization and urban form” (Healey, 1997, p. 28). This movement toward the social reality of planning required knowledge from social science disciplines, such as sociology, anthropology, and public administration. Furthermore, environmental problems, such as climate change and the energy crisis, have greatly influenced many disciplines, including planning. Planners have responded to these problems by developing theories and practices in the field of environmental sustainability. To address sustainability, planners have needed to borrow from other disciplines, such as natural resource management, ecology, geography, and the discipline of sustainability itself.

Borrowing from these disciplines provided the opportunity for planners to be aware of the extensive benefits of inclusive approaches. Planning is striving to not only become inclusive in terms of including knowledge of other disciplines, but also in terms of including local community knowledge and engaging people in addressing their community’s problems. Recent theories in planning, such as communicative action

theory or collaborative theory, place emphasis on communication and interactive approaches between the public and decision makers to achieve a successful plan (Healey, 1997).

One discipline which has great potential in informing planning is social marketing. Social marketing is a growing discipline, aimed at sparking positive behavioural changes for the benefit of society. Social marketing is applied to improve target behaviours primarily in public health, safety, and environmental conservation.

1.2 Problem Statement

Energy-related problems, such as limited energy supplies, climate change, and energy poverty, remain crucial for planning toward sustainable economic, physical and social development around the world, including Canada. Energy supplies in the world fail to keep pace with growing population and demand. The International Energy Agency (IEA) in its 2005 World Energy Outlook reported that world energy demand is expected to increase by more than 50 percent between now and 2030 (Leahy, 2006). At the same time, IEA predicted an oil shortage within the next few years. Also, in order to prevent hazardous climate change, “world greenhouse gas emissions need to be reduced by about 60 percent from today’s levels by 2050” (Leahy, 2006, p. 1). Canada is required to significantly reducing its green-house gas (GHG) emissions to meet the Kyoto Protocol agreement requirements. In addition to limited energy supplies and climate change, energy poverty is a growing problem for Canadians. The price of water, fuel and

electricity for home use have increased about 50 percent between 1997 and 2007 in Canada (Maynes, 2008 a).

The traditional way to address energy problems is focusing on the supply-side of energy and providing cleaner ways to generate power. However, there is also great potential in Demand Side Management (DSM) and energy efficiency. Behavioural changes of end users toward energy efficiency is one way toward energy saving. "Building on the work of Gardner and Stern (2008), Laitner and Ehrhardt-Martinez (2009), Dietz et al. (2009), and Meier (2009), it appears the scale of the near-term behavioural resources is on the order of a 25-30 percent savings" (Ehrhardt-Martinez, 2009, p. 5). However, the problem is that there are many barriers to long-lasting behavioural changes toward valuing efficiency (Kunstler, 2005). For example, there is increasing recognition that "the public is not a passive recipient of technological innovation" (Littleboy, Boughen, & Niemeyer, 2006, p. 3).

Social marketing is a successful tool to address behavioural changes. The Canadian Energy Efficiency Alliance strongly believes that successful DSM programs require following the approach of social marketing for effective behavioural change (Canadian Energy Efficiency Alliance, 2005).

Although social marketing and planning have the same ultimate goal of social and environmental sustainability, planning has not adequately recognized or incorporated tools and techniques of social marketing in reaching its goals. This points to a key research question: what are the benefits of integrating social marketing tools and techniques into the field of planning to address energy efficiency and improve DSM?

1.3 Objectives

This study aims at examining the integration of two disciplines, planning and social marketing, to develop a guide for designing programs for changing human behaviour toward better energy efficiency. The social marketing profession has received a lot of attention from different disciplines, such as health, business, and psychology, but the relation between social marketing and planning has been overlooked. This study provides greater emphasis on the process of program design, to enhance the positive effects on target groups. The development of an energy efficiency guide is not an attempt to compromise people's needs—but rather to encourage the provision of better services to improve quality of life.

First, I will study the application of social marketing to improve DSM, especially for low-income families. Historically, the residential DSM programs target single family homes with higher income homeowners. They are more willing and able to make some level of investment in home improvements (Kelly, 2007). Still, there are many challenges to fully engaging these homeowners. There is a greater chance that this group will choose energy efficient equipment, even if no incentive is provided to them. It is a challenge to design and implement DSM programs for houses and apartment buildings, which are owned or rented by energy consumers who cannot afford to improve their buildings or units. However, this approach provides great opportunities for energy savings, together with poverty reduction.

I have chosen Manitoba Hydro's residential DSM program, the Power Smart Home programs, as a case study. Second, I will critique social marketing approaches to address

DSM from planning's multi-disciplinary and inclusiveness perspectives. This results in the development of a new model— Integrated and Collaborative Social Marketing (ICSM). Finally, I will test the benefits of ICSM to address energy efficiency. The result may assist Manitoba Hydro in improving its Power Smart Home programs.

1.3.1 Research Questions

1. What are utilities' residential DSM challenges, particularly those associated with managing energy demand of low-income families?
2. What is the role and/or potential of social marketing in terms of developing an energy efficiency strategy to address DSM challenges, including energy poverty?
3. Can an integration of city planning and social marketing approaches improve programs directed at residential energy efficiency? If yes, how?

1.4 Background Information: Manitoba Hydro's DSM

In addition to the traditional focus on supply side provision of energy use, there is a growing concern for DSM in end-use sectors for energy conservation and efficiency. Manitoba Hydro has understood this need and began its DSM project called Power Smart Program in 1991 to promote and encourage energy efficiency. The Power Smart planning process involves undertaking a comprehensive DSM market potential study. Power Smart programs are available to residential, commercial, and industrial customers. The objective of the program is to help meet energy needs through efficiency improvements in end-use sectors, rather than through new sources of generation (Manitoba Hydro, 2009).

To date, Manitoba Hydro's Residential DSM program has mostly focused on the technological aspects of energy efficiency and promoting energy efficient products through incentives and loans. The programs include Geothermal Heat Pumps, Energy Efficient Appliances, ecoEnergy, Furnace and Boiler Replacement, Home Insulation, Power Smart Residential Loan, Lower Income Energy Efficiency, Lighting, Solar Water Heating and New Home programs (Manitoba Hydro, 2009). Studies have shown the value of applying behaviour analysis principles to improve patterns of human behaviour related to environmental protection (Geller, 2001). Although the recent Power Smart Lower Income Energy Efficiency program helps to qualify lower income households for the program, there is a need for more inclusive programs at the community/neighbourhood level. Considering communities' needs and resources in the planning process could present opportunities to address this challenge.

The existing suite of Power Smart Home programs consider energy conservation primarily in terms of the technological means of decreasing energy demand, utilizing mass marketing campaigns and information dissemination. Manitoba Hydro has not taken full advantage of behaviour change tools, such as social marketing.

Also, the existing literature dealing with behaviour change for conservation through social marketing is mainly from the point of view of environmental psychologists. They tend to target individuals in the groups and consider factors, such as probability, impact, barriers, and benefits of the target behavior for individuals in a group (McKenzie-Mohr, 2006). The expertise of planners could be used to increase the effectiveness of behavioural change efforts through social marketing. Planners target the well being of the built and social environments of communities. If done well, planners bring the programs

to the community level and collaboratively design and implement programs, involving the community in the process. Community planning connotes planning by the community, with the help of professionals rather than planning for the community by non-community members.

Figure 1: Comparing the intervention of Community Planners and Environmental Psychologists

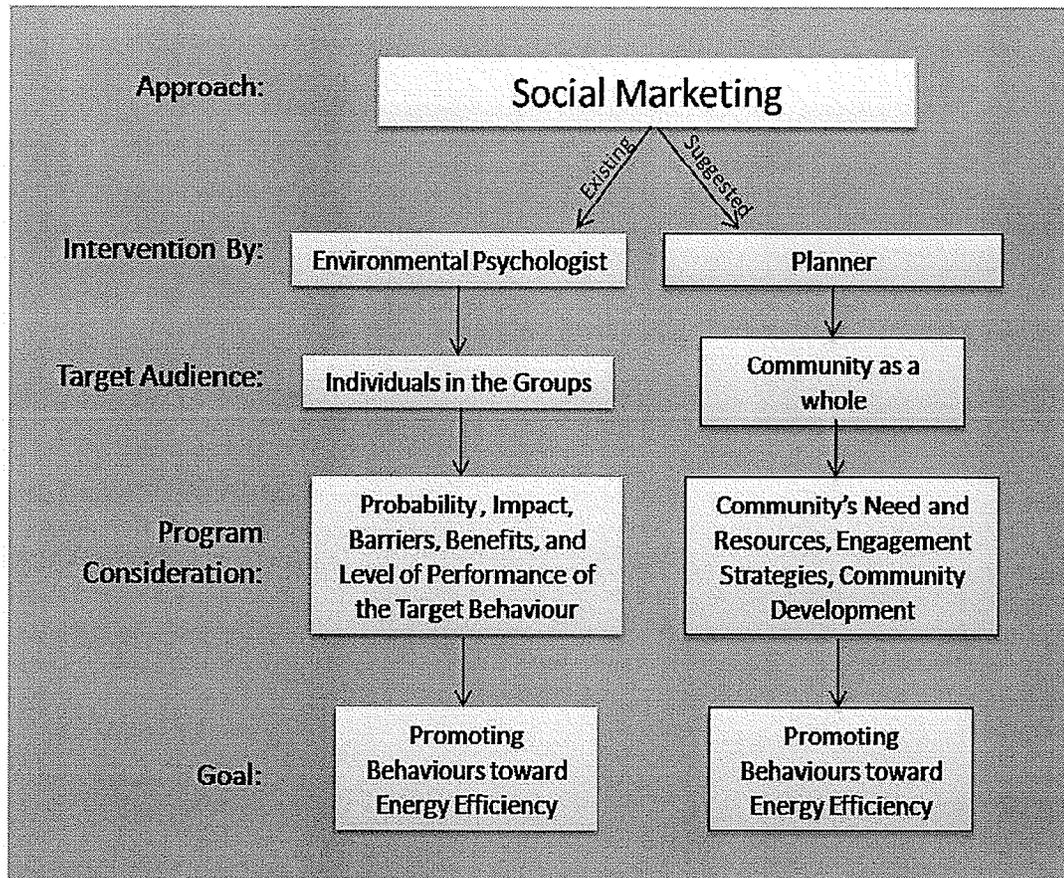


Figure 1, above, reviews my understanding of some of the differences between social marketing's interventions using an environmental psychologist and a planner's approach to achieving behaviour changes. My intent is to explore the association between planning and social marketing disciplines to address DSM challenges.

1.5 Scope

The research covers the following areas:

- Reviewing the impacts of the Manitoba Hydro's residential DSM programs (called residential Power Smart program) in two Winnipeg neighbourhoods: Spence (inner city) and Linden Woods (suburb);
- Testing social marketing techniques and tools as a strategy for enhancing residential DSM programming;
- Examining potentials of addressing Energy-poverty through DSM; and
- Integrating planning and social marketing theories and practices to develop a new model of energy efficiency promotion.

1.6 Biases and Limitations

An objective of this research is to examine the integration of two disciplines, planning and social marketing, in one specific project to enhance DSM. Each discipline is very broad with its own extensive theories and worldviews. Practitioners in each discipline may have conflicting views and do not agree with each other. My concept is explanatory, analytical and integrative. It wasn't subject to a real world test. I believe this work should be viewed as a personal perspective on this integration, which hopefully opens discussions toward a more comprehensive model which serves both disciplines.

Furthermore, since the field of social marketing for improving DSM is relatively new, finding references from different perspectives to support or oppose the results of this study is challenging.

Also, it needs to be clear that I do not have personal experience with living in energy poverty. This would limit my understanding of the experiences of those I intend to study. However, as planners we need to develop our understandings of the experiences of marginalized and vulnerable populations to be able to address their needs. I hope this research expands my understanding of energy poverty experiences and helps me to be more responsive to the needs of those I study.

1.7 Significance of the Proposed Research

This project is an attempt to explore the integration of social marketing and planning disciplines toward introducing a new model for promoting positive behavioural changes toward energy efficiency. The integrated model, ICSM, is used to address the energy crisis which is one of the most challenging crises of our time. The new model has potential to introduce a new approach for planners and social marketers which not only can be used to address DSM challenges, but also has the potential to address other social and environmental problems.

1.8 Theoretical Issues Covered

In this research, I study a wide range of theories and concepts in social marketing and planning in order to integrate these two disciplines to create the ICSM model. Some of

the theories I have studied are not currently used by social marketers or planners, however they are relevant to the development of the ICSM model.

The theories and concepts include: stages of change theory, cognitive learning theory, social cognitive theory, exchange theory, critical theory, community-organization model, communicative action theory, wicked problems, psychological world views, collaborative planning, and integral theory.

1.9 Overview of Chapters

In chapter one, *Introduction*, I provided an outline of the project, including the statement of problem, objectives, background information about the case study, scope, biases, limitations and also the significance of the proposed research.

In chapter two, *Research Methods*, I outline the research methods and the nature of my approach in this project. My approach has been adaptive and my initial methods for gathering information changed during my research. In order to explain the rationale for my method choices and reasons for adapting them, I need to describe the story of my approach from the first step of defining this project to the end.

The main objective of this study is to improve DSM. In chapter three, *Demand Side Management*, I study DSM aimed at residential energy efficiency programs and the challenges associated with them. Specifically, I discuss the need for DSM for low-income Canadians.

In chapter four, *Manitoba Hydro's DSM*, I discuss Manitoba Hydro's DSM programs and my reasons for choosing this case study. Furthermore, I will identify the impact of Manitoba Hydro's Home Power Smart programs in two Winnipeg neighbourhoods, Spence and Linden Woods. I present the results of the interviews and the data analysis in these two neighbourhoods and use these findings to critique the current Manitoba Hydro Home Power Smart programs.

Social marketing is increasingly used to overcome challenges for public action in residential energy efficiency initiatives. In chapter five, *Critical Review on Social Marketing as a DSM Tool*, I provide a review of the recent literature on social marketing strengths and limitations. Furthermore, I examine the benefits and limitations of social marketing as a tool to address challenges associated with DSM and energy poverty.

In chapter six, *Using Planning as a Response to Social Marketing's Limitations*, I justify choosing planning theories for addressing social marketing limitations and specifically explain the application of selected planning theories in the social marketing field.

In chapter seven, *Development of Integral and Collaborative Social Marketing Model*, I explain a new model of social marketing which is developed from an integration of the social marketing and planning disciplines. Furthermore, I test this model with the aim of improving DSM and energy poverty.

In chapter eight, *Conclusion*, I provide a summary of research findings. I also discuss some of the limitations of this study and offer direction for further research.

1.10 Glossary of Terms

CBSM: CBSM or community-base social marketing is a form of social marketing to foster sustainable behaviour with a focus on removing barriers to a desired behaviour while enhancing the benefits of the desired behaviours. CBSM is an attractive alternative to conventional information intensive campaigns (McKenzie-Mohr, 2006).

Collaboration or Collaborative Planning: Collaboration or collaborative planning in this document refers to Patsy Healey's collaborative planning model, a process of consensus building and conflict management in disunited societies. She describes this process in her 1997 book, "Collaborative planning: Shaping places in fragmented societies".

Collective Action: In this document, collective action means commitment of a group of people in a community to collaboratively pursue a goal or set of goals, with the provision of positive change not achievable through individual action. Here, collective action is used as the opposite of individual action.

Collective Values: In this document, collective values describes values rooted in the culture of a community, used for measuring ethical actions by the community. Here, collective action is used as the opposite of personal values.

Desired Behaviour: Desired behaviour or target behaviour in social marketing refers to the behaviour which social marketers hope will be adopted by their target market.

DSM: DSM or demand side management, also known as energy demand management, involves actions that influence the quantity or patterns of use of energy consumed by end users. However, in this document, DSM refers only to the actions that influence the quantity of use of energy and not the pattern. Therefore, issues such as changing peak demand are not the concern of this study.

Energy Demand Management: Energy demand management is another term for DSM.

Energy Poverty: In Canada there is no consensus on the definition of energy poverty. In this document energy poverty refers to the state of spending more than 10 percent of the household income on energy utility bills.

ICSM: ICSM, or integral and collaborative social marketing is a model developed in this document to address energy efficiency.

Integral: In this document, integral refers to Wilber's (2000) definition of integral theory.

Manitoba Hydro: Manitoba Hydro is a provincial crown corporation providing hydro electric energy and natural gas to customers throughout the province of Manitoba, Canada.

Planning: The word planning in this document refers to the discipline of planning, including urban, city, or regional planning.

Social Marketing: "The systematic application of marketing concepts and techniques to achieve specific behavioural goals relevant to a social good" (French & Blair-Stevens, 2005, p.4).

Target Market: Target market is the group of people social marketers target for behavioural change purposes.

Chapter 2: Research Methods

2.1 Introduction

A research project is like a journey, full of unexpected adventures. Researchers' responses to unexpected events are different. Some stick to their pre-established plans as much as they can and some look for new ways and instruments to overcome barriers or maximize their gains. I belong to the second group. In my research, I was very adaptive and interested as much in the processes of my research as in the destination. In this chapter, I explain why I chose specific methods and why I decided to discard them or move forward with them. To do so, I need to provide background information about why I chose to travel to this destination (defining my project), which instruments I chose to use (my pre-established methods), and what were my reasons for changing my approach.

2.2 Defining the Research

As a first year student in the City Planning program, I was amazed to discover the relationship between social and environmental planning. It was very interesting for me to see how our social planning affects our physical environment, how planning our physical environment influences our social networks, and how both of these factors are greatly affected by economic and political circumstances. Planners, I believe, are among the few professional groups who appreciate these interconnections and use multi-disciplinary and interdisciplinary approaches to address social or environmental problems, work on community economic development, or inform policy makers.

Considering the fact that saving our planet from environmental damage is one of the vital challenges of our time, I have decided to define a project for my practicum which deals with this problem and at the same time is directly related to social planning and public policies. Also, I preferred to propose my research to a corporation, in this case Manitoba Hydro, for two reasons. First, a real project will challenge me and may eventually direct the practice of an existing corporation, instead of dealing with imaginary scenarios; and second, I wanted to have the corporation's logistical and financial support.

I chose Manitoba Hydro as my case, because it is Manitoba's major energy utility. I believe its policies and programs affect the social system of the whole province. Also, one of Manitoba Hydro's stated goals is being "proactive in protecting the environment," which was one of the objectives of my research as well (Manitoba Hydro, 2006). I interviewed some of Manitoba Hydro's professionals before presenting my proposal to the Research and Development department. I found that improving the Power Smart programs of Manitoba Hydro, which is the commercial name for Manitoba Hydro's DSM approach, best fit with my interests. Defining approaches to reach residential consumers, especially hard to reach customers, such as low-income families, and encouraging them to change their behaviour toward energy efficiency would fulfill my interest in doing social planning in my practicum.

I knew that social marketing can be used to promote sustainable behaviours. So, I defined the purpose of my research project as a study of the social marketing approach for improving Manitoba Hydro's residential DSM. Manitoba Hydro welcomes innovative ideas and encourages proposals for improvements in procedure, equipment or safety of

the corporation (Manitoba Hydro's R&D, 2006). Manitoba Hydro approved my project and provided funding for it.

2.3 First Step: Studying DSM in the context of Power Smart programs

The case study of residential Power Smart programs provided the opportunity for me to have a closer look at their DSM approach. Several interviews with Manitoba Hydro staff and a study of online and documented information about Power Smart programs provided some initial information about the challenges associated with this set of programs. When I started this research in 2006, the residential Power Smart programs had only one set of programs for all Manitobans. The utility ignored any market segmentation, taking a mass marketing approach. In 2008, Manitoba Hydro introduced its Lower Income Energy Efficiency Program for low-income families in Manitoba. This new program was a significant first step towards overcoming some of the challenges associated with mass marketing. However, this step did not go far enough to address all of the previous programs' challenges.

To explore the residential Power Smart programs in more detail, I chose two Winnipeg neighbourhoods, Spence and Linden Woods, as case studies. I selected these two neighbourhoods because of their social and economic differences, such as average income of households and population of minorities. I assumed that the social and economic circumstances of a community are among the factors which influence the adoption of an energy efficiency program and should be considered in designing energy efficiency programs. To examine the validity of my assumption, I chose the mixed

method of qualitative and quantitative data gathering. For gathering qualitative data, I decided to interview some of the residents, and for gathering quantitative data, I compared the data on the number of residents in each neighbourhood who applied for the residential Power Smart programs.

2.3.1 Participant Interviews

I chose interviews as one method because one to one interaction between the researcher and interviewees in open-ended interviews makes this method useful for gathering initial data about topics about which little is known (Bickman & Rog, 2009). This method helped me to listen to the voices of two very different segments of Manitoba Hydro customers and compare their feedback on the program.

I interviewed ten people, five in each neighbourhood. These interviews took place in 2007, before the existence of the new Power Smart program aimed at lower-income families. I believe that community members' perspectives about energy efficiency are very important for understanding their behaviour toward energy consumption, and to facilitate the design of a unique energy efficiency program for them.

2.3.2 Strategy to Reach Interviewees

Most of the Power Smart programs are designed for homeowners, not renters. So, all the interviewees were homeowners, either in Spence or Linden Woods. To find the interviewees, I posted an advertisement at the community center in both neighbourhoods (Appendix A). This approach was not successful in finding enough eligible interviewees. Therefore, I asked the Spence Neighbourhood Association (SNA) to introduce some

community members. SNA is a non-profit community based development organization. An honorarium of \$10 and a compact florescent light bulb worked as incentives for participation. The same method did not work in Linden Woods and I had to use my network of friends. I asked people whom I know to help me find participants. The Linden Woods' participants each received multiple compact florescent light bulbs as an honorarium.

A consent form was given to the interviewees to sign (Appendix B). The consent form includes background to the study, potential risks of contribution, participation time, honorarium, use of data and its secure storage. No one refused to sign the form and everyone gave permission to tape-record the communication.

2.3.3 Interview Questions

Each participant was asked 12 questions (Appendix C). The interviews took between 10 to 25 minutes. The questions are organized in 3 main categories. The first set of questions examines the familiarity of participants with the Power Smart programs. The second set is about the effectiveness of the programs and the final set is about participants' advice to Manitoba Hydro.

2.3.4 Coding

Del Balso and Lewis (1997) recognize coding as the first step in data analysis. Based on their definition, coding is translation of "the primary data from its raw forms into more conveniently analyzable and manageable forms" according to some research questions,

issues, or themes (p. 256). In this research I categorized the data based on the following three themes related to the researcher's understanding of the issues.

- Barriers and benefits for participation;
- The need for neighbourhood-based energy efficiency programs; and
- The importance of public engagement.

I have assigned a code to each interviewee. These codes are used after each quote to denote the different speakers, yet maintain their privacy (IN stands for Interview, SP stands for the Spence neighbourhood and LW stands for Linden Woods). For interview results see Section 4.3.

Interviewees at Spence neighbourhood: IN SP1-5

Interviewees at Linden Woods neighbourhood : IN LW1-5

2.3.5 Data Gathering Regarding the Number of Participants in Each Neighbourhood

In addition to interviews, I compared the number of participants from Linden Woods and Spence in the Power Smart programs. This comparison is based on data from Manitoba Hydro from the beginning of Power Smart programs to the end of 2008. Manitoba Hydro does not have information about participation levels in the Power Smart Program based on neighbourhoods. Their data is based on postal codes and addresses. It was against their privacy policy to release the information based on exact addresses of Power Smart participants. So, I needed to submit all of the postal codes of each neighbourhood to Manitoba Hydro to identify a number of participants from each postal code. To find the

exact postal codes, it was necessary to define the neighbourhoods based on established neighbourhood boundaries, as defined by Statistics Canada. These boundaries were selected because the census used the same boundaries to calculate family income, populations and other neighbourhood characteristics. To find the postal codes of streets inside the boundaries, an online database of Canada 411™, Area Code & Postal Code Finder, has been used (Yellow Pages, 2009).

Manitoba Hydro provided the information, including the number of agreements for Power Smart programs corresponding to the postal codes. The programs included: Power Smart Loan, Furnace Rebate Program, Appliance Rebate Program and Energy Evaluations. The data was divided based on the postal codes of each neighbourhood.

2.4 Second Step: Discovering the Potentials of the Social Marketing Approach to Address the Challenges Associated with Power Smart programs

After studying the Power Smart programs and, at the same time, making myself familiar with other DSM programs and their associated challenges, the next step was to discover the potential contributions of the social marketing approach in addressing those challenges. This section is informed primarily by a critical literature review on social marketing.

Also, I participated in a two day workshop, which provided an in-depth exposure to Community-Based Social Marketing (CBSM) and how it is being applied throughout the world to foster sustainable behaviour. In this workshop, Dr. McKenzie-Mohr, the founder

of community-based social marketing, provided participants with the knowledge they need to design and evaluate their own community-based social marketing programs.

My original intention in studying social marketing was to design a CBSM program, and conduct a pilot project in the selected neighbourhoods. However, after studying social marketing, and specifically CBSM, I changed my research direction for two reasons:

1. Lack of resources: Applying social marketing strategies and evaluating the results required great commitment from a large number of residents. They would need to allow me to monitor their energy-efficiency behaviours for a long time, both before and after applying the strategies. This project would have required appropriate incentives for residents and enough researchers to complete the project in approximately two years. This extensive work was beyond the scale of my project.
2. New understanding of the limits of social marketing: I realized that social marketing is commonly used as an effective tool in energy conservation and DSM strategies aimed at individual households. However, while social marketing shares with urban planning an intimate concern about involving target households in energy efficiency programs, it has not adequately recognized nor incorporated public engagement methods commonly used by planners. Furthermore, given the contested nature of “sustainability” (Gunder, 2006), as well as the need to promote both social equity and environmental goals at a larger community scale, I recognize the need for a more critical, integral and inclusive approach to social marketing.

So, instead of designing and applying a social marketing program, I decided to evaluate the social marketing approach from a planning point of view and examine the potential integration of these two disciplines. Later, I used my findings to develop a new model for promoting sustainable behaviours.

2.5 Third Step: Exploring Planners' Potential Contribution to Improve Social Marketing Approach

In my third step, I conducted another literature review, this time on planning theories and practices. By now, I knew that planners' approaches to defining and engaging target markets, and planning processes are different than those of social marketers. I decided to expand on these differences and compare planners' and social marketers' perspectives in their interventions. In addition to the literature review, this stage was also informed by informal interviews with instructors of social marketing and planning disciplines, including Dr. Mackenzie Mohr and my own advisors. I also drew on my background in planning.

2.6 Fourth Step: Developing an Integral and Collaborative Social Marketing (ICSM) Model

The objective of this stage was to link social marketing and planning perspectives to develop a more integral and inclusive approach, which promotes both energy efficiency and social equity at a larger community scale. After developing the new model (ICSM), I heard of a new program for inner-city residents called Warm Up Winnipeg (WUW). This program was developed to make housing more affordable and environmentally friendly

by lowering energy and water bills through housing retrofits. WUW is also a training program and provides jobs for local residents (Warm Up Winnipeg, 2008). Manitoba Hydro is working with the Building Urban Industries for Local Development (BUILD), non-profit organization, to improve its residential Power Smart programs and reach low-income customers. BUILD runs the WUW program.

There are many similarities between this program's approach to addressing energy efficiency and my model of ICSM. In this stage of my research, I decided to study WUW. The rationale for my decision was the fact that I needed to evaluate the model I developed. The best way to do so was to conduct a pilot project and apply the ICSM model and evaluate the outcomes. However, it would require resources and time beyond my project's capacity. The other way to evaluate my model was to present it to energy-efficiency practitioners, such as Manitoba Hydro Power Smart Program staff, and ask for their input and feedback. This second method was my pre-planned strategy to evaluate my model. However, when I heard of this new WUW program and realized the similarities with my ICSM model, I believed it would be a useful case study to compare my model against. The WUW program had already applied some of the fundamental strategies of the ICSM model. So, evaluating the WUW program to some extent would be like evaluating the ICSM model in a real situation. Since the ICSM model was not exactly the same as the WUW model, I needed to test those different aspects of ICSM as well. To learn more about the case study of the WUW program, I used an in-depth interview with one of the program managers and a focus group with WUW trainees, in addition to the information on the program's website. To test my model, I used these

findings and conducted two focus groups, one with Manitoba Hydro staff and one with BUILD staff.

2.6.1 Confirming the ICSM Model

2.6.1.1 Case Study of Warm Up Winnipeg

Interview

I chose an in-depth interview as one of my methods to study the WUW program. This method is a powerful qualitative method for gathering primary information about subjects of study (Bickman & Rog, 2009). One of the limitations of this method is that it is time-consuming, but in my case, I interviewed only one person. This comprehensive interview provided the primary information. Also, the interviewee provided some documents and reports which helped me understand the program better. The interview took about 1 hour. The questions were organized in three main categories (Appendix D). The first set of questions covered the program's objectives, planning and application processes, funding, and different components of the program. The second set was about the relationship between the program and Manitoba Hydro. The third set focused on the achievements and challenges of the program. I categorized the interview data and information gained from related WUW reports based on the following two themes.

- Evaluation of WUW to address energy efficiency and energy poverty, and
- Similarities and differences between the WUW program and the ICSM model.

Focus Group with WUW Trainees

At this stage of my research, I knew one of the key success factors of the WUW program is its ability to address social and environmental problems at the same time. For example,

the WUW program hires and trains local community members with little or no experience to make local housing more energy efficient. To know more, I decided to talk to trainees in a focus group. I chose a focus group discussion, because focus groups are a qualitative research method, and with the use of guided group discussions, they generate a great understanding of participants' experiences and beliefs (Morgan, 1998).

To find the trainees, I asked the WUW human resource manager to introduce me to six people. An honorarium of \$20 was offered to each participant. A consent form was given to participants to sign (Appendix E). No one refused to sign the form and everyone gave permission to tape-record the communication. The focus group took about half an hour. The trainees' were asked seven open-ended questions about their reasons for participation in the training program, their experience with the program, and also their understanding of their job as a way to save energy and improve the environment. I categorized the focus group data based on the following question:

- What are the perspectives of trainees about their experience with WUW program?
and
- What influence does the program have on trainees' actions with respect to energy efficiency?

2.6.1.2 Two Focus Groups with the Manitoba Hydro and BUILD Practitioners

My findings from WUW program and its similarities to the ICSM model helped me to conduct these two focus groups. In both focus groups, I made a short presentation of my ICSM model and the process of development of the model. Then at a round-table

discussion format we discussed the benefits and limitations of the model. In the case of Manitoba Hydro, all six participants were professionals from the Power Smart department and three of them were familiar with social marketing concepts. In the BUILD focus group, only three people showed up, but all were very knowledgeable about the WUW program and provided valuable input about the ICSM model.

I asked both groups to provide feedback on the ICSM model. Also, I asked Manitoba Hydro's participants about the influence of the WUW program on their Power Smart programs (Appendix F). In case of the focus group with the BUILD organization, I used this opportunity to learn more about the WUW program and asked specific questions about their successes and limitations (Appendix G). The main reason of doing these focus groups was to confirm the value of the ICSM model. The main theme for coding was the strengths and challenges of the model to improve DSM programs, such as the Power Smart programs, and address energy poverty.

I have assigned a code to each participant in the interview and focus groups. Below, I show the distribution of participants in different groups and their given code (IN stands for Interview, F stands for focus group, WS stands for WUW's staff, WT stands for WUW's trainees, and MP stands for Manitoba Hydro's Power Smart staff).

A WUW director who participated in the interview: IN WS1;

Six WUW trainees who participated in the focus group: F WT1-6;

Three WUW staff who participated in the focus group: F WS1-3;

Six Manitoba Hydro staff who participated in the focus group: F MS1-6.

2.7 The Selected Branch of Social Science

Before I finish the methods section, I would like to clarify one aspect of my applied methodology, which is the branch of social science I have used in this research. In the case of any research or evaluation it is important to understand the researcher's approach and assumptions. There are three social science branches including: Positivist, Interpretive or Critical. According to Neuman (2003), different branches of social science "are different ways of looking at the world; ways to observe, measure, and understand social reality. They begin from very different positions, even when all end up looking at the same thing or saying the same thing." (Neuman, 2003, p. 65)

The branch of social science which I used in this research will be contextualized on the basis of the characteristics of three branches of science, which focuses on ontology, epistemology, and methodology.

Ontology

I assume the reality of peoples' energy behaviours is not absolute and single. This reality could change, and the whole purpose of the study is to find techniques to change it. So, this study's underlying ontology is definitely 'interpretive.' Based on this ontology, the energy needs and wants of the residents will be informed by drawing on the knowledge of participants (residents of the selected neighbourhoods and professionals).

Epistemology

The inquiry process has influence on the findings of any research. In this study, I (inquirer) had direct contact with the participants (inquired-into). I believe the design of questions, the way questions are asked, and the physical, administrative and behavioural

environment affect the findings. So, like the ontology, the study's epistemology is also interpretive.

Methodology

The way of knowledge making in this study needs constant cooperation between the researcher and the participants. For example, one of the expected results of this study is the creation of new knowledge about how Manitoba Hydro should respond to its customers' energy needs. This result requires the community's engagement in designing suitable DSM energy programs. The consumers' energy behaviour and needs are changeable, so there is no way to build the capacity to control and predict the knowledge. The nature of the designed programs should be flexible and still practical. This is not possible unless the programs attempt to provide consumers the opportunity to intervene. Also, Manitoba Hydro needs to understand efficient energy behaviour through the meanings that people assign to it. As the methodology aims to critique the social and economic consequences of relations between the existing program and the community members, the methodology is critical. As Myers (1997, p.3) states, "the main task of critical research is seen as being one of social critique, whereby the restrictive and alienating conditions of the status quo are brought to light." This research is interpretive in its ontology and epistemology, but the research is critical in its methodology.

2.8 Chapter Outlook

In this chapter, in order to justify my selected methods and how and why I chose them, I provided an overview of the whole project and explained my exploratory approach to research.

I have divided my research to four steps. The first step, *studying DSM in the context of Power Smart programs*, involved comparing Manitoba Hydro's DSM, referred to as Power Smart programs, in two socio-economically different neighbourhoods in Winnipeg, Spence and Linden Woods. For this first step, I used interview and data gathering as my methods of research.

The second step, *discovering the potentials of the social marketing approach to address the challenges associated with Power Smart programs*, included a literature review on the social marketing approach as a tool to address DSM challenges.

The third step, *exploring planner's potential contribution to improve social marketing approach*, is another literature review on planning theories and practices as a response to social marketing's limitations.

The forth step, *developing an integral and collaborative social marketing (ICSM) model*, involved integrating social marketing and planning disciplines. The goal was to develop a guide for designing programs' to change human behaviours, toward better energy efficiency. I conducted interview and focus groups with staff and trainees of an inner-city energy efficiency program called Warm Up Winnipeg to confirm the value of the ICSM model.

The following chapter is a literature review on DSM, with a focus on identifying the energy demand management issues to be addressed in this research.

SECTION TWO: Defining the Problems

Chapter 3: Demand Side Management

3.1 Introduction

This chapter provides an overview on some of the challenges the utility faces to promote residential energy efficiency programs as part of their energy demand management¹. Specifically, I discuss the challenges associated with addressing energy demand of low-income Canadians. In later chapters, I will examine the potential of the social marketing approach to address these challenges.

3.2 Demand Side Management and Energy Efficiency

Canada is committed to significantly reducing its green-house gas (GHG) emissions to meet the Kyoto Protocol agreement requirements. Optimised use of energy is one way to reduce GHG emissions. In addition to Supply Side Management of energy provision, there is a growing interest in Demand Side Management (DSM) in end-use sectors for optimised use of energy. In addition to energy efficiency programs, DSM may also include Demand/Load Response programs to shift and reschedule energy use to address the peak demand (Saini, 2004). In my research project only energy efficiency programs are studied.

In many regions of Canada and the United States electric utilities pursue DSM through energy-efficiency programs (Nadel, 1992; Nadel, Shipley, & Elliott, 2004)

¹ Energy demand management is another name for demand-side management (DSM) and I use these two phrases interchangeably through this report.

It may seem counter-intuitive that a utility encourages its consumers to buy less of its products, but there are many reasons why utility producers are interested in following DSM. Among those reasons are: increasing customer satisfaction through decreasing utility bills, reducing environmental impacts, decreasing the cost of constructing new power plants, ensuring supply system reliability, and meeting the authorized regulatory requirement (Nadel, 1992; Saini, 2004). Also, in some cases such as Manitoba Hydro, utilities have the opportunity to export their products at a higher rate, after meeting local energy needs. The potential energy savings made available through DSM techniques have been estimated to range between 24 percent to 70 percent savings, depending on the number of technologies considered, assumptions about technology performance, applicability and cost as well as analytical factors (Nadel, 1992).

Residential energy consumption is a significant component of the DSM programs (Aydinalp, Ugursal, & Fung, 2004). In Canada energy use is divided into five sectors including industrial, transportation, residential, commercial, and agriculture. In 2005, the industrial sector had the largest share of energy (38 percent) followed by transportation (30 percent), residential (17 percent), commercial (14 percent) and agriculture (2 percent) (Natural Resource Canada, 2009). To reach the goal of environmental sustainability and meet Canada's Kyoto Protocol target, action is required from all sectors, including the residential sector.

3.3 Critical Review on Utilities' Residential DSM Challenges

DSM programs face many challenges to be successful. If a utility's DSM program is going to be successful and achieve 10 percent or more energy savings, a participation rate of 50 percent or more and savings of 10-30 percent per customer are required (Nadel, 1992). Although some utilities and some programs achieve these savings, it is challenging for most programs to reach or sustain these success rates (IndEco, 2007). Some of the common challenges for utilities are described below.

3.3.1 Designing Effective Public Engagement Strategies

Motivating people to take action in any environmental initiative is often challenging (Kennedy, Parker, Scott, & Rowlands, 2001). Changing people's behaviour toward energy consumption and encouraging them to participate in energy saving programs is not an exception. Mass marketing is one main reason why utilities are not very successful in engaging the public in their DSM programs. At first glance, it may seem utilities' DSM residential programs are very similar to commercial marketing, with an aim to sell more products, such as energy efficient light bulbs, appliances, and furnaces. A closer look shows DSM programs are different than commercial marketing. They need to overcome barriers to change people's perceptions and behaviours and motivate them to take action on environmental issues.

Many utilities rely on mass marketing to promote their DSM programs and ignore market segment differences. These programs are not adapted to the needs of particular groups of residents. The idea behind mass marketing is to reach the largest possible audience with

one market coverage strategy. Although mass marketing may work for commercial marketing purposes, studies show that personal one-on-one or community-based marketing are more effective in delivering energy programs (Nadel, 1992; Canadian Energy Efficiency Alliance, 2005). However, because of mass marketing, some DSM residential programs fail to appreciate cultural, social and economic differences in designing the appropriate program for communities. Studies show that consumers' income, education level, and also a recent house purchase, house age, ownership, and condition of house structure are influential factors on energy efficiency program participation (Kennedy et al., 2001).

3.3.2 Planning Long-term Programs

Utilities are usually under pressure to justify DSM expenditures to ratepayers, regulators and stakeholders (IndEco, 2007). As a result, they often plan and operate their DSM programs for one fiscal year at a time without a long-term vision (Nadel, 1992). DSM programs are fairly new and these programs are changing and developing every day. Finding the best practices and building the required capacity, to provide the most efficient equipment and to develop human skills or societal infrastructure to support these initiatives, most likely will not fit into a fiscal year.

3.3.3 Dealing with Stakeholders with Different Values and Motivations

Consumers, regulators, industry, and research sectors are among the stakeholders involved in the energy efficiency dialogue. This diverse group of people may hold diverse values and motivations to change the current energy-use or deal with new energy-

efficiency programs (IndEco, 2007). Even members of each sector may not have consensus on their environmental objectives. For instance, in environmental policy making, conflict between policy objectives is very common (Pearson, 1995, p. 119). Improvement in energy efficiency delivery and decreasing pollution emissions are two environmental objectives which may have adverse affects on one another. Experience shows efficient ways for delivering energy, resulting in lower costs for users, may result in rising, rather than falling, energy consumption and pollution emissions (Pearson, 1995). Also, regulators and consumers' interests in DSM are not usually aligned. Regulators are primarily concern with setting reliable rates and ensuring cost-effective DSM practices, but consumers are interested in products and services which meet their energy needs (IndEco, 2007).

3.3.4 Filling a Shortage of Skilled Staff and Contractors

Utilities encounter a growing shortage of skilled people to plan, run, and evaluate DSM programs. This shortage causes a long waiting list for participants or entrance of unreliable contractors to the market (Nadel, 1992). Both add to the challenges of increasing consumer participation rates.

3.3.5 Dealing with Local Circumstances

Although it seems rational to implement the best models of DSM planning and operation in order to deal with associated challenges, utilities need to tailor their programs to local circumstances. Studies show that there is no best model of DSM for all jurisdictions (IndEco, 2007). The nature of DSM problems requires a consideration of local contexts, such as the current knowledge of consumers about energy efficiency, the availability of

energy efficient products, the allocated budget, the potential for energy savings, and the local regulatory process. The coordination among utilities to share information or jointly operate specific programs are recommended (Nadel, 1992), but the local circumstances should be considered.

3.3.6 Evaluating the Program's Success

As mentioned before, it is important to evaluate DSM programs to justify the expenditures. Also, the evaluation allows DSM program designers to know if the program should be replicated (IndEco, 2007). Unlike supply-side management, it is hard to measure the success of DSM. For example, if program success is based on the participation rate, it is difficult for the evaluators to determine if participants decided to take action because of the program incentives or because of their own personal motivations. Also, it is hard to monitor consumer behaviour regarding the use of energy efficient appliances and equipments. For example, an energy efficient house may bring more comfort than more energy savings. Another problem with evaluation is that even if we can measure the impact of DSM programs, it is necessary to determine which social and environmental impacts should be considered as positive impacts and which ones would be supported by both rate-payers and regulators.

3.4 DSM and Energy Poverty in Canada

Addressing energy poverty is one of the controversial challenges for utilities. In this section I first expand on the energy poverty problem in Canada and then discuss the DSM challenges to address this specific problem.

3.4.1 What is Poverty? What is Energy Poverty?

There are different concepts of poverty and also different ways to measure poverty in Canada (Human Resources Development Canada, 1998). Two approaches to measure poverty are restrictive and inclusive measures. Restrictive measures deal with physical and medical survival assessments, but inclusive measures also identify emotional, social, and spiritual needs (SPARC BC, 2003). The most common tool used in Canada for measuring poverty is Statistics Canada Low Income Cut-Off (LICO) which incorporates restrictive and inclusive measures (SPARC BC, 2003). Statistics Canada (2005) defines LICO as follows:

A LICO is an income threshold below which a family will likely devote a larger share of its income on the necessities of food, shelter and clothing than the average family. The approach is essentially to estimate an income threshold at which families are expected to spend 20 percentage points more than the average family on food, shelter and clothing (P.7).

The income threshold in LICO varies by 7 family sizes and 5 different population density categories (Statistics Canada, 2005, p. 7). Canadian families spent, on average, 43 percent of their income on food, shelter and clothing in 1992 regardless of family size and where they lived. So, on average, families who spend more than 63 percent of their income on food, shelter and clothing are considered low income. This 63 percent only gives a rough estimation; to be exact the size of the family and the population of the area should be considered (Statistics Canada, 2005).

Energy costs have not received enough attention in this definition. Utility expenses are hidden in the shelter category and the shelter expenditure is based on the 1992 Family

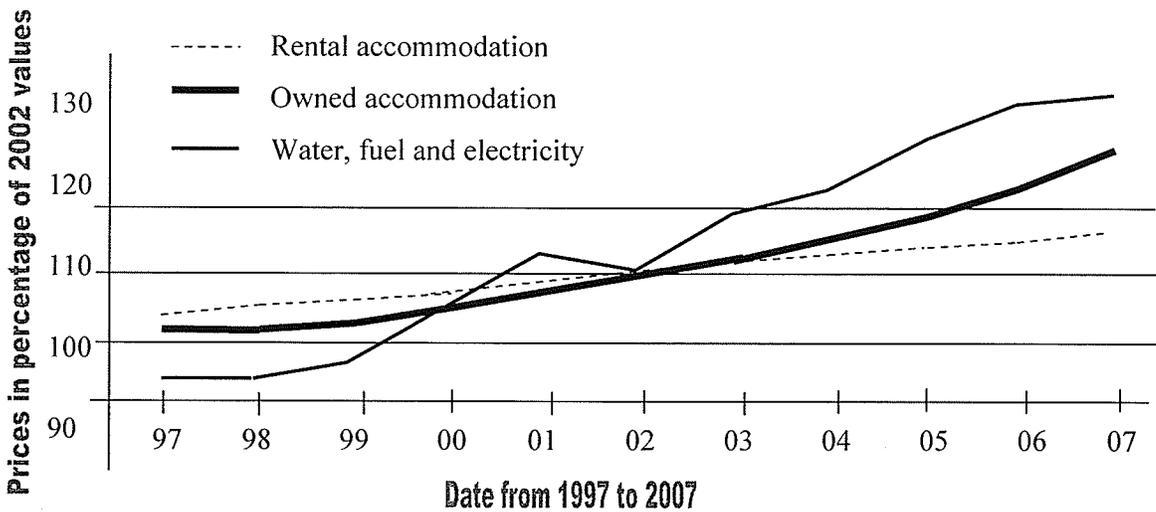
Expenditures Survey. LICO's are dependent on two variables. The first variable is based on 1992 percentages of family expenditures on food, shelter and clothing, which are fixed numbers. The second variable is family income, which is, on average, increasing every year. However, average incomes in general are not increasing as much as the cost of food, clothing, and shelter, including utilities. Also, after the survey in 1992, fuel and utilities increased at a higher rate than shelter costs, as demonstrated in Figure 2 below (Maynes, 2008b). For example, the figure shows, in 2007 the cost of housing energy (water, fuel and electricity) increased almost 28 percent from 2002, while the cost of accommodation increased about 7 percent for rental homes and 20 percent for owned ones.

So, the definition of poverty is increasingly inadequate each year. For example, the cost of water, fuel and electricity for home use has increased about 50 percent between 1997 and 2007 in Canada (Maynes, 2008a). Statistics Canada has tried to address the problem of using the old data by reweighting the 1992 data. To have an estimation of the reweighting consider this example: LICO for 2003 for 2 persons living in an urban area with a population density of 500,000 and over before reweighting is \$19,948. After reweighting it is \$20,133 which is only a \$185 increase (Statistics Canada, 2005). Without doing another survey, it is impossible to prove how accurate the reweighting is. However, the steep increase in the cost of utilities, food and housing, during that period of time, clearly puts it into question. Also, the price of energy for transportation has not been considered as part of the poverty definition. A survey in Canada shows the three categories of food, shelter and transportation are the greatest expenditures for families (deGroot-Maggetti, 2002). To improve the definition of poverty, in order to adequately

address the problem, energy costs (utilities and transportation) should be included as an independent category in addition to shelter, food and clothing.

Figure 2: Comparing the increased rate of accommodation cost (rental or owned) and housing energy cost (water, fuel and electricity) assuming their value to be 100 in 2002 (Maynes, Lifting the energy burden, 2008 b).

**In Canada Fuel and utilities increased at a higher rate than shelter
(2002=100)**



Although all Canadians feel the pain of energy cost increases, low income families are the most vulnerable. The average household in the lowest income quintile spends 7.3 percent of their income on water, fuel, and electricity, compared to an average energy burden for all Canadian households of 3.1 percent and 2 percent for the highest income quintile (Maynes, 2008a).

There is no one energy poverty definition in Canada. For example, Green Communities Canada has suggested energy poverty is defined as spending more than 6.2 percent of household income on fuel. Social Housing Services suggests 10 percent (Social Housing

Services Corporation, 2006). Even if we consider 10 percent as the threshold for energy poverty, close to a million families are living in energy poverty in Canada (Maynes, 2008a).

3.4.2 Housing Energy Efficiency and Poverty Reduction

Low-income households are often living in poorly equipped homes with low quality insulation, appliances, windows, and heating systems. These all lead to a chronic waste of energy. Improvements to the housing stock provide opportunities to reduce energy waste and, therefore, save the limited resources of low-income families. On the other hand, to be able to decrease the waste, there is a need for upfront investments in housing retrofits or buying energy efficient appliances or heating systems. This is a big challenge for low-income households. It is unreasonable to expect these families to be able to afford upfront expenditures, given “the typical low-income family in Ontario has only a \$200 [a year] cushion to buffer income interruptions or deal with unexpected expenditures” (Low-Income Energy Network, 2008, Appendix D, p.18).

The only solution left for addressing the problem is public investment in energy efficiency programs for low-income families, which are either free or subsidized. At first glance, this kind of investment may not seem beneficial for the economy. However, a study in the U.S. shows that for every dollar invested in low-income energy efficiency there is 23 dollar return to the economy. This return is 2.7 times higher than the return on investments in manufacturing. “Low-income energy efficiency is not charity: such investments provide large net benefits for the entire economy” (Oppenheim & MacGregor, 2008, p. 2). The national total annual utility bill, including energy and water

for the low income quintile in Canada, is about \$3 billion (Loney, 2009). If that bill were reduced by 30 percent through energy and water efficiency measures, more than \$900 million would be saved annually. There are many other co-benefits of energy and water efficiency for low-income households:

- Reducing demands on social service systems such as costs for providing social housing and health care (Fry & Stewart, 2006);
- Decreasing the cost of service cuts incurred by energy providers as a result of unpaid customers (Fry & Stewart, 2006);
- Reducing poverty and homelessness² (Maynes, 2008a);
- Reducing cold-related health problems especially for children and elderly people (Roberts, 2008). Approximately 10,000 winter deaths occur in Canada each year (Kelly, 2007);
- Providing retrofit related job opportunities for low-income households (Warm Up Winnipeg, 2008);
- Reducing risk of accidents from supplementary heating (Fry & Stewart, 2006);
- Decreasing carbon dioxide emissions which will cause improvements in the environment and on health (MacGregor & Oppenheim, 2008); and
- Reducing water treatment demands.

A study done for the U.S. Department of Energy in 2001 shows the total monetized value for all non-energy benefit categories through retrofit programs, including ratepayer

² Energy poverty could cause loss of shelter for low-income homeowners/renters. For example, Habitat for Humanity reports that the energy cost increases have raised the minimum income level required for families to qualify for the organization's homeownership support (Maynes, 2008 a). Also, after unpaid rents, the inability to pay housing energy bills is the second economic cause of homelessness in Canada (Fry & Stewart, 2006).

benefits, household benefits, and societal benefits associated with weatherizing a typical home, is estimated to be \$3,346, in 2001 dollars (Schweitzer & Tonn, 2002). Another study found that every dollar spent on low income energy efficiency generates \$1.88 in non-energy benefits (Schweitzer & Tonn, 2002).

Although there is no consensus on the exact societal benefits of housing retrofit programs for low-income families and it is difficult to set a criteria to measure the benefits, clearly these programs improve the quality of lives of those in energy poverty.

3.4.3 DSM Challenges to Address Energy Poverty

Not every utility addresses low-income energy needs. Those utilities which do so encounter new challenges, in addition to those associated with DSM programs in general. Here I discuss the specific challenges associated with addressing energy poverty through utilities' DSM.

Low-income Consumer Participation

One of the principal difficulties is identifying eligibility criteria for subsidized retrofits which are fair and inclusive and at the same time not over budget. For example, Manitoba Hydro's eligibility criteria are 125 percent higher than Statistics Canada's Low Income Cut Offs (Manitoba Hydro, 2008). In some cases only because they make a few dollars more in income, a low-income household may not be eligible for any support. Other barriers for participation may include a lack of awareness about the program and the complexity of the application process which requires a high-level of literacy and proof of income. Some eligible candidates may not be literate in English and some may not have any kind of ID, let alone proof of income, such as a personal income tax return documents.

Justifying Costs to the Ratepayers

Low-income households cannot afford the up-front budget to invest in their houses. A successful DSM program for low-income people needs to provide more financial incentives for low-income customers than for others. Although these programs may substantially decrease energy poverty and reduce social problems, such as homelessness, the question is whether a utility's rate-payers, regulators, and stakeholders will agree on spending revenues to reduce or prevent a social problem.

Policy Gap

In spite of the benefits of low-income energy assistance programs for Canadians, in May 2006 the Canadian federal government cancelled the EnerGuide for Houses Retrofit Incentive. The program was designed to encourage low-income homeowners to retrofit their homes to make them more energy efficient (Munroe, 2009). In the U.S., the federal government provided \$3.1 billion in 2006 for the Low-Income Home Energy Assistance Program (LIHEAP) to support state-run programs that help about five million low-income households (Social Housing Services Corporation, 2006, p. 6). However, a report from the Center on Budget and Policy Priorities shows the LIHEAP fund is much less than what is needed to address energy poverty in the U.S. (Kogan & Aron-Dine, 2006). In Canada, there is no federal assistance program to serve low-income families (Social Housing Services Corporation, 2006).

Although some utilities have stepped in to address the problem, they suffer from a lack of national leadership (Loney, 2009). Geoff Gillard, Executive Director of Canadian Housing and Renewal Association, believes there is "a major policy gap affecting all

Canadians who cannot contribute to the cost of the retrofits” (Canadian Housing and Renewal Association, 2008, p. 3). At a meeting with the Ministers of Housing on October 8, 2008, he strongly supported creating a low-income home energy retrofit program that serves all Canadians.

3.5 Chapter Outlook

This chapter describes, some of the common challenges of DSM residential programs, including energy poverty. Providing opportunities and motivating consumers, especially low-income households, to participate, is the main challenge facing these programs. Other challenges include: planning long-term programs, dealing with stakeholders with different values and motivations, filling a shortage of skilled staff and contractors, dealing with local circumstances, evaluating the program’s success, justifying the cost of low-income energy efficiency programs to ratepayers, and addressing the national policy gap for low-income energy assistance programs.

In the following chapter, I chose Manitoba Hydro’s DSM residential programs, called residential Power Smart programs, and compared the participation rate of two socio-economically different neighbourhoods in Winnipeg: Spence and Linden Woods.

Chapter 4: Manitoba Hydro's DSM

4.1 Introduction

This section provides the results of my field work in the Spence and Linden Woods neighbourhoods. The work includes interviews and data analysis on the participation rates of residents related to Manitoba Hydro's residential Power Smart programs. These two neighbourhoods were chosen because of their different social, physical and economic characteristics. I assumed these characteristics would be among the factors having the greatest impact on participation rates and should be considered when designing successful DSM programs. The results of this field work will examine the validity of this assumption. Also, I believe any public program greatly benefits from public consultations, especially if the goal of the program is to directly engage people in a new initiative. The interviews in this field work provided an opportunity to get public input.

4.2 Power Smart Home Programs

Manitoba Hydro's Power Smart residential programs are mostly based on rebates and loans. The rebates are provided for energy efficient appliances, energy efficient lighting, high efficiency furnaces and boilers, home insulation, and solar water heating. Loans are provided for geothermal heat pumps and other energy efficient home improvements, to achieve a certain amount of energy savings. In addition to these loans and rebates, there are some other information-based programs, such as home energy evaluations, which provide on-site information for homeowners about how they can save energy. Also, the

new home program provides information about building energy-efficient homes. There are training programs, such as Seniors Helping Seniors, where volunteer seniors are trained to visit other seniors' homes and teach them about how to save on energy costs.

At the time of interviews in 2007, there was no program for low-income Manitobans. Recently, the Lower Income Energy Efficiency program has been established. It provides some special rebates and services for low-income residents, including free home audits, followed by coverage of most or all of the cost of insulation, as recommended by auditors, as well as rebates for the installation of high-efficiency heating systems.

4.3 Interview Results

The interview results were categorized based on the following three themes related to the researcher's understanding of the issues:

- Barriers to and benefits of participation,
- The need for neighbourhood-based energy efficiency programs, and
- Valuing participants' knowledge.

4.3.1 The Barriers to and Benefits of Participation

The interviewees in Linden Woods frequently referred to their busy lives and lack of free time to review the Power Smart programs:

“Most of the neighbourhood residents are so busy and make a lot of money. They do not think about saving a few dollars. I am paying about \$250 for my hydro bills. Although it is not a small amount of money, but compared to my salary it is reasonable” (IN LW1).

On the other hand, the Spence participants were aware of these programs because the cost of energy for them is a large part of their budget. As well, the Spence Neighbourhood Association (SNA) actively informs local people about energy saving programs. Nevertheless, they were not actively participating, because they were not able to pay the upfront costs to be eligible for the rebates or other incentives. One of the interviewees explained:

“My house is too old and it does not have new windows and good insulation. I have a minimum wage job and I have to pay \$500 monthly for my hydro bills. I am willing to spend my spare time to make my house more energy efficient but the Power Smart Program does not provide this opportunity for me” (IN SP2).

Barriers for participation in these two neighbourhoods may be very different. In short, information and time were the main barriers for Linden Woods residents, but financing was the main problem for Spence residents. Benefits from this program were different as well. For Spence residents, who may pay more than 10 percent of their income for energy bills, saving money is the most important benefit. However, the interviewees were aware of the environmental impacts of their energy consumption as well. Saving the environment may be the other reason for them to be cautious about their behaviours toward energy consumption. For Linden Woods residents, having a higher quality place to live and more comfort are perhaps the main reasons to participate in the Power Smart program. For example, most of the Linden Woods residents were interested in the energy efficient appliance rebate. These appliances are usually high-quality and add to the comfort of living. One of the interviewees in Linden Woods, when asked about their motivation to participate in the Power Smart programs, said:

“I think the comfort is the main reason... Environmental protection is my second reason, because I am an educated person, I definitely consider the environment as one of the top priorities” (IN LW5).

Saving money and being a good role model for their children were mentioned as other benefits, by Linden Woods residents.

4.3.2 The need for neighbourhood-based energy efficiency programs

When asked if they think their neighbourhood’s energy needs and wants are unique, requiring a specific energy program, interviewees recognized some characteristics that differentiate their neighbourhood from other neighbourhoods, and influence participation rates.

In Figure 3 below, I compare the recognized characteristics of the two neighbourhoods based on the 2006 census data, to examine the differences (City of Winnipeg, 2009).

Income

The average family income was the main factor mentioned repeatedly by interviewees. If we assume that the average utility bill is \$300/month, then a \$3,600 annual utility bill is about 2.8 percent of the average family income of residents in Linden Woods and 13.2 percent of the average family income of residents in Spence.

Dwelling

The age of dwellings was another important factor. New construction technologies and increased energy efficiency standards have resulted in better quality homes, requiring less energy consumption, in Linden Woods. As well, ownership is a factor which greatly

affects the level of participation in Power Smart programs. Obviously, landlords have less interest than owners in investment in housing to reduce the cost of energy consumption.

Figure 3: 2006 statistical data comparison between Spence and Linden Woods neighbourhoods

Neighbourhood Characteristics	Linden Woods	Spence
Population	9,550 people (3150 homes)	4260 people (1770 homes)
Average Income	\$125,359	27,164
Ownership	91%	17.5%
Period of construction (After 1981)	98%	14.3%
In need of major repair	1.1%	18%
Major value of dwelling	\$288,444	\$84,392
Minority Population	24.7%	40.5%
Aboriginal Population	1.3%	30.9%
Language (speaks English)	86.9%	90.4%

Minority and Aboriginal population

Some of the interviewees in Spence referred to their neighbourhood as culturally diverse and believe culture is an important factor in adopting energy efficiency programs. One of them said:

“Spence is [a] highly ethnically diverse neighbourhood... I think the energy efficiency message has to be more meaningful coming from the community” (IN SP1).

Another commented:

“The houses are cheaper here so it attracts new comers with different cultures. Because they are new [to this culture] it takes more education to get to know the program” (IN SP4).

Language

The majority of residents in both neighbourhoods are able to speak English and language was not considered a barrier to understanding the programs' messages. However, some recommended translation of the information to other languages as a way to reach more people in their community.

The results of the interviews emphasize the benefits of introducing energy efficiency programs at the neighbourhood level. Each neighbourhood might benefit from unique program design, suitable to specific energy needs and wants, at the same time paying attention to the aforementioned characteristics.

4.3.3 The Importance of Public Consultation

These interviews begin to demonstrate the importance of public engagement in designing energy efficiency programs. Although, interviews are only one method, among many, for public engagement, and this project did not involve comprehensive interviews at a large scale, the small sample of interviewees still provided valuable information about the Power Smart program. For example, interviewees in Spence recognized the need for low-cost insulation programs. An analysis of the census data demonstrated this need is real. Most of the houses are very old and many of them need repairs. As well, the interviewees were able to recognize some of the unique characteristics of their neighbourhoods.

Although it is difficult to generalize the results, these opinions provide some hints for further research. In particular, when residents in both neighbourhoods were asked if they would you like to be involved in planning a program for their neighbourhood everyone replied they would. So, there is good potential for community involvement in planning and designing energy efficiency programs.

4.4 Power Smart Data Analysis

A comparison was conducted between the number of applicants from the two neighbourhoods, Linden Woods and Spence, for the four major Power Smart programs, including the Energy Efficient Appliance Rebate, In-Home energy evaluation, Furnace Rebate, and Insulation Rebate. The results and dates are shown at Figure 4, below. It should also be noted that the starting dates of the programs were not the same. The number of homes, and therefore the number of potential applicants in Linden Woods, is not the same as Spence (3,150 homes in Linden Woods and 1,770 homes in Spence). For a more accurate comparison, percentages were used.

Although the participation rate in Linden Woods is much higher, participation in both neighbourhoods is low. If we consider 10 percent as a successful rate for DSM programs, only the Energy Efficient Appliance program in Linden Woods reached the success rate. The only program which has a higher participation rate in Spence is the Insulation Rebate program (6 applicants in Spence compared to 1 applicant in Linden Woods). Nevertheless, the insulation program's participation rate in both neighbourhoods is less than 1 percent of the total and marked as 0 percent in Figure 4.

Figure 4: Comparison of participation rates in the Power Smart residential programs in Spence and Linden Woods neighbourhoods.

Power Smart Programs	Number of Applications	Percentage of Homes Applied of Total Homes	Percentage of Homes Applied of Total Owned-homes
	Linden/Spence	Linden/Spence	Linden/Spence
Energy Efficient Appliance Rebate (Applications date from 2006/06/01 to 2008/12/29)	407/14	13/0.8	14/0.3
Power Smart Residential Loan (Applications date from 2001/01/15 to 2008/11/30)	101/58	3/3	3/18.7
In-Home Energy Evaluation (Including EGH program and ecoEnergy program: 2001 to 2008)	17/0	0.5/0	0.5/0
Furnace Rebates: (Applications date from 2005/11/03 to 2008/09/30)	233/42	7/2	8/13.5
Insulation Rebate (Applications date from 2004/06/01 to 2008/09/30)	1/6	0/0	0/2
Total	759/107		

These Power Smart programs are designed with homeowners in mind and are not suitable for renters. In Linden Woods 2,866 homes from the total of 3,150 homes are owned. In Spence only 310 homes of the total of 1770 homes are owned. If we only consider the participation rate of homeowners and exclude renters, then the participation rate in Spence is much higher. The last column in Figure 4 shows the percentage of participants

from owner-occupied homes. For example, 18.7 percent of homeowners in Spence have applied for a residential loan, compared to 3 percent of the total population.

I should add that some of the renters may benefit from Manitoba Hydro's Commercial Power Smart program, if their land lords apply for those programs. However, in this case land lords may do not share the benefits with their renters equally.

4.5 Conclusion of Results from Two Methods

The results of interviews and data analysis show that Power Smart programs have been less effective for low-income families in Spence neighbourhood compared to high-income families in Linden Woods. Also, barriers to and benefits of participation in the Power Smart programs are very different in these two neighbourhoods. For example, the interviews suggest that money saving is not a good incentive for Linden Woods residents, but it makes perfect sense for those living in Spence.

Also, this field work identifies some of the socio-economic characteristics of neighbourhoods which affect Power Smart participation rates. Particularly, average family income, which influences housing ownership and quality, impacts participation in Power Smart programs. The literature review supports this finding that income, education level, how recently a house purchase has occurred, house age, ownership, and the condition of structure influence energy efficiency program participation (Kennedy et al., 2001).

Although Manitoba Hydro has never evaluated the impact of Power Smart programs in different neighbourhoods, this field work results begins to demonstrate the value of doing

so. Studying the impact of DSM in each neighbourhood can significantly inform the appropriate design of DSM programs for that neighbourhood. My research suggests that bringing the program to the neighbourhood-level and designing programs in collaboration with community members will greatly increase the effectiveness of the program.

4.6 Chapter Outlook

In this chapter, I explained the results of my field work regarding the impact of Manitoba Hydro's Power Smart programs, in two socio-economically different Winnipeg neighbourhoods, Spence and Linden Woods. My interviews with residents showed that the barriers to and benefits of participation are not the same both neighbourhoods. Also, there is a need to bring energy efficiency programs down to the neighbourhood level and value residents' knowledge in planning and implementing energy efficiency programs.

The data regarding the participation rate in five different Power Smart programs, shows although participation in both neighbourhoods is low, Power Smart programs have been less effective for low-income families in Spence neighbourhood compared to high income families in Linden Woods. The results of both methods indicate the benefits of neighbourhood-based energy efficiency interventions with respect to socio-economic characteristics of neighbourhoods such as average family income, population of minorities, and housing ownership.

In the next chapter, I examine the Social Marketing approach as a means to address the challenges identified.

SECTION THREE: Addressing the Problems

Chapter 5: Critical Review on Social Marketing as a DSM Tool

5.1 Introduction

Social marketing has been suggested as a successful tool for DSM programs, for effective behavioural change toward energy efficiency and conservation (Canadian Energy Efficiency Alliance, 2005). In this chapter, I examine the effectiveness of this tool to address the aforementioned challenges associated with DSM programs. Specifically, the role of social marketing to address energy poverty challenges will be studied.

5.2 Social Marketing

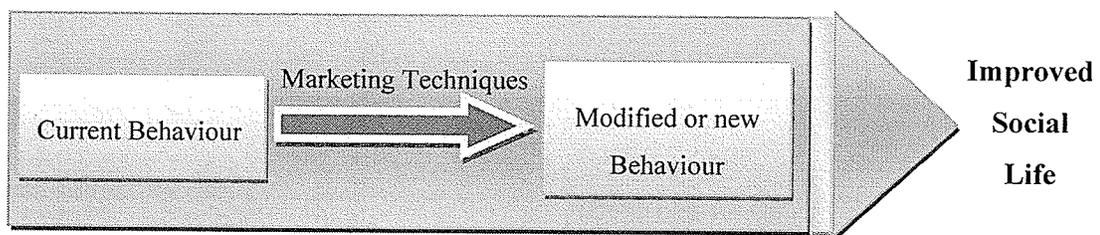
The use of marketing concepts to promote positive social change was first examined in the early 1970s. The research led to the development of a new discipline, social marketing (Kotler & Zaltman, 1971). This section provides a critical review of literature on social marketing principles, tools and theories.

5.2.1 What is social marketing?

The question asked by the sociologist Wiebe, “Why can’t you sell brotherhood like soap?” (Wiebe, 1951-1952), has inspired the development of the social marketing concept. In 1971, the term social marketing was created and it matured into a formal discipline with the publication of “Social Marketing: An Approach to Planned Social Change” in the *Journal of Marketing* by marketing experts Philip Kotler and Gerald

Zaltman (1971). Social marketing draws mainly on two distinct disciplines: social science and marketing. It has been defined as: “The systematic application of marketing concepts and techniques to achieve specific behavioural goals relevant to a social good” (French & Blair-Stevens, 2005, p.4). Simply put, social marketing is about changing behaviours by using marketing techniques that will improve the well-being of society (Figure 5, below).

Figure 5: Simplified definition of social marketing



The concept of Social Marketing has frequently been misused and misunderstood. Literature about social marketing often begins with a definition of social marketing that defines what is **not** social marketing. Some examples of these definitions include:

- “Social marketing is **not** social advertising” (Hastings, 2007, p. 18).
- “Social marketing should **not** be confused with societal marketing, social network, and social media marketing” (“Social Marketing,” 2008).
- “The well-intentioned non-profit director who uses marketing techniques to raise funds for the director’s organization or the health educator who creates a television commercial without even talking to the people [are **not** social marketers]” (Weinreich, 1999, p. 3).

Andreasen (2002) argues what makes social marketing potentially distinctive is that “it (1) holds behaviour change as its bottom line, (2) therefore is fanatically customer-driven,

and (3) emphasizes creating attractive exchanges that encourage behaviour (the benefits are so compelling and the costs so minimal that everyone will comply” (p. 7).

Social marketing is applied to improve target behaviours primarily in public health, safety, and environmental protection. It cannot be used for any kind of behaviour change problems, such as “complex problems with many contributing or confounding factors, and problems not under individual control” (Weinreich, 1999, p. 4).

Figure 5, above, simplifies the definition of social marketing, but in practice it is not so easy. Social marketers must answer questions, such as:

- Whose behaviour do they want to change? (who is their target group?);
- Why do they want to change it? (what is their objective and goal?);
- Which marketing techniques are they going to use?;
- What are their evaluation criteria? and more importantly
- Is social marketing the right technique for solving the problems they face?

To be able to answer these questions, social marketers should fully understand the process, principles, themes and theories of social marketing.

5.2.2 Nature of the social marketing problem

The problems that social marketers address have two possible broad solutions based on the nature of the problems, as described in Figure 6, below. After studying the target group and examining the clients’ perceptions about the problem, social marketers may identify the problem is communication, that in fact, some information about the desired behaviour is needed. In this case, the solution is a media campaign (Hastings, 2007).

Arguably, the research may suggest that it is an empowerment problem. What the clients need is more skill development or suitable tools and techniques rather than warnings about their incorrect behaviour (Hastings, 2007).

Figure 6: Nature of a social marketing problem



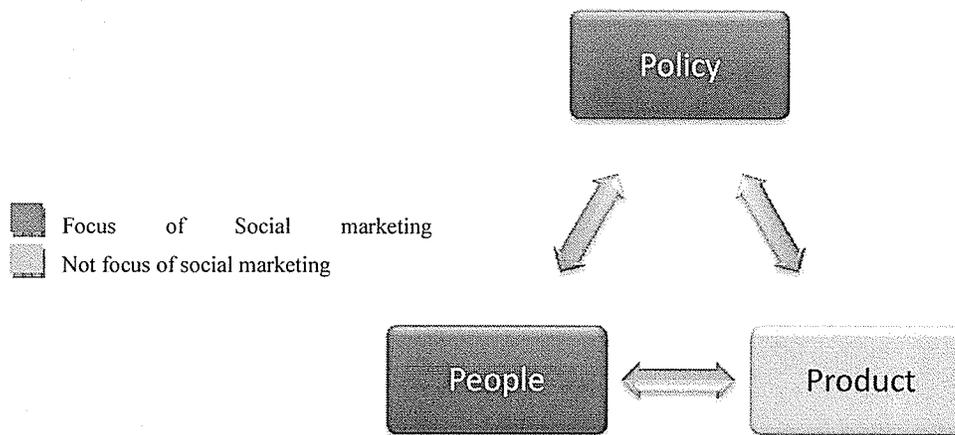
For example, let us assume we are considering the possibility of developing an advertising campaign for a low-income community. The campaign focuses on the cost of their non-energy efficient behaviour and provides them with information about an existing housing insulation program. As a first step, research could examine the residents' perceptions about energy efficiency behaviour in the context of the existing program. The researcher may find out the residents are fully aware of the program, but they are not able to participate in it. Say the program suggests some refund for buying the insulation materials, but residents do not have the money upfront or they do not have the required skills to install insulation. In this case, using media to advertise the program is only a waste of time and money. Social marketers need to address the real problem which is community empowerment and, therefore, skill development would be required.

5.2.3 Operational and Strategic Social Marketing

Any change in a social system requires changes in at least one of the following interconnected areas:

- Policies and Management (change in regulations and laws, e.g. policies for achieving significant reductions in carbon emissions);
- Products and Services (technology-based interventions, e.g. invention of new hybrid cars);
- People's Behaviour (individual or community-based behaviour-change campaigns, e.g. no-idling campaigns).

Figure 7: Three P's in a social system



Social marketers usually intend to target 'people' to achieve specific behavioural goals. Recently there have been increasing efforts to use social marketing to inform and guide policy formulation and strategy development ("Social Marketing," 2008). Social marketers began to ask, "Should we focus our efforts on influencing individuals?...Or should we also be trying to influence the policy makers, politicians, regulators or educators?" (Hastings, 2007, p. 108). The original form of social marketing, which focuses on people's behaviour, is called downstream or operational social marketing. The new form, which focuses on policies, is called upstream or strategic social marketing.

Customer understanding is the core for both types. The product itself is not the focus, but rather a tool to achieve the desired goals. For example, social marketers never think about inventing products such as a hybrid car, but they may promote them to their clients, to achieve energy efficient behavioural goals (Fig. 7).

5.2.3.1 Case Study: The Act-Belong-Commit Campaign in Rural Western Australia

The Act-Belong-Commit (A-B-C) campaign in Western Australia provides an example of social marketing campaigns for mental health promotion programs. This example helps to understand how social marketing intervention is different from other kind of campaigns. The goal of the A-B-C program was to guide health professionals in communicating to individuals and community groups what mental health promotion is about, and to guide population-wide interventions (Donovan, James, Jalleh, & Sidebottom, 2006). The A-B-C program targets both individuals (to be proactive about their own mental health) and appropriate partner organizations (to promote activities beneficial to mental health). The campaign was based on the results of qualitative and quantitative research on community members' perceptions of what mental health is, and concepts of positive mental health as described by psychologists.

After studying the community, the A-B-C campaign researchers found that people rarely consider what they could or should be doing for their mental health. The researchers concluded that "a primary objective for mental health promotion was to reframe people's perceptions of mental health away from the absence of mental health, to the belief that people can act proactively to protect and strengthen their mental health" (Hastings, 2007, p. 310)

The customer research indicated that the problem was both a *communication* and an *empowerment* problem. A media advertising and publicity campaign was developed to solve the communication problem. The campaign aimed at informing and encouraging individuals to Act (maintain or increase level of physical, cognitive and social activities), Belong (maintain or increase level of participation in groups and community events with their family and friends), and Commit (take up a cause or challenge) (Donovan, Watson, & Henley, 2003).

To solve the empowerment problem, some community organizations were chosen as partners. The partners undertake to promote their activities and cover the local events under the A-B-C banner. In exchange, A-B-C organizers offered merchandise resources (T-shirts, water bottles, etc), paid advertising support and promotional expertise that many community organizations did not have. By doing so, the program was able to increase the reach of the campaign to minority and underpowered groups (Hastings, 2007).

This study stressed the importance of consumer research in developing social marketing strategies (Hastings, 2007). Further, this case study illustrates social marketing is more than an information/education campaign, it can effectively address empowerment and communication problems in one program.

5.2.4 Theories

“There is nothing so practical as a good theory” (Lewin, 1951, p. 169). The practice of social marketing is not exceptional and should be informed by theory. Theories that help social marketers are derived from the behavioural and social sciences, and spell out the

relationship between human behaviours and various individual, social or environmental factors (The Oak Ridge Institute for Science and Education, 2006). Social marketing practices apply behavioural theories across four primary areas: psychological, social, bio-physical and environmental/ecological (French & Blair-Stevens, 2007). Social marketers need to develop creative, innovative and flexible solutions to the different types of complex behavioural challenges they face. This means that every given situation needs to be examined carefully to see which theories have the greatest potential for explaining the influences on behaviour. For instance, problems related to health issues may demand application of behavioural theories across bio-physical areas, but environmental issues may demand environmental psychology theories.

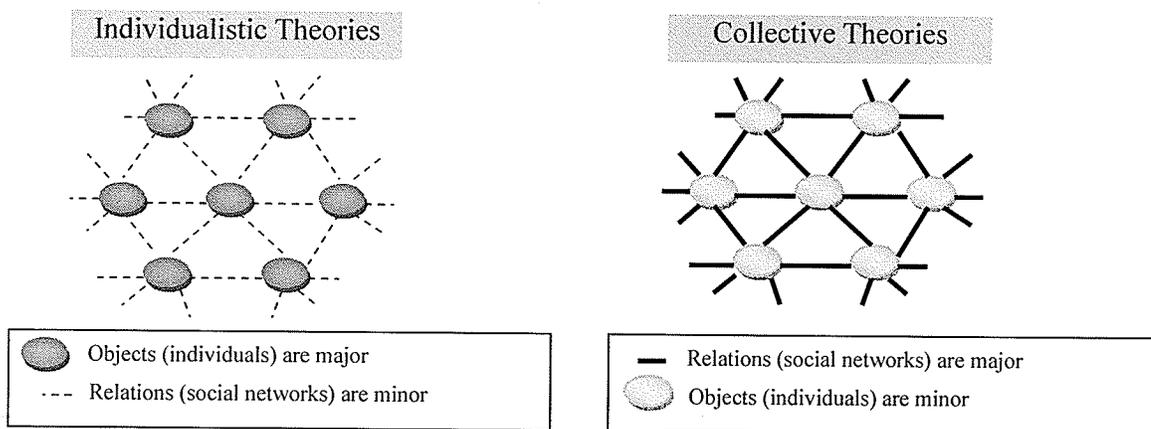
The behavioural theories help social marketers to map out the causes of problems and choose appropriate strategies and tools for behaviour change (The Oak Ridge Institute for Science and Education, 2006). For example, in a successful social marketing campaign to encourage people to fight child abuse, Bagozzi and Moore drew on Lazarus's theory of emotions. They reasoned that if the message about abused children leads people to feel anger and sadness, heightening the level of empathy among the target audience will lead to success in the campaign (Goldberg, 1995). On the other hand, because human behaviour is a very complex phenomenon, social marketers "have to recognize that all these theories and models will, inevitably, be gross oversimplifications that will ultimately be found wanting if we set too much store by them" (Hastings, 2007, p. 21).

Some behavioural theories will be discussed here. These theories do not comprise the complete list of behavioural theories. They are some examples to show the application of principles underlying specific theories for social marketers.

I have divided the selected theories into two groups and named them as: “Individualistic behavioural theories” and “Collective behavioural theories”.³ The first group includes theories which are primarily about individuals’ behaviours and the latter includes those concerning broad collective or community-based solutions.

Individualistic theories focus on influencing individuals’ behaviour to reach social change. These theories assume that psychological factors are important for how one behaves (for example: Cognitive Learning theory) or that individuals’ environments influence their behaviour (for example: Behavioural Learning theory) or that a combination of environmental/social and psychological factors influence behaviour (Social Cognitive theory). In the end, in all of these theories, the behaviours of individuals are the major focus, whether in a social context or independent of a social context. In these theories, the influence of social networks/links or the community as a whole is only a minor concern, or not a concern at all (Fig. 8, below).

Figure 8: Individualistic versus collective behavioural theories



³ As far as I am aware, no other text has used these phrases. I have chosen them for the purpose of this paper. Also, see Section 7.2.2 for a discussion of Altman & Rogoff, 1987.

Individualistic theories focus on influencing individuals' behaviour to reach social change. These theories assume that psychological factors are important for how one behaves (for example: Cognitive Learning theory) or that individuals' environments influence their behaviour (for example: Behavioural Learning theory) or that a combination of environmental/social and psychological factors influence behaviour (Social Cognitive theory). In the end, in all of these theories, the behaviours of individuals are the major focus, whether in a social context or independent of a social context. In these theories, the influence of social networks/links or the community as a whole is only a minor concern, or not a concern at all (Fig. 8, above).

In collective social marketing theories, internal links and communication between community members is crucial. After targeting a group of people who the social marketer wants to influence, the next step is to study the existing social networks and relations in order to influence the selected behaviour of the whole community. The main focus of these theories is to examine a community as a whole, to find the potential for encouraging changes.

5.2.4.1 Stages of Change Theory (Individualistic Theory)

Prochaska and DiClemente (1983) suggest that there are five stages that one should take to move from ignorance of the desired behaviour to committing to the behaviour. These stages include: precontemplation, contemplation, preparation, action, and maintenance. In the precontemplation stage individuals may be aware of the desired behaviour (e.g. quitting smoking), but may be indifferent toward the idea. In the contemplation stage individuals are evaluating the personal benefits and expenses of committing to the desired

behaviour. After going through preparation and action, they finally become committed to the behaviour at the maintenance stage and have no desire to relapse (Hastings, 2007). In a case study on the process of self-change related to smoking, the results indicate that self-changers need to use different processes in each stage of change. For example, consciousness raising happens during the contemplation stage and reinforcement management happens during the action stage (Prochaska & DiClemente, 1983).

From a social marketing point of view, this theory emphasizes the necessity of consumer research to identify the target groups' current stage, in order to design an appropriate strategy based on the consumer's position in the process to help them to move to the next step (Hastings, 2007). For example, if consumer research shows the target audience is in the contemplation stage, it means that, although they have not yet acted, they are aware of the new behaviour and the intervention does *not* need to inform them about the benefits of the desired behaviour. Alternatively, the target audience may be aware of the offer and has chosen to act, but is not committed to the behaviour, because s/he thinks the desired behaviour incorporates some amount of loss of honour or dignity. In this case social marketers need to adjust the person's social environment. Since the theory of stages of change focuses on individuals' behaviour change, it falls under the individualistic theories category.

5.2.4.2 Cognitive Learning Theory (Individualistic Theory)

Cognitive learning theory (CLT) considers learning, an intellectual process by which knowledge is obtained from ideas or perception, as a process that takes place inside the mind of individuals (Fox, 1997). Personal and individual dynamics are a very important

part of learning, and environmental factors such as peer pressure are minor. Learning is treated as an individual accomplishment. Also, CLT assumes that learning can occur without a change in behaviour (Ormrod, 1999).

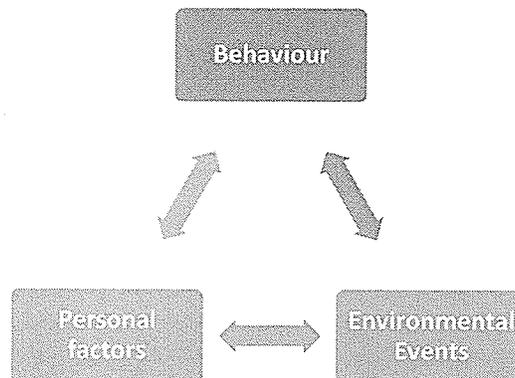
There are two important lessons for social marketers. First, learning is a complicated process in which personal characteristics should be considered. This places emphasis again on the importance of targeting a specific group with similar characteristics. Second, this theory suggests that learning about a desired behaviour will not necessarily lead to the adoption of that behaviour. It reinforces the fact that in some cases what the target group needs is not more information. They may already be aware of the desired behaviour and its benefits, but they do not feel empowered enough to act. Since CLT focuses on an individual's behaviour, it is considered one of the individualistic theories.

5.2.4.3 Social Cognitive Theory (Individualistic Theory)

Social cognitive theory suggests that human behaviour, personal factors and environmental events are three interacting operators which influence each other as demonstrated in Figure 9, below (Bandura, 1988).

Personal factors include characteristics such as education, aspirations, self-efficiency and personal skills. Environmental factors are divided into two groups: immediate environment such as peers and local community; and the wider social context, such as societal norms, cultural symbolism and social and economic conditions (Hastings, 2007, p. 28).

Figure 9: The three interacting operators



This theory has both explanatory power and operational power, to improve human functioning (Bandura, 1988). An example of its use is developing a program to reduce absenteeism by employees through a self-regulatory program. This program shows how personal factors, which are one of the three interacting operators, can be altered to improve the level of organisational functioning. Bandura describes three aspects of social cognitive theory which are especially relevant to this program. They include: developing competencies through mastery modelling; strengthening people's beliefs in their capabilities so they make better use of their talents; and enhancing self-motivation through goal systems (Bandura, 1988, p. 276).

The lesson for social marketers is, when trying to change people's behaviour, we should consider environmental factors as well as personal factors. For example, social marketers may promote a desired behaviour by changing people's perceptions about how common and normal that behaviour is, instead of encouraging individuals personally to adopt the behaviour (Hastings, 2007, p. 28). Social cognitive theory is another example of an

individualistic theory. Although it considers the influences of social and environmental factors on individuals' behaviour, it is strongly seated in an individualist mindset.

5.2.4.4 Exchange Theory (Individualistic Theory)

“Social exchange theory has provided the dominant basis for understanding exchange relationships in organizational settings” (Shore, Coyle-Shapiro, Chen, & Tetrick, 2009, p.289). Kotler (1991, p.7) defines “exchange” as “the act of obtaining a desired product from someone by offering something in return.” In social marketing, “when we are successful, we persuade the individual to exchange something—his or her time, energy, or comfort level—in return for the advocated benefit” (Goldberg, 1995, pp. 350-51). The idea of exchange theory may seem more difficult to apply in social marketing than commercial marketing. Usually, the benefits of adopting a desired behaviour are unseen, long-term and intangible (providing healthy food for kids to prevent obesity in their adulthood). On the other hand, the symbolic exchange in social marketing is more definite, moral and mutually beneficial than commercial marketing (Hastings, 2007).

Layard (2005, p.99) argues that moral actions arise when there are “voluntary ways in which people co-operate, so as to produce a decent life for all parties”. He points out: “we survived because our genes gave us the ability to cooperate” (Layard, 2005, p. 98). Trust and relationship making are key factors in any kind of exchange and cooperation between two parties. In social marketing building trust and good relationships with customers are unreachable, unless social marketers consult the target group and conduct comprehensive consumer research. Exchange theory is another example of an individualistic theory. Although, it explores relations and links between community members, its primary

concern is the relation between individuals and their surroundings, not community-level relations.

The aforementioned theories were individualistic theories which focus on individual change in order to make a social change. Although social marketing sometimes uses collective theories, it primarily uses the individualistic theories. Social marketing focuses on an individual level of intervention (Andreasen, 2002). Below some of the collective theories, which value a community-level intervention for social change, are studied. I believe social marketing could benefit from collective theories as much as individual theories. At the end of this chapter, I suggest an incorporation of collective theories with existing social marketing theories, as a way to increase social marketing effectiveness, especially for DSM.

5.2.4.5 Critical Theory (Collective Theory)

Critical conception and practice of critical theory was developed in the 1930s by writers from the Frankfurt School (“Critical Theory,” 2008). Horkheimer’s 1937 essay, “Traditional and Critical Theory” defined critical theory as a social theory with the central objective of critiquing and changing society as a whole, in contrast to traditional theory with the objective of only understanding or explaining it (Horkheimer, 1972). “Critical theory has focused on the processes of synthesis, production, or construction by which the phenomena and objects of human communication, culture, and political consciousness come about” (“Critical Theory,” 2008).

Social marketing and critical theory are both oriented toward social change. Critical theory can be a method used in social marketing to analyze a social phenomenon. Critical

theory makes explicit those aspects of the phenomenon, that are often overlooked and taken for granted. This includes aspects that oppress certain groups of people, while giving power to, or benefiting, other groups (Opalinski, 2006). Social marketers could use the critical theory perspective to have a more comprehensive and radical approach that emphasizes efforts to understand the interrelation of human communication, policy and culture. This would lead to life-altering changes rather than a focus on narrow and mundane issues (Goldberg, 1995). From a critical theory perspective, to reach life-altering changes social marketers need to change the negative or constraining social structures which influence an individual's behaviour. Also, social marketers need to push policy makers to incorporate research findings in their decision making (Goldberg, 1995). Critical theory is an example of intercommunicative theory, because its focus is on collective and community-based activities, such as cultural and political changes.

5.2.4.6 Community-Organization Model (Intercommunicative Theory)

In the 1960s, people started to think about social actions and cooperation between individuals as a source of power to make changes in their communities. They believed that change happens when people get organized (Capece & Schantz, 2000). Community organization is defined as "the process by which community groups are helped to identify common problems or goals, mobilize resources, and develop and implement strategies for reaching the goals they collectively have set (Minkler, 2005, p. 26). The concept of empowerment of individuals or communities is embedded in this definition. The community organization model also suggests that needs and wants of a community should be recognized by the community itself and not by outsiders. Thus, social involvement and community participation are central factors in this model. Community

participation is not only important for identifying a community's problems and potentials, but also for improving perceived control and managing capacity of community members (Minkler, 2005).

Social marketers frequently use consumer research in their planning processes. This model acknowledges this use of research and suggests that consumers' perceptions and ideas should be taken seriously. The main objective of social marketing is to sell a better lifestyle by changing peoples' behaviour. This model suggests that this change can happen through considering and empowering a community as a whole and having a collective and broader concern. The community-organization model is a good example of an intercommunicative theory. It is community-based and looks at community-level relations and links, such as achieving a common goal.

5.2.4.7 Communicative Action theory (Intercommunicative theory)

The concept of communicative action was developed by Habermas. He argues that people form their consciousness socially through interaction with others (Healey, 1997).

This theory assumes that open and public debate is necessary for reconstitution of the public realm (Healey, 1997). In public debates, there is a need for validating claims, identifying priorities, and developing strategies for collective action. Further, this theory suggests meeting this need through a process of interaction between community members—through interactive and collective reasoning with regard to mutual exchange (Healey, 1997). This theory argues that “it is through our communicative efforts that cultures and structures are formed and transformed” (Healey, 1997, p. 53). Holder and Lee (2007) indicate that Habermas (1984) believes “at the end, what we take to be true

and right will lie in the power of the better argument articulated in specific socio-cultural context” (p. 533).

For social marketers, this theory has important lessons. It emphasizes the importance of democratic and interpersonal communication, in order to pursue a mutual understanding of the problem and harmonize an action plan toward addressing the problem in its socio-cultural context. This theory shows why social marketers may need to consider a target community as a whole, to avoid underestimating a community’s power to reach a common understanding of social problems and find ways to tackle them.

Communicative action theory is a collective theory. Krüger (1991) calls this theory “the model of communication for society as a whole” (p. 140). Understanding the differentiation of theories between individualistic and collective is important for social marketers. Social marketers need to intervene at both the individual and community level to be successful.

5.2.5 Principles

What are the principles of social marketing? How do we know if a labelled social marketing practice is consistent with evidence-based principles and practices in the social marketing field? The National Social Marketing Centre (NSMC) has answered these questions by developing Social Marketing National Benchmarks criteria, which include eight key benchmarks of good social marketing: Customer Orientation, Segmentation, Behaviour, Insight, Exchange, Competition, Methods Mix, and Theory (French & Blair-Stevens, 2007).

For each benchmark there is a list of ‘What to look for’ which helps us to distinguish between social marketing and other kinds of interventions. The NSMC emphasizes that social marketers should not confuse benchmarks with a process of how to do social marketing. Benchmarks are not sequence based. They are eight key elements which should be examined in an intervention, to know if the intervention can be called social marketing.

Since the criteria ‘were developed following a two year independent review in 2006 which examined social marketing methods and approaches’ (French & Blair-Stevens, 2007), they include almost all of the principles that other well-known social marketing texts recognize. It seems that the criteria are the most complete version of social marketing benchmarks, so I will consider them as the social marketing principles and will discuss each one separately. The names of principles used in this paper are exactly the same as the NSMC benchmarks, but their descriptions are based on a wide selection of sources.

5.2.5.1 Customer Orientation

Customer orientation is the most important principle in social marketing and, interestingly enough, it is usually overlooked. Targeting customers’ input and understanding their current behaviours should inform the process of planning and executing the next steps. In almost any project, time and budget are limited and that is why project managers may not be interested in spending a good amount of their resources in this very first step. However, in social marketing this step is the basis and guidance for the whole project and should be carefully developed. Before studying the target market,

the social marketer should know who their customers are and why they should be targeted. After all, social marketing is based on a voluntary behaviour change and customers are free to not listen, and to ignore the intervention. So, understanding their needs, wants and characteristics will help overcome what is in competition for their time and attention. “In order to gain this understanding it is important that customer and market research is used, together with local intelligence, to inform the development of the work” (National Social Marketing Centre, 2006).

5.2.5.2 Segmentation

“The first lesson of social marketing is that there is no such thing as targeting the general public” (Weinreich, 1999, p. 5). In light of this, how should social marketers choose their target group?

To select a target market Noble suggests that “social marketers should think through the aetiology of a particular social or health problem, to identify all the possible client and stakeholder groups who may be causing, being affected by or have a capacity to influence the outcome” (Hastings, 2007, p. 122).

Using the concept of harm chain developed by Polonsky, Carlson and Fry (2003), Noble (2006) has suggested social marketers use harm chain groups. Noble’s harm chain groups includes those being harmed, those causing harm, regulators and significant others who can address harm, as well as those who influence regulators and significant others. Each of these groups can be considered a potential target market. These groups can in turn, be further segmented. There are a number of criteria for further segmentation. Hastings categorizes them into three commonly used segmentation criteria (Hastings, 2007, p. 62):

1. Personal characteristics;
2. Past behaviour or proximity to the desired behaviour; and
3. Benefits sought.

For example, we can consider the environmental problem of energy-waste in houses. Based on Nobel's harm chain groups, there are four different potential target groups. Any of these groups can be further segmented. For example, consider the group of those being harmed, which in the energy-waste case would be the residents. The residents could, based on Hastings' criteria, be further segmented into three sub-groups:

1. Residents with the same income level or those who live in the same neighbourhood (personal characteristics);
2. Households who are aware of their energy efficient behaviour, but are not committed to the behaviour (past behaviour or proximity to the desired behaviour); and
3. Households who want to protect the environment or those who want to save money (benefits sought).

After identifying all the relevant potential target groups, social marketers need to conduct a situation analysis and consider the designated resources, to know which specific group and behaviour they can afford to effectively influence to achieve their goals.

In practice, social marketers usually do not have enough resources and opportunities to influence every target group, so their choices are limited. Also, social marketers are usually called for help when a governmental or non-governmental organization has already decided their agenda, including the target market. However, knowing and

understanding options is important for a social marketer, to be able to choose the most relevant target group.

5.2.5.3 Behaviour

“Social marketing campaigns should be designed and planned with a specific behaviour objective in mind” (Kotler & Lee, 2008, p. 139). Social marketing campaigns are behaviour-based not information-based. A campaign may need to provide some information to enhance the audiences’ knowledge to change their beliefs, but the ultimate goal is to influence their behaviour. Further, “social marketing doesn’t just focus on achieving changes in behaviour, but takes a much wider approach to focus on how to promote, establish and sustain changes over time” (National Social Marketing Centre, 2006, p. 5). The planners may directly target individuals’ behaviours (operational social marketing), or alter policies in institutions, that form the social system within which the individuals operate (strategic social marketing). In either case, having a specific behaviour goal and strong behaviour analysis is necessary.

5.2.5.4 Insight

Social marketers need to answer questions such as: Why does the target audience behave the way they do? What are the influences, and who are the influencers, on the problem or desired behaviour? To answer these questions, social marketers need to go beyond traditional data gathering. They need to use their judgement. In other words, they need to develop insight to be able to creatively affect their clients’ behaviour. Traditional information and intelligence, such as demographic or epidemiological data, cannot help social marketers know how their clients feel, think or believe. Without insight, social

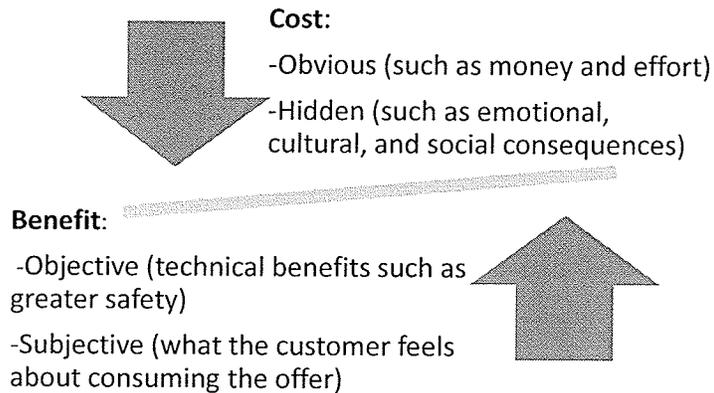
marketers will not be able to find out what moves and motivates their clients (French & Blair-Stevens, 2007).

5.2.5.5 Exchange

In social marketing, like commercial marketing, buyers have to pay the cost of the benefits proposed by sellers. Social marketers should be completely aware of the full cost of buying the desired behaviour. Some expenses are direct and obvious, but some are indirect and hidden. Only a deep understanding and insight into the customer would help the social marketer appreciate the full cost to the customer of accepting the offer (National Social Marketing Centre, 2006).

Gerard Hastings assumes that there are two types of benefits for the customer: objective and subjective. By objective, he means technical benefits such as greater safety. By subjective, he means what the customer feels about consuming the offer (Hastings, 2007, p. 160). What makes balancing social marketing's costs and benefits even harder, than balancing commercial marketing's costs and benefits, is that usually the benefits of accepting a socially desirable behaviour are long-term and intangible, while the costs are immediate and tangible. For example, energy-saving social marketing techniques, for housing, promises environmental protection. However, this may occur years after everyone is committed to saving energy, while the home-owner must pay the immediate costs of renovations.

Figure 10: Balancing costs and benefits



The challenge for social marketers is to understand all costs and benefits of the desired behaviour for their target group. Social marketers must use different methods to intelligently minimize the costs, as well as maximize the benefits for the customer considering the available resources (Fig. 10, above). In the example of an energy saving campaign, the social marketer may remind the target group about the immediate and tangible benefits of energy saving, such as having a more comfortable house and lower utility bills, in addition to the long-term environmental benefits.

5.2.5.6 Competition

“The fact that social marketers deal with voluntary behaviour means their clients always have a choice__ they have ‘buyer power’” (Hastings, 2007, p. 160). Social marketers have to compete for audience attention and willingness or ability to adopt a desired behaviour (National Social Marketing Centre, 2006). The target market may be fully aware of the benefits of adopting the new behaviour and willing to act, but may have no opportunity or power to act. In this case, social marketers need to influence upstream audiences. As well, they have to compete for the attention of policy makers, and motivate them to provide opportunities to empower downstream audiences (Andreasen, 2008).

NSMC defines two types of competition for social marketers, internal and external. Internal competition includes factors which directly affect the target group, such as the power of pleasure, enjoyment, risk taking and habit. External competition includes the power of organizations who promote the opposite or negative behaviours or those who promote positive behaviours and compete for the target's attention (National Social Marketing Centre, 2006). I think NSMC's definition of external competition should include the power of upstream audiences, as explained previously in section 5.2.3.

5.2.5.7 Methods Mix and Marketing Mix

Social marketing demands a range of methods be used to achieve synergy and enhance the overall impact. This range of methods, called Methods Mix, includes methods in the four areas of informing/encouraging, servicing/supporting, designing/adjusting, and controlling/regulating ("Social Marketing," 2008). Informing/encouraging methods are those used in media campaigns to inform the target audience about the benefits of the desired behaviour, the detriments of the current behaviour, the possible incentives and support services. Social marketing is more than information campaigns. Social marketers need to find methods to provide services for their clients to support their behaviour change. Environment has a big influence on people's behaviour. Physical and social surroundings influence individuals' decision making, so social marketers should be aware of methods for designing/adjusting the environment for their clients. Controlling/regulating methods might be used by social marketers to influence policy makers to change the regulations in favour of promoting the desired behaviour.

Another phrase used for mix of methods is Marketing Mix (French & Blair-Stevens, 2007). The phrase Marketing Mix is very well known in commercial marketing and refers to four P's which include: 1. Product; 2. Price; 3. Place; and 4. Promotion. The four P's are strategic elements which should be considered when developing the social marketing method. Social marketers have adjusted the four P's and use them somewhat differently to fit their practice (Weinreich, 1999). Actual Products in social marketing are the desired behaviours (e.g., exercise, vote, recycle, save energy). There are, in addition, two other levels: Core Products and Augmented Products. Core Products are the benefits of the desired behaviour. Augmented Products are tangible objects and services to support behaviour change (e.g. dye tabs to test for leaky toilets, or a line to encourage people to quit smoking) (Kotler & Lee, 2008). Price refers to "what the target audience has to give up to adopt the behaviour (e.g., time, effort, money, emotional costs)" (Weinreich, 1999, p. 12). Place is "where and when the target market will perform the desired behaviour, and/or acquire any related tangible objects..., and receive any associated services" (Kotler & Lee, 2008, p. 41). Promotions are the "persuasive communications" designed and delivered to inspire the target audience to act (Kotler & Lee, 2008, p. 42).

A good social marketer uses a mix of methods and will avoid reliance on single methods or approaches used in isolation ("Social Marketing," 2008). It is not necessary or even possible to use all methods in every scenario, but social marketers should be aware of them and decide which combination of methods will lead to the behavioural goals.

Principles and benchmarks of social marketing provide a solid framework to assist those planning and developing interventions. This ensures they are consistent with principles and practices in the social marketing field (French & Blair-Stevens, 2007).

Planners and practitioners need some tools and strategies to be able to apply these principles in their interventions. Although, facing any behaviour change requires its own creative, imaginative, and flexible solutions, the following evidence-based tools in section 5.2.5.8 can assist social marketers in their challenge to find solutions.

5.2.5.8 Social Marketing Tools and Strategies

The benefits of social marketing tools can be explained by exchange theory. The underlying idea of exchange theory is balancing the costs and benefits of buying an offered product (an Actual product, an Augmented product, or a Core product). The role of these tools is to make the exchange more attractive by increasing the perceived benefits, or decreasing the perceived barriers (McKenzie-Mohr & Smith, 1999).

I briefly introduce some of the social marketing tools recognized by Dr. McKenzie-Mohr (2006). Mohr is an environmental psychologist and a leading expert in the design of programs to promote sustainable behaviours. He has developed a very well known, interactive and accessible online source, *Fostering Sustainable Behavior: Community-based social marketing* (McKenzie-Mohr, 2006). This website includes a set of social marketing tools in addition to planning guides, case studies, and online forums.

I have chosen this online source to introduce social marketing tools for two main reasons. First, the focus of this website is to provide a set of tools and guidelines to foster and maintain behaviour changes toward environmental sustainability—and not promotion of health or safety for instance. Second, this website is interactive and many professionals around the world share their successful experiences of applying these tools in their environmental protection interventions. The tools described in the online book, *Fostering*

Sustainable Behavior, included in this website are introduced here (McKenzie-Mohr, 2008).

- **Commitment: From intention to action**

When individuals agree to a small request, they are subsequently committed to a much larger one (McKenzie-Mohr & Smith, 1999). For instance, if people agree to sign a petition favouring the construction of high-density housing in their city, it is more likely they would approve it in their own neighbourhood. McKenzie-Mohr (2008) believes that non-explicit prompts, such as “Be Energy Smart,” have little or no impact on target audience. On the other hand, prompts that remind people about specific behaviours, such as “Please turn off the light before leaving,” are useful.

- **Norms: Building community support**

The study shows that individuals’ responses’ to issues are greatly affected by behaviours of those around them toward those issues (McKenzie-Mohr, 2008). For example, modeling a new technique, such as installing a low-flow showerhead, is more likely to be copied by others than describing the technique in a brochure. Modeling and social norms can have great impact upon an individual’s intention to engage in a new behaviour.

- **Communication: Effective message**

Communication is the key to success for social marketing campaigns. There are many factors that need to be considered for an effective message. For example, the message should be personal, concrete, and easy to remember. As well, it is more useful if personal contact is used to deliver the message (McKenzie-Mohr, 2008).

Branding is another important factor in effective delivery of social marketing messages. Brands, such as Coca-Cola or Ivory Soap, have a long tradition in commercial marketing to differentiate and promote unique products (Andreasen A. R., 2006). “In recent years, branding ideas have found their way into the non-profit world” (Andreasen A. R., 2006, p. 105). A successful example of using brands in the social sector is the Smokey Bear brand. In this case, the brand developed a personality, captured by a fictional character, making this brand a powerful spokes-character for forest fire prevention (Andreasen A. R., 2006).

- **Incentives: Enhancing motivation**

Incentives, especially financial incentives, are considered a common tool in social marketing campaigns. Incentives motivate individuals to adopt a new behaviour or engage in it more effectively. Example of financial incentives, in housing energy efficiency programs, is rebates on energy-efficiency appliances.

- **Conveniences: making it easy to act**

Obviously, the easier the behaviour is to adopt, the more people adopt it. In order to make a behaviour easier to adopt, social marketers need to identify and remove barriers to effective engagement in the target behaviour. McKenzie-Mohr (1999) suggests using literature reviews, focus groups and phone surveys to identify barriers.

Hastings (2007) has divided the desired behaviours into four groups, based on their costs and benefits. He has allocated a specific strategy to each one. I have added relevant tools to each of the four groups, as defined by Hastings:

1. **Low cost with tangible, personal benefits** (example: seat-belt wearing)
Strategy: Communication.
Tools: Vivid, personalized communication. Branding. Prompts.

2. **Low cost with intangible, societal benefits** (example: recycling)
Strategy: Convenience and stress on ultimate benefits.
Tools: Conveniences. Norm appeals.

3. **High cost with tangible, personal benefits** (example: smoking cessation)
Strategy: Push marketing approach: providing support services and augmented products that will reduce the cost.
Tools: Enhancing motivation. Conveniences.

4. **High cost with intangible, societal benefits** (example: decreasing car use)
Strategy: De-marketing approach: using moral persuasion or social influence.
Also, increasing the cost of the current behaviour.
Tools: Commitment, Financial disincentive.

Another way to help social marketers choose the right tools or strategies is to study the current situation of the audience and stages of change mentioned in 5.2.4.1, above.

Case study: Pacific Gas and Electric

The following case study was initiated by the Pacific Gas and Electric Company and shows the use of “communication” and “commitment,” social marketing tools for improving energy efficiency home audit programs (McKenzie-Mohr, 2006).

In 1978, the United States Residential Conservation Service (RCS) Program was designed to encourage residents to upgrade their homes in order to conserve energy. A free home energy audit was part of this program. Unexpectedly, the RCS home audit program was not successful. Only 6 percent of American residents accessed the program, and less than 20 percent of those residents made changes to their homes, based on the auditors' recommendations, in spite of available retrofit financing.

The Pacific Gas and Electric Company (PG&E), in California, which was in charge of hiring auditors, recognized the communication problems and advised the auditors to incorporate two behaviour change tools during their home inspections. The first tool involved providing vivid and personalized communication by auditors instead of providing general and formal information. For instance, instead of pointing out cracks around doors and windows, they compared them to a hole the size of a basketball. Instead of indicating what the home-owner would gain if they made the recommended changes, they indicated what was lost by not undertaking the improvements. The second behaviour change tool used was commitment. Auditors were required to involve the customers during the home inspection. For example, home-owners were encouraged to take measurements or read meters (McKenzie-Mohr, 2006).

With the use of these two social marketing tools, "vivid and personalized communication" and "commitment," sixty percent of home audits resulted in residents undertaking the recommendations. This was more than three times the national average from the initial approach.

5.2.6 Research and Planning Process

Hastings (2007, p. 196) summarized the social marketing research process in a spiral diagram including seven stages:

1. Problem Definition
2. Formative Research
3. Pre-testing
4. Monitoring implementation
5. Evaluation
6. Feedback to Stage 1
7. Problem Definition

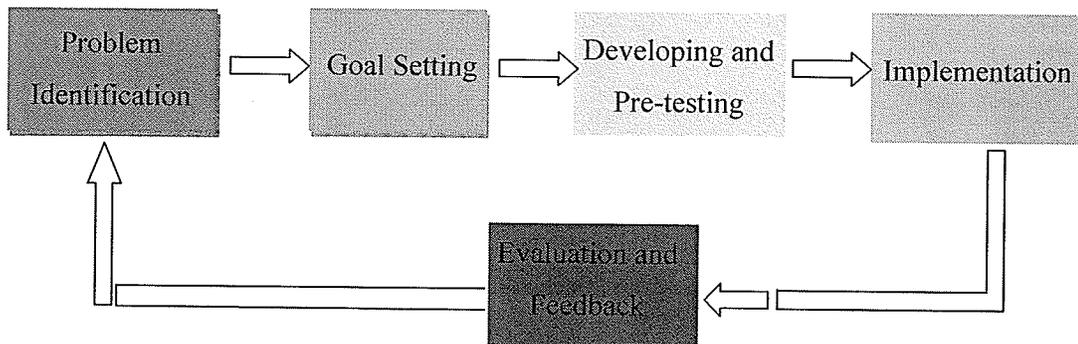
Kotler and Lee have developed another diagram showing the social marketing planning process in ten steps (2008, p.45):

1. Describe the Plan Background, Purpose, and Focus
2. Conduct a Situation Analysis
3. Select Target Markets
4. Set Objectives and Goals
5. Identify Target Market Barriers, Motivators and the Competition
6. Craft a Desired Positioning
7. Develop a Strategic Marketing Mix
8. Outline a Plan for Evaluation and Monitoring
9. Establish Budget and Find Funding Sources
10. Complete an Implementation Plan

Unlike the Hastings' process, Kotler and Lee's process is sequential and fails to include the last step which is evaluation and feedback. This step is crucial in the social marketing process. They advise social marketers to "go back and adjust a prior step before completing the plan" (2008, p.46). However, they did not actually include this step in their diagram. One positive aspect of Kotler and Lee's process is that they have included the "Target Market" in the heart of their diagram, which supports the essential need to include target market research in the social marketing planning process.

Social marketing theorists' process models differ in term of content and organization. The diagram below (Fig. 11, below) presents the elements most commonly found in these models.

Figure 11: Social marketing's planning process



5.3 Strengths and Limitations of Social Marketing to Address DSM Challenges and Energy Poverty

So far, in this chapter I have provided an overview of the social marketing approach. In this section, I discuss some of the strengths and limitations of social marketing as a tool to promote positive social changes in general, and as a tool to address DSM challenges and energy poverty specifically.

5.3.1 Strengths of Social Marketing

Andreasen (2002) shows several indications that prove the wide acceptance of the social marketing field, by scholars and practitioners. For instance, he mentions theoretical and conceptual indications, such as establishing social marketing centers in Scotland, Canada, and Poland, and also the publication of the social marketing journal, the *Social Marketing Quarterly*. With regards to practice, he mentions indicators, such as UNAIDS recognition of social marketing as a primary tool in its fight against AIDS, and adoption of social marketing approaches by a wide range of U.S. federal agencies. In these examples, social marketing has been accepted as a behaviour change tool. “Social marketers, both scholars and practitioners, have come to accept that the fundamental objective of social marketing is not promoting ideas, but influencing behaviour” (Andreasen, 2002, p. 4).

The main strength of social marketing is its power to move individuals toward adopting a new behaviour. Social marketing is able to:

- Affect and sustain healthful or socially beneficial behaviour change (Weinreich, 1999, p. 4);

- Increase program use (Weinreich, 1999, p. 4);
- Increase acceptance of using tangible products (Ling, Franklin, Lindstreadt, & Gearon, 1992); and
- Increase customer satisfaction (Weinreich, 1999, p. 4).

The social marketing approach offers several opportunities to address aforementioned challenges associated with DSM and energy poverty (respectively, sections 3.3 and 3.4.3 above). Below, I describe the challenges and then explain social marketing's potentials to address those challenges.

Designing Effective Public Engagement Strategies

Social marketing has proven to be an effective tool in addressing this challenge through designing effective behaviour change strategies. Social marketers find barriers and benefits of adopting a new behaviour for a target market. They use different tools and strategies to decrease the barriers and increase the benefits of engaging in that target behaviour (McKenzie-Mohr & Smith, 1999).

Dealing with Stakeholders with Different Values and Motivations

The social marketing principle of segmentation (described in section 5.2.5.2, above) suggests dealing with this problem through targeting different stakeholders, with different motivations, separately. Social marketers usually target one key stakeholder group and promote a new behaviour to them, by identifying the motivations that prevent them from adopting the new behaviour. Some social marketers, such as Hastings (2007), put emphasise on identifying and analyzing needs and benefits of different stakeholder groups, in addition to the key target group. Others, such as McKenzie-Mohr, focus only

on the key target group and do not deal with the challenge of consensus building between different stakeholders.

Low-income Consumer Participation

Customer orientation and understanding the target market are two of the most important principles in social marketing. This aspect of social marketing provides the opportunity to target lower income people and design a specific program for them, based on their needs. Hastings (2007, p. 68) believes “segmentation and targeting can help [social marketers] do a bit of systematic and overdue positive discrimination.” Also, social marketers divide the problems they are facing into two broad groups, communication problems and empowerment problems (described in section 5.2.2, above). In case of low-income consumers, this early diagnosis of the problem and application of the most efficient solutions prevents wasting the limited resources. As well, skill development builds the required capacity for the target group and enhances the level of participation.

Policy Gap

In 1995 Goldberg (1995, 347) argued that there is a need for a more radical approach in social marketing “to change the negative or constraining social structural influences on individual behaviour” (Goldberg, 1995, p. 347). Although much of the social marketing work done, to date, has been aimed at changing the behaviour of individuals, recent social marketers target retailers, professionals, policymakers and legislators, as well (Hastings, 2007, p. 258). For example, in one social marketing strategy, to decrease the adverse effects of food promotion to children, social marketers targeted policymakers and were able to help in shaping policy responses to food marketing and obesity in the UK

(Hastings, 2007, p. 258). This new social marketing approach can be used to address the challenge of the energy poverty policy gap (described in section 3.4.3, above).

5.3.2 Social Marketing Limitations

Like any other systematic approach to creating change, social marketing cannot be used to facilitate changes for just any kind of social problem. Social marketing is a growing discipline and “despite the growth in the number of textbooks, practical guides and infrastructure, the field has many unanswered challenges” (Andreasen, 2003). I believe social marketing has great potential to be more effective through identifying and addressing the challenges. My literature review on social marketing provided me with an understanding of the limitations of intervention, communication, use of theories, and process of planning. Below, I discuss these limitations.

5.3.2.1 Intervention in Social Marketing: Individual-Level versus Community-Level Intervention

There are three societal levels at which interventions can bring social changes. These include individual level, community level, and media/policy/law-making level (Andreasen, 2002, p.5). Social marketing primarily focuses on individual change (Andreasen, 2002, p.5). One may argue that the model of community-based social marketing (CBSM) is community-based. However, this model is called community-based, because of its emphasis on face-to-face contact with individual community members and not because of its community-level intervention. In section 5.2.4, above, I divided the social marketing theories into individualistic and collective theories. Social

marketing primarily uses individualistic theories and there are not many examples of the use of collective theories.

I believe the focus on individual behaviour changes limits social marketing's potential to bring about major social changes. Unless interventions consider whole communities and occur at the community-level, they are not able to fully consider powerful social change determinants, such as social norms, culture, social networks, a community's economy, and change diffusion processes. Furthermore, "designing and delivering a message to encourage involvement at the individual level in an environmental project can be very costly" (Kennedy et al., 2001, p.58). Community-level intervention, particularly for energy projects, has proven to be successful. Below, I explain the benefits of community-based approaches to address aforementioned challenges of DSM and energy poverty.

Community-Based Energy Projects

A community-based energy project (CBEP) targets one or more distinct communities, including geographic communities and/or communities of interest. The project puts the community at the centre and seeks to address its energy and non-energy needs, and also ensures an effective partnership with other stakeholders (CAG Consultants, 2004). Community-based energy projects provide unique opportunities for community engagement.

A comprehensive research study conducted by The Energy Saving Trust (EST) indicates significant benefits of adopting a community-based approach to energy issues (CAG Consultants, 2004), as described below.

- **Possibility to address the needs of marginalized groups**

This is in contrast to mass marketing, which “is unlikely to suffice as a way of reaching those who are hardest to reach and often need it most” (Maynes, 2008a). CBEP provides the opportunity for marginalized groups to participate actively in programs through a community network.

- **Providing sources of paid-work for local people**

The retrofit programs provide related job opportunities for community members. Internships provide financial support for local people, allowing them to cover some of the up-front costs. Also, it increases the possibility of participation in the project, because community members are more likely to trust local people to do the retrofit work, rather than an unknown organization.

- **Integrating the environmental project into community renewal projects**

There is a possibility for energy projects to be integrated into other community-based projects, thereby reducing the costs further. For instance, if there is a housing renewal program in a neighbourhood, the energy efficiency project could link to that program.

- **Incorporating community resources with skills of local residents**

CBEP could benefit from the community’s resources, such as human resources, networks and social ties. The networks and social ties could be used as information channels to distribute project information in the community and reduce the cost of advertising.

- **Understanding the policies, rules, needs and cultural values in the project's local community and reducing the chance of conflict**

Each community has its own formal or informal regulations and rules. In CBEP, a project manager is close to the community and defines the direction in a way that prevents conflict between the project direction and the existing rules, considering the community's specific needs.

- **Promoting pride and sense of belonging**

When local people have had an influence on decision making for their community, they have a stronger sense of belonging and commitment. A relevant case study is the Dyfi Valley Community Renewable Energy Project. Dyfi Valley is near Machynlleth in the UK. In 1999, several organizations came together to empower local people to carry out small-scale schemes using various renewable energy technologies. The project was mainly controlled and implemented by local people. The commitment of keen local individuals was one of the key success factors in the project (Energy Saving Trust, 2004).

In addition to the six benefits described by the CAG consultant, the community-based energy programs can ease eligibility requirements for low-income retrofit programs. Usually, qualification for the program is determined based on household income, but there are two problems with this approach. First, it is hard to determine a fair household income level for program qualification. Secondly, it may be uncomfortable for participants to accept the label of "poor" or "low-income," in order to be eligible for the program. This may be in conflict with, or further damage, a household's sense of pride or self-esteem. The community-based approach provides the opportunity to determine

program eligibility, based on the neighbourhood in which the family lives, which will resolve both problems.

Also, Parker (1995) argues that local community is the best place for creation of local environmental care policies: “where sustainability is concerned we’d better all start doing it where we live” (Parker, 1995, p. 48). She gives reasons why local processes are preferable to centralised policies (Parker, 1995, p.47):

1. Centralised policies are not able to respond to complex local environmental conditions;
2. Engaging local people in environmental policy development debates is the best way to promote active education for community people. Also policy development would benefit from local knowledge;
3. To learn new ways of living sustainably, there is a need for development of diverse alternatives. Local solutions developed with different local processes can create different alternatives;
4. Ethically, imposing values through centralised policy is not recommended.

The above benefits demonstrate that community-level intervention could benefit the social marketing approach. I believe social marketing is able to intervene at both individual and community levels. Furthermore, a successful intervention at both levels will build community capacity to lead and direct political changes toward positive social change. As well, this will likely influence the third level, the media/policy/law-making level. The Premier of the State of Queensland in Australia, Peter Beattie (2005), states, “The role of governments across the world is changing. Globally and locally

governments are being challenged to increase their focus on more effective community involvement in planning, decision making and service delivery” (Beattie, 2005, p. 3).

5.3.2.2 Social Marketing’s Communication: Consultation versus Citizen Control

Social marketing has been critiqued by community-based program directors as manipulative, similar to commercial marketing (Andreasen, 2002). They believe social marketers impose their behavioural products on the target market. However, the literature on social marketing states the ultimate concern is public engagement in the process of planning. Social marketers believe “social marketing is specifically constrained by its underlying philosophy to incorporate community views at all steps of its approach” (Andreasen, 2002, p. 10). However, what is the position of social marketers in relation to their target group? Are target groups or consumers the object or the subject of their study? It is hard to judge all the initiatives, labelled as social marketing, in relation to their commitment to community participation in setting program goals and designing program elements. However, I believe social marketing is not manipulative, but can greatly benefit from higher levels of public participation.

Community-based social marketing strategy (CBSM) includes five steps of selecting behaviour, uncovering barriers and benefits, developing strategy, piloting strategy, and implementing and evaluating the selected strategy (McKenzie-Mohr, 2008). For the first step, selecting the appropriate behaviour to address the problem, there is no community engagement involved. However, how people perceive the problem, in their social and environmental contexts, needs to be the starting point in planning processes (Shannon, 2002). Only the second step, uncovering barriers and benefits for the target market to

adopt a desired behaviour, involves engaging the target market and consulting with them through the use of surveys, observation, and focus groups. The third step ignores the benefits of public consultation. During the last steps, piloting and implementing the selected strategy, direct contact with the target group is highly recommended. However, it is mostly one-way communication to promote the selected behaviour.

Arnstein (1969) has developed a model called “the ladder of participation,” which includes eight levels of public participation: manipulation, therapy, informing, consultation, placation, delegated power and citizen control. This model could be used as a guide for social marketers, to know how to climb the ladder for increased public participation during their social marketing intervention. Social marketers rarely involve public stakeholders in defining the problem, setting the objectives, and choosing desired behaviours. When they involve people, participation generally takes the form of manipulation, therapy, informing or at best consultation.

Social marketing could be a more effective tool to address DSM challenges and energy poverty, if a higher level of public participation is mandated. A US study of public participation in environmental decision-making concludes: “involving the public not only frequently produces decisions that are responsive to public values and substantively robust, but is also helps to resolve conflict, build trust, and educate and inform the public about the environment” (Beierle & Cayford, 2002).

5.3.2.3 Social Marketing's Planning Process: Rational versus Adaptive Process

Reviewing the planning processes used in social marketing, explained in section 5.2.6, above, and described in Figure 11, I realized that the conventional social marketing process may correlate with the conventional model of decision-making known as the “rational” model. This model is a cyclical, multi-step process that includes: “Define the problem; Establish decision criteria; Generate potential alternative policies to address the problem; Evaluate the alternatives using the criteria; Recommend a course of action; Implement the decision; and Monitor performance” (Stewart, Walters, Balint, & Desai, 2004). Studies show that rational analytical approaches for handling problems are not valid for resolving problems full of conflicts with many interacting parts, and with no clear solution (Stewart, Walters, Balint, & Desai, 2004). Rittel and Webber (1973) labelled such problems as “wicked” problems. I argue that energy problems, including energy poverty and problems associated with DSM, are wicked problems. These problems are best addressed with other processes of planning, such as an adaptive process which requires greater public participation.

Rittel and Webber (1973) describe ten characteristics of wicked problems. I believe energy problems have all of these characteristics. Here, I only discuss four of them:

1. Wicked problems do not have a well-described set of potential solutions:

As discussed in section 3.3.3, above, energy efficiency dialogues have diverse stakeholders, including consumers, regulators, industry, and research sectors. Various

stakeholders have differing views of what is acceptable, making it hard to define and pursue potential solutions.

2. Every wicked problem is essentially unique:

Stakeholders of a proposed energy program play an important role in the success or failure of that program. To be effective, energy programs require not only acceptance but action from stakeholders. Environmental knowledge, environmental values, attitudes, and personal characteristics are among the factors which influence environmental behaviours (McMakin, Malone, & Lundgren, 2002). Each community has different stakeholders. Subsequently, the definition of energy programs, and challenges associated with them, are different and require unique approaches. Research has shown that there is no single and general approach for promoting environmentally friendly behaviours (McMakin et al., 2002).

3. There is no definitive formulation of a wicked problem

Energy problems have to be dealt with in a context of great uncertainty about the nature of the issues involved, and their solutions. Lack of knowledge about the issues could be a good reason for uncertainty. For example, we assume that if we continue to increase levels of carbon dioxide in the atmosphere, we will pass the limits of the planet's capacity to absorb carbon. As a result, climate change will accelerate. However, we often do not know enough about causes and solutions for this problem. We do not know at what limit carbon dioxide becomes a threat. We can only guess some of the consequences (Bueren, Klijn, & Koppen, 2003).

Also, some complex and unpredictable problems do not necessarily have ultimate solutions. For example, “energy conservation behaviour, as with all behaviour, is multifaceted and complex, challenging our attempts to explain and predict it. Research has demonstrated that there is no single and general construct that predicts environmentally friendly behaviour” (McMakin et al., 2002, p. 849). Each attempt to define and predict energy efficiency behaviours changes our understanding of energy problems.

4. Every wicked problem can be considered a symptom of another problem

Any environmental problem, including energy problems, is a set of interlocking issues such as efficient use of resources, political decision-making, social equity, and environmental education. These issues constantly changing over time in a dynamic social context. The link between environmental and social values suggests a connection between environmental and social problems. Here, some bonds between environmental and social values are demonstrated.

There is some evidence that social justice and ecological justice are two important interrelated social and environmental values. In “Conceptualizing Linked Social and Ecological Injustice,” Shaikh (2000) discusses how struggles against social and ecological injustice are linked. She says if we accept that social injustice such as racism, sexism, and classism are rooted in a belief in the inherent superiority and right to dominance of one group over another group, then anti-environmentalism has the same root, which is the belief in the inherent superiority of humans over non-human nature. Another link is described by the concept of dominant social paradigm (DSP). The

concept of DSP forms the “common values, beliefs, and shared wisdom about the physical and social environment which constitute a society’s basic worldview” (Dunlap & Liere, 1984, p. 1013). Dunlap and Liere (1984), show how values and cultural heritage, such as individualism and materialism, increase the ecological crisis and provide general guidance for both individual and societal behaviour toward environmental protection. When environmental and social problems are interrelated, one cannot be resolved without paying attention to the other. Any solution to an environmental problem generates waves of social consequences. Sustainability and social equity are interconnected issues. For example, any solution to address energy efficiency has consequences in addressing the social problem of energy poverty.

The aforementioned characteristics of energy-efficiency problems show that these problems are full of conflicts with many interacting parts and with no clear solution. Based on these definitions, energy-efficiency problems can be seen as wicked problems. Accepting that energy-efficiency problems are wicked helps us understand the rational model is not able to best address these problems. Wicked problems are resolved through an adaptive process in which discussion, consensus, iterations, and accepting change are a normal part of the process (Poppendieck.LLC, 2002).

5.3.2.4 Evaluation Criteria: Output versus Outcome

Social marketers apply many commercial marketing principles. For example, they use the same approach to promote a new behaviour as commercial marketers use to sell a product. However, unlike commercial marketing, “the end goal of social marketing is to improve individual welfare and society, not to benefit the organization doing the social

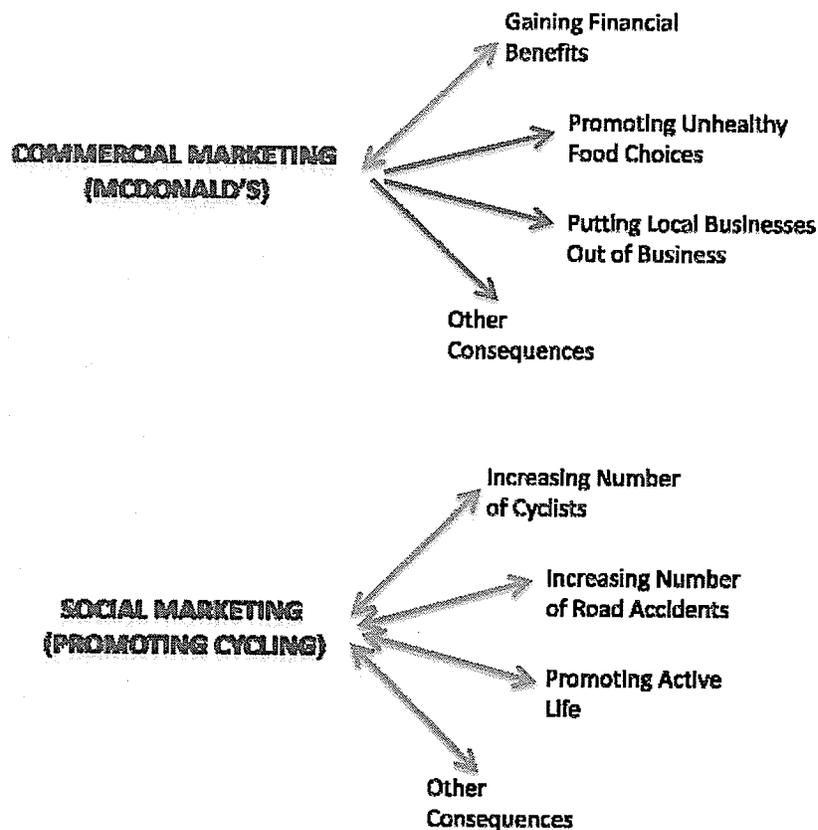
marketing” (Gordon, McDermott, Stead, & Angus, 2006, p. 1134). Although there are considerable differences between the end goals of social and commercial marketers, I believe both use the same criteria to evaluate their success. Their evaluation criteria are based on their success in selling their end product, whether it is behavioural or commercial.

I suggest the evaluation criteria of a social marketing endeavor be based on its end goal, not its end product. To expand on my suggestion, let’s compare the evaluation criteria of two marketing examples, one commercial and the other social marketing. For commercial, we can consider McDonald’s fast food. Its success is based on the financial benefits of its sale; the greater the amount of fast food sold, the higher the rate of success, even if this results in promoting unhealthy eating habits or failure of small corner restaurants. On the other hand, imagine a social marketing campaign for promoting cycling, with the end goal of promoting healthier transportation options. If this campaign adds to the number of people who ride a bike, but dramatically increases the number of bike accidents because of inappropriate roads conditions, can we call it a successful campaign? Since social marketers, unlike commercial marketers, are expected to have positive social impact; their evaluation criteria should be outcome-based not output-based (Fig. 12). However, the success of social marketing campaigns is usually evaluated based on the number of individuals who adopted the suggested behaviour and the duration of adoption.

I believe social marketers should involve stakeholders and target markets in the implementation and evaluation stages of social marketing campaigns. Stakeholders and target markets are in a better position to evaluate direct and indirect successes of a

campaign, because they are influenced by direct and indirect consequences of the social marketing campaigns. Evaluation criteria for programs, with the goal of promoting energy efficiency behaviour, need to consider the social impacts of programs on the whole society, such as increasing or decreasing energy poverty.

Figure 2: Comparison between social marketing and commercial marketing, in relation to the consequences of their actions. Blue arrows show two-way relationships and red arrows show one-way relationships.



5.4 Chapter Outlook

This chapter provides a critical review of the social marketing approach, examining its effectiveness as a tool to address DSM challenges. Existing social marketing theories,

including stages of change theory, cognitive learning theory, social cognitive theory, and exchange theory, are studied to understand underlying assumptions of social marketers about behaviour change. Also, I have suggested an incorporation of some theories, including critical theory, community-organization model, and communicative action theory, as a way to increase social marketing's effectiveness.

After studying social marketing theories, principles, tools, and planning processes, the findings show that social marketing can play a role in addressing challenges associated with DSM. Social marketing is effective in improving the participation rate of the DSM programs, dealing with stakeholders with different values and motivations, and addressing the national policy gap for low-income energy efficiency programs. However dramatic changes in intervention level, communication, process of planning, and evaluation criteria are needed to make the social marketing approach a better social change tool, in general, and an environmental sustainability tool, in particular. Social marketing is a multi-disciplinary approach. Its principles do not limit its potential to embrace success factors of other disciplines with the same goal of promoting positive social change.

The following chapter reviews planning theories that could be applied to address the limitations of social marketing.

Chapter 6: Using Planning as a Response to Social Marketing's Limitations

6.1 Introduction

In this chapter, I first explain why an integration of the planning discipline with social marketing is valuable. Second, I discuss planning theories which I believe can address social marketing's aforementioned limitations with respect to DSM and energy poverty problems. This chapter sets the stage for developing a new model of Integral and Collaborative social marketing resulting from the integration of social marketing with the discipline of planning.

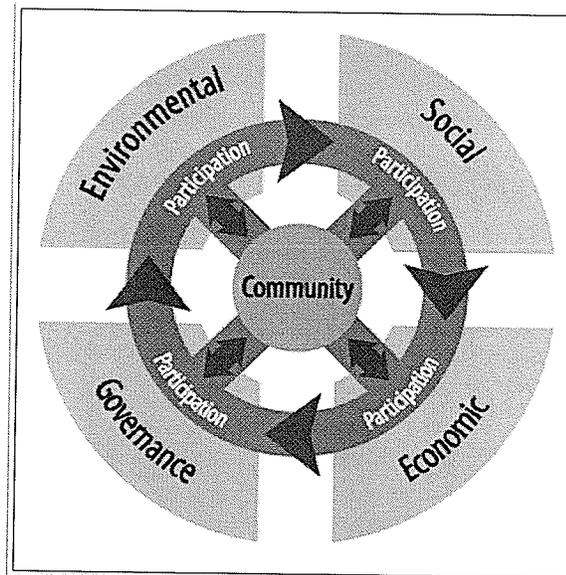
6.2 Social Marketing and Planning: Key Similarities

Planning, as a discipline, includes community, town, city, urban and regional planning. The planning discipline has seen dramatic changes in its application. Historically, planning has been seen as "management of a product, the physical shape and form, the morphology and spatial organization of the urban region" (Healey, 1997, p. 8). However, in the past century, planning has evolved into a discipline for broad philosophical and social transformation (Healey, 1997, p. 8).

Politics, economics and the physical environment have been three obvious influential factors related to planning, but the influence of social issues has often been overlooked. Over time, "the physical development planning tradition has moved both to recognise the

social processes underpinning spatial organization and urban form, and the range and complexity of the demands for local environmental management” (Healey, 1997, p. 28). This movement created a need for developing greater community engagement in planning practice (Figure 13, below). The theories in planning, such as communicative action theory or collaborative theory, place a great deal of emphasis on communication and interactive approaches between the public and decision-makers, to achieve a successful plan (Healey, 1997).

Figure 13: The influential factors in the planning discipline. Source: (Miller, Moradzadeh, & Lee, 2006)



There are similarities between social marketers and planners. Both groups:

- Have an ultimate goal of providing a better social/physical environment for people;
- Call for effective communication between program designers and target groups;

- Recognize communities (in planning) or target markets (in social marketing) as an influential factor in decision making processes;
- Influence individuals, communities and policy makers to take action toward a better social/physical environment;
- Use qualitative and quantitative tools, including focus groups, interviews and surveys to determine the target group (Pickens, 2002); and
- Understand and may use the rational model and process in designing their interventions.

6.3 Social Marketing for Planners

The similarities between social marketing and planning show the value of social marketing for planners as an effective tool in their work. Social marketing teaches planners important lessons such as how to:

- Apply marketing concepts, especially the [four P's] in the delivery of an intervention for social good;
- Promote behaviour-change campaigns;
- Work with individuals and empower them to affect change in their own communities;
- Influence policy makers and regulators through using effective behaviour-change models; and
- Include human, health, and environmental psychology theories when designing a program for promoting healthy and environmentally friendly communities.

6.4 Advancing Social Marketing by Planners

Recently, social marketing centres and organizations such as the National Social Marketing Centre have been working toward creating “solutions to behavioural challenges by applying science and intelligence from every relevant field of study” (Blair-Stevens, 2008, p. 25). They are trying to build greater understanding of how they can enhance public sector policy, strategy and delivery (Blair-Stevens, 2008). Clive Blair-Stevens (2008) considers social marketing as “an integrative discipline, one that connects with and integrates alongside other methods and approaches” (p.14).

There are some examples of social marketing moving towards a more inclusive approach, and being able to address a greater range of social problems (Lefebvre, 2009). It is a good time to suggest that social marketers incorporate knowledge from the planning field. Below, I discuss some planning theories and practices which have great potential in addressing aforementioned social marketing limitations (section 5.3.2, above).

6.4.1 Intervention Level: Neighbourhood-based Approach

The scale of neighbourhood, in many cases, has proven to be appropriate for energy projects. One of the results of my field work (section 4.3.2) showed the need for neighbourhood-based energy efficiency programs. Furthermore, in section 5.3.2.1, above, I discussed some benefits of community-based energy projects. Although, social marketers focus on individual-based intervention (Andreasen, 2002, p.5), some of social marketing professionals appreciate neighbourhood-based interventions. For example, McKenzie-Mohr (1999) believes neighbourhood provides a segment of the public which has common characteristics, resulting in more efficient delivery of programs (McKenzie-

Mohr, 1999, p.3). Particularly, experts in environmental sustainability suggest that this scale of intervention could become “a suitable unit for a long-term environmental practice and a practice to increase the social and technical robustness” (Nilsson, 2001).

Despite the benefits of neighbourhood-based approaches for energy and environmental projects, social marketing theories and practices have difficulty to intervene in this level. They usually do not consider community-based influential factors such as culturally related values in their approach (Noble & Camit, 2005, p. 1). On the other hand, neighbourhood planning has been the focus of planners’ theories and practices, for at least the last few decades. Planning books such as “Neighbourhood Planning and Community-based Development” provide critical and comprehensive review on interventions at this level, and recommend tools for successful neighbourhood-based planning (Peterman, 2000). Dr. John Randolph, Chair of the urban affairs and planning program at Virginia Tech states “neighbourhoods are a region’s ground-level social fabric and community identity. The focus of the neighbourhood scale is perhaps the greatest contribution of the new design orientation—compactness, walkability, mixed use, open space, natural drainage, community space” (Randolph, 2004, p. 140).

One may argue that social marketers sometimes use neighbourhood-based approaches. Yet, even when they focus on neighbourhoods, they do not see a neighbourhood as a holistic entity. Social marketing targets the well-being of individuals in a community, while planning targets the well-being of communities. For example, the social marketing intervention, The Community Lifestyle campaign, encourages households in the same neighbourhood to help each other to commit to desired environmentally-friendly behaviours, by providing support and inspiration, strengthening the development of the

group norm, and role modeling (Gershon & Gilman, 1991). This is one example of a neighbourhood-based social marketing campaign, and addresses issues such as interpersonal influences and local leadership. However, this campaign did not target an entire neighbourhood and did not consider issues such as a neighbourhood's collective identity and environmental values. My studies on a diverse range of social marketing case studies show social marketers barely talk about asset-based neighbourhood development, neighbourhood-based service delivery, neighbourhood policy, community building, neighbourhood mobilization, and a collective sense of identity and cultural values at neighbourhood level. However, these concepts are very well known in planning theories and practices. Therefore, planning, particularly community planning, can greatly inform neighbourhood-based social marketing approaches.

6.4.2 Communication: Two-Way

Communication is a key for success in any intervention, particularly when the goal of the intervention is to persuade people to take specific actions, such as in DSM projects. I discussed social marketing communication limitations in section 5.3.2.2, above. In social marketing, customers are those who buy the desired behaviours. They may be seen as solely buyers. Planning can contribute to address these limitations. Planning theories such as advocacy, incremental, and communicative planning appreciate customers' (stakeholders') power in the planning decision making processes and recognize their customers as their employers as well.

6.4.2.1 Communicative Action Theory

Communicative action theory, described in section 5.2.4.7, above, “emphasizes the planner’s role in mediating among stakeholders” not making the decisions for them (Fainstein, 2000). In this theory, an effective intervention is two-way communication. So, sellers are buyers and buyers are sellers. In this perspective, customers have the power of decision making and control. Generally, the more power they have, the higher the level of participation that occurs. Collaborative planning is based on Habermas’s communicative action theory. Habermas believes that “despite our diverse and often conflicting interests we still have a shared lifeworld—a mutual socio-cultural horizon of basic beliefs, norms and behavioural codes upon which we can base our arguments, evaluate them and find consensus” (Mäntysalo, 2005, p. 10). Among the different planning models, I believe collaborative planning can best be used to address the limitations of social marketing communication strategies.

Patsy Healey, who has developed approaches to collaborative planning practices, believes that the process of “making sense together,” core to communicative action theory, benefits from the addition of “while living differently” (Mäntysalo, 2005, p. 12). Healey emphasizes the need to support practices that acknowledge “diverse ways of knowing and being” (Healey, 1997, p. 244). This means that the engagement processes should understand how cultural, social, and political differences of communities influence their ways of making sense of problems. Again this fact emphasizes the importance of community-based intervention. The individual-based intervention would not allow for understanding collective social, cultural and political values.

The end goal of social marketing is to change individuals' current undesired behaviours.

Shannon (2002) believes:

In order to have new behaviour patterns and different outcomes, the current ones need to change or be modified. Thus without engaging those whose behaviour or values inhibits change in the planning process, good ideas for new actions are unlikely to be possible (p. 129).

Collaborative planning allows social marketers to use effective processes for collaboration between members of the target market. It would engage them in planning to “build consensus not only around what the problems are, but about strategies and directions” (Healey, 1997, p. 244).

6.4.2.2 Planning Practices

There are numerous practical examples of collaboration in the planning field, particularly related to environmental sustainability. Wendy Sarkissian develops and applies community engagement strategies for environmental sustainability purposes. For example, her new book “Kitchen table sustainability: Practical recipes for community engagement with sustainability” provides tools to remove barriers toward effective participation in building sustainable communities, with descriptions of case studies and examples from around the world (Sarkissian, Hofer, & Shore, 2008). Another example of tools used by planners is the social analysis system (SAS). “SAS is a body of techniques and software tools that help people move beyond the ‘technical fix’ approach to social change and development, taking the social dimension seriously in projects that require effective dialogue between stakeholders” (Chevalier, 2004).

I believe social marketers can use planning knowledge to incorporate more effective social interaction methodologies at the neighbourhood scale, to better address DSM challenges. In emphasizing the importance of collaborative planning processes, John Forester, professor, author, and practitioner in city and regional planning states:

What if social interaction were understood neither as resource exchange (microeconomics) nor as incessant strategizing (the war of all against all), but rather as a practical matter of making sense together in a politically complex world? Planning and public policy analysis would then become processes of envisioning and attending to possible futures, shaping public attention to public possibilities. Public policy itself, by patterning social interaction, could then be seen to shape not only the distribution of “who gets what,” but the more subtle constitution of ways we learn about and can attend to our concerns, interests, and needs (Forester, 1993, p. ix).

6.4.2.3 Communication and Empowerment

My studies show communication in social marketing and planning, especially collaborative planning, has different meanings and purposes. Understanding these differences can help social marketers improve their communication methods.

1. In social marketing communication means the way social marketers convey information to their clients. Sometimes, communicator and social marketer are used interchangeably in social marketing literature (for example, Hastings, 2007, p. 83). However, in collaborative planning, communication means continuous interaction between clients (Healey, 1997).
2. Communication and empowerment are two separate entities in social marketing. In fact, as I discussed in section 5.2.2, above, social marketers divide problems into two groups, communication and empowerment. However, in collaborative planning, an effective communication *enables* all stakeholders to engage in joint fact finding

(Throgmorton, 2008). In other words, true communication and interaction can happen only when all stakeholders have been given the power to engage in producing and consolidating ideas and strategies. “Communicative action theory argues that planning decisions should be reached through collaborative processes involving all stakeholders, and conforming to particular rules which ensure that participation is fair, equal and empowering” (Watson, 2003, p. 397).

3. Communication and empowerment in social marketing are used to provide information or services for clients, so they are able to buy social marketing products (described in section 5.2.5.7, above). However, communication and empowerment in collaborative planning is used to provide products (the desired ideas, strategies and directions to address problems).

I believe planners have a broader understanding of communication, especially in community-based interventions, which can benefit social marketing communication strategies.

6.4.3 Planning Process: Collaborative Planning

One of my critiques of the social marketing approach to address DSM is its rational process of planning (section 5.3.2.3, above). I explained that DSM problems need an adaptive model. In this section, again I suggest the adaptive process of collaborative planning as a solution. Planners are familiar with strengths and limitations of the rational model. In fact, rational-comprehensive planning is one of the most entrenched planning approaches and is based on the rational model. After Healey (1997) explains some of the innovations of rational-comprehensive planning, she continues: “Yet the problems with

the model are fundamental and primarily relate to its assumptions about ontology and epistemology” (p.252). Throgmorton (2008, p.19) explains that the rational model works only when:

- Problems or concepts are clearly defined;
- Cause-effect relationships are well-understood;
- Decision-maker is willing or is able to act on technical recommendations;
- Political-economic-institutional environment is steady; and
- Public’s role (values/interpretations) is inconsequential.

Throgmorton adds that the rational-comprehensive model is a scientific model. He explains, “good scientific work cannot tell us what choices we should make. What we should do is a normative question informed by science but not determined by it” (p.21). Forester (1993) divided planning problems into technical and political problems. He believes that political problems cannot be solved through a rational model. On the other hand, “collaborative planning is a form of adaptive governance: it can produce new governance institutions capable of generating long-term, sustainable policy solutions to wicked problems. It can build social capital, foster public learning and enhance deliberative democracy” (Throgmorton, 2008, p. 23). Collaborative planning has its own challenges. However, overcoming the challenges can reveal significant benefits. Some of the challenges include: building trust between participants with unequal power, encouraging powerful interests to participate in negotiations, finding financial and institutional support, and considering political and economic shifts in the planning processes (Throgmorton, 2008, p. 27).

There are examples of utilities which adopted collaborative planning for their DSM challenges. A study of 24 electric utilities in the U.S. shows they have applied collaborative planning, engaging non-utility interests, and describe their substantial efforts to incorporate two-way communication, resulting in a better DSM. On the other hand, those utilities for which communication is defined solely as one-way communication, such as use of workshops, focus groups and customer surveys, DSM resources did not reach their full potential (Schweitzer, Hirst, & Hill, 1991, p.xiii).

6.4.4 Evaluation Criteria: Social Equity and Environmental Sustainability

As I discussed in section 5.3.2.4, above, social marketers may focus on specific behaviour change problems. The number of people who have adopted the new behaviour, and the sustainability of behaviour change are two main factors of success. However, in community planning, the whole community is considered as a system and outcomes are evaluated based on social, environmental, political and economic sustainability.

Below, I discuss two planning concepts, which emphasize the interconnection between different consequences of actions taken for social or environmental sustainability. These concepts have the potential to improve social marketing evaluation criteria.

6.4.4.1 The Notion of Sustainability

Gunder (2006) alerts planners to the problem of targeting ecological sustainability “as an ideal societal goal in itself” (p.218). He emphasises the need for rearticulating sustainability’s core concern from a “mechanism for justification for more pro-market behaviours,” toward domination of social and environmental equity (Gunder, 2006, p.

218). He reminds us that sustainability has multiple bottom-lines and that it is a common mistake to over-value ecological sustainability. This could result in social injustice and in the promotion of neoliberal values of globalization. Gunder (2006) believes that planners have a responsibility to ensure that “social justice is not swept aside in the dualistic tension between market efficiency and environmental protection, even if economic growth always continues to seem to prevail” (p.218).

An example of social injustice resulting from environmental sustainability practices can be seen in New Urbanism developments. New Urbanism is a design philosophy which values environmental sustainability through designing walkable and public transit oriented neighbourhoods. In practice, including these design features in a development usually costs a lot. Grant (2006) points out that “producing developments for elite consumers” is one of the several ironies associated with New Urbanism developments. The goal of New Urbanism is to provide services for everyone. However, focusing on high quality standards of design makes living in New Urbanism developments too expensive for low-income people to afford.

6.4.4.2 Integral Sustainable Development

Barett Brown’s Integral Sustainable Development framework draws upon the integral vision which is most clearly proposed by philosopher Ken Wilber in his “integral theory” (Brown, 2005). Integral theory “attempts to include matter, body, mind, soul, and spirit as they appear in self, culture, and nature” in a comprehensive framework to address governance, social, environmental, and economic challenges (Wilber, 2000, p. xii). Integral theory has been applied to numerous disciplines such as business, education,

medicine, politics, religion, and education (Brown, 2005). Integral theory uses a multi-disciplinary approach to promote both individual and collective changes from interior and exterior views. Four major perspectives of I, IT, WE, and ITS, known as the four quadrants, are fundamental to Wilber's integral theory⁴ (Wilber, 2000).

- “I” (individual/interior) refers to *intentional and subjective* realities, for example consciousness, psychological development, mental models and emotions (Brown, 2005).
- “IT” (individual/exterior) refers to *behavioural and objective* realities, for example brain and organism, visible biological features, and degrees of activation of the various bodily systems (Brown, 2005).
- “WE” (collective/interior) refers to *cultural and intersubjective* realities, for example shared values, culture and worldview, relationships, norms, boundaries and customs (Brown, 2005).
- “ITS” (collective/exterior) refers to *social and objective* realities, for example social systems and environment, visible societal structures, economic systems, political orders (Brown, 2005).

In other words, there are four perspectives to any social, economic, cultural, environmental, or governance problem. Practitioners consider one, or a combination of two or more, of these perspectives to understand and explain problems or offer solutions.

Integral perspective suggests including all of the four perspectives in a holistic view.

⁴ Integral theory also includes other key tenets such as “developmental stages” which are not explained in this discussion.

For example, the causes of poverty from a Republican/Conservative political perspective are rooted primarily in interior variables such as lack of personal responsibility, work ethic, and family values (Wilber, 2008). “I” and “WE” represent these interior variables at the individual or collective level. From a Democratic/Liberal political perspective, poverty is primarily rooted in exterior social circumstances such as social oppression, injustice, and lack of opportunity (Wilber, 2008). “IT” and “ITS” represent these exterior variables at the individual or collective level. Furthermore, from an “individualistic” perspective, rights and responsibilities of individuals (“I” or “IT”) are more important than those of the collective. On the other hand, from a “collective” perspective social systems and culture (“WE” or “ITS”) are more important than individuals’ emotions or behaviours (Wilber, 2008). An integral view acknowledges all of the four variables.

Integral sustainable development is an approach toward sustainable development based on integral theory. Brown (2005) suggests the use of Integral Sustainable Development in three areas:

- Understanding the reality of the challenge: before beginning a process of any social or physical sustainable development, practitioners need to have a comprehensive understanding of the reality. Integral sustainable development provides this understanding with its multi-disciplinary approach, including as many disciplines, worldviews, and methodologies as possible.
- Mapping the process: After understanding problems and challenges, the next step is to map the process of addressing problems with regard to major dynamics of the stakeholders and project as a whole. Integral sustainable development offers

an inclusive perspective to the interior (psychological and cultural) and exterior (behavioural and systemic) dynamics.

- Tailoring the application: The last step is to achieve the most appropriate and durable solutions. Integral sustainable development helps practitioners adopt the best solutions, based on the unique interior and exterior variables which result in optimal use of resources.

For instance, in a community-based project in the region of Huancavelica in Peru, the Institute for Action and Progress (INAPRO) formed a strategy to address the adverse effects of civil violence and promote community resilience (Hochachka, 2006). The initial objectives of INAPRO were economic prosperity and social infrastructure. After 6 years of work, INAPRO recognized that the objectives of economic prosperity and social infrastructure are only part of the development needs of the communities (Hochachka, 2006). Based on the four quadrants, INAPRO only considered “ITS” and did not include the other three integral perspectives. They reformed their perspective toward an integral sustainable development model to include all four quadrants of integral theory.

Examples of the objectives for each quadrant are:

- “I”: Individual and Interior or “Self and Consciousness”
Objectives: Healthy psychological and emotional development
Through: self-reflection activities with parents on violent patterns of behaviours;
- “IT”: Individual and Exterior or “Action and Behaviour”
Objectives: Improvement in family nutrition
Through: skill-building activities;

- “We”: Collective and Interior or “Culture and Worldview”

Objectives: Promoting participatory process, group cohesion and cultural identity

Through: providing collective pathways for collaboration and action;

- “ITS”: Collective and Exterior or “Social System and Environment”

Objectives: Addressing economic, environmental

Through: environmental projects, social networking, and microcredit schemes

(Gail, 2006).

The integral approach described above has been effective in promoting integral sustainable development in the communities targeted by INAPRO. Freddy Riviera, Executive Director of INAPRO explains that the focus on interior objectives (such as motivation and capacity building) was necessary to effectively address exterior objectives (such as poverty reduction and child abuse):

By also working with the interior quadrants, INAPRO fosters motivation and capacity in local people so that they are empowered and skilled to address their own problems and envision their own future. This all-quadrant understanding of community resilience has a more effective impact over the long term than other single quadrant approaches (Hochachka, 2006, p. 23).

Furthermore, planners appreciate the interconnection between social, political, environmental and economic interests, and know addressing one will influence the others. Understanding this interconnection is helpful for social marketers in designing and evaluating their programs, especially for complex energy efficiency problems which influence and are influenced by the economy, policy, and society.

6.5 Chapter Outlook

In this chapter, I identified the similarities between social marketing and planning with a focus on how the disciplines could positively influence each other. However, the main focus of this chapter was on planning's potential contribution to address the aforementioned social marketing limitations as a tool for improving DSM.

Neighbourhood planning, communicative action theory, collaborative planning, and integral sustainable development are recommended to help address the limitations associated with social marketing's intervention level, communication, process of planning and evaluation criteria.

In the next chapter, I apply the findings of this chapter to develop a new model of social marketing to address DSM and energy poverty.

Chapter 7: Development of Integral and Collaborative Social Marketing Model

7.1 Introduction

Previous chapters demonstrate that planning and social marketing provide different opportunities to address energy efficiency challenges. Also, both disciplines welcome positive influences from other disciplines: social marketing is “an integrative discipline, one that connects with and integrates alongside other methods and approaches” (Blair-Stevens, 2008, p. 14); and “planning has always drawn from a variety of academic disciplines and its strength is in its interdisciplinary character” (Hornell, 1999). I believe the integration of these two disciplines would provide great opportunities, not only to address energy problems, but also for many social and environmental problems. In this chapter, I explain why these two disciplines are complementary, then develop an integrated model of social marketing and planning referred to as integral and collaborative social marketing (ICSM). I explain how this model is different than social marketing in addressing DSM challenges and compare it with an energy efficiency program in Winnipeg’s inner city.

7.2 Social Marketing and Planning Perspectives and World Views

In this section, I use Wilber's (2000) integral theory and Altman and Rogoff's (1987) psychological world views to explain the differences between social marketing's and planning's perspectives and world views.

Based on Wilber's (2000) integral theory, social marketing and planning have different perspectives which complement each other, facilitating the development of an integral approach. Also, Altman and Rogoff (1987) have divided psychological world views into four groups, including trait, interactional, organismic, and transactional. I explain that social marketing takes an interactional world view, and planning takes a transactional world view.

7.2.1 Social Marketing and Planning Perspectives

As I explained in section 6.4.4.2 above, Wilber (2000) identifies four major perspectives of I, IT, WE, and ITS in his integral theory. He believes that these four perspectives are required for the "all quadrant, all level" (AQAL) approach which promotes both individual and collective changes from both interior and exterior views. I demonstrated social marketing's need to incorporate planning's integral sustainable approach in its theory and practice. Here, I explain that planners too, can benefit from social marketing's model to be more inclusive and integral. Integral planners welcome interdisciplinary approaches, such as integral theory, and promote different applied forms of this theory (Wight, 2005). However, planners also realize there has been a gap between planning practices and interdisciplinary cooperation with other fields (Dudley, 2010).

With respect to Wilber's integral theory, social marketers and planners can address all four quadrants of the AQAL approach. Social marketers are likely best at addressing I and IT perspectives and planners are best at addressing WE and ITS. As discussed in Chapter 5, in the social marketing approach, social marketers with human psychology and marketing backgrounds focus on individuals from interior and exterior perspectives such as their psychological development and behaviour change patterns. On the other hand, planners' are concerned with cultural realities, norms and addressing social systems and environmental problems. The Association of Collegiate Schools of Planning (ASCP) identifies five broad topic areas where planning has strategic advantages (Hornell, 1999). All of those areas include collective perspectives at the community level from either an interior view, such as understanding social networks within the community, or an exterior view, such as economic development. For example, the following two topic areas are good examples: "planning has a relative monopoly on identifying interconnections within community and human settlements;" and "planning makes connections between public and private activities within the community, leading for example to planning's dominance in several fields, including ... economic development" (Hornell, 1999, p. 13).

Based on AQAL approach, an inclusive approach needs to address all four quadrants of integral theory. Social marketing and planning are complementary, because each one addresses two of these four quadrants.

7.2.2 Social Marketing and Planning World views

Altman and Rogoff (1987) have divided psychological world views into four groups, including trait, interactional, organismic, and transactional. I argue that social marketing

takes an interactional world view, and integral planning takes a transactional world view. Below, I describe some characteristics of the two views, interactional and transactional, and how they correspond to social marketing and planning disciplines.

The interactional world view respects the connection between psychological qualities of individuals and their social or physical environments, but treats them as “separate underlying entities” (Atman & Rogoff, 1987, p. 35). In section 5.2.4 above, I discussed the individualistic character of social marketing theories, which corresponds to this feature of an interactional world view. Social marketers do not see individuals and their social or environmental context as one entity. Rather, they study the relationship between individuals and the interior or exterior factors which influence individuals’ behaviours. In this respect, social marketing has an interactional world view. On the other hand, the transactional world view sees the psychological qualities of individuals and their social or physical environments as “a holistic entity composed of aspects which are mutually defining” (Atman & Rogoff, 1987). As I discussed in Chapter 6 above, planners may consider each community as a holistic entity and focus on the wellbeing of an entire community. From this integral planning’s point of view, the mutually defining aspects of a community are its social, political, environmental and economic contexts. Therefore, integral planners could be described as subscribing to a transactional world view.

Also, in the interactional world view, change results from the interactions between phenomena and the environment. In contrast, in the transactional world view, change is a defining feature of phenomena and occurs constantly without pre-established directions (Atman & Rogoff, 1987). Assuming that a phenomenon in social marketing means individual and change means behavioural change; social marketers take an interactional

view on change. The intention of social marketers is to change a target market's behaviour. They do this through interacting with individuals of the target market and adjusting individuals' environmental factors, in a way that maximizes the perceived benefits and minimizes the perceived barriers toward adopting a desired behaviour. However, the intention of planners can be seen as respondent to constant changes in a community taking a transactional world view on change.

In the interactional world view observers are separate, objective, and detached from people and their social or physical environment. They study relations between elements to find laws of relations. Observers understand a system by prediction and control (Atman & Rogoff, 1987). Social marketers, as observers, may be seen as detached from their target market. They study their clients and their social and physical environment to find out what influences their clients' behaviours and which social marketing tools should be chosen. However, I believe the intention of social marketers is to control and direct their clients, not to be controlled by them. They communicate their message to their market, but are not supposed to change their process of planning based on their clients' critical feedback. Social marketers may design a process for their intervention and stick to their pre-set plans. Therefore, I believe social marketing derives from an interactional world view.

On the other hand, observers are subjective and part of a phenomenon in the transactional world view. Therefore, different observers provide different information about a phenomenon. They study the whole event such as the confluence of people, space, and time and are interested in patterns and forms of the whole event. Prediction is acceptable, but is not necessary in this world view (Atman & Rogoff, 1987). As I discussed in

Chapter 6 above, community planners are part of the process of planning. Their intention is to seek out public interests and plan with people, rather than for people. Integral planners coordinate between different stakeholders and manage changes, rather than direct them. They study the whole community and are interested in patterns and forms of economic, social, environmental and political systems, rather than each individual in a community. Therefore, I believe integral planners as observers would ideally have a transactional world view.

Therefore, social marketing's world view can be seen as interactional and integral planning's world view can be seen as transactional. I believe integral planning's world view would enhance social marketing's capability to address wicked problems such as the energy poverty problem. In the transactional world view, individuals, their communities and the environment are viewed as holistic entities. Therefore, this world view allows social marketers to address interrelated social and environmental problems at the same time. Also, as discussed in section 5.2.5.4 above, social marketers' insight is one of the principles of social marketing. Social marketers (as observers) cannot be detached from the intervention. The way they understand the problem and interact with the target market is subjective and has a significant effect on the success of the intervention. I believe having an interactional world view would enhance social marketing by emphasizing the position of social marketers themselves in interventions and their skills, such as interpersonal and conflict resolution skills.

7.3 Integral and Collaborative Social Marketing

In this section, I explain my purpose in developing the ICSM model, why I refer to it as integral and collaborative social marketing and what the characteristics of this model are.

7.3.1 The Purpose of the ICSM Model

Section 5.3.2 above, describes social marketing's limitations in addressing DSM and energy poverty challenges initially identified in sections 3.3 and 3.4.3. I realized that the planning discipline with its different perspectives and world views can respond to those limitations. Both planning and social marketing have concerns about environmental sustainability and energy efficiency. However, they use different approaches to address these shared concerns. Therefore, my purpose in developing this model is to incorporate community planning perspectives in the social marketing approach. The goal is to develop a more integral and inclusive approach, which promotes both energy efficiency and social equity at a larger community scale. However, this model may be used by both social marketers and planners as a tool to encourage other behavioural changes at the community level.

7.3.2 Foundations

This model has three main foundations which are included in its name:

1. Integral

This model incorporates an integral sustainable development framework described in section 6.4.4.2, above. The integral approach is not only part of the ICSM model; it

informs the whole approach from understanding the reality of the challenge, to mapping the process, and tailoring the application.

2. Collaborative

Based on the ICSM approach, practitioners must collaborate with stakeholders to understand problems, set objectives, develop interventions, and finally implement and evaluate the intervention. Therefore, collaboration with stakeholders is an essential part of every step of an intervention, based on this model.

3. Social Marketing

I refer to this as a social marketing model, because it is based on the principles of social marketing described in section 5.2.4, above. Although ICSM's process of planning, evaluation criteria, intervention level, communication and some of its intervention techniques have been drawn from planning theories and practices, its structure is based on social marketing principles.

7.3.3 What is ICSM and How it Works

Andresen (1995) defines social marketing as: "the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of their society" (p.7). ICSM shares most of its definition with social marketing: ICSM is the application of commercial marketing *and community planning* technologies to the analysis, planning, execution and evaluation of programs *in which stakeholders, the target audience, and the practitioner collaboratively develop values and*

actions to influence the voluntary *individual and collective* behaviour of the target audience, to improve their personal welfare and that of their society *from interior and exterior perspectives*. Below, I explain the differences between ICSM and social marketing approaches in detail.

7.3.3.1 The Role of Community Planning in ICSM model

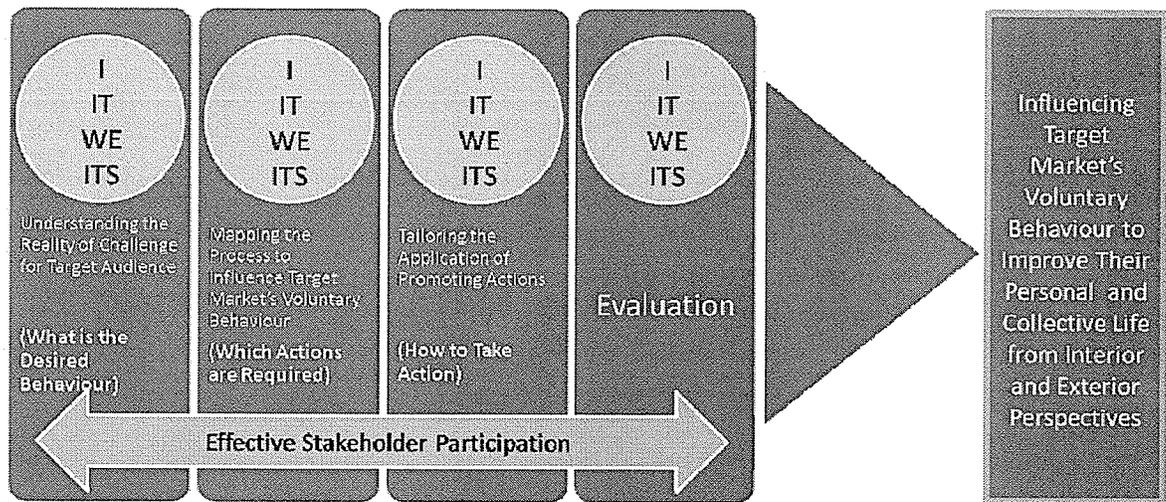
Community planning improves social marketing in the four areas of intervention level, communication, planning process and evaluation. These four areas are explained in section 6.4, above. In other words, ICSM is a social marketing approach, with improvement in those four areas based on community planning theories and practices. The most significant contribution of community planning is the concept of collaborative planning in ICSM's process of planning. Unlike social marketing, the target market is engaged in the process of planning, from the first step of understanding the reality of the challenge to the final steps of implementation and evaluation.

I developed four steps of the ICSM planning process, based on the integral sustainable development approach (Brown, 2005, p. 3). Those steps are (Fig. 14, below):

- Understanding the reality of the challenge for the target audience;
- Mapping the process to influence the target market's voluntary behaviour toward addressing the challenge;
- Tailoring the application of promoting actions; and
- Evaluation.

These steps are not necessarily sequential. In each step, communication with the target market may lead the practitioner to step backward or forward. For example, if the project is in the stage of “tailoring application” and there are changes in economic circumstances influencing the perception of the challenge by the target market, practitioners may need to return to the “understanding the reality of the challenge” stage and acquire new information from the target market. Two-way arrow in Figure 14 shows this non-sequential process of planning. Therefore, the process is adaptive and constantly adjusts its strategies. Also the process is continuous until the consensus is reached and the target market adopts the new action.

Figure 14: ICSM's process of planning



I should note that this continuous iterative process does not mean that the ICSM model cannot be applied in projects with limited time and resources. The practitioner can decide when it is time to step forward and not return to previous steps. However, the plan should

be able to adapt to dramatic changes in the lives of the target market, which may influence their understanding of the problem or their ability to act on it.

7.3.3.2 Value and Action

In the definition of ICSM, I used terms of value and action. These terms are not part of the definition of social marketing. Action and behaviour do not mean the same thing. By action, I mean any individual or collective activity of the target audience which directly or indirectly helps to accomplish the objectives of the intervention. For example, when social marketers talk about behavioural changes toward housing energy efficiency, they mean behaviours such as installing a programmable thermostat, using energy efficient appliances, or adding insulation to the attic. However, activities such as convincing someone else to buy an energy efficient appliance, or helping a friend to add insulation to their home does not consider behaviour change.

In ICSM, any activity which facilitates the behavioural changes, such as motivating others to adopt the desired behaviour through role modeling and empowerment, or removing barriers toward adoption of desired behaviour, is considered an action. Sometimes actions are collective, such as signing a petition for demanding new policies, sharing appliances in a common area, or eating in a local community-based restaurant. I call them collective actions because action is not taken unless a sufficient number of the target market's members commit to change their behaviour collectively. In short, every behaviour is an action, but every action is not a behaviour. Actions are taken in the process of achieving the goal, however behaviours are end goals.

Social marketing discusses the influence of others on behavioural changes of the target audience, through activities such as role modeling, norms and social diffusion. However, social marketing's goal is to change an individual target audience's end behaviours rather than actions which need to be taken individually or collectively to facilitate the change. For example, in a social marketing campaign to reduce housing energy consumption, through the behaviour of adding insulation to the basement, social marketers would evaluate their success based on the number of people who have added insulation to their home. However, ICSM would consider not only the number of people who adopted the behaviour, but also people who have taken action to influence those people to adopt the behaviour. Actions are as important as behaviours, because they support the behaviour change and have the potential to sustain the change long after the campaign is over.

Personal and collective values are important in the ICSM model. In section 5.3.2.3, above, I discussed how social and environmental values are interrelated and influence social and environmental problems. ICSM's process of collaborative planning provides opportunities for the target audience to discuss their personal values, which are the basis for adopting a desired behaviour. Furthermore, to act collaboratively, practitioners and stakeholders need to help target audiences identify their shared values. This is the basis for defining actions they are going to collectively take. Also, the process of negotiation and knowledge sharing may lead to development of new values. For example, a network of the target market together with stakeholders may lead to a higher value placed on energy efficiency in the target market's list of priorities.

Similar to social marketing, the end goal of ICSM is to change target market behaviours. The difference is the process of change. ICSM involves the target market and

stakeholders in identifying the target market's collective values and developing a series of individual or collective actions, toward adoption of the desired behaviour. Furthermore, development of the actions is based on the target market's capacity, skills and assets of its individuals and their neighbourhood(s). As much as possible, the whole process of intervention should be designed in a way that takes advantage of existing capacity and develops new skills and capacities.

7.3.3.3 Intervention Level

ICSM targets both community and individual levels of intervention. As illustrated in Figure 14, above, the four perspectives of the integral approach (I, IT, WE, and ITS) are part of each stage of the ICSM model. Intervention at the two levels of individual and community allows the practitioner to take advantage of promoting individual and collective actions. For example, solutions, such as building physical or social infrastructure do not make sense when the intervention level is individual. On the other hand, it may be hard to develop collective actions in specific circumstances and the intervention may be more effective at the individual level. Furthermore, even in interventions at the community level, the practitioner needs to interact with individuals. In short, ICSM targets a community as a holistic entity and considers the interrelationship between its members and their environment. Also, if it is required, ICSM would target individuals as part of the whole.

7.3.3.4 Integral Approach: Impact and Possibility

The integral approach is a comprehensive approach requiring great resources to be thoroughly applied. In cases where resources are limited, ICSM can use the integral

approach to only identify influential factors, but not address all of them. After identifying internal and external dynamics, ICSM would address only those with the greatest potential to impact the whole neighbourhood.

7.3.3.5 Negotiation and Action

ICSM integrates the power of social marketing and collaborative planning. Social marketing is powerful in changing behaviours or promoting actions. Collaborative planning is powerful in facilitating the democratic process of planning through negotiation and consensus building. Therefore, ICSM is about both building consensus and changing actions.

The following table (Fig. 15) compares some of the main features of the ICSM and social marketing approaches.

Figure 15: Comparison between some main features of traditional social marketing and ICSM

Main Features	Traditional Social Marketing	ICSM
Level of Intervention	Individual	Community/Individual
Process of Planning	Rational	Adaptive
Practitioner's Position	Objective/Controlling the Planning Process	Subjective/Part of the Planning Process
Communication with Target Market in the Planning Process	Providing Information/Consultation	Empowerment/Giving Control
Evaluation Criteria for Interventions to Reduce Energy Use	Output-based (Behavioural changes toward Energy Efficiency)	Outcome-based (Actions toward Energy Efficiency/ Moving toward Social Equity)

7.4 How ICSM Model Resolves DSM Challenges

In section 3.3, above, I reviewed residential DSM challenges that utilities face. In section 3.4.3, I reviewed specific challenges to address energy poverty. I discussed social marketing's strength to address some of those challenges (section 5.3.1). However, social marketing itself is not effective to address all of the challenges. Below, I discuss ICSM's potential to resolve the challenges.

Designing Effective Public Engagement Strategies

As I discussed in section 5.3.1, above, social marketing itself is an effective tool for engaging the public in energy efficiency projects, through promoting behaviours toward energy efficiency. However, ICSM is a better tool to address this challenge. While ICSM shares with social marketing the strength of engaging the target market, by using specific tools to encourage them change their behaviours, ICSM incorporates public engagement methods used by planners. These methods help the ICSM practitioner to engage the public, as well as provide opportunities for them to delegate power at different stages of planning. The empowerment that occurs during ICSM collaborative planning builds leadership capacity in communities to effectively engage in energy efficiency projects.

Planning Long-term Programs

Utilities are under pressure to justify DSM expenditures to stakeholders, including ratepayers and regulators, at the end of fiscal year. This limits their freedom to plan for long term projects. ICSM can address this problem through its collaborative approach, including stakeholder engagement at the beginning of the process. This process of stakeholders engagement, with a focus on capacity building in the target community, may

result in a higher value being placed on long term projects. Again, I would echo Throgmorton's idea about the ability of collaborative planning to generate long-term solutions: "collaborative planning ... can produce new governance institutions capable of generating long-term, sustainable policy solutions to wicked problems. It can build social capital, foster public learning and enhance deliberative democracy" (Throgmorton, 2008, p. 23).

Dealing with Stakeholders with Different Values

Social marketing suggests dealing with stakeholders with different values, by applying segmentation and targeting different stakeholders separately. ICSM uses collaborative planning to resolve conflicts in the process of planning. ICSM identifies and respects existing conflicting values. It uses collaborative planning techniques to integrate values, and develop accepted actions. Furthermore, ICSM uses social marketing segmentation principles and only targets one group of stakeholders with common values and interests for behaviour change purposes.

Shortage of Skilled Staff and Contractors

ICSM develops skills and capacities in a local community, by engaging and hiring local people for planning and implementation of the project. In the long term, this strategy resolves the shortage of skilled staff and contractors.

Dealing with Local Circumstances

ICSM intervenes at the neighbourhood scale and offers an integral perspective to the interior dynamics (such as: how much knowledge the target audience has about energy efficiency, potential behavioural changes for energy savings) and exterior dynamics (such

as: availability of energy efficiency products, budget, regulations) of the stakeholders, and the neighbourhood as a whole. Therefore, the ICSM model identifies the local circumstances of a target neighbourhood, uses them to define the neighbourhood's problems related to energy efficiency, then tailors the application accordingly.

Evaluating a Program's Success

In section 3.3.6, above, I identified two problems related to evaluating DSM program success. The first one is the difficulty in measuring the impacts of a DSM program. The second problem is gaining the support of stakeholders on success factors. ICSM offers inclusive criteria to evaluate the impact of the program on the selected neighbourhood and target audience, from interior and exterior perspectives based on an integral approach. Also, ICSM requires the target audience and stakeholders to collaboratively set the criteria for program evaluation and to engage in the evaluation itself. Collaboration with stakeholders can address both problems.

Before, I discuss the strengths of ICSM to address energy poverty challenges, I should mention that ICSM is a neighbourhood-based approach. As such, it has all the strengths and benefits of community-based energy projects discussed in section 5.3.2.1, above.

Low-income Consumer Participation

In section 5.3.1, above, I explained that social marketing can address the problem of consumer outreach participation through principles of segmentation, customer orientation, and empowerment. In addition to all the strengths of social marketing, ICSM involves the target audience (low-income consumers) through a community network, during the early stages of planning. This reduces the problem of lack of awareness about

the program. Furthermore, community groups, such as neighbourhood associations, work like trusted communication channels and can help home-owners in the application process. Since the target audience is part of the planning group, the program would consider personal and collective values, along with barriers and benefits of the program, making it a good fit for the selected neighbourhood. Also, the ICSM intervention level is the neighbourhood. Therefore, eligibility criteria is not based on income, it is based on neighbourhood. This prevents problems associated with defining eligibility criteria. Development of policies and activities is based on capacities, skills, and assets of the residents and their neighbourhood as a whole.

Cost Justification for Addressing Energy Poverty

ICSM can address the concern about spending utility revenue on energy poverty prevention through effective communication with stakeholders. The long term benefits of utility expenditure on addressing energy poverty can be discussed in the first stage of planning.

Furthermore, ICSM does not consider low-income neighbourhoods as only the recipient of services. It recognizes a neighbourhood's resources, capacities and assets, and uses them to require rate-payers and low-income residents both commit to investing their resources in action.

Energy Poverty Policy Gap

Social marketing can address the energy poverty policy gap, by targeting policymakers and legislators (Section 5.3.1). ICSM uses a different approach to address the policy gap. Based on ICSM's integral approach, the affects of external and internal dynamics on the

selected low-income neighbourhood are studied during the first stage, i.e. understanding the problems. Therefore, policy gaps can be identified, early in the process, as external collective factors. To address this problem, the practitioner and stakeholders, including residents, design a series of actions to be taken by the target neighbourhood. In this case, the target neighbourhood may cooperate with their local politicians to lobby for energy poverty policies (LIEN, 2007). The Low-Income Energy Network in Ontario offers a lobby toolkit which can be used for this purpose (LIEN, 2007).

7.5 Confirming the ICSM Model

The best way to test the ICSM model is to apply it in different DSM projects and evaluate the result. This approach was beyond my ability and the scope of this project. I used two different approaches to confirm this model. First, I compared this model with an approach taken by the Warm Up Winnipeg program, which shares many principles of the ICSM model. Warm Up Winnipeg has partnered with Manitoba Hydro's to address the energy needs of low-income inner city families. Second, I presented this model to energy efficiency practitioners and asked for their feedback. Below, I combine the results of these two evaluation approaches.

7.5.1 Background Information about Warm Up Winnipeg Program

Warm Up Winnipeg (WUW) is an innovative program developed by BUILD (Building Urban Industries for Local Development), a non-profit organization located in Winnipeg's inner city (Warm Up Winnipeg, 2008). This program combines poverty

reduction with emission reduction. The program makes housing more affordable through housing retrofit projects for Winnipeggers, especially low-income families. The intervention empowers inner city communities through training and hiring local people to implement housing retrofit projects (Warm Up Winnipeg, 2008). The BUILD organization was established in 2006 to make Centennial neighbourhood one of Winnipeg's most energy efficient neighbourhoods, under an innovative project that united job training, environmental leadership and lower energy bills (Province of Manitoba, 2006).

The Centennial neighbourhood project was considered a pilot for other low-income neighbourhoods across the province. The pilot project was very successful and led to the expansion of BUILD in downtown Winnipeg. Warm Up Winnipeg is now focussing its efforts in sixteen of Winnipeg's lowest income neighbourhoods. The retrofit program includes installing additional attic, wall, and basement insulation, low flush toilets, efficient shower heads, faucet aerators, compact fluorescent lighting, and pipe wrapping (Warm Up Winnipeg, 2008).

7.5.2 Warm Up Winnipeg Evaluation

The interview results and data gathering were categorized based on the following two themes related to the researcher's understanding of the issues:

- Evaluation of WUW to address energy efficiency and energy poverty; and
- Similarities and differences between the WUW program and the ICSM model.

Here, I only address the first theme. My focus group with practitioners and WUW staff improved my understanding of the second theme. Therefore, later in this section, I address the second theme based on the combination of my findings from the interviews and focus groups.

7.5.2.1 Project Achievements

Lowering Energy Bills

In 2008-09, BUILD, through its WUW program, retrofitted about 1,000 Manitoba Housing apartment units, 100 Manitoba Housing single detached houses, and 100 privately owned low- income houses. On average, the home-owners saw a reduction of over \$500 per year on their utility bills (IN WS1). The average household income in 2005 in Centennial neighbourhood was \$25,548 (Statistic Canada, 2006). For this neighbourhood, the reduction of energy costs by \$500/year means a savings of about 2 percent of the family's income. (Statistic Canada, 2006)

Human Side of the Project: Empowering Communities by Engaging them in the Project Implementation

All of the work done by Warm Up Winnipeg was completed by local workers with little or no experience in the formal labour market. Warm Up Winnipeg trains local workers even if they have a previous history of crime, addiction, or lack of work experience (IN WS1). The program is intended to provide job opportunities for local residents, by removing barriers to future employment. As well, it provides a supportive environment, where the individual's culture and personal journey is honoured and respected. After finishing three months of training, 90 percent of trainees are able to find permanent jobs.

Some of these people move from being social assistance recipients to permanent taxpayers (IN WS1; Loney, 2009). For example, one trainee started with BUILD in the summer of 2008. He has received valuable on-the-job training, access to free counselling, help obtaining missing identification, a free account at the Assiniboine Credit Union, driver's license tutoring, and workshops on financial management. With a bank account, he can now save to pay off insurance penalties incurred in prior offenses (IN WS1).

Protecting the Environment

Warm Up Winnipeg reduced green house gas emissions on average by 2 to 3 tonnes per house annually. On average the program also saves 80,000 litres of water per house per year and for apartment units the water saving is about 20,000-25,000 litres per suite (IN WS1).

7.5.2.2 Trainees Feedback on the Program

I conducted a focus group with six trainees, to evaluate the program from their point of view. I categorized the findings based on two questions:

- What are the perspectives of trainees about their experience with WUW program?
and
- What influence does the program have on trainees' actions with respect to energy efficiency?

Trainee Perspectives about the Program

Trainees provided very positive feedback about the program. When I asked them if they had ever referred anyone to the program, everyone said yes. For example, one of the

trainees convinced his young brother to participate. At least three of the trainees consider their experience with WUW as a life-changing experience:

“This place is really good to help you to change your life” (F WT1).

“They [WUW staff] are helping us all the time. Help us to get our driving licence back, to find a home to stay, and after 6 months training is over, they help us to find employment” (F WT3).

“When I am thinking of this company, I think it is changing the world a little, but changing the people living in this area a lot” (F WT5).

Also, trainees were very pleased to be able to help their community members save energy and money:

“One of the people who we worked for told me that I am saving a lot of money because of this program...When you see people are happy, it makes you happy” (F WT6).

“We are helping out low-income people and I like that idea. Helping out where I came from and I still come from. Helping out our neighbourhood” (F WT1).

Influences of WUW on Trainees' Action toward Energy Efficiency

When I asked the trainees if they had used their training to voluntarily make energy-saving changes to their own homes, or homes of friends or family members, everyone said yes. Their activities included installing baseboards, changing light-bulbs and adding insulation. Also, they mentioned that they are more cautious about using energy.

“Being able to help people to save energy and money in many years to come makes me more aware of how much energy I myself can save” (F WT6).

The WUW program has been very successful in changing trainees' attitudes and behaviours toward energy efficiency in their homes and their neighbourhoods. They not

only take individual action toward saving energy, but also promote these activities in their neighbourhood.

7.5.2.3 Stakeholders' Feedback on the Program

The minister of science, technology, energy and mines, Jim Rondeau, expresses his ideas about the benefits of the WUW program for low-income families:

“I am proud to take part in an initiative that is truly innovative and truly inspiring. This is a remarkable community partnership – a made-in-Manitoba hat trick of jobs, energy efficiency and reduced poverty – that will have a very real and lasting benefit for the citizens who need it most” (Province of Manitoba, 2006, p. 30).

Manitoba Hydro which is supplying free materials for WUW's retrofit projects, perceives partnering with WUW as an opportunity to reach its hard-to-reach customers. Bob Brennan, the president and CEO of Manitoba Hydro, says:

“Our Power Smart programs are very popular throughout Manitoba, but participation tends to be lower in areas with high concentrations of rental housing or low income [residents]. This project [the Centennial project] is a creative approach to delivering Power Smart.” (Province of Manitoba, 2006, p. 30)

Also, Ayn Wilcox, vice-chair of United Way's Community Investment Committee, says:

“United Way believes that addressing the root causes of poverty requires a larger effort than any one organization or sector can do on its own. It demands collective community effort with leadership from governments, business, community organizations and others. This project is a great example of what we can achieve when we work together” (Province of Manitoba, 2006, p. 30).

The above statements are examples of positive feedback WUW has received from its partners and stakeholders.

7.5.3 Warm Up Winnipeg Program and ICSM Model Comparison

My study of begins to demonstrate the success of the WUW program in addressing the energy needs of low-income communities. Below, I examine the similarities between WUW's approach and the ICSM model, based on my findings about the WUW program and also the focus group held with WUW staff. The goal is to explore the similarities of the two approaches, and to identify features contributing to the success of WUW, that could be applied to the ICSM model. I discuss the similarities between the WUW program and ICSM, based on three main components of ICSM: integral approach, collaborative planning, and social marketing.

7.5.3.1 Integral Approach

WUW's approach to address energy needs of low-income families is a good example of the integral approach. WUW considers personal, collective, interior and exterior barriers and benefits of energy efficiency for the target groups and sets objectives for each of the four quadrants of the integral approach. WUW has two different target groups: neighbourhood's low-income residents, and the trainees. WUW has been successful in promoting energy efficiency actions in both groups. Below, are examples of the objectives for each quadrant (for trainees or low-income home-owners):

- "I": individual and interior or "self and consciousness"
Objective: improving self-image of trainees,
Through: consultation, evaluation criteria, positive feedback from customers.

The WUW trainees may have criminal records or be social assistance recipients for a long time (Loney, 2009). WUW give opportunities to trainees to change their self image and see themselves as productive members of the community. Trainees receive free consultation from their social worker at WUW, to deal with the personal challenges in their lives. In my focus group with WUW staff, one person stated:

“I help trainees to overcome personal barriers to be able to finish their training...I may do an initial assessment and counselling with them and refer them to another appropriate program based on their needs.”(F WS1)

Also, the training program does not require any police background check as a qualification for acceptance. This feature of the program not only gives greater access to training, it improves the self-esteem of trainees who are not being treated based on their previous mistakes. Rather, they are evaluated for making better decisions. The social worker said:

“We evaluate our trainees only based on attendance and work-place attitude [and not their background].” (F WS1)

Furthermore, WUW staff makes sure trainees are trained to satisfy owners of the homes they retrofit (F WS2). This results in positive feedback from home-owners. In an interview done by CBC with one of the homeowners (Canadian Broadcasting Corporation , 2009), the interviewer asked: “What do you have to say about people who may have been a little bit sceptical [to hire WUW trainees] and say WUW employees are learning on the job and many of them are coming from rough backgrounds?”

“This is an example of their work. They did everything, they cleaned everything up, we had no problem....they are very polite; they came here and went downstairs

and didn't bother me at all. What more can you ask for?...this changed my attitude about people".(Canadian Broadcasting Corporation , 2009).

This positive feedback could be the first positive reactions some of the trainees have received from their job experiences, contributing to a better self-image.

- **“IT”**: individual and exterior or “Action and Behaviour”

Objectives: promoting individual behaviours toward energy efficiency, such as: changing home-owners behaviour toward applying for retrofit programs, and changing some unemployed residents' behaviour to commit to a training program and work for energy efficiency projects.

Through: removing financial barriers for home-owners and providing skill-building activities for trainees.

The main obstacle for low-income families to apply for energy efficiency programs, such as Power Smart programs is the ability to afford the upfront costs required. WUW partners with different local and governmental organizations, such as Manitoba Hydro, to cover the costs of retrofit programs for low-income households (F WS2). As well, WUW is a training program to build capacity and skills in local people, who are needed to implement energy efficiency projects (F WS2).

- **“WE”**: collective and interior or “culture and world view”

Objective: Promoting a sense of collective identity and pride in trainees

Through: providing a collective pathway to help low-income families to save money, by building group awareness about energy savings.

WUW's trainees come from similar backgrounds and are familiar with the challenges their neighbourhood faces. Trainees have a sense of belonging to the group, whose mission is to help low-income neighbors:

“We want to help out people and put a little of money in their pocket” (F WT5).

Also, the WUW program activities, including using local community channels to distribute information about WUW programs, encourages ongoing discussion, about energy savings, in the selected neighbourhoods:

“I have referred everyone I know to the program, everyone I came across, everybody.”

(F WT2)

- **“ITS”**: collective and exterior or “social system and environment”

Objectives: addressing the social and economic problems of the whole neighbourhood

Through: retrofit projects and job opportunities

As I discussed in section 3.4.2, above, there are many social benefits of energy and water efficiency for low-income households. For example, the economic situation of the neighbourhood improves, reducing demands on social service systems, and reducing homelessness and its associated problems in the whole neighbourhood. WUW improves the economic situation of the neighbourhood, not only by reducing energy bills, but also by hiring local residents and providing financial support from outside of the neighbourhood for retrofit projects.

7.5.3.2 Collaborative Planning: Collaboration and Partnership

BUILD calls itself a partner and friend, not only to low-income households, but also to other income households who wish to retrofit their homes (Warm Up Winnipeg, 2008). Their approach allows all households to participate in protecting the environment and improving the economy of their city by hiring BUILD to retrofit their homes. Also, BUILD is partnering with different neighbourhood renewal corporations and government programs and departments. Some of the neighbourhood renewal corporations are: North End Community Renewal Corporation, West Broadway Development Corporation, and Spence Neighbourhood Association (Warm Up Winnipeg, 2008). Different government departments find WUW an optimal place to invest, to meet various social and environmental objectives, such as Manitoba Hydro's lower income program, ecoENERGY, along with Manitoba Entrepreneurship, Training and Trade, and The Manitoba Housing Authority. (Warm Up Winnipeg, 2008).

BUILD is open to partnership and collaboration with different organizations. However, the collaborative approach of BUILD is not the same as the collaborative planning approach of ICSM. One of the important stages of planning in ICSM, which is part of its definition, is the collaboration between all stakeholders to identify and develop shared values and actions, required to meet the goal of the ICSM project. WUW is missing this stage of collaborative planning. Although BUILD has had a one on one relationship with its stakeholders, it did not involve all stakeholders in collaboratively developing values and actions. Development of this stage could prevent some of the current challenges WUW is facing. For example, one of the challenges is:

“BUILD works with each of these governmental organizations to be able to cover the full costs. BUILD benefits from the collective outcome of these different governmental organizations. But, each of these organizations is looking for a return on their investments based on their own objectives and mission. It is sometimes hard for BUILD to specifically show each of the organizations how they benefit individually from the collective outcome.” (IN WS1)

If collaboration of stakeholders in first stage of planning results in the development of collective values, actions and outcomes, then the aforementioned challenge would be prevented.

7.5.3.3 Social Marketing

Both ICSM and WUW models are similar in their social marketing approach. I called the ICSM model a social marketing approach, because this model shares the end goal of social marketing which is changing people’s behaviour and action toward a social good. Based on this rationalization, WUW may be called a social marketing approach as well.

7.5.4 Strengths and Challenges of the ICSM Model

My goal of evaluating the ICSM model was to find the strengths and challenges of this model to improve the DSM program and address energy poverty.

7.5.4.1 ICSM’s Strengths

My findings from my interviews and focus groups indicate WUW and ICSM are similar in their integral approach to market positive social changes. The evaluation of WUW indicates that its integral approach has greatly contributed to its success. Therefore, I consider the integral approach of ICSM a strength of this model, enhancing its social marketing power. ICSM and WUW were different in their process of collaboration. It

means that through my comparison I was not able to evaluate ICSM's collaborative approach in practice. Instead, I used a focus group to confirm the value of the collaborative approach of ICSM. I presented the ICSM model to energy efficiency practitioners and asked for their feedback on the model, including its collaborative approach.

7.5.4.2 ICSM's Practical Challenges

The focus group identified some practical challenges with regards to implementing the ICSM model. These include challenges associated with engaging the public in dialogue, collaboration with community groups and NGO's, collaboration with other decision makers, partnership with cities and municipalities, targeting neighbourhoods, and providing more incentives for low-income families.

- **Engaging in Public Dialogue**

Although respondents were in agreement on the benefits of ICSM's collaborative approach and on including the target market in the process of planning, implementation of this approach was identified as the main challenge of ICSM. For example, a Manitoba Hydro employee placed importance on the challenge of collaboration with end-users (target market) as follows:

“We have 350,000 end-users and they all have different priorities which is why we need to channel through different community organizations, [such as Winnipeg Harvest and Salvation Army for our lower-income program], and retailers and contractors to identify trends and issues [instead of direct communication with end-users]. Even when we conduct focus groups to consult with end users in small settings, we have found that ideas are all over the place, so how do you concentrate when out of 40 people you have 60 different concerns?”
(F MS6)

- **Collaboration with Community Groups and NGO's**

Another Manitoba Hydro employee identified the challenge of effective partnership and collaboration with non-governmental organizations (NGOs) and community groups, while trying to treat all of them equally. They state that if they use ICSM and intervene at the neighbourhood level, they would need to choose their community organization partners and work collaboratively with them to promote behavioural changes in that neighbourhood. However, it resulted in competition between different NGO's:

“Sometimes we have to be careful, because if we choose to do something for one NGO we better to do it for all of them. From a political standpoint, because we are a governmental organization [we have to treat all of them the same]. For example, if we decide to do a neighbourhood presentation for Spence and let's say St. Boniface came knocking for a similar project, we can't say that we prefer to work with Spence, because they were looking at it from a broader standpoint. We don't always have that option to differentiate, even if it is reasonable to do so.” (F MS1).

- **Targeting Neighbourhoods**

Another challenge for Manitoba Hydro was tailoring its Power Smart program to the neighbourhood scale. They argue that based on ICSM, they would need to target neighbourhoods and work with residents to identify the needs, values and capacities for energy efficiency programs. This process of planning would result in different programs for different users, based on where they live. However, users may not be happy to receive different services while they pay the same rates for their utilities.

“We cannot show the differentiation. Basically, if I am poor and lower-income in Spence with a very good program in my community and now I am a lower-income resident in Thompson and my community didn't do such a good

community job, then as a Manitoba resident, I would be discriminated [against because I cannot] access a program based on inability of my community. As a resident I would be saying what is the difference? I am still a rate payer and resident of Manitoba.” (F MS1)

- **Addressing Energy Poverty**

Another challenge for applying ICSM was targeting low-income families. ICSM suggests designing specific programs for low-income families, as a way to address energy poverty. Although Manitoba Hydro already has a program for lower income families, and helps them through programs such as WUW or individually to reduce their utility bills, it has difficulty to justify its efforts for non-low income residents. The focus group participants mentioned that some end-users perceive the lower-income program as a tax increase.

“We receive phone calls from non-low income residents who say: I have already paid my taxes and I pay my utility bills. Why should I pay another tax to make low-income housing more energy efficient?” (F MS2)

One of the WUW trainees recognized this challenge:

“I have heard some people say that hydro companies in North America with programs like WUW are communist, because they are putting people before their profit. It is crazy, we just want to help out low-income people and put a little money in their pocket, it is all. We are not going to grab the tax-payers money.” (F WT6)

- **Organizational Objectives and Positive Social Changes**

Another challenge for implementation of the ICSM model was the fact that government departments and non-government organizations compete to meet their organizational goals, and do not collaboratively work to address interrelationship problems (F WS3). As Andreasen (2002) explains:

“Practitioners, policy makers, and foundations all make distinctions among types of social problems and issues on the basis of the broad subject matter involved. Thus, there are issues involving health care, the environment, crime, social welfare, the arts, and so on, each with its own subareas and specialities...These practitioners and organizations compete for government budgets, talent, foundation priorities and dollars, volunteers, media attention, and ultimately, a high place on the public agenda” (p.5).

However, ICSM suggests that all stakeholders collaboratively develop values and actions required to change the behaviours of the target market, and then define which actions each one needs to take to meet the goal of intervention.

The aforementioned challenges are not a complete list of ICSM challenges in practice. They are only based on my findings from the focus group. However, all of these challenges relate to communication and consensus building. If the energy providers build the infrastructure to support effective public engagement and collaboration with other organizations, then competition to receive more resources from end-users or organizations will change to collaboration to provide more services for the benefits of all. Therefore, I would say the significant challenge of ICSM is the practice of collaborative planning.

7.6 Chapter Outlook

In this chapter, I used Willber’s (2000) integral theory and Alman and Rogoff’s (1987) psychological world views to explain the differences between the perspectives of the social marketing and planning disciplines. I explored how they can be integrated to complement each other and facilitate the development of an integral approach toward

energy efficiency and addressing DSM challenges. As a result, I developed a new model of social marketing called ICSM.

ICSM is the application of commercial marketing and community planning technologies to the analysis, planning, execution and evaluation of programs in which stakeholders, the target audience, and the practitioner collaboratively develop values and actions to influence the voluntary individual and collective behaviour of the target audience, to improve their personal welfare and that of their society from interior and exterior perspectives.

Similar to social marketing, the end goal of ICSM is to change target market behaviours. The difference is the process of change. ICSM involves the target market and stakeholders in identifying the target market's collective values and developing a series of individual or collective actions, toward adoption of the desired behaviour. Furthermore, development of the actions is based on the target market's capacity, skills and assets of its individuals and their neighbourhood(s). As much as possible, the whole process of intervention should be designed in a way that takes advantage of existing capacity and develops new skills and capacities.

This model can be used by planners or social marketers to guide the development of behavioural change programs not only for energy efficiency purposes, but also for making other positive social changes.

I compared this model with an existing program in Winnipeg's inner city, called Warm Up Winnipeg, to discover the strengths and challenges of the ICSM model.

Chapter 8: Conclusion

8.1 Summary of Findings

Social marketing, as a behavior-change strategy, is an effective tool in addressing housing energy efficiency. However, social marketing has some limitations in fully addressing energy demand management, especially energy poverty challenges. The contested nature of sustainability (Gunder, 2006), as well as the need to promote both social equity and environmental goals at a larger community scale, calls for a more critical, integral and inclusive approach to social marketing.

I propose a model of Integral and Collaborative Social Marketing (ICSM), which integrates social marketing and planning methods, to situate energy conservation efforts within a holistic sustainability framework (Brown, 2005). ICSM views communities through an integral four-quadrant lens (Wilber, 2000). It moves from an interactional world view, in which individuals are viewed independently from their physical and social environments, and practitioners separate from their clients, to a transactional world view (Atman & Rogoff, 1987), in which individuals, their communities, the environment and the practitioner are viewed as holistic entities. Furthermore, while social marketing and community planning share an intimate concern with public engagement, social marketing has not adequately recognized nor incorporated public engagement methods commonly used by planners.

Adopting collaborative planning approaches (Healey, 1997) would allow the social marketer to aid in transmitting a community's knowledge, capacities, values, and norms

into positive social outcomes. The potential of an ICSM approach is examined in terms of its ability to address DSM and energy poverty challenges.

8.2 Reflection on Original Research Questions

Originally, in Chapter 1, section 1.3.1, I posed three main questions. I reflect on each of them here.

1. What are utilities' residential DSM challenges, particularly those associated with managing energy demand of low-income families?

DSM programs face many challenges limiting their ability to reach their objectives. Some of the main challenges are:

- Designing effective public engagement strategies;
- Planning for long-term projects, while meeting short-term objectives;
- Dealing with stakeholders who have different values and motivations;
- Filling a shortage of skilled staff and contractors;
- Dealing with local circumstances; and
- Evaluating success of their programs.

Their challenges to meet the energy demand of low-income families include:

- Low-income consumer participation;
- Cost justification to allow for spending on low-income programs; and
- Addressing major policy gaps related to energy poverty.

2. What is the role and/or potential of social marketing in terms of developing an energy efficiency strategy to address DSM challenges, including energy poverty?

Social marketing provides great opportunities to address DSM and energy poverty challenges, through changing individuals' energy efficiency behaviours. Social marketing is a powerful tool in increasing energy users' engagement in energy efficiency programs. Its segmentation and targeting principles allow practitioners to target low-income households and address their energy needs. Also, strategic social marketing is effective in promoting policy and regulation changes in favour of energy efficiency. However, social marketing is limited by its rational model of planning, individual level of intervention, evaluation criteria, and interactional world view limit. This in turn limits its ability to fully address interconnected social and environmental challenges of DSM and energy poverty.

3. How can an integration of city planning and social marketing approaches improve programs directed at residential energy efficiency?

Based on Wilber's (2000) integral theory, social marketing and planning have different perspectives which complement each other, facilitating the development of an integral approach. Also, Altman and Rogoff (1987) have divided psychological world views into four groups, including trait, interactional, organismic, and transactional. I explained that social marketing takes an interactional world view, and planning takes a transactional world view. I believe the transactional world view would enhance social marketing's capacity to address wicked problems, such as energy poverty problems.

I believe planning's most important potential contribution in addressing the limitations of social marketing is its collaborative planning approach (Healey, 1997). Studies show that rational analytical approaches for handling problems are not valid for resolving wicked problems, such as energy efficiency problems, which are full of conflicts with many interacting parts (Stewart, Walters, Balint, & Desai, 2004). Wicked problems can be thoroughly tackled only through adaptive planning, such as collaborative planning. Also, the collaborative approach allows for consensus building and conflict resolution between different stakeholders, to mobilise internal and external capacities toward meeting their energy needs.

8.3 Significance for the Planning Profession

In this project, I suggest planners expand their perspectives, with respect to addressing social and environmental problems using the ICSM model. Planners usually neither intervene at the individual level nor target behaviour-change objectives. ICSM offers planners an opportunity to intervene at both the individual level and community level. ICSM is based on an integral approach (Wilber, 2000) in which individual and collective intervention, from interior and exterior perspectives, are required to address any social, economic, cultural, environmental, or governance problem. Also, ICSM offers planners an opportunity to include social marketing behavioural-change strategies. These have been proven to be effective in promoting positive social and environmental changes and could add new tools to the planner's toolbox.

Furthermore, I examined the possibility of using planning knowledge in addressing the DSM challenges faced by utilities. Planners are not fully aware of their role in linking

corporate energy efficiency projects with community development processes. Also, utilities usually do not see the benefits of having planners on their team. I addressed this gap in this project.

8.4 Biases and Limitations

The main limitation which arose during my research was testing the ICSM model. The best way to test the model would be to apply it in different DSM projects and evaluate the results. However, this approach was beyond my ability and the scope and time frame of this project. Instead, I used two different approaches to confirm the value of the ICSM model. However, each approach had its own limitations.

In my first approach, I compared the ICSM model against the WUW model. The limitations arose because these two models are not exactly the same and have been developed in two very different settings. In my second approach, time was the main limitation. Most of the focus group participants did not have any experience in social marketing and collaborative planning approaches. Therefore, I needed to explain these approaches in a one hour presentation, in advance of the focus group. Unfortunately, this did not provide enough time to fully describe these approaches.

8.5 Further Research Directions

This research can expand in three main directions: development of the ICSM model; research on collaborative planning practices; and finding barriers and benefits of using ICSM by utilities to address energy poverty.

- **Development of the ICSM model**

The ICSM model presented here is only an introduction of social marketing and planning integration, to address social and environmental problems. There is an opportunity to explore and develop other theories and practices in both disciplines, to expand on the ICSM model developed in this thesis. Considering the fact that social marketing itself is a young and growing discipline and there is an ongoing effort to expand it, the timing is perfect to develop the ICSM model further.

- **Research on collaborative planning practices**

Collaborative planning is a key component of ICSM. Collaborative planning is a recently developed theory and there is ongoing discussion about its applicability. Research can explore those discussions in more depth, studying the successes and failures of practices which have used collaborative planning to address energy efficiency.

- **Finding barriers and benefits of using ICSM by utilities to address energy poverty**

Utilities operate within a regulated environment which imposes different types of obligations on them (Marvin, Graham, & Guy, 1999). They need to demonstrate commercial success while addressing DSM challenges and energy poverty. Also, utilities govern in different systems in North America; some of them are public and some are private. Finding the barriers and benefits of using the ICSM model in different types of utilities, with the aim of addressing energy poverty, is another potential research direction.

8.6 Recommendations for Manitoba Hydro

In this final section, I suggest ways Manitoba Hydro could improve its residential Power Smart programs based on the results of this study. I have divided the recommendations according to four sections of this project including: the field work results, the critical review on the social marketing approach, the Warm Up Winnipeg program, and the ICSM model.

8.6.1 Recommendations Based on the Field Work Results

According to my findings from chapter four, I suggest Manitoba Hydro should:

- Recognize the significance of interventions at the neighbourhood scale. They should appreciate distinctive energy needs and resources within the local neighbourhood, which cause unique barriers to and benefits of participation in Power Smart programs for different neighbourhoods.
- Include factors such as each neighbourhood's current participation rate in the residential power smart program (see Figure 4), local information distribution channels, population, income, home ownership, housing condition, cultural background, language when promoting Power Smart programs in each neighbourhood.
- Value local residents' knowledge in designing new Power Smart programs or adapting existing ones.

8.6.2 Recommendations Based on the Review on the Social Marketing Approach

My study on the social marketing approach showed this approach is effective in promoting energy efficiency behaviours and therefore improving participation rates in Power Smart programs. Based on these findings I suggest Manitoba Hydro:

- Incorporate social marketing tools and techniques in its current Power Smart programs.

The CBSM website: www.cbsm.com is a useful resource for designing social marketing programs for energy efficiency purposes. Also, I recommend Manitoba Hydro study BC Hydro's Power Smart programs in which social marketing strategies have been already used.

- Target people instead of products.

The current Power Smart Program, except for the Lower Income Energy Efficiency program, targets a specific product or service, such as energy efficient light-bulbs or in-home energy evaluation. However, based on the social marketing approach Manitoba Hydro should target different groups of people (see section 5.2.5.2), instead of targeting the general public, and then select an energy-efficiency behaviour which would have the highest impact and possibility for the target market. I suggest Manitoba Hydro targets a neighbourhood as a target market.

- Apply the same process and promote different products and services in different neighbourhoods.

Manitoba Hydro currently has the same Power Smart products and services for every Manitoban, with the exception of its Lower Income Energy Efficiency program. I believe the lower income program has been the right direction to improve the Power Smart Program. Programs and services need to be different for different residents, based on their income, their housing conditions and other existing energy resources and needs. In my focus group with Manitoba Hydro staff, some explain that Manitoba Hydro cannot differentiate their programs for ratepayers, and all ratepayers should benefit from the programs in the same way. My answer to this critique is that Manitoba Hydro can have the same Power Smart Program for every neighbourhood. However the program should not be product based, it should be a process of understanding the target neighbourhoods energy needs and resources and promoting behaviours which are most likely to be adopted by the residents. Therefore, at the end the results would be different for different neighbourhoods, but the program is the same.

- Create and promote effective brands.

As I discussed in Section 5.2.5.8, branding is an important factor in effective delivery of social marketing messages. I believe the Power Smart Program can improve its brand in two ways.

First, Power Smart programs need to be branded in a way that they are all under the same umbrella. In my interviews, I realized that some people do not know that different Power

Smart programs are connected. They may know the furnace program or the lighting program, but they may not know that all of them are part of the Power Smart Program.

Second, Power Smart programs need to be sensitive in branding low-income programs. The current program for low-income residents is called Lower-income Energy Efficiency program. The name of this program may cause people with low income to be sceptical of using the program, because they do not want to be recognized by their income. The program could have other brands, such as Warm Up Winnipeg (WUW), without referring to a person's income level.

8.6.3 Recommendations Based on the WUW Program

My study on the WUW program showed it is successful in promoting energy efficiency and at the same time empowering the community and individuals. However, community empowerment is a constraint for a large utility such as Manitoba Hydro. Given the context is different for large utilities, here I explain what Manitoba Hydro can learn from the WUW program.

- Collaboration with other local or governmental organizations.

The BUILD organization partners with local neighbourhood-based organizations such as Spence Neighbourhood Association and West Broadway Development Corporation as well as governmental organizations such as the Manitoba Housing Authority or Department of Competitiveness, Training, and Trade.

Manitoba Hydro can use the same approach and work collaboratively with other organizations to design a program which not only addresses energy efficiency, but also

has other benefits that those organizations are trying to achieve. For example, Manitoba Hydro can work with the City of Winnipeg to address energy efficiency and water efficiency in the same program and share some costs including advertising. I should mention that Manitoba Hydro is already working with some community organizations. However, I believe Manitoba Hydro can be more innovative and proactive in finding organizations and inviting into a partnership.

- Focus on the human-side of energy-efficiency projects

The WUW program has been successful in providing a supportive environment for its trainees, where individuals trust the corporation and the corporation respects the individual's personal journey toward a successful outcome.

Manitoba Hydro may not be able to interact with all and every individual customer. However, it can use the same strategy and provide a more supportive environment for its customers, where customers are motivated to use the existing infrastructure of Manitoba Hydro to promote energy efficiency in their community. I believe one way to develop trust and motivate customers is to involve them in decision making and value their local knowledge, capacity, values, and norms in the planning of energy efficiency programs.

8.6.4 Recommendations Based on the ICSM Model

The ICSM model has two main foundations which complete the social marketing approach. First is the integral approach and the second is the collaborative approach.

Therefore, based on the ICSM model, I suggest Manitoba Hydro:

- Use an integral and collaborative approach to change the behaviours of its clients toward energy efficiency (see Chapter 7)

From understanding the perceived energy problem of a target market, to mapping the process to influence the target market's behaviour, to tailoring the application and final evaluation of outcomes, Manitoba Hydro should consider personal and collective dynamics for energy efficiency from both interior and exterior perspectives through engaging the target market in the whole process of planning.

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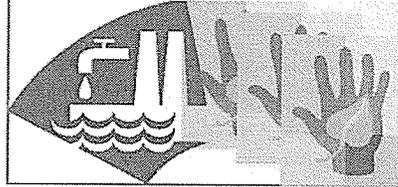
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Appendices

Appendix A: Interview Request Advertisement



Would you like to take part in a research about energy efficiency in your neighbourhood?

Background to the Research:

The purpose of this research is to plan for energy efficient communities by involving community members. Specifically, this knowledge will serve the Manitoba Hydro Power Smart residential program.

Where:

When:

Who: Residents of this neighbourhood who are older than 18 years old and pay for their hydro

Contact Information: *ummoradz@cc.umanitoba.ca*

Phone: 955-7475

Participants will receive \$10 and a Compact Fluorescent light Bulb

Appendix B: Consent Form

Consent form for the interview with Spence and Linden Woods residents:

Research Project Title: **Social Marketing Aimed at Reducing Energy Consumption in Neighbourhoods**

Researcher(s): **Fereshteh Moradzadeh**

Sponsor: **Manitoba Hydro**

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Background to the Research

This research aims to overcome the multiple barriers to long-lasting behavioural change valuing energy efficiency rather than increasing consumption by using Community-based Social Marketing approach. Its purpose is to plan for energy efficient communities by the community with the help of professionals (rather than planning for the community by non-community members).

This knowledge will serve the Manitoba Hydro Power Smart residential program to guide the development of 'integrated and inclusive' energy policy that will be more responsive to the energy needs of communities, especially low-income and marginalized groups, in Winnipeg.

The interview discussion will last approximately thirty minutes. You will be asked to discuss the Manitoba Hydro's Power Smart program and your willingness to participate

in energy efficiency programs and your answers will be tape-recorded to transcribe by the researcher.

There are no risks involved in your participation in this research project beyond that of everyday life.

Use of Data, Secure Storage and Destruction of Research Data

The information will be obtained by the researcher will be utilized in a major degree project report. However, your name and personal information and recorded tapes will be treated as strictly confidential and stored in the researcher's home, and subsequently destroyed once the project has been completed. Upon completion of the research project, you will have access to any public reports utilizing data from your interview that may be published by Manitoba Hydro.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

**Principal Researcher: Fereshteh Moradzadeh, Master of City Planning Student,
University of Manitoba.**

Telephone: (204) 261-7318

Name of Supervisor: **Dr. Sheri Blake**

Telephone of Supervisor: (204) 474-7051

This research has been approved by the Joint-Faculty Research Ethics Board (JFREB). If you have any concerns or complaints about this project you may contact any of the above named persons or the Human Ethics Secretariat at 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Thank you for participating in this project. Your cooperation and insights are very valuable, and are greatly appreciated.

I, _____, consent to the dissemination of material provided

[Name of Participant: *please print*]

to Fereshteh Moradzadeh. I understand that for the purposes of the major degree project, all information will be treated as confidential, stored in a private and secure place, and subsequently destroyed once the project is completed and disseminated.

Signature of Participant: _____

Date _____

Name of Researcher: _____

Date _____

Signature of Researcher: _____

Date _____

Appendix C: Interview questions for the Spence and Linden Woods residents

1. How long have you been living in this neighbourhood?
2. Do you own the dwelling you are living in?
3. Who pays for hydro in this dwelling?
4. Have you heard of Manitoba Hydro's residential energy efficiency programs or Power Smart program?
5. The following programs are part of the Power Smart Program. Which one are you familiar with? What do you know about them?
 - Home Insulation Program
 - Thermostat Program
 - Residential Lighting Program (Compact Fluorescent Light Bulbs or LED Holiday Lights)
 - Power Smart R-2000 Standard
 - Power Smart New Home Geothermal Project
 - Power Smart Appliance Program
6. Would you please tell me about how you heard about this program? (referring to each of the sub-programs in question 5)
7. I would like you to tell me what you think of the advertising that Manitoba Hydro does for this program. Were their messages clear and understandable to you?
8. Have you ever done anything about saving energy in your home as a result of this program? If yes, please tell me about it.
9. In the media there are many energy-saving tips from different sources. Do you remember any of these? [Probe: what about the one...]. Do you feel that these tips are applicable to a household like yours?
10. Do you think your neighbourhood's energy needs and wants are unique and requires a specific energy program? If yes, how?
11. If Manitoba Hydro plans to design an energy efficiency program in this neighbourhood, would you like to be involved in planning the program?

12. If you could give one comment to Manitoba Hydro about the Power Smart Program, what it would be?

Appendix D: Interview questions for the interview with one of the BUILD directors

1. Please explain what are the WUW program's goals and the program's components? How does the training component work?
2. Who were involved in the pilot project (Centennial project)?
3. What is the cost of the program and who are the sponsors?
4. How people can apply for the retrofit program?
5. How people can apply for the training program?
6. What is Manitoba Hydro's part in WUW program?
7. Have you ever evaluated your program? If yes, what are your evaluation criteria?
8. What are achievements and challenges of the program?

Appendix E: Questions for focus groups with Manitoba Hydro and BUILD staff

A. Questions from Manitoba Hydro Power-Smart Program professionals:

1. What are the strengths and weaknesses of your Lower Income Energy Efficiency program in promoting energy-efficiency behaviours? What worked and what didn't work?
2. What is the impact of the Warm Up Winnipeg program in the current Manitoba Hydro's Lower Income Energy Efficiency program?
3. Do you think the Integral and Collaborative Social Marketing (ICSM) approach could be beneficial for the Power Smart Program, especially the Lower Income Energy Efficiency program? If yes how?
4. What are some barriers toward incorporating ICSM strategies in the current Power Smart Program? What needs to be changed in your organization to make the implementation of initiatives, such as ICSM easier?

B. Questions from BUILD (Warm up Winnipeg program) staff:

1. What are the strengths and weaknesses of your current program in promoting energy-efficiency behaviours? What worked and what didn't work?
2. What are the barriers to implementation of your program?
3. Have you ever evaluated your program? If yes, what are the outcomes of your program? Are you planning to incorporate new strategies in your program? If yes, what are those strategies?
4. How do you think your program could be adapted by Manitoba Hydro or other energy-efficiency program designers?

5. Do you see similarities between your program's approach and the ICSM approach?
6. What are your perspectives about ICSM as a way to improve your program?
7. What are some barriers for implementing the ICSM model in your organizations? What needs to be changed in your organization to make the implementation of initiatives such as ICSM easier?

Appendix F: Questions for the focus group with Warm UP Winnipeg trainees

1. How did you find out about this program?
2. Why did you decide to participate in the training program?
3. What are some barriers to and benefits of participation in this program?
4. Have you ever referred anyone to this program? If yes, explain your answer.
5. What do you like and dislike about this program?
6. Have you ever been asked about your opinion on this program?
7. How do you think this program has changes your understanding about energy-efficiency behaviours? Have you ever use your training to voluntarily make energy saving changes to your own home, or homes of friends or family members?

Appendix G: Ethics Protocol Submission Form

1. Summary of Project: Purpose

This research for the city planning Major Degree Project focusing on *community-based social marketing*⁵, as a strategy for reducing energy consumption at a neighbourhood scale. Community-Based Social Marketing (CBSM) will be the underlying strategy employed in this research project, to influence the community members to consider accepting, modifying, or abandoning certain ideas, practices or behaviours – in pursuit of more efficient energy usage.

This research aims to overcome the multiple barriers to long-lasting behavioural change valuing energy efficiency rather than increasing consumption. Its purpose is to plan for energy efficient communities by the community with the help of professionals (rather than planning for the community by non-community members). In addition, the project aims to uncover innovations in policy and practice of integration of diverse energy efficiency jurisdictions such as Manitoba Hydro and connect them to the community.

This knowledge will serve the Manitoba Hydro Power Smart residential program to guide the development of ‘integrated and inclusive’ energy policy that will be more responsive to the energy needs of communities, especially low-income and marginalized groups, in Winnipeg.

Methodology

This project involves focus groups with professionals in energy-efficiency programs and

⁵ Social marketing is the application of familiar marketing concepts and techniques to mobilise individuals and communities towards achieving goals associated with positive social change. CBSM is considered particularly effective in fostering behaviour that is supportive of more sustainable development (McKenzie-Mohr, D. & Smith, W. (1999). *Fostering sustainable behavior: an introduction to community-based social marketing*. Gabriola Island, BC: New Society Publishers

Manitoba Hydro's employees who work in Power Smart department. Also, the study involves in-depth interviews with residents of two socio-economically different neighbourhoods. The residents will be asked about their energy consumption behaviour and the influence of Power Smart Program on their attitude and behaviour toward energy conservation. It is estimated that each interview will last half an hour. The project will encompass 10 interviews. The data obtained from the interviews will be analyzed to evaluate Power Smart Program's effectiveness in changing people's behaviour toward energy consumption and will help to design a strategy that utilizes behaviour change tools which are specific for different neighbourhoods. Also, the effectiveness of the proposed strategy will be tested through three focus group discussions: one with the staff of Manitoba Hydro's Power Smart program and one with the staff of Warm up Winnipeg program and last one with the trainees of Warm up Winnipeg program. The focus group discussion will take approximately one hour. Personal information will be removed from the focus group and interview data to utilize in the thesis report.

2. Research Instrument

Please see attached form.

3. Study Subjects

The study will be informed by some interviews and three focus group discussions with Warm up Winnipeg program's staff and trainees as well as Manitoba Hydro's employees who work in Power Smart department.

Also, the research will focus on people who are living in the selected neighbourhood. The residents will be asked to participate on a volunteer basis. The potential participants will be provided with a comprehensive description of the research project and their role and the benefit of their contribution to the project. Also, the name and personal information of the participants would not be released in the final report and the written consent will be required for potential participants.

4. Informed Consent

Written consent is required for potential participants. Attached find two consent forms. One of them is for the interview and the other for the focus groups purpose.

To encourage potential participants to support the research and partake in the interviews, each the 10 interviewees will receive \$10 cash and an energy-efficient light bulb. Each of the Warm up Winnipeg trainees who participate in the focus group will receive \$20 cash.

5. Deception

No personal information will be asked for participants in the study except their name and signature on the consent forms. The consent forms will be strictly confidential and stored in the researcher's home, and subsequently destroyed once the project has been finished.

Personal information including name and job title of interviewees who are professionals in energy conservation and/or community-based projects will be asked for the sake of reference. The interviewees will be informed about the research process and goals and the fact that some of their responses to the questions will be quoted in the thesis report or some possible publications by Manitoba Hydro. Their permission for dissemination of the provided information will be obtained by consent forms.

6. Feedback/Debriefing

After completing the research project, all participants will have access to any public report published by the main researcher or Manitoba Hydro.

7. Risks & Benefits

For the purposes of the focus groups and interviews, there are no risks involved for neither the participants nor the researcher.

Benefits

The project will examine the ability of CBSM in engaging community members for developing and implementing energy efficiency programs such as Manitoba Hydro's

Power Smart Program at the neighbourhood scale. The current suite of Power Smart residential programs consider energy conservation primarily in terms of the technological means of decreasing energy demand, utilizing mass marketing campaigns and information dissemination. This project will rely on environmental behaviour studies and delivering community-based programs. Manitoba Hydro will consider this research as a guide to enhance its current energy efficiency programs by engaging Manitobans in developing energy efficient programs.

8. Anonymity and Confidentiality

The data obtained from the focus group process will be consolidated to remove all identifiers thereby maintaining the anonymity of the participants in the thesis report.

Some of the information received from the interviews with the professionals will be incorporated in the thesis. To prevent plagiarism, the information attained from the interviews with the professionals will be cited with the respective names referenced in the reference section of the thesis. Professionals and participants will only be consulted when they provided written consent. Consent form for interviews with the residents is different than consent form for focus group with practitioners. Please see the attached consent forms.

9. Compensation

Each of the 10 interviewees will receive \$10 cash and an energy-efficient light bulb. Each of the Warm up Winnipeg trainees who participate in the focus group will receive \$20 cash.