RISK COMMUNICATION IN PUBLIC CONSULTATIONS FOR LOCALLY UNWANTED LAND USES:

A STUDY OF THE PUBLIC CONSULTATION FOR THE SOUTH EAST FALSE CREEK NEIGHBOURHOOD ENERGY UTILITY

by

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RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF URBAN STUDIES

In the Urban Studies Program, Faculty of Arts and Social Sciences

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SIMON FRASER UNIVERSITY
Spring 2010

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ABSTRACT

City governments all over the world are looking at ways to promote and incorporate sustainable sources of energy. The City of Vancouver attempted to incorporate such a process using biomass combustion in the South East False Creek development, a new model sustainable community in the centre of the city. However, this technology was rejected and an opportunity to employ this beneficial energy source was missed. This project examines the public consultation process for this proposal to determine how it might have contributed to the rejection. Challenges to the acceptance of such a technology by the public, both generally and for this project specifically, were exposed. It was determined that the rejection of biomass combustion as an energy generation technology was largely a consequence of faulty execution of certain components of the planning and consultation processes and less a result of unacceptable risk inherent to the proposal itself.

Keywords: Risk; Risk communication; district energy; NIMBY; Not-In-My-Backyard; LULU; Locally Unwanted Land Use; Public consultation; Biomass combustion.
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1 INTRODUCTION

To combat global warming, action is needed immediately to begin to reduce the anthropogenic portion of the total greenhouse gas (GHG) loading to the atmosphere. Governments around the world have signed on to the cause both in treaty and policy. Numerous technologies – including solar, geo-thermal, wind and tidal, to name a few – are being developed on the small and medium scale to replace the combustion of fossil fuels as an energy source. At this scale – as compared to much larger energy generation facilities such as wind farms and hydroelectric dams – energy generation can be distributed among several smaller facilities, many of which can be built much nearer the end user; within the communities themselves. Almost all scenarios will require some combination of technologies as no one of these technologies can provide reliable and consistent power throughout the days, weeks and months of the year – none save biomass combustion, the oldest on-demand energy source known to humans\(^1\). However, building such facilities close to residents almost always spurs spirited debate, if not outright conflict.

With today’s development of advanced emissions control technologies, biomass combustion can take its place among the solutions of greatest hope in the drive to reduce GHGs. However, recent attempts to implement this

\(^1\) Large scale technologies like hydro and nuclear power are reserved for future research as they are not applicable at the neighbourhood or even the citywide scale.
technology have met with significant public opposition despite its many benefits. This opposition has in some cases resulted in the rejection of biomass combustion based energy supply facilities, particularly in urban areas where it is no coincidence that the majority of end users of the energy reside. Thus, there is a need for research to better understand the consultation process surrounding the implementation of these facilities so we may more effectively promote the uptake of this technology.

1.1 Barriers to Uptake

Despite the many advantages and benefits of using wood combustion as an energy source, social acceptance remains a potentially powerful barrier to implementation of this technology. However, gauging the level of community acceptance of such a technology is not a simple process. Early on in the introduction of renewable energy sources, “the first surveys on the public acceptance of renewables…revealed very high levels of support for the technology” (Wustenhagen et al, 2007). According to Bell et al (quoted in Wustenhagen et al, 2007):

This overall picture for renewable energy has (mis)led policy makers to believe that social acceptance is not an issue. However, moving from global to local, and from general support for technologies and policies to effective positive investment and siting decisions, one has to acknowledge that there is indeed a problem.

In other words, acceptance of the technology in principle has no bearing on acceptance of the use of that technology by those who live or work nearby.
Some features of renewable energy innovation that add dimensions to the debate on social acceptance are that (Wustenhagen et al, 2007):

- Renewable energy facilities can be much smaller and more numerous than conventional power plants making them very much suited for locating within communities. Thus, uptake of these types of technologies is characterized by an increase in the number of siting decisions that need to be taken.

- Renewable energy conversion tends to be characterized by lower energy density. In other words, more energy input is needed to produce a given unit of energy as compared to traditional energy sources such as fossil-fuelled power plants. Therefore, more facilities are needed to satisfy the demand and hence the collective visual and environmental impacts tend to be higher. In other words, more facilities are required for the same amount of power so a greater visual and environmental impacts result.

- Most renewable energy technologies do not compete with incumbent technologies on a level economic playing field. By and large, these are newer technologies and generally do not yet benefit from economies of scale that minimize implementation costs. Thus, acceptance of these solutions over other more established technologies is commonly a choice between short-term costs and long-term benefits.

Indeed, energy facilities based on wood combustion technology exhibit all of these features when proposed for an urban environment. Thus, the importance of gaining an understanding of the level and nature of community acceptance – as undertaken in this research – cannot be understated.

Few scenarios more clearly illustrate the potential for conflict in dialogue than the public consultation component of the siting process for a Locally Unwanted Land Use – or LULU – and fewer still when the proponent represents
local government. In addition to the difficulty in communication expected from the typically anticipated opposition of residents near the proposed site, the proponent must deal with an added dimension of difficulty resulting from the accountability they have toward the voting public, from which most of the stakeholders hail. The traditional approach taken towards public consultation is to expect a strong negative reaction from the public towards the proposal. This strong opposition is commonly associated with local opposition to the nearby siting of a LULU – commonly identified as the Not-In-My-Backyard (NIMBY) effect. Almost by definition, NIMBYism has traditionally been considered the culmination of all things irrational about a public response to a LULU. In the extreme, the NIMBY effect has been described as:

“…a public health problem of the first order. It is a recurring mental illness which continues to infect the public. Organizations which intensify this illness are like the viruses and bacteria which have, over the centuries, caused epidemics such as the plague” (Piller, 1991 in McAvoy, 1998).

The traditional approach to communicating with such irrationality has sometimes been to develop a form of one-way ‘educational’ monologue versus two-way collaborative dialogue, in which “…public officials often discount the instrumental objections of citizens, and they tend not to see or take seriously the normative challenges that citizens put forth” (McAvoy, 1998). This might lead to the assumption that NIMBYists cannot be swayed and so the public consultation process becomes little more than a requirement on a checklist that holds little if any hope of achieving agreement. Dialogue has been incorporated only in its most basic form – presentation of the facts in order to ‘educate’ together with
some simple provision for response by the stakeholder such as a comment card or take-away survey. A review of recent literature on NIMBYism reveals that the public’s response to LULUs is far more complex and that the NIMBYist position comprises only a small part of the basis for typical opposition to such processes. A negative reaction to a LULU has been described as a manifestation of the public’s reaction to perceived risks associated with the project. Risks can be perceived at the local or broader levels. They can be related to health risks, risks associated with the introduction of new technology, risks of intentional or unintentional relaying of inaccurate information (i.e. distrust), etc. The literature on risk perception is vast and generally frames the response not in the selfish arena of the NIMBYist tradition but in the broad spectrum of risks that can be perceived by stakeholders, which only serves to reinforce the complexity of the response. The literature on risk communication is less extensive. However, it generally exposes the drawbacks of the traditional approach to consultation, that being the one-way educational approach. Using such a simplistic approach to what is often a very complex issue can hardly be expected to result in a positive outcome, such as when citizens and planners agree on the nature and location of a LULU. Instead, projects are regularly approved in the midst of significant conflict with little understanding of the actual level and nature of acceptance for the project. This research takes a look at an example of a LULU consultation – the South East False Creek Neighbourhood Energy Utility (SEFC NEU) public consultation – and seeks to analyse it in the context of several factors influential to the dialogue between the public and the project proponents. It is hoped that
through this research, lessons can be learned about overcoming challenges to such proposals and hence promote greater success in the development and implementation of this valuable technology.
2 THE CASE FOR WOOD COMBUSTION AS A DISTRICT ENERGY SOURCE

2.1 Wood-fired district energy supply

While this research primarily deals with the public consultation/community acceptance aspects of solid wood combustion as an energy source, it is useful to define the combustion system that is being discussed from the numerous biomass options available at various scales of production. Each type of combustion system – from the fireplaces in individual homes to the large-scale mega-plant – is sufficiently different in its scale and mechanism of operation to necessitate an altogether different discussion in terms of its applicability as an energy supply solution. The subject facility for this research is a wood-fired energy facility sized at the medium-scale, defined here as greater than 3 megawatts and less than 10 megawatts. Such a system is well suited for an urban environment as it is large enough to absorb the expense of the significant emissions control technology required to maintain the low-emissions profile needed for an urban installation. Yet, a medium scale facility is not so large that it overwhelmingly imposes on the local environs.

2.1.1 Wood-combustion

This study discusses energy from the combustion of solid wood specifically as opposed to biomass energy in general, which is commonly associated with the use of biofuels such as ethanol and biodiesel. The supply of
wood combusted can take many forms including raw forest debris, green waste from domestic activities, existing waste streams from wood-related industries and commercially produced wood fuel pellets. While many countries must import much of their biomass fuels, British Columbia is well endowed with such resources. In fact, in 2007, over a million tonnes of solid wood fuel was shipped out of the Port of Vancouver from one facility for overseas export\(^2\). Clearly, Metro Vancouver, a region located within an abundance of such fuel, is well situated to take advantage of this type of energy source.

2.1.1.1 Air Quality

Air quality in Metro Vancouver is managed according to the three primary goals set out in the GVRD Air Quality Management Plan (AQMP), which are:

1. Protection of human health
2. Improve visibility
3. Protection of global air quality

These principles are hierarchical in that the first carries more importance than the last. That is, the last principle can only be considered once the first and second have been satisfied. In general, given the prevailing small-to-medium-scale energy generation solutions (i.e. at a scale that is smaller than large-scale hydroelectric solution), the first and third principles exist in opposition to each other. This is because the emission of the contaminant of greatest concern to human health in the region – particulate matter (PM) – is minimized when today’s cleanest fuel, natural gas, is burned. As a fossil fuel however, natural gas

\(^2\) Source: Metro Vancouver Regional District.
contributes significant quantities of greenhouse gases, thus confounding the satisfaction of the last principle.

Recently, more attention is being paid to wood-fuelled combustion as a means to address this dichotomy. As a renewable source of fuel, biomass has been identified as a potential sustainable long-term source of energy, a status dependent upon the sustainability of the biomass harvesting processes. It is also particularly important due to its characteristic carbon-neutrality, since it releases through combustion what it would have released anyway through decomposition at the end of its life. Further, the growth of the next tree to replace the first effectively creates a carbon neutral cycle that is decades in duration rather than millennia, as is characteristic of fossil fuel combustion. A renewably harvested wood fuel source can also offer an initial benefit of carbon sequestration as the root systems of biomass sources also draw CO₂ from the atmosphere but are not themselves burned as fuel (Varela et al, 1999, p. 409). Resulting from advances in air emissions control technologies, biomass combustion can be performed while reducing PM emissions to levels on the same order of magnitude as natural gas and so can satisfy the first principle in the AQMP.

2.1.1.2 Biomass versus Sewer Heat Recovery

Two forms of technology were presented for the supply of energy for the SEFC NEU – biomass combustion and sewer heat recovery. Biomass was offered as the preferred option in SEFC partly because it is a proven and reliable technology but also because on the whole it was the more environmentally friendly choice on both the local and global scale. This is primarily due to the
lower overall emissions of carbon dioxide (CO$_2$) to the atmosphere since, despite the emission of CO$_2$ by transport trucks delivering wood pellet fuel to the facility, it would rely less on peak load backup from natural gas fuelled boilers. In this case, the essential difference between biomass and sewer heat is that a biomass facility can change its output to meet demand from end users while a sewer heat facility produces a constant supply of heat and would require backup boilers to meet demand over its capacity.

From an emissions point of view, the biomass facility was proposed to employ what is known as Best Available Control Technology (BACT) for the control of emissions of particulate matter, which would have minimized emissions of particulate matter (PM) including PM2.5. Particulate matter, specifically PM2.5, is a primary contaminant of concern originating from combustion processes so control of this contaminant would be critical to the acceptance of the technology by all stakeholders. PM2.5 is particulate matter with individual particle sizes that are less than 2.5 microns in size (or about 1/400$^{th}$ of a millimeter in diameter). This type of PM presents a significant health risk as it is known to enter and become lodged in the lungs potentially causing several pulmonary afflictions$^3$. This same BACT is also designed to remove smoke particles from the emissions so there would be no visible plume from the facility. Beyond that, proper sourcing of fuel would have minimized the emission of toxic substances such as dioxins, which are known to be carcinogenic. In summary,

\footnotesize{$^3$ United States Environmental Protection Agency Technology Transfer Network located at http://www.epa.gov/ttn/naaqs/pm/pm25_index.html.}
this facility was proposed to be constructed so as to reduce the emissions to a point well below that which would impact even the closest neighbours.

2.1.1.3 Sustainability

An obvious advantage of using biomass of any kind is the sustainable potential of the fuel source. The word potential is used purposely to remind the reader that a perpetual source of such a fuel can only be realized if it is harvested in a sustainable manner. Regardless of the size of the existing supply of wood in the world, only maintaining that amount can ensure carbon neutrality. Dipping into existing supplies without full replacement would be destructive to this pursuit. Further, increasing demand for energy of all kinds will require significant planting programs to increase the fuel stock. Despite the potential pitfalls, biomass clearly has the renewability advantage over fossil fuels.

2.1.2 District Energy

The discussion on using solid wood as a fuel typically includes small-scale residential applications – in other words, the common household fireplace or wood stove. In addition, the discussion includes large-scale applications such as centralized power plants supplying energy to areas on the scale of cities or larger. This study in contrast purposely limits the enquiry to medium-scale facilities that are better suited to produce energy at the neighbourhood level. This type of energy regime is referred to as district energy supply, a term meant to imply that energy is produced locally for multiple buildings. Typically, local energy supplies are limited to individual users such as the small-scale systems
referred to above. An advantage of district energy systems is that losses of energy during transmission – typically electricity for widespread systems – are minimized as the energy source gets closer to the user. Further, district energy systems allow for the capture of additional energy in the form of waste heat from the energy generation process in use such as fuel combustion or sewer heat recovery. Therefore, the efficiency of the complete system – combustion to end user – is increased. Finally, by minimizing the transmission distance, heat can be delivered using alternate transmission methods such as steam or hot water from a facility that produces both electricity and heat in the same process, a facility also known as a combined heat and power (CHP) facility. According to a July 2006 City of Vancouver update 4, “[c]ommunity energy is ‘green and clean’ relative to conventional systems because it produces fewer emissions and all at a single point where they can be regulated, monitored, and controlled”. They further estimate that the NEU is expected to reduce the direct and indirect GHG emissions by 6,000 tonnes annually compared to buildings with conventional HVAC systems. The report further emphasizes the flexibility and adaptability of district energy systems in that they can adapt to new technologies as energy costs and technologies change... “the SEFC NEU is designed to be flexible and adaptable over time as the neighbourhood is built out over 15 years; providing “sustainable” energy services that balance costs, increases reliability, and reduces Green House Gas (GHG) emissions and exposure risks to fuel price fluctuations over time. There will be opportunities to reduce emissions even

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further through the adoption of newer technologies over time and possible future expansion of the system to surrounding neighbourhoods as growth occurs.”

2.2 Global Trends

In order to illustrate the growing importance of solid wood combustion as a fuel source for the supply of renewable energy now and into the future, a review of a few examples of global wood combustion projects is useful.

2.2.1 Renewable Energy Sources Growth Trend

While member countries of the European Union are choosing to employ different methods to reach their Kyoto targets, on the aggregate, the combustion of solid biomass is currently playing a pivotal role in the collective strategy to reduce the emissions of greenhouse gases (Figure 2-1). This trend is expected to continue.

Source: Renewable Energy Road Map, Commission of the European Communities, 2007

Figure 2-1: European Union Renewables Growth - Electricity Production
In the United States, a similar trend in the promotion of wood as a fuel source has developed and is expected to continue (Figure 2-2).

In the United States, a similar trend in the promotion of wood as a fuel source has developed and is expected to continue (Figure 2-2).

Biomass combustion is second only to wind power but has the advantage over wind due to its applicability to district energy solutions. Wind power, by virtue of the size of installations required to make it economical, cannot be employed in such a way.

2.2.2 Vaxjo, Sweden: Biomass and District Energy

The city of Vaxjo, Sweden provides a good illustration of the beneficial application of wood combustion at the district level. Vaxjo derives 50.7% of its energy supply from renewable sources, 35.5% of which comes from biomass combustion. A contributing factor to this relatively large percentage is a significant increase in the use of a district energy model to increase the efficiency
of producing and delivering energy to end users. A substantial amount of the energy obtained from biomass is used to provide heating energy as illustrated in Figure 2-3. Figure 2-4 illustrates the resulting reduction in CO2 emissions due to this fuel source transfer to biomass from fossil fuels.

Figure 2-3: Vaxjo Heat Energy Supply

Figure 2-4: Vaxjo Per Capita CO2 Emissions

5 From the Climate Strategy of Vaxjo, http://www.vaxjo.se/upload/Climate%20strategy%20of%20Växjö.pdf
By adopting the district energy model, Vaxjo has enabled end users to switch from fossil-fuel derived sources of energy to a renewable source in the form of biomass combustion. With such a localized medium-scale process (as opposed to individual-scale fireplaces), it became economical to employ this type of technology while still utilizing the considerable technology – in size and expense – required to maintain clean emissions. While this is only one example of such an approach, it is indicative of the trend in many European countries\textsuperscript{6}.

\textsuperscript{6} The David Suzuki Foundation, \textit{Who’s Meeting Their Kyoto Targets}, May, 2006 found at http://www.climateactionnetwork.ca/e/cop-12/kyoto-targets-dsf-2006.pdf
3 UNDERSTANDING LULU CONSULTATIONS

The public consultation associated with the siting of a LULU facility is rife with challenges that result from the interaction of several key factors. An understanding of those factors is required for a proper evaluation of the SEFC NEU.

3.1 Risk

3.1.1 The Nature of Risk

Traditional approaches to estimating risk involved, almost exclusively, quantifications based on probability and consequence (Newby, 1997; Snary, 2004). More recently however, it has been shown that defining risk is as much about understanding the perception of risk as it is about our ability to calculate it. This perception involves peoples’ beliefs, attitudes, judgments and feelings. Thus, risk is definable by each of us for each of us and cannot be reduced to a simple technical determination. As Snary (2004) points out, “[the] reductionist understanding has its roots in the positivist doctrine which takes the view that scientific understandings are wholly objective and should be kept separate from the value judgements present in other parts of a decision-making process”. The vulnerability in the reductionist approach is elucidated by Newby (1997):

Scientists may be able to explain the facts, but the facts rarely speak for themselves. The facts are interpreted by individuals who may behave in quite different ways to those which scientists, or public policy-makers, or the industrialists, originally intended.
Value judgments are not exclusive to the perception of risk; they are equally employed in its evaluation. In the assessment of risk, judgments are necessary at several points in the process such as problem identification or the selection of the size of the safety margin for a given calculation. These judgment points introduce a value driven component to a technical decision that has significant implications for the perception of even the most quantifiable risk.

Given how this subjective judgement contributes to how risk is perceived, it is worthwhile describing the factors that influence it. The volume of literature on risk perception is considerable but a good summary can once again be found in Snary (2004). He summarizes the influences on the subjectivity of risk evaluation by identifying three categories of risk-related concern, herein interpreted as risk related to the project, the process and institutions.

**Project-related risk**

To many planners, the input received from the public seems to expose the existence of perceived risk that runs contrary to the extensive technical evaluation of risk that is typical of contentious proposals. While the initial tendency is to explain such an incongruous reaction as irrational or uninformed, the public's reaction can instead be considered a *rational* evaluation and identification of risk based on a wide spectrum of factors:

- The risk has not been accepted voluntarily,
- The risk is created by humans, not ‘acts of god’,
- The risk has received considerable media attention,
- The risk of cancer is dreaded,
The health effects are in many cases irreversible,
The risk is not personally controllable,
The process that generates the risk is unfamiliar, and
The risk is not accompanied by any direct benefit or compensation.
[Snary, 2004]

Process-related risk

Beyond the influences on the perception of risk for the individual, risk is further evaluated and refined based on the values and beliefs characteristic of different social groups. The challenge for the planner then is to decide the relative weights to award to each group’s point of view since “no one interpretation of risk [should be considered] more objective than another” (Snary, 2004). To meet this challenge, planners must ensure procedural fairness in order to allow for the consideration of these differing and equally valid viewpoints. Central to this notion are the tenets of “…representativeness and inclusiveness” (Tansey and O’Riordan, 1999, in Snary).

Institution-related risk

The public may also perceive risk to exist within the vulnerability of institutions or in their ability to carry out fair and logical assessments. Risk is commonly assessed within a scientific frame despite the current understanding of the existence of a concomitant psycho-social frame. Neglecting, intentionally or otherwise, to correctly define for the public the method of risk assessment (e.g. limits, assumptions, conditions, etc) causes uncertainty among stakeholders, the antithesis of the intent of the consultation. Institutions are generally held to
account for a more robust and thorough assessment that precludes shortcuts or inconsistencies in the process. Anything less invites distrust.

Institutional vulnerability may also be found in a lack of credibility or trustworthiness of the regulator, the developer and/or the decision-maker. This is usually a pre-existing condition caused by the distribution of anecdotal evidence or first-hand experience of less than exemplary practices by these actors in past developments elsewhere. Consultations are thus characterized by risk that is ingrained in the process and is likely not incorporated into the risk assessment of proposed facility. Finally, concerns about the legitimacy of the siting process can be a source of uncertainty that elevates perceived risk. Fears about the inequality of the siting process relate to “concerns about accountability, the lack of real public involvement and the balance of power” (Snary, 2004). Clearly, with so many factors influencing the evaluation of risk, no universal or even moderately consistent definition of risk for an individual proposal can be possible. Nevertheless, there is still a need to identify and understand these perceived risks so that they may be comprehensively incorporated into the consultation.

3.2 Trust

A central issue in the discussion about effective consultation for contentious developments is that of trust – or perhaps distrust, depending on the commentator. The key capacity of trust is its ability to set the threshold for acceptance. In other words, the amount of resources needed to gain acceptance or achieve consensus for a given proposal is inversely related to the level of trust that exists on the part of the public in various actors in the dialogue. The more
trust the public has – for instance for other participants or the process – the less work will be required to convince participants that their interests matter and will be appropriately considered. “An interesting point with risk communication is that trust in those responsible for providing information matters as much as the probability estimates presented to the public” (Elahi, 2000). In addition, a lack of trust can serve to cloud the dialogue in a fog of uncertainty about the motivations of the other participants. In such an environment, even the most sincere message can be misinterpreted making the road to the abovementioned threshold more challenging than it could otherwise have been.

According to Newby (1997), “trust can be seen as involving a willing acceptance of vulnerability, based on the expectations that certain criteria will be met. For example, these criteria might include expectations about the commitment of an organization to its obligations, about its competence over time to meet those obligations, about the extent to which it cares about those [with] which it is in that relationship of trust, and about the extent to which those obligations might predictably be expected to be met”. These same criteria are presented as critical by Petts (1993) who sees trust derived from perceptions of “competence and expertise, honesty and openness, and dedication and commitment”. The perception on the part of the public of the extent to which these expectations might be met determines the level of distrust that exists during the consultation. Not surprisingly, much of this determination is made prior to the consultation based on past events in which current actors were a part. “Distrust, once initiated, tends to reinforce and perpetuate distrust,
reinforcing beliefs” (Elahi, 1997). Drawing from the literature, selected significant contributing factors to the level of distrust, as they pertain to this research, include:

- A lack of trust in fragmentary policy and regulatory systems to produce any coordinated and coherent strategies for managing risk (Petts, 1994),
- A lack of trust in different regulatory agencies and plant operators to monitor facilities effectively (Petts, 1994),
- Insufficient impartiality between a regulator and the industry regulated (Elahi, 2000),
- Distrust between supporters and opponents of the proposal (Schively, 2007), and
- Perceived lack of objectivity on the part of the experts in their evaluations of the proposal (Schively, 2007).

Naturally, just as there are factors to generate distrust, there are also methods to counteract it. As counterintuitive as it might seem, the literature suggests that providing more information – a cornerstone of the traditional one-way, purely educational consultation strategy – has done little to achieve acceptance on the part of the local community and may actually “fuel distrust…and further polarise opinions” (Owens, 2008). Information may instead be interpreted – to the detriment of the proposal – based on previously adopted viewpoints that had generated the distrust in the first place.

To promote an increase in the level of trust by the public, assessments of risk should be grounded in science, be transparent, and incorporate public value judgements (Elahi, 2000). In other words, the perceived risk is as valid as the calculated risk. Schively (2007) concurs with the incorporation of sound science
principles and further adds that trust is enhanced by the perception of a fair siting consultation process that is supported by the inclusion of the public’s right to reject the facility. Clearly, this latter requirement has significant implications for the planner since the public is traditionally consulted quite late in the development process when significant resources have already been expended. With the public holding a right to veto a proposal, the wisdom of beginning the dialogue early in the planning stages cannot be overstated. Finally, the credibility and the perceived neutrality of the spokesperson for the proponent can have a profound effect on the level of trust engendered by the process. As asserted by Petts (1994), “perceptions of competence and expertise are largely influenced by…the spokesperson’s merit factors such as track record, experience, presentation skills, education, professional recognition and independence”. Clearly, how the trust is promoted and distrust reduced has implications for every component of the consultation strategy.

3.3 NIMBY Response

A notable form of public reaction to contentious proposals such as LULUs is the NIMBY (Not In My BackYard) response. The literature is extensive on the causes of the NIMBY response and its characteristics, but common among most descriptions are the suggestions that the response is irrational and motivated primarily by self-interest (McAvoy, 1998). The effect is that the NIMBY response is often discounted or neglected entirely. However, there is a risk, often realized, that ‘legitimate’ opposition – or opposition in some way deemed rational – may be inadvertently discredited in the process. There is value therefore in the
attempt to contextualize the opposition commonly identified as the NIMBY response.

As noted previously, the NIMBY response is generally described as “extreme opposition to local projects characterized by: distrust of project sponsors; high concern about project risks; limited information about project siting, risks and benefits; highly emotional responses to the conflict and parochial and localized attitudes toward the problem, which exclude broader implications” (Michaud et al., 2008). This description makes suggestions of irrationality and self-interest on the part of local opponents of the proposed LULU. However, even a response only slightly less intense in each of these characteristics may still be considered legitimate… “opponents are homeowners who are exhibiting a ‘risk-averse strategy’ associated with their inability to ‘insure their major (and often only) asset against devaluation by neighbourhood effects’.” (Schively, 2007). Contrary to traditional definitions, this type of opposition may from a more nuanced understanding be more appropriately be characterized as rational. This is supported by Edelstein (2004), “After years of writing about the psychosocial justifications for NIMBY, I have come to see enlightened opposition as the most rational response possible to waste facility siting, the precise reaction, at least in a democracy, expected of citizens who are vigilant about the quality of their communities”.

The suggestion may be made that opposition on the fringe of the debate, which tends toward the irrational, may facilitate the invocation of the NIMBY term by decision makers who seek to simplify the consultation process through a
marginalization of most or all opposition to the proposal (van der Horst, 2007). This may explain why the NIMBY response had appeared so prominently in the literature on the consultation process. However, the current literature on the NIMBY phenomenon regularly places NIMBY as a minor component of the LULU response, and often suggests abandoning ‘the language of NIMBY’ altogether (Burningham, 2000; Wolsink, 2006; in van der Horst, 2007). This discussion is relevant to my project, which is premised on the idea that local opposition – even strong opposition – can and should once again be considered seriously in the risk assessment for LULU proposals. Marginalization of the public opposition by planners, intentional or otherwise, should no longer be an option within an acceptable risk communication strategy.

3.4 Purpose of the Consultation

Even a cursory review of the literature on risk (perception, communication, management, assessment) reveals myriad suggestions for a proper approach to public consultation. The selection of the consultation strategy to employ depends largely on what the process is intended to accomplish. While this may seem intuitive – even obvious – it is worthwhile to mention as it introduces the idea that there is a decision to be made as to the purpose of the consultation. Much of the literature fails to perform this evaluation based on the assumption that maximum collaboration is the ideal condition of consultations and that the variation is limited to the process of achieving that ideal. By maximum collaboration, it is meant that the public participates as a full partner in the discussion with equal decision-making power to other stakeholders – the developer and decision-
maker not excluded. Even this definition pulls back somewhat from some forms of participation, such as delegated power and citizen control that swing the power balance decidedly to the citizens, described by the New Economics Foundation (1998) as Citizen Power participation. This same publication labels strategies with more neutral power balances tokenism, a clearly negative connotation suggesting deficiency rather than simply another form of consultation. It is worth mentioning that tokenism can be a part of all forms of participation and speaks to the legitimacy and sincerity of the approach rather than the strategy.

3.4.1 Individual Interest versus Societal Benefit

Despite the volume of literature espousing the virtues of maximum citizen control, perhaps the more appropriate consultation design limits the public’s input to the identification and assessment of risk and stops short of conferring decision-making authority to the citizens. While this may be contrary to the trend in popular participation literature, this theory can gain a foothold using a scenario first presented in 1833 by William Forster Lloyd and later entitled The Tragedy of the Commons by Hardin (1968). The logic builds upon the idea that a herdsman faced with the decision of whether or not to add another cow to a common pasture will always choose to add, as a freethinking rational person should. The choice is obvious to him since he gains the full benefit of having an extra cow while accepting only a fraction of the negative effects, which are spread out among all herdsmen using the pasture. Hardin (1968) summarizes...

Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own interest in a
society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.

It is relevant to the current discussion that Hardin presented this scenario as a means of illuminating some challenges with “a class of human problems which can be called ‘no technical solution problems’”. This is refined for the current discussion to mean a class of problems that cannot be solved by technical means alone such as contentious LULU proposals, which contain a strong psychosocial component to the assessment of risk.

The message from the abovementioned scenario that informs this paper is simply that a freethinking rational individual can and should be expected to act in his best interest even when society as a whole suffers because of those actions. This self-interest was far from irrational as NIMBY theory generally claimed. Campbell (1996) takes the argument further suggesting that despite the seemingly apparent dichotomy between the individual and society, the two in fact rely on each other for support of their own needs:

[The] conflict…arises from competing claims on and uses of property…. This growth-equity conflict is further complicated because each side not only resists the other, but also needs the other for its own survival. [It is] a contradictory tendency for a capitalist, democratic society to define property…as a private commodity, but at the same time to rely on government intervention to ensure the beneficial aspects of the same property. …The conflict defines the boundary between private interest and the public good (emphasis added).

This discussion thus sets the theoretical framework for the development of an appropriate public consultation strategy. In other words, in consultations with the public on such contentious issues, opposition should be expected and
planned for as an entirely rational response. Further, despite the regular presence of some irrationality in the public's response, this component is now considered to be a much less significant portion of the opposition than has traditionally been thought. While no one strategy will work for all situations, the theory may point to general guidelines of a consultation strategy that may readily be applied to the majority of consultative approaches. This discussion forms the basis for the proposition that public input ought to be solicited and facilitated preferably as a dialogue but that the input be limited to a risk assessment function and not be expanded to include a decision-making function. Within that assessment role, participants are free to promote their own interests - a rational tendency – ideally in a two-way collaborative environment. By ensuring the ability of the citizens to contribute to the identification of risk as they see it while maintaining the authority of the decision makers to act on society’s behalf, a balance between individual interest and societal benefit may be achieved.

Before leaving this discussion entirely, a note about the consequences of such a condition of the consultation strategy needs to be made. While it is well outside the scope of this research to study the possible outcomes of limiting the empowerment of the people in this way, it is acknowledged that potential for abuse of the decision-making power by leaders is strong. By leaders, I mean not just the elected representatives in government, who are ultimately responsible for such decisions, but also the ‘front line' bureaucrats, the planners, who represent the government and deal directly with the public during the consultation process. Even if such an abuse is never realized, merely the existence of the potential for
such abuse may discourage participation in the consultation process altogether. Again, no suggestions are offered here as to the precise consultation model that might ensure effective citizen participation without total citizen empowerment but certainly trust will be central to the process. By this I mean trust on behalf of the public toward the other actors – bureaucrats, politicians, other stakeholders – as well as the consultation process itself. Increasing the level of trust between actors, more so than the level of citizen power, in all aspects in the consultation is the key ingredient to the success of this participatory process.
4 METHODOLOGY

This analysis was carried out using several methods to gain insight into the public consultation portion of the siting process for a Locally Unwanted Land Use (LULU). These methods included a study of a specific consultation event for a recent LULU project; an extensive review of academic literature relating to the public consultation process; a review of relevant government documentation including reports to the Boards of various municipalities, bylaws, policies and file-specific documents; semi-structured interviews with selected government personnel who have held responsibility for some part of a LULU project that relates to the consultation stage and personal observations made while attending such a consultation.

The case that was selected for this study was the public consultation portion of the siting process for a wood combustion-based district energy utility intended to provide hot water – for domestic hot water as well as space heating – to the newly developed South East False Creek lands upon which the Olympic Village will be built to house Olympic athletes during the Games in 2010. Beyond that, the utility would then continue this service for the residents who will eventually inhabit these lands once the Games are finished and the lands are reconfigured for permanent habitation. This case is of particular interest to me due to my own involvement in the process as a representative of the Regulation & Enforcement Division for Metro Vancouver (formerly the Greater Vancouver
Regional District), the regional government that holds jurisdiction for exterior air quality throughout the region. Public consultation is a requirement for most applications for authorization to emit air contaminants such as those emitted from the district energy facility described above. My role during these events was to answer any questions that would arise from the public participants related specifically to the permitting process. Any questions from the public related to the project itself were addressed by the proponents. As the attendees were almost exclusively focussed on the project itself, I effectively fulfilled an observer role, which resulted in my ability to make note of interesting characteristics of the consultation process during these events. However, research conducted in pursuit of an answer to the guiding questions in this project officially began after these events took place. As a result of my attendance at this particular event, some insight presented in this analysis naturally resulted from personal observation.

Guidance for the analysis of the case study was developed in the form of the following general questions:

- What was the outcome of the consultation?
- What factors contributed to the outcome?
- More specifically, what aspects of the planning and implementation of the project/consultation contributed to the outcome?
- What could be done differently to enhance the chances of a favourable outcome for the next project of this type?
In addressing these questions – even if not answering them entirely – I intend to offer guidance to promote the successful implementation of similarly beneficial public infrastructure in the future.

To inform the analysis, the research involved an extensive review of the literature on the subject of public consultation in the arena of the siting process for contentious facilities or LULUs, in order to draw out the main influences on the response typically exhibited by the public during these processes. These factors were further elucidated and used to help inform the next stages of the project.

To gain some insight into the nature of the current environment within which government-proposed contentious facility siting processes were carried out, I conducted a series of semi-structured interviews with selected government actors in positions of some authority who have played or were currently playing a role in one or more consultations for contentious issues. Interviewees were selected based either on their project management role in the consultation for a specific LULU siting proposal or on their ongoing role as a communications professional working for the organization that had proposed a specific LULU siting. All interviewees work for a government organization at the municipal level within the region.

A total of 6 interviews were completed, significantly fewer than had been planned, due to the challenges of this method. The main obstacle was the nature of the subject itself leading several invitees to refuse to take part, citing risk management as the reason. Several invitees told me that despite
assurances that identifying information would not be included in the paper, the subject matter presented a level of risk that they felt they did not wish to accept. Those who elaborated on their decision not to participate expressed fear that a quote or misquote could have negative consequences originating from either the public or their superiors.

In order to allay this risk, all identifying information – including identities, projects, and organizations – has been omitted or changed where specific reference to a project, person or organization is necessary. This suits the project well since specific information related to the project is not needed for this portion of the analysis.

The interview questionnaire (Appendix A) consisted of 9 questions, some multipart, that were intended to guide the conversation if needed. No interviewee allotted enough time to address all questions on the questionnaire but at least one response was received for every question. In the end, the questions became more than guides for the discussion as all interviewees appeared guarded in their responses leading to relatively discrete answers with minimal elaboration. This likely speaks to the politically risky nature of the subject matter.

Finally, the research involved a review of secondary data consisting of information related to the specific siting proposal for the SEFC facility as well as records pertaining to official policy of the proponent organizations on public consultation requirements for siting proposals. This information is either directly publicly accessible or is available through Freedom of Information (FOI) processes. Of the information that has been acquired through the FOI process of
selected organizations, a significant number of these documents pertain to the public consultation process for the Neighbourhood Energy Utility (NEU) including correspondence and survey responses submitted following the 2 public consultation events held for this project. As indicated earlier, these responses number over 130 and form the basis for an understanding of the public’s response to the consultation. The review of this information is intended to expand the understanding of the details of specific consultation events including the policies, strategies, expectations and outcomes of the process in order to better understand the context and effectiveness of the consultation methods employed by the proponents.
5 THE CASE: SEFC NEIGHBOURHOOD ENERGY UTILITY

The assurance of a district energy solution for the False Creek area may arguably be the announcement by the International Olympic Committee that Vancouver was the successful bidder for the 2010 Winter Olympics. From that point forward, decision makers throughout the Metro Vancouver region set about identifying showcase projects that would reinforce Vancouver’s image of a sustainable city. An obvious location for such a showcase was the proposed site of the athletes’ Olympic Village on the south shore of False Creek in Vancouver (Figure 5-1).

Photo credit: Eagle Eye Flying Camera (from http://vancouver.ca/commsvcs/southeast/)

Figure 5-1: City of Vancouver with SEFC highlighted in red.
The portion of South East False Creek where the Olympic Village and the NEU are located is illustrated in the Official Community Plan below (Figure 5-2).

Several justifications exist for the drive to make SEFC a showcase for sustainability in Vancouver. First, sustainability is a key requirement of the planning process for the City of Vancouver and for the region as a whole. Any new development, particularly one in such a prominent location within the city, would need to be designed with sustainability in mind. Second, the SEFC area is situated near the Vancouver city proper, which is characterized by numerous densely populated neighbourhoods particularly along the shores of False Creek. For this reason, development would need to be pursued with consideration for the health of nearby urban dwellers and the environment as well. Third, this area
is the last significant piece of yet-to-be developed land in the urban core of Vancouver. In essence, it is the last opportunity in the foreseeable future to show what can be achieved with good development when planners put their minds to it.

The biomass-fired NEU was planned as a significant component of the SEFC model sustainable community. As previously described, this technology is well suited to play a key role in the evolution of cities toward the implementation of more environmentally, economically and socially responsible energy sources. Unfortunately, as outlined below, the opportunity to employ biomass combustion as a locally generated sustainable energy source in Vancouver was missed. How this may have come to pass is the substance of the discussion that follows.

5.1 Public Consultation Guidelines, Legislation and the Nature of Consultations at South East False Creek

Based on the interviews conducted during this research, there is inconsistency among the approaches employed to consult with the public on contentious issues. While the limited number of interviews conducted provides only a partial look into the spectrum of consultation methods employed within the Metro Vancouver region, a more extensive survey of decision makers conducted for the Union of BC Municipalities (UBCM) by John Talbot & Associates Inc. (1996) corroborates the findings in this research. In that survey, numerous decision makers from municipalities throughout the Greater Vancouver region and on Vancouver Island were surveyed and revealed that while some methods
were generally common among them, consultation strategies were for the most part not consistent.

Consultations are carried out either as a guideline i.e. a suggested or a recommended strategy, an internal requirement of the proponent organization, or a legislated requirement. Whatever the motivation for the consultation, the strategy for carrying it out seems generally left up to the project manager to determine. However, at least for all the organizations represented by the interviewees approached in this research, particularly controversial issues are regularly referred to the Communications or Public Relations department of each of the organizations.

Most municipal powers within the Metro Vancouver region are enabled by two forms of legislation, the Community Charter and the Local Government Act. However, the City of Vancouver is empowered by the Vancouver Charter, which itself is subject to certain requirements of the other two pieces of legislation neither of which relate to public notification or consultation requirements. The Vancouver Charter sets out requirements for public hearings on the adoption or alteration of Official Community Plans (OCPs). In the case of the SEFC NEU, which was a consultation on a technology choice and not a change to the SEFC OCP, consultation was not legislated by any of these two instruments. In a similar manner, references to public involvement in the Vancouver Charter are

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For all other municipalities within the region, the Community Charter provides guidance on the notification requirements, referring only to the type and area of distribution of newspaper in which to publish the notice, but does not set out any requirements for the consultation process itself. In short, the requirements are limited only to the manner in which the notice is distributed and makes no reference to requirements beyond that. The Local Government Act sets out similar notification requirements for public hearings and also further details requirements for the decision making process post-consultation.
limited to notification and do not incorporate consultation requirements for the kind of contentious facility studied here. However, when the City of Vancouver does opt to conduct consultations, it does so according to guidelines set out in its own internal guiding document, the City of Vancouver Public Process Guide. In it, several methods of consultation are listed – a list from which City project managers may customize a consultation strategy of their choosing.

Aside from considerations within the purview of the City, there is also a provincially mandated environmental component to the public consultation for the SEFC NEU. Specifically, as a result of the air emissions from the biomass combustion facility, the project proponent was required to apply for an air emissions permit from the Greater Vancouver Regional District (now Metro Vancouver), the organization with jurisdiction over exterior air quality throughout the Metro Vancouver region. Metro Vancouver, through the District Director for Air Quality, is authorized to carry out this power by the BC Environmental Management Act (EMA) and is therefore bound by its requirements, which include public notification requirements as set out in the BC Public Notification Regulation (PNR). Metro Vancouver exercises this power through the Greater Vancouver Regional District Air Quality Management Bylaw No. 1082. Similar to the Community Charter and the Local Government Act, the Public Notification Regulation also sets out the required methods for distribution of notices. However, it specifies a minimum posting period of 30 days, twice that of the

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8 Internal document obtained from the City of Vancouver, September 15, 2009.
9 Available at http://www.bclaws.ca/
Community Charter. Finally, the PNR outlines an additional responsibility of the District Director to require enhanced forms of notification – such as public meetings – for permit applications involving potentially contentious or widely-impacting projects. In the case of the SEFC NEU, such a requirement for enhanced notification was set by the District Director. However, once again, as per the PNR no consultation beyond notification and an adequate length of time for receipt of comments from the public was part of that requirement. What is consistent among these pieces of legislation is that the strategy for consultation beyond the notification requirements is not guided by legislation and is therefore variable among proponents for the type of facilities discussed in this research.

One interviewee for this research asserted that consultation is a political requirement while notification is a legislated requirement. While public meetings are often carried out to fulfill both requirements, only the notification portion carries legislated conditions under which it is to be performed. The consultation portion – consisting of such things as working groups, collaborative dialogue, workshops, etc – is carried out to fulfill the needs of the political body that governs the organization in question. For municipalities, the City Council would be this political body. Since these needs are subjective in nature and are defined by the organization itself, strategies vary, according to the interviewees.

Some of the first documents shown to the public presenting the details of the energy facility came out in October of 2005 during that year’s public information sessions (City of Vancouver, 2005). It is notable that wood combustion as an energy source was not an option being considered at that time;
instead only geo-exchange and sewer heat were presented as alternatives to the usual sources, electricity and natural gas. Biomass was first indicated as an alternative along with geo-exchange and sewer heat recovery in February 2006, but only in display materials (City of Vancouver, 2006). None of the three alternatives were offered as complete replacements for heat from grid electricity and natural gas as these latter forms of energy would still be required as backup capacity for peak loads requirements.

While planning for the SEFC site had been ongoing for several years prior to 2006, the public event where biomass was presented as an option for the first time occurred very close to the required start date for construction if the facility were to be ready in time for the Olympics. In other words, it was at a very late stage in the planning process and after several public consultation events that the option of wood combustion as an energy source was raised, as depicted in the following chronology:

- 2005, Oct: Sewer Heat Recovery & Geothermal Exchange options proposed for base load
- 2006, Feb: Sewer Heat Recovery, Geo-exchange & Biomass Combustion options proposed for base load
- 2007, Feb: Air permit application filed
- 2007, Mar: Consultation events; Geo-exchange removed
- 2007, Apr: Air permit application withdrawn
- Early 2007: Construction began

This caused significant consternation for the participants at the 2007 public events who regularly described the biomass option as having been “sprung upon” them. Further, with the removal of the geo-thermal exchange option in 2007, evidence in the submissions suggested that the public felt they
were being cornered into the biomass option. A large amount of correspondence following the event expressed dissatisfaction that there was little time to contemplate the options presented. As a result of the public events being held at the “last possible moment” prior to the required date for construction to begin, no time was left for further dialogue to occur nor were any opportunities planned for this to take place. Clearly, insufficient time had been allotted for an adequate consultation to take place, a point that had not been lost on NEU planners. In a letter written to the Greater Vancouver Regional District following the consultation indicating its intent to withdraw its application for an air permit, the City indicated that, referring to concerns raised during the consultation process, it was believed “that all of the…perceptions and concerns could, with sufficient time and further work, be addressed and resolved to the satisfaction of most stakeholders” 11. This statement suggests that adequate time was indeed a key component missing from what might otherwise have been a successful proposal.

The looming deadline presented by the Olympics had created an environment that presented significant – and arguably overwhelming – challenges to the consultation process. One of the most substantial of those challenges was the very limited timeline available for the consultation, which led to an atmosphere of public distrust towards the proponents. Several responses noted that respondents felt they were being ‘forced’ to accept the biomass option and that the consultation was not about dialogue but rather that biomass had already been selected and the consultation was a formality. This might suggest

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11 Letter from the City of Vancouver to Metro Vancouver Engineering Services dated April 19, 2007.
that gaining the public's support for the biomass option would be a greater trial
now that the environment surrounding that dialogue had been tainted with
distrust.

The February 2006 consultation consisted of 2 events held nearby the
proposed siting options. These events were poster board sessions where the
details on the proposed technologies were presented to attendees along with a
request for comments in the form of either surveys that were distributed at the
events or in whatever other method of correspondence desired. As evidenced by
direct observation, it was clear that the topic was of significant interest to the
public since there were hundreds of attendees present throughout both events12.

Through the Metro Vancouver freedom of information (FOI) process, all
documentation related to the consultation was acquired, including copies of
correspondence to and from the City of Vancouver related to the SEFC
consultation as well as all surveys returned. A requirement of the application
process for a Metro Vancouver air permit is for the applicant to forward all
correspondence related to the public consultation to Metro Vancouver.
Consequently, the SEFC file at Metro Vancouver is considered complete. A
condition of acquiring this information through the FOI process is that all
indentifying personal information be obscured by the Metro Vancouver FOI
Coordinator. Therefore, no individuals are indentified although organizations and
associations remain named.

12 Personal observation obtained through attendance at these events.
In all, correspondence submitted by individuals in response to this proposal consisted of 103 survey responses as well as 33 submissions by email or post. One third of the non-survey responses were submitted as several copies of two separate form letters opposing the biomass option indicating the possible existence of an anti-biomass campaign, possibly led by members of one of the respondent associations. Correspondence was also submitted by organizations and associations including:

- The Chinese Benevolent Association (“the umbrella organization for some eighty-five (85) associations and societies located in the Vancouver Chinatown area.”)
- Vancouver Chinatown Revitalization Committee (“a community coalition of over 20 members with representatives from Chinatown organizations, local professionals, merchants and youth.”)
- Society Promoting Environmental Conservation
- False Creek South Neighbourhood Association
- Citygate Inter-tower Community Group
- Environment Canada
- PCI Developments Corp (a “private developer and landowner with a direct interest in South East False Creek”)
- Strata Corporation – Europa, 63 Keefer
- Polygon Foundry Tower Ltd (a “private developer and landowner in the South East False Creek Area Plan”)
- Southeast False Creek Stewardship Group
- Merrick Architecture
- David Suzuki Foundation

This list represents a wide spectrum of parties with interests in the SEFC development including residential and business interests from all around the eastern end of Southeast False Creek although the north shore seems to be somewhat less represented than the east or south sides.

My review of the submissions revealed the following key categories of concern:
- Risk to human health
- Degradation of the environment
- City’s reputation for sustainability
- Visual impact from the facility and its exhaust stack(s)

Only a couple of responses (both from individuals) mentioned impact on property value as a concern, a frequency of such responses that runs counter to traditional literature on the NIMBY phenomenon, which attributes significant motivation for opposition to opponents’ desire to protect their own property values. Numerous respondents indicated inadequate time for consideration of the proposal as a significant cause for concern with such representative comments as, “due process subverted” and “we need an extension to the time limit you have (very undemocratically) placed to suit yourself” and “want to know why we had little to no notice of this monstrocity [sic]...”. The majority of responses were negative with respect to acceptance of the biomass option with only 3 respondents expressing support for biomass. To be more accurate, negative responses were generally very negative and consisted of such comments as, “ugly, unhealthy…a very regressive step” and “this is an insane idea” and “dumb idea…will make the city a laughing stock”.

5.2 SEFC NEU Geography

As previously indicated in Figure 5-2, the NEU is located at the far southwest corner of the site. To the west is densely populated residential land while to the south and east is mainly commercial/industrial zoning. The site itself is primarily vacant, after a long industrial history.
The proposed siting of the NEU forms the basis for a large part of the opposition to the NEU project. Many of the responses from concerned citizens were from the residents living to the west of the site immediately adjacent the NEU. The main concern raised during the consultation was that the NEU – or more importantly the environmental impact of the NEU – is localized next to the residents while providing no benefit in the form of energy supply services to them. In fact, no services could readily be provided to these residents as the design for distribution of the heat – in the form of hot water – requires that a heat exchanger be installed into any building using this energy supply. This concern was compounded by the fact that in the view of several residents (based on a large amount of correspondence received during the consultation), the facility did not need to be sited at the west end of the site and in fact the more appropriate location for the facility was at the far east end of the site next to a mainly industrial area. In other words, not only did they not see a benefit from the nearby facility but there was not even a compelling argument as to why their sacrifice in terms of siting was needed in the first place. In fact, two locations were proposed for the NEU, the current and final location under the Cambie Street Bridge and another in a former industrial building named the “Sawtooth Building” situated a few blocks the northeast (Figure 5-3). No proposal was made by the planners for an ‘east end’ location.
Some insight into site selection may be gained from a review of the SEFC Water and Waste Management Plan (Keen Engineering Co. Ltd., 2002). While this plan primarily deals with the management of storm water, wastewater and solid waste from the whole of the SEFC site, it does contain some clues as to the reasoning for the selection of the west end of the site for infrastructure-type facilities. Notably, several potential LULU facilities are contemplated in the plan including a sewage treatment plant and a composting facility. It is a reasonable assumption that the site selection criteria for these waste management facilities should also apply to the site selection for the NEU.
In the plan, the ‘preferred location’ for the composting facility was “on the west edge of the site, close to the Cambie Bridge” – the same area as was proposed for the NEU. This location was preferred in the plan since it was “the farthest from any high-density residential areas thereby reducing risks of complaints should any mishaps create a smell problem...”. This suggests that to the possible detriment of residents living to the west of SEFC, siting of contentious facilities, possibly including the NEU, at the west end of SEFC was considered an acceptable means of mitigating impacts from such projects on the mainly residential areas farther to the east of the site. While siting a facility to the far west end of SEFC would separate it from the majority of SEFC area residents by several blocks, it would also place the facility across the street from those living west of the development area. Consideration of the impact from such facilities on residents living adjacent the development seems to have been minimized.

As indicated in Figure 5-3, the preferred location presented for the facility was under the Cambie Street Bridge. Information could not be located that provided insight into the reason(s) for this selection but it turned out during the consultation to have more relevance than simply its proximity to the False Creek South neighbourhood. A review of correspondence received following the public events indicated that many local residents valued the land under the bridge as ideal for the creation of a new park. Again, information on the part of SEFC and/or NEU planners as to the potential for this particular parcel of land was not readily available in the literature. Regardless, a significant number of
respondents perceived that there was a disconnect between the City’s value of the land and their own. It was further suggested in some of the responses as well as at the public meetings themselves, that the City’s apparent devaluation of this parcel of land was indicative of its depreciation of residents’ values in general. This perception of disrespect would likely have contributed significantly to the adversarial nature of the consultation. However, a quick glance at Figure 5-3 reveals a significant amount of parkland planned for the site immediately to the east of the Cambie Bridge. SEFC planners may have considered their existing allotment of parkland to be sufficient for the area. Nevertheless, the fact that the issue was raised by the residents speaks to some amount of miscommunication in the planning and consultation process.

5.3 Technology

Throughout the evolution of the project from the first planning stages through to the consultation stages when options were presented to the public for consideration, a selection of several technologies were proposed as energy sources for the Neighbourhood Energy Utility. As previously noted, biomass was not one of the original technologies proposed, which included geo-thermal heat and sewer heat recovery. Biomass was introduced in 2006 late in the planning stages. Also at that time, geo-thermal had been removed as an option leaving biomass and sewer heat recovery as the only technologies presented. Despite
the fact that both technologies were presented, the preferred option expressed by the City of Vancouver was the biomass option\textsuperscript{13}.

Biomass was preferred by the City because it is a clean, proven option for the supply of energy even in a highly populated area like SEFC. In fact, the proposed emissions control technology to be employed in this facility has been in use for decades throughout the region with several such facilities currently operating in industry to similar conditions specified in the SEFC proposal. Despite this proven track record, a review of the correspondence received by the proponent following the consultation indicated that the proposal was plagued by a substantial amount of misinformation or misrepresentation among residents. For example:

- Several survey responses revealed that the rejection of the proposal was at least partly due to the respondent’s displeasure at having “[w]ood fires [producing] extremely harmful smoke with particulates…” in the heart of the city. As already described, such facilities are not characterized by the appearance of smoke in their emissions.

- The David Suzuki Foundation’s response to the consultation is clearly in favour of the sewer heat recovery option, a point that numerous other respondents invoked in their own justifications for opposition to the biomass facility. However, without diminishing the validity of the Foundation’s concerns, their correspondence related to several issues that the proponents had addressed in the evaluation of the biomass option. While they were indeed valid concerns, they did not support an outright rejection of the technology as other citizen respondents had

\textsuperscript{13} An extensive justification for the preferred use of biomass technology, including a detailed review of air emissions, is outlined in the air permit application submitted to Metro Vancouver by the City of Vancouver.
suggested. These concerns included the following, along with the proponents' responses:

- The cleanliness of the biomass fuel supply and the resultant potential for the release of contaminants in the emissions from the facility. [The proposal had indicated that a clean source of fuel would be secured for the facility.]
- The precedent that might be set in support of operators of other poorly controlled biomass fuelled boilers. [This was a regulatory issue that was being managed in a satisfactory manner at that time and has since been resolved.]
- The negative consequences of large scale biomass fuel harvesting. [Current biomass fuel production originates entirely from wood waste streams from the wood products industry.]
- Additional greenhouse gas release from the transport of biomass fuel to the facility. [This was accounted for in the total emissions estimates during the proposal.]

- Several respondents targeted the unacceptability of odour as their main opposition. Interestingly, odour is not characteristic of wood burning facilities but is very possible as an emission from a sewer heat recovery facility. These emissions could result in livability problems that far outweigh, on a daily basis, any environmental issues that concerned citizens raised about biomass combustion.

Herein we see a disconnect between the merits of the technology and the perception of those same qualities by the public. This disconnect is not unexpected in LULU consultations and would need to be addressed by planning for adequate time to communicate those merits. The fact that the benefits of the technology were not sufficiently communicated, as evidenced above, suggests that insufficient time was allotted for this process to take place.
6 DISCUSSION

From the discussion so far, it is clear that the process of consulting the public when proposing facilities of a contentious nature can be challenging for many reasons. Some challenges are brought to the consultation such as pre-existing trust issues while others are fomented by it. The SEFC NEU consultation featured both types of challenges contributing to the eventual rejection of the proposed biomass combustion technology and hence the loss of an opportunity to employ this beneficial technology. Whatever the nature of the challenge, its impact on the process can be mitigated if an appropriate consultation strategy is developed.

As discussed above, risk is a key consideration for the public during any consultation, contentious or otherwise but the SEFC NEU project was almost completely an exercise in risk management for the public. As outlined earlier, virtually all risk can be considered to be defined by the observer, also known as perceived risk. Even technical risk or empirically evaluated risk is re-evaluated in the mind of the observer thus becoming perceived risk. In these types of cases, the public does not directly question the validity of the figures presented by the proponent but instead questions the validity of the assumptions and conditions under which the analysis is performed to get those figures. For a proposal such as the SEFC NEU, this was the source for a large part of the conflict; the public perceives the potential for risk in every component of the project, which forms the
basis for its part of the dialogue. In contrast, the proponent typically identifies risk only in the technological aspects of the projects, risks that are calculable and well-defined and that are easily addressed and mitigated when considered in this way. Thus, the risk communication that ensues finds little common ground on which to gain traction.

Before looking at the case itself, a general discussion on risk communication is worthwhile. Consultations are opportunities for dialogue and gathering information and/or data on the public's response to a proposal, and I have suggested that they not necessarily be opportunities for or attempts at involving citizens as decision makers. Nevertheless, the communication of risk is crucial to the process primarily to inform the participating public but also to increase the chances that its response be one of acceptance of the proposal – at least after an initial reaction in opposition. I further argue that acceptance should be considered a bonus rather than a requirement. This opinion is based on the tenet that sustainability – or more precisely social sustainability – is about informed collective choice, which suggests the need for opinions to be formed with as much information as possible at hand but that there is no requirement for everyone to accept the project, only the majority. While this idea seems to run contrary to much of the literature on citizen empowerment, it is nonetheless an entirely democratic idea supportive of the concept of citizen participation.

I further suggest that while a key component of social sustainability is social acceptance, this does not necessarily mean acceptance by the public. In this context, it means acceptable for the society in which the project is
introduced. A more appropriate term would be social acceptability. Based on this reasoning, it is acceptable or even advisable that leaders maintain sole responsibility for decisions while ensuring the public’s input is adequately considered. This, I believe, is the true purpose of risk communication processes or consultations – first to inform the public and then to solicit a response to the proposal. Educate then communicate. How well communication is carried out, which is based in large part on how thorough the former is conducted, determines the extent of reciprocity in the consultation.

A more detailed explanation of these types of communications is in order to gain some insight into both the nature of the preferred two-way process as well as the extent to which the actual process followed this approach. By two-way communication, I am referring to an extended, collaborative and iterative process of discovery that takes place virtually from the project’s inception. In this type of communication, consultation with stakeholders would begin early in the project design stage and would continue throughout construction as decisions are needed. This process would be carried out as an ongoing partnership, possibly in the form of a working group, or some other form of collaborative stakeholder group. While there would be several key decisions throughout the planning stages that would benefit from such a collaborative process, the most critical part of the project development that would be informed by this dialogue would likely be the identification of different solutions to the need being contemplated. In this way, all risks – technical and perceived – can be identified early.
In contrast to this idealized approach, the SEFC NEU project consultation followed a design more typical of what I refer to as the one-way educational approach to communication. In this form of consultation, the project is developed to a very late stage in the design process. Then, following an internal solution identification program – including a risk identification process – options are rolled out to the public for consideration and response. In such a process, the public is generally informed of the chosen solution and requested to comment. The public is ‘educated’ on the intended solution to a basic level of understanding and then requested to comment. Drawbacks to this approach include:

- The full list of concerns (risks) are not available for consideration early in the development process and are thus usually not incorporated in the solution being considered during the consultation.
- Since the stakeholders concerns are not fully considered until the consultation process takes place, the ensuing discussion is often difficult and characterized as more argumentative than collaborative.
- Despite the use of the term ‘educational’ in the description of such processes, they can suffer from a lack of knowledge on the part of some or many stakeholders. These forms of consultation usually do not last long enough to allow for an adequate transfer of knowledge to result in an effective education of stakeholders.
- These processes are generally not iterative or are characterized by only a few opportunities for stakeholders to engage the planners. While planners generally accept comments throughout the project design process, stakeholders are generally more prone to comment in response to formalized communication processes such as working groups and public meetings.
- Since systems do not seem to generally be in place to ensure consistency in consultation approaches, there is a risk that merely the
completion of a consultation process, however rudimentary, will be considered to have fulfilled the consultation requirement without actually having discovered and addressed all of the risks associated with the project.

The consultation process that occurred for the SEFC NEU was characteristic of the latter type more so than the former, at least for the post-2005 events. Consultations occurred annually, were limited to poster board sessions (display materials) and provided limited methods for comment in the form of take-away surveys for submission of comments by post. This is not to suggest that this consultation was somehow substandard comparatively – only that is fairly representative of one type of commonly occurring minimalist consultation process employed by some municipal organizations within Metro Vancouver.

While consultations on contentious issues are notable in their own right, a couple of atypical characteristics set the consultation for the SEFC NEU apart even from these. The first is that it was ostensibly intended to present two options for an energy supply on which to base the construction of the energy utility. However, the proponent made clear that the preferred option was the biomass combustion technology. Thus, unlike the traditional model of the ‘accept or reject’ consultation, the NEU ‘biomass consultation’ had a release valve in the form of an alternative option that on the surface appeared to be equivalent or better. It is interesting that the public’s response, rather than being one of consideration for both options, was instead clearly intended to form a strong opposition to biomass as if was indeed the only option. That the need for such
opposition was perceived speaks to some degree to the adverse condition of trust that the public stakeholders had for the proponent during the consultation.

The second characteristic is the influence of the notion of the Olympic Games on the acceptance of the biomass technology for the energy utility. While I present the coming presence of the Olympics in Vancouver as somewhat of a special influence on this consultation, its effect is in fact merely an extreme manifestation of a pre-existing and powerful sense of pride in this city by the residents within it. This is very evident in many anti-biomass survey responses such as, “inappropriate perception for Canada’s most sustainable city” and “…an eyesore to this beautiful downtown core” and “…an ugly pulp mill ruining our beautiful skyline” and “World-class city image further tainted”. Quite apart from the typical issues that characterize such consultations, numerous survey respondents noted that some part of their opinion, whether in favour of biomass or otherwise, was based in the idea that when the world turned its eyes toward Vancouver in 2010, it had better see a model sustainable city. Thus, the SEFC dialogue was supercharged with an emotional component even further beyond what could be expected of such consultations. As a result, it was additionally distinguished by a much narrower margin of error than usual, even for a city like Vancouver whose citizens continue to pursue the ideal city, even if only as a vision. The effect is that those who were opposed to the technology, were very opposed as evidenced by the choice of extreme negative terms in anti-biomass responses such as “outrageous” and disgraceful” and “insane”. It is interesting to note that those who were supportive of biomass simply added the proposed
technology to the list of acceptable solutions and hence carried a less vocal message. This was well illustrated in the collection of pro-biomass survey responses where respondents who supported biomass combustion also supported sewer heat recovery but none expressed emphatic support for the biomass option alone. Examples of pro-biomass comments include, “the more we can use sustainable building heating and hot water the better” and “Supportive – if as clean as stated and aesthetics pleasing”. This is in sharp contrast to responses expressing emphatic opposition to the biomass option solely. This presented challenges to a determination of the level of support for the biomass option – as opposed to the sewer heat recovery – both for this research project and presumably for the proponent as well.

The conflict that characterized the SEFC NEU consultation was the result of the public’s identification of several potentials for risk in the project. As already surmised, some of this perception came to the table as a legacy of previous contacts between the public and the local government and some was fostered by the process. An evaluation of both types can help to expose the causes of and hopefully the solutions to the controversy. To do this, Snary (2004) presents a list suggested by Slovic et al. (1985) of several grounds for the perception of unacceptable risk that provides a framework for this portion of the discussion. These grounds are herein translated to encompass the following categories for the perception of unacceptable risk:

Control: The most obvious basis for the perception of unacceptable risk one could perceive in this category is the fact that the process being
proposed is not personally controllable. Once the facility is in place, there is no action that a member of the public can take, short of moving completely from area, that can mitigate the risk to that individual from that process. In the case of the SEFC NEU, this concern was compounded by the fact that the City of Vancouver was the proponent (and owner of the facility), which may support the perception that the public’s only institution to which an appeal could be made (of the future operation of the facility, for example) is no longer available to them or working in the best interest of the public.

Uncertainty: The proposed process is unfamiliar to the public. In this case, while the basic process was based on a familiar concept – the combustion of wood – the larger scale at which it was proposed injected uncertainty as to the effect of the process on the neighbourhood. Beyond this however was the doubt leading to insecurity caused by a lack of knowledge of the technology by which the process was to be carried out. In this case, the boiler technology was unfamiliar, but more crucially the control technology was an unknown. This was the key point in this category; one of the main bases for the proponent’s argument that the process was benign was also one of the most unfamiliar components of the proposal. As little emphasis was placed on educating the public on the operation of the equipment, the ‘clean emissions’ message was required to some extent to be taken on faith, something that can be hard to promote in such consultation processes.
Media attention: The SEFC NEU consultation was characterised by considerable local media attention. More accurately, the project was often portrayed negatively as much of the messaging in the media was in the form of letters to the editor or as interviews with area residents. It was significant to the outcome that only a few names appeared prominently and regularly in the media, names of residents claiming to live in the residential area immediately to the west of the proposed location for the facility. The messaging of these residents was strongly in opposition and so the general media messaging appeared strongly in opposition. Perhaps not coincidently, many – even most – of the survey responses offered much the same reasoning for opposing the project as had appeared in most of the media prior to the public meetings themselves. These responses also correlate well with the messages contained in the ‘form letter’ responses described earlier. Conversely, the proponent’s message was less conspicuous, indeed almost absent, in the media and was therefore overpowered. This may be symptomatic of the general avoidance of the media by public proponents beyond the need to notify the public of the proposal as well as any upcoming consultation events. It is notable that ‘newspaper articles’ appears on a long list of communication methods in the City of Vancouver’s Public Process Guide. However, while that guide provides extensive guidance on possible techniques and considerations for a public consultation process, there
seem to be no requirements to use any of them specifically and instead leaves the individual strategies up to the project managers themselves.

**Risk/reward:** As discussed earlier, the SEFC area intended to be served by the proposed energy facility is a former industrial area and was uninhabited at the time of the consultation. Therefore, neither support nor opposition was to be garnered from that area. The main neighbourhood impacted by the proposal was the residential area to the west of the facility – a neighbourhood that would not be served by the facility. Thus, this neighbourhood was essentially being asked to shoulder the brunt of the risk from the project but without the benefit of the energy it was to produce. That this particular group of people was opposed to the facility should not have come as a surprise to an observer of the consultation process. Even the “benefit to society” basis for requesting their support was inappropriate for this proposal in that the main environmental benefit of the facility was ‘carbon neutrality’ characteristic of wood combustion, which is more a global benefit rather than a local one. To ask one neighbourhood specifically to accept more of the risk so that the city and the region could benefit by reputation would seem to be a tall order.

**Health:** Risks associated with potential health impacts by the facility appear most prominently in the documentation. Generally, these impacts are articulated as risks to respiratory health i.e. risk of getting asthma or aggravating an existing asthmatic condition. This is not surprising given the public’s experience with wood combustion being virtually exclusive to
campfires or home fireplaces, neither of which presents a particularly clean vision of combustion processes. The other prominent health risk perceived by the public as expressed in the documentation is that resulting from the emission of dioxins. Cancer is the most feared potential deleterious effect of exposure to these substances even if non-cancerous afflictions that impair lung function are more likely to result from exposure. Its mere mention significantly restricts the margin for error in the collective mind of the public and maximizes the onus on the proponent to manage such risks in the project. More importantly, it further maximizes the onus on the proponent to communicate those risks and the measures that will be taken to minimize them.

Beyond these project-related perspectives of risk, Snary further suggests a process-related perspective for the perception of risk. The essence of this part of his theory is that people perceive risk based in part on cultural commonalities and can thus be grouped on that basis. He further suggests that these groups can be separated into two value-based typologies – egalitarian and individualist. Detailed discussion on these typologies will be left for further research. The key point in raising them is to suggest that whether opposition is based on cultural and/or value based typologies, it would be too onerous, if not impossible, for a decision maker to prioritize such viewpoints in order to weight their validity and hence their value to the process. Instead, Snary suggests these views are best normalized by way of procedural fairness.
In general, the SEFC NEU proposal was characteristically fair in that it was representative and inclusive. Documentation indicated that comments were successfully solicited from several stakeholders including nearby residents, the public at large, other public institutions and advocacy groups such as the David Suzuki Foundation. However, one aspect as previously discussed was the timing of the wood combustion option for the NEU. While consultations had begun on the NEU years in advance of the final meetings, the wood option was proposed for the first time at the final consultation meetings before the schedule would force the decision to be made as to which technology would be used to produce energy at the facility. A review of City of Vancouver documentation failed to reveal the reason for the delay in notification on the wood combustion option. That little time was allowed for a thorough evaluation of that option was a common complaint by those who submitted survey responses following the meetings. More significantly, this was perceived as a wholly unfair condition of the process given that the City was also a direct stakeholder in the process and appeared in favour of the wood combustion option over sewer heat recovery. This appearance was evident both in the fact that the City had filed an application for an air quality permit with Metro Vancouver for the wood combustion option and in the language contained in its outreach correspondence:

The City is currently seeking public input in support of an emissions permit application for the use of wood pellet biomass energy. While the permittability of this technology is being assessed, the City is also evaluating the technical viability of the sewer heat recovery option. The SEFC project will benefit from either heat source option. Both biomass and sewer heat recovery would minimize greenhouse gas emissions. Both are innovative technologies that would support the SEFC goals of establishing a model sustainable
community. However, at this time sewer heat recovery has not yet proven to be a technically viable option.\textsuperscript{14}

It appeared that the City was given an advantage in support of its selection of the biomass option by virtue of the lack of time other stakeholders were given to comment on its proposal. The resulting suspicion on the part of the public arising from the late notice not only influenced the appearance of fairness in the process but also had a dramatic and arguably irreparable negative impact on the trust that might have existed, whatever the level, between the City and the public.

While information was scarce on the reason for the late addition of biomass to the energy supply options for the NEU, some inferences can be made from the information available. It was clear from the documentation that the ability to employ the sewer heat recovery option was in doubt. It is not surprising then that with an approaching deadline for the beginning of construction, another more readily achievable option was required. However, it is not clear why the geothermal option was no longer offered in the public presentation documents released in March, 2006. No information was found in the documentation to provide insight into this question but it is assumed that some technical or financial constraint was the cause. Regardless, by early 2007, biomass combustion was the frontrunner for the energy supply technology for this project. I contend that had the technology been received well by the public at that time, it would have been in place for the NEU in its final design.

\textsuperscript{14} City of Vancouver False Creek neighbourhood Energy Utility Energy Options FAQ: Sewer Heat vs. Biomass Comparison, March 2007 Update.
Regardless, it is a reasonable conclusion that the biomass option was the preferred option at the time despite its appearance as a contingency plan. It is obvious from the presentation documents throughout 2006 and 2007 that the proponent was not ready to drop the sewer heat recovery option entirely. Thus, there is some doubt as to the actual intention of the proponent in terms of which technology was ultimately their preferred option barring any of the constraints existing at the time. Despite this, it is clear from the response to the consultation that the intentions of the proponent were unclear resulting in confusion and ultimately distrust on the part of the public toward the proponent. Much of this confusion could have been avoided had all of the possible technologies been brought forward from the very beginning of the consultation process, which began as far back as 2005 or possibly earlier. While it is often challenging to determine all of the needs of a project from the start of the planning process, certainly biomass would have been one of the first options considered since it has been in use successfully in so many other applications for so long. Not only is the introduction of all options at the earliest possible moment in the planning process an imperative but as well, performing a concurrent consultation would be required in order to keep the stakeholders informed of all issues that might affect their perception of risk from the project development process.

Finally, Snary offers the *institution-related perspective of risk* as a contributing factor in that public’s response to the proposal. This perspective is essentially grounded in the trust that the public has in the institutions that govern the processes surrounding such proposals. As just presented, public trust was
compromised by a consultation on the wood combustion option that was considered too rapid for sufficient analysis by the other stakeholders in the consultation. This effect was specific to this consultation and was a consequence of the compressed timelines that were forced by the rigidity of the Olympic Games schedule. However, a common trust issue that characterizes most – I might argue all – consultations is the lack of trust in the proponent to provide unbiased information to the stakeholders. Even in its most scrupulous form, information can be biased by the value-based assumptions that are made in the process of acquiring it. This is often the main basis for opposition even in the face of the most rigorous of empirical risk analysis. The solutions are only as dependable as the assumptions upon which they are based. This phenomenon is not isolated to the proponent itself but is extended to any ‘experts’ that the proponent consults or otherwise presents for corroboration of its assurances. One method to counteract this tendency to disregard technical information would be to invite a neutral third party to take part in the planning process from the beginning so that the public can have faith in the proponent’s message indirectly through the third party. To instil greater trust in the process on the part of the public, this method could be expanded to involve a third party that has the appearance, if not actually in substance, of acting for the benefit of the public. An example in the case of the SEFC NEU would be an organization like the David Suzuki Foundation, the opinions of which were invoked numerous times in submitted surveys as a credible, knowledgeable third party acting on the public’s and the environment’s behalf. Had such an organization been involved from the
very beginning of the planning process, whatever concerns the Foundation had
could have been addressed – to the extent possible at least – prior to the
consultations taking place rather than during. The third party messaging then
could have been one of support and encouragement rather than one of
apprehension and concern.

As a final point of discussion, I wish to propose some selected guidelines
that might be employed to minimize some risk, or at least the perception of risk,
during a public consultation process. These are proposed to be in addition to a
sound consultation strategy and include:

- Timing…early and often: Identify the stakeholders early on in the planning
  process. In this way, the full spectrum of perceived risk can be exposed
  early and addressed throughout the development of the project. Another
  consultation midway and later on in the process would be advisable.
  Opposition can still occur at the later stages if risks have not been
  mitigated, in the opinions of the stakeholders (Jones, 1994). Stakeholders
  should be continually connected to the planning process and should be
  influential at several points in the timeline of the development. Finally,
  leave sufficient time for each stage to complete.

- Translation: A key to effective dialogue is to ensure that the language of
  science and technology is properly translated for the public. In fact,
  translation is a prerequisite to education and is needed to ensure that
  everyone understands the language of the proposal (Campbell, 1996).
  This speaks as well to the idea that the true nature of the biomass option
  was lost on much of the public who were asked to evaluate the technology
  without understanding the language. The process is ill served by
  assuming that the public cannot understand. In fact, from the survey
responses received during the SEFC NEU process, there was a significant technologically savvy component of that collection of stakeholders.

- Two-way dialogue versus one-way education with solicitations for input: Typical consultation involves public meeting to educate the public on what the facility is followed by distribution of survey leaflets to solicit feedback. While education is a valuable approach, it is only one component of a collaborative process of exposing the nature of risks associated with the project as perceived by stakeholders instead of as defined by planners. In this way, planners can internalize the externalities i.e. learn from stakeholders what the risks are that the planner cannot know (the perceived risks not just the technical).

- Wide distribution of information: Seek out and include as many stakeholders as possible. The public will get the information eventually so a proponent should be sure that some of it accurately reflects its position. The alternative is that the message will likely be distorted by the viewpoint of the messenger. As noted earlier, a proponent would be well served by taking advantage of the media to distribute its message alongside that of its opponents.

- Involve a neutral or public-centric third party: Involve experts who are perceived to be acting on behalf of the public’s interest. Involve them early and effectively so that their concerns can be addressed. In so doing, the dialogue stands a better chance of standing on a firmer foundation of trust between the proponent and the public. In this way, the threshold for acceptance that must be overcome is lowered and the process becomes more efficient.

Finally, these guidelines should be formalized in a strategy that helps to ensure a minimum level of efficacy in the consultation. This is not to suggest that every aspect of the consultation be outlined in such detail that the process cannot maintain the resilience needed to manage the uniqueness of each
dialogue. Instead, certain basic characteristics, including but not limited to those listed above, should be designed into the consultation strategy to serve as general guidelines to help maintain a responsive communication around such complex issues. With such a plan in place, variations in planners’ desire and ability to ensure an effective communication can be normalized.
7 CONCLUSION

The Southeast False Creek Neighbourhood Energy Utility proposal presented several challenges to the adoption of the wood combustion option for that facility. Some challenges resulted from characteristics embedded in the proposal itself such as 'risk-enhancing' siting of the facility and a time constrained schedule for all parts of the planning and construction phases of the process. Other challenges resulted from deficiencies or inefficiencies in the consultation process itself including, again, timing of certain steps in the process as well as a lack of success in adequately identifying and incorporating risk as perceived by the public in addition to the commonly considered technological or empirically evaluated risk. In the end, it was found that a better designed and executed consultation process would likely have mitigated much of the public's concern not just the with the consultation process but also with the project itself.
WORKS CITED


Environment Canada website re Kyoto targets = http://www.ec.gc.ca/doc/media/m_123/c4_eng.html


