FRAMING ENERGY AND FOREST POLICY:
A CONTENT ANALYSIS OF BIOENERGY IN THE VANCOUVER SUN

by

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ABSTRACT

Burning wood from the province’s forests to produce energy is a growing industry in British Columbia and a fundamental part of the Liberal government’s energy and forest plans. In 2007, the province set new environmental targets and developed new energy policy that highlighted the need for bioenergy in the province. As a result, the 2008 BC Bioenergy Strategy mandated a two part “Bioenergy Call for Power” by BC Hydro, ten new community biomass based energy projects and a $25 million investment into the new Bioenergy Network. As with any topic, the news media can affect its audience’s perspectives and attitudes towards an issue. This study explored the possibility that the news media has been framing wood bioenergy as a solution to the mountain pine beetle epidemic and as a carbon-neutral energy. A keyword search was done to collect articles from The Vancouver Sun, the largest provincial daily newspaper in British Columbia, starting in 2001, when the Liberal government took power in the province. A content analysis was performed on the articles to assess the themes and information conveyed about bioenergy. The study found that prior to 2007, the articles were less likely to suggest bioenergy could make use of mountain pine beetle-killed trees and were less likely to describe it as a carbon-neutral and renewable energy source. The change since 2007 indicates that the issue is being framed as a solution to the province’s problems in the forest and energy industries.
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INTRODUCTION

In 2008, the British Columbia government released the BC Bionergy Strategy. This strategy committed the government to putting $25 million towards establishing a provincial Bioenergy Network that would invest in new bioenergy projects and technologies. It also mandated a BC Hydro two-part call for bioenergy power, and called for the development of ten community energy projects to be fired by biomass by 2020.

This strategy was developed as an offshoot of the BC Energy Plan which was developed by the Liberal government in 2007, and which sets strong environmental targets in an effort to fight the effects of climate change. The province’s goal was to reduce greenhouse gas emissions 33% below 2007 levels by the year 2020. It also planned to ensure that all new electricity generation projects would produce no greenhouse gas emissions, that the province would become energy self-sufficient by 2016, and that it would continue to produce 90% of its electricity through clean and renewable methods. The plan called for the development of the BC Bioenergy Strategy to: “take advantage of B.C.’s abundant sources of renewable energy, such as beetle-killed timber, wood wastes and agricultural residues.” (BC Ministry of Energy, Mines and Petroleum Resources BC energy plan outlines vision 2).

Using wood fiber to produce energy was not a new concept for the province. For years, many of the province’s pulp mills had burned mill residues, or waste, to power their facilities (BC Ministry of Energy, Mines and Petroleum Resources The BC energy plan 2). What changed was the idea that this technology could be used to provide power for other energy consumers. A facility could generate power, and BC Hydro would sell that power to customers around the province.
Wood bioenergy combines two resource based industries in the province: the forest industry and the energy industry. Together, the two industries contribute about 12% to the province’s gross domestic product (Hoberg 332). The nature of the industries and their role within the province has been changing in recent years. The forest industry has experienced a sharp decline in revenues because of the economic downturn in the United States and a precipitous drop in housing starts and lumber demand. In addition, the forest industry has dealt with the outbreak of the mountain pine beetle epidemic (Hoberg 339). Since the 1980s, the energy industry has been moving towards privatization and deregulation, and premier Gordon Campbell and his Liberal government have been even more aggressive with this trend (Hoberg 347). Since 2002, the construction and operation of new energy projects has been handled by independent power producers and without BC Hydro, the provincial crown corporation (331).

Forest industry in British Columbia

British Columbia’s forest industry contributes about 7% to the province’s gross domestic product each year (Hoberg 332) making it a major contributor to provincial revenues. The industry has experienced turmoil for years, but in 2007, the economic downturn began to be felt in the forest industry, and it suffered badly (Hoberg 340). British Columbia’s forest industry is largely dependent on the U.S. market - wood products are exported to the United States and used in residential construction. In 2007, the American housing market collapsed, and the demand for wood products plummeted. At the time, the Canadian dollar had risen compared to the U.S. dollar, making Canadian lumber products even less attractive to potential buyers. In addition to other market factors, the price of lumber dropped, meaning little revenue was made from the lumber that did sell (Hoberg 341).

In 2006, Canada capitulated to the United States and established the Softwood Lumber
Agreement Between the Government of Canada and the Government of the United States of America. This agreement included a condition where taxes to export wood products to the United States would increase as the amount of wood exported decreased (Parfitt Softwood 6). The agreement also removed the policy of appurtenancy -- where companies that were given the right to cut down publicly owned trees in British Columbia had to support local sawmills by processing the wood in that region (Parfitt Softwood 3). Further change to the industry came with the introduction of a market-based pricing system for wood -- a Liberal campaign promise and an essential step toward establishing the agreement (Parfitt Softwood 9). This new trade agreement with the United States compounded the impact of the market collapse for the forest industry. Between 2007 and 2008, 20,000 forestry workers lost their jobs -- sawmill workers were affected particularly badly (Hoberg 332).

The decline in the forest industry has had major implications for forest practices. The Canadian Centre for Policy Alternatives published a report examining the amount of usable wood being cut down and wasted at logging sites across British Columbia. It was reported that 17.5 million cubic metres of usable wood was left behind between 2004 and 2008 (Parfitt Shortchanged 1). The carbon content in this wood stream is equivalent to about 3.23 million tonnes, which if totally released to the atmosphere would add another 5% to British Columbia’s total carbon emissions (Parfitt Shortchanged 1).

In conjunction with the economic crisis, British Columbia is experiencing an environmental crisis. The mountain pine beetle is expected to kill 80% of the province’s merchantable pine by 2013 (BC Ministry of Forest and Range 2). As of fall 2009, roughly 620 million cubic meters of timbre, about 45% of the pine, had been killed (Hamilton). Once killed this pine has a shelf-life, or a period of time the wood is still commercially valuable. The minimum shelf-life predicted for beetle-killed wood is five years, the maximum is twenty years,
but generally the trees are thought to be commercially valuable for up to twelve years (BC Ministry of Forest and Range 11).

The forest industry in British Columbia is at a critical point (Forest Products Association of Canada 1). After a sharp decline in the industry as a result of the economic downturn, stakeholders are struggling to find new uses for the forests. At the same time, the climate change crisis is pushing citizens and governments to reduce greenhouse gas emissions. Historically, the province has taken resources out of the forests to sell as wood products. Now there is a movement to find ways to use the economic value of the carbon stored in trees and reduce the environmental impact of forestry practices. The provincial government has endorsed the idea of using wood to produce a clean energy: bioenergy.

**Bioenergy in British Columbia**

The targets set by the provincial government maintains that its energy plan can be partially fulfilled using bioenergy technologies. This study explores the technology that burns wood to produce electricity and heat; other forms of bioenergy such as wind, solar, tidal, etc. are not dealt with in this report. Wood bioenergy is an interesting subject because it has the potential to provide growth for the forest industry -- an industry that is currently in decline.

Since the BC Energy Plan was announced in 2007, BC Hydro has awarded four wood bioenergy contracts to generate 500 gigawatt hours of energy in 2008 - roughly the energy consumed by 50,000 households annually. In 2010, the provincial crown corporation wants to secure contracts that will supply an additional 1,000 gigawatt hours of electricity (Parfitt Managing 18).
**Bioenergy concerns**

Different groups involved in the forest industry foresee a growing bioenergy industry affecting them in different ways. The pulp and paper industry is concerned about the use of mill residues, meaning the waste created from processing wood -- sawdust, chips and shavings -- for bioenergy. The pulp and paper industry has been using these materials to make a product for decades. It is worried that increasing the number of bioenergy facilities will drive up the price of these materials, making the pulp and paper industry no longer economically viable (Parfitt Managing 18).

The use of logging residues, the waste created from harvesting trees, and pine beetle-killed trees for bioenergy is part of the BC Bioenergy Strategy (6). Some researchers and environmentalists worry about the ecological impact of removing this material from the forests in addition to the normal wood harvest. This group insists this wood is needed to help forests re-grow after being harvested (Chapman).

There also are concerns about the cost of salvaging bioenergy wood from mountain pine beetle-killed trees and the waste logs that Parfitt researched (Shortchanged). The cost of taking this wood out of the forest and transporting it to a facility may only be economically viable if the facility is a short distance from the wood source. The price consumers pay for electricity is so low that power producers want a guarantee that it would still be economically beneficial (Clarke). This technology also becomes less environmentally friendly, the further the wood is transported because of the greenhouse gases produced in transportation (Parfitt Managing 23).

If a company pursues a bioenergy project there is the need to have a constant supply of fuel or wood. The industry is looking for a guarantee that it will continue to have access to the province’s publicly owned trees in the long term -- after the pine beetle-killed wood has been used and logging residues are not as readily available. This is a concern from an
environmentalist perspective; environmentalists want to preserve the forests, meanwhile companies that traditionally harvest the forest also need access to these trees (Parfitt Managing 24).

British Columbia has an abundance of trees, making wood bioenergy a seemingly obvious choice for “green” energy production in the province. Furthermore, forests re-grow making bioenergy a renewable form of energy. But, once planted, trees must stay standing long enough to provide enough ecological benefits to be considered a renewable resource. These benefits include carbon storage which generally increases as trees get older (Parfitt Managing 29).

Wood bioenergy is often said to be carbon neutral. The reason for this being that the carbon released by burning wood is absorbed by living trees. Parfitt has found that this is not necessarily true. When trees are cut down and turned into wood products, they continue to store carbon. But when trees are burned to produce energy, that carbon is immediately released into the atmosphere. Furthermore, if the wood residues are left in the forest after harvesting, carbon is released as the wood decomposes but it is released slowly over time and some of the carbon remains tied up in nature without being released (Managaing 22).

*The Vancouver Sun*, the largest circulating province-wide daily newspaper in British Columbia, has both energy and forest beat reporters, indicating the importance of these two industries to the province. How this newspaper presents wood bioenergy is important because of the government’s movement toward investing money and resources in to developing bioenergy projects.
The news media

This study shows that *The Vancouver Sun* has been following the growth of the bioenergy industry in British Columbia. The public relies on the news media to learn about issues and events (Lippman 22), thus it is important to study how ideas are presented. This paper explores how *The Vancouver Sun* has presented wood bioenergy to the public and how this has changed over time. This paper goes on to suggest how this can affect the public’s understanding of a subject and the public’s beliefs and feelings toward it.

Nuclear energy

Nuclear energy provides an example of where the news media focused on certain aspects of a new technology, only to drastically change how it was represented twenty years later (Palfreman, 2006). In the 1950s, nuclear energy became a source of electricity and two vastly different view points existed about the industry. As an energy source, nuclear energy can provide a plentiful supply of energy, but nuclear physics can also be used to make weapons. Palfreman (25) says both of these viewpoints were well known in the 1950s but most of the media coverage about nuclear energy was positive or neutral. In 1966, there was a meltdown at a nuclear reactor near Detroit. It was a serious accident, but one the press didn’t explore. During the 1973 oil crisis, many stories focused on the energy generating potential of nuclear physics (Palfreman 25).

By the mid 1970s, nuclear energy was being presented differently - the negative aspects were presented in the news coverage. The news media started presenting the views of physicists opposed to nuclear energy and protesters as well as the dangers of nuclear physics - explosions and radiation (Palfreman 26).

Nuclear energy illustrates how a story can be framed and how those frames may
transform over time. As the technology was emerging, nuclear energy was framed as a solution to an energy crisis. Within a couple of decades the frames changed, and the news was dominated by the dangers of nuclear physics. Certain actors gained support and became more vocal. Images of the destruction caused by nuclear weapons became prominent and there were accidents at nuclear power plants to act as focusing events. This frame transformation is not unique to nuclear energy. Using corn to produce ethanol and making a biofuel or bioediesel was a popular idea, a supposedly green technology. Recently, the media coverage of the use of corn to produce fuel has changed to discuss the issues of an emerging food crisis and using agricultural land to produce a fuel.

There are multiple actors who have a stake in the growing bioenergy industry in British Columbia and each has a different perspective on the issue. This content analysis should provide insight into whose perspective is being used as a frame for the news on bioenergy and if this frame has changed throughout the Liberal government’s leadership.

Wood bioenergy is being framed in two ways. One - wood bioenergy is the solution to the mountain pine beetle epidemic. Two - wood bioenergy is a green energy that is carbon neutral. To examine this hypothesis, this study asked the following questions:

Were the following terms used:
“carbon neutral” or a derivate such as “greenhouse gas neutral”
“green energy”
“renewable”
“mountain pine beetle” or “pine beetle” or “mountain pine beetle-killed timber”

Does the article discuss how bioenergy works?
Does the article discuss wood bioenergy in the future?
Does the article address reforestation/rehabilitation?
Does the article address carbon balance?
LITERATURE

The function of news

One of the longstanding ideas about the role of the news media is that it defends the principles of democracy. Walter Lippmann wrote that journalists were responsible for conveying news and information to the public. Journalists act as the link between the policymakers and the public. The news is a particularly important source of political information for the public (Iyengar *Responsible* 8).

The public turns to the news for information, and Lippmann believed that news forms public opinion (22). Lippmann was quick to explain that this doesn’t mean the public is getting pure information. The journalist does not witness the news; reporters depend on sources to act as witnesses. News is second hand and is not an exact account; it is a representation of the story. This means that public opinion isn’t formed by events but by how those events are told. Lippmann draws on Plato’s philosophies and explains that the news media puts pictures in our heads and those pictures give us impressions of our external world. The public responds to those impressions, or pseudo-environments, not the real environment. This means news acts by instructing public opinion (Lippmann 12).

News effects

One of the ideals of journalism is that news should be presented in an objective way. The method used to produce journalism should be transparent and the journalist should try to get the best information available (Kovach and Rosentiel 81-110). News that is truthful and objective helps establish trust between the media and the public, the people the news media try to serve (Kovach and Rosentiel 52-3). Despite news media’s efforts to be objective, it still has the power
to influence its audience. There are three well established news media effects: agenda setting, priming and framing. Maxwell McCombs, a prominent agenda-setting theorist, has also written about how agenda setting and framing can work together. Other effects have been discussed throughout the literature including the news media as informers, persuaders and the so called "bandwagon effect" that refers to political campaigns. This study focused on the idea of framing and details about the other effects are not included in this report. A brief description of agenda-setting and priming is included below to help demonstrate how the framing effect is different.

McCombs first found evidence of the agenda-setting effect in the 1968 presidential election (McCombs and Shaw 177). He found an almost perfect correlation in rank order between the issues that voters felt were most important during the election and the amount of news coverage those issues received. Agenda setting suggests that news media tell the audience what issues are important by focusing on those issues in their coverage. Essentially, the volume of coverage is what matters - news coverage affects the salience of an issue on the agenda (McCombs and Shaw 186). With extensive news coverage of an issue, the audience believes it has more importance nationally (Iyengar Responsible 133).

Priming, like agenda setting, has to do with the extent of news coverage. The difference is that it specifically influences an audience’s political judgments. Iyengar explains that news coverage affects the criteria used to evaluate political leaders (Responsible 133). The best way to understand priming is with an example. In the 1992 presidential election, the media focused on the economy in their coverage, and president George Bush lost the election to Bill Clinton. When asked, most voters said the state of the economy was the reason that they voted against Bush (Miller and Krosnick 265). The authours suggest that if the media had focused on the triumph of the Gulf War, the outcome of the election may have been different.
**Framing**

Framing as an effect of news media will be discussed to a greater extent because of its importance to this study. Framing is discussed throughout social science literature and can be found in psychology, sociology, public opinion and political research. Framing relates to the idea of how an issue is presented, which aspects of the issue are highlighted and in what context.

Todd Gitlin wrote about framing in the context of how the media portrayed Students for a Democratic Society (SDS) - the group that organized the first national demonstration against the Vietnam war in 1965 and that Gitlin was once president of. Gitlin says framing is a way of seeing an event: “Journalism’s more regular approach is to process social opposition, to control its image and to diffuse it at the same time, to absorb what can be absorbed into the dominant structure of definitions and images and to push the rest to the margins of social life” (5). Iyengar (Overview 214) explains framing as “a more subtle form of media influence, associated not with the amount of news but the manner of presentation.”

To Gitlin, frames are about selection and this selection works in various places. He says frames help journalists do their job in reporting the news, and help news consumers understand the news (Gitlin 98). This means a journalist will take an issue and package it a certain way. In the news media, journalists construct a frame based on ideology, attitudes and professional norms (Scheufele 109). Gitlin (100) says this often happens because of the time constraints put on journalists and because of pack-journalism where journalists from different organizations follow the same angle of a story. Scheufele (115) says the medium where the news is published also influences the frame through its political orientation and organizational routines. Scheufele (115) argues that external sources of information, especially stakeholders and actors, are the third influence on the frame -- this is described in more detail below. It has also been reported that a frame is what makes an issue interesting; it defines the story (Reese 13).
Agenda setting built on Lippmann’s ideas of the images in our heads by explaining why reporters and audiences think about those images. Framing goes beyond Lippmann’s ideas of how personal perceptions are used to process the news media (Entman 52). Agenda setting makes an issue more salient. Framing selects certain parts of the issue to become more salient. This puts the issue in context by explaining what the problem is, what caused the problem, how to judge its effects and how it should be evaluated or fixed (Entman 52). It also means that part of the picture is left out. Iyengar (Responsible 11) argues that the framing of an issue is a “contextual cue” and that these cues influence opinions and decisions. He distinguishes between the two parts of this process; framing is different from a framing effect. Framing explains how an issue is presented, and the effect is how this changes a decision or opinions (Responsible 11). Iyengar stresses that this power to influence is not limited to naive or ignorant audiences - news directly affects public opinion of everyone (Responsible 130).

Iyengar (Responsible 14) breaks up news frames into two categories: episodic news frames and thematic news frames. Episodic frames discuss an issue in the context of an event -- it's an illustration of the subject. Episodic framing results in making the acts or characteristics of individuals more accessible (Iyengar Responsible 14). Thematic framing discusses an issue within a broader context. Thematic framing occurs more often in print media than in television, and it “helps audiences to think about political issues in terms of societal and political outcomes” (Iyengar Responsible 14). This study addressed how wood bioenergy was presented in a newspaper over nine years -- and focused on the framing trends that emerged in that time. It did not try to break the frames into the two separate categories Iyengar discusses.

One way to identify a frame is to identify the voices that are being heard in the news (Tankard 101). When it comes to public policy, issues generally have many stakeholders. Tankard (96) argues that media framing eliminates voices. When an issue gets onto the public
agenda, stakeholders start trying to frame it and establish a specific point of view (Miller and Reichert 108). They do this by highlighting certain aspects of the issue and leaving out others. The media will turn to these stakeholder groups to be used as sources in a news piece, and the group’s point of view becomes the frame (Miller and Reichert 108). In an analysis of television network coverage of the Gulf War, more than 50% of all news reports came directly from official government spokespersons (Iyengar and Simon 256). This practice of using the government “party-line” for news means that the government gets to frame the issue. This affects the public’s understanding and opinions of the issue. The audience's feelings toward an issue will be similar to the government’s position (Iyengar and Simon 256). Entman (52) explains that studying the presence or absence of key words or phrases, images, sources of information and facts or judgments used to reinforce a theme, can also identify frames.

McCombs’ first works on agenda setting built off the phrase coined by Bernard Cohen (13), that the press “may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about.” But, as the body of research on framing grew, McCombs worked to show how agenda setting and framing worked as one theory (McCombs and Estrada 239). McCombs claims that framing is the second dimension of agenda setting. Together, agenda setting tells the audience what to think about and framing tells the audience how to think about these issues (McCombs and Estrada 246).

**Methods**

Wood bioenergy has existed in the province for a long time, but it only became a part of policy in 2007, when the BC Energy plan was released under the Liberal government. A content analysis was performed of *The Vancouver Sun’s* newspaper coverage of wood bioenergy in the province. A content analysis provides quantitative data to identify themes and perspectives
expressed in a text (Bengston and Xu 2). Bengston and Xu (2) argue a content analysis allows one to examine the language of a text, and that language reflects a society’s values and beliefs which in turn influence the way its members think and behave. A content analysis also allows us to examine trends over a long period of time and assess the changes in those trends (Bengston and Xu 2).

Sample collection

To analyze the news media, newspaper articles from *The Vancouver Sun* were collected. Print media allows readers to control what they read by allowing them to select which articles they want to read, how much time they want to spend on the article and what information the reader takes away from the article. This is different from broadcast news where a person has no choice over which pieces of news are given to them and they are forced to consume the news in a predetermined order and within a limited timeframe (Soroka 33). Unfortunately, no recent data about consumption of forestry news by Canadians could be found. In 1989, 51% of Canadians indicated that newspapers were their main sources of information on issues related to forestry (Environics Research Group).

*The Vancouver Sun* was selected as the source for newspaper articles because it is the largest daily province-wide newspaper in British Columbia, and it has the largest circulation of any paper in the province (Canadian Newspaper Association). A provincial newspaper was used because wood bioenergy is part of the provincial government’s agenda - forests and energy fall under provincial jurisdiction. If this were a national issue, national papers would be used (Soroka 35).
Data collection

The articles were analyzed for general journalistic features: date, author, location in paper, word count and article type. This is a standard practice when doing a content analysis of how an issue is framed (Tankard 100).

Entman (52) explains that frames can also be identified by analyzing key words or phrases that come up often and those that are missing. Facts or judgements can also be used to reinforce a theme (Entman 52). Tankard (101) indicates that the lead of a story is a framing mechanism. Often the lead explains the news element of the story although sometimes, especially with feature articles, the news is found in the nutgraph.

Miller and Reichert argue that an issue is framed in the news media based on which stakeholder group are used as sources and their point of view (108). Tankard also identifies the selection of sources, affiliations and quotes as a framing mechanism (101).

The method for conducting the content analysis for this study was developed based on the framing mechanisms outlined by the researchers discussed above.
METHODS

Articles for this content analysis were found using a keyword search in Proquest’s Canadian Newsstand index. Articles from The Vancouver Sun were found by performing the following searches: “wood waste,” “bioenergy,” “biomass” and “wood AND energy.” Duplicates were removed, and in the case where different versions of the same story appeared in different editions of the paper, the longest story was selected. The reason for selecting the longest story is that as much information as possible would have been presented to readers.

Searches for other key terms that the study was looking for such as “mountain pine beetle” and “carbon neutral” were excluded because the number of articles produced was too great to pick out the few articles that would align with the study’s subject. Similar searches for “mountain pine beetle” and “carbon neutral” with all the same parameters provided about 800 results each.

The initial set of articles was reduced further throughout the analysis when articles appeared that did not discuss wood bioenergy. This often occurred if a person in an article had the name "Wood," or the article was about waste from building materials, gardening or real estate. Other articles were removed because they focused on biofuels. This analysis was only interested in looking at the use of wood to produce power, not to produce gasoline for vehicles. In the instance that an article discussed the use of wood to produce a gas that could be used instead of natural gas, the article was kept in the data set. In total 242 articles were analyzed.

Articles were retrieved starting from June 6, 2001, and ending December 31, 2009. On June 6, 2001, Gordon Campbell’s Liberal government took power; the Liberal government has
been very active in changing forest policy in the province. Examples of some of the articles used in this analysis can be found in Appendix A.

The articles were analyzed for general journalistic features: date, author, location in paper, word count and article type. The type of articles were broken into four categories: news, feature, opinion/editorial and brief. News articles have a sense of timeliness to them - news tends to report on important happenings within the preceding 24 hours. The news must be gathered quickly and the information must be new, fresh and immediate (Garst and Bernstein 4). Feature stories lack the sense of timeliness, which means the information is newsworthy, but the story could appear on any particular day. It could run tomorrow, the day after or even within the following weeks (Lanson and Stephens 343). The section of the newspaper the articles are found in usually identifies opinions and editorials. This category includes editorials - unattributed articles generally assumed to represent the institutional voice of the newspaper, letters to the editor, and columns which are attributed to a writer but express a distinct personal view.

For the purpose of analyzing the average word count of the articles over the course of each year, two articles\(^1\) were removed from the data set. These articles contained more than 4,000 words each and significantly skewed the data. They are considered outliers. The data collected from these articles for other parts of the analysis was left in the data set.

This paper analyzed the articles to determine which actors were quoted or used as sources the most frequently. A group was quoted if a quote from spokesperson in that group was included in the article. A group was mentioned if sources or information from that group were included in the article. Hessing identifies politicians, environmentalists, First Nations, industry representatives and labour groups as the major actors in BC forestry (121-31). This study added

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BC Hydro as an actor in the analysis because of the provincial crown corporation’s important role in the bioenergy industry.

A politician was defined as an elected member of government or a bureaucrat (i.e. chief forester, deputy minister of forests). These individuals have an interest in being re-elected and/or gaining revenue for the government. A First Nation is a person who identifies himself or herself as having a First Nations heritage. An environmentalist is a person who supports conservation and saving the environment. An industry representative is a person who has an interest in obtaining security for companies working in the wood products sector (this can include the bioenergy) and includes individuals from these companies. A labour group indicates a union or someone looking for job security for a number of people working in the forest/wood processing or energy industries (Hessing 125). A BC Hydro actor was identified as someone who works for the crown corporation.

In the case that a person represents more than one of these categories, he or she was identified as a source for whatever message he or she was promoting. For example a First Nation who has been elected to government but who wants to preserve the forests for the sake of the environment was classified as an environmentalist. These individuals were classified as First Nations if they want to preserve the forest for the sake of their band’s cultural values or as a politician if they were talking about the forest in terms of an election issue. In the case that an individual represents more than one category and expresses more than one message, two categories may be indicated. It was expected that more than one of these sources would be quoted and mentioned in each article, it is unusual to find an article with only one voice.

The wood fiber for energy production can come from a variety of waste sources including mountain pine beetle-killed trees, logging residues, mill residues, and urban waste. The articles were analyzed to determine which source of wood was discussed in the article.
The forest industry is most active in rural British Columbia, along the coast and the interior of the province. The urban population, centralized in the lower mainland and Victoria, has more voters and represent the environmental voters (Hoberg 337). The location that the articles focus on was assessed in the content analysis. Urban areas were defined as Victoria, Vancouver and the lower mainland. Rural areas of the province were defined as anything that is not urban including large cities in the interior of the province such as Prince George.

The context in which the bioenergy articles were written was analyzed as part of the content analysis. Articles were separated into seven categories: the Ministry of Forest and Range made an announcement or began a bioenergy project; BC Hydro made an announcement or began a bioenergy project; a new policy was introduced about bioenergy; research was conducted on bioenergy; the industry began a new bioenergy project or made an announcement about the industry; a new facility was announced or started work; or some other context. In the case where more than one of these categories would describe the article, they were both indicated.

Using wood as biomass is a contentious issue in the province (Parfitt Managing). There are benefits to the technology but concerns about its economic sustainability and its impact on forest workers and the health of the forests. The articles were studied to determine if any of the challenges for the bioenergy industry or any conflicting views were mentioned in the article. An article was classified as including a conflict or challenge if it made any reference to a problem within a project or the industry.

Along with the above criteria, the articles were examined based on the questions asked in the Introduction of this paper:
Were the following terms used:

“carbon neutral” or a derivative such as “greenhouse gas neutral”
“green energy”
“renewable”
“mountain pine beetle” or “pine beetle” or “mountain pine beetle-killed timber”

Does the article discuss how bioenergy works?

This means at least two sentences were dedicated to explaining how wood is burned to produce energy.

Does the article discuss wood bioenergy in the future?

This means the article addressed bioenergy 20 years in the future. Twenty years was selected because it represents the upper shelf-life limit of the mountain pine beetle-killed wood (BC Ministry of Forests and Range 11).

Does the article address reforestation/rehabilitation?

The BC Ministry of Forests and Range defines reforestation as the planting of forests on lands that have recently previously contained forests. The article addressed reforestation/rehabilitation if there are at least two sentences dedicated to explaining how forests were restored in the past or will be replanted or restored in the future.

Does the article address carbon balance?

This means the article dedicated at least one sentence to describing how carbon was released from burning wood for bioenergy. Alternatively the article could dedicate at least two sentences to explaining carbon sources, carbon sinks and the role of forests as carbon sinks. Occasionally, this question was explained incorrectly in an article. This happened frequently enough that it was counted separately.
Is wood bioenergy the focus of the story?

Many of the articles mentioned wood bioenergy as part of a larger story. An article was classified as focusing on wood bioenergy if more than half of the paragraphs discussed this idea.

Two masters of journalism candidates from UBC’s School of Journalism were given the methodology and ten randomly selected articles from the 242 used in the content analysis. They were asked to perform the analysis on each of the ten articles to test intercoder reliability. Intercoder reliability of 93% was achieved, indicating the analysis questions and definitions were appropriate for this report.
RESULTS

In total, 242 articles met the criteria for analysis. Of that sample 25% of the articles discussed or focused on wood bioenergy for more than half of the paragraphs, while the remaining articles mentioned or dedicated a small portion of the article to discussing wood bioenergy (Figure 5). The data were analyzed in its entirety, and the 60 articles that focused on the issue for over half the article were also isolated and analyzed separately. The data were also separated into two time frames: 2001-2006 and 2007-2009.

The number of articles discussing wood bioenergy increased between 2001 and 2009 (Figure 1). Because Gordon Campbell and his Liberal government did not take office until June 6, 2001, articles were only obtained starting from that date. Seven articles were written about bioenergy between June and December of 2001. Between 2002 and 2004, the number of articles ranged from 11 – 15 per year. In 2005, there was an increase in the number of articles, totaling 25 that year. Another spike occurred in 2007, when 48 articles were written about wood bioenergy. The number of articles in 2008 remained the same as 2007, and increased slightly to 51 in 2009.

After the two articles mentioned in the “Methods” section were removed from the data set because they contained more than 4,000 words each, the length of the articles was found to be consistent over time (Figure 2). News stories accounted for 120 of the articles, or about half of the data set. Opinions and editorials were the second most common type of article at almost 24%, followed by features making up 16% and briefs making up 11% (Figure 3).
Figure 1 - The number of articles about wood bioenergy in *The Vancouver Sun* between June 2001 and Dec. 2009

Figure 2 - The average number of words per article between 2001 and 2009
Of the 242 articles, Gordon Hamilton and Scott Simpson, The Vancouver Sun’s respective forestry and energy reporters wrote 40%. The articles were split evenly between the two reporters; Hamilton, the forestry reporter, wrote five more articles on the subject than Simpson, the energy reporter. The remaining 60% of articles were written by various reporters and editorial contributors (Table 1).

**Table 1 - The author of the articles in the data set**

<table>
<thead>
<tr>
<th>Author</th>
<th>Number of articles</th>
<th>Percent of articles (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gordon Hamilton</td>
<td>51</td>
<td>21.07</td>
</tr>
<tr>
<td>Scott Simpson</td>
<td>46</td>
<td>19.01</td>
</tr>
<tr>
<td>Other</td>
<td>145</td>
<td>59.92</td>
</tr>
</tbody>
</table>
Of the six groups of people interested in the wood bioenergy issue, industry came up the most frequently of any group. Industry spokespeople were quoted 42% of the time and industry sources or information was included in 60% of the articles (Figure 4). Individuals in government appeared second most frequently, followed by B.C. Hydro. Environmentalists were quoted in 8% of articles and information or sources from environmentalists were included in 15% of articles. First Nations were quoted in 1% of articles and the information or sources about the group appeared in almost 5%. Labour was quoted the least and discussed the least at less than 1% and just over 2% of the time respectively. In 38% of articles no group was quoted and in 12% of articles none of the groups were mentioned.

Of the 242 articles analyzed, 19% referred to a conflict or challenge of the wood bioenergy industry. In the group of articles that dedicated more than half the article to discussing wood bioenergy, this number increased to 33% (Figures 5 and 6).

The articles were analyzed for terms that play into the idea of burning wood as an environmentally friendly method of energy production. In the data set, the term “carbon neutral” was used in 9% of the time, “green energy” was used in 26% of articles and “renewable” was used in 18% of articles. “Carbon neutral” was used more frequently in the articles where more than half the paragraphs dealt with wood bioenergy, 17%, than in the entire data set. The terms “green energy” and “renewable” decreased in frequency when the more than half the article focused on the subject. “Green” was used to describe wood bioenergy in 17% of the articles and “renewable” was used in 3% (Figures 5 and 6).
Figure 4 - The frequency that sources were quoted and mentioned in the articles.
Figure 5 - The frequency of yes and no answers to the analysis questions in the entire data set
Figure 6 - The frequency of yes and no answers to the analysis questions in the data set of articles where more than half the article discussed wood bioenergy.

In total 17% of the articles in this study mentioned the pine beetle-killed wood and wood bioenergy together in the same article. This number increased to 33% when the selection of articles was limited to those that focused on wood bioenergy (Figures 5 and 6).

Only 3% of articles in the entire data set explained how wood could be used to produce clean energy but this number increased to 10% in articles that where more than half the article focused on wood bioenergy. This was much higher than the number of times the future of the industry was discussed, which was once in the entire sample or less than 1% of the time. This
article happened to be an article that also focused on wood bioenergy. Reforestation was also discussed in only one article in the entire selection and this article did not happen to focus on wood bioenergy (Figures 5 and 6).

Articles either explained carbon balance, did not explain it or explained it incorrectly to readers. In total, five articles discussed carbon balance correctly, or 2%. Three of these articles were in the group where more than half the paragraphs in the article were about wood bioenergy. Almost 5% of articles in the data set went into detail about carbon balance and wood bioenergy but presented the information incorrectly and 12% of the articles where bioenergy was the subject of more than half the article explained it incorrectly. In total, 93% of all articles did not provide any details on carbon balance nor did 83% of the focused articles (Figures 5 and 6).

The articles were analyzed when they were broken into two time frames: 2001-2006 and 2007-2009. Some of the information conveyed in the articles was not significantly different between the two time frames; other pieces of information were significantly different.

The number of articles that dealt with bioenergy for more than half the article remained fairly constant. Throughout the data set about 25% of articles focused on bioenergy (Figure 5). Almost 29% of articles focused on bioenergy between 2001 and 2006; between 2007 and 2009, it was 24%. Articles that explained how wood can be burned to produce energy and carbon balance also did not vary significantly between the two time frames. The process of how bioenergy works was discussed in 2% of articles prior to 2007 and in 4% of articles in the second data set. Carbon balance was explained correctly in 1% of articles prior to 2007 and in 2% of articles after that date (Figures 7 and 8).

Only one article in the data set discussed the future of the bioenergy industry and only one article discussed reforestation. In each case these articles were found in the second data set, years 2007-2009.
The term “green energy” was used in about 26% of articles over the data set. This did not change a great deal. It was used only 22% of the time prior to 2007 and 28% of the time from 2007-2009 (Figures 7 and 8).

Differences were noted between the two time frames with the use of the terms “carbon neutral” and “renewable” and how frequently the mountain pine beetle was discussed in conjunction with wood bioenergy. Prior to 2007, the term “carbon neutral” or variations of it, was used in 2% of the articles. After 2007, the term was used in 13% of articles. The term renewable was used in 11% of the articles analyzed prior to 2007. This number doubles to 22% after 2007. In 8% of the articles prior to 2007 mountain pine beetle-killed wood was discussed, but between 2007-2009 this number jumps to 24% (Figures 7 and 8).

The frequency that the conflicts or challenges of developing a wood bioenergy industry come up in articles, changes slightly between the two time frames and decreases in the later years. Prior to 2007, 22% of articles discuss obstacles, while after 17% do the same. Over the data set the conflicts or challenges are discussed 19% of the time (Figures 7 and 8).
Figure 7 - The frequency of yes and no answers to the analysis questions in articles written between 2001 and 2006.
Figure 8 - The frequency of yes and no answers to the analysis questions in articles written between 2007 and 2009
DISCUSSION AND CONCLUSION

The keyword searches for wood bioenergy articles yielded 242 articles for analysis between June 6, 2001, when Gordon Campbell’s Liberal government took power in the province, and the end of 2009. When the data set is considered together, it does not support the study’s hypothesis that wood bioenergy is being framed as a carbon neutral energy source and as a solution to the mountain pine beetle epidemic. But, when the data is analyzed for changes in trends over time, the study shows that the articles were more likely to be framed according to the hypothesis after 2007. These trends are discussed in more detail below:

The number of articles written throughout each year of the analysis increased over time as was expected to happen. The first big jump occurred in 2005, and there was another spike in 2007. In 2007, the British Columbia government announced its goals to cut carbon emissions, become energy self-sufficient and use renewable energy (BC energy plan outlines 1-2). These policies were outlined in the BC Energy Plan and later, in 2008, the province released the BC Bioenergy Strategy. BC Hydro collaborated with the government on these plans and targets. Following the release of these documents, BC Hydro put out two separate calls for project proposals and has accepted four projects by this study’s conclusion. These actions explain why news coverage increased in 2007 and remained at that level. In addition to provincial wood bioenergy projects, companies and groups are also beginning to use wood burning technology to produce power. An example of this is the new Dockside Green development in Victoria. This new neighbourhood is powered by Nexterra’s wood gasification system.
Stakeholders / voices

Across the literature, researchers emphasized the importance of determining which voices were heard in the news media. This study monitored how frequently the following groups were consulted by The Vancouver Sun: government, BC Hydro, industry, labour, environmentalists and First Nations.

The most striking finding of this study revealed that the voice of Aboriginal groups was consistently missing in the articles about wood bioenergy. When compared to the frequency that government voices are used as sources in the same set of articles, the elimination of First Nations’ voices is even more pronounced (Figure 4). First Nations spokespeople were only quoted in about 1% of articles compared to government spokespeople, who were quoted 29% of the time. Moreover government sources and information were included in more than 50% of wood bioenergy articles whereas Aboriginal sources were noted less than 5% of the time.

This polarity is particularly shocking when one considers the efforts the provincial government had gone to in recent years to work with First Nations in a more productive way. Establishing a “new relationship” with First Nations was arguably the Liberal government’s biggest accomplishment and most significant change. In the 2003 speech from the throne, premier Gordon Campbell said:

Today our government made a significant step ...with a clear statement in the throne speech of respect and reconciliation, and a commitment to revenue-sharing with First Nations who wish to help revitalize our forest industry (Office of the Premier).

This “new relationship” has been particularly important in the forestry sector. Delgamuukw, Haida, and Tsilhqot’in all had successful court cases throughout the late 1990s and early 2000s against the province and industry groups over lack of consultation (Palmer Court). The rulings from these cases indicated the fundamental importance of more fully consulting with and accommodating Aboriginal groups, especially when issues over the use of...
natural resources occurred on lands that they had claims to. Gordon Campbell’s government responded by taking a new attitude toward First Nations groups (Palmer *Hard edged*). It was decided that consulting with First Nation groups prior to making forestry decisions was no longer sufficient because the individuals were more than just stakeholders. Now, First Nations are analogous to the provincial government. Other actions in the forestry sector also demonstrate the new relationship. As part of the Forestry Revitalization Plan in 2004, 8% of the land taken back by the government to establish a market based pricing system, was given to First Nation groups (13-14). This change has not been reflected in the reporting of wood bioenergy in *The Vancouver Sun* – information about Aboriginal groups was only included in 5% of the articles. The impact of this in public opinion and policy is discussed in more detail below.

A limit of this study is that it does not explain why certain voices have been left out. Further research should aim to answer this question. Specifically it would be important to study First Nation representation in the news across all forest topics to determine if the news media has reflected the changes in the province’s attitudes towards First Nations and, if not, to investigate the reasons for this.

This content analysis found that the voice of labour groups was also consistently left out. This was significant because of the number of forest and mill workers who have lost their jobs since 2007. One frequent criticism of the wood bioenergy industry is the potential impact it might have on pulp and paper mills. In the articles from *The Vancouver Sun* the sources of wood for bioenergy were most often mill residues and mountain pine beetle-killed wood. The use of mill residues as a source of bioenergy is the primary cause of concern for the pulp and paper industry. Fiber from mills and the pine trees were each mentioned almost twice as often as any other source of wood for bioenergy.
The environmental actors were also consulted less frequently than other groups -- environmental quotes appeared in less than 10% of the articles and information and sources from that group was mentioned in about 15% of articles. This finding was not surprising because of the current relationship between the forest industry and environmental groups. After an agreement was reached to protect the Great Bear Rainforest in British Columbia, environmentalists took a step back from focusing on forest issues. Instead, groups such as Greenpeace focused on other environmental matters such as the tar sands.

First Nations, labour groups and environmentalists were thus unable to frame and shape how bioenergy initiatives were portrayed in The Vancouver Sun. The opinions and attitudes of these groups were not found in the articles and thus the public does not have access to them. This means the public is getting a skewed or narrowly defined idea of the issues and concerns of using wood bioenergy. The issues and concerns of First Nations, labour groups and environmentalists cannot influence the public opinion of this technology because they are not included in the articles being read by The Vancouver Sun audience. The voices that are included determine public opinion and set the agenda (Lippmann 12). They also determine the frame and decide the aspects of an issue that get discussed (Entman 52). These frames play a role in the decisions that are made – forming public policy.

This study does not suggest that The Vancouver Sun intentionally left out First Nations, labour groups and environmentalists in an effort to frame bioenergy a certain way. This study did not investigate why a quote from a group of actors was included or how the reporting was conducted. This study only suggests that the audience of The Vancouver Sun will not hear what these groups have to say about the growing bioenergy industry. The omission of these voices may tie into why the conflicts and challenges of this industry were only discussed in about 20% of articles.
This study found that the voice of the industry, government and BC Hydro came up the most often in articles from *The Vancouver Sun* (Figure 4). Out of all groups, the industry’s voice is heard the most -- industry was quoted in 42% of all articles. This means the industry has a major role in setting the agenda and framing wood bioenergy (Lippmann 12). What is less clear is the position of the forest industry on wood bioenergy. Economically the industry has been harmed by the financial situation in the United States and Canada, and there is reason to look for new and innovative revenue streams. But, there are apprehensions about bioenergy development and the ability to secure long term access to trees. It is hard to identify how this group would frame the issue because different voices in this group could be saying different things.

It is also clear that BC Hydro and the government, who are in favour of promoting and developing wood bioenergy in the province, play a major role in determining the frame and setting the agenda. These groups have initiatives in place to expand the wood bioenergy industry and want the public to support these plans. This indicates that the aspects of wood bioenergy the government and BC Hydro would highlight would be the positive aspects. The specific issues these groups have made more salient by being able to frame the issue are more clearly identified by looking at the second half of the study – focusing on the language and messages that appear in the articles.

**Language**

The first question used to analyze framing in bioenergy articles from *The Vancouver Sun* examined the use of specific keywords and phrases. In this study, the articles were analyzed for the following keywords: “carbon neutral,” “green energy,” “renewable” and “mountain pine beetle.” These words or phrases were identified as being in line with how the provincial government and BC Hydro wanted to frame the issue.
Overall these phrases were used in fewer than 50% of the articles, and even when more than half the content of an article discussed wood bioenergy, the frequency was low. This was surprising until the data was isolated into two separate time periods. Articles written prior to 2007 -- the year when the provincial government announced its new environmental initiatives and developed the BC Energy Plan -- were less likely to include the above keywords, while some of these keywords and phrases doubled in frequency after 2007 (Figure 7 and 8).

The most significant increase was observed in the use of the term “carbon neutral”. Prior to 2007, it was used in 2% of articles, and increased to being included in 13% of articles after 2007. This is six times more frequently. Renewable energy came up twice as frequently after 2007, appearing in 22% of articles. References to mountain pine beetle-killed wood almost tripled, becoming a common phrase in about 24% of articles (Figure 8). This indicates that the frame shifted around 2007 and wood bioenergy was discussed as a solution to environmental problems -- the message the government and BC Hydro have been promoting. This change is particularly interesting when considered in conjunction with other analysis questions.

**Carbon balance**

As the terms “carbon neutral,” “renewable” and “green energy” were used more frequently after 2007, it could be assumed that the terms would be qualified or explained. For example using the term carbon neutral is almost useless without an explanation of the role of forests in maintaining carbon balance. The term carbon neutral was used six times more frequently after 2007 while an explanation of carbon balance only increased from 1% to less than 3%. No observable change was noticed in how frequently carbon balance was explained incorrectly across the two time periods -- this happened in around 5% of all articles. This suggests that *The Vancouver Sun* was using the language offered by the government without
trying to put it in context. One of the provincial government’s energy policies says that all new
electricity generation projects would produce no greenhouse gas emissions. Providing readers
with context is one way to be objective in the news media (Kovach and Rosentiel 80-110). The
more objective the articles are, the less likely it is that the actors can frame an issue in the media
and influence the opinion of the public. The articles frame burning wood as a carbon neutral
practice, but they don’t make any effort to explain where this carbon comes from or the role that
forests play in both storing and releasing carbon.

Reforestation

For the term “renewable” to make sense, it also needs to be qualified. For trees to be
considered a renewable resource means new trees have to be planted and allowed to grow for a
specific amount of time. This amount of time has been hotly debated -- trees should provide a
minimum amount of ecological benefit to the area and should stand long enough to be a carbon
sink (meaning the length of time a tree will continue to store more carbon than it produces). It is
believed that the longer a tree stands, the more carbon it stores (Parfitt Managing 29).

“Renewable” was used in twice as many articles after 2007, increasing from 11% to 22%. While
this term became more common in the discussion, only one article in the data set went into
reforestation. This was a surprising result because reforestation is the responsibility of the tenure
holder, the group cutting down the trees, not nature. Articles seem to lack context if trees are
described as renewable without an explanation of who is responsible for this. This finding
indicates that The Vancouver Sun was framing bioenergy as a renewable energy resource. One
of the provincial government’s energy policies is that 90% of energy will come from renewable
sources.
Mountain pine beetle

Prior to 2007, 8% of articles discussed wood bioenergy in conjunction with mountain pine beetle-killed wood. After 2007, almost 24% of articles did this. When bioenergy and mountain pine beetle are discussed together, it gives the reader a sense that pine beetle killed-wood will be used for bioenergy projects. Despite the increase of this message in the news media over time, the bioenergy projects in the province do not reflect this increase. As discussed earlier, the first call for bioenergy yielded no mountain pine beetle projects. Approved projects from the second call for power were not announced prior to the study’s completion. In conversations with Forest Minister Pat Bell, he explained that mountain pine beetle-killed wood will play a role in the future bioenergy industry but the majority of the wood fiber for bioenergy will come from logging residues. This message is not consistent with previous statements from the ministry and provincial government (BC Ministry of Energy, Mines and Petroleum Resources. Bioenergy 6), nor is it reflected in the news coverage of the issue. This indicates that wood bioenergy is being framed as a solution to the mountain pine beetle epidemic. Residents of British Columbia are aware of the damage caused by the mountain pine beetle, and the number of beetle-killed trees that would be available for bioenergy projects. Failing to explain that this is not where the majority of the wood comes from seems unfair to the audience who rely on The Vancouver Sun to form opinions on forest issues and energy policies. This would not help to promote a relationship of trust between the public and the news media (Kovach and Rosentiel 52-3).

The results of this study indicate that the The Vancouver Sun has framed bioenergy according to the messages of BC Hydro and the provincial government. The elements that The Vancouver Sun has selected to frame wood bioenergy are that it is carbon neutral and a
renewable energy source that can solve the mountain pine beetle epidemic. As explained earlier this has the power to effect the public’s perception of this idea.

Bioenergy should be something the public understands correctly. A commonly cited problem with the explanation of environmental issues or green products is that the information is confusing. If bioenergy is pursued as a power source and the province becomes reliant on it to contribute energy to the grid, the public may feel duped when their preconceived notions of this industry are shown to be untrue.
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APPENDIX A

B.C. wood pellets to cut greenhouse gas in Japan:[Final Edition]

PRINCE RUPERT -- A partnership between Canadian Forest Products, Pinnacle Pellet and the Moricetown First Nation will see wood pellets travel through Prince Rupert and overseas in order to lower greenhouse gas emissions in Japan.

Leroy Reitsma, business development manager with Canfor, said the pellets that will be moving through Prince Rupert's Ridley Terminals in 2007 will be sent to Japan where they will be used in a coal displacement project. The coal-fired electrical generation facility in Japan is being converted to burn pellets.

"It's all about reducing the use of coal and meeting targets of reducing greenhouse gas emissions," said Reitsma.

The wood pellet plant is part of a larger project that includes the installation of a new bark-fired energy system at the Houston Canfor sawmill in the northern Interior. The combination of the wood pellet plant and the bark-fired energy system provides an economically viable, value-added alternative to beehive burners.

Since 1968 when Canfor opened a sawmill in Houston, 16 million gigajoules of energy in the form of bark and sawdust have simply been expelled into the atmosphere -- a value of $300 million.

"When you look at that, there has to be a better way," he said.

Reitsma went on to explain Canfor's sawmill in Houston produces three types of waste: bark removed from the outside of the logs; sawdust produced when logs are cut; and shavings left over from planing the logs to size after they have been dried.

Previously, the debris was put into a beehive burner, but provincial regulations required Canfor to phase out the burner by 2007.

In 2004, Canfor began working with Pinnacle Pellet to market pellets made from waste wood using heat and high pressure.

That left the question of what to do with the bark. it's now burned at the sawmill and provides the heat required for both lumber and pellet production.

The project is also an opportunity for Canfor to further their relationship with the Moricetown Band. They already do business with Kyahwood Forest Products -- a joint venture between the two parties that directly employs 75 people in Moricetown in lumber remanufacturing.
In addition to sending the pellets through a silo storage facility at Ridley Terminals and on to Japan, the partnership will also sell product into the U.S.

"We are working with Ridley Terminals to ship wood pellets and we are working with CN to use their Prairie train car fleet to back-haul to U.S. markets," said Reitsma

Pellets are proving a popular alternative to the high cost of natural gas, said Reitsma. Before they had financing they were able to sell out the product for the first five years.

"We are currently producing pellets on budget and most important of all, all of our partners are on the same page."

In addition, turning biomass into energy is part of a strategy to keep Canfor competitive in the current lumber market, he said

"Wood residue is an asset that must be used to improve our competitive position."
Forest industry faces major changes; Much of B.C.'s wood supply will be used for bioenergy instead of pulp and lumber, expert says:[Final Edition]

Natural Resources: The B.C. forest industry turned in one of the world's worst performances in 2006, but a transformation of historic proportions is just over the horizon, one of the province's leading industry consultants said Thursday.

PricewaterhouseCoopers partner Craig Campbell said traditional pulp and lumber production, particularly in the pine beetle-ravaged Interior, is going to give way to bioenergy, smoothing over the boom- and-bust cycles that characterize the industry today.

Campbell's forecast of a prosperous future comes at a time when the industry is the world's basket case. He said mountains of logs are piling up alongside forest roads today because companies cannot economically convert them to lumber.

The industry tumbled from the world's top performing region two years ago, when it had $1.5 billion in profits, to the bottom of the heap in 2006, losing $500 million, according to findings released Thursday by PricewaterhouseCoopers.

Further, return on capital employed -- a key indicator of financial health -- dropped to -1.8 per cent as the industry fought against the mountain pine beetle infestation, a depressed U.S. housing market and a soaring Canadian dollar, Campbell said at PWC's 20th Global Forest and Paper Industry Conference.

Lumber prices are bumping along the bottom but he said he sees no sign that they are going to improve soon.

Despite the bad performance, Campbell said huge changes are under way -- a consequence of the mountain pine beetle infestation -- that will transform the province's wood products industry from reliance on cyclical commodities to more stable energy production.

"The next five years in the B.C. forest industry are going to be without a doubt the biggest transformation we will ever see," Campbell told the 500 people attending the conference.

The pine beetle is the greatest challenge and, as wood quality deteriorates in the dead pine stands, less of it will be suitable for lumber.

"The outlook is very bleak for the Interior sawmilling industry. Dozens of sawmills are going to close."

He said that in the Interior, 15 million cubic metres of timber -- enough lumber to fill half a million logging trucks -- is going to waste in huge roadside piles because it cannot be economically converted to lumber.

Other factors driving the change include:
Ownership of the industry is changing rapidly, with new investors buying stakes in B.C. companies.

- Softwood duty refunds injected a $2.5-billion windfall that PWC did not include in its earnings report.

- Carbon credits trading is coming, adding a new source of revenue.

It all adds up to "big opportunities for biomass energy using beetle wood," Campbell said.

In a later interview, Campbell said the industry is buzzing over the potential of electrical generation. BC Hydro has committed to promoting bioenergy and the key question remaining is what kind of subsidy it will offer producers.

"We are getting phone calls to do studies for energy companies vis a vis the wood supply. There is a lot of momentum and interest. That's where I see we are going to shift: from traditional lumber to energy."

He sounded a note of caution on subsidies, however, saying that in Europe subsidies to energy producers lead to higher wood prices, forcing some traditional wood-products manufacturers out of business.

Mark Connelly, investment analyst with Credit Suisse, said diversifying into energy production looks like a smart move, but he questioned how ready B.C. companies are to diversify, noting many have not diversified out of the region, a basic financial strategy.

"One of the reasons B.C. wood companies have such a problem is that they are B.C. companies," he said.

"What you have here, in my mind, is an industry that locked itself into a region that now suddenly has a real problem," he said, referring to the beetle. "Every time you read a money-management thing, it says diversify. And B.C. didn't."

Both Campbell and Connelly noted that the face of the industry is changing as activist investors buy stakes.

Campbell singled out B.C. billionaire Jim Pattison, Montreal's Stephen Jarislowsky and New York-based Third Avenue Management, which has a $800-million investment in B.C. companies.

He said the industry needs to consolidate beyond what has taken place already.

"The question looms whether Third Avenue will role its pulp assets all under one banner," he said.
New independent power could add $26.1 billion to B.C. economy: report

The independent power sector could inject $26.1 billion into the British Columbia economy by 2020, according to a PricewaterhouseCoopers study to be released today in Vancouver.

The report, commissioned by the Independent Power Producers Association of B.C., says $26.1 billion in capital investment could generate $9 billion for economic growth over the next 11 years -- representing a 4.5-per-cent increase in the size of the provincial economy.

PwC is still polishing the report and expects to release an authoritative version before year's end.

A draft version is being presented today to IPPBC members at their annual conference. IPPs are now working through a BC Hydro call for power that seeks 6,000 gigawatt hours (GWh) of new green energy from wind, run-of-river hydro, bioenergy and other renewable sources of electricity.

But the report says IPPs could deliver more than four times that amount -- 26,500 GWh -- to the grid by 2020. The numbers are not far-fetched -- Hydro's most recent call received bids totalling 17,000 GWh, and there are many projects around the province still in earlier stages of development.

Some of the electricity could be used to develop a substantial export industry -- producing 12,000 GWh per year to sell to green-power-eager markets in the United States. But the report also notes that electricity demand within B.C. could absorb all 26,500 gigawatt hours if new high-density office and residential buildings opt for electric heating instead of natural gas.

Total employment impacts from IPPs, at that level of development, would reach 87,000 person-years, and government revenues generated through the construction phase of potential IPP projects are estimated at $1.6 billion, the report says.

PwC says the Central Interior would realize the greatest benefit from biomass projects -- which require waste wood for fuel -- because it is the hub of B.C.’s forest industry.

The Lower Mainland-South Coast has the greatest potential for benefit from run of river development.

The Peace River region, meanwhile, would realize the greatest benefits from development of wind energy.
"From our perspective it's a good news story," PwC partner John Webster, who is presenting the report, said in an interview on Monday.

"Essentially once you've got the market estimates of electricity demand and you have the capital expenditures that derive from that, you plug the numbers into a very conventional economic input-output model."
The report should spur both the industry and the government to action -- and alert communities around B.C. to the economic opportunities on their doorsteps, said Harvie Campbell, IPPBC chairman.

"The purpose of the report is more to get specific about what that opportunity is, and what the demands are going to be on the industry, the opportunity for the communities, etc.," Campbell said. "We need to make sure we are working hand in hand with Victoria, with BC Hydro, with BCTC to bring about this big opportunity for the province."