

# Business Plan

TAKING UBC'S RESIDENTIAL ENVIRONMENTAL ASSESSMENT PROGRAM  
(REAP) BEYOND THE UBC CAMPUS



With special thanks to Brenda Sawada, Alison Aloisio, Jorge Marques and Helen Goodland, who helped us when we were struggling with the concept, and the UBC SUSTAINABILITY office for providing us with this opportunity.

**TEAM 8**

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## **EXECUTIVE SUMMARY**

The demand for sustainable construction is rapidly increasing in both private and public sectors. This is mainly due to the fact that the meaning of sustainability is making more and more sense to the owners of these development projects. Sustainable construction not only helps provide social and environmental benefits, but it also provides economic benefits in the long run<sup>1</sup>. Consequently the importance of Green Building Rating Systems has been growing with time, and so is the demand and willingness of customers to pay more for an apartment in a green certified development. In Canada, the number of members of CaCBC (Canada Green Building Council) has gone from 0 in 2003 to 800 in April 2005. The number of projects registered in Green Building Rating Systems doubles or triples each year<sup>2</sup>.

Currently the two most popular rating systems that are being employed in Canada are LEED and Built Green. LEED (Leadership in Energy and Environmental Design), designed by the US Green Building Council (USGBC) provides a list of norms for sustainable construction<sup>3</sup>. LEED is currently the most popular Green Building Rating System in the US and some parts of Canada. However LEED has attracted criticism from some developers because of its extremely stringent and sometimes impractical norms and the high certificate fees. Built Green, a rating system, owned and managed by the Built Green Society of Canada, can only be applied to single-family homes or row houses. It is currently a very popular rating system in both BC and Alberta<sup>4</sup>.

Thus there is a need in the market for a more practical green building rating system, a system that could be used on a broader domain of project types rather than being

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streamlined on a particular type of project, a system that could be less complex and more practical providing the developer with much needed experience in undertaking green projects, a system that could be more affordable than other expensive rating systems.

UBC's REAP is one such rating system that satisfies this market requirement. However till date this framework has only been implemented on the UBC Campus. UBC however sees the opportunity of promoting this framework within British Columbia thus using REAP as a tool to realize its vision of putting Sustainable Development in to practice and developing a sustainable community thus enhancing UBC's reputation as a leader in sustainability<sup>5 6</sup>.

This opportunity can be realized by developing an entirely separate department within the UBC Campus, whose sole responsibility will be to do the necessary to successfully implement and promote this concept beyond the boundaries of the UBC Campus. Effective promotional strategies will need to be implemented to raise the awareness of this concept among the developers and their potential homebuyers.

The dynamic analysis of the BC market uncovers several possible risks that REAP may encounter with time. However, based of secondary research the future prospects of promoting such a concept seems extremely intense.

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*This is not a business plan for a for-profit organization and hence does not address the issues of developing a sustainable competitive advantage or earning revenue in excess of normal returns. This Plan has been written to indicate that REAP is a viable concept which can be marketed to the developers and homebuyers, moving towards adopting sustainable developments<sup>7</sup>.*

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## **1. INTRODUCTION**

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REAP, the Residential Environmental Assessment Program, is a Green Building Rating System, which was developed for use at UBC for all types of residential buildings (low, mid and high-rise). It is a highly inexpensive rating system and provides a framework to measure sustainable building practices. One of the objectives for development of such a framework was to bring about higher quality residential constructions at UBC<sup>8</sup>. REAP guidelines aim to provide sustainable design, energy efficiency, waste management, healthy interiors and the use of local materials and high efficiency appliances and equipment that minimize water and energy waste. REAP is loosely based on the concept of LEED<sup>9</sup>. However, its implementation is much cheaper and more practical for the builders when compared with LEED. Currently the REAP framework is only implemented on the UBC Campus.

### **1.1. Vision**

REAP's Vision is in alignment with UBC's vision of putting Sustainable Development(UBC Policy # 5) into practice and modeling a responsible, engaged and sustainable community, dedicated to principles of inclusivity and global leadership and thus enhancing UBC's reputation as a leader in sustainability<sup>10 11</sup>.

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### **1.2. The Opportunity**

REAP is the perfect substitute for the green building rating systems available in the market and it overcomes their shortcomings. The continuously increasing demand of Green Buildings in the market gives UBC an opportunity to extend REAP beyond UBC campus through all types of Residential constructions from single-family houses to Multi-Storied Apartments.

### **1.3. Corporate Social Responsibility**

UBC is the first university in Canada to create a comprehensive sustainability strategy complete with 68 targets and actions. The Sustainability Office at UBC initiated and helped develop this strategy in response to the University's Sustainable Development Policy, which was put in place in 1997. The policy calls for clearly targeted action plans in all departments with the objective of improving performance in key sustainability areas. The sustainability strategy will serve as a model for institutions around the world.<sup>12</sup> Social Responsibility is hence of the highest priority.

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## **2. BENEFITS**

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### **2.1. Existing Barriers for Promotion of REAP**

The principal barriers to understanding the advantages of green rated buildings, both for developers and customers include assumptions that it costs more to build such buildings, lack of understanding of green strategies, minimal awareness of the market, steep learning curves for both developers and customers and lack of experience of the construction companies<sup>13</sup>. It is evident that lack of awareness and knowledge are the biggest impediments in promoting such concepts. This business plan aims at increasing

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the understanding of REAP by overcoming these barriers and creating demand for the product, thus achieving economies of scale.

## **2.2. Advantages of REAP**

*Developer Advantages:* With the rising surge in the demand for Green Buildings in the BC Market, developers who are early adopters of REAP can gain an early-mover advantage in meeting the growing market demands<sup>14</sup>. Also adopting REAP will help the developers in being perceived as a socially responsible developer involved in high quality projects, thus building their brand image<sup>15</sup>. The employment of REAP will reduce water and wind erosion along with the sedimentation of waterways during construction, thus minimizing the developers' losses<sup>16</sup>. REAP's mandatory requirement of installation of Energy Star Products benefit the developers as BC Hydro offers rebates on ENERGY STAR labeled windows<sup>17</sup>. Canada's Commercial Building Incentive Program (CBIP) also provides incentives to developers of Green Building projects, depending on the level of implementation of the chosen framework.

REAP is a simplified version of LEED which can be applied to all types of residential buildings. Assuming that the City of Vancouver will mandate LEED as their green baseline for buildings greater than four stories tall, adopting REAP as a framework for projects can give the developers much needed experience in the implementation of Green Building development projects.

*Customer Advantages:* Though the costs of REAP certified apartments might be slightly higher; customers will benefit from the long-term advantages, which equate with healthy environments, improved performance of the building and multiple bottom line benefits. Customers will gain economic benefits since efficient energy and water saving strategies

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will yield savings on operating costs. Indoor environmental quality strategies such as better thermal control, day lighting and better overall quality will minimize the chances of sick building syndrome and callbacks<sup>18</sup>. Such buildings will also permanently reduce watershed pollution and storm water runoff. Additionally, these buildings will place reduced demand on community infrastructure for power generation, sewage conveyance and potable water<sup>19</sup> thus reducing the maintenance cost of the customers and giving them community benefits.

### **2.3. Energy Simulation Results**

EnerSys Analytics Inc. (EnerSys) conducted an Energy Performance Workshop session for a typical Multiunit Residential Building (MURB) on the UBC campus. A simulation of the application of a particular set of energy measures (based on REAP) on the typical MURB resulted in savings of \$10382 (21.8%) on the annual energy bill<sup>20</sup> (*Refer Exhibit 2.3.1 and Exhibit 2.3.2 for Simulation Results and Economic Analysis*).

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## **2. REAP ORGANIZATION**

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Currently there is only a single part time employee who is working for REAP at the Sustainability Office. In order to promote this concept outside the UBC Campus, a team will have to be developed which will work towards achieving this goal.

### **3.1. Organizational Structure**

The organization will be structured according to three functional areas: sustainability, marketing and operations (*Refer Exhibit 3.1.1*). The Sustainability Green Building Specialist heading the Sustainability Division will plan, coordinate and direct the implementation of REAP; coordinate the required actions with the UBC Properties Trust

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and UBC Sustainability Office; and approve the proposals of the Marketing Officer and the Operating Officer. The Sustainability Specialist will also periodically review the rating system; develop the Monitoring and Evaluation Plan; control projects' performance (their progress, costs and quality); conduct impact analysis; and prepare technical reports. The Operations Officer heading the Operations Division will be responsible for the budget planning and oversee and conduct the financial analysis; plan, coordinate and carry out the activities related with the certification process; and coordinate and supervise the work of the University of British Columbia students in charge of the Management Information System design, implementation and upgrading. A Civil Engineer will also work in the Operations Division in coordination with the Sustainability Specialist and will be in charge of assessing the developers' compliance with the requirements of the REAP system. The Communications Officer heading the Marketing Division will plan and implement the marketing and communication activities related to website, publications, expos, seminars and workshops<sup>21</sup>.

### **3.2. Culture**

The REAP Organization will bring together leaders from different sectors of the building industry to progress in its vision of modeling a responsible, engaged and sustainable community. The culture in the organization will be member-driven, transparent, committed to openness thus balancing every aspect of operations and organization<sup>22</sup>. The commitment of the team to its vision will provide the solid foundation on which the REAP culture will be based. The environment at the organization must develop a Communal Culture<sup>23</sup>, which is high on both solidarity and sociability.

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## 4. OPERATIONS

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### 4.1. Procedure for REAP certification

Presently all REAP certifications for developments on the UBC Campus are carried out at the Sustainability Office using the REAP guidelines (*Refer Exhibit 4.1.1*). After the implementation of the suggested organizational structure, all REAP certifications will be facilitated through the REAP Office which will work closely with UBC Properties Trust. Developers will need to follow a set of procedures to acquire the REAP certification. Initially the developers will be required to submit a sustainability statement outlining the way in which they will adopt REAP in their construction. The Developer's project architect will then have to submit a REAP checklist verifying their compliance with the program and identifying the initiatives they will undertake in their development, to the REAP Office. He will then have to design and discuss any changes if required with the Sustainability and Operating Division. The Developer will then finalize the design, material and systems to be used in the project and submit a letter of proof to the REAP Office. The REAP Office will then determine the Certification Level of the Project based on number of points granted to the project (*Refer Exhibit 4.1.2*). Also if the project undertaken is at UBC then the developer will have to submit a Construction Site and Safety Plan and a Truck Management Plan in accordance with the terms and conditions of UBC Property and Community, to the REAP office (*Refer Exhibit 4.1.3*). Once the project commences, the Civil Engineer at REAP Office will monitor the implementation of the proposed Project Plan. Once the Project is completed as per the plan, the REAP Certification is issued to the Developer. For developments off the UBC Campus, a fixed Certification fee is charged to the developer by the REAP Office.

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#### **4.2. Management Information System for Monitoring and Evaluation**

REAP will set up a Monitoring and Evaluation System that will assess the progress of the activities of each building project with respect to REAP's internal procedures and the stage of project execution. This assessment will then be utilized to measure the financial, economic and social benefits involved for each of these projects. This will be achieved by incorporating the various frameworks already available in the market into the system to assess these benefits. This component is key for the business from two perspectives. Firstly, it will effectively aid project management since it facilitates the operation of the building projects, contributes to improving the quality of their execution and helps to achieve the desired impact. Secondly, the system will provide an outlet for accountability to stakeholders in the REAP supply chain: the donors, developers, building consumers and society, who want to attain specific objectives with the implementation of the project. The Monitoring and Evaluation component requires a Management Information System whose development, implementation and upgrading will be coordinated by the operations officer who will be in charge of a team of six students from the University of British Columbia who specialize in the following areas: Sustainability (from the Sauder School of Business), Management and Information Systems (also from Sauder), and Computer Science. Each area will be given the respective project specifications and deadlines, and two meetings a month will be held for retro alimentation between areas. Even though this alternative requires more time for getting results than by appropriating any existing software, it is more flexible and specific for the organization's needs and represents a very low cost since it is taking advantage of the skilled human resource that the university possesses. The process of design and implementation of the Management

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Information System for Monitoring and Evaluation includes the following activities, which will be carried out in constant coordination and teamwork with the sustainability expert and the six students designated: 1) determine the information needs of the organization and their purpose; 2) determine the inputs and outputs of information and how it will be processed; 3) decide on equipment requirements; 4) carry out the installation of hardware; 5) develop the systems' design based on the information and communication needs of the organization; 6) proceed with the programming of software applications; 7) test the system and make improvements needed; and 8) provide users with training on the system.

In addition, the Management Information System will periodically receive maintenance and will be upgraded when necessary by students from the Computer Science program at UBC. The implementation of this system is estimated to take around 3 months.

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## **5. MARKETING**

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### **5.1. External analysis – Porter's 5 Forces Analysis**

**Potential Entrants:** A new entrant would be any new Green Building Rating System. The main barrier to entry in this industry is professionalism. Any potential entrant who wants to develop a new rating system would have a certain level of expertise in the green building construction industry.

**Substitutes:** The available substitutes for the customers would be non-green (regular) buildings, which are prevailing in the market. The substitutes have adequate power since they are cheaper and also because the homebuyers are still not completely aware of the benefits of such Green Certified Buildings.

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**Customer's Concern:** Customers are more concerned with how early their investment will pay off. However there is also a growing desire among customers to minimize their footprint on the environment in whichever possible way.

**Developer's Concern:** The developers are skeptical about the development of such green projects, not knowing whether customers would be willing to pay the additional costs.

**Industry Competitors:** Such a competition is termed "Standard Competition". If REAP needs to make its presence felt in the BC market, the toughest competition it will face will be from LEED, which is currently the most reputed and popular standard being adopted in North America for development projects exceeding four floors (*Refer Exhibit 5.1.1*). Hence REAP will need to position itself as a simpler and cheaper version of LEED, specifically for residential projects that are four storied or lesser.

## **5.2. Secondary Research**

James Hogan and Associates, Inc. released a survey at Globe 2006 showing findings concerning people's perception of sustainability. The results indicated that 92% of Canadians surveyed agree that Canada should phase in mandatory standards requiring all new buildings and appliances to deliver 50% more energy efficiency within 10 years; 89% approve of meeting 100% of Canada's new electricity needs through conservation measures or renewable clean energy<sup>24</sup>. This rising concern for sustainability assures that the movement towards green development will gain momentum with time.

## **5.3. Segmentation**

The growing image of BC as the most livable place on the planet is subsequently booming its real estate prices. The developers charge an average price of CAD\$700,000 for a 1200 sq. ft. non-green apartment in the Point Grey region. At such prices, the

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majority of developers are targeting to sell their apartments to high end affluent customers who are both health and environment conscious and do not mind spending a little bit extra to acquire an apartment in a green certified building. Since the REAP framework has been successfully implemented than any other framework in BC on buildings that are four storied or less more, the REAP office will mainly concentrate on promoting REAP across this segment. REAP's target segment would include both developers, who target such apartment buildings for affluent customers who are more concerned about the environmental and community benefits than the economical benefits, and also the customers who belong to this particular group, both groups being early adopters of the green development concept<sup>25</sup>.

#### **5.4. Value Proposition**

*For developers - "To provide a convenient economical green building framework that can be applied across all categories of residential units"*

*For customers - "To provide the eco-friendly health conscious populace with a trusted evaluation system guaranteeing them environmentally responsible, low energy consuming and high quality living."*

#### **5.5. Eco-labeling**

Eco-labeling is the practice of branding the environmental qualities of a product or system so that consumers can more easily make environmentally based decisions. Eco-labels in the construction industry will facilitate the customers with an assessment standard used for decision making. So REAP can be promoted such that it becomes a potential eco-label for Residential Buildings<sup>26</sup>.

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## **5.6. Promotional Strategies**

An effective mix of marketing strategies will edify the target developers and homebuyers about the benefits of REAP.

*Push Strategy:* Professors at UBC and employees at the REAP office, having proficiency in REAP and sustainable development concepts, will be involved in delivering seminars to developers and educating them the benefits of implementing REAP. These seminars are expected to encourage developers to adopt REAP consequently pushing the developers to market this concept to their potential customers.

*Pull Strategy:* The participation of REAP Office in various Public Relation Events will increase awareness of REAP in the market. With time the growing awareness of the benefits of the concept among the homebuyers will develop a growing demand for REAP Certified Apartments. Homebuyers interested in the concept will go to the developers and find out if they are using REAP, thus encouraging the developers to implement REAP and promoting the concept even further.

## **5.7. Expositions**

The REAP office will take part in Construct Canada Expo which takes place every November in Toronto. It is a three-day event and is Canada's largest annual exposition of products, technologies and systems used in high-rises, residential and building commercials. This event will help REAP to network with the 23,000 attendees<sup>27</sup>. The Senior Sustainability Green Building Specialist and Communications Officer can coordinate with Construct Canada to conduct seminars and presentations to spread REAP awareness to high-end customers and high profile builders. In addition to educating and making people aware of green buildings, REAP office plans to set up a stall in a 300 sq.

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ft. area at this Expo where detailed procedures to apply for REAP certification, its levels and charges to developers will be provided. The REAP office will also take part in the HomeBuilders & Renovator Expo which takes place every February in Vancouver. This focus at this event will be spreading awareness in the local market by delivering seminars<sup>28</sup>.

### **5.8. Website**

The REAP office will host a new website [www.reap.ubc.ca](http://www.reap.ubc.ca) (this URL is currently unregistered) exclusive to the website for the Sustainability Office. The development and maintenance of this website will be outsourced as a project to Computer Science Students at UBC. The website will contain every detail about the concept of REAP. It will also provide an Event Calendar, containing information of Expos, PR Events and Seminars chalked out for the year and an Online Registration System, providing developers and homebuyers the facility to register for various events conducted by the REAP Office. Secondary market research<sup>29</sup> revealed that 59% of the developers believe that “Independent validation of costs and benefits of green buildings” and “ More case study descriptions of successful projects” can most effectively promote advantages of sustainability”. In accordance with these findings, the Communication Officer at REAP will upload the MIS generated costs and benefits reports for successful REAP projects on to the REAP website so that both developers and homebuyers can make any required analysis.

### **5.9. Publications**

Promotion of REAP is planned through advertisements in popular magazines targeted at elite customer base (Green Horizon<sup>30</sup>) and the developers targeting these customers

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(Green Builder Magazine<sup>31</sup>) twice a year in May and December. The advertisements in Green Horizon will concentrate on describing the economic, environmental and social benefits of dwelling in REAP certified buildings while the advertisements in Green Builder Magazine will concentrate on describing the benefits of REAP over the other Green Building Rating Systems. These advertisements will also provide links to the REAP website where people can go and validate the costs and benefits of various successful REAP projects.

#### **5.10. The Marketing Calendar**

The Annual Marketing Planning will be conducted in January. The marketing activities will commence by providing the first seminar for developers which will include distribution of REAP brochures containing the Rating system details. By participating and delivering seminars at HomeBuilder & Renovator Expo in Vancouver, REAP will promote itself in the local market in the month of February. In March REAP office will deliver another seminar to developers to make them aware of the new trends in Construction Industry and ways to fetch benefits from REAP. Since June is the month for weddings, the REAP team will hold PR events two months in advance to educate the potential home buyers on the benefits of REAP certified buildings so that they might be able to take that into consideration while making their home buying decisions. In May, the REAP team will start advertising in both developer and homebuyer magazines to raise awareness of the concept. Another seminar, mainly concentrating on the Cost Benefit Analysis, would be held for developers in July. The interim planning will be conducted in July as well to confirm if the activities are being conducted as per the initial plan and also to incorporate changes if required. The REAP team will hold another PR

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event in September since this is the time when college freshmen leave home. This is generally the time when parents might be thinking of finding new accommodations. The biggest activity for the year would be the Construct Canada Expo in Toronto, held in November 2007. This is the premium expo for green builders and experts to exchange ideas. At the end of the first year, in December, the REAP team will again advertise the concept in both developer and homebuyer magazines to strengthen the awareness that they have created (*Refer Exhibit 5.10.1 for Marketing Calendar*).

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## **6. FINANCIAL PLAN - REAP 2007-2010**

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### **6.1. Market And Sales Forecast Of Certifications**

Canada Green Building Council (CaGBC) forecasts an annual growth of 1.5% in residential green building constructions between 2005 and 2008. Between 2000 and 2004 British Columbia LEED has been in charge of 64 out of 112 LEED projects in Canada. Since its implementation in 2000, LEED projects in Canada have increased by more than 50% every year<sup>32</sup>. Based on these figures and considering the potential impact of the promotion activities of this business plan, it is assumed that REAP will be able to get 3 projects during the last six months of the first year of its implementation. For the subsequent three years REAP will get almost 4 projects each year. There is also an expected tendency that customers tend to opt for higher rating categories than the previous year. (*Refer Exhibit 6.1.1 for Target Market Forecast*)

#### **6.1.1. Revenue**

Revenue will be generated from Certifications and Consultation.

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***Certification Charges:*** As REAP has been mandated at the UBC campus, the developers implementing it are not charged for certification, but construction outside the UBC campus will be charged. Charges for Platinum, Gold, Silver, Bronze and Basic Level Certification will be \$30,000, \$25,000, \$20,000, \$15,000 and \$10,000 respectively.

*(Refer Exhibit 6.1.1.1 for Sales Forecast)*

***Consultation Charges:*** REAP's Communications Officer and Senior Sustainability Green Building Specialist will be involved in providing paid consultations to developers interested in learning about REAP, or to developers interested in implementing certain green building techniques without going for the entire certification. Consultation charges would be \$120 per hour<sup>33</sup>. In the first three months consultation is expected to be 10 hours per month, an amount which is expected to grow by 5 hours every three months.

### **6.1.2. Expenses**

For the projected four years, it is assumed there will be no further expansion; hence the yearly fixed expenses will remain constant. The rates of inflation are not considered for the estimations. *(Refer Exhibit 6.1.2.1 for Expenses Details)*

***Personnel expenses:*** During the first six months of operations, only the sustainability expert and the marketing officer will be employed at the REAP office. The operations officer and the civil engineer will be contracted from the seventh month of 2007. During the next three years REAP will maintain the same organizational structure. The personnel cost for part time employees at REAP includes salary and employee benefits. All the four Officers will each receive a package of \$20,000 per annum<sup>34</sup>(20 hours/week).

***Marketing expenses:*** These expenses include the costs of publications, expos, seminars and costs of publishing brochures for PR events. Advertisement costs to publish in

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customer and builder magazines are \$1,980<sup>35</sup> and \$5,500<sup>36</sup> respectively. The cost of printing 5,000 double folded brochures is \$500<sup>37</sup> and postage charges are assumed to be approximately \$70 per month. There is no cost in delivering seminars at HomeBuilders & Renovators Expo since the event is held in Vancouver and there are no participation charges. The Expo organized by Construct Canada is in Toronto, where the exhibit fee is \$27 per sq. ft.<sup>38</sup>. REAP is expected to exhibit in a 300 sq. ft. block. The total expenditure for the Toronto trip will be approximately \$10100 (Air Fare and 4 Night Stay<sup>39</sup> = \$1800, Traveling and Food Expenses = \$200 and Exhibit Fee<sup>40</sup> = \$8100). The total expenditure on each seminar (approximately 4 hours) assuming an attendance of 10 is approximately \$500 (Food and Snacks per Person<sup>41</sup> = \$10, Guest Speaker Charges per hour = \$50 and Site Charges per hour = \$50). REAP's participation in the PR events will involve only distribution of REAP brochures and hence will not incur any expenses. Since the development and maintenance of both the Website and the MIS system will be outsourced as projects to UBC students, there will not be any associated charges.

***Supplies and Insurance:*** Based upon the figures for the centrally managed functions of the 2006-2007 budget summary book of the University of British Columbia, the supplies expenses and the property insurance expenses constitutes around 3% and 1% respectively of the personnel expenses. These percentages were considered for the estimations.

## **6.2. Financial Statements**

The following factors and assumptions are included in the financial statements.

### **6.2.1. Income Statement**

*(Refer Exhibit 6.2.1.1.a and Exhibit 6.2.1.1.b for Projected Income Statements for years 2007-2010)*

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**Revenues:** As a non-profit organization of the Sustainability Office at UBC, REAP office relies on financial support from this department, complemented by revenues from certifications and consulting services. In addition to the revenues generated from certifications and consultations, a contribution of \$20,000 (unrestricted fund) will be received from the Sustainability Office (through UBC Properties Trust<sup>42</sup>). This funding will be continued through the next year if the REAP Office is successful in achieving its goal. Since there is no investment, there is no associated income.

**Expenses:** The personnel, marketing, supplies and insurance expenses are recorded in accordance with the matching principle of GAAP. The depreciation expense has been calculated by using the straight-line method<sup>43</sup>. The estimated useful lives of the assets are: for furniture, 5 years; and for computer equipment 3 years<sup>44</sup>.

Since UBC is a registered charity, all sub-organizations within UBC are exempt from taxes under section 149 of the Income Tax Act. Hence there will be no taxes associated with the projected finances of the REAP Office.<sup>45</sup>

### **6.2.2. Balance Sheet**

*(Refer Exhibit 6.2.2.1.a and Exhibit 6.2.2.1.b for Projected Statements of Financial Position for the years 2007-2010. Also refer Exhibit 6.2.2.2.a and Exhibit 6.2.2.2.b for Projected Statements of Cash Flows for the years 2007-2010)*

**Assets:** There is no grants receivable from the Sustainability Office at UBC. The REAP office does not hold stocks or bonds or any other investment. Insurance is considered as a prepaid expense. At the beginning of 2007, REAP will purchase \$5,000 worth of computer equipment and \$3,000 worth of furniture. There is no investment in buildings or additional furniture since the Sustainability Office at UBC will provide these to the

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REAP office at no additional costs. Accumulated depreciation calculations are based on the assumptions made in the section on depreciation expenses under the income statement. REAP does not possess any kind of collections.

**Liabilities:** Parts of expenses and parts of cost of computer equipment and furniture that cannot be paid with the available cash are considered under accounts payable. There are no grants payable and deferred revenue due to third parties and long-term debt. For non-profit organizations net assets are the difference between revenues and expenses determined from the income statement.

### **6.2.3. Financial Performance – Breakeven and Sensitivity Analysis**

*(Since the financials of this business plan can be assessed completely using the common-size statements, there is no need for calculating any specific financial ratio. Refer Exhibit 6.2.3.a and Exhibit 6.2.3.b for Common-Size Statements and Break-Even Point)*

There was no information available for similar green building agencies using which the REAP organization could be benchmarked. However, it is important that the REAP Office follows a sustainable business model for achieving its mission which does not emphasize on profit maximization. The analysis of the projected financial performance of the REAP Office indicates that their net assets will start increasing from the second half of the second year after the implementation of the activities outlined in this business plan. From the commencement of the third year, the REAP office will be able to cover its expenses without any external contribution even though it is not a requirement. The break-even point is calculated to be the maximum in the years 2008 and 2009 (years with higher estimated expenses) at \$97,300. This indicates that the REAP Office will be able

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to cover its expenses even if the estimations on the number of certifications and consultations vary. Hence it is safe to infer that most of the potential risks are covered.

The green building certification charges are the most important source of revenue for the REAP Office. However it is important to note that the consulting services generate around one third the revenue generated by the certifications. Hence it is important to monitor this activity continuously since this source has the potential to generate greater future revenues. Personnel expenses account for 80% of the total expenses, which is a common trend in these types of non-profit organizations. However, it is worth noting that even though the human resources in this organization with their increasing expertise form highly valuable assets, it is not reflected on the financial statements. From the second half of the second year, the REAP Office will start generating cash from its activities and will not have anything under accounts payable and will also not have to rely on any debt. Hence, if the market behavior is in line with the projected estimations, the REAP office will be capable to expand further. The office will also be capable then to opt for acquiring any mode of leverage for its growth.

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## **7. RISKS AND CONTINGENCY**

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*The LEED Threat:* The City of Vancouver (COV) has almost decided on mandating LEED as their green baseline for buildings greater than four stories tall from 2007<sup>46</sup>. LEED has already come out with a framework, which can be applied across residential buildings, which are smaller than four stories tall. If LEED is successful in promoting this framework more than REAP, there is a possibility that the COV might mandate LEED as their green baseline for buildings smaller than four stories tall in subsequent years. The occurrence of this event can completely cease REAP's prospects.

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*Crash in the Real Estate Market:* Though the BC real estate market is currently booming, a sudden crash in the market for a significant length of time might highly discourage the developers from adopting any practice that increases the construction costs.

*Growing cost sensitivity in the potential market:* The cost of real estate is going up at a very rapid rate in BC. Hence assuming that this current trend continues for a subsequent period of time, there is a possibility that even the elite affluent customers (the current majority of REAP's target segment) may become more cost sensitive and start avoiding any additional costs in the apartments they purchase.

*Technological Difficulties:* The lack of funds will force the REAP office to outsource the development and maintenance of both the Website and the MIS system as projects to UBC students. Hence due to the lack of expertise, there is a high risk that both the MIS system and website might not live up to the required standards. This will prove to be detrimental in the efforts to promote REAP.

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## **8. FUTURE PROSPECTS**

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COV is currently in the process of developing a Green Building Strategy that would ultimately set green baselines for all types of construction in Vancouver. Currently the focus is on mandating a rating system for buildings bigger than four stories tall and after that their focus will shift to buildings smaller than four stories tall and then single family houses. Hence they are currently in a lookout for a rating system that could be applied across all types of construction<sup>47</sup>. If REAP is able to gain the potential market share it is expected to gain, it can well and truly be in contention to be mandated as the green baseline for buildings smaller than four stories tall by COV.

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## APPENDIX

**Exhibit 2.3.1: Stimulation Results**

Customer Usage	Natural Gas		Electricity		Total Costs		Energy Savings	
	\$	Savings	\$	Savings	\$	Savings	GJ	Savings
Cooling	-	-	-	-	-	-	-	-
Heating	6039	10.30%	9004	17.50%	15043	14.80%	985	14.70%
Lights	-	-	8537	0.00%	8537	0	484	0.00%
Equipment	-	-	5097	16.40%	5097	16.40%	279	17.60%
Fans	-	-	1506	0.10%	1506	0.10%	65	0.20%
Refrigerator	-	-	-	-	-	-	-	-
External Lights	-	-	1320	29.30%	1320	29.30%	54	37.50%
Elevator	-	-	1054	0.00%	1054	0.00%	39	0.00%
DHW	4748	56.70%	-	-	4748	56.70%	370	57.40%
Cooking	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>10787</b>	<b>39.10%</b>	<b>26518</b>	<b>11.60%</b>	<b>37305</b>	<b>21.80%</b>	<b>2277</b>	<b>25.10%</b>
<b>Total Savings (\$)</b>	<b>6917</b>		<b>3466</b>		<b>10382</b>		<b>761.3</b>	
<b>Fuel Savings</b>	555GJ		57.3 MWh				-	

**Exhibit 2.3.2: Economic Analysis**

Incremental Costs (\$)	
Equipment & Labour	\$82,150
Annual Operations & Maintenance	\$100/Year
Cooling System	\$0/ton
Heating System	\$0/kBtuh
Fans and Pumps	\$0/hp
Net Savings/Year	\$10,382
Net Capital Cost	\$82,150
<b>Payback at 7% = 9.7 Years</b>	

**Exhibit 3.1.1: Organizational Structure of REAP**



**Exhibit 4.1.1: REAP Grading System<sup>48</sup>**

REAP assesses the performance of each Developer on a number of points granted to his Project.

Certification Levels	Points Required
Basic Compliance	66 – 79
Bronze Level	80 – 109
Silver Level	110 – 139
Gold Level	140 – 169
Platinum Level	170 – 200

**Exhibit 4.1.2: Residential Environmental Assessment Program<sup>49</sup>**

<b>Description</b>	<p>1. Categories: Sustainable Sites; Water Efficiency; Energy &amp; Atmosphere; Materials and Resources; Indoor Environmental Quality; Construction; Innovation &amp; Design Process.</p> <p>2. Range of performance levels offered: Basic compliance(66 points) to Gold or Platinum.</p> <p>3. Additional points can be earned in any of the performance categories, with no minimums or maximums.</p>
<b>Energy &amp; Atmosphere</b>	<p><b>Required:</b> Meet minimum wall (R-14), roof (R-28) and floor (R-14) insulation values; energy efficient windows (Energy Star or U-value of 0.35 or less); furnaces with 80% efficiency; domestic hot water boilers with 80% efficiency or electric heaters with energy factor of 0.90 or higher; low-flow showerheads max 8.5 L/min.</p> <p><b>Optional:</b> Higher performance values for envelope assemblies, windows, air and water heating, showerheads, and lighting; occupancy sensors for parkades; gas submetering; heat recovery system; geexchange hot water heating system.</p>
<b>Water Efficiency</b>	<p><b>Required:</b> High efficiency irrigation technology or a temporary irrigation system; low-flow toilets (max 6L) and sink faucets (bathroom max 3.8L/min; kitchens 6.8L/min).</p> <p><b>Optional:</b> Reduce by 50% or eliminate use of potable water for irrigation (100% reduction); dual or ultralow-flow toilets; water efficient appliances; additional point for installing all three of dual-flush toilets, dishwashers and clothes washers; provide hot and/or cold water metering in all units.</p>
<b>Indoor Environmental Quality</b>	<p><b>Required:</b> Adhesives and sealants meet EcoLogo criteria for VOC limits or the State of California standard; paints with EcoLogo certification or Master Painter’s Institute Level 2; floor coverings meet Carpet and Rug Institute Green Label IAQ test program or EcoLogo criteria</p> <p><b>Optional:</b> Low VOC paints are Master Painter Institute Level 3; urea formaldehyde-free cabinetry; urea formaldehyde-free composite wood products.</p>
<b>Materials and Resources</b>	<p><b>Required:</b> None</p> <p><b>Optional:</b> Reused building materials (either 5% or 10% of total cost); 20% of the materials by cost are locally manufactured; of the locally manufactured materials, 50% are also locally harvested, extracted or salvaged; rapidly renewable flooring (i.e. bamboo) or FSC/CSA hardwood flooring.</p>
<b>Sustainable Sites</b>	<p><b>Required:</b> Storm water management plan; drought tolerant and pest resistant planting; bicycle parking/storage; funding a community car-sharing vehicle or dedicating a parking stall for car-sharing; light pollution reduction meeting IESNA illuminance requirements.</p> <p><b>Optional:</b> Recycling and composting systems; designated parking spaces and adequate power service for electric vehicle recharging; providing a new vehicle and a parking space to a car-sharing network.</p>
<b>Construction</b>	<p><b>Required:</b> Staging and construction plan; vegetation safeguards and diverting debris from landfill; truck management plan; wheel wash; site sediment and erosion control plan; waste management plan.</p> <p><b>Optional:</b> Indoor air quality management plan; preoccupancy flushout or conduct a baseline indoor air quality test.</p>
<b>Innovation and Design Process</b>	<p><b>Required:</b> Goal setting workshop.</p> <p><b>Optional:</b> Green building specialist; energy performance screening; energy modeling workshop; designing for safety, accessibility, security and crime prevention; educating sales staff and homeowners; research collaboration with UBC students and faculty.</p>

**Exhibit 4.1.3: UBC Terms and Conditions for Developers<sup>50</sup>**

The Developers have to take care of the environment and the neighborhood while they construct at UBC sites. The list below shows the terms and conditions that need to be followed by the Developers, which not only take care of the UBC property and community but also keep a check on any harm caused to the environment:

**1. Construction Site Safety**

Developers are completely responsible for ensuring that construction is carried out safely. They need to ensure that the construction is limited to their assigned plot and they do not interfere in other UBC operations. They also should enclose the site with temporary fencing to avoid causing any harm even to visually impaired people.

**2. Construction site plan**

The Developer is responsible for submitting a plan for its site operations. They need to protect the trees at their site by fencing it and also provide first aid treatment immediately in case of injury by having a first aid station nearby.

**3. Noise and Tree Offenses**

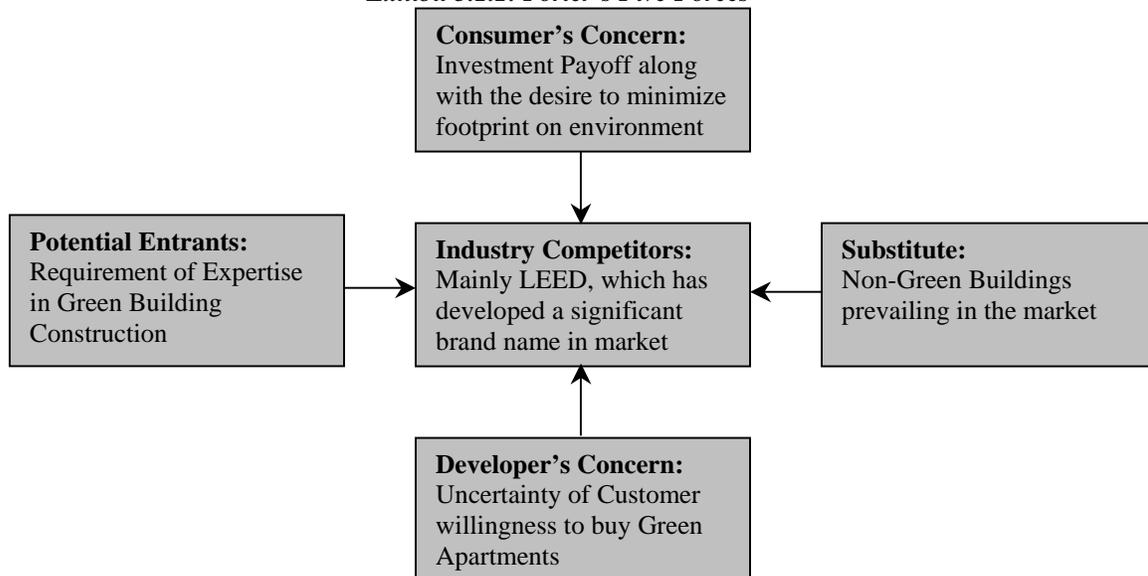
The Developer is responsible for taking care that there is no disturbance caused to the quiet, peace, or enjoyment of the rest of the public. To control this, construction is allowed from 7.00am to 7.00pm on any weekday and 9.00am to 5.00pm on Saturdays. On Sundays and statutory holidays construction is not permitted. All the trees need to be protected at UBC so any damage to a tree is an offense. The penalty for each contravention to noise or tree protection is \$1,000 for the first offense and \$2,000 for subsequent offences.

**4. Truck Management Plan**

The UBC Properties Trust's Project Management team includes a consultant with regards to construction traffic management. He is responsible for the day-to-day monitoring of trucks at construction sites through the Truck Management Plan. This will minimize the impact of truck traffic on campus.

Truck traffic is dispersed over all designated routes, such as 4th Avenue, 10th Avenue, 41st Avenue and SW Marine Drive, and truck traffic is reduced near residential areas. Truck arrivals and departures are scheduled such that the truck traffic is distributed throughout the day. If these measures are not met, the truck operators are fined. Developers are also encouraged to reuse materials and stockpile excavated materials to reduce truck traffic. Such implementations have successfully reduced truck traffic by 44%. Failure to implement the Truck Traffic Management Plan is penalized by \$1,000 for the first offence and is doubled for subsequent offences

**Exhibit 5.1.1: Porter's Five Forces**



**Exhibit 5.10.1: Marketing Calendar**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Marketing Event</b>		HomeBuilder & Renovator Expo		PR Event					PR Event		Construct Canada Expo	
<b>Marketing Activity</b>	Seminar		Seminar		Advertising in magazines		Seminar					Advertising in magazines
<b>Marketing Material</b>	Brochures		Information on New Trends	Literature for would-be weds			Information of Cost Benefit Analysis		Literature for new home buyers			
<b>Plan</b>	Annual Planning						Interim Planning					

**Exhibit 6.1.1: Financial Analysis – Target Market Forecast**

Potential Customers	Price	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Platinum	30,000												
Gold	25,000												1
Silver	20,000										1		
Bronze	15,000												
Basic	10,000							1					
<b>Total (month)</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>
<b>Total (year)</b>													<b>3</b>

Potential Customers	Price	Jan/Mar 08	Apr/Jun 08	Jul/Sep 08	Oct/Dec 08	Jan/Mar 09	Apr/Jun 09	Jul/Sep 09	Oct/Dec 09	Jan/Mar 10	Apr/Jun 10	Jul/Sep 10	Oct/Dec 10
Platinum	30,000								1				
Gold	25,000				1			1					1
Silver	20,000			1			1				1	1	
Bronze	15,000		1			1				1			
Basic	10,000	1											
<b>Total (month)</b>		<b>1</b>											
<b>Total (year)</b>		<b>4</b>				<b>4</b>				<b>4</b>			

**Exhibit 6.1.1.1: Financial Analysis – Sales Forecast**

Sales	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Platinum	-	-	-	-	-	-	-	-	-	-	-	-
Gold	-	-	-	-	-	-	-	-	-	-	-	25000
Silver	-	-	-	-	-	-	-	-	-	20000	-	-
Bronze	-	-	-	-	-	-	-	-	-	-	-	-
Basic	-	-	-	-	-	-	10000	-	-	-	-	-
<b>Total (month)</b>	-	-	-	-	-	-	<b>10000</b>	-	-	<b>20000</b>	-	<b>25000</b>
<b>Total (year)</b>												<b>55000</b>

Sales	Jan/Mar 08	Apr/Jun 08	Jul/Sep 08	Oct/Dec 08	Jan/Mar 09	Apr/Jun 09	Jul/Sep 09	Oct/Dec 09	Jan/Mar 10	Apr/Jun 10	Jul/Sep 10	Oct/Dec 10
Platinum	-	-	-	-	-	-	-	30000	-	-	-	-
Gold	-	-	-	25000	-	-	25000	-	-	-	-	25000
Silver	-	-	20000	-	-	20000	-	-	-	20000	20000	-
Bronze	-	15000	-	-	15000	-	-	-	15000	-	-	-
Basic	10000	-	-	-	-	-	-	-	-	-	-	-
<b>Total (month)</b>	<b>10000</b>	<b>15000</b>	<b>20000</b>	<b>25000</b>	<b>15000</b>	<b>20000</b>	<b>25000</b>	<b>30000</b>	<b>15000</b>	<b>20000</b>	<b>20000</b>	<b>25000</b>
<b>Total (year)</b>				<b>70000</b>				<b>90000</b>				<b>80000</b>

**Exhibit 6.1.2.1 Financial Analysis – Expense Details**

Expenses	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Personnel	3333	3333	3333	3333	3333	3333	6667	6667	6667	6667	6667	6667
Marketing	500	10100	1000	-	5550	-	500	500	-	-	10100	5550
Publications	-	-	-	-	5550	-	-	-	-	-	-	5550
Expos	-	10100	-	-	-	-	-	-	-	-	10100	-
Seminars	500	-	500	-	-	-	500	-	-	-	-	-
PR Events	-	-	500	-	-	-	-	500	-	-	-	-
Supplies	200	200	200	200	200	200	200	200	200	200	200	200
Insurance	67	67	67	67	67	67	67	67	67	67	67	67
<b>Total (month)</b>	<b>4100</b>	<b>13700</b>	<b>4600</b>	<b>3600</b>	<b>9150</b>	<b>3600</b>	<b>7433</b>	<b>7433</b>	<b>6933</b>	<b>6933</b>	<b>17033</b>	<b>12483</b>
<b>Total (year)</b>												<b>97000</b>

Expenses	Jan/Mar 08	Apr/Jun 08	Jul/Sep 08	Oct/Dec 08	Jan/Mar 09	Apr/Jun 09	Jul/Sep 09	Oct/Dec 09	Jan/Mar 10	Apr/Jun 10	Jul/Sep 10	Oct/Dec 10
Personnel	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000
Marketing	1500	5550	1500	5550	1500	5550	1500	5550	1500	5550	1500	5550
Publications	-	5550	-	5550	-	5550	-	5550	-	5550	-	5550
Expos	-	-	-	-	-	-	-	-	-	-	-	-
Seminars	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-
PR Events	500	-	500	-	500	-	500	-	500	-	500	-
Supplies	600	600	600	600	600	600	600	600	600	600	600	600
Insurance	200	200	200	200	200	200	200	200	200	200	200	200
<b>Total (month)</b>	<b>22300</b>	<b>26350</b>										
<b>Total (year)</b>				<b>97300</b>				<b>97300</b>				<b>97300</b>

**Exhibit 6.2.1.1.a: Projected Income Statement**

**Residential Environmental Assessment Program  
Comparative Projected Income Statements  
For the Years Ended December 31, 2007**

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
<b>Revenues</b>												
Contributions	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667
Program Service Revenue	-	-	-	-	-	-	10000	-	-	20000	-	25000
Other Revenues	1200	1200	1200	1800	1800	1800	2400	2400	2400	3000	3000	3000
Investment Income	-	-	-	-	-	-	-	-	-	-	-	-
Net Revenues Released from Restrictions	2867	2867	2867	3467	3467	3467	14067	4067	4067	24667	4667	29667
<b>Total Revenues</b>	<b>2867</b>	<b>2867</b>	<b>2867</b>	<b>3467</b>	<b>3467</b>	<b>3467</b>	<b>14067</b>	<b>4067</b>	<b>4067</b>	<b>24667</b>	<b>4667</b>	<b>29667</b>
<b>Expenses</b>												
Personnel	3333	3333	3333	3333	3333	3333	6667	6667	6667	6667	6667	6667
Marketing	500	10100	1000	-	5550	-	500	500	-	-	10100	5550
Supplies	200	200	200	200	200	200	200	200	200	200	200	200
Insurance	67	67	67	67	67	67	67	67	67	67	67	67
Depreciation	189	189	189	189	189	189	189	189	189	189	189	189
<b>Total Expenses</b>	<b>4289</b>	<b>13889</b>	<b>4789</b>	<b>3789</b>	<b>9339</b>	<b>3789</b>	<b>7622</b>	<b>7622</b>	<b>7122</b>	<b>7122</b>	<b>17222</b>	<b>12672</b>
<b>Increase in Net Assets</b>	<b>(1422)</b>	<b>(11022)</b>	<b>(1922)</b>	<b>(322)</b>	<b>(5872)</b>	<b>(322)</b>	<b>6444</b>	<b>(3556)</b>	<b>(3056)</b>	<b>17544</b>	<b>(12556)</b>	<b>16994</b>
Net Assets at Beginning of Year	-	(1422)	(12444)	(14367)	(14689)	(20561)	(20883)	(14439)	(17994)	(21050)	(3506)	(16061)
Net Assets at End of Year	<b>(1422)</b>	<b>(12444)</b>	<b>(14367)</b>	<b>(14689)</b>	<b>(20561)</b>	<b>(20883)</b>	<b>(14439)</b>	<b>(17994)</b>	<b>(21050)</b>	<b>(3506)</b>	<b>(16061)</b>	<b>933</b>

**Exhibit 6.2.1.1.b: Projected Income Statement**  
**Residential Environmental Assessment Program**  
**Comparative Projected Income Statements**  
**For the Years Ended December 31, 2008, 2009, 2010**

	Jan/Mar 08	Apr/Jun 08	Jul/Sep 08	Oct/Dec 08	Jan/Mar 09	Apr/Jun 09	Jul/Sep 09	Oct/Dec 09	Jan/Mar 10	Apr/Jun 10	Jul/Sep 10	Oct/Dec 10
<b>Revenues</b>												
Contributions	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Program Service Revenue	10000	15000	20000	25000	15000	20000	25000	30000	15000	20000	20000	25000
Other Revenues	3600	5400	7200	9000	3600	5400	7200	9000	3600	5400	7200	9000
Investment Income	-	-	-	-	-	-	-	-	-	-	-	-
Net Revenues Released from Restrictions	18600	25400	32200	39000	23600	30400	37200	44000	23600	30400	32200	39000
<b>Total Revenues</b>	<b>18600</b>	<b>25400</b>	<b>32200</b>	<b>39000</b>	<b>23600</b>	<b>30400</b>	<b>37200</b>	<b>44000</b>	<b>23600</b>	<b>30400</b>	<b>32200</b>	<b>39000</b>
<b>Expenses</b>												
Personnel	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000
Marketing	1500	5550	1500	5550	1500	5550	1500	5550	1500	5550	1500	5550
Supplies	600	600	600	600	600	600	600	600	600	600	600	600
Insurance	200	200	200	200	200	200	200	200	200	200	200	200
Depreciation	567	567	567	567	567	567	567	567	150	150	150	150
<b>Total Expenses</b>	<b>22867</b>	<b>26917</b>	<b>22867</b>	<b>26917</b>	<b>22867</b>	<b>26917</b>	<b>22867</b>	<b>26917</b>	<b>22450</b>	<b>26500</b>	<b>22450</b>	<b>26500</b>
<b>Increase in Net Assets</b>	<b>(4267)</b>	<b>(1517)</b>	<b>9333</b>	<b>12083</b>	<b>733</b>	<b>3483</b>	<b>14333</b>	<b>17083</b>	<b>1150</b>	<b>3900</b>	<b>9750</b>	<b>12500</b>
Net Assets at Beginning of Year	933	(3333)	(4850)	4483	16567	17300	20783	35117	52200	53350	57250	67000
Net Assets at End of Year	(3333)	(4850)	4483	16567	17300	20783	35117	52200	53350	57250	67000	79500

*Exhibit 6.2.2.1.a: Projected Statements of Financial Position*

*Residential Environmental Assessment Program  
Comparative Projected Statements of Financial Position  
For the Years Ended December 31, 2007*

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
<b>Assets</b>												
Cash	-	-	-	-	-	-	-	-	-	-	-	-
Grants Receivable (net)	-	-	-	-	-	-	-	-	-	-	-	-
Investments	-	-	-	-	-	-	-	-	-	-	-	-
Prepaid Expenses	733	667	600	533	467	400	333	267	200	133	67	-
Property, Plant and Equipment.	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000
Accumulated depreciation	189	378	567	756	944	1133	1322	1511	1700	1889	2078	2267
Collections	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Assets</b>	<b>8544</b>	<b>8289</b>	<b>8033</b>	<b>7778</b>	<b>7522</b>	<b>7267</b>	<b>7011</b>	<b>6756</b>	<b>6500</b>	<b>6244</b>	<b>5989</b>	<b>5733</b>
<b>Liabilities and Net Assets</b>												
<b>Liabilities</b>												
Accounts Payable	9967	20733	22400	22467	28083	28150	21450	24750	27550	9750	22050	4800
Grants Payable	-	-	-	-	-	-	-	-	-	-	-	-
Defered revenue	-	-	-	-	-	-	-	-	-	-	-	-
Due to Third Parties	-	-	-	-	-	-	-	-	-	-	-	-
Long Term Debt	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Liabilities</b>	<b>9967</b>	<b>20733</b>	<b>22400</b>	<b>22467</b>	<b>28083</b>	<b>28150</b>	<b>21450</b>	<b>24750</b>	<b>27550</b>	<b>9750</b>	<b>22050</b>	<b>4800</b>
<b>Net Assets</b>												
Unrestricted	(1422)	(12444)	(14367)	(14689)	(20561)	(20883)	(14439)	(17994)	(21050)	(3506)	(16061)	933
Temporarily Restricted	-	-	-	-	-	-	-	-	-	-	-	-
Permanently Restricted	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Net Assets</b>	<b>(1422)</b>	<b>(12444)</b>	<b>(14367)</b>	<b>(14689)</b>	<b>(20561)</b>	<b>(20883)</b>	<b>(14439)</b>	<b>(17994)</b>	<b>(21050)</b>	<b>(3506)</b>	<b>(16061)</b>	<b>933</b>
<b>Total Liabilities and Net Assets</b>	<b>8544</b>	<b>8289</b>	<b>8033</b>	<b>7778</b>	<b>7522</b>	<b>7267</b>	<b>7011</b>	<b>6756</b>	<b>6500</b>	<b>6244</b>	<b>5989</b>	<b>5733</b>

**Exhibit 6.2.2.1.b: Projected Statements of Financial Position**

**Residential Environmental Assessment Program  
Comparative Projected Statements of Financial Position  
For the Years Ended December 31, 2008, 2009 and 2010**

	Jan/Mar 08	Apr/Jun 08	Jul/Sep 08	Oct/Dec 08	Jan/Mar 09	Apr/Jun 09	Jul/Sep 09	Oct/Dec 09	Jan/Mar 10	Apr/Jun 10	Jul/Sep 10	Oct/Dec 10
<b>Assets</b>												
Cash	-	-	250	13100	13800	18050	33150	51000	51700	55950	66050	78900
Grants Receivable (net)	-	-	-	-	-	-	-	-	-	-	-	-
Investments	-	-	-	-	-	-	-	-	-	-	-	-
Prepaid Expenses	600	400	200	-	600	400	200	-	600	400	200	-
Property, Plant and Equipment.	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000
Accumulated depreciation	2833	3400	3967	4533	5100	5667	6233	6800	6950	7100	7250	7400
Collections	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Assets</b>	<b>5767</b>	<b>5000</b>	<b>4483</b>	<b>16567</b>	<b>17300</b>	<b>20783</b>	<b>35117</b>	<b>52200</b>	<b>53350</b>	<b>57250</b>	<b>67000</b>	<b>79500</b>
<b>Liabilities and Net Assets</b>												
<b>Liabilities</b>												
Accounts Payable	9100	9850	-	-	-	-	-	-	-	-	-	-
Grants Payable	-	-	-	-	-	-	-	-	-	-	-	-
Deferred revenue	-	-	-	-	-	-	-	-	-	-	-	-
Due to Third Parties	-	-	-	-	-	-	-	-	-	-	-	-
Long Term Debt	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Liabilities</b>	<b>9100</b>	<b>9850</b>	<b>-</b>									
<b>Net Assets</b>												
Unrestricted	(3333)	(4850)	4483	16567	17300	20783	35117	52200	53350	57250	67000	79500
Temporarily Restricted	-	-	-	-	-	-	-	-	-	-	-	-
Permanently Restricted	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Net Assets</b>	<b>(3333)</b>	<b>(4850)</b>	<b>4483</b>	<b>16567</b>	<b>17300</b>	<b>20783</b>	<b>35117</b>	<b>52200</b>	<b>53350</b>	<b>57250</b>	<b>67000</b>	<b>79500</b>
<b>Total Liabilities and Net Assets</b>	<b>5767</b>	<b>5000</b>	<b>4483</b>	<b>16567</b>	<b>17300</b>	<b>20783</b>	<b>35117</b>	<b>52200</b>	<b>53350</b>	<b>57250</b>	<b>67000</b>	<b>79500</b>

**Exhibit 6.2.2.2.a: Projected Statements of Cash Flows**

**Residential Environmental Assessment Program  
Comparative Projected Statements of Cash Flows  
For the Years Ended December 31, 2007**

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
<b>Operations</b>												
Increase in Net Assets	(1422)	(11022)	(1922)	(322)	(5872)	(322)	6444	(3556)	(3056)	17544	(12556)	16994
(+) Depretiation expenses	189	189	189	189	189	189	189	189	189	189	189	189
(-) Change Current Assets	733	(67)	(67)	(67)	(67)	(67)	(67)	(67)	(67)	(67)	(67)	(67)
(+) Change Current Liabilities *	-	-	-	-	-	-	-	-	-	-	-	-
Cash	(1967)	(10767)	(1667)	(67)	(5617)	(67)	6700	(3300)	(2800)	17800	(12300)	17250
<b>Investment</b>												
(-) Property, plant ans equipment	8000	-	-	-	-	-	-	-	-	-	-	-
Cash	8000	-	-	-	-	-	-	-	-	-	-	-
<b>Financing</b>												
(+) Change Liabilities	9967	10767	1667	67	5617	67	(6700)	3300	2800	(17800)	12300	(17250)
Cash	9967	10767	1667	67	5617	67	(6700)	3300	2800	(17800)	12300	(17250)
<b>Change in Cash</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Cash</b>	-	-	-	-	-	-	-	-	-	-	-	-

**Exhibit 6.2.2.2.b: Projected Statements of Cash Flows**

**Residential Environmental Assessment Program  
Comparative Projected Statements of Cash Flows  
For the Years Ended December 31, 2008, 2009 and 2010**

	Jan/Mar 08	Apr/Jun 08	Jul/Sep 08	Oct/Dec 08	Jan/Mar 09	Apr/Jun 09	Jul/Sep 09	Oct/Dec 09	Jan/Mar 10	Apr/Jun 10	Jul/Sep 10	Oct/Dec 10
<b>Operations</b>												
Increase in Net Assets	(4267)	(1517)	9333	12083	733	3483	14333	17083	1150	3900	9750	12500
(+) Depretiation expenses	567	567	567	567	567	567	567	567	150	150	150	150
(-) Change Current Assets	600	(200)	(200)	(200)	600	(200)	(200)	(200)	600	(200)	(200)	(200)
(+) Change Current Liabilities *	-	-	-	-	-	-	-	-	-	-	-	-
Cash	(4300)	(750)	10100	12850	700	4250	15100	17850	700	4250	10100	12850
<b>Investment</b>												
(-) Property, plant ans equipment	-	-	-	-	-	-	-	-	-	-	-	-
Cash	-	-	-	-	-	-	-	-	-	-	-	-
<b>Financing</b>												
(+) Change Liabilities	4300	750	(9850)	-	-	-	-	-	-	-	-	-
Cash	4300	750	(9850)	-	-	-	-	-	-	-	-	-
<b>Change in Cash</b>	-	-	250	12850	700	4250	15100	17850	700	4250	10100	12850
<b>Cash</b>	-	-	250	13100	13800	18050	33150	51000	51700	55950	66050	78900

*Exhibit 6.2.3.a: Common-Size Statements and Break-Even Point*

**Residential Environmental Assessment Program  
Common-Size Projected Income Statements  
For the Years Ended December 31, 2007, 2008, 2009 and 2010**

	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Revenues</b>								
Contributions	20,000	20,000	20,000	20,000	20%	17%	15%	16%
Program Service Revenue	55,000	70,000	90,000	80,000	55%	61%	67%	64%
Other Revenues	25,200	25,200	25,200	25,200	25%	22%	19%	20%
Investment Income	-	-	-	-	-	-	-	-
Net Revenues Released from Restrictions	100,200	115,200	135,200	125,200	100%	100%	100%	100%
<b>Total Revenues</b>	<b>100,200</b>	<b>115,200</b>	<b>135,200</b>	<b>125,200</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Expenses</b>								
Personnel	60,000	80,000	80,000	80,000	60%	69%	59%	64%
Marketing	33,800	14,100	14,100	14,100	34%	12%	10%	11%
Supplies	2,400	2,400	2,400	2,400	2%	2%	2%	2%
Insurance	800	800	800	800	1%	1%	1%	1%
Depreciation	2,267	2,267	2,267	600	2%	2%	2%	0%
<b>Total Expenses</b>	<b>99,267</b>	<b>99,567</b>	<b>99,567</b>	<b>97,900</b>	<b>99%</b>	<b>86%</b>	<b>74%</b>	<b>78%</b>
<b>Increase in Net Assets</b>	<b>933</b>	<b>15,633</b>	<b>35,633</b>	<b>27,300</b>	<b>1%</b>	<b>14%</b>	<b>26%</b>	<b>22%</b>
Net Assets at Beginning of Year	-157,417	-2,767	89,767	229,800	-157%	-2%	66%	184%
Net Assets at End of Year	<b>-156,483</b>	<b>12,867</b>	<b>125,400</b>	<b>257,100</b>	<b>-156%</b>	<b>11%</b>	<b>93%</b>	<b>205%</b>

**Break Even Point: 97,300**

*Exhibit 6.2.3.b: Common-Size Statements and Break-Even Point*

**Residential Environmental Assessment Program  
Common-Size Projected Statements of Financial Position  
For the Years Ended December 31, 2007, 2008, 2009 and 2010**

	2007	2008	2009	2010	2007	2008	2009	2010
<b>Assets</b>								
Cash	-	13,100	51,000	78,900	-	79%	98%	99%
Grants Receivable (net)	-	-	-	-	-	-	-	-
Investments	-	-	-	-	-	-	-	-
Prepaid Expenses	-	-	-	-	-	-	-	-
Property, Plant and Equipment.	8,000	8,000	8,000	8,000	140%	48%	15%	10%
Accumulated Depreciation	2,267	4,533	6,800	7,400	40%	27%	13%	9%
Collections	-	-	-	-	-	-	-	-
<b>Total Assets</b>	<b>5,733</b>	<b>16,567</b>	<b>52,200</b>	<b>79,500</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Liabilities and Net Assets</b>								
<b>Liabilities</b>								
Accounts Payable	4,800	-	-	-	84%	-	-	-
Grants Payable	-	-	-	-	-	-	-	-
Deferred revenue	-	-	-	-	-	-	-	-
Due to Third Parties	-	-	-	-	-	-	-	-
Long Term Debt	-	-	-	-	-	-	-	-
<b>Total Liabilities</b>	<b>4,800</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>84%</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net Assets</b>								
Unrestricted	933	16,567	52,200	79,500	16%	100%	100%	100%
Temporarily Restricted	-	-	-	-	-	-	-	-
Permanently Restricted	-	-	-	-	-	-	-	-
<b>Total Net Assets</b>	<b>933</b>	<b>16,567</b>	<b>52,200</b>	<b>79,500</b>	<b>16%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Total Liabilities and Net Assets</b>	<b>5,733</b>	<b>16,567</b>	<b>52,200</b>	<b>79,500</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

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	Jan	Feb	Mar	Apr	May	Jun
<b>Marketing Event</b>		<b>HomeBuilder &amp; Renovator Expo</b>		<b>PR Event</b>		
<b>Marketing Activity</b>	<b>Seminar</b>		<b>Seminar</b>		<b>Advertising in magazines</b>	
<b>Marketing Material</b>	<b>Brochures</b>		<b>Information on New Trends</b>	<b>Literature for would-be weds</b>		
<b>Plan</b>	<b>Annual Planning</b>					

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