

**Vision Forum Summary Report**  
**The Future of Green Homes in Portland, Oregon**  
from the May 4, 2006 Forum, 3-6pm  
Earth Advantage National Center  
Portland, Oregon

Presented by



"The Premier Source for Sustainable Building Solutions"

and



The Green Home Forum is a collaborative effort of  
Portland Office of Sustainable Development's G-Rated  
Program, Portland Community College, Northwest Ecobuilding  
Guild, Imagine Energy, Living Spaces and Roots Realty.

# Vision Forum Summary Report

## The Future of Green Homes in Portland, Oregon

### Outline

I. Event Description	p.2
II. Common Themes	p.2
III. Sector Summaries	p.3
IV. Call to Action	p.6
V. Appendix	p.7
A. Panelist Comments	p.7
B. Participant Input on Obstacles and Opportunities by Sector	p.12
C. List of Participants	p.21
D. Participant Evaluation Questionnaire Responses	p.23

### I. Event Description

Interest in green or sustainable building in the residential market is growing quickly and some aspects of the market are strong. However, many barriers and unresolved issues remain before green building becomes mainstream practice. This event was an opportunity for key players in the residential industry to gather, take stock, and identify strategies and actions which will strengthen and expand green building.

Organizations involved in green building, principally Earth Advantage and The Green Home Forum, invited colleagues to join in a dialogue about the future of green building in Portland. Representatives came from seven sectors: Development, Building & Design, Finance, Realty, Policy, Green Programs and Education. A list of the approximately 60 people who participated is included in the Appendix.

At the start of the forum, a representative from each sector offered an overview of the current issues facing that sector. Following these presentations, all the event participants had an opportunity to offer their written comments regarding what they saw as the obstacles and opportunities, not only for their sector, but for other sectors as well. Once everyone had offered their comments, members of each sector met as a group to review the comments and identify what issues they thought were of highest priority. The day ended with a report of findings from each group.

This report summarizes comments made by participants. A complete record of all comments is included in the Appendix.

### II. Common Themes

Notably, there was a strong similarity among issues that ran across all sectors. While the points were not surprising in themselves, the commonality of these issues indicates that changes addressing these matters would have significant benefits for many sectors in the green home field. The common themes were as follows:

1. Demand for green homes is rising, mostly because of increased energy costs as well as health issues. This is having a positive impact in terms of putting more focus and more resources towards green homes. There is an opportunity to build on awareness and interest in the community.
2. There is a need for education at all levels throughout all sectors to support and refine perceptions of what green building is—from compelling story telling to consumers, to sustainability-infused courses in schools, to on-going professional development and specialty trades skill-building.

3. Green building and green homes need definitive descriptions and a cohesive brand and identity to clearly convey the concepts to a general audience.
4. There is no common means of valuing green homes. Verifiable metrics on the performance, benefits and economic value of green homes over time are needed to create a shared level of understanding and information across all sectors.
5. The wide array of different codes and standards for green building, products, practices, financing, etc. poses a major barrier to greater adoption of green home building. Standardization and streamlining, again at all levels and for all sectors, is needed for more widespread acceptance.
6. While a variety of financial incentives currently offered by government and non-profits encourage adoption of green building practices, the consolidation of such incentives into one manageable unit would enhance their effectiveness.
7. Setting green home goals for the region that are meaningful, measurable, and easily understood would help unify the various green home efforts and offer momentum to the mechanisms described above.

### **III. Sector Summaries**

The issues outlined above impact each sector in unique ways. The summaries below offer a more specific view of the obstacles as well as the opportunities for moving forward from the perspective of each sector.

#### **Policy**

##### Obstacles

- Many overlapping "green" programs—Portland's Office of Sustainable Development, Earth Advantage, Energy Trust of Oregon, Energy Star, U.S. Green Building Council's LEED system--serving a variety of purposes (education, incentives, certification, etc.).
- Not high enough energy and air quality standards in the building code.
- Resistance from builders, particularly for new homes.
- Complex tax credit programs.
- Green projects are difficult to permit.

##### Opportunities/Solutions

- A consolidated, distilled green goal, supported by city policy leaders. Portland's Office of Sustainable Development could assist with marketing, education, and certification. Might include levels similar to LEED (silver, gold, platinum), but based on easy metrics, such as energy use (kilowatt hours), water use (cubic feet), and indoor air quality. Low income housing program efforts plug in, too. Bonus points offered for local, reused and recycled/sustainable material.
- Simplified tax credit system based on outcomes and performance, instead of technology by technology. Offer tax credits to builders for speculation homes built to new standards.
- Give green projects priority at permitting office.

#### **Green Building Programs**

##### Obstacles

- Too many different green building programs and logos which appear confusing to the consumer.
- Programs need to be easy for the builder to understand and translate benefits.
- Too many different green measures in programs confusing the builder.
- There are upfront costs of installing green measures.

- Consumer awareness of green building value is low.
- No additional value given by appraisers/RMLS listing for green-built homes.

#### Opportunities/Solutions

- Develop one green building standard that is easy to communicate to consumers and builders.
- Educate builders, consumers, realtors, appraisers and students on the value and benefits of green building.
- Increase incentives to builders and consumers for green building. This should be on the local, state and national levels.
- Develop a goal for green building so we can measure our successes and failures.
- Develop a contiguous value proposition for green building that proves to be the “tipping point” to taking the practice mainstream.

### **Development**

#### Obstacles

- The cost/benefit case for green home development has not been made clearly enough to entice most builders who are currently benefiting from a hot housing market.
- First-cost investment on green benefits vs. long-term operational and community benefits is a real dilemma developers face.
- Existing land use rules, codes and zoning regulations, which are prescriptive and mostly not ‘green’, make innovation difficult and risky.
- There is a lack of convenient, large scale suppliers of green materials for green development.

#### Opportunities/Solutions

- Opportunity to create green developments vs. developments with green homes.
- Embrace “model development” that showcases green building in the field with supporting media to drive the value.
- Offer expedited permitting services to developers building green.
- Create market incentives for suppliers of green products to expand to meet needs of large developers (solar as example).
- Change zoning to allow for higher density, mixed-use, solar orientation, and car-less development.

### **Building/Design**

#### Obstacles

- Education.
- Cost Perception.
- Green building needs a “push” from the building and zoning codes.
- Green building is not in stock plans yet.
- The design and aesthetics need to “wow” and to be beautiful.
- Homeowner associations and other guidelines can exclude green materials and technology (solar, composting, etc.).

#### Opportunities/Solutions

- Marketing of green building and better story telling to the public about green building.
- Efficiencies will become increasingly attractive with rising energy costs and as “cost over time” becomes more salient. Example: Selling performance guarantees that monthly energy savings will exceed added mortgage costs.
- Need to learn how to sell “healthy home” concept. Analogy to organic produce. Why are people willing to rush to pay more to limit chemical intake with food and not their homes?

- We need to remember that green building is making homes that are “less bad” than conventional homes, but they are nowhere near sustainable. We need to keep our vision on this more distant prize.

## **Finance**

### Obstacles

- The time value of money has an inherent bias for a short term perspective, putting future cost savings and benefits and a long-term perspective at a disadvantage.
- Developing a green standard by which the financial community can recognize and differentiate the asset from mainstream development.
- Perceived risk of green building leads to higher cost of capital; finance community thinks that there are not enough examples of green buildings to be comfortable.
- There is no methodology for valuing green in the appraisal industry.

### Opportunities/Solutions

- Place a value on far future costs, such as land-fill taxes, and incorporate into financial analysis.
- Substantiation of production gains in healthy buildings could make strong argument in support of green building.

## **Realty**

### Obstacles

- Lack of education about green building due to the other competing areas of expertise required and a general lack of available education on the topic.
- Agents do not have the information and education to clearly and convincingly articulate the value of green building to clients.
- Likewise, appraisers, banks, lenders, home inspectors, and other professionals involved real estate transactions do not have adequate education and information. Educating one group within this network is not enough. All groups must share an understanding of green building given their symbiotic working relationship.

### Opportunities/Solutions

- "Eco-Agent" type classes included at the certification level. Classes about green building outside those required for the Eco-Agent exam. Incorporate green home education into the classes now offered by title companies and real estate agencies.
- Educate agents as to the “niche” benefits of developing green building expertise.
- Clearly defining green is necessary as a common basis for all the professionals involved in real estate transactions.
- Create a network of these early adopters in the various real estate professions so that they can assist each other with information and offering services to clients. A green real estate agent needs a green inspector, etc.

## **Education**

### Obstacles

- Reaching a bigger audience and converting the non-believers.
- We are missing a coordinated delivery mechanism to assure quality information and to help learners find out where to get the information they need.
- Currently a teacher finds a wide range of knowledge levels in each class. There is a need for better quality, interdisciplinary education tailored to various audiences.
- There is specific information missing about materials and techniques. A centralized database is needed.

#### Opportunities/Solutions

- Because this is a regional hot spot for green building, we have a lot of excellent and abundant resources from government agencies and organizations from which to draw.
- There are green building professionals motivated to get involved in education.
- We have received national recognition and significant grant money is in the pipeline to improve education, to organize delivery mechanisms and to catalyze industry partnerships.

#### IV. Call to Action

Two pivotal target areas emerged from the Vision Forum:

- A. The establishment of a goal for sustainable green building for Portland would serve as a catalyst for driving the movement forward. This goal may be 50,000 – 100,000 'green homes' by 2015. Clearly, adoption of such a goal would need to be embraced by **all** sectors of the market and advocated strenuously by policy. As a 'sustainable' leader of the nation, Portland needs to take just such a stance.
- B. Create a "value proposition chain" that seamlessly and concisely articulates the value of green homes to appraisers, listing agencies, realtors, financial institutions and ultimately, home-buyers and owners. A universally agreed upon and cohesive value proposition chain will serve to coalesce the respective efforts of the different green home sectors which are now fragmented. This type of coordinated effort is essential if we are to reach a "tipping point" whereby green building moves forcefully into the mainstream.

#### Action Plan:

Clearly further Forums are required to capitalize on the idea-seeds that have been sown. A 'change agent team,' which we have dubbed **The Group of 18** emerged from the Vision Forum. This Group identified themselves as willing to chart the next steps. We will be calling on this group to gather and map out the path. It will be challenged to:

- A. Engage all relevant participants for the purposes of creating a shared set of green home criteria relevant for all sectors of the green home arena. With this distilled, we then need to formulate visions, standards and strategies to establish a measurable Portland goal for green homes that will aid in accelerating broad adoption.
- B. Narrow in on each of the core participants in the financial-real estate value proposition chain with a view to identifying feasible changes that need to be addressed to create such education and value.

While the Group of 18 has stepped forward, please feel more than welcome to contact Earth Advantage if you wish to be part of this crucial change agent team. We cannot be too busy to attend to the fundamentals that ultimately affect how we all live.

## V. Appendix

- A. Panelist Comments
- B. Participant Input on Obstacles and Opportunities by Sector
- C. List of Participants
- D. Participant Evaluation Questionnaire Responses

### A. Panelist Comments

The purpose of the panel was to offer an overview of issues facing each sector with regard to green home building. We asked each of the panelists to address three questions:

1. *How would you characterize the current state of the green home industry within your sector?*
2. *What are the major factors impacting it, both positively and negatively?*
3. *What are the issues that need to be addressed to move forward?*

### Policy

Dan Saltzman is a Portland City Commissioner and oversees the Office of Sustainable Development which provides leadership in a number of areas including energy, solid waste and recycling, sustainable technologies and practices, and green building. We asked him to specifically address these questions: *What has been the city's approach to greening homes in Portland thus far? What might some future goals be in terms of green home building?*

#### Dan's points

Portland's Office of Sustainable Development (OSD) based the design of the G-Rated green building program in 2000 on the community's response to the questions, "How can the City best support green building? What can OSD do that complements and strengthens the efforts of local business, organizations, homeowners and renters?" Rob Bennett organized a series of dialogues, in which the building community strongly recommended that the G-rated program provide education and information. So we have the ReThink class series, the Build It Green tour of homes, the Green Home Forum, resources like the Green Remodeling Guide, our web site and much more. The community wanted us to offer start-up technical support intended to help projects get going, and to link them up to local services and products. And the community wanted the City to support green innovations that could benefit the whole building industry and local economic development, so we have the Green Investment Fund. Basically the idea was for G-Rated to support local people and projects, while not offering services available in the private sector.

Frequently, the OSD staff talks to homeowners planning a new home or remodel, who want to know how to be more sustainable. We help them identify green ideas that fit their goals, lifestyle and budget. We refer them to the Earth Advantage and Energy Star home programs for more in-depth assistance. We send them on tours, to classes, to the Northwest Green Directory for local vendors. We hook them up with the Energy Trust and ODOE tax credits. And we hear back later that this was very helpful. G-Rated also acts as a nexus of information about Portland's green building experience--as we learn from green projects, we pass the information along to others to support their projects, and we connect people to each other.

Fuel costs for homeowners will rise dramatically in the next few years as 1) oil and gas supplies are outpaced by demand while production plateaus, and 2) we have to cut greenhouse gas emissions substantially. To buffer citizens from coming price shocks, and at the same time reduce greenhouse emissions, I would like to see the City offer more in-depth how-to training on energy efficiency in residential buildings, and more support for companies developing energy-related products and services.

I would also like to see the City support a voluntary energy standard and incentives for remodels as well

as new homes that goes well beyond the state energy code (which is close to the same as when first adopted in 1991 despite changes in energy costs and available technologies).

I'd also like to see an educational program aimed at helping the average citizen figure out their total energy use and greenhouse gas emissions. Most people do not know their total energy use or CO2 emissions, so how can they measure progress in reducing them? They need better feedback.

Finally I would like to convene our designers and builders to identify ways to start adapting buildings to the changing climate.

### **Green Building Programs**

Duane Woik is the Green Building Consultant with the local green building program Earth Advantage. Duane works with builders, developers and Home Builder Associations to promote green building both regionally and nationally.

#### Duane's points:

1. Green building is gaining market awareness with consumers
  - Opportunity for builders to differentiate their homes
  - Increased demand means more builders will embrace green building
  - More builders involved means more green products and improved supply chain
  - Increased national attention for green building at National Association of Home Builders
2. (Positive) Strong home sales
  - Increasing home values
  - High energy costs
  - High insurance costs for builders (Mold issues)
  - Indoor air quality awareness(Negative) Homes selling to quickly
  - Not enough home buyers demanding green building
  - Poor representation for green products (FSC, Solar, alternative building materials)
  - Saving water is only a concern when we have a drought
  - Keeping up with the demand and still deliver quality green building certification
3. Better understanding of green building at point of sale (sell value)
  - Get appraisers to give additional value for green built homes
  - Improve energy performance of homes (move towards net energy)
  - Give energy bill guarantees

### **Development**

Jim Chapman is the President and General Manager of Legend Homes, a native Oregon company building 600 homes per year in Portland and Corvallis. Mr. Chapman has over 30 years of expert knowledge of home building production.

#### Jim's points:

1. Current state of the green home industry in the development sector:
  - Current regulations regarding water quality and sensitive lands provide significant green practices by the entire industry already.
  - Public awareness of planetary protection is beginning to push large firms to pay greater attention.
  - New technologies are creating new approaches to the goals. As these prove out, use will become more common, reducing costs and resistance from local jurisdictions.
2. What are the major factors impacting it, both positively and negatively?

- Land Costs: While the explosion in land costs has squeezed the ability to devote even more to open space, it has opened opportunities for investment in more innovative solutions to maximize the spaces we have.
  - Building Sciences: The lack of product liability protection from the insurance industry has forced responsible companies to improve the construction of their homes. The dangers of litigation provide incentives to improve air quality, prevent moisture intrusion, and study all the elements of a home and the effects on the inhabitants. Those same dangers limit the untried use of fringe products and methods (i.e. straw bale homes, subterranean structures, etc).
  - Large builder/developers have an advantage:
    - I. The design of the land and the homes placed on it are controlled by the same entity.
    - II. The sheer numbers of homes produced provide greater opportunities for research and experience.
3. What are the issues that need to be addressed to move forward?
- Development: It is difficult to turn a barge around in the river. Stepping outside the box is dangerous for large builder-developers, just as it is for local jurisdictions. They have enough trouble dealing with the application of new regulations, and to take on new sciences voluntarily has not been found to be rewarding in the past, due as much to resistance by local jurisdictions as the lack of proof of its merit. We are beginning to see more flexibility from some sectors, and those experiences resonate with the engineers and environmental consultants who work our projects through entitlements. As there are more successes, it will encourage more attempts at unique solutions. The region as a whole is on that path.
  - Mainstream Home Building:
    - I. Sharing solutions: Industry education is critical.
    - II. Market demand/success: When the big ones start doing it, the others have to follow.

## **Finance**

Tonya Parker is the Senior Deputy Director for Fannie Mae's Oregon Business Center. She helps lead investments in multifamily and single family housing, both rental and homeownership, in Oregon.

### **Tonya's points:**

1. The green home industry in the real estate finance arena is still emerging. While there has been steady progress in education and innovation over these past few years, there are still only a handful of lenders who offer what would be considered mortgage loans for sustainable or energy efficient homes. For instance, HomeStreet Bank for years has offered Fannie Mae's Energy Efficient Mortgage here and in the Seattle area. In a nutshell the loan can save a family buying or rehabbing a home up to 50 percent by allowing them to finance 100% of energy efficient upgrades determined by an inspection, which could mean up to 15% of the value of the home.

2. Some of the major factors positively impacting this industry are educational campaigns like those Earth Advantage sponsors, a willingness to learn by those in the industry and a climate here in Oregon that puts an emphasis on creative, innovative techniques that support our love of a healthy environment. Several weeks ago I was called on two separate occasions by Realtors who were eager to learn more about the green home industry and how they could become better educated. They saw the business opportunity that exists in this area and told me they were working to be considered Realtors in the marketplace who specialize in helping people buy and sell these types of homes.

One top negative factor is the perception by many, whether it is a lender, a developer or a buyer is that an energy-efficient home, or one that is green built, is a niche, boutique product. Considering the number of these homes being built here in Oregon as compared to other states it appears to actually be the opposite. Also the fact that this forum is being held with such great interest and attendance shows this is an industry that will flourish.

3. Issues that should be addressed to help this industry move forward is training and comprehensive continued education. As this industry grows, there is a need for training to keep all those involved in the

home buying process - from the builder to the Realtor to the appraiser - up to speed. They will need to understand the beneficial aspects of green homes, what are reliable products and appliances, how people qualify for loan products such as EEM, etc.

## **Building**

Carrington Barrs is a principal with Barrs & Genauer Construction, Inc. which provides construction management, general contracting and consulting services to the commercial building industry with an emphasis on sustainable building techniques.

### Carrington's points:

The good news is that green building is increasing in numbers and becoming more popular with consumers and that is driving up the demand. The bad news is that "green washing" is increasing as more and more builders are learning how to "talk the talk", but not knowing how, or being really willing, to deliver.

The major factors which are having positive impacts include the fact that materials and methods are becoming more standard and understood. Also, construction site recycling is at an all time high, and FSC certified wood is becoming more available.

The major factors which are having negative impacts include the misconception that green building always costs more. In addition is the misconception that sustainably harvested timber takes away jobs for loggers. Then there is the dilemma between selecting green materials that are transported long distances versus choosing a product that may be less green or more expensive, but is locally produced. This can lead to an extremely complex decision making process.

In terms of the issues that need to be addressed, garbage tipping fees need to continue to rise. Demand for recycled post-consumer and post-industrial waste needs to continue to increase. Fuel prices need to continue to rise. Government subsidies need to stop for timber companies who don't log sustainably, as well as for oil companies generally. Vehicle emissions need to be much more stringent and the miles-per-gallon standards of vehicles need to be much higher. The list goes on...

## **Realty**

Dee Reddy is a Real Estate Broker with Realty Network GMAC Real Estate. Her business is primarily with home buyers and small to mid-tier investors in the inner Portland Market.

### Dee's points:

1. How would you characterize the current state of the green home industry within your sector?
  - Home ownership has long been the keystone of the American dream – it symbolizes among many things, security, achievement, pride and safety.
  - 60% of consumers surveyed in the 2000 State of Green Building Survey believe that current construction practices are not environmentally sound.
  - 90% of consumers surveyed indicated that they would be willing to pay extra for green built and remodeled homes.
  
2. What are the major factors impacting it? (positively/negatively)
  - Positive Factors
    - I. Personal Ethics/Sustainability
    - II. Health
      - a. In-home chemical exposure can often exceed limits established by OSHA (Occupational Safety and Health Administration) for the workplace.

- b. Indoor air quality jumped to #2 in importance for home consumers (kitchen cabinets previously held the #2 spot) - according to 2001 research surveys by Cahners Residential Group.
  - Negative Factors
    - I. Cost
      - a. Most Builders surveyed make the assumption that cost of going green outweighs exceeds the added value (i.e. the extra amount the consumer is willing to pay) for green upgrades.
      - b. In rapidly progressing real estate markets, the barrier to entry is increasing rapidly – many buyers are struggling just to get into the housing market and don't feel that they have the “luxury” to go green.
    - II. Lack of Education
      - a. Gap between what buyers want and what builders and developers think that buyers want – according to 2001 research surveys by Cahners Residential Group.
      - b. Surveys have shown that builders believe that less than half of consumers are willing to pay extra for green building.
      - c. Consumer surveys have shown that number to be closer to 90%.
- 3. What are the issues that need to be addressed to move forward?
  - Improved Education For Builders
    - I. How to build green in a financially feasible way – understanding how to utilize the available tax and grant incentive.
    - II. Working with local distributors and suppliers to improve availability of sustainable and green products to builders and remodelers.
  - Improved Education For Consumers
    - I. Health benefits of green building in addition to ecological and sustainability issues.
    - II. Understand and take advantage of available mortgage programs that will underwrite larger loan amounts if purchasing a green built or remodeled structure.
  - Improved Financial Incentives
    - I. Improve the quality and quantity of tax incentives and grant programs available to help underwrite the cost of green building.
    - II. Tax abatements for consumers to help mitigate the extra cost – allows buyers to pay more for green built or remodeled homes, allows builders and developers to recoup their costs.

## **Education**

Kim Hughes is the principal of a consultant practice focusing on project development, education and training. Kim launched the first Sustainable Building Advisor program in Portland with PGE, two years later with Mt Hood Community College.

### **Kim's points:**

1. How would you characterize the current state of the green home industry within your sector? There are a variety of education and training classes and programs available for the sustainable design and construction of homes. If I categorize the training it would fall into the following categories:

- Public or community education and training
- Professional continuing education and training
- Trades continuing education and training
- Integrated curriculum within community colleges and Universities

If you think about who is offering the education and training in these various categories, there are a variety of providers offering education and/or training in one or more of the categories:

- Public or governmental entities
- Non-profit or non-governmental organizations
- Community colleges and universities

- Trade unions and professional associations
- For-profit businesses

There are many high-quality classes and programs being offered. These classes and programs are offered as something unique, leading-edge and separate from the basic and foundational education and training that is offered in the trades and professions associated with the design and building industry. The sustainable concepts, strategies and practices are just beginning to be integrated into basic educational and training curriculum for the trades and professionals such as architecture, landscape architecture, building construction, design and drafting, interior design etc. There are many resources available to assist educators and trainers to bring this new information forward, but not in one central location. The educators and trainers need to be motivated to spend time researching, talking with other professionals and educating themselves.

## 2. What are the major factors impacting it, both positively and negatively?

From a positive perspective, there is a lot of energy and enthusiasm about sustainable design and construction education. There are many resources available, although no central location to go and get the information and resources. Students see that there is a gap and have developed initiatives on their own to address this. There is a demand for this type of education. There is budget or financial limitations in most colleges and universities that make it difficult to spend money researching, assessing and planning. There is no clear structure or process for integrating sustainable design and construction into existing course curriculum for a variety of professions and trades. There are many successful, individual initiatives going on simultaneously and they are making progress, although slowly. The initiatives need to have a regional relevance and be tied to the mission or vision of the provider organization. Many times, the new initiatives are experiments and there are many lessons learned. This is a dynamic process and will be until the concepts, strategies and practices become more embedded in the standard educational process.

## 3. What are the issues that need to be addressed to move forward?

There needs to be an assessment or gap analysis to determine what the issues are. Then there needs to be a way to prioritize and plan to move forward and address those issues. This process needs to include collaboration between educational institutions, business/industry and government. It needs to include students. We should also look at other organizations and geographic locations to see what models have been successful in moving this type of education forward. The value proposition needs to be clearly communicated; in a way that many different types of people can understand.

## **B. Participant Input on Obstacles and Opportunities by Sector**

Following the panel presentations, all event participants were asked to write comments on the “Obstacles” and “Opportunities” panels they saw for each sector. Below are their comments by sector.

### **Policy**

Obstacles:

- Policy makers are subject to regular change and politically influenced – how to make green a multi-year priority?
- Current government policies may not favor sustainable development.
- Policy makers don’t view green building as an urgent issue.
- Policy makers misunderstanding of “costs” of green vs. “true” costs of not green.
- Lack of cross-policy (cross jurisdictional) awareness of conflicting requirements that impede green building advances.
- Be more aggressive. Make and enforce stricter policies.
- Variable codes by jurisdiction. Variable education/attitudes among inspection departments.
- Green efforts are diluted. Too many associations confuse a consumer: G-Rated, LEED, Energy Start, Earth Advantage, Net Zero, Earth Smart, etc.

- Natural materials are being shipped out the country without value added products made in Oregon by Oregonians. We need to produce more green products.
- Minimum parking requirements. This should be sorted out between developers, lenders and buyers.
- Consolidated standards supported by city and government, and media. Points for getting permits faster. Consolidated tax credits.
- Lack of acceptance of green building construction details within city departments.
- LEED policy issues with extreme certifications. Seems intent on fundraising more than end result.
- Overcome building code trepidations.
- Provide incentives for green design.
- Money to smaller builders/low income people to do green.
- Gray water systems hard to permit.
- Builders may be resistant to being forced to implement standards that they may not totally buy into.
- Builders are resistant to change. Diluted/overlapping offers. Codes not including green.

#### Opportunities:

- Building codes – increased energy efficiency requirement on new construction. Adopt section G of plumbing code to allow gray water.
- Opportunity to develop a green standard for the state of Oregon.
- Pass local building code requiring green building for all infill (PDX and surrounding suburbs)
- City of Portland is on board.
- Code changes to allow rainwater to be used for gray water applications. Use of waterless urinals.
- Advocate for point-based permit system a la McCall, ID for Energy Star or green building features. Green features would save more pints and make it easier for a building to be permitted.
- Need for a tangible goal in terms of numbers of green homes in Portland – i.e. 50% of homes by 2025.
- Gray water!
- News/media marketing. Convince local news to showcase green tech. Similar to the Humane Society segments minus cute kittens.
- Encourage green building with tax breaks.
- Add green building requirements and sustainable development incentives to the building and planning codes.
- Incorporate green building training in Building Inspector Education.
- Abbreviated approval process for sustainable developments.
- Policy makers need to be more savvy and hard nosed about biz aspects of green development.
- Without policy decision-makers value engineer green practices out to make themselves a bigger profit.
- Consolidated region-wide goal for green home building supported by local government, business, etc.
- Update OR energy code (ch. B) – to reflect cost-effective measures given current fuel costs – to increase new technologies available today – to include all energy use (not just space heating).
- Creative programs and incentives to help institutionalize the value and necessity of green development.
- Air quality requirements as a requirement for sale.
- Third party inspectors could qualify for code inspections.
- Building codes – with the understanding of the home as a system that influences health, we can develop codes that support human health, sustainability and structural integrity.
- Provide more incentives to encourage green features in homes. Relax development and regulations. Offer tax incentives.
- Perfect opportunity for tax rebates to encourage green building. As with hybrid cars, etc.
- Focus tax credits from all technologies into “pilot” sustainable neighborhoods. Designate 2 or 3 in state (Oregon Department Of Energy).
- Allow homebuilders to aggregate renewable energy tax credits for all new homes. They can leverage lower equipment prices. Change State law.
- Policy changes that align market forces to incentivize green building through direct incentives or indirect incentive – securitization of credits, aligning funders, builders, financial markets and utilities.

- Promote efficiency of a product from its source – what energy is required to bring a flooring product from Columbia? How much energy is wasted to make electricity to run a heat pump?
- Develop pilot subdivisions with partnerships of state, local government, private sector to demonstrate sustainable home sell and developers wins homebuyers.
- Residential Energy Tax Credits pass through to developers and speculation homes.
- Facilitating permits for green.
- Financial incentive/tax abatement to encourage early adopters of progressive green technologies. Continue in the vein of Energy Trust.
- Incentives for sustainable practices.

## **Development**

### Obstacles:

- Lack of choices in new housing design. Large ostentatious housing developments are built instead of smaller home with quality materials.
- Convince builders/developers that it's worth their while with money. Incentives.
- Documentation of savings to justify additional cost.
- Higher densities create collisions with a site's ability to process its own storm water. Care must be taken to avoid structural damage.
- Breaking the apathy barrier.
- Most people can't/ don't orient homes/development to TRUE South.
- Zoning – spaghetti like planning with limited access so cars are required to drive kids to recreation, school, store, etc. Need to find ways to get people out of cars.
- 'Split' between initial investor builder adding features like energy efficiency – but tenants or future buyers collect benefits. Need a way to share costs and benefits. First costs – life costs.
- Current regulations limit forward thinking green strategies.
- Need to figure out how to incentivize merchant development. (Leaving money on table due to life cycle and value.)
- Rethink garages (really used for storage).
- Bottom-line mentality that only considers short-term economic gain.
- Current yardstick to measure success in dollars of profit. We need a measure all can accept that incorporates social and environmental values as well.
- Keeping it affordable.
- Pricing! Shortage of convenient local suppliers can drive the costs beyond feasibility.
- Many people buy homes as investments, so they want the features they think will support resale at highest price – like nice cabinets. Need a way to add other values to the set, like a safe and healthy house.
- Difficult to match market demand required densities. For example, small lots, expensive construction.
- Internal sales need to adopt green building sales features 100 percent into their delivery.
- Inadequate resources for low income housing that would be healthy for children with asthma/allergies.
- Innovation and learning curve for labor cost is expensive.
- For sale or "flip" mentality negates the value-over-time proposition of green development.
- Perception of higher costs relative to benefits received – ability to convey greater value.
- Perceived cost of incorporating green design, when many things can be for little extra cost, or is easily returned in value/payback.
- First cost investment on energy-efficiency vs. long-term operational benefits in residential is a real challenge developers face.
- A permit process that gives a green home faster review or at minimum a fast way to resolve questions re: new features. Today it is risky to propose new features; you may be slowed down too long.
- Working to get codes and zoning modified/updated for "green" flexibility.

- Land use rules, codes and zoning prevent some opportunities.

#### Opportunities:

- Do higher density with smaller homes = green space too.
- Educate consumers.
- Opportunity to create green developments vs. developments with green homes.
- Embrace “model development” that showcases green building in the field with supporting media to drive the value.
- Opportunity for establishing communities that share in green concepts and work together in neighborhoods to continue the effort long after the home is built, sold and lived in.
- More opportunities for social living. Like Peninsula Park Commons. Shared resources combined with private space.
- Need to put green building into a sustainable context. Re-create the city with regards to reliance on gasoline. Reduce it!
- Innovative pro-forma concepts that consider the triple bottom line.
- Increase permit and review fees to provide revenue to allow discount or rebates of these fees to green certified projects.
- Opportunity to gain reputation for contributing to the community by growing greener.
- Pick the appropriate site for the building and vice versa.
- Match the home layout plan to the optimum site location within a development.
- Allow for green development to have higher density.
- Create market incentives for suppliers of green products to expand to meet needs of large developers (solar as example).
- Incorporating mixed use structures in suburban developments so residents can access groceries/café without tier cars.
- Offer expedited permitting services to developers building green.

### **Green Building Programs**

#### Obstacles:

- Hard to follow who does what.
- Programs are scattered, hard to decide, expensive to join, certify.
- Too many, with different requirements.
- Several green programs, which one to choose?
- Differences in programming instead of collaboration.
- Duplication.
- Time consuming – where does “free help end?”
- Simplification and acceptance of single (reduced number) standard.
- No one-stop shopping for homebuyers and other decision-makers on all green programs.
- Knowing what the need is on any given year.
- Need to encompass energy standards.
- Not enough money.
- Funding – Business Energy Tax Credit surviving well for now.
- Enticing people like appraisers/realtors lenders/builders to learn.
- Hard to convince transition when only large leaps are marketable.
- Need to get over the stigma of being associated with radical “greenie” ideas and enter mainstream.
- Too specialized as far as active involvement.
- Not promoted well enough to professionals and consumers.
- Need to expand beyond green (i.e. concern for just the building and the site to concern for the entire neighborhood and community).

#### Opportunities:

- Get the word out better – Business Energy Tax Credit (BETC) seems misunderstood/unfamiliar even to savvy architects and builders.
- Federalize the BETC program (or similar). National energy tax credit tied to LEED.
- Get creative. BETC tied to LEED was an enormous step forward for both programs.
- Need low cost system to identify green products and their value and quality.
- Develop a regional goal.
- Important to keep multiple levels in programs to encourage first time entries.
- Promote modular home production criteria.
- Partnering with manufacturers of green products.
- Create a residential green building credential. Like LEED AP. -Education –Exam - Could be SBA for residential.
- Create program to help corporations better assess value of sustainable development practices.
- Make easy for builders to understand.
- Make one more consumer friendly, streamlined and branded system with marketing to educate and draw in those consumers.
- Need for a consistent message.
- Huge market potential.
- Energy guarantee for energy bills.
- Creative incentives for media to discount time for marketing push for one brand of green build criteria.
- Develop one minimum standard that all green building programs meet.
- Organized programs with brands can make it easier for consumers.
- Many local colleges and universities already have a foundation in place for ecology – all that's needed is application and theory.
- K-12 school curriculum/field trips to EA HQ.  
More partnerships with existing educational institutions.
- Providing generalized green building practices for realtors/lenders.
- Bio-regional – integration – policy enhancement – education – dialogue development.
- Collaborate with people you don't normally hang with.
- A region-wide goal that is easy to achieve and supported by government, media, etc. Think "LEED-lite."

#### **Financing**

##### Obstacles:

- Too much importance given to on-site parking in project underwriting (especially in Portland where there is a strong demand for housing without car parking).
- No market visibility to consumer to promote financing of green buildings.
- No incentives to builders to try at all really.
- Not enough knowledge of benefits of green building, oblige lenders to view green building as "risky."
- Inherent conflict between conservatism of industry and "soft" nature of green building solutions (risk management is limiting and not looking holistically).
- Development of new technologies seems to be driven by market forces that respond almost exclusively to upper end new construction.
- Which needs to happen first, the market values sustainable practices, or appraisers establish values so banks will lend on experimental/new building practices.
- Lack of faith (education) in the depth, validity and value of this market (false sense of risk).
- Lack of awareness or understanding of the value – financial, health and environmental – to having a green home.
- Lenders are lemmings, no guts!
- Finance does not encompass enough for predevelopment money which improves overall design and construction.

- Difficult to obtain financing on new methods of construction/lack of education about advanced/new materials = lack of confidence in lender.
- Higher price could disqualify some buyers.
- What incentive and/or financing programs are out there?  
Interest rates on water efficient homes should be lower to reflect a decrease chance of default (lower operating expenses = less cash pain out each month).
- True cost of a crappy particleboard home disposal with short life span not factored into financing.

#### Opportunities:

- Recycled or reused materials incentives remodel loans – reduce landfill, blend into neighborhood.
- Advertise energy efficient mortgages.
- More vehicles like Energy Efficient Mortgage.
- Require percentage of portfolio to have energy efficient or green mortgage.
- Built examples to look at and some utility savings to analyze to discredit “risk.”
- Future opportunity for financial market focused around creation/trading of energy efficiency credits securitization of credits or measures.
- Appraisal, warranties should better include value of long-term energy efficiency of buildings as assets.
- Assessors need to give increased value for a green home.
- Financial markets could be largest driver of green and reflect value in a new way.
- Quantify value of sustainable features.
- Enable lenders to reduce interest rates for certified home financing (new homes or remodels)
- Need state tax law changes.
- With financing options or incentive available to homebuyers, this will serve as a motivator to look toward green homes.
- Not many “Green” banks so there is room to define as such and increase business.
- By approaching housing development and maintenance in a model that supports health, energy efficiency and minimizes environmental impacts, societal long term financial gains are tremendous.
- Small home mortgages.
- Transportation efficient mortgages.
- Provision of promoted finance package would do wonders to move the market.
- Creative ways to finance up front costs over the life of the loan.
- Money can be made available for businesses using local and regional resources for finished products – i.e. hardwood veneer plywood using Oregon wood species.

## **Building**

#### Obstacles:

- Better plans with fewer square feet for greater efficiency.
- Bad stock plans used poorly.
- Architects are unrealistic for production building.
- Affordable, efficient envelope systems not yet available.
- Greet (possible) entrée into more deep ecology.
- Builders are conservative about embarking.
- Green needs a “wow” factor – a 2000 square foot deck makes a consumer say “wow,” what the deck is made of is a yawn. A red living room wall is a wow; low voc paint is a yawn.
- More concern for aesthetics and features rather than green systems/features.
- Getting building design better coordinated with building systems (ET), etc.
- So much information about heating systems has an electric or gas bias (due to the source of funding) that it’s hard to do comparisons of different systems across energy sources.
- Do we need Air conditioned cooling in the Northwest? Investing a little more on the home design can eliminate need for AC.
- Shortage of green designs that are era sensitive in infill projects within the city.

- The building code lag and the effort required to pioneer a new building/structure/material.
- Need more incentives. Push the envelope on green.
- Integrated base level of green on each project.
- Risk of higher priced products for builders.
- Not understood by key decision-makers, so green building practices get value engineered out.
- Market for home sales is so good that not as much concern about promoting features that may be perceived as too costly.
- What happens if housing market cools?
- Redefine “money”.
- Many green products out there. What’s really green vs. green washing?
- Builders are not up on the latest, best practices and like to do what they know how to do.
- Brain damage required to learn to do things differently process (integrated design) as well as design itself.
- Builders lack education required to incorporate green building details.
- Transitioning when you’re depending on old practices and business structure to support you.
- Difficulties in conveying value of green building to owners and investors.
- Assemble tried and tested assemblies of green details/methods for green construction.
- The very steep and fast learning curve with materials and their performance.

#### Opportunities:

- Great technology available. Demand in market.
- Market increasing.
- Some small and advanced (timeline) changes make a lot of difference, e.g. lot orientation.
- Larger producers can take the lead in finding efficient processes, and then share them.
- Reduce need for artificial lighting through design.
- Improved energy efficiency. Move toward net energy homes.
- We need an energy code that is like California Title 23 – more included, more rigorous, greater energy savings than our code.
- More examples of EE realtors for old homes.
- Continued mainstreaming of green design, thus broadening green products/materials available and lowering the cost premium.
- Certify manufactured homes that are green.
- Promote modular home construction as green techniques
- Need local manufacturers of green building products. Example – Durisol Insulated Concrete Form made in Ontario Canada. Freight is cost prohibitive. Could be made on West Coast.
- Opportunity to explore, use new building systems – i.e. Structurally Insulated Panels, soy-based insulation, etc. The more it is used the better the price will be.
- Selling/value of performance.
- More remodeling/rehab programs for existing homes.
- Value smaller home sizes more.
- Integrate low-tech practices with technical talk. Think, innovate.
- Extensive study information available. Trade/associations coordinating member efforts.
- Opportunity to differentiate.
- Equate green features with advantages for builders – lower risk of litigation, better construction, 3<sup>rd</sup> party certification a la Energy Star/ Earth Advantage.
- Benefits the future. Making a better tomorrow. A better place for today’s kids.

#### **Realty**

##### Obstacles:

- No formal recognition of a green home having a higher intrinsic value.
- Inspectors are not trained to identify opportunities for green solutions to problems identified.
- Lack of education for realtors. Difficult to communicate value to buyer and have them appreciate it.

- Inability to articulate the value-proposition to standard home purchasers.
- Timing is often difficult – sellers want to minimize outlay to make sale. Buyers are often overextended at time of purchase.
- There was also the issue of appraiser’s not having the information needed either through RMLS data nor through quantifiable green certification.
- Difficult for realtors to access green.
- Realtors don’t have much green to sell right now. Don’t seem very interested until there is more green product. Chicken and egg.
- Lack of knowledge by realtors of green features, examples that are built to see.
- Lack of familiarity of benefit of green construction.
- How to measure or verify “green” qualities of a home.
- Are people buying multifamily units as concerned about green/safe healthy housing as those that are buying home for themselves?
- Realtors need to sell hidden features of green building more. Lack of knowledge about what is incorporated inside a structure stops this from happening.
- Lots of other interests competing for attention.
- Sex sells – green is not sexy.
- On used homes realtors market the improvements made without knowing if they were done efficiently or correctly.

#### Opportunities:

- Ability to create a marketing point of difference for realtor and builder.
- Ability to differentiate business/practices by focusing early and becoming an expert in the field.
- Realtors can be advocates and sell green building.
- Portland Community College and other realty education programs could offer classes.
- Incorporated green building topics in real estate license certification test.
- Lots of profits that could be spent on education of realtors – future investment.
- Realty marketing can become the educator to the buyer since they meet with buyers frequently.
- Realtors need to communicate value to buyers so the builder/developer will continue to build to a green level.
- Proved the increased value of the product which will increase seller’s return and drive demand for more product.
- Increased awareness of radon and mold are opportunities for testing before purchase.
- Realtor education program that certifies them.
- Promote green and efficient properties. Develop a score system.
- Education of homebuyers about advantages of green design.
- Population expects realtors to be experts on home advantages.
- Need to sell value of green building – education.
- Third party certification for brokers.

### **Education**

#### Obstacles:

- Limited approaches to effectively reach private sector – convince them of costs do not exceed.
- Educate the disbelievers not those who already get it.
- Growing gap between rich and poor – inability of green building movement and low-income housing advocates interested in health to be more integrated with each other.
- No one central source for education and potential conflicting information.
- Need unified strategy to educate people in the most effective way.
- No one organization to take responsibility for overseeing education.
- Needs to be more “Earth Advantage” and other educational clearinghouses spread throughout region. One in every community.

- There is a void regarding consensus on construction methods. Conflicting findings from similar studies, etc.
- Better resources for comparing heating systems based on cost, efficiency.
- Need to assemble database of working green details and methods.
- Have a bio-regional entity (Earth Advantage/Cascadia) build a common database and forum for proven solutions and strategies.
- Need good, non-biased product information. UL tested equivalent?
- Too many products to sort through.
- Need to educate people in ways that enable them to make change – not just get into a room and talk. Action oriented education.
- Environmentalism is interdisciplinary, requiring extraordinary instructors.
- Few means for evaluating quality of education.
- Knowing where to start and where to begin, i.e. entry-level info to more advanced technological information.
- Need to marry good teaching/learning strategies with green building information.
- Provide training in building science/moisture/Indoor Air Quality. Give green building a foundation in rigorous science and research.
- So many industries play a part in making movement successful – tailoring education streams for each area is logistically and fiscally challenging.
- American Idol is more compelling (or whatever shiny object in the distance).

#### Opportunities:

- Next generation knows no different. Older generation business leaders do not always understand.
- Regional hot points or spots.
- Awareness of climate change – how will weather affect building design, energy use?  
There are lots of “free programs becoming available.
- Many happy to help resources.
- The philosophy is in place – inertia is in place – captive audiences – facilities – place.
- Grants – Portland State University, Green Building Grant, Portland Community College.
- Grassroots health initiatives – PACE.
- Colleges can be sources of green building resources for businesses and consumers.
- Colleges can be a source for new building techniques using regional resources.
- Bring green building education to public schools and private institutions.
- Consumer education materials should be routed through the realtors. Realtor partnerships with home certification programs like Earth Advantage.
- Develop green building ideas specific to each trade – e.g. framing certified wood and advanced framing, electrical – energy efficient light fixtures/controls.
- Keep success regularly featured in media – engrain sustainable building into people’s minds.
- Make it easy and fun. Kids.
- Make it easy for people to account for their energy use and measure progress in reducing energy and greenhouse gas emissions. Provide yardsticks so people know how their energy use compares with others.
- Need to reinforce environmental benefits as well as health and cost savings.
- Opportunity to strengthen the value of community. Opportunity to evaluate our actions as individuals by judging their effects on the community.
- With integration of sectors, could potential multifamily unit buyers be supported to understand that what is good for their tenant health is good for their long-term investment?

## C. List of Participants

<b>Company</b>	<b>Name</b>
Alan Mascord Design Associates	Cate Waltman
Alan Mascord Design Associates	Gary Higginbotham
Ankrom Moisan Associated Architects	Scott Tayer
Ankrom Moisan Associated Architects	Carolyn Forsyth
<b>Barrs &amp; Genauer Construction, LLC</b>	<b>Carrington Barrs</b>
Cascadia Green Building Council	Gina Franzosa
Cascadia Region Green Building Council	Brandon Smith
<b>City of Portland</b>	<b>Dan Saltzman</b>
City of Portland, Office of Sustainable Development	Alisa Kane
City of Portland, Office of Sustainable Development	Terry Miller
City of Portland, Office of Sustainable Development	Michael O'Brien
Clackamas Community Land Trust	Nancy Yuill
Coho Construction Services, Inc.	David Heslam
Communitecture	Mark Lakeman
Conservation Services Group, Inc.	Debra Taevs
DL Design Group	Maria Cahill
Earth Advantage Inc.	Sean Penrith
<b>Earth Advantage, Inc.</b>	<b>Duane Woik</b>
Ecos Consulting	Jon Thomsen
Ecos Consulting	Anthony Roy
Ecos Consulting	Lois Gordon
Ecotrust	Kent Goodyear
Endura Wood Products	Mary Mulcrone
Enterprise Community Investment	Whit Spencer
Enterprise Foundation, The	Kate Allen
<b>Fannie Mae</b>	<b>Tonya Parker</b>
Gerding Edlin	Renee Worme
Green Hammer Construction	Stephen Auguier
Hasson Company Realtors	Joe Menashe
Imagine Energy LLC	Jonathan Cohen
Imagine Energy, LLC	Randy Hart
<b>Legend Homes</b>	<b>Jim Chapman</b>
Living Spaces	Beth Meredith
Living Spaces	Eric Storm
Meadow Group Inc.,	Kria Lacher
Miller Paint Co.	Brian Setness
Multnomah County	Diane Drum
Multnomah County	Andrea Greiling
Neil Kelly	Tom Kelly
Northwest Energy Efficiency Alliance	Anne Brink
NW Natural	Phil Damiano
NW Natural	Brenda Hartzog
Office Of The Governor	David Van't Hof
Oregon Department of Energy	Christopher Dymond
Oregon Home Builders Association	Jon Chandler

Pacific Securities Capital	Theddi Chappell
Pacific Security Capital	Sarah Heinicke
Peninsula Park Commons	Eli Spevak
Portland Community College	Spencer Hinkle
Portland Community College	Denise Roy
Portland Community College	Noelle Studer
Portland Community College	Tom Robertson
Portland Development Commission	Michael D. Prothe
Portland General Electric	Bill Nicholson
Portland General Electric	Thor Hinckley
Portland General Electric	Dave Robertson
Portland State University	Jennifer Allen
Premier Building Systems	Patrick Sughrue
R & R Energy Resources	Bill Lenz
Reach Community Development, Inc.	Kevin Kraus
Realty Trust Group, Inc.	Kira Mead
ReDirect Guide	Robin Wang
Roots Realty	Mark Wheeler
Roots Realty	David Todd
Rose City Mortgage	Lorie Clements
SERA Architects	Tim Smith
SERA Architects	Clark Brockman
ShoreBank Pacific	Bonnie Anderson
<b>The Realty Network GMAC</b>	<b>Dee Reddy</b>
<b>Zero Waste Alliance</b>	<b>Kim Hughes</b>
Zero Waste Alliance	Jeanne Longley

***Bold = Panelist***

Thanks to all who participated in the Vision Forum as it is only through continued dialog and cooperation that we will forge new paths and understandings.

## D. Participant Evaluation Questionnaire Responses

Usefulness of Event	Rating on a Scale of 1 - 5					Total Responses	Total Number	Average	Percent
	1	2	3	4	5				
Usefulness of Panel Presentations	0	3	1	18	6	28	111	4.0	79%
Usefulness of Input and Evaluation Session	0	0	6	9	13	28	119	4.3	85%
Usefulness of Reporting Out Session	0	0	5	14	9	28	116	4.1	83%
Overall Value of the Vision Forum	0	0	2	15	11	28	121	4.3	86%

### Summary:

From the 56 people that attended the Forum, 28 people responded to the questionnaire (exactly half responded). The over-all feedback was very positive with the Usefulness of Panel Presentation coming in at the lowest at 79%. The remaining three areas of critique came in at the low and mid-80's with the Overall Value of the Vision Forum coming in at the highest at 86%. People felt their 3 hours were well spent with the set up of the forum. This is a very good result given that the attendees were all respected players in their "green" industry and often is hard to find new or challenging ideas to those that are deeply involved. Because of this feedback, it may prove useful and would be well received to continue with these forums and break them down even further into industry specific session groups.

Suggestions for Future Topics	Education	Other Industries	Next Session	Metrics
	Green building	Appraisers	Implementation	How a green home works/performs
	Green building programs	Home Inspectors	Define "green" in the industry	How to measure what green is
	Get the Green story out to the public	Codes	Ecology and Construction	How to brand as "green" cert.
	Specific Educational Classes for Industries		Mapping organizations and Paths of Influences	Value Engineering
	Education for industry and their clients		Identify Key conversations and actions	
	Marketing green as 'cool'		Next "stakeholders"	
	Life-cycle costs for comparison		Goal setting	
	Marketing and Education Tie In		Policy Gaps and Opportunities	
	How to UNIFY the region's efforts		Standardization of Green	
	IAQ		Action Committees formed	
	Recommendation of products		What's next/purpose	
	Setting policies		How to create sustainability momentum	
	Methods and practices that are tried and true			

continued

**Summary:**

It's difficult to break down into common themes, but generally the comments fell under the four categories of Education, Other Industries (who should be invited to participate), what the Next Session should entail, and Metrics or measurement. In trying to capture every comment, you can see there are plenty of good quality issues and topics for education. And many of the educational topics can be applied to the specific sectors creating a goldmine opportunity for outreach. Also, many comments were about the next session telling us that people, even though top in their "green" industry, want substance and want to know where this goes next and how do we do it.

Suggestions for Improvement	Suggestion (and number of comments)
	Longer Session (2)
	More Often (1)
	Power Point (1)
	More networking time (1)
	Q&A of Panelists (2)
	Smaller Panel (1)
	Read comments to get groups "perception" (1)
	More participant feedback (1)
	Location should be more centralized (2)
	Green Building leaders discuss common Green Goal to distribute to the groups (2)
	More in-depth working groups (3)
	Clearer vision on how this continues into the future (3)
	What's the next steps/end goal (2)
	Invite some students from PSU, PCC, OSU, U of O (1)
	Invite appraisers (1)
	How to develop benefits and awareness (2)

**Summary:**

The comments from the "suggestions" field are very positive in the way that the attendees want this type of forum MORE often. They want LONGER sessions. They want SMALLER groups to home in on key topics. They want MORE participation. They want NEXT STEPS to achieve an overall goal. Again, this tells us several things. First, even the industry "experts" in their respected green fields are lacking this detailed content and they are seeking it. Second, due to the high turn out compared to the number of emails sent out (raw number of 119 email invites sent out with 56 participants is an outstanding 47% response), this was a very "hot" topic that sparked key people's interest. Third, it appears everyone knows or at least now sees not only the disconnect between the different groups dealing with green building, but also the need and importance of pulling together all the groups so that we are working with each other. It appears this was a very successful forum for all that participated and they want other occasions to talk with the other participants.

**A special thanks** to Sean Penrith and Tim Ahaus of Earth Advantage and Beth Meredith and Eric Storm of Living Spaces, and the many others at Earth Advantage and the Green Home Forum, for their efforts in making the May Forum on The Future of Green Homes in Portland happen. And thanks to Jennifer Allen of Portland State University for moderating the panel.