



Joint Public Advisory Committee (JPAC)  
Comité Consultivo Público Conjunto (CCPC)  
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### Memorandum

To: Adrián Vázquez  
CEC Executive Director

CC: Council Members  
Green Building Advisory Group Members  
JPAC Members

From: Irene Henriques, JPAC Chair for 2007

Re: Green Building in North America: Seattle International Symposium, 1–2  
May 2007—Summary of Public Comments and Discussion.

Date: 12 June 2007

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On behalf of the Joint Public Advisory Committee, I am pleased to present to you a copy of a report commissioned by JPAC, which contains a summary of the public comments provided at the CEC's international symposium on green building, held in Seattle, WA, on 1 and 2 May 2007.

The report contains input from a wide variety of stakeholders from across North America on the four draft background papers that will be addressed in the final document. These are: Green Building Scenarios for 2030, Working Towards Green Building Financing and Market Consolidation, Institutional Efforts for Green Building, and Working Towards Accessible and Sustainable Housing. We trust that the commentary and information that was provided by the public at the forum will prove useful as you bring your papers to fruition, and we look forward to receiving the final report.

Sincerely,

Irene Henriques  
JPAC Chair 2007

## **Green Building in North America: International Symposium Summary of Public Comments and Discussion 1–2 May 2007, Seattle, Washington, USA**

### **Background**

The Commission on Environmental Cooperation is preparing a report on *Green Building in North America: Opportunities and Challenges*. The CEC Secretariat will present the report to top environmental officials in Canada, Mexico, and the United States in late 2007 or early 2008. An Advisory Group on Green Building was created in 2006; this group met and recommended four critical topics to be addressed in the report:

- Green building scenarios for 2030
- Green building financing
- Institutional efforts for green building
- Accessible and sustainable housing

An important step in gathering information for this report is consultation with the public. A first public workshop was held in Mexico in February 2007.

On 1–2 May 2007, the CEC held a second public meeting in Seattle, Washington, to discuss draft background papers on the four topics to be addressed in the final report. On May 1, authors of the background papers presented their preliminary findings to an audience that included the CEC Advisory Group on Green Building, the CEC Joint Public Advisory Committee (JPAC), and the public. Each presentation was followed by questions, comments, and discussion. On May 2, JPAC held a public forum to continue discussion of the paper topics.

This report summarizes the extensive questions, comments, and discussion from the two-day symposium.

### **Overall Comments**

During the two days of comments, several themes emerged:

- Real business cases are needed to document and demonstrate the benefits and value of green buildings as well as the cost, which is not necessarily higher than conventional buildings. “Business case” is not prominent in papers and needs to be highlighted.
- Data on actual performance are needed to document effects and benefits.
- The analysis needs to address retrofits, renovation, and operations as well as new design and construction.
- A comprehensive approach is needed:
  - The analysis and recommendations need to go beyond energy to include other environmental concerns.

- The analysis and recommendations need to go beyond buildings to cities and regions. Understanding the history, social, and economic context is crucial.
- How can we dissolve artificial boundaries between and within the three countries to work together more effectively? How can the three countries collaborate as equals, learning from one another, and respecting the diversity among them? The conditions in Mexico are different from those in the United States and Canada, which are far more similar.

### **Comments on Paper 1: Scenarios for 2030**

The purpose of this paper is to present a vision of building performance in North America, based on an aggressive but achievable uptake of green building practice. The authors of the paper based the scenarios on the AIA/RAIC 2030 Challenge for reducing the global warming impacts of buildings. They described the assumptions and modeling approaches for their “deep green” scenario and the “business as usual” case used for comparison. The analysis found that the aggressive scenario was able to achieve or do better than the 2030 Challenge targets, requiring use of renewable energy in some cases. Achievement of the targets, while feasible, will require significant policy and program development commitment.

Audience members raised the following questions and comments:

- The scenarios need to address environmental concerns beyond energy. Although energy is critically important, it is not the only concern. Water is also very important as are other issues. Can the scenarios address ecosystem services, building location, and other planning concerns? Can the scenarios include social, environmental justice, and poverty issues? In Mexico, tourism and coastal resorts are a rapidly growing industry and scenarios need to be more comprehensive to address the environmental issues they raise.
- How can we build “co-creatively” and reframe the dialogue to include win-win scenarios? For this we must think holistically.
- It would be helpful if the scenarios could factor in costs associated with the alternatives, as well as identifying the public versus private benefits and costs.
- How can the scenarios assist policymakers in developing and choosing the most effective policies? The authors responded that the scenario is based on performance improvements as well as time to market, both of which can be affected by policies. Policymakers could test ideas within the scenarios to see what results are achieved with different inputs.
- The scenario tool is very powerful and should be made available and applied globally to markets such as China and India.
- This issue is urgent but many people outside the green building movement do not recognize the urgency. This will require public policies, education, and case examples. How is this best accomplished? How can the CEC contribute?

### **Comments on Paper 2: Green Building Financing**

Presentations by authors of this paper highlighted the status of the markets in Mexico and the United States, the drivers and barriers affecting green buildings, and potential

financial instruments and incentives to address the drivers and barriers. There was also a presentation on valuation—how current practices do not capture the benefits of green building and how the concept of “value” needs to be expanded.

Audience members raised the following questions and comments:

- How should “green building” be defined for purposes of financial institutions—LEED or EnergyStar or another standard? The authors responded that there is wide consensus on the Brundtland Commission definition of sustainability (“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”) and that there are other international standards as well as those cited by the audience member. They also noted that certification systems are in place in Canada and the United States, but that there is no certification program or standard in Mexico at the present time to provide a definition.
- “Value” must be viewed more broadly to include values and beliefs, *all* potential benefits (and all costs as well), ecosystem services, the costs to society of not building green, and strategic benefits to companies that adopt green approaches. Value can be defined as our legacy for future generations in terms of human health and development, economic and cultural development, as well as environmental sustainability.
- Valuation and financing instruments/ incentives must address retrofits and renovations as well as new construction since existing building stock is the largest segment of the market. The authors agreed and also noted that smaller buildings need attention as well as large ones.
- Green building is not always more expensive although there is a perception that this is the case. The authors agreed that green building can save cost, save time, and add value.
- In addition to green buildings, some cities, such as Seattle, are exploring green urbanism, but they are finding that conventional financing does not work for this new direction.
- How can health benefits of green buildings be factored into valuation? The authors responded that traditional valuation models can address health benefits since green buildings reduce risks or these models can be expanded to include additional considerations. They all agreed that real business cases are needed, including health benefits. In addition, better data on health effects are needed but this will require better access to health data and standardization of how this information is gathered, stored, and reported. It was noted that privacy concerns present barriers to collection and analysis of health data.
- In Mexico, in particular, how can valuation address environmental effects of the coastal development that is increasing significantly? Since much of this development is financed internationally, how can the CEC encourage a broader perspective on the value of greener development and the true costs to communities of environmental degradation?

### **Comments on Paper 3: Institutional Efforts**

The authors described the different institutional conditions in the three countries, with Mexico differing from the United States and Canada in its lack of codes, standards, and organizations addressing green buildings. They presented seven institutional approaches: mandates, voluntary programs, financial mechanisms, preferred purchasing, research, education, and international agreements. They also presented gaps in green building policy and recommendations for each country and for collaborative work.

Audience members raised the following comments and questions:

- Voluntary approaches and purchasing are not sufficient. Governments need to mandate standards that place requirements for sale or lease of buildings. Mandatory measures are needed to bring the lower end of the market along and voluntary measures to encourage the greener end of the market. The scenarios described in Paper 1 could help in examining the appropriate balance between voluntary and mandatory approaches.
- Government mandates often set the bar too low and only punish the “bad” rather than providing incentive for the “good” actions.
- Benchmarks and performance data will be key to many programs, such as tradable permits. The Europeans are working on gathering performance data and California is investing in smart meters.
- What are similarities and differences among the recommendations for the three countries? How do they apply specifically to rapidly growing cities? In Mexico, national leadership is crucial and it will influence activities at the municipal level; green building policy needs to be included in the National Development Plan.
- We should not just rely on government to take action and invest in these programs. We are going through a period of change management and it requires individuals and companies to take responsibility. People and businesses respond to market signals so we need to look at government policies that encourage this responsibility and accountability. An author responded that because the market does not reflect the true cost of energy use and environmental degradation, government mandates are needed.
- There is a need for more evaluation of the effects of policies so they can be fine-tuned.
- Policies should emphasize performance targets rather than prescriptive codes that tell how targets should be met.
- Education at all levels is very important. Educating children now will have a huge impact in the future as they grow up and become decision makers. Educating governments and developers about the devastation of coastal areas will require gathering and assembling data on individual cases so that effects of this development can be demonstrated. Training professionals is a substantial cost that could be supported by government programs.

### **Comments on Paper 4: Accessible and Sustainable Housing**

The authors presented the different conditions in each of the three countries, from the growing green residential markets in the United States and Canada to the lack of commitment and incentives in Mexico. The particular challenges in Mexico were also

presented, such as the rapid growth of construction, the potential effect of “baby boomers” purchasing retirement or vacation homes in Mexico, the lack of affordable housing for the large number of Mexican families who live in poverty, and the fact that 60 percent of housing is “self-built.”

Audience members raised the following comments and questions:

- Data on the actual performance of green housing is needed. There are measurement and verification tools for commercial buildings that might be adaptable to housing. It would be preferable to have one standardized protocol for verification to reduce confusion in financial markets. Although the tools exist, the incentives to apply them do not exist. The challenge for performance measurement is to include all issues, be real and credible so it will be used, be simple so it can be applied everywhere, and be mandated.
- Mexico needs affordable, simple technology to meet the needs of its lower income population and to address the “self-built” housing market. This group often relies on older, cheaper equipment such as discarded air conditioning units from the United States that are inefficient and often polluting. This happens in other countries as well—in houses built for lower-income people in Canada, clothes washers and dryers were not included so residents bought what they could afford—the least expensive (and generally least efficient) units available.
- In all three countries, there are lessons from the past that can be useful, such as the use passive solar. In Mexico, there was a vernacular architecture that has been largely forgotten. It used indigenous materials and climate-appropriate design. This should be rediscovered. Terminology and language are important—for example, terms like “durable” and “non-durable” goods imply that one is better than the other. Calling adobe and bamboo “non-durable” stigmatizes them.
- Families tend to stay in their houses in Mexico for generations, unlike the United States and Canada in which families move more frequently. This means that houses in Mexico need to be more adaptable to changing family size, age, health, and other factors.
- Resident behavior is critical to energy consumption and environmental performance of homes and other buildings. Homeowners and tenants need education and an “instruction manual” for their homes – if a manual is provided with a new car, why shouldn’t there be a manual for a new home? Further, a culture change is needed so that they are encouraged to change behavior and take responsibility. There is a lack of a “line of sight” between behavior and consequence—it is like driving a car without dashboard instruments. How can we make the link between behavior and result more visible?
- Information should be shared among the three countries within climate zones to make the collaboration more productive.
- Plug loads from our ever-increasing use of electronic equipment and gadgets is responsible for approximately 21 percent of residential energy use; a percentage that will almost certainly grow in the future.
- Housing differs from commercial buildings because there is so much variation in size, cost, etc.