

## ENERGY EFFICIENCY AND RENEWABLE ENERGY FINANCING TASK FORCE'S ANNOUNCEABLE FOR EMM7:

### “FINANCING HIGH PERFORMANCE BUILDINGS AND COMMUNITIES”

The Challenge: The APEC region is experiencing rapid urban growth, especially in the area of new commercial and residential buildings. Rising energy demand is causing a host of problems, including black/brown outs, local air pollution, greenhouse gas emissions and, of course, the need for huge sums of capital to expand the electric power capacity. Since the building sectors of most APEC economies account for approximately one-third of all electric power consumption, green, high performance buildings and smart growth in communities should be an important part of the solution to meeting exponentially increasing energy needs. Green buildings not only save energy, water, and other natural resources, but they increase the comfort, health, and productivity of those working or living inside. This reduces countries' health costs, improves the general standard of living, and leads to a higher GNP, with significantly less environmental degradation than is typically associated with such growth.

Moreover, a significant percentage of energy consumption in urban areas is affected by the way communities are designed, developed and managed and by the energy technologies and practices used within them.

Objective: The purpose of this initiative would be to promote and facilitate the efforts of APEC economies to develop of high performance, low impact buildings and communities in the APEC region, with emphasis on public leadership, especially at the municipal level, and on using innovative financing techniques.

#### Brief Description of Components:

**Region-Wide Municipal Network to Promote Energy Efficient Buildings and Communities.** To promote the exchange of information and development of effective public-private partnerships, business models and regulatory policies and incentives, develop a network of municipalities to facilitate energy-efficient design and construction of commercial and residential structures and municipal buildings. Focal areas for the network would be financing, energy planning and management, networking, policy reform and public awareness. Key elements would also be measuring the medium and long term economic and environmental benefits in a coherent way; developing policy measures that take into account public benefits; and promoting regional and metropolitan area planning for efficient performance relating to energy/utility systems, transportation, land-use, etc.

**Pilot Financing Programs for High Performance Construction and Modifications.** During the next five years, promote and help to facilitate innovative financing in building projects planned for development in four or five major APEC cities. Innovative financing techniques would provide incentives for developers to design and construct green, high performance buildings, using a range of possible measures and incentives.

Wherever possible the developments should be selected on the basis of one of two criteria:

1. Be representative of building types that are being built in large volumes and where the energy efficiency approach could be rapidly proliferated;
2. Be of sufficient scale that the pilot work could also demonstrate the viability of efficient energy generation such as combined heat and power, integrated renewable sources, along with efficient end-use (e.g., high rise residential or commercial buildings.)

The range of financing and other incentives could include:

1. Adopting voluntary performance certification (or similar mechanism) for both energy performance and direct and indirect greenhouse gas emissions performance that would be accepted by financing institutions to qualify to reduce both construction financing costs and mortgage costs. The public interest intervention could be to participate in the risk guarantees on the loan and mortgage instruments.
  - a. The developer could sell the building on the basis of guaranteed energy and GHG performance, and in return would receive reduced construction financing costs;
  - b. The purchaser would receive lower mortgage rates, either allowing higher prices to be charged to enhance the developer's margin or covering the incremental costs of construction;
  - c. The guarantee/certification can be transferable as part of the title documents, updated with actual performance data;
  - d. Each building would be designed according to a widely accepted performance metric and undergo monitoring and verification of the energy performance relative to local market "peer" norms.
2. Ensure the ongoing energy and greenhouse gas performance of buildings by using pre-qualified energy service companies ("ESCO"). The public interest intervention could be to participate in the risk guarantees on the performance contracts.
  - a. ESCOs would guarantee the energy and GHG performance of the building, and be paid accordingly;
  - b. The mechanism would use energy savings performance contracts ("ESPC"). The ESPC to be offered would guarantee a major portion of the projected energy performance, thus increasing the building's asset value (the operating savings translate into higher profits for the owner) relative to the surrounding market;
  - c. Preparing standard energy savings performance contracts and other legal documents (to buy down costs and facilitate implementation to private ESCO's);
  - d. Providing seed funding and incentives to backstop a portion of the risks assumed by ESCO's.

3. Use pilot financing programs to “jumpstart” resource development for green building and ESCO industries in the APEC region. The public intervention could be to support the initial costs of training and education, and establishing programs and quality tracking systems.
  - a. Establishing a program framework and modalities (assistance, protocols, guidelines on how to apply);
  - b. Developing, assisting and certifying business and trade training programs;
  - c. Providing incentives for energy efficient manufacturing enterprises through a variety of mechanisms.

**Model Community Energy System Development.** Promote and facilitate the efforts of APEC economies and municipalities to develop a number of model community energy systems. These efforts would produce new environmentally and technologically sustainable business models for energy services on a community-scale and public policy and financing innovations to promote the integration of energy efficiency, conservation and renewable energy (“EECRE”) technologies and strategies into community design and development (i.e., community-scale integrated energy systems – district heating, on-site heat and power, renewables and waste to energy systems; public transport – rapid bus transit; utility systems – water supply and treatment, street lighting, traffic signals). In particular, these efforts would: (1) Identify specific opportunities to integrate EECRE technologies and strategies in community planning and development; (2) Address local, state or national constraints and market barriers to the use of these technologies and strategies; and (3) Develop guidelines for local community planning and development and innovative financing to facilitate use of the EECRE technologies and strategies. These model communities would point the way to a standardized approach that would deliver affordable, reliable, and efficient energy services to consumers.

**Advance Market Transformation Effects of EWG and Expert Groups.** Further the efforts of the EWG and EE&C and NRET Expert Groups to accelerate market transformation to Green Building/Community practices and technologies through measures and market tools such as energy labeling, building rating and harmonizing energy efficiency standards. Also, promote the recommendations of the “Rise of Green Buildings Workshop” organized by the City of Melbourne and the APEC EWG’s Experts Group on EE&C.