

APEC Concept Note

Please submit through APEC Secretariat Program Director. Concept notes of more than 3 pages (Including title page) or incomplete submissions will not be considered.

Project Title:	Energy Saving Window Thermal Performance Simulation Training		
Source of funds (Select one):	<input type="checkbox"/> Operational Account	<input type="checkbox"/> TILF Special Account	<input checked="" type="checkbox"/> APEC Support Fund
Committee / WG / Sub-fora / Task-force:	Committee on Trade and Investment / Sub-committee on Standards and Conformance		
Proposing APEC economy:	Thailand		
Co-sponsoring economies:	United States, New Zealand, Singapore (tbc)		
Expected start date:	Spring/Summer 2012		
Expected completion date:	November 2012		
Project summary: Describe the project in under 150 words. Your summary should include the project topic, planned activities, timing and location: <i>(Summary must be no longer than the box provided. Cover sheet must fit on one page)</i>	<p>A. Topic: Thailand will host a workshop for APEC economies and provide expert training for building envelope material testing and rating in support of our effort to establish a regional APEC Test and Simulation Facility. This effort will enable improved building energy efficiency policies and programs, reduce trade barriers, and directly supports the Energy Smart Communities (ESCI), Smart Buildings-Materials Testing and Rating Centre activity (SB-2).</p> <p>B. Activities: Currently, Thailand with support from the United States, Japan and Industry is in the process of establishing a regional APEC Building Material Test Centre. It is anticipated that phase I will be completed within the next 6 to 12 months. Once the basic framework for the centre is established it will be essential to assemble other economies and experts to plan for subsequent phases including direct participation in the effort. This workshop will facilitate greater involvement and will foster overall APEC energy efficiency investment. Utilizing significant in-kind support such as detailed software programs and training curriculum from the USA, adjacent to the workshop will be training sessions to provide capacity training for APEC participants.</p> <p>C. Timing and Location: This workshop and training will take place over 3-4 days in Bangkok, Thailand. A side visit will include a tour of the King Mongkut's University of Technology Thonburi materials testing facility.</p>		
Total cost of proposal: (APEC funding + self-funding) USD 90,000	Total amount being sought from APEC (USD): By category: Travel: 70,000 Labour costs: 20,000 Hosting: Publication & distribution: Other:		

Project Proponent Information and Declaration: Dr.Prasert Sinsukprasert, Ministry of Energy
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I declare that this submission has been prepared in line with the **Guidebook on APEC Projects**. If approved, I agree to develop the project in line with APEC project requirements.

 Name of Project Proponent

Date: 7/26/11

Project Synopsis

1. **Relevance:** Why should APEC undertake this project? What problem or opportunity will the project address and why is it important?

Building's are responsible for approximately 50 per cent of the electricity consumption in most APEC economies. Space conditioning loads that are directly affected by the building envelope (window, walls, roof and foundation) characteristics are responsible for approximately 30 to 50 per cent of the building consumption. Thus, in order to curtail the growth of increased demand for electricity, investment in high performance building envelopes is essential. This project directly addresses this opportunity in a way that is most effective.

In 2010, APEC leaders acknowledged the importance of work on standards and conformance to reduce the impact of non-tariff barriers on free and open trade and investment. Leaders also emphasized that innovative growth should be advanced across APEC economies through the adoption of policies that best enable economies to support innovation and use information and communication technologies. This project directly supports these goals by seeking to promote a building envelope energy rating harmonization effort among APEC economies based on proven energy ratings systems. This effort will educate other APEC economies on how to perform widely accepted energy efficiency practices to ensure implementation and enforcement of building energy codes.

The APEC *Energy Saving Window Study*, completed for APEC by the National Fenestration Rating Council in 2011, revealed a lack of congruent building envelope energy efficient practices among APEC economies including very limited window energy rating procedures. This project proposes to follow up on this study's recommendations to educate APEC economies on state-of-the-art energy efficient window rating procedures that comply with internationally recognized standards. Currently, most building energy codes make a general reference to window energy performance leading to widely divergent results reducing building energy savings. Fundamental investments for insulation applications, cool roof technologies, and other technological opportunities need to be pursued by all APEC economies and are included in the scope of this project.

2. **Objectives:** Describe the 2-3 key objectives of the project. (e.g. to... create a framework...; ensure participants will be able to...; share experiences...; enhance understanding...; develop recommendations...; build interest...; revise strategies... etc.)

- Collaborate working on an APEC pilot test case that can be replicated throughout APEC by participating in the establishment of the first APEC regional energy efficient testing and rating center, where building envelope energy saving opportunities will be taught and implemented
- Revise APEC economy building energy saving strategies to include internationally recognized energy saving ratings methods
- Basic capacity building and sharing of APEC economy building envelope energy savings successes

3. **Alignment:** Describe how the project will help achieve APEC's key priorities and meet your forum's work-plan or medium-term plan.

This project directly supports the 2010 APEC Leaders decision to implement the Energy Smart Communities Initiative (ESCI) for the APEC Building Material Testing and Rating Center (SB2). This project is directly focused on test standard development and harmonization to foster economic growth of energy efficient technologies and to reduce trade barriers.

This workshop and training session will be a major effort to get greater support from the APEC region. In 2011, under a self-funded US led project, a first successful workshop was held and six economies participated. Significant momentum has been created, however this next workshop will be held at a critical time when the test center will be moving towards phase II. Getting greater support from multiple APEC economies for participation and recognition, will help secure funding from the private sector since many companies serve numerous APEC markets. Funding requirements for phase II will be much greater and a consolidated APEC effort as proposed for this project can make a big difference in securing the private sector investment.

4. **Methodology: How do you plan to implement the project? In this section, address:**

- **Timeline: Project timelines and dates for key activities and deliverables**
 - Identify workshop participants and extend invitation to training seminar (February 2012 to April 2012)
 - Coordinate workshop and training at a regional energy efficiency center, likely in Bangkok, Thailand (April 2012 to May 2012)
 - Host workshop and training over three to four days, timing highly dependent upon the plans and development of phase I for the test center establishment (hosted between June 2012 – Oct 2012)
 - Summary of workshop completion with action items, next steps, and revised implementation plan (30 days after workshop)
 - Posting of all materials and final report from the workshop on the internet for easy access by all APEC economies.
- **Stakeholders: Beneficiaries and stakeholders (APEC & non-APEC) and how they will be engaged**
 - *APEC economy building material manufacturers, industry experts, academics, governmental officials (energy code officials), and product suppliers will make presentations and engage in discussion forums*
 - Non APEC fenestration manufacturers and suppliers providing products to APEC economies may participate
 - Residential and commercial building owners/tenants will learn about new opportunities to reduce energy consumption, and gain increased comfort for unconditioned buildings thus avoid increased space conditioning loads that come with increased income
 - APEC policy developers will learn how product ratings can help in establishing a range of energy efficiency policies; participation will be pursued so that “buy-In” can be achieved leading to program requirements that specify the need for rated performance of complying products.
- **Previous projects/activities: If and how this proposal builds on the findings or lessons learned from previous projects/activities, while avoiding duplication**
 - *This project will build upon NFRC’s recent APEC supported research titled: Energy Saving Windows- Survey of Policies and Programs to Promote Advanced Window and Glazing Technologies in APEC Economies. This research highlighted the tremendous need for improved building energy policies and programs where energy saving windows may be further implemented by providing an energy rating method such as that proposed here.*
 - *Click here to access the paper: http://publications.apec.org/publication-detail.php?pub_id=1172*
 - *This project also builds upon the outcome of the Cooperative Energy Efficiency Design for Sustainability (CEEDS) Phase II effort on Building Energy Codes lead by the Asia Pacific Energy Research Centre.*
- **Communication: How you plan to communicate the results or benefits of this project to others**
 - The results of the workshop will be made available in the public domain. Policy developers from organizing economies including Thailand, USA and Japan will promote the effort to other economies and within entities within their own economies. Global material suppliers will promote the effort to developing markets in other APEC economies. The entire effort will become a major case study to be replicated in other economies.