

APEC Building Integrated Thin-film PV Promotion Study Project Synopsis



China New Energy Chamber of Commerce

CNECC

Overview



Project Title:	APEC Building Integrated Thin-film PV Promotion Study
Source of funds:	APEC Support Fund
Committee / WG / Sub-fora / Task-force:	Energy Working Group (EWG) / Expert Group on New and Renewable Energy Technologies (EGNRET)
Proposing APEC economy:	China
Co-sponsoring economies:	
Expected start date:	April,2014
Expected completion date:	December, 2014
Project summary:	The project will be divided into 3 stages. Stage 1: make the research survey about APEC economies' technology standard, construction environment, policies and application situation of building integrated with thin-film PV (thin-film BIPV). Stage 2: make the summary and analysis from the outcome of the research survey into Development Report of Thin-film PV in AEPC Area. Stage 3: organize the meeting for information exchange and experience sharing among APEC economies.
Total cost of proposal: (APEC funding + self-funding) USD 187,000	Total amount being sought from APEC (USD): 137,000 By category: Travel: 15,000 Labor costs: 96,000 Hosting: Publication & distribution: 6000 Other: 20000

A dream to come true



1. Relevance

New thin-film tech, new opportunities

responding to APEC Russia 2012:
integrate to grow and innovate to prosper.

- Developing renewable energy
- Reducing greenhouse gas emission
- Promoting economy development
- Guaranteeing energy safety

Building Integrated Thin-film PV Promotion Study

- Study Thin-film BIPV application
- Define new ways of RE utilization
- Find a new way of economy growth
- Enhance energy safety by distributed solution

Challenges & opportunities

Challenges

- The advantages of thin-film BIPV are not known
- How the concept to be realized and benefit APEC economies

Opportunities

- Study better energy solution
- Update energy concept
- Promote acceptance

2. Objectives

Clean energy for a better World

- To improve the market acceptance of thin-film BIPV in APEC economies.
- To reduce the greenhouse gas emission and mitigate global climate change.
- To build a platform for communication and cooperation among APEC economies.
- To spread the idea of “using clean energy to change the world”, promote the transformation of energy production/consumption structure and the sustainable development in APEC region.



3. Alignment

Energy Safety: New Challenge and Strategic Decision

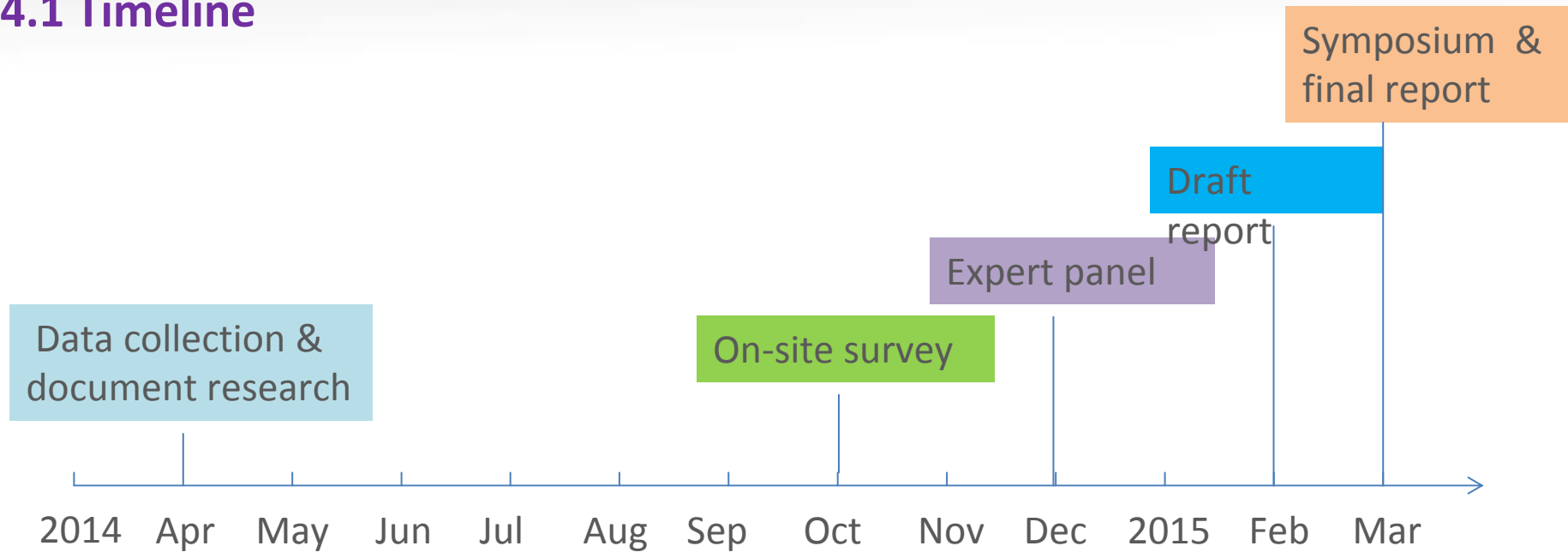
- Development of renewable energy
- Reduction of greenhouse gas emission
- Promotion of energy trade and investment and energy safety

Building Integrated Thin-film PV Promotion Study

- Aims to expand the market application of thin-film BIPV and this will contribute to adjustment of energy structure, low-carbon and emission reduction and mitigation of global climate change.
- Build a platform for communication and cooperation.
- (partially) Self-sufficient power solutions

4. Methodology

4.1 Timeline



4. Methodology

4.2 Stakeholders

Beneficiaries

- Thin-film BIPV related industry
- Traditional industries
- All APEC economies

Stakeholders

- APEC member government bodies
- research institutes
- Energy co.
- Industry associations
- Consumer associations
- Real estate developers

The stakeholders will be engaged by senior PV experts from different APEC economies through phone, e-mail or face to face.

4. Methodology

4.3 Previous projects/activities

Previous project

- APEC economies' power market of solar roof power station
 - PV module as attachments
 - Roof-top PV projects or Building Attached PV (**BAPV**)



This project

- Building Integrated Thin-film PV Promotion Study
 - Thin-film PV module as building material
 - Building-integrated PV (**BIPV**)



4. Methodology

4.4 Communication

1) The forum:

A final printed report of the project will be published at the forum which will be held at the last stage. The report will be distributed to the attendees.

2) Website access:

The report will be posted on the website of Asia Pacific Energy Research Centre.

3) The long-term communication:

Project team will positively promote the outcome throughout the country and APEC region.

Thanks



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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:	APEC Building Integrated Thin-film PV Promotion Study
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:	Energy Working Group (EWG) / Expert Group on New and Renewable Energy Technologies (EGNRET)
Proposing APEC economy:	China
Co-sponsoring economies:	Hong Kong China, Indonesia, Japan, Korea, Malaysia, Philippines, Chinese Taipei, Thailand, USA
Expected start date:	March, 2014
Expected completion date:	December, 2014
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>	The project will be divided into 3 stages. Stage 1: make the research survey about APEC economies' technology standard, construction environment, policies and application situation of building integrated with thin-film PV (thin-film BIPV). Stage 2: make the summary and analysis from the outcome of the research survey into Development Report of Thin-film PV in APEC Area. Stage 3: organize the meeting for information exchange and experience sharing among APEC economies.
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Project Overseer Information and Declaration:

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As Project Overseer and on behalf of the above said Organization, I declare that this submission was prepared in accordance with the **Guidebook on APEC Projects** and any ensuing project will comply with said Guidebook. Failure to do so may result in the BMC denying or revoking funding and/or project approval. I understand that any funds approved are granted on the basis of the information in the document's budget table, in the case of any inconsistencies within the document.

Name of Project Overseer

Date:

Project Synopsis

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

Using the clean energy to change the world is our common mission. The integration of building and thin-film PV not only improve living environment for human beings, protecting our mother earth from worse pollution, but also change our living style, making the energy utilization more convenient, safe and economic. In a word, it is significant to the future of our human beings. The application of thin-film BIPV is responding to the outcome of APEC Russia 2012: integrate to grow and innovate to prosper. It helps reaching the target of developing renewable energy, reducing greenhouse gas emission, promoting economy development, guaranteeing energy safety in APEC region.

Thin-film PV has the advantages of stabilization, flexibility and still power under weak light. It has been a trend for developed countries to use thin-film PV products in building. However, due to the problems of core technology, market's acceptance and energy using concept etc, the thin-film BIPV is not popular in some less-developed APEC economies. So this project is aimed to explore the best development path for thin-film BIPV based on the research survey about relevant technology standards, construction environment, policies and application status then expand the market acceptance in APEC region. Implementing this project will drive strongly the industrial system establishment, concept change of energy consumption and the spread of clean energy idea.

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.)

To improve the market acceptance of thin-film BIPV in APEC economies;

To reduce the greenhouse gas emission and mitigate global climate change;

To build a platform for communication and cooperation among APEC economies;

To spread the idea of "using clean energy to change the world", promote the transformation of energy production, consumption structure and the sustainable development in APEC region.

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

Themed "Energy Safety: New Challenge and Strategic Decision" the 10th APEC Minister's Meeting in 2012 focused on the problem of energy safety. Several consensuses were made at the meeting by APEC economies, including development of renewable energy, reduction of greenhouse gas emission, promotion of energy trade and investment and energy safety in APEC region.

This project is an action toward to the spirit of APEC meeting. In the aspect of developing renewable energy, this project aims to expand the market application of thin-film BIPV and this will contribute to adjustment of energy structure, low-carbon and emission reduction and mitigation of global climate change. In the aspect of promoting energy trade and investment, this project will build a platform for communication and cooperation. In the aspect of guaranteeing energy safety, this project will also produce some solutions.

4. **Methodology:** How do you plan to implement the project? In this section, address:
 - **Timeline:** Project timelines and dates for key activities and deliverables

The project duration is 12 months. It will be officially started in January 2014. The project will be implemented in 5 steps: data collection, document research, on-site survey, expert discussion, compile report and organize forum. The work plan is as follow:

2014/1-2014/2: finish the data collection and document research

2014/3-2014/7: on-site survey about technology standard, construction environment, national policies and application status in APEC economies

2014/8-2014/9: numbers of experts will be gathered to discuss and analyze based on the previous research work for solutions

2014/10-2014/11: combine the draft report in research survey stage and the outcomes of experts discussion to finish the final report about thin-film BIPV development in APEC region

2014/12: a specific symposium will be held to discuss the suggestions and reports of study; the project will come to end and a written report will be published

- ***Stakeholders: Beneficiaries and stakeholders (APEC & non-APEC) and how they will be engaged***

The first beneficiary of this project is thin-film BIPV developer who has mature technology and development experience as well as the related stakeholder who gain the technology and experience finally. Like US and Japan, the developed economy which has core technology and design experience will be benefited directly from the technology trade and transfer. At the same time, the less-developed countries will be as well benefited from this new-type mode of energy utilization to promote the energy-saving and environment protection. Other APEC stakeholders or non-APEC ones can profit by cleaner environment jointly and more experience of exploring renewable energy can be learned also.

The project will gather government officials of APEC economies and the representatives of research institute, industry organization, energy companies, consumers association, real estate companies etc. in this filed at the forum for communication and cooperation.

The review group which consisted of several senior experts in the field of PV who come from APEC economies will interview some typical stakeholders by phone, e-mail or face to face. The stakeholder is might be the government, research institute, industry organization and companies of APEC members and non-members.

- ***Previous projects/activities: If and how this proposal builds on the findings or lessons learned from previous projects/activities, while avoiding duplication***

Only one project named "APEC economies' power market of solar roof power station" in the past is relevant to this project. But the project is only refer to how implement the roof solar projects but not taking PV products as building materials. The major target of project in this proposal is to find the best way to develop thin-film BIPV and then make it popular in the APEC region even in the world, contributing to global climate change mitigation.

- ***Communication: How you plan to communicate the results or benefits of this project to others***

A final written report about thin-film BIPV development in APEC region will be published at the forum which will be held at the last stage. The forum is a platform for outcomes sharing. The report will be given to the attendees free of charge. After that, the outcomes of this project will be posted on the website of Asia Pacific Energy Research Center. Meanwhile, the project team will positively promote the outcome throughout the country and APEC region.