

Facesheet

(Tick ✓ one) **Project seeking APEC funding** **Progress Report** **Evaluation Report**
 (Tick ✓ one) **Operational Account** **TILF Special Account** **Self-funded Project**

Project number: (To be filled in by Secretariat)		Date received by Secretariat:	Late / Not late () ()
Name of Committee/Working Group: Expert Group on Clean Fossil Energy/Energy Working Group			
Title of Project: Options to Reduce CO ₂ Emissions from the Electric Power Generation Sector in APEC Economies (Phase III) – TILF Workshop for Developing Economies			
Proposing APEC Member: USA			
Co-sponsoring APEC Member(s): Canada, Korea, Japan			
Project Overseer: Name, Title and Organisation (M) Scott M. Smouse, Chair APEC Expert Group on Clean Fossil Energy			
Postal address: U.S. Department of Energy National Energy Technology Laboratory P.O. Box 10940 Pittsburgh, PA 15236-0940 USA		Tel No: 412-386-5725 Fax No: 412-386-4561 Email: scott.smouse@hq.doe.gov	
Financial Information	Total cost of proposal (US\$): 150,000	Amount being sought from APEC Central Fund (US\$): 125,000	
Type of Project: <input checked="" type="checkbox"/> seminar/symposium <input type="checkbox"/> short-term training course <input type="checkbox"/> survey or analysis and research <input type="checkbox"/> database/website <input type="checkbox"/> others (Please specify)			
Project start date: January 2003		Project end date: June 2003	
<p>Project Purpose: The Expert Group on Clean Fossil Energy (EGCFE) has been conducting a multi-year study on technological and other options to reduce present and future carbon dioxide (CO₂) emissions from electric power generation facilities in APEC economies¹. Information on the most cost-effective ways to reduce emissions of gases that contribute now, or are likely to contribute in the future, to global climate change will be of increasing importance to policymakers in all APEC member economies. When completed, the results of this work will constitute an important body of information and data to support policy and strategy development by both government and industry with regard to global climate response, particularly with regard to future investments in coal-based electricity generation infrastructure. This proposal aims to draw together the results of a multi-year, two-phase project, by organizing and holding a TILF Workshop on “Options to Reduce CO₂ Emissions from the Electric Power Generation Sector in APEC Economies (Phase III).” This Workshop is the logical, and necessary, third phase of the ongoing effort, and will promote critically needed dialogue among senior officials that can’t be achieved through publication and dissemination of the final reports for the first two phases of the study. An important objective of the Workshop, which makes it appropriate for TILF funding, will be its focus on issues that can affect the coal as a future energy source in developing APEC member economies, and in particular, how CO₂ emission reduction issues may distort future trade and investment decisions.</p> <p>This Workshop will be held in an APEC developing economy in 2003 and is intended to provide a timely forum where both government and industry participants from all APEC member economies can address the latest issues and experiences in the reduction of CO₂ emissions from fossil fuel power generation and share their individual experiences. The information presented and discussed in the Workshop will be of particular benefit to APEC developing economies where most options can not only reduce CO₂ emissions, but also lower the cost to produce electricity and reduce other emissions (SO₂, NO_x, and particulates) that are of a local and regional concern. The collateral benefits of many practical, cost-effective, near-term CO₂ reduction options have largely been not been recognized by developing countries.</p> <p>The completed Phase I study on Options to Reduce CO₂ Emission from Electric Power Generation in APEC Economies has provided detailed information on fossil fuel generating capacity broken down by fuel type and generation technology for all APEC economies, as well as an inventory of possible options for reducing CO₂</p>			

¹ Options to Reduce CO₂ Emission from Electric Power Generation in APEC Economies.

emissions indicating their reduction potential and their estimated costs. It also identified a number of CO₂ emission reduction scenarios that could be pursued by APEC economies, including their aggregate reduction potential over the existing APEC fossil fuel power generation capacity. Some of these options could be deployed at existing power plants to reduce CO₂ emissions and, in some cases, extend power plant life, increase generating capacity, reduce generating costs, and/or reduce other emissions. Other options could be pursued for new greenfield power generating facilities to substantially reduce future growth in CO₂ emissions through deployment of advanced power systems.

The Phase I inventory of emission reduction options will be complemented by additional information to be assembled under a second phase of the study regarding relevant power generation projects existing in or under consideration in APEC economies. It is expected that most of the projects described in these case studies will come from developed APEC economies. These projects will be described in detail by a qualified consultant to serve as examples of clean, efficient technologies that the developing economies can replicate. To date, this work has resulted in one report containing information on the APEC electric power generating sector and on emission reduction options and scenarios as described above. The second phase of the project, including the case studies and development of an action plan for at least one developing economy, is being carried out in 2002.

The Workshop program will include:

- 1) Keynote addresses on the status of global discussions on CO₂ emission reduction, with special reference to the role of the power generation sector; on technologies and options for CO₂ emission reduction, with particular reference to developing economies; and on trade and investment issues in APEC developing economies relating to CO₂ emission reduction options.
- 2) Presentations of the results of the Phase I work carried out under the auspices of the EGCFE on emission reduction options and scenarios.
- 3) Presentations of the case studies and action plan from the Phase II study.
- 4) Papers by APEC economy government officials on relevant activities in progress or planned in their economies, including projections for future power demand.
- 5) Presentations by executives from the power generation sector of different APEC economies, providing their perspective on how CO₂ emission reduction issues will affect their investment decisions in various APEC economies.
- 6) Presentations by multi-lateral banks and other investment institutions on how climate change issues are affecting their loan and assistance decisions.
- 7) Presentations by representatives of selected NGOs providing their perspective on future of coal in developing APEC economies.
- 8) Several Panel Discussions involving invited senior government representatives and industry experts.
 - a) Upgrading and refurbishment of existing power plants.
 - b) Generating technologies for new coal-fired power plants: development status, economics, reliability, O&M, and other issues for APEC economies.
 - c) Emission accounting and trading schemes, and development cooperation.
 - d) Facilitating trade and investment in APEC developing economies in areas relating to CO₂ emission reduction from electricity generation.
 - e) How to pick the "low-hanging fruit" for APEC economies.

It is anticipated that 100-125 individuals will participate in the Workshop. There will also be extensive local media coverage of this event to give the general public access to the views of the APEC experts. The presentations and panel discussions will involve high-level government research officials, private sector experts, and consultants/experts who have been involved in the related projects described above.

The Workshop results will be synthesized and presented to the EGCFE and EWG together with a set of recommendations for actions by APEC economies. A record of the Workshop will be published but the primary objective of the activity will be to engage leaders in the public and private sectors in a productive dialogue on approaches to the continued and, in some cases, the expanded use of coal for power generation in developing APEC economies, while addressing the global concern over rising CO₂ emissions.

Signature of Project Overseer:

(Separate written confirmation acceptable for e-mail submission)

Date:

Signature of Committee Chair/WG Lead Shepherd:
(Separate written confirmation acceptable for e-mail submission)

Date:

ECOTECH Weightings Matrix

[Options to Reduce CO₂ Emissions from the Electric Power Generation Sector in APEC Economies (Phase III) – TILF Workshop for Developing Economies]

Criteria	Supporting Information (indicate paragraph number if details are in the project proposal)	Linkage ⁶
<p>Responds to a specific instruction from Leaders/Ministers¹</p>	<p>MANILA DECLARATION</p> <ul style="list-style-type: none"> • Strengthen economic infrastructure • Develop stable, safe and efficient capital markets • Harness technologies for the future • Safeguard the quality of life through environmentally sound growth <p>THE OSAKA ACTION AGENDA Implementation of the Bogor Declaration Part Two: Economic and Technical Cooperation</p> <ul style="list-style-type: none"> • improving the flows of technological information and technology; • improving the transparency of regulatory frameworks; • contributing to sustainable development <p>THIRTEENTH APEC MINISTERIAL MEETING JOINT STATEMENT Shanghai, People's Republic of China</p> <p><i>“Energy security stands as an important issue for economic development and regional prosperity. They called for further energy technology development, exchange, application and deployment, and for the facilitation of a diverse and efficient supply mix to avoid the risks posed to the economy by volatility in the international oil market.”</i></p> <p>Expansion and improved operations of coal-power sector in APEC economies will improve further diversify fuel supplies at the lowest cost, by reducing global oil demand and better utilization of local and regional resources; thereby, promoting economic development and regional prosperity.</p>	1
<p>Meets a core Ecotech theme under the Manila Declaration¹</p>	<p>IV. Organizing Themes and Priorities</p> <p>Strengthen economic infrastructure to eliminate bottlenecks to economic growth, especially in such areas as telecommunications, transportation, and energy, in order to further integrate members into the regional economy, and the region into the global economy.</p> <p>Harness technologies for the future to ensure that APEC joint activities promote the flow and expand the capacities of its members to absorb existing industrial science and technology as well as develop new technologies for the future, thus promoting a free flow of information and technology.</p>	1
<p>Responds to the Common Policy Concepts, Activities and Dialogues identified in Part II of the Osaka Action Agenda¹</p>	<p>Section A, Item 2 - Joint Activities The information presented and interchange at the proposed seminars could lead to Joint Activities that will serve to:</p> <ul style="list-style-type: none"> - improve APEC economies' ability to analyse current and future economic trends, and develop and implement policy measures; - utilize regional resources more effectively; and - increase the effectiveness of policy measures. <p>Section B, Item 2 - Joint Activities APEC economies will engage in Joint Activities such as compilation and sharing of data and information, surveys, training, seminars, research and technical demonstrations.</p> <p>Section B, Item 5 - Energy: Common Policy Concepts APEC economies will set priority on the following:</p> <ul style="list-style-type: none"> - fostering a common understanding on regional energy issues; - facilitating investment in the energy sector where appropriate; - reducing the environmental impact of the energy sector; and - accepting equivalence in accreditation and increasing harmonization of energy standards 	1

Responds to a <u>specific</u> ECOTECH initiative ²	APEC Agenda for Science and Technology Industry Cooperation into the 21 st Century. Manila Declaration on ECOTECH (see above). Mexico Declaration on Science and Technology Cooperation: - “Encourage APEC fora, particularly the ISTWG, to continue to work with, and engage, the private sector to participate in the policy dialogue, in particular as it assessment of constraints and opportunities for partnerships and networks among economies; - Promote cleaner production both to preserve the environment and - to stimulate economic growth”	1
Improves skills, including in new technologies	Participants will be able to learn about technology advances, get answers to real issues, and solve problems. Information and data from discussions of technology application and of other coal-related issues will increase the ability to evaluate options that integrate energy, economic and environmental goals. Can facilitate joint implementation projects that will result in transfer of technology and skills. Likely to catalyze new inward investment in upgrading existing power generation capacity and building environmentally friendly new plants.	1
Builds capacity and strengthens institutions	Provides information and insights to participants that will strengthen their ability to contribute to energy and environmental goals in their own economies.	1
Measurably improves economic efficiency/performance ³	Information presented at the seminars can lead to significant improvements in coal-fired power plant efficiency at reasonable cost, resulting in lower costs, improved performance, and reductions in CO ₂ emissions and other pollutants from power plants.	1
Is of <u>practical</u> benefit to the private sector; has private sector <u>participation</u> ; and/or <u>funding</u> ⁴	Will benefit the private sector through better understanding of issues relating to the coal-fired power generation in developing economies, and through opportunities for investment in these economies. Private sector participation has been good in past seminars and will be actively sought in this one.	3
Assists economies attain sustainable growth and equitable development, while reducing economic disparities among APEC economies and improving economic and social well-being	Information presented at the seminar can lead to lower future growth of emissions and more sustainable growth in power generation in developing economies. It can reduce economic disparity by facilitating inward investment in upgrading the electricity generation sector, thereby improving economic and social well being via more secure and reliable energy and electricity supply.	1
Supports a TILF objective, as laid down in Part I of the Osaka Action Agenda ¹	The seminar topics discussed will include issues and problems that distort trade and investment decisions with a specific focus on coal as an energy source. The seminar will contribute towards fostering regional co-operation to liberalize and facilitate trade and investment in the coal and coal-based energy sectors of developing member economies and to support the region’s rapidly expanding demand for clean and efficient energy The seminar can also facilitate inward investment in developing APEC economies through identifying opportunities for projects in coal-fired electricity generation, including joint implementation projects.	1
Disseminates information including through seminars/websites/databases ⁵	The seminar proceedings will be circulated to key decision-makers in the private sector as well as public and government officials; to technical experts; to electric utility and related industry sector representatives; and to research institutes. A summary will be posted on the EGCFE web site for immediate viewing. A full version will be available for downloading.	0
Outline the outcome and how members will benefit ⁵	Presents an update on the results of substantial work done in these fields in industrialized and developing economies, and adds value by discussion, interchange and networking. Identifies issues needing further attention.	0
	Net Score	12

Footnotes

1. Identify which instruction/ECOTECH theme/OAA element
2. See <http://www.apecsec.org.sg/ecotech/index.html>
3. Policy outcomes that include development of energy efficiency guidelines, food safety standards etc.
4. One point scored for each element up to a maximum of 3 points
5. Not scored.
6. Yes = 1 point, No = 0 points

Remarks *(Please indicate if not applicable eg for TILF projects. Additional information in support of projects, which do not score highly, may also be provided here by the Lead Shepherd/Chair).*

FORMAT FOR PROJECTS SEEKING APEC FUNDING

This format should be completed with reference to the Guidebook on APEC Projects. It is recommended that the “Guide to Strengthening Project Management and Performance” would be a useful reference. Both Guides are available on the APEC Secretariat website at www.apecsec.org.sg

Please note that items followed by an asterisk (*) fall within the category of criteria which relate to “APEC values” in the **Criteria of Assessment of APEC projects** set out in Annex B.

Please provide your answers in point form or as succinctly as possible below each paragraph heading.

PROJECT DESIGN**Project**

1. *Name of project.*

Options to Reduce CO₂ Emissions from the Electric Power Generation Sector in APEC Economies (Phase III) – TILF Workshop for Developing Economies

2. *Name of the working group or committee taking responsibility for the project and the dissemination of its results.*

APEC Energy Working Group/Expert Group on Clean Fossil Energy

Objectives

3. *Describe briefly how you will measure your results (in the short and longer term) to know if your project has been successful. (You must provide detailed assessment measures in paragraph 19).*

In the course of the Workshop, the representatives of the participating member economies, experts in the field, decision makers, and representatives of the business community will be performing the following joint activities:

- Considering issues associated with improving the economic and environmental performance of existing fossil fuel power generating plants,
- Identifying the most efficient, cost-effective and environmentally sound fossil fuel generating technologies for new power plants,
- Assessing the most effective policies and strategies to reduce present and potential CO₂ emissions from power generation in APEC economies,
- Addressing issues and problems relating to CO₂ emission reduction from coal-fired power generation that can distort trade and investment decisions, and ways to overcome them,

- Identifying on-going technical cooperation needs in the Asia-Pacific region, which will assist APEC economies in fulfilling APEC investment objectives,
- Promoting an on-going mechanism for dialogue with the APEC business community on ways to improve the APEC investment environment for electric power generation.

Indicators of success of the Workshop will be:

1. The results of a survey distributed to participants.
 2. The number of attendees. We are projecting 100-125 participants with about 1/3 foreign participants.
 3. The number of economies that participated in the event.
 4. The number of copies of the proceedings requested after the event.
 5. An indication from the host economy and other economies that their objectives were met and that the resources utilized "were well spent."
 6. Any follow-up actions involving further APEC cooperative projects
4. *How, briefly, this project responds to the priorities set by APEC Leaders and Ministers, as evidenced by parts of the APEC Action Agenda including Action Program, work plan, vision statement, and policy statement that relate to this project.*

The proposed project furthers the goals of energy aspects of the Action Agenda, specifically by fostering a common understanding of regional energy issues. The project contributes to the achievement of the objectives of the Bogor Declaration and addresses the elements embraced in the 3Es initiative by reducing the environmental impact of the energy sector, and facilitating investment in electricity generation. It responds to the 1996 Manila Declaration, in particular its desire to ensure that APEC joint activities promote the flow and expand the capacities of its members to absorb existing industrial science and technology as well as develop new technologies for the future, thus promoting a free flow of information and technology. It is also consistent with the call by Energy Ministers at their San Diego meeting in 2000 for implementation of priority energy initiatives, including strategies to enhance energy efficiency. Finally, it could lead to application of a pathfinder approach of the type suggested in the 2001 Shanghai Accord, based on a group of members piloting the implementation of an initiative or initiatives aimed at reducing present or future potential CO₂ emissions from electricity generation.

The proposed Workshop will further these APEC objectives by making available data and promoting cooperation between APEC members on issues of regional importance with the potential of substantially improving the economic and environmental conditions within the region. The issues of how to expand use of fossil fuels in a more efficient and economic manner while reducing to a minimum CO₂ emissions and other environmental impacts are of key importance and common to all APEC economies. Cooperation on the project will contribute towards a better understanding of how resources, environmental and energy policies can be successfully integrated, and is likely to facilitate trade and investment in fuels and electric power in APEC developing economies..

5. *For applications under the TILF Special Account: How briefly this project contributes to APEC Trade and Investment Liberalisation and Facilitation (e.g., relevance to specific parts of the Osaka Action Agenda).*

The proposed Workshop will address issues and problems relating to CO₂ emission reduction from coal-fired power generation that can distort trade and investment decisions, particularly in developing economies. It will foster regional co-operation to liberalize and facilitate trade and investment in the coal and coal-based power sectors of developing member economies and support the region's rapidly expanding demand for clean and efficient energy.

Specifically, the work that is the object of the Workshop is likely to lead to Joint Activities that will serve to:

- improve APEC economies' ability to analyze current and future economic trends, and develop and implement policy measures;
- utilize regional resources more effectively; and
- increase the effectiveness of policy measures.

This activity is also aimed at improving environmental performance through expanded programs in the fields of clean coal and other fossil fuel technology, leading to exploration of cooperative multilateral programs to reduce climate change concerns, such as demonstration projects which lead to joint implementation. In this

case, it is likely also to facilitate technology imports, licensing, and inward investment in electric power generation in developing APEC Economies.

This proposal addresses a number of recommendations in the Osaka Action Agenda. Specifically, in Part One: Liberalization and Facilitation, Section C: Actions in Specific Areas, Section 3: Services, Energy, the following Collective Action was recommended: “*APEC economies will facilitate investment in the energy sector by identifying institutional, regulatory, and procedural impediments that affect investment in electricity infrastructure.*” While the Kyoto Protocol does not require developing economies to reduce their carbon dioxide emissions, many developing economies will eventually need to reduce their emissions owing to economic maturation. Also, most developing countries favor regulatory approaches that include CO₂ emission trading schemes, including Joint Implementation and Clean Development Mechanism projects. The EGCFE is completing the second Phase of a multi-year study on “Options to Reduce CO₂ Emissions from the Electric Power Generation Sector in APEC Economies.” This study will constitute an important body of information and data to support policy and strategy development by both government and industry with regard to global climate responses, particularly with regard to future investments in coal-based electricity generation infrastructure. There is no more contentious issue facing developed and developing economies around the world than the issue of how to address climate change. This stems from not only inherent political and economic factors, but also the myriad of institutional, regulatory, and procedural impediments that impact adoption of all proposed schemes. Owing to its large point source nature, the fossil power generation sector is at the center of the CO₂ debate. While the ongoing study and the proposed project cannot begin to address all the relevant issues affecting the electricity sector, it can facilitate critically needed dialogue among senior government and private sector officials on currently available, cost-effective CO₂ reduction options for the coal power sector. Near-term investment decisions by developing economies on the use of new technologies, such as Clean Coal Technologies, in new or refurbished power plants to meet future power demand will have a long-term impact on the future of the coal in the region.

In Part Two: Economic and Technical Cooperation, Section B: Economic and Technical Cooperation in Specific Areas, Section 2. Industrial Science and Technology, Common Policy Concepts, two recommendations are relevant: *(b) improving flow of technological information and technology, and (e) contributing to sustainable development.* This project is generating significant information on both the technical and economic merits of various CO₂ reduction options for coal power generation facilities. Exchange of this information should (1) allow central government and private utilities in APEC developing economies to make more rational decisions about their limited resources, and (2) increase the interest of foreign investors in pursuing power plant refurbishment projects in APEC developing economies, including Joint Implementation (JI) projects. Investment decisions on new power plant construction and refurbishment of existing power plants are among the many decisions that all developing APEC economies must make that affect their overall sustainable development.

Also in Part Two: Economic and Technical Cooperation, Section B: Economic and Technical Cooperation in Specific Areas, Section 5. Energy, Common Policy Concepts, three recommendations are relevant: *(a) fostering a common understanding on regional energy issues; (b) facilitating investment in the energy sector where appropriate; (c) reducing the environmental impact of the energy sector.* Specifically, it is recommended that APEC economies “*improve environmental performance through expanded programs in the fields of clean coal technologies, renewable energy sources and end-use energy conservation measures, leading to exploration of cooperative multilateral programs to reduce climate change, such as demonstration projects which lead to joint implementation.*” The Asia Pacific region is unique in the world, in that is the only region where coal is projected to be the dominant fuel for new power generation for many decades. Other regions have more options, including natural gas power generation. Among the many technological options to reduce CO₂ emissions from the coal power sector, clean coal technologies offer the greatest reduction potential in both new and existing plants. In Phase 1 of the ongoing Study on “Options to Reduce CO₂ Emissions from the Electric Power Generation Sector in APEC Economies,” clean coal technologies were projected to have a significant potential to reduce CO₂ emissions in all APEC economies. These technologies reduce the environmental impact of the energy sector in two ways: (1) installation of clean coal technologies, such as state-of-the-art burners, and particulate control devices, on existing power plants will directly reduce pollution and (2) use of less coal and other fossil fuels will indirectly reduce pollution through deployment of power plant technologies with higher efficiency ratings, such as integrated gasification combined cycle (IGCC) and supercritical pulverized-coal technologies. Power plants employing clean coal technologies will emit significantly lower levels of the traditional pollutants, nitrogen oxides, sulfur dioxide, and particulate, and lower emissions of carbon dioxide owing to their inherently higher thermal efficiency. The first two phases of this project will generate considerable practical information of about technological

and economical merits of the various CO₂ reduction options available to APEC economies. Sharing of this information will create a common understanding (1) among developing APEC economies of the relative technical and economic merits of various CO₂ reduction options, including clean coal technologies for new and existing power plants and (2) between developing and developed economies of the actions taken to date, perceived technical and market barriers, and government plans with regard to adoption of various options, particularly the use of clean coal technologies, in each economy.

Linkages

6. *The kinds of institutions in member economies intended to benefit from the results of the project. Highlight the direct benefits to the institutions, the types of business in member economies which will benefit from the results of the project and what the direct benefits are.*

Each of the member economies will benefit in a number of ways. The attendees to the Workshop will be able to learn, first hand, about technology advances, get answers to real issues, and solve problems. In addition, information and data resulting from discussions of potential applications of these technologies, and from the discussion of other coal-related issues, will enhance the ability of members to formulate integrated energy and environmental policies, and to evaluate options for resolving specific energy production and environmental issues. The power generation sector will benefit from improved knowledge and access to information on enhancing the performance of existing plants and building more efficient new plants. The information, interchanges and contacts made are likely to facilitate and support free coal trade and energy sector investment for the region as a whole.

7. *How the participation of the business/private sector and non-governmental institutions has been sought or will be sought. Illustrate how the business/private sector has been involved in the planning and delivery of the project and whether any other APEC fora have been consulted. (*)*

The Workshop will serve as a forum for expression of opinion, examination of issues, and presentation of data by leading members of the business and industrial community in the power generation and related fields. These leaders will be specifically invited and will participate as speakers, panel members, and attendees. Their contributions add a high degree of practical experience essential to a full understanding of options and factors key to the decision-making process. The importance of private sector support also is evident in the level of cost sharing made available in each of the technical seminars implemented by the APEC/CFE. Industrial and private sector experts in all aspects of clean fuels technology and electric power generation have responded enthusiastically to the invitation to participate in past events. They contribute their costs (i.e., preparation time, travel and expenses) to the overall benefit that the Workshop brings to the attendees. However, in very specific circumstances, with the specific approval of the EGCFE chair, a small number of attendees may be provided assistance to attend the Workshop to ensure their participation.

8. *How this project will add "APEC value" (as to the potential benefits of implementing projects) in the context of other work that might have been done elsewhere in the same field. (*)*

The Workshop will bring together the results of several activities carried out over the previous two years, and lay the basis for future progress in this field in APEC economies, including probably some joint actions. The issues addressed at the Workshop will encompass a wide range of electric power generation issues, and this project will be coordinated with other working groups through the Energy Working Group (EWG). The Workshop will permit open dialogue among senior public and private sector officials that can not be achieved through publication and dissemination of a study report. The results of the Workshop will be shared outside the APEC EGCFE through the publication of proceedings, which will be disseminated to all APEC members. Additional copies of the Workshop proceedings will be published and directly distributed to key government and industry officials and will be available through the APEC, EWG, and EGCFE websites. Therefore, the results of the Workshop will be available to virtually every APEC member.

9. *An indication of how the project might contribute to related projects or activities in APEC or elsewhere.*

The International Energy Agency's Working Party on Fossil Fuels is planning a workshop in China on Zero Emission Power Plants in October 2002. Contacts with those responsible for the IEA Workshop will be made

to ensure that information developed in the context of APEC projects on emission reduction leading up to the APEC Workshop proposed here will be available to the IEA, and that the results of the IEA Workshop will be available to APEC. Moreover, the possibility of a joint or coordinated workshop will be discussed.

10. *Describe the deliverables of the project and demonstrate how they will meet the needs of the targeted beneficiaries.*

The most direct beneficial impact of the project will be on the attendees and the experience they acquire in a forum created specifically for the direct interchange between them and the recognized experts in their field of interest. However, the major product of the Workshop that will extend the benefits of this activity throughout the Asia-Pacific Region is the Proceedings Report that will be published. This report will contain the papers presented by the invited experts and a summary of the panel discussions. The Proceedings Report, (together with the comprehensive reports from the earlier Phase I and Phase II of the project), will provide a good reference body of work on technologies and options for reducing actual and potential CO₂ emissions. It will be an APEC resource to be consulted in the resolution of problems and an educational tool for the introduction and discussion of issues. The value of the report will be maximized through care in its preparation and its subsequent distribution to a list of "decision makers" identified by the members of the Experts Group. The Proceedings will also be available through the APEC EGCFE website. Every attempt will be made to reach those who can have the most impact in the transfer of clean and efficient fossil fuel power generating technology through the use of the information and data contained in the report.

Methodology

11. *A concise description of the project's methodology by component, with its associated outputs clearly specified.*

The 3-day Workshop will consist of keynote and technical presentations and panel discussions scheduled so that representatives of the member economies and the Experts can have maximum opportunity to meet and exchange views.

The Project Steering Committee will be responsible for putting together the 3-day Workshop program and suggested list of speakers and panel discussants for approval by the EGCFE. It will designate a member who will take lead responsibility, assisted by a consultant, for confirming the speakers/panelists, finalizing the Workshop Program, publicizing the Workshop, providing advance information to participants, and working with the host economy to complete arrangements for the conference facilities, the social program, and the site visit. Following the Workshop, the Steering Committee will finalize the Proceedings Report for approval by the EGCFE for publication. The timetable for organizing/holding the Workshop and publishing the Proceedings is detailed in #13 below.

12. *A timeline for circulation and submission of this project proposal with drafts circulated well in advance to fora to allow careful consideration.*

This proposal was circulated to the EGCFE in early February 2002, for discussion at its Business Meeting in Kuala Lumpur on March 5, 2002, where it was approved for submission to the EWG Secretariat by March 15, which will then distribute it to the Energy Working Group and other fora for consideration.

13. *A timetable for the accomplishment of each component in (11).*

1. Identify Organizing Committee members from various key APEC economies. Develop 2-3 day Workshop program and identify host economy (November 2002).
2. Develop suggested list of speakers and panelists (January 2003).
3. Contact and confirm the speakers/panelists and finalize the Workshop Program (February 2003).
4. Complete arrangements for the conference facilities and possible site visit in consultation with the host economy (April 2003).
5. Publicize the Workshop via APEC web sites and other means (January to June 2003).
6. Provide timely advance information to Workshop participants (January to June 2003).
7. Hold the Workshop (September-November 2003).
8. Prepare the Proceedings Report for approval by the EGCFE (November-December 2003).
9. Publish the Proceedings Report (December 2003).

14. *The number of APEC member economies that will participate in this project. Please indicate the names of member economies participating in each component of the project as set out in (11). (*)*

Usually, representatives from 8-10 economies that are active members of the APEC EGCFE attend workshops organized by the group, including Australia, Canada, the People's Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, Philippines, Chinese Taipei, Thailand, and the United States. All representatives in attendance typically participate in the technical sessions, social functions, and site visits. A very active effort to inform key offices, individuals and organizations with each economy will be included as part of the Workshop planning process.

Budget

15. *An itemized budget for the project, including provision for any publication and dissemination of project results, in the prescribed format. Applications under the Operational Account should use the format at Annex A1. Applications under the TILF Special Account should use the format at Annex A2. The budget should illustrate the assumptions adopted (e.g. unit costs) for the computations.*

The estimated cost of this project, US\$150,000, is justified based on the anticipated benefits to governments and businesses in gaining information about options for CO₂ emission reductions that can be implemented most effectively within the individual economies. Investment in fossil fuel-based plants in the respective member economies is conservatively projected to run into tens of billions of dollars over the next ten years and assistance is needed now to ensure availability of technology and market data/information for timely evaluation and appropriate actions.

16. *A timetable for the drawdown of APEC funding requested for the project, including details of any advance payment or instalment payment requested and justifications for such requests.*

Full funding should be available upon approval of the project to facilitate placement of contracts for meeting facilities and other expenses, including commitments for invited speakers.

17. *Details of any request for waiver or exception from the normal APEC financial rules with justifications.*

None

Dissemination of Project Output

18. *A plan for the publication and dissemination of the results of the project, including:*

a. *the nature of the target audience, and, based on that audience;*

- Key decision-makers in the private sector as well as public and government officials;
- Technical experts;
- Electric utility and related industry sector representatives;
- Research Institutes.

b. *the form and content;*

The Workshop Proceedings will meet accepted standards for such reports, and comply with the APEC style and nomenclature guidelines. A summary will be posted on the EGCFE web site for immediate viewing. A full version will be available for downloading (see below).

c. *format (e.g. hard copies, floppy discs, internet uploading);*

Bound report for circulation by mail, plus electronic version in PDF format posted on the EGCFE website, available for viewing or downloading. Also, the report will be produced on CD-ROM for all participants and other interested parties.

- d. *number of copies for the publication;*
200 printed copies with the possibility of re-publication as determined by demand.

e. *accessibility of results for the targeted audience;*

The Workshop proceedings will be distributed to all attendees by mail. A more general audience may obtain the proceedings from APEC, libraries, and interested energy or resource-oriented organizations. They will also be available from the EGCFE website.

f. *a publicity plan for:*

i) *briefing the general or specialist media about key components of the project;*

Appropriate press releases will be held at the Workshop for local newspapers, television and radio stations. Supplemental media releases and articles will be prepared and submitted to coal, gas, electric power, energy, environment, and trade journals.

ii) *the promotion of sales or other dissemination of the final product; and*

Promotion will be through the dissemination plan listed above. Announcement of the proceeding will be made through various media, including print media and the internet. Extra copies of the proceeding will be available from the EGCFE Secretariat and at an appropriate agency at the host economy.

g. *a budget for publication and dissemination, to form part of the itemized budget.*

US\$5,000

Assessment of Project

19. *With reference to your objectives stated in paragraph 3, provide detailed criteria (quantitative and qualitative) for how you will measure your results in the short and long term to know if your project has been successful. State your current benchmarks for measurement, your target results from the project for each measurement criterion and the range of acceptable results both in numerical and percentage terms, where possible.*

General indicators of the success of the meeting will be the following:

- The number of attendees. We are projecting 100-125 participants with approximately 1/3 foreign participants.
- The number of economies that participated in the event.
- The number of proceedings requested after the event.
- An indication from the host economy and other economies that their objectives were met and that the resources utilized “were well spent.”
- Any subsequent cooperative actions between APEC member economies that emerge from this activity would be an indicator of success.

In addition, for those activities planned and implemented by the Expert Group on Clean Fossil Energy that involve a large number of participants and a selected number of technology experts or policy advocates as speakers, an evaluation process is implemented. The results are used in conjunction with the above indicators to determine the degree to which the Group’s activity has been successful. The evaluation form is distributed to the attendees as well as the members of the Expert Group. These forms, when completed, are collected and the results tabulated. The resulting correlations are used to assess the degree of success achieved, redirect the next activity of a similar nature, and to identify areas where greater emphasis is needed. Additional confirmation about the degree to which the activity had achieved its objectives is reflected in the number of requests received for additional material relating to the issues and/or technologies contained in the report or for the report itself. The evaluation process has proven to be very successful in its previous application to projects of the type being proposed.

Gender Criteria for Formulation and Evaluation of Projects

Objectives

1. *Show how the objectives of the project provide benefits for women, where appropriate. APEC Ministers have indicated (Framework for the Integration of Women in APEC) that benefits might include: increased involvement of women; taking account of the differences in women's and men's lives (gender analysis); and collection/use of sex-disaggregated data.*

The primary objective of the workshop is information transfer, networking, and ultimately, energy security in the APEC region. In general, having an adequate, dependable, efficient, and environmentally safe supply of energy in the APEC Region benefits men and women equally. Women can be uplifted by provision of electricity to replace domestic fuels, such as wood or coal, for cooking and space heating, and freed from the daily time-consuming efforts to secure and use these fuels, as well as from the harmful health impacts of uncontrolled combustion at the household level.

Linkages

2. *Show how the participation of women has been/will be sought. Show how women are involved in the planning, management, allocation of resources, and implementation of the project.*

Women are encouraged to participate as equal partners in all phases of EGCFE projects. While the official representative of each economy to the EGCFE changes occasionally, at least one economy (P.R. of China) has been represented by a woman for a number of years. Women will be sought in organizing the workshop, and strong participation from women will be encouraged in all facets of the workshop, including as speakers and session chairs.

Methodology

3. *Provide a brief description of the way women will be able to participate equitably in the development and implementation of the project.*

Women are encouraged to participate in all phases of the Workshop. Women will be consulted in the workshop development process and will be invited as speakers and session chairs during the workshop. The selection of a consultant will follow APEC guidelines.

4. *Provide a brief description to show that the project will collect and use sex-disaggregated data (if available) to measure the project's effects on women.*

The only data collected will be the questionnaires that are given to each participant to fill out at the end of the conference. The list of attendees will show the number of women that attended the Workshop, however.

Dissemination of Project Output

5. *Does the plan for the publication and dissemination of the project's results include communication methods that are appropriate for women?*

Questions that may be relevant include: Are women one of the target audiences? Does the plan take account of women with low literacy and women with low access to electronic media? Will the results be disseminated to women's organizations?

The proceedings will be distributed to every participant and will also be posted on various APEC web pages. Men and women will have an equal opportunity to receive a copy.

Budget

6. *Are women involved in making decisions on the allocation of resources/*

Women will be consulted in all aspects of the decision-making process.

7. *Where appropriate, provide details of the project's budget that are allocated to activities that address the specific needs of women.*

N/A – the project is gender neutral.

Assessment of Project

8. *Provide details of how the project proponent will assess whether he/she has met the gender criteria for APEC projects and how he/she will measure the impact of the project on women.*

The number of women participating in the Workshop will be an indicator of well all APEC members, including women were reached.

Annex A2

**APEC TILF Special Account
Itemized Budget for Financial Year 2003***

(Please tick ✓)

This project is:

- a seminar, symposium or short-term training course
 a survey or analysis and research project
 neither the above, but involves the provision of equipment

Items			APEC Funding (USD)	Self Financing (USD)
<i>Direct Labour</i>	No. of Hours	Rate		
- Speaker's Honorarium				
- Translator's Fees				
- short-term clerical and secretarial staff remuneration	275/125 (APEC/Self)	\$40/hr	11,000	5,000
- Consultant (including Researcher) Fees (workshop organizer)	150/100	\$100/hr	15,000	10,000
- Consultant's Secretary Cost				
<i>Travel (for invited speakers)</i>				
Per Diem (including accommodation and "additional payment")	18 people	3 days @\$150/day	8,000	
- Airfare	18 people	\$3,500/trip	63,000	
	No. of Copies	Unit Cost		
<i>Publication of report</i> (including distribution) (print + CD-ROM)	200	\$25.00	5,000	
<i>Equipment/Materials</i> (pls. describe briefly what is required and why) (audiovisual equipment rental)			3,000	
<i>Photocopying</i>			5,000	
<i>Communications</i> (Phone/Fax/Mail/Courier)			5,000	
<i>Hosting</i> (pls. describe, e.g., conference room rental, stationery) (meeting room rental)			10,000	10,000 (reception)
<i>Total</i>			125,000	25,000

If project straddles more than one year, please indicate only the amount of funds required for the financial year in question.