Twenty-First Meeting, Kuala Lumpur, Malaysia, 18-19 May 2001

Summary Record of the 21st Energy Working Group Meeting

The twenty-first meeting of the APEC Energy Working Group (EWG) was held in Kuala Lumpur, Malaysia, on 18-19 May, 2001. Australia and Malaysia co-chaired the meeting.

Delegates from Australia; Brunei Darussalam; Canada; Chile; the Peoples' Republic of China; Hong Kong, China; Japan; the Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; the Philippines; Singapore; Chinese Taipei; Thailand; the United States of America and Vietnam participated in the meeting. Representatives from the EWG and APEC Secretariats also attended. PECC and APERC were represented at the meeting, the EWG EBN Chair attended the meeting until the completion of Agenda Item 2, and the Secretary General of the Energy Charter Secretariat gave a presentation on the Charter.

A list of participants is at Attachment A.

1. Opening address and the adoption of the agenda.

In his welcoming address, Co-chair for the meeting, Mr Syed Hamzah Syed Othman, Deputy Secretary General, Ministry of Energy, Communications and Multimedia, warmly welcomed delegates to EWG21 to Malaysia.

In his opening address the Deputy Secretary General noted the importance of technology transfer and human capacity building to the process of reducing the gap between developed and developing countries and the gap between the rich and the poor. Access to energy in remote communities was also an important aspect of moving toward greater equity in our APEC community. The main barriers to increased use of new and renewable technologies are cost and attitudes. A continuing focus on these aspects of our work will help to address these barriers.

Mr Mackey, Lead Shepherd of the EWG and Co-chair, thanked Mr Syed Hamzah Syed Othman for his address and for the excellent meeting facilities provided by Malaysia on behalf of all delegates attending EWG21 and outlined the business for the meeting.

On behalf of EWG members, the EWG Chair Mr Mackey welcomed Dr Helena Gaytan of the APEC Secretariat to her first EWG meeting and recorded his thanks for Mr Yang Yafei's many years of administrative support to the EWG.

The agenda for the meeting was adopted with one amendment.

Action Arising/Next Steps

• Mr Mackey to write to Mr Yang Yafei expressing the appreciation of EWG members for his contribution to the work of EWG.

2. Report of the fifth meeting of the Energy Working Group – Energy Business Network (EBN)

Dr Siwanan Na Nakorn, EBN Chair, presented the "Summary of Decisions" of the fifth meeting of the EBN which was held at Oaxaca, Mexico, on 7 March, 2001. Members thanked Dr Siwanan Na Nakorn for his comprehensive report. While discussion on the decisions to be made regarding the EBN's recommendations was deferred until Agenda Item 3. Members thanked Dr Siwanan Na Nakorn for his report and expressed strong support for the work of the EBN and the need for strong business participation in the activities of the EWG.

Action Arising/Next Steps

- Nil.
- 3. Proposals arising from the fifth meeting of the Energy Working Group Energy Business Network (EBN)
- 3.1: Implementation Facilitation Assistance Team (IFAT) Update

Members agreed to defer discussion on the IFAT Update until Agenda Item 5.

Action Arising/Next Steps

• Members agreed to discuss the IFAT matters raised at EBN5 under Agenda Item 5.

3.2: Business Participation in EWG Activities

Members noted the interest of the EWG Business Network of seeking greater participation at EWG meetings and recognised recent achievements in the greater engagement of business in EWG related activities. Members agreed that EBN representatives should be encouraged to participate in the Expert Groups where their contribution would be most relevant. Further, it was agreed that increased dialogue involving representatives from EBN at EWG meetings would be both beneficial and consistent with decisions taken by APEC Leaders, Energy Ministers and Senior Officials. Members therefore, agreed that an EBN representative would be invited to participate at EWG meetings in those agenda items for which there was consensus of members. EBN will be excluded from participation in deliberations on specific agenda items when an issue is more appropriately discussed on a government level only. Only EWG members can take part in decisions of the EWG.

Members agreed that for future meetings of the EWG, the Secretariat would seek advice from member economies as to which agenda items an EBN representative will be invited to attend. This will allow the EBN representative to be advised in advance of EWG meetings of the agenda items to which they can fully contribute.

Action Arising/Next Steps

• The EWG Secretariat to advise EBN members of the EWG decision.

• Prior to future EWG meetings the EWG Secretariat will seek advice from members on which agenda items should be confined to government to government dialogue only.

4. EBN Terms of Reference

The Chair advised members that it was now two years since the EBN Terms of Reference (TOR) were written by the EWG. In accordance with the content of the EBN TOR they are to be reviewed every two years. The subject was opened for comment. The EBN TOR were agreed without change.

Action Arising/Next Steps

• The EWG Secretariat to advise EBN members of the EWG's decision.

5. Implementation Facilitation Assistance Team (IFAT) Update

Mr David Natusch, Team Leader, presented the IFAT teams' report on the visit to Peru. EWG members noted that both the IFAT and Peru considered the visit to have been a success.

The United States advised members that while it had previously indicated that it may invite an IFAT Team during 2001 that because of the recent policy review it was not yet able to provide further detail.

Members welcomed the announcement by the Philippines that while they had temporarily deferred their proposed IFAT visit they now wished the visit to go ahead in early 2002. The Philippines indicated that they will be shortly forwarding an invitation outlining their requirements to the Chair of the EWG. However, the Philippines indicated that they were not in a position to provide all out-of-pocket expenses to IFAT Team members and raised the question as to whether funding assistance could be found from alternative sources.

A number of members emphasised the value of IFAT's for gaining expertise on any area of their energy sector as an input to their energy sector development. Chile also indicated that it may consider an IFAT in the future.

EWG members noted the discussion held by the EBN on the Regional IFAT concept and considered that IFAT's are best suited to address the needs of specific member economies rather than issues of broader concern.

EWG members considered proposals for additions to the IFAT Guidelines and comments made by the EBN regarding out-of-pocket expenses.

Members agreed that funding of out-of-pocket expenses will continue to be considered on a case-by-case basis at the discretion of the inviting economy. Members agreed in principle to the additions to the guidelines proposed by one economy and to the EWG Secretariat preparing revised guidelines to reflect the above, and to take into account the way in which IFAT Team Leaders will be chosen.

Action Arising/Next Step

• A revised set of guidelines will be prepared by the EWG Secretariat and circulated to members for consideration out-of-session.

6. Secretariat Reports

Dr Helena Gaytan, Director (Program) at the APEC Secretariat presented a report to members on recent APEC developments, and goals and themes for the China APEC year.

Mr John Butterfield, Manager of the EWG Secretariat noted that the Secretariat would be consolidating the comments from members on the Human Capacity Building Initiative and would input consolidated comment to the APEC Secretariat.

The EWG Secretariat also noted that it was important for EWG members to advise the EWG Secretariat of future activities, as the function of sharing this information with the broader community is an important one.

Members sought clarification of the way in which the Osaka Action Agenda would be updated. The APEC Secretariat and EWG Secretariat advised that the first part of the Energy section of the Osaka Action Agenda (Part II) reflects decisions taken by Energy Ministers and Leaders. The second part would need to be in accordance with the Future Directions of the EWG when they are agreed by EWG.

Members noted the reports of the APEC and EWG Secretariats, including advice regarding guest applications and project approvals.

Action Arising/Next Steps

- The EWG Secretariat will consolidate member comments received on the Human Capacity Building Initiative and forward them to the APEC Secretariat
- Expert Group Chairs will advise the Secretariat of intended future activities
- The EWG Secretariat will place all activities notified to it on the EWG web site and forward these to the APEC Secretariat for inclusion on the APEC web site
- An updated version of the Osaka Action Agenda will be prepared by the EWG Secretariat and circulated to EWG members for comment.

7. Future Directions Strategic Plan

Mr Peter Hodge, the delegate from New Zealand, who facilitated the workshop on the Future Directions Strategic Plan introduced the item. Members considered the outcomes of the Future Directions Workshop held on 16 May. Some changes to the text of the Future Directions Strategic Plan to address specific concerns were discussed and agreed. Endorsement will be sought out-of-session. Members noted that decisions would be taken at a later date on whether the Plan should be submitted to a future meeting of APEC Energy Ministers for endorsement.

Action Arising/Next Steps

• A copy of the Future Directions Strategic Plan is attached to this Summary Record. Endorsement of the plan will be sought out-of-session, before EWG22. When the Future Directions Strategic Plan is agreed, the EWG Secretariat will forward it to the APEC Secretariat and post it to the EWG website.

8. EWG Project Proposals for 2002

Members noted that 19 project proposals had been submitted for the consideration of the EWG. Of these, 10 were seeking funds from the APEC Central Fund Operational Account, 3 were seeking funds from the Trade and Investment Liberalisation Fund (TILF) Special Account, and 6 were self-funded.

Members endorsed all 19 project proposals without amendment.

Members ranked the projects in the following order in accordance with the agreed EWG method up to a value of approximately US\$300 000.

Operational Account projects endorsed for forwarding to the APEC Budget and Management Committee to a total value of US\$313,660:

- 1. Harmonising Economic and Environmental Objectives of Energy Policy Phase 1 (Australia) Project 1, APEC funds sought US\$76,660.
- 2. Operation of APEC Energy Database and Analysis (EGEDA) Project 4, APEC funds sought US\$27,300.
- 3. Symposium on the Development and Coordination of Energy Efficiency Programs and Standards During Energy Market Restructuring (EGEEC) Project 3, APEC funds sought US\$60,000.
- 4. APEC 21st Century Renewable Energy Initiative: Training and Accreditation Needs and Capabilities Study (EGNRET) Project 10, APEC funds sought US\$50,000.
- 5. Business Guide to Formation of Energy Service Companies (ESCO's) (EGEEC) Project 6, APEC funds sought US\$50,000.
- 6. Assessment of Geological Storage Potential of Carbon Dioxide in the APEC Region (EGCFE) Project 2, APEC funds sought US\$50,000.

The four remaining projects seeking operational account funding exceeded the US\$ threshhold.

TILF Special Account projects endorsed by EWG21 for forwarding to the APEC Budget and Management Committee:

- 1. Adoption of Renewable Energy Standards (EGNRET) Project 3, TILF funds sought US\$95.000.
- 2. Impediments to Adoption of Distributed Resources in APEC Economies (EGEEC and EGNRET) Project 1, TILF funds sought US\$90,000.
- 3. Measuring the Impacts of New Economy Technologies on the Energy Sector in APEC Economies (Australia) Project 2, TILF funds sought US\$188,750.

Self-funded projects endorsed by EWG21:

- 1. APEC Energy R&D and Technology Transfer Seminar (EGNRET)
- 2. Coal Flow Seminar and Clean Fossil Energy Technical Seminar (Joint Workshop) in Malaysia
- 3. 2002 APEC Renewable Energy Fair (EGNRET)
- 4. Energy for Sustainable Communities Program
- 5. Greenstar Micro-Enterprise Project Combining Solar Power and Internet Connectivity for Sustainable Development (EGNRET)
- 6. Earthquake Response Cooperation Program for Energy Supply Systems (Phase 2) (Chinese Taipei)

Action Arising/Next Steps

• The EWG Secretariat will submit the project proposals listed to the APEC Secretariat for consideration of the APEC Budget and Management Committee.

9. Policy Dialogue (EWG Members only - No Observers or Guest Participants)

Members held a policy dialogue on the topic "Energy Efficiency" and, as previously agreed, no records of discussion were taken under this item. It was agreed that for EWG22 the policy subject would be "The Role of Nuclear Energy". The topic of "Embedded Energy and Standby Power" was also raised. It was agreed that the latter subject should be referred to the Electricity Regulators' Forum for consideration and report to the EWG in the first instance.

Action Arising/Next Steps

• The EWG Secretariat is to request the ERF to consider the subject "Embedded Energy and Standby Power" and to report to EWG22.

10. Pledge and Review

Members noted the contributions to the voluntary Pledge and Review program. Members reaffirmed that this is an important initiative agreed by Energy Ministers.

The meeting noted the Expert Group on Energy Efficiency and Conservation's (EGEEC) suggestions on ways to improve the current Pledge and Review Program. Members also noted that the EWG Secretariat will prepare an annual report, including new pledges received from members at EWG21, and circulate it to the EWG out-of-session.

Action Arising/Next Steps

- The EWG Secretariat will prepare an annual report, including new Pledges received from members for EWG21, and circulate it to the EWG out-of-session prior to EWG22
- Member economies who have not done so are encouraged to submit their Pledge and

Review contribution to the EWG Secretariat for circulation to members.

11. Other Key EWG Initiatives

11.1: Earthquake Response Cooperation Initiative

Members noted the progress report from Chinese Taipei and expressed strong support for this initiative. EWG members noted the workshop and other activities to be undertaken for phase one of the initiative.

Action Arising/Next Steps

Nil at present.

11.2: 21st Century Renewable Energy Development Initiative

Members noted the Progress Report on the 21st Century Renewable Energy Development Initiative and its potential to make a valuable contribution to the APEC region. Members agreed to consider additional self-funded activities under this initiative out-of-session.

Action Arising/Next Steps

Nil at present.

11.3/11.4: Energy E-Commerce/Energy Services

Members noted the report on the combined workshop on Energy E-Commerce/Energy Services. Members supported the proposal by the Republic of Korea and PECC to interactively cooperate on the two initiatives. Members agreed to a second workshop concentrating on electricity or natural gas and the role of E-Commerce in these markets and noted the proposal that there be a third workshop to produce a compendium of "Best Practice" in Energy E-Commerce/Energy Services.

While members supported two initiatives, members stressed that the second combined workshop should focus on information exchange and should be compatible with and not duplicate the work of broader APEC groups on E-Commerce and Services or the application on Services currently before the World Trade Organization, and that members positions at the WTO would in no way be prejudiced.

Action Arising/Next Steps

• PECC and the Republic of Korea to advise the EWG Secretariat of details of the next combined workshop for circulation to member economies.

11.5: Framework for Cooperation on Energy Efficiency Testing Standards

Members noted the report from New Zealand and noted the requirements for those economies wishing to participate to cooperate closely with the work of the Standards coordinator. The Peoples' Republic of China requested minor amendments to the report which were accepted

by members.

Action Arising/Next Steps

• New Zealand is to forward a Request For Proposals for the Standards Coordinator contract to the APEC Secretariat for circulation to all APEC economies.

11.6: Energy Security Initiative

There was an extensive discussion on the energy security initiative agreed at EWG20 held in Cusco, Peru. This discussion confirmed that the intention of the initiative was, and remains, firmly seated in information sharing on the many aspects that together contribute to greater energy security. It was acknowledged that for many economies disruption to oil supply is the key concern and that the establishment of oil stocks by these economies may be an important policy option.

The workshop proposed to be held in Thailand on 12 and 13 September was discussed and it was noted that the agenda for the workshop contained a good breadth of relevant issues for consideration. While the suggestion was made that it may be more appropriate to hold the workshop back to back with the next EWG meeting to facilitate EWG delegate participation, the September Thai venue proposal was agreed. Given the political and policy sensitivities associated with energy security it was agreed that the initiative needed to be carefully managed by the EWG and that the output from the workshop should be considered at a half day session during EWG22. The EWG can then consider what ought be presented to APEC Leaders.

Some concerns were expressed about the content and status of the document entitled "Scoping Paper – Energy Security Initiative: Emergency Oil Stocks as an Option to Respond to Oil Supply Disruptions". The document had been prepared by APERC as an input to deliberations on the broader initiative, but its authorship was not identified in the document.

It was noted that this contribution was not intended to "scope" the energy security initiative agreed in Cusco, but it was suggested that as a stand-alone document its purpose and status could be misinterpreted. It was suggested that the authorship of the document should be clearly identified on it and that a description such as "Analysis Paper" rather than "Scoping Paper" would be more appropriate. Mr Yokobori clarified that emergency response measures were not limited to emergency stock draws and stockpiling was used as an illustration of an emergency response option. Mr Yokobori also noted that APERC documents do not have to be agreed by member economies, but advised that APERC would welcome comments and contributions from members on the analysis contained in it to facilitate its update prior to the September workshop.

Members noted the need for a "progress" report to APEC Leaders on the energy security initiative and agreed that it would be helpful if the EWG Secretariat circulate to them proposals for the content of the report in order to receive suggestions to facilitate its preparation.

Action Arising/Next Steps

- Member economies to advise the Chair of the Expert Group on Clean Fossil Energy of possible speakers for the workshop to be held in September 2001, by the end of June 2001 to facilitate preparation of an agenda.
- The Chairman of the EGCFE to advise the EWG Secretariat of details for the September Workshop in Thailand, to enable circulation to all member economies.
- Members to advise APERC of comments and suggestions on the currently termed "Scoping Paper", in particular to non-stock options by 15 June to facilitate update of the document.

• The EWG Secretariat to circulate to members an outline of a proposed report to APEC Leaders by the end of June for comment.

12. Statements on Notable Energy Developments since EWG20

The Chair thanked members for providing their Statements on Notable Energy Developments. Members who tabled their Statements at the meeting were encouraged to provide an electronic copy to the EWG Secretariat by 31 May for circulation to members by the end of June 2001. The delegation from the USA made available to members a copy of the media statement on the USA's new energy policy.

Action Arising/Next Steps

- Those members wishing to submit their statement on notable energy developments are invited to provide an electronic version to the EWG Secretariat by 31 May 2001.
- The EWG Secretariat is to circulate these additional documents to members by the end of June 2001.

13. Report of the Ninth Meeting of the Energy Regulators' Forum

A report on the ninth meeting of the Energy Regulators' Forum held in Kuala Lumpur on 17-18 May 2001 was tabled. Members welcomed and noted the report.

Action Arising/Next Steps

• Nil.

14. Report of the meeting of the EWG Expert Group Chairs

The EWG Secretariat presented a report to members on the outcome of the meeting of the EWG Expert Group Chairs' held in Kuala Lumpur on 17 May. Members noted the progress reports prepared in advance of the meeting by each of the Expert Groups and APERC.

Members endorsed the revised Terms of Reference for the Expert Group on Clean Fossil Energy.

Action Arising/Next Steps

• Members to provide comment to the EWG Secretariat by 8 June 2001 on the Strategy Paper tabled by the EGNRET. An amended Strategy Paper will then be circulated to EWG members for endorsement out-of-session.

15. Review of Lead Shepherd Position

EWG members reviewed the position of Lead Shepherd. Australia was selected to undertake the role of Lead Shepherd for the next two years. EWG members discussed the position of

Deputy Lead Shepherd. It was agreed that the current practice of the hosting economy acting as Co-Chair would continue.

It was also agreed that Australia would carry out the EWG Secretariat functions until the Lead Shepherd position was reviewed in 2003.

Action Arising/Next Steps

Nil.

16. Other Business

16.1: Presentation by the Energy Charter Secretariat

Members noted the presentation given by Dr Ria Kemper, Secretary General, of the Energy Charter Secretariat. Members thanked Dr Kemper for her presentation.

Action Arising/Next Steps

• Nil.

16.2: Proposal on Case Studies on Energy For Sustainable Development

Australia presented a proposal that the APEC EWG might consider preparing a case study on cooperation within the EWG on issues relevant to the decisions taken on energy at the CSD9 negotiations which took place in April 2001. A copy of the text was circulated to members. Members agreed that the proposal would be discussed at EWG22.

Action Arising/Next Steps

• Australia to prepare a discussion document on the proposal for consideration at EWG22.

16.3 APEC 2002

Mexico advised that it will be the host for APEC in the 2002 year and indicated that if no other economy is to hold a meeting of APEC Energy Ministers in that year it would wish to consider doing so. If an APEC Energy Ministerial meeting is hosted by another economy in 2002, Mexico proposed that one of the Energy Working Group meetings be held in Mexico during that year.

Members warmly welcomed Mexico's proposals and the EWG Secretariat will liaise further with Peru to clarify whether its proposal to host an APEC Energy Ministers meeting in 2002 will proceed.

Actions Arising/Next Steps

• The EWG Secretariat will liaise further with Peru to clarify whether its proposal to host a Ministerial in 2002 will proceed.

17. Date for Next Meeting

Members welcomed and noted the generous offer by Papua New Guinea to host EWG22 and associated meetings in Port Moresby, on 27-28 September 2001. Members also welcomed and noted the offer by Thailand to host EWG23 in Bangkok Thailand in 2002.

Action Arising/Next Steps

• The EWG Secretariat will inform members of the details of arrangements for EWG22 and associated meetings when they become available.

18. Document Access

Members agreed that the Summary Record and other documents from this meeting could be released to the public immediately after the meeting.

Action Arising/Next Steps

Nil

19. Summary Record of Twenty-First Meeting

The Summary Record of the meeting was agreed.

Action Arising/Next Steps

Nil

Concluding Remarks

Members recorded their thanks to Mr Syed Hamzah Syed Othman, Deputy Secretary General, Ministry of Energy, Communications and Multimedia, for attending the meeting and the Co-Chairs for leading the members through a substantial agenda. Members also recorded their appreciation to the host economy for the excellent meeting facilities and hospitality they enjoyed in Malaysia.

21st Meeting, Kuala Lumpur, Malaysia 18-19 May 2001

Attachment A

List of Participants

Chair/Co-Chair

Mr Tim Mackey Dept. Industry, Science & Resources, Australia Mr Syed Hamzah Syed Othman Ministry of Energy, Communications & Multimedia,

Malaysia

Australia

Mr Robert Alderson Dept. Industry, Science & Resources Ms Vicki Brown Dept. Industry, Science & Resources

Brunei Darussalam

Mr Hj Umar Hj Mohd Tahir
Mr Hj Abd Shawal Yaman
Dept of Electrical Services, Ministry of Development
Dept of Electrical Services, Ministry of Development

Canada

Mr Claude Gauvin
Dr Martin Walters
Natural Resources Canada
Natural Resources Canada

Chile

Mr Claudio Espinoza National Energy Commission

Mr Tomas Astorga Ministry of Mining

People's Republic of China

Ms Jun Gu Foreign Affairs Department, State Development

Planning Commission

Mr Yihui Wang Basic Industry Department, State Development

Planning Commission

Hong Kong, China

Mr Lee Chun Kau Electrical and Mechanical Services Department

Mr Wong Yin Fun Economic Services Bureau

Mr Leung Welman Electrical and Mechanical Services Department

Japan

Mr Kenji Kobayashi International Affairs Division, METI

Mr Kenzo Hagio Agency for Natural Resources and Energy, METI

Mr Hidenobu Sobashima Ministry of Foreign Affairs Mr Masaru Hattori Ministry of Foreign Affairs

Republic of Korea

Dr Dae Gyun Oh Korea Energy Management Corporation
Mr Kyo-Hyoung Han Ministry of Commerce, Industry & Energy

Mr Jea-Seoung Choi Korea Gas Corporation

Mr Seok Won Shin Korea National Oil Corporation

Malaysia

Mr Syed Hamzah Syed Otthman Deputy Secretary General, Ministry of Energy,

Communications and Multimedia

Mrs Noriyah Ahmad Ministry of Energy, Communications & Multimedia

Mr Mohamud Razif Abdul Ministry of Energy, Communications & Multimedia Mubin

Mrs Ungku Ainon Ungku Tahir PETRONAS Dr M. Farid M Amin PETRONAS Mrs Zuraidah Kamarudin PETRONAS

Dr Mohd Zamzam Jaafar Malaysia Energy Centre
Dr Norhayati Kamaruddin Malaysia Energy Centre

Dr Salim Sairan Tenaga SPL, Tenaga Nasional Berhad

Mexico

Dr Lourdes Melgar Ministry of Energy

New Zealand

Mr Peter Hodge Ministry of Economic Development

Papua New Guinea

Mr Idau Kopi Department of Petroleum and Energy Mr Vore Veve Department of Petroleum and Energy

Peru

HE Javier Gonzales Terrones Ambassador, Ministry of Foreign Affairs

Mr Enri Prieto Second Secretary, Peru Embassy

Philippines

Mrs Lilian Fernandez Department of Energy

Singapore

Mr Wong Siew Kwong Energy Market Authority
Ms Jeanette Lim Energy Market Authority

Chinese Taipei

Mr Wang Yunn-Ming Deputy Secretary General, Ministry of Economic

Affairs

Mr Chuang Shih-Ming Ministry of Economic Affairs

Mr Lu Jhy-Ming ITRI
Mr Shih Shin-Chih ITRI
Mr Lin Tien-Yueh ITRI

Thailand

Mr Sittichod Wantawin National Energy Policy Office

Mr Siwanan Na Nakorn Electricity Generating Public Company Limited

Mr Poonpat Leesombatpiboon National Energy Policy Office

United States

Mr David Pumphrey
Mr George Zeigler
Department of Energy
Mr Scott Smouse
Department of Energy
Mr Andre Van Rest
Department of Energy
Ms Michelle Billig
Department of State

Viet Nam

Me Vu Van Thai Ministry of Industry

EWG Secretariat

Mr John Butterfield Dept. Industry, Science & Resources, Australia Mr Andrew Scally Dept. Industry, Science & Resources, Australia

APEC Secretariat

Dr Helena Fabiola Gaytan Fragoso APEC Secretariat

Expert Group Chairs

Mr Tomas Astorga Chair, Expert Group on Minerals & Energy

Exploration & Development

Dr Sun Chun Chair, Expert Group on Clean Fossil Energy

Ms Karen Schneider Vice Chair, Expert Group on Energy Data & Analysis Mr Andre van Rest Chair, Expert Group on New & Renewable Energy

Technologies

Pacific Economic Cooperation Council

Mr Jerry Pruzan United States PECC Energy Forum Mr David Natusch New Zealand PECC Energy Forum

Asia Pacific Energy Research Centre (APERC)

Mr Keiichi Yokobori President, APERC

Dr Yonghun Jung APERC
Dr Hassan Ibrahim APERC
Mr P Marc LaFrance APERC

Energy Regulators' Forum

Mr Doug Cooke Dept. Industry, Science & Resources, Australia

Chair, Energy Working Group Business Network (EBN)

Dr Siwanan Na Nakorn Electricity Generating Public Company Limited,

Thailand

Energy Charter Secretariat

Dr Ria Kemper Secretary General, Energy Charter Secretariat