
EWG43 Summary Record

EWG43 was held in Kuala Lumpur, Malaysia on 5-10 March 2012. The Energy Working Group (EWG) Lead Shepherd Dr. Phyllis Yoshida, Deputy Assistant Secretary for Asia, Europe and the Americas, Office of Policy and International Affairs, U.S. Department of Energy, co-chaired the meeting with Datuk Loo Took Gee, Director General of the Malaysian Ministry of Energy, Green Technology and Water. Delegates from Australia; Brunei Darussalam; Canada; Chile; the Peoples' Republic of China; Hong Kong, China; Indonesia; Japan; the Republic of Korea; Malaysia; New Zealand; Philippines; Russia; Singapore; Chinese Taipei; Thailand; the United States and Viet Nam participated in the meeting. An observer from Colombia also participated as a guest.

Officials from the Asia Pacific Energy Research Centre (APEREC); APEC and EWG Secretariats; Expert Group Chairs on, Energy Data and Analysis (EGEDA), Energy Efficiency and Conservation (EGEEC), and New and Renewable Energy Technologies (EGNRET); and chairs of the Energy Trade and Investment Task Force (ETITF) and Low Carbon Model Towns Task Force LCMTTF) participated in the meeting. The Chair of the Expert Group on Clean Fossil Energy submitted a report and sent regrets.

1. OPENING ADDRESSES AND ADOPTION OF THE AGENDA

Lead Shepherd Phyllis Yoshida welcomed the group to EWG43, outlining the goals for the year, including implementation of instructions from Energy Ministers and Leaders made in 2011, and the challenges faced in completing more projects than any other APEC working group. She stressed the need to ensure that the quality of the work remains high, and noted that she was eager to hear from our Russian colleagues about progress toward planning of the Energy Ministerial Meeting set for June 2012 in St. Petersburg.

The Co-Chair from Malaysia welcomed the group to Kuala Lumpur, highlighting that energy is important for social development. He noted that discussions at the EWG43 would focus on the primary issues, the need to preserve energy security while ensuring environmental protection, and highlighting the pursuit of a sustainable energy future.

The Lead Shepherd asked opened the floor for comments on the agenda. Russia noted that March 8 was "Woman's Day", and recognized the many women in the room. Malaysia noted that as an exporter of energy, they did not need to report on emergency response under agenda item 10.c.

2. ENERGY WORKING GROUP MANAGEMENT AND DIRECTION

Mr. Salazar, from Embassy Colombia in Kuala Lumpur, was acknowledged as an invited guest of the EWG, and he noted Colombia's interest in joining APEC.

The APEC Secretariat reviewed the 2012 APEC Priorities and tabled his full report. He highlighted the four priorities for Russia's host year: liberalizing trade and investment and expanding regional economic integration, strengthening food security, establishing reliable supply chains, and fostering innovative growth. He noted that the process for new multi-year projects began in Session 3, 2011, with four projects now in the pilot stages. A small working group will evaluate results in 2013 and that a sample size of at least 12 is necessary for the review, with a consultant with appropriate skills to be hired. He also provided a list of 9 proposals approved in Session 3, 2011. EWG members submitted ten proposals for Session 1/2012 in January. Nine of them were approved in –principle to be developed into full project proposals. The standard project synopses for Session 2/2012 must be submitted by April 8th to have time for endorsement and prioritization. Full project proposals in case in-principle approved granted, are due June 4 and June 20 for June 21 and July 3 notification, respectively.

Speaking on behalf of expert group and task force chairs, the United States gave a short intervention on supervision of projects, noting that with 20 active projects from 2011 and 17 or more new projects in 2012, the EWG could have 40 or more active projects in 2012, thus calling for a more effective process for monitoring. At the 28th meeting of the EWG Expert Group and Task Force Chairs and APERC on March 5, Chairs recommended (1) that all current projects be assigned to a task force or expert group for monitoring and (2) that starting with Session 3, 2012, new submissions first be vetted by a task force or expert group before being considered by the EWG. The Chairs tabled a paper stating these recommendations, and asked for approval by the EWG.

Several delegates expressed the view that EWG delegates should retain the right to submit project proposals independently, while acknowledging the value of expert group input. Chinese Taipei noted in particular that some self-funded projects or broadly themed projects might not fall clearly within the remit of any of the expert groups or task forces. However, several delegates also expressed support for expert group review where appropriate to improve project quality. The EGEEC Chair stressed the importance of clear communications between EWG members and expert groups, and noted that many projects would benefit if given the opportunity for improvement by the members of the expert groups before being put forward for consideration by the EWG. Several delegates, along with the President of APERC and the Lead Shepherd, also noted that supervision of projects by the respective expert groups and task forces would be a great assistance to the EWG in view of the fact that some 40 projects or more will need to be followed in the course of 2012.

Pursuant to comments on the proposal, the Lead Shepherd convened a small group to come up with new language. The group included delegates from Australia, Japan, Chinese Taipei and the United States, as well as the EGEDA Chair and the APEC Secretariat. The agreed text was then adopted as follows:

Procedures for Project Proposals

While EWG member economies retain the right to make project proposals directly to the EWG, member economies are highly encouraged to vet project proposals with an appropriate expert group or task force. This will ensure expert advice and coordination with ongoing and planned work as the project proposals are elaborated. Project proposals should normally be submitted by a EWG delegate or designated expert group or task force member. In cases where the subject matter of the proposal does not clearly relate to the remit of any existing expert group or task force, or in cases where the project would be self-funded by an economy or economies and no request is being made for support from APEC funding sources, the expert vetting process may not be necessary.

Procedures for Projects Underway

Each APEC-funded project underway should be assigned a lead expert group or task force to follow and advise it, along with an assisting expert group or task force where appropriate, to ensure coordination with ongoing or planned activities. Project assignments should be suggested by expert group and task force chairs collectively, and the assignments should then be endorsed by the EWG. The APEC and EWG Secretariats should maintain a list of current projects with leads and co-leads for each in consultation with the expert group and task force chairs, and this list should be reported to the EWG.

The APERC President reported on ongoing work on PREE, CEEDS, PRLCE, and the APEC Energy Demand and Supply Outlook 5th Edition. He tabled a detailed summary of APERC activities and presented the new work plan, which included Phase 4 PREE, Phase 4 CEEDS, Phase 2 PRLCE, and Phase 2 Low Carbon Model Town (LCMT). APERC will analyse and present alternatives to business-as-usual projections for the first time starting with the next APEC Energy Demand and Supply Outlook. Alternative cases may focus on Natural Gas Case and Energy Efficient Transportation Case. Japan expressed its appreciation for APERC's important work, noting its government budget constraint for 2012 and asking members for continued support. The Lead Shepherd also expressed appreciation.

The January 26, 2012 draft of the EWG work plan, which had been distributed to EWG members prior to the meeting for review and comment, was tabled for additional comments. The Lead Shepherd asked that any additional comments be provided soon so that the 2012 Work Plan could be edited and sent back for final approval.

The Lead Shepherd led a discussion of EWG engagement with other fora.

- Australia tabled a document on priorities of the APEC Business Advisory Council (ABAC) for 2012, including fossil fuel subsidy reforms, identifying barriers to trade and investment, a proposal

for industry engagement, and follow-up on the Transportation and Energy Ministerial Conference in September 2011. Australia hopes to get an ABAC representative to the next task force meeting.

- APERC's President noted CEED Phase 3 work on energy efficient urban transport in cooperation with the Transportation Working Group. He also reminded members of past cooperation with the Asian Development Bank (ADB) on the Energy Data Base and Energy Outlook.
- The EGEEEC Chair mentioned engagement with the international National Copper Association (ICA) on several projects, which has included a financial contribution to project funding.
- The United States noted ongoing cooperation with the Subcommittee on Standards and Conformance (SCSC) of the Committee on Trade and Investment (see report under agenda item 12).
- The Lead Shepherd added that recently in Paris the International Energy Agency (IEA) expressed its interest to continue APEC engagement and retain guest status in the EWG, which has been renewed.

3. PROJECT PROPOSALS

Expert Group and Task Force chairs submitted and reviewed project proposals for consideration in the second session of APEC project funding for 2012. The APERC President, the EGEDA Chair and China noted new proposals; with the Chair of EGEEEC pointing out that the International Copper Association (ICA) had offered \$100,000 to China's project on distribution transformers. The EWG endorsed nine new project proposals for the second session, which were ranked as follows:

- 1) Establishing Low Carbon Energy Indicators (China/EGEDA)
- 2) Energy Investment: Challenges and Opportunities in the APEC Region (Australia/ETITF)
- 3) Peer Review on Energy Efficiency (PREE) Phase 4 (Japan/APERC/EGEEEC)
- 4) Operation of APEC Energy Database and Analysis (Japan/EGEDA)
- 5) APEC/ASEAN Harmonization of Energy Efficiency Standards for Air Conditioners (Japan/EGEEEC)
- 6) Workshop to support the Development of National Lighting Design Centers (United States/EGEEEC)
- 7) APEC Distribution Transformers Survey: Estimate of Energy Savings Potential from Increase in MEPS – Minimum Energy Performance Standards (China/EGEEEC)
- 8) Applied Research on Energy Regeneration of Municipal Sludge in Low-Carbon Cities Construction (China/EGNRET)
- 9) Research on the Radiation system Integrated with Hybrid Energy and Phase Change Energy Storage (RSIHEPCES) in Low Carbon Towns (China/EGNRET/

4. REPORT ON THE APEC LEADERS MEETING

The Lead Shepherd provided highlights of the 2011 Leaders Meeting in Honolulu Hawaii. She noted that energy issues were on Leaders' agenda for the very first time, and they appreciated the opportunity to discuss them. U.S. Secretary of Energy Steven Chu made a presentation on the importance of energy efficiency which noted that 680 coal fired power plants could be eliminated by adopting the equivalent of U.S. efficiency standards throughout the APEC region; key elements of the presentation were adopted in the Leaders' Declaration. The International Energy Agency made a presentation on natural gas which underlined the need for cooperation within APEC to fully realize the potential of this resource. The APEC Secretariat called the IEA presentation very important, noting that shale gas potential in many economies could transform the gas market.

5. POLICY DIALOGUE

A Policy Dialogue was held on Energy Security. In accordance with EWG tradition, the discussion was off the record to ensure a frank exchange of views.

Russia suggested natural gas as the policy dialogue topic for EWG-44, as a natural gas initiative is a key energy element of the 2012 Russian APEC host year.

6. PLANNING FOR THE 10th APEC ENERGY MINISTERS MEETING (EMM-10) IN RUSSIA

Russia reported on plans for the EMM-10 in St. Petersburg, Russia on June 24-25, noting that invitations had been sent out to Energy Ministers in late February and should be received in all economies by early March. The meeting will be held just after the International Economic Forum. A draft program will be circulated via the EWG Secretariat around the middle of March. The afternoon or evening of the June 24 will feature a government/private sector roundtable on issues of energy cooperation in APEC. A breakfast with ministers and ten or fifteen CEOs of leading companies will be held on the morning of June 25 just before the ministerial meeting itself. A cultural excursion is planned for the evening of June 25. A draft statement will be circulated by the end of March, for email comments, leaving open the option for face-to-face meetings later. The statement will stress natural gas and nuclear power security, pursuant to Russian drafts of initiatives circulated to EWG delegates in February. In the gas area, key themes will include price volatility and the future of the gas market in the APEC region for the next 30 years. There was considerable discussion of the draft of the ministerial statement, with concerns raised over the brief amount of time remaining until June if delicate language and nuances are to be addressed. Chinese Taipei noted that this year is the 10th anniversary of the energy security initiative in APEC, suggesting that Ministers acknowledge previous work and lay out plans for the decade to come.

7. FOLLOW-UP TO APEC TRANSPORTATION AND ENERGY MINISTERIAL CONFERENCE

The United States noted that the Transportation Working Group had prepared a template with EWG input to track progress on the instructions that Energy Ministers and Transport Ministers had made to

the two working groups with respect to a clean energy and transport future, energy-efficient passenger transport, energy efficient freight transport, and alternative fuels. Thailand represented the EWG at the Transportation Working Group meeting in Bangkok in February to begin filling out the template, for which a draft including initial inputs from both energy and transport sides will be circulated to the EWG for information and comment in March.

Japan appreciated the Action Agenda, which contains Energy Smart Communities Initiative (ESCI) and Low Carbon Model Town Project, and expressed its intention to promote them in order to cope with the rapid growth of energy consumption in transportation area in the region.

Thailand recommended more active cooperation between the two working groups and suggested another joint meeting be held. The Lead Shepherd agreed to talk to her counterpart about this.

The APERC President reported on the Phase 3 CEEDS project which focused on energy-efficient passenger transport. Workshops on this topic were organized in San Francisco on September 14-16, 2011 and in Singapore on January 17-19, 2012, and summary reports on these workshops will be available on APEC and APERC website. The reports and workshop presentations will be linked to the ESCI website.

8. STATEMENTS ON NOTABLE DEVELOPMENTS SINCE EWG43

APEC economies submitted statements on notable developments since the last EWG meeting.

- Brunei noted that their energy use is expected to double by 2035 in a business-as-usual case. Initiatives to reduce energy intensity include the introduction of a new electricity tariff in January 2012 to encourage high efficiency appliances, approval of construction of a new 300 MW Combined Heat and Power and cogeneration power plant, and establishment of Energy Services Companies. The government aspires to generate at least 30 percent of total power from new and renewable sources.
- China drafted a report on “APEC Low Carbon Model Town Project – Development in China”, which presented on low-carbon towns, highlighting high-speed rail, spatial plans to reduce energy consumption, financial incentives, and the role of temporary housing for migrant workers. China plans to build 100 new energy cities by end of their 12th Five Year Plan (FYP).
- Hong Kong China will implement energy-efficiency audits from September 2012, and will bring efficiency standards up to those used in Singapore and the United States.
- Indonesia is encouraging the private sector to develop bioenergy power plants by issuing new feed-in-tariff for the capacity up to 10 MW of biopower at about 10.7 U.S. cents per kilowatt-hour. Indonesia is also promoting the use of liquid petroleum gas (LPG) for transportation, with construction of 108 new LPG dispensers.

- Japan tabled a report updating its renewable energy policies.
- Malaysia discussed restructuring of electricity pricing to introduce market structures to make renewables more competitive by 2020.
- New Zealand recently sold the Whirinaki Power Station to a private utility and is preparing for a sell-down of four state-owned energy companies. It also reported the continued success of the Warm Up New Zealand: Heat Smart program. Since 2009, the program has installed insulation or clean heaters in more than 150,000 homes, or around 10 percent of the New Zealand housing stock. The programme, as currently funded, ends in 2013.
- Russia noted recent efforts to increase production capacity of coal, including opening of new deposits. Coal production increases are planned to occur in three stages between 2012 and 2030. Government business partnerships will be used to expand output. Coal mine safety will also be improved.
- Chinese Taipei outlined a comprehensive green energy plan, with low-carbon community, infrastructure development, energy smart buildings, and a Greenhouse Gas Reduction (GHG) Act. Substantial wind and solar photovoltaic capacity will be added to the power grid.
- The United States announced that an agreement had been signed for the purchase of power from a 200-megawatt coal-fired power plant with carbon-capture and storage (CCS), starting in 2015. The plant will capture 90 percent of carbon dioxide emissions from combustion.

9. PROGRESS OF APEC ENERGY SMART COMMUNITIES INITIATIVE (ESCI)

Chinese Taipei reported on progress in developing the ESCI Knowledge Sharing Platform (KSP) website which was launched during the EWG-43 meeting week. EWG members were encouraged to visit the website and to send suggestions for additional content to the web developers at the University of Pennsylvania so the site can gain momentum. China expressed appreciation, stressed the value of including policies and best practices from many different economies, and offered to provide information on low-carbon towns in China.

As chair of the Low Carbon Model Town Task Force, Japan provided a brief progress report on the 3rd Task Force held on March 5. The next phase will be on Samui Island in Thailand, a community of some 50,000 people whose example may apply to a wide range of smaller towns throughout the APEC region. It was reported that EEC Engineering Network was selected as a competent consultant to conduct a feasibility study by an international open tender. The consultant made a presentation on Low Carbon Development for Samui Island. Plan of Actions for 2012, which had been adopted by the Task Force members, was also presented. EWG members were invited to nominate additional Study Groups A and B members, who would refine the concept of the low carbon town in APEC and who would take part in policy peer review on Samui Island, respectively.

10. SHORT TERM ESI MEASURES

10a. Joint Organization Oil Data Initiative (JODI Oil, JODI Gas)

The Chair of EGEDA provided a brief report on continued progress in implementing JODI, noting ongoing projects including the 2010 energy data, oil and gas data, and capacity building and energy statistics. 2012 is the 10th anniversary of JODI. The name has been changed to reflect sources other than oil, and economies were encouraged to include other data.

Japan highlighted capacity building activities which had been provided by the Institute of Energy Economics, Japan (IEEJ) to help some economies submit timely and accurate data, and encourage further participation by developing economies and support by developed economies. Australia and Chinese Taipei asked when the JODI data base and investment data in JODI will become public. The EGEDA Chair noted that these points would be discussed at a forum in Kuwait the following week to be attended by the head of JODI, and he promised to report to EWG-44 on the outcomes.

10b. Real Time Emergency Information Sharing System

Japan provided a brief report on the status of RTEIS.

11. ENERGY TRADE AND INVESTMENT

11a. Report of Energy Trade and Investment Task Force

The Chair of ETITF reported that the Task Force would propose a project on energy investment challenges and opportunities to be considered in the second round of funding for 2012, and solicited co-sponsors for the project. He also discussed ETITF and EWG member activity to encourage trade through an updated list of environmental goods under the following agenda item.

11b. Cooperation with Subcommittee on Standards and Conformance (SCSC) to Promote Trade in Energy-Related Environmental Goods

EWG members discussed how best to support the initiative by the Committee on Trade and Investment to compile a list of environmental goods in 2012 that would be covered by Leaders' commitment in 2011 to reduce tariffs of such goods to 5 percent or less in all APEC economies.

The ETITF chair noted the discussions of the CTI regarding the EGS list and reminded members that products were to be nominated for the list by March 10 for consideration, but he recommended that economies contact their CTI delegates about the list, as the deadline may be flexible. EWG Members noted that EGS needed to be kept up to date, as the previous list was based on a 2005 WTO list with narrow coverage of renewable energy products such as photovoltaic cells. To help ensure EWG inputs are incorporated in an expanded and updated list, the ETITF Chair asked the Lead Shepherd to write to the CTI chair to invite the EWG to future discussions on EGS.

Australia and United States noted that they had provided advice on SCSC counterparts on new types of goods that had been created in recent years by advancements in renewable energy technology. It was suggested that EWG members might compare notes on their suggestions.

Chinese Taipei suggested that it would be beneficial if an updated list of environmental services could be considered by CTI at some point in addition to the list of environmental goods.

Chinese Taipei held successful workshops on photovoltaics and light emitting diodes in Taipei, including standards and testing methods, in the week prior to hosting EWG42 in Kaohsiung.

The Co-Chair asked for Chinese Taipei for clarification on its strategy toward standards for LEDs. Chinese Taipei responded that as the largest producer of LEDs in APEC, they had worked with China (the largest user of LEDs) to develop standards for indicator lights and indoor lighting which they hoped would be adopted by other economies. Chinese Taipei noted that they would be very pleased to cooperate with Malaysia and any other economy to develop mutual standards.

The United States reported that EWG had helped SCSC organize four workshops on trade-related aspects of energy-efficiency in 2011. Workshops on Green Buildings and Green Growth were held in Washington in March and Singapore in September. Workshops on energy management systems and on information and communications technologies were held in San Francisco in September. Materials from the green buildings workshops will be posted on the ESCI website.

12. ENERGY EFFICIENCY

12a. Progress Report including Project Highlights (EGEEC)

The Chair of EGEEC provided a written progress report and highlights. An Energy Efficiency Summer Study, organized back to back with EGEEC-39 in Sydney in February had over 250 participants. A proposed project would examine cost savings from distribution transformers which could amount to US\$34 billion. Results of a project on enforcement and compliance with air conditioner efficiency standards have been published on a website by Hong Kong China. Multi-year projects such as one on green buildings with the Subcommittee on Standards and Conformance (SCSC) are under consideration. A project on APEC-ASEAN Harmonization of Energy Efficiency Standards for Air Conditioners, which is being supported by the International Copper Association, would be a good candidate for cooperation between APEC and ASEAN. Japan announced that it would propose the project for second session of APEC funding in 2012 and sought for support from interested economies.

The Chair of EGEEC asked if there was a way for a third party such as the International Copper Association (ICA) to help lead EWG projects, given their interest and a willingness to provide funds.

Since APEC-funded projects must be competitively bid, the best way might be to note potential co-funding from third party organizations like ICA in the project proposals that are made.

12b. Reports on Peer Review of Energy Efficiency (PREE) and Cooperative Energy Efficiency Design for Sustainability (CEEDS) activities (APERC)

The President of APERC tabled the draft report from the recent PREE for Indonesia, which includes specific 49 recommendations covering almost all end-use sectors. Indonesia expressed gratitude to the PREE team, although some of the recommendation has been awarded for long time. Noting that they have a new directorate for energy conservation, this shows that the government is very concern on energy efficiency implementation and they hoped the results of the PREE would contribute to an energy efficiency culture that is needed in their economy. Indonesia noted that it would be difficult to implement all 49 recommendations however, they will try to grouping the recommendation in short, medium and long term implementation, but that they accepted the findings and recommendations and asked other economies to consider how they can help Indonesia adopt the recommendations.

Brunei stated that they look forward to a PREE later this year to help identify practical energy efficiency measures and will use the results of Indonesia's PREE to start their own analysis of gaps. The Philippines thanked the APERC for the PREE of Philippines, and looked forward to full results.

Japan thanked those economies who have participated in PREE and those who have lent experts. Japan also thanked economies who showed their interests in PREE and follow-up PREE. Japan committed to continuously support these activities as the Project Overseer.

12c. Report on Collaborative Assessments of Standards and Testing (CAST), Strengthening APEC Energy Standards Information System

The Chair of EGEEEC noted that activities on CAST had been incorporated into the Expert Group's work plan and that APEC-ESIS had successfully migrated to a new web server.

12d. Progress Toward Energy Intensity Reduction Goal

Japan noted the importance of promoting energy efficiency and the role of the ESCI and low Carbon Model town Project in helping economies to reduce energy intensity. It also noted that collaboration with private sector would be beneficial. The Lead Shepherd reminded members that the goal agreed in Honolulu to reduce energy intensity 45 percent by 2035 is a region-wide goal for APEC.

Chinese Taipei noted that they were committed to the goal for their economy.

New Zealand noted that its energy intensity had reduced by about 21% between 1990 and 2011. It noted that the predominant cause of this reduction was from structural change in New Zealand's

economy. It noted that this structural shift is expected to continue into the future further reducing energy intensity.

Singapore noted that the 45 percent energy intensity goal is still a stretch by Singapore's standards given that its domestic goal is a 35% reduction by 2030. In this regard, Singapore encouraged greater support and participation for collective efforts within EWG to share best practices on energy efficiency to fulfill the aggregate goal for the APEC region. Underlining its constraints as an alternative-energy disadvantaged economy with no indigenous resources, Singapore highlighted that energy efficiency is a key priority, and has been a useful lever to balance the objectives of their energy policy: ensuring economic competitiveness, energy security and sustainable development. Further, Singapore shared a few examples of its energy efficiency improvements in the power generation sector and transportation sector: the implementation of pilot-tests for smart grids and electric vehicles.

12e. Discussion of Next Steps to Support Energy Efficiency Initiatives

Thailand noted that a systematic monitoring process and yearly reporting could be useful to show ministers progress toward meeting the energy intensity goal. He asked if APERC or EGEEEC could be a center for compiling energy intensity information provided by economies. The APERC President said it was possible to do so and also perhaps to make long-term energy intensity projections. The Vice President of APERC noted that he had provided a progress report to EWG-42 on energy intensity reductions from the 2005 baseline through 2009. Since the IEA releases energy statistics every August, the analysis could be updated through 2011 in time for EWG-44.

New Zealand noted the importance of measuring progress on energy intensity reductions in a fair and consistent matter. Many energy intensity analyses based on Total Primary Energy Supply assume a very low efficiency for geothermal energy. This results in an unfavourable impact on energy intensity calculations from geothermal energy. For this reason, it could be preferable to base energy intensity figures on final energy consumption.

13. NEW AND RENEWABLE ENERGY

13a. Progress Report Including Project Highlights (EGNRET)

The Chair of EGNRET reported that the EGNRET has not met since EWG42 but would meet in Wellington, New Zealand in June, 2012 (EGNRET 38), then in Chongqing, China in November or December 2012 (EGNRET 39). An election will be held at EGNRET 39 for the positions of Group Chair and Vice Chair for 2013-2014 term. Current projects include one on AMI Deployment (on schedule, and expected to be completed in 2012), a stock-take of electric vehicles interface with the grid (a date for a workshop has been set for June 20, 2012, alongside the EGNRET 38 meeting in Wellington, New Zealand), a micro grid project for insular and remote localities (a project website is being created), on the prospects for marine current energy generation (a project website is also being

created), and one on best practices in energy efficiency and renewable energy technologies in the industrial sector (cooperated with EGEEC).

The EGNRET Chair noted new project proposals for 2012 on the application of smart grids to the reconstruction of earthquake-stricken Christchurch in New Zealand, on the feasibility of a smart energy network system in Yujiapu business district in China, on the energy regeneration potential of municipal sludge, and on the potential for energy storage using phase-change materials.

The EGNRET Chair also noted that the expert group will strengthen collaboration with APEC other fora, e.g., LCMT Task Force, Biofuel Task Force (BTF), EGEEC, Industrial Science and Technology Working Group (ISTWG), and some projects, e.g., Peer Review on Low-Carbon Energy Supply (PRLCE) and PREE supported by APERC.

The EGNRET Chair also noted that the expert group will strengthen collaboration with APEC other fora, e.g., LCMT Task Force, Biofuel Task Force (BTF), EGEEC, Industrial Science and Technology Working Group (ISTWG), and some projects, e.g., Peer Review on Low-Carbon Energy Supply (PRLCE) and PREE supported by APERC. Thailand will host the first-ever Peer Review of Low Carbon Energy (PRLCE), with a renewable energy focus, on May 21-25, 2012, and invited EWG members to nominate experts for the team.

The Lead Shepherd noted that the PRLCE focuses on policy and regulation, rather than technology, and was pleased nominate the EGNRET Chair to serve on the peer review team in Thailand.

13b. Progress Report on APEC Smart Grid Initiative – ASGI (United States)

The United States tabled a progress report on the growing list of APEC smart grid activities, including smart grid road maps, smart grid test beds, and smart grid interoperability standards.

Smart grid road maps are being elaborated through half a dozen APEC-funded projects, most of which have gotten underway just recently. These include road maps for

- Development of advanced metering infrastructure – AMI (supported by the project on Addressing Challenges of AMI Deployment in APEC that should be completed in April 2012)
- Development of electric vehicle charging infrastructure (related to the Stock-take of EV Interface with smart grids and the Potential for Harmonization being done in 2012),
- Grid development to support distributed renewable energy sources (supported by projects on Small Hydro and Renewable Grid Integration, on Demand Response's Effect in Accommodating Renewable Energy Penetration, and on Promotion of Energy Efficiency and Renewable Energy in Low Carbon Model Towns of APEC through Distributed Energy Source)

- Development of microgrids (related to the project on Piloting Smart Microgrid Projects for Insular and Remote Localities in APEC Economies)

A Smart Grid Test Bed Workshop was held in Washington DC on January 24-25, 2012 and attended by nine economies including five in APEC (Australia, Japan, Korea, Chinese Taipei and the United States). The APEC Smart Grid Test Beds Network will be coordinated with the broader International Smart Grid Action Network (IGSAN). Germany, Korea and the United States have agreed to make their test beds available, and other economies are encouraged to do so.

The progress report also noted recommendations for advancing further regulatory cooperation related to smart grid interoperability standards developed by the APEC Committee on Trade and Investment (CTI) through the APEC Regulatory Cooperation Advancement Mechanism on Trade-Related Standards and Technical Regulations (ARCAM).

14. ALTERNATIVE TRANSPORT FUELS

The United States provided a Final Report on the APEC Biofuels Task Force, in which 17 economies participated and which had completed over five years of activity from 2006 to 2011. The Task Force made summary reports to EMM-8 in Darwin in 2007 and the Transportation and Energy Ministerial Conference in 2010. It also produced eight technical reports on biofuel resources, economics, transportation infrastructure, employment potential, and sustainability measures.

The last report of the Biofuels Task Force, on the resource potential for biodiesel from algae, was completed in December 2011. Using conservative estimation techniques, the report finds that algae could displace about 7 percent of biodiesel requirements in the APEC region. Presentations from the related algal biofuels workshop that was held in San Francisco prior to the Transportation and Energy Ministerial Conference in September 2011 are on the EGNRET website.

The United States suggested that EGNRET might wish to conduct additional biofuel studies from time to time. The Chair of EGNRET is considering a follow-up study on second generation biofuel. He also asked if the progress of individual economies on biofuels could be reported. Malaysia noted that since economies are all starting to address aviation biofuels at the same time and can consider standardizing regulations; this could be a suitable topic for further investigation.

Malaysia reported the initial B5(5% biodiesel blended with 95% diesel) implementation involving diesel vehicles from the selected government agencies; namely Malaysian Armed Forces (ATM), Kuala Lumpur City Hall (DBKL), Malaysian Palm Oil Board (MPOB) and Selangor Public Work Department (JKR Selangor). From June 2011, the government continued the B5 mandate in phases based on region beginning with the central Region of the Peninsular of Malaysia, whereby it covers Federal Territories of Putrajaya and Kuala Lumpur, Selangor, Melaka and Negeri Sembilan. Eventually, the

government planned to undergo nationwide B5 implementation by 2014, with an estimate usage of 500,000 tonnes of biodiesel per year with anticipated emission saving of 1.5 million tons of carbon dioxide

Indonesia noted recent biofuel mandates in transportation, industry, and power generation sectors and goals for increasing biodiesel and bioethanol shares of automotive fuel supply to 20 percent and 15 percent respectively in 2025. Indonesia is already distributing a 7.5 percent biodiesel blend and bioethanol from molasses as a blend with gasoline.

Chinese Taipei noted their efforts to use waste cooking oil as feedback to produce biodiesel, and currently a mandatory B2 scheme (blending 2% of bio-diesel into regular diesel) has been implemented since June 15, 2010.

The United States noted that a stock take of electric vehicle interactions with smart grids in APEC has begun. The Lead Shepherd offered to talk with representatives of the Electric Vehicle Initiative (EVI) at the Clean Energy Ministerial in London in April 2012 to explore possible linkages with APEC.

15. CLEAN FOSSIL ENERGY

15a. Progress Report including Project Highlights (EGCFE)

The EGCFE tabled a written progress report, of which the United States presented highlights. "Several projects are underway on carbon capture and storage (CCS). In Phase 5 of CCS capacity building efforts, a workshop was held in Viet Nam in December 2011, and two are scheduled to be held during April 2012 in Thailand and Indonesia. The Asian Development Bank, with a grant of AU\$21 million from the Global Carbon and Capture Institute in Australia, has been conducting CCS feasibility studies in these three economies for inclusion in the workshops, as well as the Philippines. Another APEC project on Permitting Issues Related to Carbon Capture and Storage for Coal-Based Power Plant Projects in Developing APEC Economies is examining power plant permitting regimes in nine developing APEC economies, identifying issues with applying these to coal-fired plants with CCS, and recommending capacity building activity to help ensure that the regimes are compatible with CCS deployment. A new APEC project will identify near-term carbon capture, utilization, and storage (CCUS) opportunities in developing APEC economies, in particular CO₂-enhanced oil recovery (EOR). An APEC CCUS-EOR Expert Workshop is being developed to share results from the study."

Japan stated a project proposal was being developed collaborating with the U.S. in order to seek APEC fund for the second session of 2012. It looked for the participation of not only economies who already have knowledge and experiences for advanced CCT, but also those who need their support.

15b. Presentation and Discussion on Fossil Fuel Subsidy Reduction

The Lead Shepherd asked economies to start filling out the voluntary reporting mechanisms (VRM) with emphasis on consumer subsidies, noting that economies may also fill out producer subsidies if

they choose. The goal is to have these forms submitted in time for consideration at EWG44. New Zealand encouraged all economies to use the VRM this year, noting that fossil fuel subsidy reform is a medium- to long-term goal and that EWG can help to educate economies on practical options.

New Zealand acknowledged that the voluntary reporting approach agreed to at EWG42 was an economy-led approach, with economies determining what they will report. The Lead Shepherd reiterated that, as with G20, economies will define what they consider to be wasteful consumptive fossil fuel subsidies (FFS). Some economies may wish to focus on efforts to reduce consumer subsidies, though efforts to reduce producer subsidies are also within the possible scope of reporting.

The Co-Chair noted that Malaysia had recently increased oil prices while educating the public to understand that energy efficiency efforts are enhanced when fossil energy prices are fair.

Thailand noted that on January 15, 2012, it had raised LPG and NPG prices through the end of the year by eliminating subsidies, despite resistance from special groups like taxi companies.

Indonesia noted that fuel subsidy is already mandated by Energy Law, however, when it come to the implementation, the government is always face difficult position. Like for the time being, the government propose to the parliament to reduce subsidy by increasing the domestic oil price, it seems that there is a big resistance from the most of people. The subsidy removal sometime is politized. Lead Shepherd suggested that economies' reports on practices for reducing subsidies and focusing remaining subsidies on the poor or those otherwise lacking energy access could be compiled by APERC, in much the same way as a compendium is already produced each year for energy efficiency policies. She also suggested that this could be a theme for the APERC workshop planned prior to EWG-44. The United States noted that the project report on Phasing Out Inefficient Fossil Fuel Subsidies to Reduce Waste and Limit CO2 Emissions while Protecting the Poor should be done by June, allowing for key elements to be incorporated by economies into progress reports.

15c. Presentation and Discussion on Unconventional Gas Census

On behalf of the EGCFE Chair, the United States noted that a contract had recently been signed with a consultant to carry out Unconventional Gas Census project that was approved in late 2011. The project report will note potential amounts of unconventional gas that could be practically and economically produced in each economy and suggest a framework, scope and content for a more systematic and comprehensive APEC Unconventional Gas Census. An APEC Unconventional Gas Expert Workshop in the third quarter of 2012 will review the draft. APERC would like to include a sensitivity case for expanded unconventional gas supplies in its next set of long-term projections. This could incorporate information already developed by the U.S. Geological Survey and others, along with additional information from APEC economies identified by the survey project in 2012.

16. OTHER LONG-TERM MEASURES

16a. Nuclear Energy

Two economies reported notable developments in the nuclear energy area:

- Chinese Taipei noted that the three nuclear power plants it has in service will be decommissioned, and new plants will be built only after a conclusion of a new safety study.
- The U.S. Nuclear Regulatory Commission has issued construction permits for two new nuclear power plants, the first time in 34 years that it had granted such permits.

16b. Hydrogen and Fuel Cells

Indonesia noted a new cooperation with Korea for 300 kilowatts, with results that might be ready to share by EWG44. The Lead Shepherd noted that the United States also might have new results to share later in the year.

16c. Methane Hydrates

There was no discussion under this item.

16d. Petroleum Infrastructure

There was no discussion under this item.

16e. Offshore Oil and Gas

The United States noted recent reforms of safety regulations and institutions in response to the Deep Horizon Gulf of Mexico spill several years ago which can be presented at EWG44.

Brunei noted January 2012 efforts by Shell to promote sustainable oil and gas, including additional production from marginal fields.

New Zealand noted regulatory developments related to offshore drilling under the so-called the Petroleum Action Plan. From January 2012, New Zealand has replaced the priority in time method for issuing permits with a blocks offer approach. More effective management and increased transparency are expected. In addition, the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Bill underwent its first reading in September 2011. This legislation aims to provide a consistent framework for balancing the protection of the ocean environment with economic development opportunities and will apply to offshore petroleum exploration, amongst other activities.

16f. Natural Gas Trade

Australia noted the APERC supply and demand outlook and two LNG projects on Australia's northwest continental shelf on which AU\$176 billion will be invested by 2017. LNG exports are expected to reach 80 million tonnes per annum with new facilities operating at full capacity.

17. CONCLUDING BUSINESS:

The timing and hosting of EWG44 was discussed. Mexico is scheduled to host but has not yet confirmed its ability to do so. The Lead Shepherd will follow up with Mexico on this matter. Other economies that might be interested in hosting EWG44 were also asked to identify themselves.

Chinese Taipei asked if a CD ROM of documents could be delivered at the meeting. The Lead Shepherd noted that this was difficult since economies submit many materials at the last minute.

Thailand asked if the EWG website could be updated with the documents from recent meetings approved for public distribution. The Lead Shepherd offered to look into this prior to EWG44.

Economies were asked to volunteer to serve as Lead Shepherd from 2013, given that the United States had volunteered to serve through 2012.

The guest from Colombia expressed appreciation for being invited to attend the meeting and requested that Columbia also be invited to EWG44. The EWG approved this request.