

# APEC Project Proposal

*Please submit through relevant APEC Secretariat Program Director.  
Proposals must be no longer than 12 pages, including budget and title page.*

<b>Project title and number:</b>	<b>Combined heat and power (CHP) technologies for distributed energy systems</b>
<b>Source of funds (Select one):</b> <input checked="" type="checkbox"/> Operational Account <input type="checkbox"/> TILF Special Account <input type="checkbox"/> APEC Support Fund	
<b>Committee / WG / Sub-fora / Task-force:</b>	Energy Working Group
<b>Proposing APEC economy:</b>	Russian Federation
<b>Co-sponsoring economies:</b>	China, Indonesia, USA, Japan
<b>Expected start date:</b>	March 2012
<b>Expected completion date:</b>	March 2013
<b>Project summary:</b>  <b>Describe the project in under 150 words. Your summary should include the project topic, planned activities, timing and location:</b>  <i>(Summary must be no longer than the box provided. Cover sheet must fit on one page)</i>	<p>Distributed energy generation based on CHP technologies is a short-term cost-effective and ecological solution for increasing energy efficiency. The overall efficiency of CHP plants can reach in excess of 80% at the point of use. The proposed project is a study covering: 1) APEC countries priorities and lessons learned in applying CHP for distributed energy generation; 2) potential for using CHP in specific conditions: islands and cold climate territories.</p> <p>CHP technologies are developed in some APEC and non-APEC countries, particularly in Europe. Information/technology sharing will be helpful to increase use of CHP in APEC countries.</p> <p>The study includes research of the experience in APEC in applying CHP: share in the energy generation; future plans; challenges; commercial feasibility; specific applications (islands and cold climate territories). The research findings will be presented as a report and disseminated at a final seminar.</p> <p>The study group will be working in Russia with 4-5 study tours.</p>
<b>Total cost of proposal: (APEC funding + self-funding)</b>  <b>USD 90,000 + 90,000=180,000</b>	<b>Total amount being sought from APEC (USD): 63,000</b>  <b>By category:</b> <i>Travel: 31,900+self-funding Labour costs: 48,900+self-funding,</i>  <i>Hosting: self-funded Publication &amp; distribution: 4,200 Other: self-funded</i>

**Project Proponent Information and Declaration:**

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I declare that this submission has been prepared in line with the **Guidebook on APEC Projects**. If approved, I agree to develop the project in line with APEC project requirements.

\_\_\_\_\_  
*Name of Project Proponent*

**Date:**

# Project Details

**Please answer each question succinctly. Suggested section lengths are provided as a guide. Proposals must be no longer than 12 pages, including budget and title page.**

## SECTION A: Relevance to APEC

*[Answers to questions 1–3 may be taken or adapted from the Concept Note]*

1. **Relevance:** Why should APEC undertake this project? What problem or opportunity will the project address and why is it important? [*½ page*]

Energy security and climate change mitigation are among the top current priorities of the global development. Finding affordable solutions to these challenges is crucial during an economically unstable situation.

CHP (cogeneration) is a proven cost-effective energy-efficient technology which could be used for increasing energy efficiency in APEC countries in the short and middle terms. The USA, Japan, Russia, China, Canada and other APEC countries already have some experience in using CHP technologies for distributed energy generation. Researching this experience will allow organising the available material in a systematic way for the benefit of all APEC member countries. The fact that such APEC member countries as the USA, Russia and Canada have considerable cold climate territories and many APEC member countries are either located on archipelagos (Japan, the Philippines, Indonesia, Malaysia) or have islands within their territories (Russia, Canada, the USA, Australia, New Zealand, etc.) adds practical value to the project.

CHP benefits among others include:

- Possibility to deliver hot water, space heating, hot air/steam for industrial heat processes, space cooling (using an absorption chiller), dry air generation (with the use of desiccant) in addition to electricity and heat;
- Considerable increase in energy efficiency. Cogeneration's simultaneous generation of electrical power and thermal energy ensures greater energy efficiency (70-90%) in comparison with conventional systems producing power and heat separately (35%). Less fuel is required to produce a given amount of energy because the conversion and transmission losses associated with the separate production of power and heat are also avoided.
- Greenhouse gas reduction. Emissions from cogeneration plants are considerably lower than emissions from conventional power plants.

Cogeneration technologies also have significant advantages in the distributed energy generation systems. Cogeneration provides distributed power generation at or near the point of consumption which lessens the need for significant investments in the expansion of the central grid. Thus transmission losses are reduced, the electricity grid is stabilized and the impact of rising electricity prices may be decreased.

In 2011 the International Energy Agency in the report "Cogeneration and Renewables" once again underlined the value and importance of CHP technologies which can help dramatically increase energy efficiency to achieve low-carbon goals.

The EU is working on a new CHP strategy and since European countries are leading in using CHP in residential and industrial sectors it is the right time to study their strategies, understand the situation in APEC and prepare practical recommendations to promote CHP technologies.

The proposed project is expected to contribute to the APEC Green Growth agenda to move APEC countries to a clean energy future. It is widely recognized that modernization of the economies depends to a significant degree on the countries' ability to provide reliable and clean energy. For Russia's 2012 chairmanship in APEC modernization and innovative growth have been announced among key priorities, so the proposed project will contribute to the practical implementation of these priorities.

2. **Objectives:** Describe the 2-3 key objectives of the project. (e.g. to create a framework for...; help participants to...; share experiences in...; enhance understanding of...; etc.) [*¼ to ½ page*]

The key objectives would be:

- To survey the current APEC countries' priorities, strategies and plans for the CHP application in distributed energy generation and also to study the European initiatives, strategies and legislation in this area;
- To study and share best practices and experiences of practical projects in which CHP technologies are applied for distributed energy generation in cold climate and/or on islands;
- To develop recommendations for promoting use of CHP in distributed energy generation in specific conditions (islands and cold climate territories) including measures aimed at overcoming barriers identified during the project.

3. **Alignment:** Describe how the project will help achieve APEC's key priorities and meets your forum's work-plan or medium-term plan. [*less than ½ page*]

The project is aligned with current APEC and EWG priorities.

According to the APEC Leaders' Declaration on Climate Change, Energy Security and Clean Development endorsed in Sydney, Australia on 9 September 2007: "improving energy efficiency is a cost-effective way to enhance energy security and address greenhouse gas emissions while promoting economic growth and development".

The APEC Growth Strategy announced in 2010 defines sustainability as one of the five critical growth attributes. This Growth Strategy includes enhancing energy security and promotion of energy-efficiency and low-carbon policies as an important action within the sustainable growth agenda.

The Fukui Declaration of APEC Energy Ministers of 2010 also states that "improving energy efficiency is one of the quickest, greenest and most cost-effective ways to address energy security, economic growth and climate change challenges at the same time". At this meeting the APEC Energy Ministers also directed the EWG to develop APEC Technology Development Roadmaps for key energy technologies to accelerate collective efforts to deploy such technologies in APEC.

At the 19<sup>th</sup> APEC Leaders' Meeting in November 2011 the following instruction was made: "We instruct officials to undertake capacity-building activities...including exchanging views, experiences and best practices to promote trade and investment in environmental goods and services". CHP equipment represents technologies with high potential for improving the environment.

The proposed project is also in line with the APEC "Energy Smart Communities Initiative" supporting development of the energy-efficient buildings, transport, and electric power grids.

The project foresees studying implemented projects and compiling recommendations for the future. Preliminary analysis showed that the experience gained by different countries in distributed energy generation is already considerable and may be catalogued in a systematic way to simplify future projects particularly in the territories where distributed energy has the most benefits (islands, cold climate territories).

4. **For TILF Special Account applications: Briefly describe how the project will contribute to APEC trade and investment liberalization and facilitation with reference to specific parts of the Osaka Action Agenda (Part 1, Section C and, where appropriate, Part 2).**  
**For APEC Support Fund applications: Briefly describe how the project will support the capacity building needs of APEC developing economies, and how they will be engaged. [¼ page]**

## **SECTION B: Project Effectiveness**

5. **Work plan: Provide a timeline of actions you will take to reach your objectives. For each, include:**
- **How it will be carried out and how member economies, beneficiaries & others will be involved**
  - **Related outputs for that particular step (e.g. contract, agenda, participant list, workshop, report) [1-2 pages. Answers may be taken or adapted from the Concept Note]**

It is planned to involve CHP expert(s) for the project management and coordination with the Project Overseer. The project team will be based in Russia.

### **Step 1: Overview of the current situation with CHP in APEC (March 2012 – July 2012)**

At the initial stage the project team will contact EWG to establish the right contacts in the area of CHP in all the APEC economies.

The main part of the stage will be research of APEC countries' strategies, plans and practical experience in applying CHP for distributed energy generation. The research will consist of:

- desk research based on already available APEC publications (e.g. Compendium of Energy Efficiency Policies of APEC Economies 2010, APEC Energy Overview 2010, etc.);
- questionnaires sent to identified contacts with specific questions on applying CHP technologies in distributed energy systems in specific conditions (islands, cold climate territories), barriers to further development of CHP, the questionnaires will be used to collect more detailed and/or missing information on CHP in APEC economies;
- 2-3 study tours to collect successful case studies of CHP technologies in distributed energy systems and determine the success factors and barriers. It is planned to visit the USA, China, Indonesia/Philippines, Japan for the purposes of this project, it is also planned to arrange one study tour to Europe (tentatively – Denmark) to research their experience in CHP. The study tours will allow collecting and cataloguing all the factors which influenced the reviewed practical

projects: legislation, specific conditions in the territory, economic basis for the decisions, barriers and how they were overcome. By interviewing the project owners and studying projects it will be possible to define the most critical factors in the decision-making process. The study tours will allow matching results of the desk research with the practical project experience, will increase relevance of the project for the industry representatives.

Outputs: report containing overview of the APEC countries' strategies in the area of CHP establishing the existing baseline in this area, several case studies of successful application of CHP technologies in distributed energy systems, overview of the main barriers preventing further CHP promotion.

### Step 2: Recommendations on wider use of CHP in APEC (August 2012 – November 2012)

This stage includes work on preparing recommendations on promoting use of CHP in distributed energy systems with emphasis on island and cold climate territories. Recommendations will be first of all focussed on overcoming the identified barriers and also provide information on already available promotion mechanisms. It is planned to conduct a series of consultations with fora outside APEC, like the International Energy Agency, COGEN Europe, US EPA CHP Partnership, possibly other organisations identified during the previous step. 1-2 study tours to gather further practical experience on CHP on islands and in cold climate territories are foreseen (possibly combined with interviewing the relevant organisations).

After preparing recommendations they will be sent to relevant APEC contacts to collect their feedback and comments which will be also incorporated in the report.

Output: research paper providing recommendations on wider implementation of CHP in APEC economies with focus on applying CHP for distributed energy systems in specific conditions (islands, cold climate territories).

### Step 3: Dissemination of project results (December 2012 – March 2013)

The last stage includes finalizing the research findings and preparing the final report which will be published and sent directly to relevant organisations.

At this stage it is planned to prepare and conduct a two-day seminar for disseminating the project findings.

The timeline for the seminar is as follows:

Time	Activities
December 2012 – January 2013	<ul style="list-style-type: none"> <li>• Preparation of the preliminary agenda,</li> <li>• Agreements with potential speakers,</li> <li>• Selection of the seminar location,</li> <li>• Finding and booking facilities and equipment, hiring translators,</li> <li>• Preparation of the seminar materials including seminar feedback/evaluation forms,</li> <li>• Finalization of the agenda</li> </ul>
February 2013	<ul style="list-style-type: none"> <li>• Sending invitations to the APEC economies participants,</li> <li>• Sending invitations to other relevant organisations,</li> <li>• Publishing information about the seminar in the relevant media,</li> <li>• Follow-up with the invitees,</li> <li>• Compiling list of participants</li> </ul>
March 2013	<ul style="list-style-type: none"> <li>• Seminar preparatory activities (printing seminar materials, preparing the facilities)</li> <li>• Collecting final confirmations from the participants,</li> <li>• Seminar organization: registration of participants, moderating,</li> <li>• Collecting feedback from participants,</li> <li>• Preparation of the Seminar Protocol, publication of the seminar results and conclusions.</li> </ul>

Currently several cities in Russia are being considered as the seminar locations. They include Vladivostok, Irkutsk, Ekaterinburg and St. Petersburg. The final decision will be based on the cost-efficiency of different available options to ensure maximum value for the APEC funds.

Outputs: final research report to be published and sent directly to relevant organisations, two-day seminar attended by approx. 30 participants.

6. **Risks:** What risks may be involved in implementing the project and how will they be managed?  
*[1/8 to 1 page, depending on project nature/complexity]*

Risk	Risk mitigation measures
<u>Step 1: Overview of the current situation with CHP in APEC (March 2012 – July 2012)</u>	
Difficulties with establishing the relevant contacts in APEC economies	Close cooperation with the EWG and using existing contacts of the relevant Russian organizations in the field of energy efficiency to speed up the process. The project team will define several contacts for APEC economies possibly from different sectors (government, commercial sector, research institutions).
Low interest in filling in questionnaires and low return rates	Questionnaires will contain a small number of questions which can be potentially answered in a telephone conversation.
Duplication of work	The project includes detailed desk research of existing projects and publications in APEC and in non-APEC organizations so the duplication should be avoided.
<u>Step 2: Recommendations on wider use of CHP in APEC (August 2012 – November 2012)</u>	
Low interest in participation in the project from non-APEC organisations	This risk is estimated as being relatively low as APEC represents a very important global region representing 40% of the world's population, about 54% of the world GDP and about 44% of world trade, so international organisations as well as organisations in Europe are likely to be interested in developing relationship with APEC.
Delays in feedback on recommendations from relevant contacts	Since the recommendations will be already prepared and only feedback will be expected, it can be obtained via short telephone conversations if there are delays in written responses.
<u>Step 3: Dissemination of project results</u>	
Delays in preparation of the workshop (delays in providing the self-funding leading to delays in organization of the seminar)	Setting realistic schedule allowing for minor delays and careful budget planning
Insufficient number of relevant speakers for the seminar	It is planned to inform the relevant contacts about the seminar at the start of the project and to inform them about speaking at the seminar beforehand. It is also planned to have 2 additional speakers.
Low interest in attending the seminar	To ensure the attendance the project team will send the invitations to the seminar in advance and will follow-up with the invitees. The project team also intends to communicate with EGNRET and APEC Secretariat (for travel eligible economies).

7. **Monitoring and Evaluation:** What indicators will you use to know if the project is on track (monitoring) and successful in meeting its objectives (evaluation)? What information will you collect (e.g. stakeholder feedback, website hits, participant stats etc.) and how will you collect it (e.g. meetings, surveys, interviews, peer review, records review)? [*½ page*]

The following indicators may be used for monitoring the project:

- Number of established contacts in APEC economies (step 1)
- Number of filled in questionnaires and/or phone interviews (step 1)
- Number of study tours and assessed CHP case studies (steps 1 and 2)
- Number of consultations with fora outside APEC (step 2)
- Number of received feedback forms/ phone interviews regarding CHP promotion recommendations (step 2)
- Number of seminar speakers and attendees (step 3)
- Number of web-sites where the final report will be published and number of organisations to which the report will be sent (step 3)

The following indicators may be used for evaluation of the project:

- Completeness and accuracy of the report on the CHP strategies in APEC (step 1)
- Number of identified barriers to applying CHP technologies (step 1)

- Number of successful case studies of CHP in distributed energy systems (steps 1 and 2)
- Accuracy of recommendations on further promotion of CHP technologies, availability of recommendations to overcome the barriers identified during step 1 (step 2)
- Number of consultations, available feedback from non-APEC fora (step 2)
- Number of specific case studies on applying CHP technologies in distributed energy systems in cold climate and on islands (step 2)
- Positive feedback from the seminar participants (step 3)
- Media coverage of the project (number of references, attitude) (step 3)

The feedback from the project participants will be an essential indicator for the project evaluation. It is planned to conduct surveys to get feedback on the prepared recommendations and also feedback after the seminar.

An indirect indicator of the successful project implementation can be an increased number of CHP projects in the APEC region.

During the project it is foreseen to collect actual data on the CHP projects in the APEC region as well as stakeholder feedback on the proposed recommendations regarding increasing the role of CHP technologies in distributed energy systems.

The information will be collected primarily during the desk research, surveys and interviews.

8. **Linkages: Describe the involvement of other APEC fora, and relevant other organisations. Include:**

- **Engagement:** How are you engaging other relevant fora, within and outside of APEC?
- **Previous work:** How does this project build on, yet avoid duplication of, previous or ongoing APEC initiatives, or those of other organisations?
- **APEC's comparative advantage:** Why is APEC the best sources of funds for this project?

*[¼ to 1 page. Answers may be taken or adapted from the Concept Note]*

Within APEC it is planned to involve the Energy Working Group and its subgroups: Expert group on new and renewable energy technologies, Expert group on clean fossil energy, Expert group on energy efficiency and conservation, Energy Smart Communities Initiative. These APEC fora will be contacted to identify the experts in the APEC economies and later to prepare recommendations which can be implemented in all APEC countries.

Key non-APEC organisations whose input is important for the project are the International Energy Agency, COGEN Europe, US EPA CHP Partnership, UK Heat and Power Association, Advanced Cogeneration and Energy Utilization Centre (Japan), Cogeneration Study Committee (China). Experts from these institutions will be involved in identifying key barriers to wider spread of cogeneration technologies in distributed energy systems for preparing recommendations.

Cogeneration is well-known tested and ready-to-use technology and a lot of work has already been done to support its promotion. Within the project it is planned to study the available experience with particular attention to the IEA work (the International CHP/DHC Collaborative, 2009-2011 publications on CHP) and the past EC-ASEAN COGEN projects (1991-2004).

Significant amount of work on promoting energy efficiency has also been undertaken within APEC. The proposed project can be regarded as continuation of the APEC 21st Century Renewable Energy Development Initiative and Cooperative Energy Efficiency Design for Sustainability as cogeneration is one of the energy efficient technologies with high energy savings potential.

The project also complements the current activities within the Energy Smart Communities Initiative.

Notwithstanding the considerable amount of work on CHP the most recent conclusions of the international organisations conducting research on CHP still state that the potential of this technology is underused in many regions of the world. For example significant potential exists in APEC countries like Canada, China, Japan, Russia, Mexico, Indonesia, Australia, New Zealand and the USA thus making APEC a well-suited forum for implementing the proposed project and disseminating its results. In case of this project APEC funding will bring significant value for money and will contribute to the capacity-building activities to accelerate collective efforts of deploying energy-efficient and environmentally friendly technologies.

## **SECTION C: Project Efficiency**

9. **Budget: Complete the budget and budget notes for the project in the template in SECTION F of this form. The budget should include calculation assumptions (e.g., unit costs) and self-funding contributions. Please consult the *Guidebook on APEC Projects* for eligible expenses.**

10. **Cost Efficiency:** Highlight how the project offers APEC maximum value for money. In what ways will the project maximize the cost-efficient use of resources? [*¼ to ½ page*]

The project foresees considerable self-funding with APEC funds being used to cover some part of the labour costs and facilitate travel of the participating economies to the seminar.

Overall the project team is planning to use a number of methods to ensure cost efficiency of the project:

- the project is building on the APEC previous projects and publications reducing the labour costs,
- project data gathering will be performed mostly distantly involving a small number of study trips to key projects and facilities and the trips will also be combined with interviewing the relevant stakeholders in the countries to obtain up to date information on the current state and also main barriers and recommendations on promoting CHP,
- to disseminate the project results only a limited number of printed copies is foreseen, results will be disseminated mostly in electronic form.

## SECTION D: Project Impact

11. **Beneficiaries:** Explain who the direct project beneficiaries are and what the intended benefits will be. Include an explanation of how the project outputs (e.g. workshop, symposium, research paper, best practices etc.) will assist the project beneficiaries. [*less than ½ page*]

The main beneficiaries of the project will be:

- Policymakers and regulators as a result of the project will have an overview of the best practices in CHP technologies, current CHP strategies, plans and projects in different countries. The best practices and recommendations for promoting CHP can be used by them as a guide to improve the situation in their respective countries; especially policymakers in APEC and non-APEC countries with a large number of islands and cold climate territories will have well-researched practical recommendations for using CHP technologies in distributed energy generation.
- Researchers participating in the project will have further information for their future research. Possible research institutes to be involved in the project include: the Institute of Energy Economics (Japan), the Russian Energy Agency, Moscow Power Engineering Institute and others.
- Power utilities will have practical recommendations for applying CHP in specific conditions (islands and cold climate territories).
- Producers, sellers of CHP equipment may also benefit in the long-term when CHP technologies will be spreading in APEC countries.
- End-users will be provided with a more reliable and environmentally friendly energy supply system.

12. **Gender:** What steps will the project take to ensure the participation and engagement of both men and women throughout the project? How do project objectives benefit women? [*less than ½ page*]

Women were included in the planning and management of the project from the beginning. The Project Overseer is assisted by a female official of the Ministry of Energy of the Russian Federation and consultations on the project were conducted with researchers at the Russian Energy Agency who are also female.

To ensure equal opportunities the project team will encourage participation of both men and women in the project. Researchers, speakers and seminar participants will be invited irrespective of the gender.

It is expected that the project will have positive benefits in terms of improving the environment for men and women alike.

13. **Dissemination:** Describe plans to disseminate results and/or outputs of the project, including:

- **The number, form and content of any publications (Note: APEC will not fund website maintenance or publications that are collections of PowerPoint slides. APEC encourages electronic publication.)**
- **The target audience**
- **Any intention to sell outputs arising from this project.** [*less than ½ page*]

The study results will be communicated to beneficiaries, stakeholders and general public in the following ways:

- The final report will be available for free on the web-sites of the relevant agencies and organisations in Russia and other countries involved in the project.
- Copies of the report will be sent to the Ministries of Energy in APEC member countries.

- A 2-day seminar will be conducted to present the study findings and define further practical steps in increasing the use of CHP technologies. The target audience for the seminar will be policymakers, regulators and power utilities companies from APEC member countries.

## **SECTION E: Project Sustainability**

14. **Sustainability: Describe how the project will continue to have impact after the APEC funding is finished.**
- **How will stakeholders and beneficiaries be supported to carry forward the results and lessons from the project?**
  - **After project completion, what are the possible next steps to build on its outputs and outcomes? How will you try to ensure these future actions will take place? [less than 1 page]**

The project is practice-oriented and will result in recommendations on promoting CHP technologies in APEC. These recommendations will be distributed to the relevant stakeholders and regulators (in all the APEC economies) who can implement them. The project findings will be also sent to the relevant CHP trade organisations thus ensuring wider outreach and possible use of the recommendations in the discussions between CHP equipment industry and government authorities. It is foreseen to include in the final report contact details of relevant organisations which will participate in the project to help build the expert network on CHP in APEC countries. It is planned to discuss with the project participants if facilitation of the CHP action network in APEC may be a useful instrument in promoting energy efficiency in the region. If the proposal is supported by participants the network may be considered for inclusion in the multi-year Energy Smart Communities Initiative.

The proposed project clearly contributes to the APEC Energy Smart Communities Initiative and the results will be submitted to the cross-cutting Knowledge Sharing Platform within this initiative to ensure prolonged impact and wider outreach. The APEC Energy Smart Communities Initiative is a multi-year project, so the project findings and successful case studies will be available for several years after the formal project completion. As a follow-up the project team will discuss the possibility of including the project material in the Energy Efficiency Training Curricula within the Energy Smart Communities Initiative.

Through different linkages it is also planned to share the project findings with other relevant fora interested in promotion of CHP (the International Energy Agency, Cogeneration and Energy Utilization Centre in Japan, Cogeneration Study Committee in China and others) to ensure international outreach.

It is also planned to describe several convincing case studies showing benefits of CHP including renewables-based and other advanced CHP technologies. It is expected that consultations with IEA and other relevant research organisations will allow including estimated potential of increasing CHP use in APEC countries to showcase technical and financial viability of CHP technologies on the national level.

It is expected the project report will be used as guidance for policy makers and CHP project owners in the middle term. Project Overseer will ensure that it is available via the internet and information about the project is publicised in relevant sources including, if possible, websites of international organisations, trade associations, state agencies overseeing energy efficiency.

15. **Project Overseers: Who will oversee the project—including any hiring of contractors—and drive it to success? Please include the names and brief biographies of the PO and any other main point(s) of contact responsible for this project. [less than ½ page]**

### **Project Overseer: Mr. Talyat Aliev.**

Mr. Aliev is currently the Deputy Director of International Cooperation Department in the Ministry of Energy of the Russian Federation. His experience in the public service spans more than 30 years, including 7 years in the energy sector in various leading positions. In his current capacity he oversees Russia's engagement with multilateral and regional organizations, such as APEC, ASEAN, GECF, OPEC, OSCE, etc. as well as bilateral projects and initiatives.

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**Project Overseer is assisted by Dr. Svetlana Beznasyuk**, who is a Chief Expert in the International Cooperation Department in the Ministry of Energy of the Russian Federation. Dr. Beznasyuk is currently the principal Russian point of contact for the EWG.

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## SECTION F: APEC Project Itemized Budget

Please consult the descriptions of eligible expenses in the *Guidebook on APEC Projects*

<u>All Figures in USD</u>	# of Units	Unit Rate	APEC Funding	Self Funding	Notes
<b>Direct Labour</b>					
Speaker's honorarium ( <i>government officials ineligible</i> )	(6 speakers*2 days)	750	9000		
Translator's fees	(300 pages, 2 days of simultaneous interpretation)	15 per page;  1000 per day		6500	
Short-term clerical fees	(80 hours)	15		1200	
Contractor (including Researcher) fees	(960 hours)	70	39900	27300	2 months, 3 researchers
Contractor's secretary fees	(80 hours)	15		1200	
<b>Travel (Speaker, Experts, Researchers)</b>					
Per Diem (incl. accommodation and "75% additional payment")	(1 person, 4 days)	4*250+  188		1188	China, average per diem is taken as approx. 250
Per Diem (incl. accommodation and "75% additional payment")	(1 person, 4 days)	4*300+  225		1425	USA, average per diem is taken as approx. 300
Per Diem (incl. accommodation and "75% additional payment")	(1 person, 4 days)	4*130+  98		618	Indonesia, average per diem is taken as approx. 130
Per Diem (incl. accommodation and "75% additional payment")	(1 person, 4 days)	4*300+  225		1425	Japan, average per diem is taken as approx.300
Per Diem (incl. accommodation and "75% additional payment")	(1 person, 4 days)	4*335+  251		1592	Denmark, per diem=335
Per Diem (incl. accommodation and "75% additional payment")	(6 people, 3 days)	3*240+  180		5400	Vladivostok (tentative) or other location in Russia, average per diem is

<b><u>All Figures in USD</u></b>	<b># of Units</b>	<b>Unit Rate</b>	<b>APEC Funding</b>	<b>Self Funding</b>	<b>Notes</b>
					taken approx. 240 Speakers
Per Diem (incl. accommodation and "75% additional payment")	(4 people, 3 days)	3*240+ 180		3600	Vladivostok (tentative) or other location in Russia, average per diem is taken approx. 240  Project staff
Airfare	(1 person, 5 trips)	3000		15000	Study tours to China, USA, Indonesia, Japan and Denmark
Airfare	(10 people, 1 trip each)	1500		15000	Travel to the seminar location for speakers and project team
<b>Travel for Participants (from Travel-eligible economies only. Active participants only)</b>					
Per diem (incl. accommodations and "75% additional payment")	(11 people, 3 days)	3*240+180	9900		Vladivostok (tentative)
Airfare ( <i>restricted economy class</i> )	(11 people, 1 trip each)	2000	22000		1 representative from travel-eligible economies, advance payments may be required
<b>Other items</b>					
Publication/distribution of report	(42 copies)	100	4200		
Specialized equipment or materials ( <i>please describe</i> )	(1 projector device, 3 microphones simultaneous interpretation equipment for 2 days)			5532	Seminar
Photocopying	(300 pages of seminar materials)	0.3 per page		100	
Communications (telephone, fax, mail,				2920	Mainly telephone for

<b><u>All Figures in USD</u></b>	<b># of Units</b>	<b>Unit Rate</b>	<b>APEC Funding</b>	<b>Self Funding</b>	<b>Notes</b>
courier)					surveys
<i>Hosting</i> (provide breakdown, e.g., room rental, stationery)	Room rental for 2 days		5000		
<b>Total</b>			90000	90000	

**Budget Note 1: Drawdown timetable: Provide a timetable for the drawdown of APEC funding requested.**

Up-front mobilization payment for labour: 18 % of the APEC funding

On completion of step 1: 25% of the APEC funding. The funding will be used for labour.

On completion of step 2: 30% of the APEC funding. The funding will be used for labour.

On completion of step 3: 27% of the APEC funding. The funding will be used for labour, funding the seminar participants travel to the seminar.

**Budget Note 2: Direct labour: Provide information for APEC-funded positions including general duties, total hours and who will be contracted, if known. (It is not acceptable to contract staff from your own organisation or government employees.)**

APEC funding will be used for the following purposes: speakers' honoraria, contractors' fees, airfare costs for travel-eligible participants from APEC economies, publication of the reports.

APEC funds will be utilized in part for inviting speakers to the seminar (speakers' honoraria). The speakers will be selected during the course of the project from the relevant organizations and tentatively include representatives from:

- 1) Advanced Cogeneration and Energy Utilization Centre (Japan)
- 2) Cogeneration Study Committee (China)
- 3) COGEN Europe
- 4) US Clean Heat and Power Association/ US EPA CHP Partnership
- 5) International Energy Agency
- 6) ASEAN-EC Cogen 3 project coordinators
- 7) Russian national association for decentralized energy

The rest of the funds allocated for labour costs will be used for covering the contractor's fees (researchers). The Russian Energy Agency is considered as a contractor for the project.

The main contractor's duties and tasks will include:

- Desk research at stages 1 and 2;
- Preparation and conducting of interviews with the relevant project owners regarding CHP projects;
- Preparation and collecting feedback from the project participants in APEC economies;
- Preparation and organization of the seminar;
- Preparation of dissemination of the final project report.

It is estimated that 3 researchers will spend 2 months (40 working hours per week\*8 weeks=320hours each) full time on this project. The labour costs will be covered for 60% by APEC funding and 40% will be self-funded.

**Budget Note 3: Waivers: Provide details of any requests for waivers from the normal APEC financial rules, with justifications (e.g. from tendering requirements, for advance payment, simultaneous interpretation payment) in the notes column of the budget table, or below if the waiver requires a detailed explanation.**

Active participants may request advance payment for travel expenses. Travel eligible participants will represent beneficiaries who may be government officials from developing economies. Hence, waiver is requested to fund travel of government officials if they are nominated as active participants.