

Possible APEC Collaboration with IRENA on Renewable Energy Projects USA

**EGNRET 45 meeting
Xiamen, China
November 16-17, 2015**

APEC Leaders' and Ministers' Guidance, 2014

“...we endorse the Energy Ministers' aspirational goal to double the share of renewables including in power generation by 2030 in APEC's energy mix.”

- 2014 Leaders' Meeting, Beijing

“ We reaffirm the UN “Sustainable Energy for All” initiative and instruct the EWG through the EGNRET to develop the road map for the aspirational goal of doubling the share of renewables in the APEC energy mix, including in power generation by 2030; and, to attain this goal, **cooperate with IRENA or other organizations** to conduct research on the economic benefits and cost-effectiveness of utilizing renewable energy and integrating it into power grids so as to support R&D, innovation and commercialization of clean energy technologies and to promote practical cooperation on renewable technologies, equipment and services among member economies.”

- 2014 Energy Ministers, Beijing

APEC Energy Ministerial, Cebu, October 2015

- At EMM-12 in Cebu, Energy Ministers reiterated the importance of renewable energy development and deployment to further progress toward the Leaders' goal, including in the context of strengthening energy resilience to natural disasters and climate change.
- Ministers also emphasized the need to increase energy access, particularly in remote communities, and noted the benefits of microgrids, energy storage, and integration of renewables into the grid.
- They strongly encouraged the acceleration of renewable energy projects to further progress toward the Leaders' renewable energy goal.

EGNRET is implementing eleven projects in 2015

- EWG-05-2014S - 2014 APEC Workshop on Biodiesel Application Experiences (Chinese Taipei)
- EWG-04-2014A - APEC Photovoltaic System Best Practices and Latest Development Comparative Study (PV-BPLD) (China)
- EWG-05-2014A - APEC Vehicle Fuel Efficiency Labelling Schemes Review and Recommendations (New Zealand)
- EWG-14-2015A - Small and Medium PV System Database in the APEC Region (Thailand)
- EWG-18-2015A - A Comparative Study on Multi-Field Applications of Building-Mounted Photovoltaic (BMPV) in the APEC Region (China)
- EWG-05-2015A - Workshop on Experiences and Plans to Double Renewable Energy Utilization by 2030 in the APEC Region (USA)

EGNRET is implementing eleven projects in 2015 (Cont'd)

- EWG-17-2015A - Renewable Energy Safety in APEC (Thailand)
- EWG-13-2015A - Promoting Renewable Power Generation with Fuel Cell Technologies (China)
- EWG-15-2015A - APEC Workshop on Promoting the Development of Wind Energy, Phase 2 – Public Private Partnership for Wind Energy Development (Vietnam)
- EWG-16-2015A - APEC Workshop on Promoting the Development of Biomass Energy (Vietnam)
- EWG-12-2015A - Ethanol Trade Development as Part of APEC's Renewable Fuel Strategy (USA)

Draft IRENA Work Plan for 2016-2017

- To **leverage the expertise and resources** of international organizations, the U.S. proposed a draft APEC-IRENA work plan **to facilitate brainstorming on potential areas** for collaboration.
- The Work Plan is based on IRENA's initial draft work program for 2016-2017*, to **capitalize on efforts already underway** without requiring significant additional resources from IRENA to collaborate with APEC.
- The proposed areas for APEC-IRENA collaboration are meant for **discussion purposes only** to generate dialogue and ideas.
- This work plan has not been vetted by IRENA.

**Note that the IRENA Work Plan has since been amended.*

Proposed APEC-IRENA Work Plan

*Based on IRENA Work Program Themes and Program Components for 2016-2017 (noted in gray)

1. Planning for the global energy transition		
Objective	Impact	Component
<i>Mainstreaming renewable energy options and strategies in energy plans</i>	<i>Established platform for cooperation and concerted action by stakeholders to accelerate deployment of renewable energy</i>	<i>SE4ALL Renewables Hub</i>
	<i>Comprehensive and acknowledged roadmap on options and action for doubling the share of renewable energy by 2030</i>	<i>REMAP2030</i>
	<i>Analytical and empirical framework for informed cross-sectoral policy and decision-making in resource-constrained environments</i>	<i>Water, Energy and Land Nexus</i>
	<i>Countries equipped with knowledge and expertise to implement an enabling policy framework to upscale renewable energy deployment</i>	<i>RRA and Advisory Services</i>
Possible APEC-IRENA Activities		
Component	Proposed Activity	
REmap 2030 for APEC Region	Pulling from ongoing REmap regional report for SE Asia, draft REmap report for Asia-Pacific region (perhaps APEC and ASEAN?) with recommendations for APEC Leaders' goal to double RE by 2030	
Energy-water nexus project: phase 2	Collaborate on next phase of APEC energy-water nexus work through analytical study, identify best policy practices for policymakers on integrating RE using case studies and/or sector-level analysis	
	Hold workshop to discuss results of study; invite IOs doing similar energy-water nexus work (e.g., CEM, ASEAN, Smart Villages Initiative, World Bank, ADB?)	
RE Grid Integration	Building upon ongoing IRENA studies, participate in regional workshop on RE planning / grid integration / policy best practices; help develop roadmaps to facilitate RE integration in APEC region as part of goal to double renewables by 2030	
APEC Renewable Readiness Assessment	Conduct high-level Renewable Readiness Assessment (RRA) for APEC region based on REMap regional report	

2. Gateway to knowledge on renewable energy

<i>Objective</i>	<i>Impact</i>	<i>Component</i>
<i>Renewable energy knowledge accessible</i>	<i>Solid foundations established for the most complete, up-to-date and freely accessible global renewable energy statistics database with high quality</i>	<i>Renewables Statistics</i>
	<i>Enhanced global awareness of renewable resource potentials and policy-makers enabled to make informed planning decisions</i>	<i>The Global Atlas</i>
	<i>Global reference repository of renewable energy policies, regulations and best practice</i>	<i>RE Policy and Best Practice</i>
	<i>Authoritative and comprehensive information and analysis of the true cost competitiveness of renewables globally to help shape national and global</i>	<i>Renewables: The True Costs</i>

Possible APEC-IRENA Activities

Component	Proposed Activity
Renewables statistics for APEC region	Prepare report on most up-to-date RE statistics for Asia-Pacific region, including resource mapping for RE
	Provide training on RE statistical analysis
Renewables: true costs	Building upon recent IRENA studies, analyze RE costs, band of cost ranges, assess RE competitiveness in APEC region
	Hold workshop/webinars on findings
RE policy and best practices	Drawing upon IRENA databases, develop database on RE policies, regulations and best practices for Asia-Pacific region; brief to policymakers in region
Global Atlas report on APEC region	Using Global Atlas, develop resource maps for APEC region, draft analytical report with recommendations for doubling RE by 2030; brief at EWG meeting
	Hold webinar on using Global Atlas for energy planners and policy-makers

3. Enabling investment and growth		
Objective	Impact	Component
<i>Improving policy frameworks and enabling market conditions for accelerated deployment of renewable energy</i>	<i>Contribution to the global debate and increased awareness of policy options in a dynamic energy market</i>	<i>Policy assessment</i>
	<i>Enhanced global knowledge of policy options for opening energy markets to renewable energy investment</i>	<i>Regional Market Analysis</i>
	<i>Increasing investment in renewable energy by developing guidelines and approaches to optimal energy pricing frameworks and reforms required in current policies</i>	<i>Energy Pricing</i>
	<i>Enhanced understanding of risks and innovative mitigation options and tools to develop bankable projects to facilitate renewable energy investment</i>	<i>RE Finance</i>
Possible APEC-IRENA Activities		
Component	Proposed Activity	
Regional Market Analysis	Conduct regional market analysis of Asia-Pacific region, including assessment of RE investment	
	Hold regional workshop to report on lessons learned and recommendations for RE investment; invite World Bank, ADB and/or other relevant players	
Policy Assessment	As part of above assessment, hold workshop for policymakers on RE policy options, regulations, and best practices	
	Hold capacity building training for policymakers on RE policies, grid connectivity, developing energy targets, and reducing policy barriers to investment	
Energy Pricing	Draft energy pricing analysis report for APEC region, analyze band of cost ranges for RE	
	Help establish regional cost goals for renewable energy sources, building on current IRENA work	
RE finance	Conduct analysis for APEC region on RE financing/investment challenges, identify best practices for finance and investment and risk mitigation strategies	
	Hold workshop on findings, recommendations and best practices for finance/investment, involve WB and other finance orgs	
	Conduct capacity building training for entrepreneurs to develop viable projects to attract project financing	



4. Renewable energy access for sustainable livelihoods		
Objective	Impact	Component
Contributing to sustainable livelihoods through access to renewable energy	Enabling conditions for renewable energy-based mini-grid deployment to shift the paradigm for universal energy access	Mini-grids
	Accelerated deployment of off-grid renewable energy solutions in isolated communities and urban areas	Off-grid for Niche Applications
	Increased renewable energy deployment through greater financial and technical assistance to SMEs	Capacity Building for Entrepreneurs

Possible APEC-IRENA Activities

Component	Proposed Activity
Mini-Grids/Off-grids	Assess grid integration of renewables into smart grid for APEC region
	Hold technical workshops for mini-/off-grid solutions, RE integration into mini-grids
	Hold technical training for equipment installers (solar hot water, solar air conditioning, photovoltaics)
	Hold workshop for policymakers on mini-/off-grid options, including value for energy resiliency, targets
Capacity Building for Entrepreneurs	Conduct capacity building for entrepreneurs/SMEs, train on financing RE projects; support business incubation centers

5. Islands: lighthouses for renewable energy deployment:

Objective	Impact	Component
Island energy systems transformed through renewable energy	Improved knowledge of solutions and conditions for investment in renewable energy applications on islands	GREIN
	Strengthened partnerships to advance renewable energy deployment in SIDS	Partnerships in SIDS
	Improved capacities to meet national renewable energy targets and attract investments in SIDS	Building Capacity in Islands

Possible APEC-IRENA Activities

Component	Proposed Activity
RE grid integration/ Mini/off-grids solutions	Hold capacity building workshops/webinars on RE grid integration; mini-grids /off-grid solutions for islands
	Waste-to-energy workshop? (note a new EWG project submitted by China on this topic)

6. Regional action agenda

<i>Objective</i>	<i>Impact</i>	<i>Component</i>
<i>Regional integration with increased shares of renewables to meet energy needs</i>	<i>Effective regional frameworks of cooperation to increase the share of renewables in power grids</i>	<i>Emerging Regional Clean Energy Corridors</i>

Possible APEC-IRENA Activities

Component	Proposed Activity
Regional Clean Energy Corridors	Conduct regional workshop together with ASEAN on RE grid integration including all regional stakeholders

EGNRET Role

EGNRET has an important role to play to develop the best path toward fulfilling the Leaders' goal.

Through a review of current and previous renewable energy projects, EGNRET can assess where more work is needed to accelerate RE development and deployment.

We welcome ideas on how best to leverage ongoing efforts within IRENA (and other organizations) to facilitate APEC's continued progress.

Thank You.