

## **Energy Working Group's Proposed Work Plan for 2020**

### **Introduction**

The Energy Working Group's (EWG) Work Plan incorporates guidance from APEC Economic Leaders, Ministers and Energy Ministers to form a solid foundation for the EWG work program. The EWG's work plan responds to specific priorities from Leaders and Ministers on areas such as strengthening energy security, advancing clean and renewable energy, rationalizing or phasing out inefficient fossil fuel subsidies that encourage wasteful consumption while recognizing the importance of providing those in need with essential energy services, enhancing energy efficiency, promoting energy resiliency, and advocating low-carbon development for sustainable growth.

EWG's priorities are also consistent with and guided by the annual APEC priorities agreed by Senior Officials. In 2020, under the overarching theme of "*Optimising Human Potential towards a Future of Shared Prosperity*," these priorities are:

- Improving the Narrative of Trade and Investment
- Inclusive Economic Participation through Digital Economy and Technology
- Driving Innovative Sustainability

Given the relevance of innovative sustainability within the 2020 APEC priorities where sustainable and clean energy will be specifically discussed, the EWG will seek to collaborate, as appropriate, in related initiatives. Furthermore, the EWG will examine its activities and ensure that those which are contributing to APEC action in these three priority areas engage other relevant APEC fora as appropriate, in line with APEC cross-fora collaboration direction from Senior Officials, and are properly incorporated into APEC deliverables on the above 2020 priorities.

In the first half of 2020, EWG will have its policy dialogue centered on the topic of Renewable Energy Transition for Sustainable Growth, the priority issue proposed by Malaysia as APEC host economy. In the second half of 2020, EWG will continue the policy dialogue on the priority issue proposed by New Zealand, the APEC host economy of 2021.

The themes of energy security, clean energy development and deployment, energy efficiency, energy resiliency and sustainable growth continue to be prominent in the Energy Working Group's activities. The EWG will continue to increase its focus on responding to natural and man-made resiliency challenges for energy infrastructure and networks. Capacity building activities to improve the analytical, technical, operational and policy capacity of APEC economies will continue through workshops, information exchanges, training, best practice guides, peer reviews and other activities. Additional emphasis will be placed on exercise training for oil and gas emergencies and further efforts on clean and efficient use of fossil energy to address continued energy demand growth in the Asia-Pacific region.

In 2019, EWG has developed APEC Energy Vision-Post 2020 to strategically set a clear vision for achieving progress towards an energy secure and low emissions

region that is responsive to rapidly evolving energy market challenges. The Vision highlights EWG's shared vision to implement modern regulatory frameworks, to develop effective energy governance, to accelerate developments in energy efficiency and reduction in energy intensity, to accelerate investment into low carbon energy systems, to co-operate on energy innovation and low carbon technology, and to support open, competitive and transparent energy markets. EWG will continue to strengthen its works towards the shared vision.

As the basis of energy policy discussion among Energy Ministers as well as within EWG, the Asia Pacific Energy Research Centre (APERC) has been preparing the APEC Energy Demand and Supply Outlook every 3 years. The latest version is the 7th edition published in May 2019. APERC will continue to carry out the annual publication of the APEC Energy Statistics and the APEC Energy Handbook as well as the APEC Energy Overview under the guidance of the Expert Group on Energy Data and Analysis (EGEDA). These data are used to track the EWG energy intensity reduction and renewable share doubling goals.

## **1. Expected Outcomes/Deliverables for 2020**

The EWG's work plan is responsive to specific priorities from Leaders and Ministers on areas such as promoting energy security, developing clean and renewable energy, cleaner use of fossil fuels, rationalizing or phasing out inefficient fossil fuel subsidies, enhancing energy efficiency, improving energy resiliency and low-carbon development for sustainable growth. For a full list of all APEC itemized work plans currently under EWG as of January 2020 please see "2. Itemized Work Plans for 2020". Further projects are anticipated to be added to this list in 2020, both from APEC-funded and self-funded sources.

- **Energy Security**

With emerging energy security risks facing the APEC region, the EWG has agreed to renew Energy Security Initiative (ESI) with updated scope and elements of energy security in the region, as the principal mechanism to address energy security challenges in a sustainable manner. The reinvestigation of Energy Security Initiative (ESI) will begin from the EWG59 meeting in the first half of 2020. In addition, efforts will continue on capacity building in oil and gas emergency response and relevant data collection and activities to address energy supply disruptions. With the assistance of the Asia Pacific Energy Research Centre (APERC), the EWG will undertake activities under the Oil and Gas Security Initiative (OGSI) which has three components: Emergency Exercises, a Network Forum and Newsletter and Security Studies. Members will also continue creating favorable conditions for trade and investment to support a diversified, flexible and integrated natural gas market in the APEC region. APEC economies endeavor to achieve a more secure and safe energy infrastructure and reaffirm the vital importance of achieving and maintaining high levels of nuclear safety, security, and non-proliferation, worldwide.

Expected outcomes and deliverables for 2020 include:

- Under the Oil and Gas Security Initiative: 2020 (EWG 01 2020S), the 5th Oil & Gas Security Exercise will be held in Thailand in February 2020. The 6th Oil & Gas Security Network Forum will be held in Osaka, Japan in April 2020. The OGS

newsletter is released bi-monthly. The OGS Study on “Changing LNG market dynamics, impacts on supply security in the APEC region” will be endorsed and published by mid-2020.

- **Renewable Energy**

For years, the EWG has been working to develop and deploy renewable energy technologies and fuels. APERC will continue to undertake Peer Reviews on Low Carbon Energy Policies (PRLCE) as a major tool to accomplish this objective. The EWG is accelerating efforts on renewable energy to help meet the aspirational goal endorsed by the Leaders’ in 2014, i.e. to double the share of renewable energy within APEC’s energy mix, including in power generation, by 2030 over a 2010 baseline. The EWG is undertaking and developing projects and activities to promote innovation and technology development, reduce costs and improve sustainability of renewable energy to support this goal for the APEC region as a whole including the development of a roadmap by Expert Group on New and Renewable Energy (EGNRET). The EWG is in conversations with the International Energy Agency (IEA) and the International Renewable Energy Agency (IRENA) on possible joint activities.

Expected outcomes and deliverables for 2020 include:

- The APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy (EWG 06 2019A) is scheduled to be held around June 2020, to provide an excellent networking opportunity to begin the development of a consortium of Universities in APEC economies to work in collaboration with the EWG and APERC on EWG goals.
- The Workshop on Filling the Gap to Reach the Goal of Doubling Renewable Energy in the APEC Region - Phase 2 (EWG 2 2019A) is scheduled to be held in September-October 2020, to discuss the draft plan of renewable energy roadmap and share information, tools and best practices for developing for renewable energy projects and roadmap.
- A two-day Dialogue under APEC Multi-Stakeholder Dialogue on Promoting Renewable and Clean Energy (RCE) Policies (EWG 3 2019A) will be held in 2020 in Viet Nam to identify renewable energy/fossil energy linkages and suggest draft clean energy legislation models which support the linkages.
- Two Workshops under Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region (EWG 04 2019A) will be held respectively in March 2020, Hawaii and in June 2020, Thailand to sharing best practices for the RE&EE projects.
- A Workshop on Sustainable Mobility-City Solutions with Cross-sectoral Coordination under Sustainable Mobility: Routes for Integrating the Energy and Transport Sectors for Urban Cities (EWG 5 2019A) will be held in April-June 2020.

- **Energy Efficiency**

The EWG will continue its efforts to enhance energy efficient appliances, equipment, transport, industry, buildings and power grids, and promote more energy efficient communities through the Energy Smart Communities Initiative (ESCI) and related Low-Carbon Model Town (LCMT) Project. The EWG will also continue to build the ESCI Knowledge-Sharing Platform to share best practices and enhance capacity building on low-carbon and efficient energy development. These efforts, along with a broader set of energy efficiency projects, will further progress toward the aspirational

goal to reduce APEC's aggregate energy intensity by 45 percent from 2005 levels by 2035 as directed by the APEC Leaders in their meeting in Honolulu in 2011. In this context, the role of the Expert Group on Energy Efficiency and Conservation (EGEE&C) is vital in coordination and reporting. The EGEE&C is working with the International Copper Association (ICA) as well as the International Energy Agency on energy efficiency projects, and will keep in view on the latest developments and liaise with the International Energy Efficiency Hub (former International Partnership for Energy Efficiency Cooperation, IPEEC which was expired by end of 2019) on possible collaboration after its establishment.

Expected outcomes and deliverables for 2020 include:

- The 5th EEP Workshop (EWG 7 2019A) focusing on industrial efficiency will be held in 2020. The EEP Workshop provides a capacity building opportunity for APEC members, particularly developing economies, to strengthen their ability to develop robust energy efficiency policy.
- The 6th Follow-up PREE (EWG 7 2019A) is expected to be conducted in Indonesia. The Follow-up PREE is designed to assist a former PREE host economy in implementing the recommendations of the PREE review team.
- An APEC Workshop on District Cooling and/or Heating Systems (DCHS) (EWG 08 2019S) will be held in September 2020 in Hong Kong, China, alongside with the 31st EGEDA meeting in Hong Kong, China, to provide a platform to promoting and highlighting the growing importance of DCHS from the perspective of energy efficiency and conservation.
- An APEC Workshop on Energy Intensity Reduction in the APEC Region's Urbanise Cities (EWG08 2019A) will be held in September/October 2020 in Viet Nam, alongside with the 56<sup>th</sup> EGEE&C meeting to address urbanization concerns and EE&C technology development challenges as well as to share the best EE&C policies and practices, and the emerging new technology.
- Evaluation of Energy Technologies, Programs and Policies (EWG 12 2019A) will support a two-day workshop in the August-October 2020 timeframe which will bring together policy makers and evaluation practitioners to highlight evaluation methods and analysis, and the evaluation of energy technologies, programs and policies.

- **Clean Fossil Fuels**

In 2015, the Energy Ministers in Cebu, the Philippines, noted that clean energy technologies and traditional energy sources, including cleaner use of fossil fuels are important in addressing energy access challenges. The EWG will continue to pursue efforts to use fossil fuels cleanly and sustainably. The clean use of fossil fuels through highly efficient electricity generation and industrial use and Carbon Capture Utilization and Storage (CCUS) remain high priorities for many APEC economies as fossil energy will continue to be a large part of the region's energy mix into the foreseeable future. In this context, Expert Group on Clean Fossil Energy (EGCFE) conducts activities focused on the adoption of cleaner fossil fuels, such as natural gas and clean coal technologies, and reducing barriers to their adoption. EGCFE will also deal with security issues including OGS.

Expected outcomes and deliverables for 2020 include:

- A PREP-Peer Review on Efficient Power (EWG 12 2017A) is expected to be hosted in 2020 to review and provide advice on current coal power generation

practices in Vietnam as the prototype for possible follow-on peer reviews in other APEC developing economies.

- The US-self funded Best Coal Power and Cogeneration Plant Case Studies project (EWG 02 2019S) will be completed in early 2020, which will highlight more than a dozen coal plants with world-class designs and performance, including efficiency, emissions, and water consumption.

- The US-self funded project APEC Regional Workshop on Coal Plant Efficiency (EWG 01 2019S) will be convened mid-late 2020, likely in an Asian member economy.

- The 2<sup>nd</sup> EGCFE Coal Meeting will be held in conjunction with the APEC Regional Workshop on Coal Plant Efficiency.

- The APEC Study on Small-Scale Shallow Draft LNG Carriers and Floating Storage Regasification Units (EWG 11 2018A) will be completed in early 2020, to share information on these technologies with APEC members.

~~- Under the Oil and Gas Security Initiative: 2020 (EWG 01 2020S), the 5th Oil & Gas Security Exercise will be held in Thailand in February 2020. The 6th Oil & Gas Security Network Forum will be held in Osaka, Japan in April 2020. The OGS newsletter is released bi-monthly. The OGS Study on “Changing LNG market dynamics, impacts on supply security in the APEC region” will be endorsed and published.~~

- The 3rd EGCFE Oil & Gas Meeting is scheduled to be hosted in April 2020 in Osaka, Japan in conjunction with the abovementioned the 6th Oil & Gas Security Network Forum.

- **Low-Carbon Towns**

Responding to the instructions first given by APEC Energy Ministers Meeting (at EMM9 in 2010) “to encourage creation of low-carbon communities in urban development plans, and share best practices for making such communities a reality”, EWG members have undertaken joint actions through the Low Carbon Model Town workstream. The project has delivered feasibility studies in 7 cities/towns through different phases: Yujiapu Financial District (Tianjin, China), which was a green field development from scratch; Samui Island (Thailand), which focused on rural tourism resort area development issues; Da Nang (Vietnam) which included redevelopment dealing with existing urban districts; San Borja (in Lima, Peru), focusing on residential area issues; Bitung (Indonesia) focusing on industrial city issues; Mandaue City (The Philippines) which included cooperation with neighboring cities to boost sustainability, and Krasnoyarsk (Russia) which focused on an inland region with high heating and cooling system demands. As a step forward, the LCMT project is proceeding into a new phase of the dissemination of the “Low Carbon Town”, based on the concept and lessons learned from the 7 phases mentioned above, by utilising the Low-Carbon Town Indicator (LCT-I) System for self-evaluation on low-carbon town development. In-depth feasibility studies have been carried out in Banda Aceh City, Indonesia, Hang Tuah Jaya and Shah Alam City, Malaysia, Davao City, the Philippines, and Da Lat City, Viet Nam. APERC has been the executant of this project.

Expected outcomes and deliverables for 2020 include:

-The Wrap-up LCMT Symposium under APEC Low-Carbon Model Town (LCMT) Project Dissemination Phase 3 (EWG 01 2019A) will be held in late 2020 to conclude the lessons learnt from the LCMT projects.

-The 3rd in-depth feasibility studies will be carried out in the volunteer towns which are Khon Kaen Municipality, Thailand, La Molina District, Lima, Peru and Phu Quoc, Viet Nam.

- **Sustainable Energy technology**

Leaders endorsed in Beijing the establishment of the APEC Sustainable Energy Center (APSEC) in 2014 to facilitate cooperation on sustainable energy development across the APEC region through information exchange, policy dialogue, technology research, development and demonstration, and capacity building on sustainable energy. In 2015, APSEC began operations with initial activities to share best practices on clean coal technologies and to undertake the APEC Cooperation Initiative for Jointly Establishing an Asia-Pacific Urbanization Partnership endorsed by Leaders in 2014. In 2016, encouraged by Ministers, APSEC worked on a roadmap for the implementation of this initiative, organized a workshop on APEC Sustainable Cities, established a cooperative network of sustainable cities (CNSC) in APEC economies, and developed solar-powered emergency shelter solutions (SPRESS) as an energy-resilience tool for natural disaster relief. APSEC's five-year plan was endorsed by EWG in 2017, with APEC Sustainable City Development Program (CNSC) & Asia-Pacific Clean Coal (Energy) Technology Transfer (CCT) serving as two pillar programs. In 2019, EWG endorsed Energy Transition Solutions (ETS) as a pillar program in APSEC's next 5-year Work Plan, and generally supported APSEC to develop the implementation plan of the next 5-year Work Plan.

By continuously working on the CNSC, CCT and ETS pillar programs, APSEC will strive to develop local communities that are energy sustainable and economically vibrant, and where energy production and consumption is environmentally sustainable and efficient, to implement CCT training and to promote transfer of technologies, to promote clean energy technologies and sustainable city development within APEC region, provide energy transition solution for a safe, clean, efficient and sustainable energy system through tasks of high level research to produce APEC publications, flagship events and training activities for capacity building and knowledge sharing, and cooperative networks building for resources integration and intelligent enrichment.

Expected outcomes and deliverables for 2020 include:

- A week-long training program under the theme of Clean Coal Technology and Clean Energy Policy will be hosted in 2020.
- Research on APEC Sustainable Urban Low-carbon Energy Systems and APEC Sustainable Urban Performance Evaluation Framework will be carried out to collect data of representative cities in APEC region and evaluate their sustainable urban performance.
- Workshop on Sustainable Cities will be held in the margin of EWG59 meeting in Surabaya, Indonesia in March 2020.
- The Sixth Asia-Pacific Energy Sustainable Development Forum will be held in September 2020 in China.

- **Energy Resiliency**

During EMM 12, the EWG was instructed to create the Task Force on Energy Resiliency. According to its Terms of Reference (TOR), the objective of the ERTF is to implement the Energy Ministers' instructions to promote energy resiliency in the APEC region anchored on the four strategic priority sub-themes identified in the Cebu Declaration: 1) Disaster-proofing energy infrastructures; 2) Advancing cutting-edge energy efficiency technologies; 3) Promoting community-based clean energy use in energy poverty stricken areas; and 4) Improving energy trade and investment in APEC. In 2019, the Task Force decided four workstreams would be pursued: Grid Resilience; Strengthening Infrastructure; Energy Water-Nexus; Energy Access. In 2019, the Energy Access workstream launched a survey, and received feedback from most member economies which provided valuable insights for the future promotion of energy access within the APEC region. A new workstream, Energy Resilience Principles was proposed in 2019 within the ERTF and will be further developed in 2020. The purpose of the principles is to provide an exhaustive list of elements necessary for considering energy resilience, and improve energy resiliency within the region.

Expected outcomes and deliverables for 2020 include:

- Two Workshops under Demonstration and Promotion of Energy Resilience tool based on Solar-Powered Emergency Shelter Solutions (SPSS) for Natural Disaster in APEC will be held in April-May and August-October 2020.
- The APEC Workshop on the Use of Pumped Storage Hydropower to Enable Greater Renewable Energy Use and Reliable Electricity Supply (EWG 09 2019A) will be a three-day workshop, which will be held in the August-October 2020 timeframe focusing on capacity-building and training for further deployment of pumped storage hydropower.
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- We are working on an Energy Access Initiative and seeking its endorsement. Relevant study on Energy Access will be continued to better promote energy access within the APEC region.
- We are working on an APEC Energy Resilience Principles and seeking its endorsement. Relevant guidelines will continue to be discussed for improvement of energy resiliency within the region.

- **Cross-cutting Issues**

In 2020, the EWG will continue to seek collaboration with Emergency Preparedness Working Group on energy resilience, with the Policy Partnership on Science, Technology and Innovation, Automobile Dialogue, and Transportation Working Group on new energy technology, and with the Policy Partnership on Women and the Economy on gender mainstreaming in the energy fora.

## 2. Itemized Work Plans for 2020

Title	Summary of Specific Plans	Mandate (Leaders/Ministers/SOM/SCE Priorities and Decisions, Strategic Plans and to ABAC recommendations)	ECOTECH Priorities and/or Host Year Priorities	Cross-fora collaboration (within APEC and beyond APEC)
PREP - Peer Review on Efficient Power (EWG 12 2017A)	<p>The project requested 12-month extension with new completion date of December 2020.</p> <p>The project called for volunteers to host peer reviews on February 2019. And the peer reviews will hopefully be completed by the end of the 3<sup>rd</sup> quarter of calendar year 2020.</p>	<p>We encourage member economies, where there are difficulties to quickly deploying alternatives to coal, to enhance cooperation in developing and applying clean coal technologies such as highly efficient coal-fired power plants.</p> <p>We instruct the EWG through the EGCFE to promote clean coal technologies, such as Ultra-Supercritical (USC) coal-fired power generation, Integrated Gasification Combined Cycle (IGCC) and Carbon Capture, Utilization, and Storage (CCUS).</p> <p>(2014 EMM Statement)</p> <p>Facilitate joint research and development on clean fossil energy technologies that are adapted to the needs of APEC economies, as well as demonstrate and disseminate appropriate clean fossil energy technologies.</p> <p>Increase understanding of the relevant clean fossil energy technologies including carbon capture, use, and storage (CCUS), promoting their efficient use, and facilitating access to these technologies by encouraging information exchange.</p> <p>(2015 EMM Statement)</p>	Sustainable Growth, Human Security	
APEC Low-Carbon Model Town (LCMT) Project Dissemination Phase 3 (hereinafter referred to as Dissemination Phase 3) (EWG 01 2019A)	<p>The wrap-up symposium is planned to be held in late 2020 in Japan.</p> <p>The publication of the summary report of the symposium is expected to be finished in December 2020.</p> <p>The 3rd in-depth feasibility study will be carried out in the volunteer towns which are Khon Kaen Municipality, Thailand, La</p>	<p>We encourage ongoing efforts in this direction toward energy efficient and low-carbon development in urban settings, including the implementation of the APEC Low-Carbon Model Town Project, use of green codes and standards for buildings, and the Energy Smart Communities Initiative.</p>	Sustainable Growth, Human Security	OECD, ADB, ICLEI, IDB



Title	Summary of Specific Plans	Mandate (Leaders/Ministers/SOM/SCE Priorities and Decisions, Strategic Plans and to ABAC recommendations)	ECOTECH Priorities and/or Host Year Priorities	Cross-fora collaboration (within APEC and beyond APEC)
	Molina District, Lima, Peru and Phu Quoc, Viet Nam in 2020.	<p><b>(2015 Leaders' Statement)</b> We instruct the LCMT-TF to move the current LCMT Project into the next stage in order to disseminate Low-Carbon Towns in the Asia-Pacific region.</p> <p><b>(2015 EMM Declaration)</b></p>		
Filling the Gap to Reach the Goal of Doubling Renewable Energy in the APEC Region - Phase 2 <b>(EWG 02 2019A)</b>	<p>One workshop is planned to be held in September–October 2020. The goal of workshop will engage renewable energy experts, policy makers and private sectors to discuss the draft plan of renewable energy roadmap and share information, tools and best practices for developing for renewable energy projects and roadmap.</p> <p>The final report highlighting the recommendations with suggested roadmap to develop renewable energy and reach the doubling goal is expected to be submitted during December 2020 to January 2021.</p>	<p>The future economic growth of the APEC region will be supported by an appropriate mix of energy resources and power generation technologies that includes both conventional and renewable energy with increasing priority for clean energy sources and enhanced energy efficiency. In this regard, we will build on synergies among the Member Economies aimed at maximizing strengths from each economy thus minimizing costs of policy implementation.</p> <p><b>(2015 EMM Declaration)</b> We reaffirm our aspirational goals to reduce aggregate energy intensity by 45 percent by 2035 and double renewable energy in the regional energy mix by 2030.</p> <p><b>(2014 Leaders' Statement)</b></p>	Sustainable Growth, Human Security	IRENA, IEA
APEC Multi-Stakeholder Dialogue on Promoting Renewable and Clean Energy (RCE) Policies <b>(EWG 03 2019A)</b>	<p>A 2-day Dialogue will be held in Viet Nam in 2020. Discussion topics may include overview on renewable and clean energy (RCE) policies, RCE policies and markets – how to create the right market conditions for optimal results, identify renewable energy/fossil energy linkages and suggest draft clean energy legislation models which support the linkages etc.</p> <p>A summary report (ranging from 10 to 15 pages) with outcomes and recommendations from the Dialogue is expected to be finished in May-June 2020, and will be presented to EWG.</p>	<p>The future economic growth of the APEC region will be supported by an appropriate mix of energy resources and power generation technologies that includes both conventional and renewable energy with increasing priority for clean energy sources and enhanced energy efficiency. In this regard, we will build on synergies among the Member Economies aimed at maximizing strengths from each economy thus minimizing costs of policy implementation.</p> <p><b>(2015 EMM Declaration)</b> We reaffirm our aspirational goals to reduce aggregate energy intensity by 45 percent by 2035 and double renewable energy in the regional</p>	Sustainable Growth, Human Security	IEA, ASEAN

Title	Summary of Specific Plans	Mandate (Leaders/Ministers/SOM/SCE Priorities and Decisions, Strategic Plans and to ABAC recommendations)	ECOTECH Priorities and/or Host Year Priorities	Cross-fora collaboration (within APEC and beyond APEC)
		energy mix by 2030. <b>(2011 Leaders' Statement)</b>		
Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region <b>(EWG 04 2019A)</b>	<p>The 1<sup>st</sup> workshop is planned to be held in March 2020 in Hawaii, USA. The 1<sup>st</sup> Workshop will focus on sharing best practices for the RE&amp;EE project from the perspective of the developed APEC Economies to participants from the developing APEC Economies.</p> <p>The 2<sup>nd</sup> workshop is planned to be held in June 2020 in Thailand. This workshop will focus on sharing selected successful project in transportation sector and build capacity in project design and planning.</p> <p>The final report is expected to be finished in July-September 2020.</p>	<p>We reaffirm our aspirational goals to reduce aggregate energy intensity by 45 percent by 2035 and double renewable energy in the regional energy mix by 2030. <b>(2014 Leaders' Statement)</b></p> <p>We reaffirm our commitment towards Leaders' aspirational goals to reduce aggregate energy intensity by 45 percent by 2035, to double the share of renewable energy in the APEC energy mix by 2030, and to achieve sustainable and resilient energy development within the Asia-Pacific. <b>(2014 AMM Statement)</b></p>	Sustainable Growth, Human Security	TPTWG, PPSTI
Sustainable Mobility: Routes for Integrating the Energy and Transport Sectors for Urban Cities <b>(EWG 05 2019A)</b>	<p>One workshop-“Sustainable Mobility-City Solutions with Cross-sectoral Coordination will be held in April-June 2020.</p> <p>A case study on Sustainable Mobility-Cross-sectoral Planning and Strategies will be delivered as an APEC publication in July-August 2020.</p>	<p>In transitioning to a low-carbon economy we will explore the contribution of clean energy technologies and energy efficient initiatives in the transport and power sectors. These may include biofuels, civil nuclear power for interested Member Economies, advanced coal technologies, liquefied natural gas (LNG), solar, wind, and marine energy technologies. <b>(2015 EMM Declaration)</b></p>	Sustainable Growth, Human Security	GIZ', Emissions Development Strategic Partnership, LAC/Asia Regional Platforms
APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy <b>(EWG 06 2019A)</b>	<p>A 3-day workshop will be held in June 2020.</p> <p>The project completion report is expected to be submitted on December 2020.</p>	<p>The future economic growth of the APEC region will be supported by an appropriate mix of energy resources and power generation technologies that includes both conventional and renewable energy with increasing priority for clean energy sources and enhanced energy efficiency. In this regard, we will build on synergies among the Member Economies aimed at maximizing strengths from each economy thus minimizing costs of policy implementation. <b>(2015 EMM Declaration)</b></p> <p>We reaffirm our aspirational goals to reduce aggregate energy intensity by</p>	Sustainable Growth, Human Security	HRDWG

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		<p>45 percent by 2035 and double renewable energy in the regional energy mix by 2030.</p> <p><b>(2016 Leaders' Statement)</b> Improve human capital development and our goals to improve people-to-people connectivity and continue the promotion of cross-border cooperation in education engagement.</p> <p><b>(2015 Leaders' Statement)</b></p>		
<p>APEC Peer Review on Energy Efficiency (PREE) Phase 10 (Follow-Up PREE) <b>(EWG 07 2019A)</b></p>	<p>The 6<sup>th</sup> Follow-up PREE will be conducted in Indonesia in June 2020.</p> <p>PREE deliverables will include a Peer Review Report on Energy Efficiency for the host economy, which will include identification of barriers to the effective implementation of the action plans and the recommendations for overcoming those barriers. The Peer Review Report is expected to be finished in December 2020.</p> <p>The 5<sup>th</sup> EEP Workshop will be held in 2020. The theme of the workshop is enhancing industrial energy efficiency. Its summary report is expected to be finished within 2020.</p>	<p>The future economic growth of the APEC region will be supported by an appropriate mix of energy resources and power generation technologies that includes both conventional and renewable energy with increasing priority for clean energy sources and enhanced energy efficiency. In this regard, we will build on synergies among the Member Economies aimed at maximizing strengths from each economy thus minimizing costs of policy implementation.</p> <p><b>(2015 EMM Declaration)</b></p>	<p>Sustainable Growth, Human Security</p>	
<p>Energy Intensity Reduction in the APEC Region's Urbanised Cities <b>(EWG 08 2019A)</b></p>	<p>The preliminary draft study report is expected to be submitted in August 2020.</p> <p>The one-day workshop is scheduled to be held in September/October 2020 alongside with the 56<sup>th</sup> EGEE&amp;C meeting in Viet Nam. The summary record will be shared with EGEE&amp;C members.</p> <p>The draft study report is expected to be submitted in April 2021 and reported at the 57<sup>th</sup> EGEE&amp;C meeting.</p>	<p>We reaffirm our aspirational goals to reduce aggregate energy intensity by 45 percent by 2035 and double renewable energy in the regional energy mix by 2030.</p> <p><b>(2011 Leaders' Statement)</b></p>	<p>Sustainable Growth, Human Security</p>	
<p>APEC Workshop on the Use of Pumped Storage Hydropower to Enable Greater Renewable Energy Use and Reliable Electricity Supply (EWG 09 2019A)</p>	<p>Policies to use more renewable energy across APEC economies require additional storage to make best use of intermittent generation from solar and wind to meet variable electricity demand. Rapid population growth, urbanization and intensifying extreme climate events further threaten the resilience and reliability of electricity grids.</p> <p>This project supports a three day workshop focusing on capacity-building and training for further deployment of pumped storage hydropower as an 'off the shelf' technology for large scale</p>	<p>This project supports APEC Environment Ministers' 2012 recognition of the criticality of water in economic development: "We recognize that water is at the core of sustainable development and highlight its link to economic growth, poverty reduction, food security, a better sanitary state of the environment and ecosystems protection."</p>	<p>Sustainable Growth, Human Security</p>	

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	electricity storage.			
Evaluation of Energy Technologies, Programs and Policies (EWG 12 2019A)	<p>Evaluation of energy technologies, programs and policies is essential to developing effective and useful technologies, programs and policies and to understanding the impacts of policy and program implementation.</p> <p>This two-day workshop will bring together policy makers and the evaluation practitioners to highlight evaluation methods and analysis, and the evaluation of energy technologies, programs and policies.</p> <p>This workshop will provide insights on the value of having robust evaluation practices through the presentation of best practices, case studies and workshop sessions</p>	<p>This workshop responds to numerous ministerial declarations, such as the Fukui Declaration following EMM9, instructing EWG and associated sub-groups to promote and strengthen energy efficiency and renewable energy in the region. The project is also directly linked to APEC's Energy Intensity reduction target as it enables improved efficiency results.</p>	Sustainable Growth, Human Security	IEA, EEAP
APEC Workshop on District Cooling and/or Heating Systems (DCHS) (EWG 08 2019S)	<p>The one-day workshop is scheduled to be held in September, 2020 alongside with the 31st EGEDA meeting in Hong Kong, China. The summary record will be shared with EGEDA and EGEE&amp;C members.</p>	<p>We reaffirm our aspirational goals to reduce aggregate energy intensity by 45 percent by 2035 and double renewable energy in the regional energy mix by 2030. <b>(2011 Leaders' Statement)</b></p>	Sustainable Growth, Human Security	
Research on the Role of Urban Planning for Addressing Climate Change and Disasters (EWG 09 2019S)	<p>The preliminary draft research is expected to be submitted to PSU in March 2020.</p> <p>The draft research is expected to be reported at the 5th Workshop on Sustainable Cities held within EWG 59 in March 2020.</p> <p>The final report is expected to be finished by July 2020.</p>	<p>We encourage ongoing efforts in this direction toward energy efficient and low-carbon development in urban settings, including the implementation of the APEC Low-Carbon Model Town Project, use of green codes and standards for buildings, and the Energy Smart Communities Initiative. <b>(2015 Leaders' Statement)</b> We instruct the LCMT-TF to move the current LCMT Project into the next stage in order to disseminate Low-Carbon Towns in the Asia-Pacific region. <b>(2015 EMM Declaration)</b></p>	Sustainable Growth, Human Security	<p>The report will be distributed for information to relevant international organizations and institutions: UN-ESCAP, UNDP, UNIDO, UN-Habitat, World Bank's Global Platform for Sustainable Cities GPSC, AIIB, ADB, Global Covenant of Mayors, ICLEI, C40, Cities' Alliance.</p>
Oil and Gas Security Initiative: 2020 (EWG 01 2020S)	<p>The 5<sup>th</sup> Oil &amp; Gas Security Exercise will be held in Thailand in February 2020.</p> <p>The 6<sup>th</sup> Oil &amp; Gas Security Network Forum will be held in Osaka, Japan in April.</p> <p>The OGS newsletter is released bi-monthly. The OGS Study on "Changing LNG market dynamics, impacts on supply security in the APEC region" will be endorsed and</p>	<p>Improving the capacity of the APEC region to respond to emergencies such as disruptions in oil and gas supply is vital, and as such, we reaffirm the continuation of the APEC Oil and Gas Security Initiative(OGSI) which puts forward oil and gas security exercises, network and studies <b>(2015 EMM Declaration)</b></p>	Sustainable Growth, Human Security	IEA, ERIA

<b>Title</b>	<b>Summary of Specific Plans</b>	<b>Mandate</b> (Leaders/Ministers/SOM/SCE Priorities and Decisions, Strategic Plans and to ABAC recommendations)	<b>ECOTECH Priorities and/or Host Year Priorities</b>	<b>Cross-fora collaboration</b> (within APEC and beyond APEC)
	published.			

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