

# Progress on Possible New Energy Goals for APEC

**The 61<sup>st</sup> Meeting of the APEC Expert Group on Energy Efficiency & Conservation (EGEEEC61)**

**The 59<sup>th</sup> Meeting of the APEC Expert Group on New and Renewable Energy Technologies**

**17-19 October 2023**

**Metro Manila, Philippines**

Glen SWEETNAM

Chair, EGEDA

Senior Vice President, Asia Pacific Energy Research Centre (APERCC)

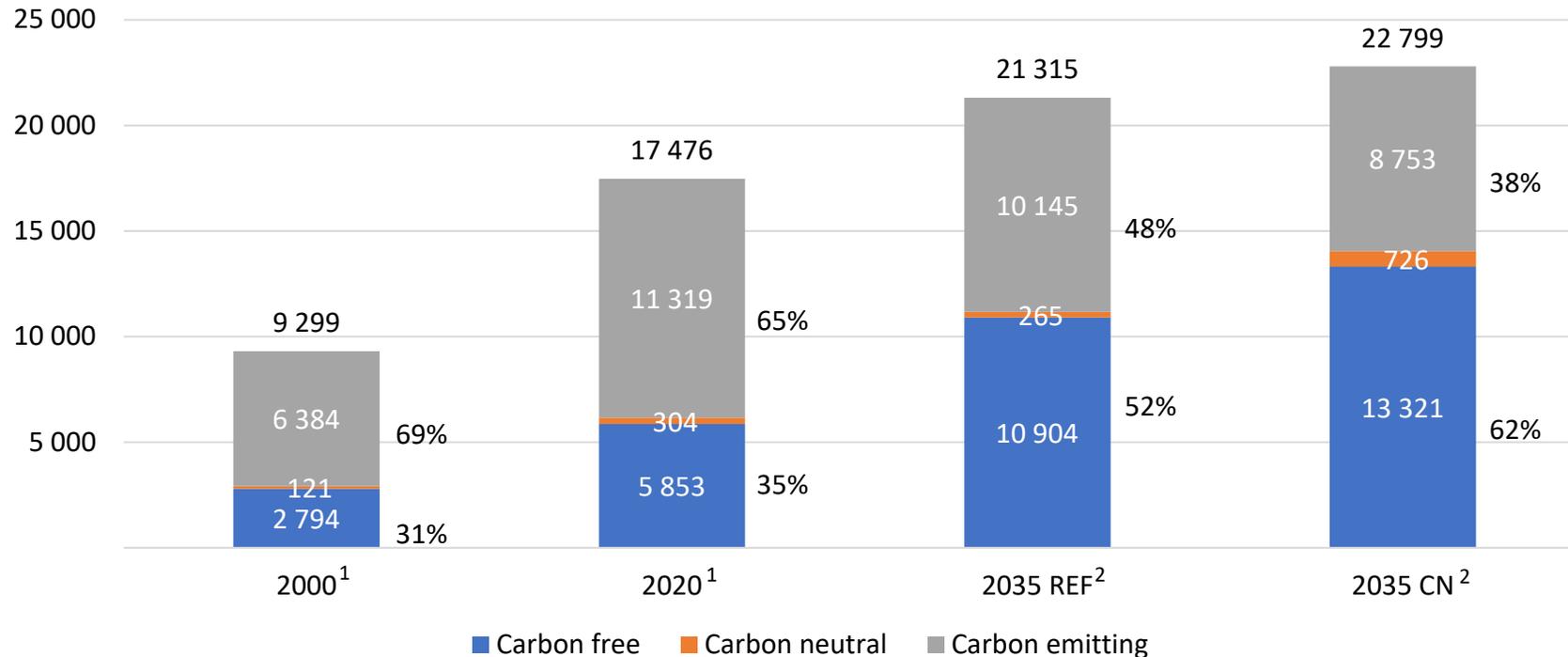


# Outline

- ❑ The United States proposed three new energy goals for APEC
  - ❑ Carbon free and carbon neutral power generation
  - ❑ Methane emissions in the fossil fuel sector
  - ❑ A Just Energy Transition initiative
- ❑ Chair's Statement from EMM 13
- ❑ APERC analysis of power generation proposal

# Decarbonized share of electricity generation is rising

## APEC Electricity Generation (TWh)



Source: EGEDA<sup>1</sup> and APEC Energy Demand and Supply Outlook 8<sup>th</sup> Edition<sup>2</sup>

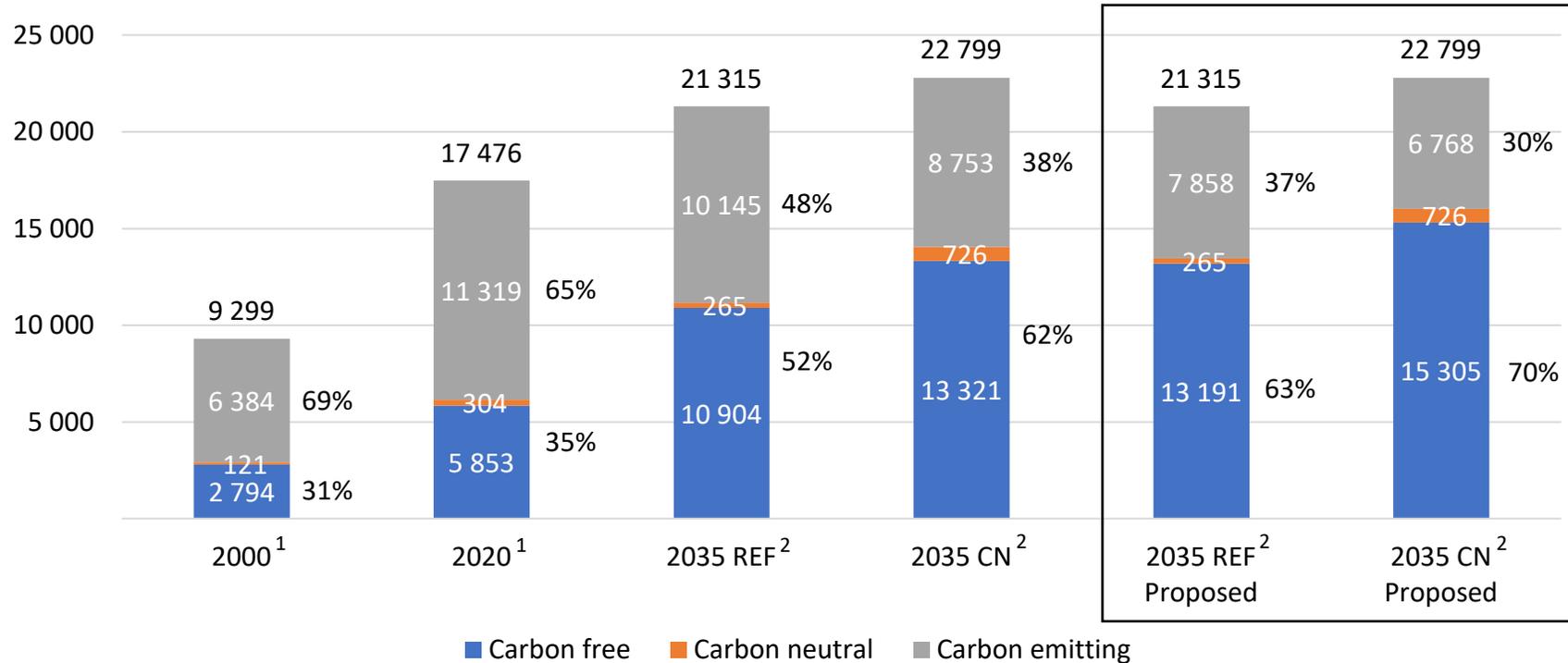
Note: 1) Carbon emitting includes coal, oil, and gas. Carbon neutral includes coal CCS, gas CCS, bioenergy, and waste. Carbon free includes nuclear, hydro, wind, solar, geothermal, and others. Total electricity generation excludes storage and imports.

2) The lower percentage numbers show the combined share of carbon free and carbon neutral.

- From 2000 to 2020, APEC 's decarbonized share rose by 4 percentage points (31% to 35%).
- From 2020 to 2035, APERC projects the decarbonized share will rise by 17 and 27 percentage points in REF and CN, respectively

# US decarbonization can have a substantial effect on APEC total

**APEC Electricity Generation Assuming US Achieves Its Decarbonized Goal (TWh)**



Source: EGEDA<sup>1</sup> and APEC Energy Demand and Supply Outlook 8<sup>th</sup> Edition<sup>2</sup>

- If the US completely decarbonizes its power sector by 2035, the total APEC decarbonized share rises by 11 and 8 percentage points in REF and CN, respectively.
- In all 2035 cases, carbon emitting generation is greater than the 2000 level despite US efforts.

# “Carbon free plus carbon neutral” electricity generation shares

	2000 <sup>1</sup>	2020 <sup>1</sup>	2035 REF <sup>2</sup>	2035 CN <sup>2</sup>
Australia	8%	22%	46%	69%
Brunei Darussalam	0%	0%	9%	15%
Canada	73%	82%	81%	87%
Chile	49%	49%	73%	82%
China	18%	33%	54%	61%
Hong Kong, China	0%	0%	4%	4%
Indonesia	14%	18%	35%	43%
Japan	42%	27%	69%	72%
Korea	39%	34%	41%	50%
Malaysia	11%	18%	18%	28%
Mexico	24%	23%	34%	68%
New Zealand	72%	81%	95%	98%
Papua New Guinea	30%	31%	42%	51%
Peru	82%	64%	70%	70%
Philippines	43%	21%	38%	38%
Russia	34%	40%	42%	50%
Singapore	2%	2%	6%	23%
Chinese Taipei	27%	18%	32%	39%
Thailand	6%	19%	27%	31%
United States	28%	39%	55%	68%
Viet Nam	55%	35%	50%	53%
<b>APEC Total</b>	<b>31%</b>	<b>35%</b>	<b>52%</b>	<b>62%</b>

Source: EGEDA<sup>1</sup> and APEC Energy Demand and Supply Outlook 8<sup>th</sup> Edition<sup>2</sup>

# Backup slides

# Electricity generation in 2 scenarios (TWh)

	2000 <sup>1</sup>			2020 <sup>1</sup>			2035 REF <sup>2</sup>			2035 CN <sup>2</sup>		
	CF	CN	CE	CF	CN	CE	CF	CN	CE	CF	CN	CE
Australia	16	1	192	56	3	205	127	1	150	241	5	110
Brunei Darussalam	0	0	3	0	0	6	1	0	8	1	1	8
Canada	432	8	166	525	11	116	583	12	136	650	42	103
Chile	19	1	21	36	5	43	78	6	31	107	6	24
China	239	2	1 114	2 449	85	5 245	5 034	86	4 348	5 566	127	3 628
Hong Kong, China	0	0	31	0	0	35	1	1	31	1	1	31
Indonesia	13	0	78	39	12	239	178	12	355	224	58	373
Japan	410	29	616	209	63	738	611	37	293	635	45	270
Korea	113	0	175	186	13	377	274	11	407	278	58	339
Malaysia	7	0	57	29	1	144	49	5	236	50	34	214
Mexico	47	2	157	69	2	243	158	0	314	359	12	178
New Zealand	27	1	11	35	1	9	45	1	2	53	1	1
Papua New Guinea	1	0	2	1	0	3	5	0	7	6	0	6
Peru	16	0	4	33	0	19	48	0	21	55	0	23
Philippines	19	0	26	20	1	80	82	1	136	86	3	145
Russia	295	3	579	432	4	652	507	0	702	595	57	666
Singapore	0	0	31	0	1	52	3	1	65	3	9	41
Chinese Taipei	47	2	136	46	4	230	95	4	208	116	4	187
Thailand	6	0	90	13	22	151	42	23	174	47	43	196
United States	1 072	72	2 882	1 590	75	2 573	2 752	66	2 287	3 997	214	1 985
Viet Nam	15	0	12	83	0	159	234	0	232	250	5	225
<b>APEC Total</b>	<b>2 794</b>	<b>121</b>	<b>6 384</b>	<b>5 853</b>	<b>304</b>	<b>11 319</b>	<b>10 904</b>	<b>265</b>	<b>10 145</b>	<b>13 321</b>	<b>726</b>	<b>8 753</b>

Source: EGEDA<sup>1</sup> and APEC Energy Demand and Supply Outlook 8<sup>th</sup> Edition<sup>2</sup>

Note: CF is carbon free, CN is carbon neutral, and CE is carbon emitting

# Carbon free and carbon neutral power generation

*Nearly all APEC economies supported the following text:* Noting that APEC is on track to meet and exceed its current goals for doubling renewable energy from 2010 levels by 2030 and reducing energy intensity 45 percent from 2005 levels by 2035, APEC economies will contribute towards **a new collective aspirational goal for the power sector of approximately 70% of electricity generated by carbon free and carbon neutral sources for the APEC region by 2035** in line with different circumstances of each economy including through their existing targets or policy measures, while making every effort to exceed this goal in this time frame. In furtherance of this goal, APEC economies will work individually and collectively on a voluntary basis on integration of variable and fluctuating sources into grids and on increasing grid reliability. ***[bold added]***

# Methane emissions in the fossil fuel sector

*Nearly all APEC economies supported the following text:* In order to improve energy security and supply, APEC economies are **committed to working to achieve their respective announced pledges that collectively comprise at least a 50% reduction methane emissions in the fossil energy sector from 2020 levels by 2030**, while making every effort to work together to exceed this level in this time frame, including on efforts to minimize flaring and venting, to conduct regular leak detection and repair in the oil and gas sector, and to reduce greenhouse gas emissions in the coal sector. In this context, we note the expansion of the work of the Expert Group on Clean Fossil Energy to include cross-cutting issues, such as methane abatement, and efforts to turn wasteful methane emissions into useful energy sources. APEC economies call on APERC to develop capacities relevant to this commitment. ***[bold added]***

# A Just Energy Transition initiative

Mindful of the commitment of APEC economies to promote strong, balanced, secure, sustainable, and inclusive growth, **we task the Energy Working Group to establish a Just Energy Transition Initiative**, the development of which will be determined by the consensus of all APEC economies. This Initiative would promote efforts to accelerate energy transitions within their economies as per their domestic circumstances broadly consistent with the Non-Binding Just Energy Transition Principles for APEC Cooperation endorsed at this Energy Ministerial Meeting, that will pursue positive environmental, economic, and social outcomes while taking into account domestically defined economic growth priorities, meaningfully engage workforces, private sector companies and investors, and communities in an equitable and inclusive way, recognizing the critical importance of decent work and quality jobs as part of any energy transition agenda, and supporting broadly shared prosperity for all, including MSMEs, women and others with untapped economic potential, such as Indigenous Peoples as appropriate. We emphasize that the Just Energy Transition Initiative will both support and build on the implementation of the La Serena Roadmap for Women and Inclusive Growth.

***[bold added]***

# Non-Binding Just Energy Transition Principles for APEC Cooperation

We further task the Energy Working Group to seek opportunities to incorporate these principles as applied to future workstreams for information exchange and capacity building.

- Take into account domestically defined economic growth priorities.
- Pursue positive environmental, social, and economic outcomes.
- Deliver domestically defined equitable benefits.
- Support inclusion and gender equality.
- Create resilient firms, institutions, and communities.
- Provide support for decent work and workforce development.
- Promote healthy lives and well-being for all.

**Thank you.**

**<https://aperc.or.jp>**

