

8.b. Report on Power Sector Decarbonization Projections

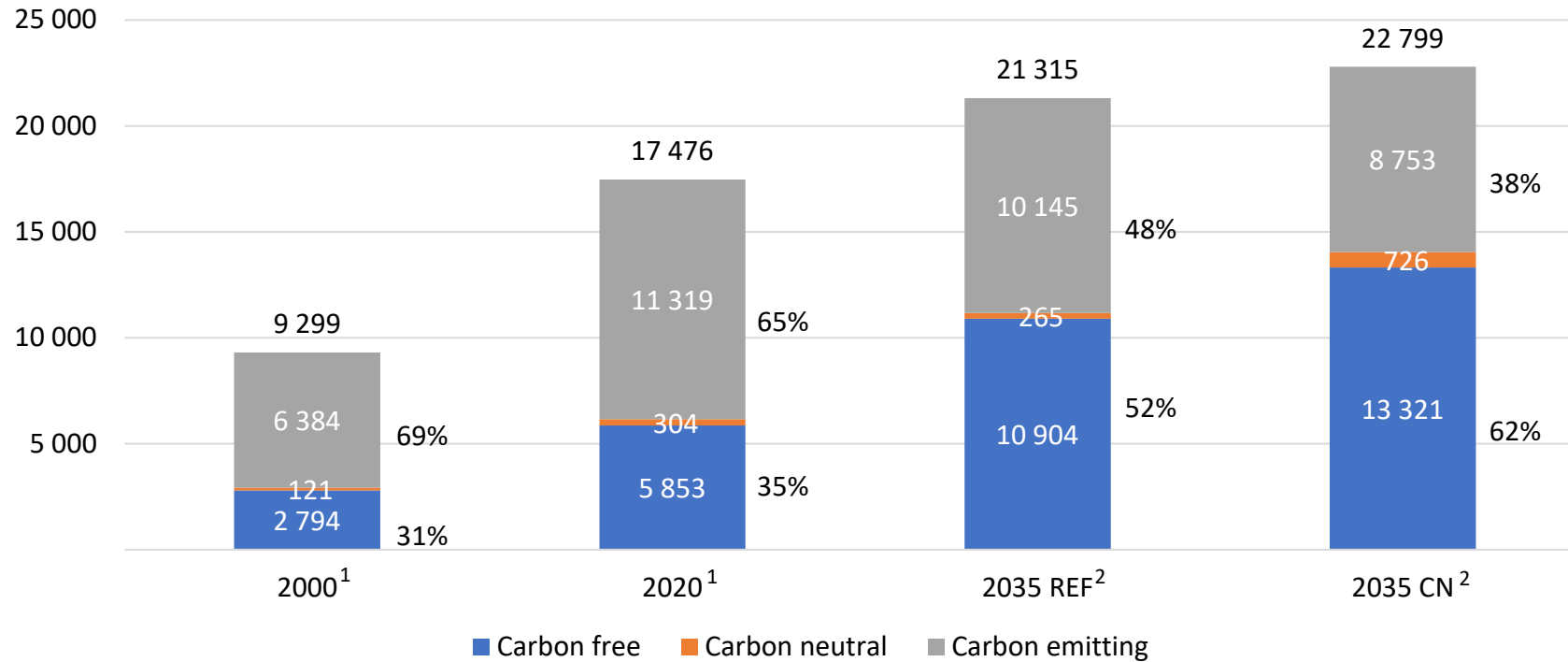
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Kazutomo IRIE, PhD
President, APERC



Decarbonized share of electricity generation is rising

APEC Electricity Generation (TWh)



Source: EGEDA¹ and APEC Energy Demand and Supply Outlook 8th Edition²

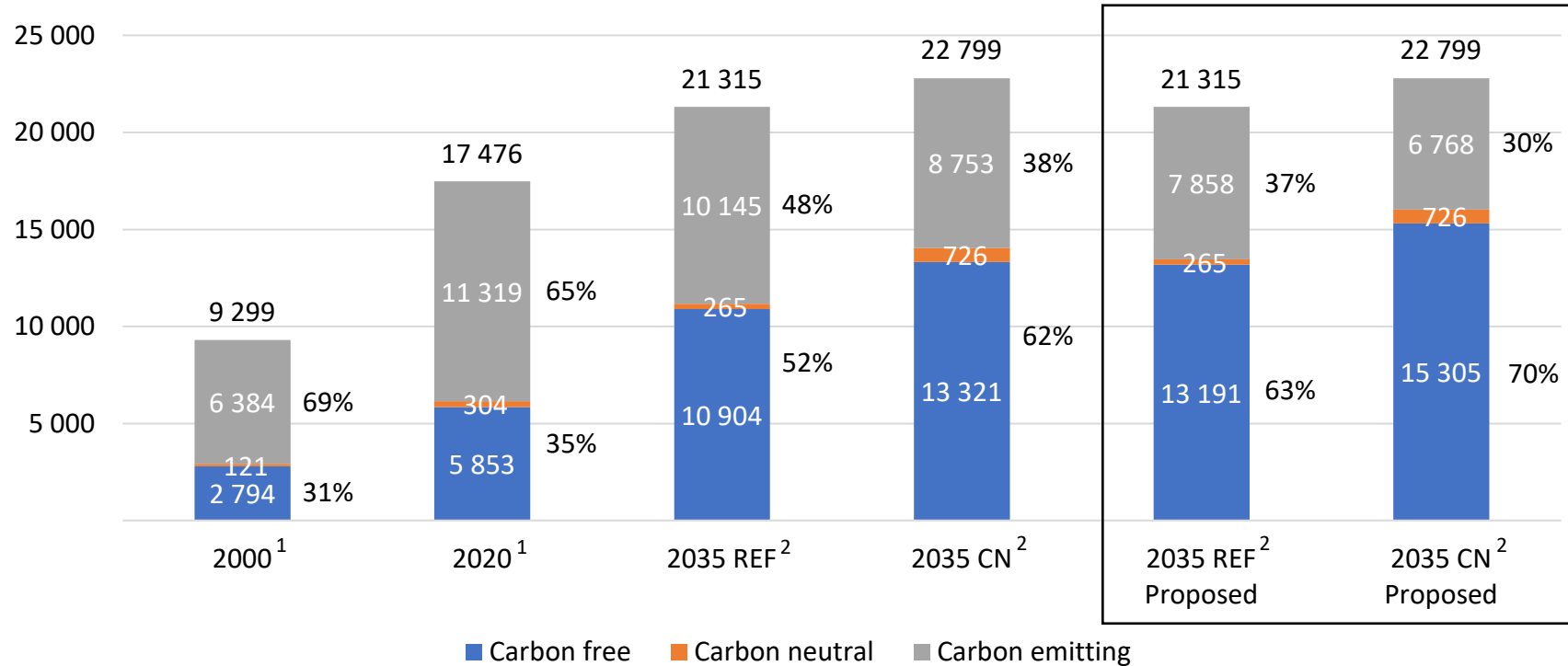
Note: 1) Carbon emitting includes coal, oil, and gas. Carbon neutral includes coal CCS, gas CCS, bioenergy, and waste. Carbon free includes nuclear, hydro, wind, solar, geothermal, and others. Total electricity generation excludes storage and imports.

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: EGEDA¹ and APEC Energy Demand and Supply Outlook 8th Edition²

- 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 ¹	2020 ¹	2035 REF ²	2035 CN ²
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%
APEC Total	31%	35%	52%	62%

Source: EGEDA¹ and APEC Energy Demand and Supply Outlook 8th Edition²

Electricity generation in 2 scenarios (TWh)

	2000 ¹			2020 ¹			2035 REF ²			2035 CN ²		
	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
APEC Total	2 794	121	6 384	5 853	304	11 319	10 904	265	10 145	13 321	726	8 753

Source: EGEDA¹ and APEC Energy Demand and Supply Outlook 8th Edition²

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

Thank you.

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