

INSTALLED CAPACITY

Total MW Installed Capacity	2016			2017			2018			2019			By Technology 2019
	Colombia	Central America	Total Celasia	Colombia	Central America	Total Celasia	Colombia	Central America	Total Celasia	Colombia	Central America	Total Celasia	
Total Installed Capacity	1,853.47	534.80	2,388.27	1,855.90	534.80	2,390.80	1,810.62	487.12	2,297.74	1,311.91	497.82	1,809.73	
Hydraulic (reservoir)	897.00	0	897.00	897.00	0	897.00	932.00	0	932.00	932.00	0	932.00	
Hydraulic (small hydro-power plants, greater than 10 MW)	179.47	118.30	297.77	177.42	118.30	295.72	177.42	118.30	295.72	164.77	118.30	283.07	1,227.74
Hydraulic (small hydro-power plants, less than 10 MW)	0	0	0	0	0	0	0	0	0	0	0	0	
Thermal (simple cycle) – Natural gas	187.00	0	187.00	187.00	0	187.00	167.00	0	167.00	167.00	0	167.00	
Thermal (simple cycle) – Diesel	610.00	0	610.00	610.00	0	610.00	610.00	0	610.00	610.00	0	610.00	
Thermal (combined cycle) – Natural gas and Liquefied	0	160.00	160.00	0	160.00	160.00	0	102.20	102.20	0	102.20	102.20	476.20
Thermal (bunker internal-combustion motors)	0	87.00	87.00	0	87.00	87.00	0	87.00	87.00	0	87.00	87.00	
Thermal (coal)	0	120.00	120.00	0	120.00	120.00	0	120.00	120.00	0	120.00	120.00	
Wind	0	49.50	49.50	0	49.50	49.50	0	49.50	49.50	0	49.50	49.50	49.50
Photovoltaic – Farms	0	0	0	9.80	0	9.80	17.86	9.80	27.66	25.41	20.50	46.91	56.29
Photovoltaic – Roofs	0	0	0	3.79	0	3.78	6.34	0.32	6.66	10.96	0.32	10.38	

ENERGY GENERATED

Total Energy Generated (GWh)	2016			2017			2018			2019			By Technology
	Colombia	Central America	Total Celasia	Colombia	Central America	Total Celasia	Colombia	Central America	Total Celasia	Colombia	Central America	Total Celasia	
Total Energy Generated	5,597	1,529	7,126	5,228	1,091	6,317	5,429	1,086	6,516	4,517	1,108	5,625	Generation
Hydraulic (reservoir)	2,369.58	0	2,369.58	3,340.00	0	3,340.00	3,045.87	0	3,045.87	2,972.14	0	2,972.14	
Hydraulic (small hydro-power plants, greater than 10 MW)	592.20	465.06	1,057.26	878.06	485.00	1,363.06	887.28	464.84	1,352.12	706.82	378.80	1,085.62	4,117.33
Hydraulic (small hydro-power plants, less than 10 MW)	59.20	0	59.20	58.30	0	58.30	78.88	0	78.88	59.57	0	59.57	
Thermal (simple cycle) – Natural gas	410.40	0	410.40	4.01	0	4.01	0.47	0	0.47	4.13	0	4.13	
Thermal (simple cycle) – Diesel	0	8.60	8.60	0	17.00	17.00	0	0.68	0.68	0	0.06	0.06	
Thermal (combined cycle) – Natural gas and Liquefied natural gas (LNG)	2,165.91	0	2,165.91	942.00	0	942.00	1,392.99	0	1,392.99	745.19	0	745.19	1,251.60
Thermal (bunker internal-combustion motors)	0	268.90	268.90	0	275.00	275.00	0	71.50	71.50	0	76.06	76.06	
Thermal (coal)	0	588.10	588.10	0	152.00	152.00	0	319.69	319.69	0	426.16	426.16	
Wind	0	198.30	198.30	0	162.00	162.00	0	227.00	227.00	0	213.06	213.06	213.06
Photovoltaic – Farms	0	0	0	5.00	0	5.00	14.63	2.47	17.10	19.82	13.91	33.73	43.32
Photovoltaic – Roofs	0	0	0	0.20	0	0.20	6.18	0.05	6.23	9.22	0.37	9.59	

GENERATION MIX

Generation Source	2019 Generation (% of the total of TWh sold)	2019 Installed Capacity (% of the total MW)	2025 Projected Capacity (% of the total MW) 2019
Coal	7.58	6.63	3.78
Nuclear	0	0	0
Natural gas	13.32	9.23	11.56
Liquid fuel	1.35	10.45	5.96
Hydraulic (greater than 10 MW)	72.13	67.14	39.93
Wind	3.79	2.74	16.98
Other renewables (solar, hydraulic, less than 10 MW, geothermal, biomass, etc.)	1.83	3.61	21.83
Total Capacity (Must be equal to 100%)	100	100	100
Total (Absolute Values)	5.83	1,809.73	

AVERAGE EFFICIENCY

Type	2016	2017	2018	2019	2019 Explanation of the Trend	2019 Average age of the Plants
Efficiency of coal-based power generation plants (%)	27.38	26.84	26.95	27.19	There was a 0.24% increase in efficiency, primarily due to the management of maintenance and a more efficient operation.	39.25
Efficiency of combined-cycle natural-gas-based power generation plants (%)	46.28	41.08	41.34		In 2019, Zona Franca was sold.	In 2018, the average age of the combined-cycle plants was calculated as the mean value of the age of Flores 1 (26 years) and Flores 4 (8 years).
Average efficiency of the simple-cycle natural-gas thermal plants (%)	0	31.98	27.70	32		

AVERAGE AVAILABILITY

Type	Percentage (%)			
	2016	2017	2018	2019
Coal Plants	76.11%	47.90%	90.62%	79.44%
Natural-Gas Plants	90.51%	97.12%	92.76%	100%