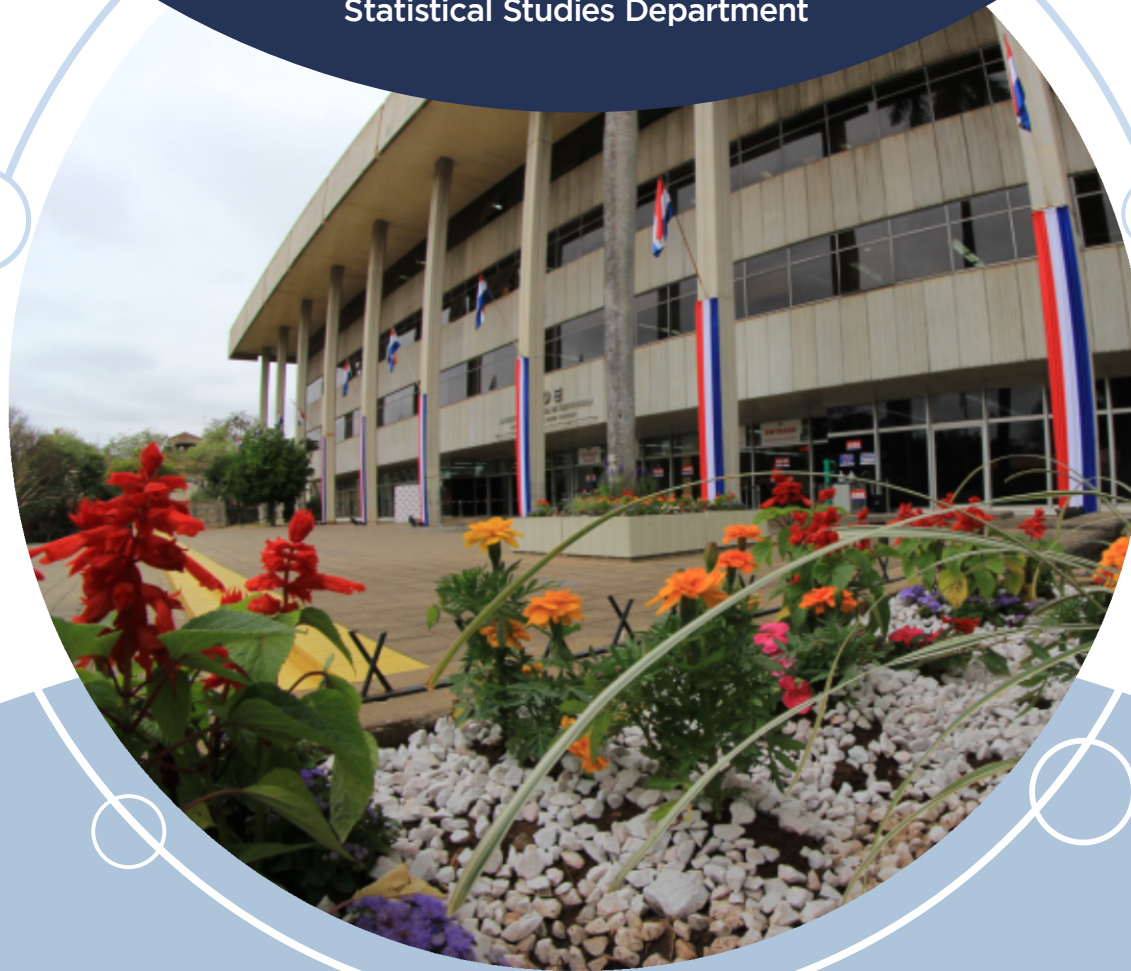


Statistical Summary

2016 - 2020

Studies and Planning Directorate
Investment Management and Studies Division
Statistical Studies Department



Administración Nacional
de Electricidad

 TETÃ REKUÁI
GOBIERNO NACIONAL

*Paraguay
de la gente*

1. Generation

1.1) Origin of Electrical Energy (MWh)

	2016	2017	2018	2019	2020
Gross Generated Energy					
Acaray	1,290,149	957,530	1,083,691	979,943	579,032
Thermal	1,250	1,509	1,553	1,820	1,920
Gross Total Energy	1,291,399	959,040	1,085,244	981,763	580,951
Purchased Energy					
Itaipú	11,227,393	13,454,277	15,043,900	15,266,241	15,861,298
Yacyretá	2,458,889	1,236,502	476,891	1,203,238	1,664,317
Total Purchased Energy	13,686,282	14,690,779	15,520,791	16,469,479	17,525,615
Total Origin	14,977,680	15,649,819	16,606,035	17,451,242	18,106,566

Source: ANDE

1.2) Destination of Electrical Energy (MWh)

	2016	2017	2018	2019	2020
National Consumption					
Interconnected National System (SIN)	14,848,092	15,575,124	16,577,415	17,319,187	17,955,575
Bahía Negra	1,250	1,509	1,553	1,730	1,839
Total National Consumption	14,849,342	15,576,633	16,578,968	17,320,917	17,957,414
Energy Export					
Ebisa (Argentina)	128,339	73,186	27,067	130,325	149,152
Total Energy Export	128,339	73,186	27,067	130,325	149,152
Destination	14,977,680	15,649,819	16,606,035	17,451,242	18,106,566

Source: ANDE

1. Generation

1.3) Electrical Energy Balance - National Market (MWh)

	2016	2017	2018	2019	2020
Net Generation (a)	1,289,011	957,241	1,083,126	979,671	579,029
Purchased Energy (b)	13,686,282	14,690,779	15,520,791	16,469,479	17,525,615
Import Energy (c)	0	0	0	0	0
Export Energy (d)	128,101	73,025	27,009	130,042	148,558
Net Energy Available (e=a+b+c-d)	14,847,192	15,574,996	16,576,908	17,319,108	17,956,086
Own Energy Consumption (f)	21,963	6,620	7,280	8,999	9,703
Public Lighting Consumption(g)	246,118	332,738	330,927	319,605	307,579
Total Energy Loss (h)	3,811,713	3,997,705	4,066,001	4,470,312	4,227,480
Total Energy Billed (i =e-f-g- h)	10,767,398	11,237,933	12,172,700	12,520,192	13,411,324

Source: ANDE

1.4) Electrical Energy Losses - National Market (%)

	2016	2017	2018	2019	2020
Transmission	6.18	5.76	5.36	5.25	5.02
Distribution	19.49	19.91	19.17	20.56	18.53
Total	25.67	25.67	24.53	25.81	23.54

Source: ANDE

1. Generation

1.5) National Interconnected System (NIS)

	2016	2017	2018	2019	2020
Energy (MWh)					
Metropolitan	7,793,673	8,221,343	8,680,831	9,019,443	9,312,851
Center	1,403,944	1,480,363	1,577,072	1,687,126	1,833,781
South	1,232,101	1,298,146	1,360,075	1,400,074	1,453,292
North	667,598	679,469	760,093	836,672	862,484
East	2,623,912	2,755,592	3,054,866	3,201,156	3,297,053
West	199,676	234,648	247,243	254,115	284,562
Total Electrical System	13,920,905	14,669,561	15,680,180	16,398,586	17,044,023
Own Consumption	9,041	8,212	9,293	10,756	10,977
Transmission Losses	918,145	897,351	887,943	909,845	900,575
Total Energy NIS	14,848,092	15,575,124	16,577,416	17,319,187	17,955,575
Peak Power Demand (MW)	2,917	3,135	3,226	3,553	3,563
Load Factor (%)	57.9	56.7	58.7	55.6	57.5

Source: ANDE

2. Transmission and Distribution

2.1) Transmission Infrastructure

	2016	2017	2018	2019	2020
Transmission Lines (km)					
500 kV	364	364	711	711	727
220 kV	4,529	4,564	4,575	4,616	4,727
66 kV	1,261	1,291	1,345	1,355	1,355
Installed Capacity (MVA)					
500/220 kV	4,750	4,750	5,350	5,350	5,350
220/66 kV	2,298	2,815	3,350	3,575	3,545
220/23 kV	2,488	2,883	3,115	3,418	3,525
66/23 kV	2,124	2,334	2,519	2,684	2,772
Clients served in High Voltage (*)	318	493	511	558	538
ANDE substations (quantity)	82	89	90	94	95
Non-ANDE substations (quantity)	15	18	18	18	18
Total Substations (quantity)	97	107	108	112	113

Note: All data is updated as of December 31 of each year.

(*) INC, ESSAP, GHN, CLYFSA, ADM, SIC, CMY, ELKEN, CAI, CERV, VET, VMC, BTW, CHORT, FERNH, CARGILL, WMA, INP.
(Excluding BCP and VCE)

Adjustments were made to the calculation methodology.

Source: ANDE

2. Transmission and Distribution

2.2) Distribution Infraestructure

	2016	2017	2018	2019	2020
Medium Voltage Lines (km)	66,339	67,354	67,815	68,331	68,633
Distribution Transformers (quantity)	76,972	79,920	81,942	85,733	90,585
Distribution Transformers (MVA)	5,791	6,000	6,220	6,561	7,039
Active Customers (quantity)	1,512,725	1,577,655	1,630,249	1,678,081	1,717,413

From 2014 includes the length of self-construction lines and transformers of exclusive use.

Source: ANDE

2.3) Service Interruption Index - Metropolitan area

	2016	2017	2018	2019	2020
Equivalent Outage Frequency by Power - FEP (number of interruptions/kVA-year)	32.38	27.55	22.83	23.41	22.81
Equivalent Outage Duration by Power - DEP (hours of outages/kVA-year)	41.00	30.80	21.88	28.35	36.32

Source: ANDE

3. Commercialization

3.1) Billed Energy (MWh)

	2016 ⁽¹⁾	2017 ⁽²⁾	2018	2019	2020
Residential	4,793,863	4,920,271	5,376,642	5,533,958	6,403,281
Commercial	1,929,452	0	0	0	0
Industrial	1,818,777	988,716	749,445	411,616	388,551
General	1,336,237	0	0	0	0
Government	643,475	457,253	401,080	352,048	354,507
Public Lighting	245,595	164,004	171,448	187,814	209,077
Other	0	3,937,962	4,519,966	5,007,948	5,033,185
Differential	0	123,013	138,168	130,333	133,652
High Voltage	0	554,503	594,360	639,171	626,010
Very High Voltage	0	65,971	135,913	158,884	171,334
Electrointensive	0	26,240	85,678	98,419	91,726
Total National	10,767,398	11,237,933	12,172,700	12,520,192	13,411,323
Export	120,179	70,493	26,162	127,001	145,467
Total National and Export	10,887,577	11,308,426	12,198,862	12,647,192	13,556,790

⁽¹⁾ In September 2016, approximately 20,000/industrial customers were transferred to the group of general consumption.

⁽²⁾ Since 2017, the structure of consumption groups is considered according to the Statement of Tariffs N° 21.

Source: ANDE

3. Commercialization

3.2) Revenue from Energy (million €)

	2016 ⁽¹⁾	2017 ⁽²⁾	2018	2019	2020
Residential	1,751,261	1,931,272	2,189,284	2,355,701	2,633,656
Commercial	650,758	0	0	0	0
Industrial	446,706	302,354	242,160	129,598	116,478
General	341,175	0	0	0	0
Government	135,936	122,094	143,911	135,468	130,033
Public Lighting	77,972	61,542	66,400	72,739	80,973
Other	0	1,406,418	1,643,774	1,831,297	1,842,265
Differential	0	49,814	54,373	52,565	54,807
High Voltage	0	126,459	144,836	156,384	154,642
Very High Voltage	0	13,932	35,216	42,474	42,795
Electrointensive	0	5,098	15,297	19,392	19,832
Total National	3,403,808	4,018,983	4,535,251	4,795,617	5,075,481
Export	95,716	55,647	18,695	94,413	117,140
Total National and Export	3,499,524	4,074,630	4,553,946	4,890,030	5,192,621

⁽¹⁾In September 2016, approximately 20,000/industrial customers were transferred to the group of general consumption.

⁽²⁾Since 2017, the structure of consumption groups is considered according to the Statement of Tariffs N° 21.

Source: ANDE

3. Commercialization

3.3) Billed Customers (quantity)

	2016 ⁽¹⁾	2017 ⁽²⁾	2018	2019	2020
Residential	1,281,931	1,175,992	1,235,521	1,281,498	1,352,113
Commercial	129,562	0	0	0	0
Industrial	1,523	1,574	1,402	480	363
General	46,391	0	0	0	0
Government	14,073	7,568	7,530	7,582	7,608
Public Lighting	0	0	0	0	0
Other	0	169,949	176,540	179,444	181,439
Differential	0	121	155	168	191
High Voltage	0	11	13	12	11
Very High Voltage	0	1	3	4	4
Electrointensive	0	1	3	1	1
Total National	1,473,480	1,355,217	1,421,167	1,469,189	1,541,730
Export	1	1	1	1	1
Total National and Export	1,473,481	1,355,218	1,421,168	1,469,190	1,541,731

⁽¹⁾ In September 2016, approximately 20,000/industrial customers were transferred to the group of general consumption.

⁽²⁾ Since 2017, the structure of consumption groups is considered according to the Statement of Tariffs N° 21 and the values correspond to the average number of customers billed for the period January to December.

Source: ANDE

3. Commercialization

3.4) Average Consumption per Customers (kWh/month)

	2016	2017	2018	2019	2020
Residential	312	349	363	360	395
Total National Market	609	691	714	710	725

Since 2017, the average number of customers billed from January to December is considered.

Source: ANDE

3.5) Electricity Consumption per Capita

	2016	2017	2018	2019	2020
National Consumption (MWh/año)	10,767,398	11,237,933	12,172,700	12,520,192	13,411,323
Total Population (inhabitants)	6,854,536	6,953,646	7,052,983	7,152,703	7,252,672
Electricity Consumption per Capita (kWh/year)	1,571	1,616	1,726	1,750	1,849

Estimated population as of 30 st of June of each year.

Source: ANDE and National Statistics Institute

3.6) National Electricity Coverage

	2016	2017	2018	2019	2020
Served Population (inhabitants)	6,895,546	6,997,344	7,099,117	7,198,913	7,299,762
Total Population (inhabitants) (*)	6,903,913	7,003,138	7,102,668	7,202,514	7,302,683
National Electricity Coverage (%)	99.88	99.92	99.95	99.95	99.96

(*) Estimated population as of 31 st of December of each year.

Source: ANDE and National Statistics Institute

4. Electricity Rates

4.1) Average Rates of Electricity (€/kWh)

	2016	2017	2018	2019	2020
Residential	365.3	392.5	407.2	425.7	411.3
Commercial	337.3	0.0	0	0	0
Industrial	245.6	305.8	323.1	314.9	299.8
General	255.3	0.0	0	0	0
Government	211.3	267.0	358.8	384.8	366.8
Public Lighting	317.5	375.2	387.3	387.3	387.3
Other	0	357	363.7	365.7	366.0
Differential	0	405	393.5	403.3	410.1
High Voltage	0	228	243.7	244.7	247.0
Very High Voltage	0	211	259.1	267.3	249.8
Electrointensive	0	194	178.5	197.0	216.2
Total National	316.1	357.6	372.6	383.0	378.4
Export	796.4	789.4	714.6	743.4	805.3
Total National and Export	321.4	360.3	373.3	386.6	383.0

Source: ANDE

4.2) Billing of the Social Rate (Law 3480/2008)

	2016	2017	2018	2019	2020
Customers Benefited (quantity)	295,022	273,023	289,395	280,741	257,963
Total Subsidized Amount (millions €)	59,245	56,456	61,345	60,460	46,318

Com.: The quantity of customers benefited corresponds to the average for the period January to December.

Source: ANDE

5. Human Resources

5.1) Employees by Occupational Level (quantity)

	2016	2017	2018	2019	2020
Professional	636	609	581	621	687
Technical	575	532	544	514	544
Administrative	1,234	1,206	1,237	1,146	1,061
Operational	1,779	1,723	2,065	2,025	1,948
Total Permanent	4,224	4,070	4,427	4,306	4,240
Contracted	1,047	1,011	487	546	803
Total Employees	5,271	5,081	4,914	4,852	5,043

Values correspond to the 31 st of December of each year.

Source: ANDE

5. Human Resources

5.2) Employees by Sector (quantity)

	2016	2017	2018	2019	2020
Generation	62	58	58	57	55
Transmission	606	570	572	556	536
Distribution	1,604	1,555	1,807	1,758	1,761
Commercialization	993	968	1,034	1,012	991
Administrative	959	919	956	923	897
Total Permanent	4,224	4,070	4,427	4,306	4,240
Contracted	1,047	1,011	487	546	803
Total Employees	5,271	5,081	4,914	4,852	5,043

Values correspond to the 31 st of December of each year.

Source: ANDE

5.3) Personnel Index

	2016	2017	2018	2019	2020
Connected Customers per Employee (amount/employee)	358	388	368	390	405
Billed Electricity per Employee (MWh/employee-year)	2,549	2,761	2,750	2,908	3,163

Source: ANDE

6. Financial Management

6.1) Balance Sheet (million ₺)

	2016	2017	2018	2019	2020
Assets					
Current	3,890,120	3,585,852	4,011,600	4,060,133	4,511,935
Non-current	11,773,543	13,126,290	15,661,656	17,406,326	19,438,404
Total Assets	15,663,663	16,712,142	19,673,255	21,466,459	23,950,339
Liabilities					
Current	1,106,404	1,176,404	1,338,298	1,409,245	2,095,288
Non-current	4,608,251	4,904,624	5,648,462	6,190,932	7,618,323
Total Liabilities	5,714,655	6,081,028	6,986,760	7,600,176	9,713,611
Equity	9,949,007	10,631,114	12,686,495	13,866,283	14,236,728
Total Liabilities and Equity	15,663,663	16,712,142	19,673,255	21,466,459	23,950,339

Source: ANDE

6.2) Income Statement (million ₺)

	2016	2017	2018	2019	2020
Operating Income (a)	3,673,215	4,216,980	4,693,727	5,056,866	5,306,912
Operating Expenses (b)	3,885,520	3,842,781	4,110,061	4,580,303	4,974,335
Net Operating Income (c=a-b)	-212,305	374,199	583,666	476,564	332,577
Non-Operating Income (d)	702,727	566,455	689,835	891,560	798,825
Non-Operating Expense (e)	564,169	399,272	640,953	1,015,285	783,927
Profit Before Tax (f=c+d-e)	-73,747	541,382	632,548	352,839	347,475

Source: ANDE

6. Financial Management

6.3) Profitability Rate (Law 966/1964)

	2016	2017	2018	2019	2020
Net Revenue (million ) [a]	-212,304	374,199	583,666	476,564	332,577
Immobilized Investment (million ) [b]	7,118,810	7,456,615	7,663,136	10,028,129	10,591,012
Profitability Rate (%) [c=(a/b)x100]	-2.98	5.02	7.62	4.75	3.14

Source: ANDE

6.4) Economic and Financial Indicators

	2016	2017	2018	2019	2020
Unpaid Bills - Consumers (%)	33.07	33.03	27.83	31.44	44.23
General Chargeability Margin (%)	81.16	80.46	76.88	77.07	75.76
Current Liquidity (times)	3.52	3.05	3.00	2.88	2.15
Solvency (%)	63.52	63.61	64.49	64.60	59.44
EBITDA Margin (%)	5.55	19.61	22.43	18.78	13.47
Equity Profitability (%)	-0.74	5.09	4.99	2.54	2.44

Source: ANDE

ANDE's Mission Statement: To satisfy the country's electrical power needs and act in the regional electricity sector, with social and environmental responsibility, to excel in management and provision of services in order to contribute towards national development and to the welfare of its population.



Administración Nacional
de Electricidad



*Paraguay
de la gente*