

Plan de Expansión del Sistema Interconectado Nacional 2016 – 2030

Tomo I Estudios Básicos

Anexo Tomo I - 3

Cuadros Soporte & Detalles de Cálculo.

PLAN DE EXPANSIÓN 2016-2030

PROYECCIONES DE DEMANDA

Anexo Tomo I - 3

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POBLACION TOTAL, URBANA Y RURAL , POR SEXO

CUADRO No. 1
PROYECCIONES DE POBLACION TOTAL CENSO 2010 -INEC, BOLETIN No. 15

AÑOS	POBLACION TOTAL		POBLACION MASC	POBLACION FEM	TASAS URBANAS		TASAS INTERANUALES			POBLACION SEXO					TASAS INTERANUALES				
					POBLACION URBANA	RURAL	POBLACION URBANA	RURAL	Ind.Mas. Urb	URBANA Masculina	Femenina	Ind.Mas. Rur	RURAL Masculina	Femenina	URBANA Masculina	Femenina	RURAL Masculina	Femenina	
1970	1,524,445		778,163	746,281	725,459	798,986				94.9	353,306	372,152	114	424,857	374,128				
1975	1,750,317	2.80%	891,719	858,597	851,792	898,525		3.26%	2.38%	94.5	413,775	438,016	114	477,944	420,580	3.21%	3.31%	2.38%	2.37%
1980	1,981,562	2.51%	1,007,171	974,390	986,184	995,378		2.97%	2.07%	93.9	477,701	508,482	114	529,469	465,908	2.91%	3.03%	2.07%	2.07%
1985	2,225,132	2.35%	1,129,208	1,095,923	1,152,036	1,073,096		3.16%	1.51%	94.2	558,839	593,196	113	570,369	502,726	3.19%	3.13%	1.50%	1.53%
1990	2,474,119	2.14%	1,252,452	1,221,666	1,332,040	1,142,079		2.95%	1.25%	94.3	646,406	685,633	113	606,045	536,033	2.95%	2.94%	1.22%	1.29%
1995	2,746,944	2.11%	1,387,815	1,359,128	1,594,684	1,152,260		3.66%	0.18%	95.3	778,139	816,544	112	609,675	542,584	3.78%	3.56%	0.12%	0.24%
2000	3,040,701	2.05%	1,535,364	1,505,336	1,892,922	1,147,779		3.49%	-0.08%	96.4	929,151	963,770	112	606,213	541,565	3.61%	3.37%	-0.11%	-0.04%
2005	3,351,007	1.96%	1,690,687	1,660,319	2,203,923	1,147,084		3.09%	-0.01%	97.2	1,086,503	1,117,419	111	604,183	542,900	3.18%	3.00%	-0.07%	0.05%
2010	3,661,835	1.79%	1,841,305	1,820,530	2,516,842	1,144,993		2.69%	-0.04%	97.7	1,243,834	1,273,007	111	601,126	543,866	2.74%	2.64%	-0.10%	0.04%
2015	3,975,404	1.66%	1,995,695	1,979,709	2,828,398	1,147,006		2.36%	0.04%	97.9	1,399,438	1,428,959	110	600,362	546,643	2.39%	2.34%	-0.03%	0.10%
2020	4,278,500	1.48%	2,144,802	2,133,698	3,126,097	1,152,403		2.02%	0.09%	98.0	1,547,042	1,579,054	109	601,671	550,731	2.03%	2.02%	0.04%	0.15%
2025	4,565,559	1.31%	2,288,477	2,277,081	3,403,910	1,161,649		1.72%	0.16%	97.8	1,683,286	1,720,623	109	605,190	556,458	1.70%	1.73%	0.12%	0.21%
2030	4,834,846	1.15%	2,418,725	2,416,120	3,659,812	1,175,034		1.46%	0.23%	97.6	1,807,585	1,852,226	108	611,140	563,893	1.44%	1.48%	0.20%	0.27%
2035	5,083,229	1.01%	2,538,069	2,545,159	3,891,613	1,191,616		1.24%	0.28%	97.3	1,919,103	1,972,509	108	618,965	572,650	1.20%	1.27%	0.25%	0.31%
2040	5,306,666	0.86%	2,644,563	2,662,102	4,096,885	1,209,781		1.03%	0.30%	97.0	2,016,826	2,080,058	108	627,736	582,044	1.00%	1.07%	0.28%	0.33%
2045	5,483,952	0.66%	2,727,814	2,756,137	4,260,041	1,223,911		0.78%	0.23%	96.6	2,093,334	2,166,706	108	634,480	589,430	0.75%	0.82%	0.21%	0.25%
2050	5,625,442	0.51%	2,793,319	2,832,122	4,389,900	1,235,542		0.60%	0.19%	96.3	2,153,329	2,236,570	107	639,989	595,552	0.57%	0.64%	0.17%	0.21%

POBLACION TOTAL, URBANA Y RURAL , POR SEXO

AÑOS		POBLACION TOTAL	POBLACION MASC	POBLACION FEM			POBLACION SEXO					
							URBANA			RURAL		
							Ind.Mas. Urb	Masculina	Femenina	Ind.Mas. Rur	Masculina	Femenina
	1970	1,524,445	778,163	746,281	725,459	798,986		353,306	372,152		424,857	374,128
1	1971	1,567,158	799,654	767,502	749,130	817,970		364,648	384,480		434,980	382,989
2	1972	1,611,068	821,738	789,327	773,573	837,405		376,354	397,217		445,345	392,059
3	1973	1,656,207	844,433	811,773	798,813	857,302		388,436	410,376		455,956	401,344
4	1974	1,702,612	867,754	834,857	824,877	877,671		400,905	423,971		466,821	410,850
5	1975	1,750,317	891,719	858,597	851,792	898,525		413,775	438,016		477,944	420,580
1	1976	1,794,299	913,699	880,599	877,119	917,111		363,605	383,422		487,831	429,278
2	1977	1,839,387	936,220	903,164	903,199	936,081		374,203	395,034		497,923	438,156
3	1978	1,885,607	959,297	926,308	930,054	955,443		385,111	406,997		508,224	447,218
4	1979	1,932,989	982,943	950,045	957,708	975,206		396,337	419,323		518,738	456,467
5	1980	1,981,562	1,007,171	974,390	986,184	995,378		477,701	508,482		529,469	465,908
1	1981	2,028,044	1,030,475	997,567	1,017,325	1,010,458		492,927	524,397		537,407	473,049
2	1982	2,075,616	1,054,318	1,021,296	1,049,449	1,025,766		508,637	540,810		545,465	480,300
3	1983	2,124,303	1,078,712	1,045,589	1,082,587	1,041,306		524,849	557,737		553,643	487,662
4	1984	2,174,133	1,103,671	1,070,460	1,116,772	1,057,081		541,577	575,193		561,944	495,137
5	1985	2,225,132	1,129,208	1,095,923	1,152,036	1,073,096		558,839	593,196		570,369	502,726
1	1986	2,272,839	1,152,846	1,119,991	1,185,977	1,086,551		575,348	610,628		577,332	509,218
2	1987	2,321,570	1,176,979	1,144,588	1,220,918	1,100,175		592,344	628,573		584,380	515,793
3	1988	2,371,345	1,201,617	1,169,724	1,256,889	1,113,969		609,843	647,045		591,514	522,453
4	1989	2,422,187	1,226,771	1,195,413	1,293,919	1,127,936		627,858	666,059		598,736	529,200
5	1990	2,474,119	1,252,452	1,221,666	1,332,040	1,142,079		646,406	685,633		606,045	536,033
1	1991	2,526,425	1,278,425	1,247,998	1,380,857	1,144,108		670,835	710,018		606,769	537,337
2	1992	2,579,837	1,304,936	1,274,899	1,431,463	1,146,141		696,187	735,270		607,494	538,644
3	1993	2,634,378	1,331,997	1,302,378	1,483,924	1,148,177		722,498	761,420		608,220	539,954
4	1994	2,690,072	1,359,620	1,330,451	1,538,308	1,150,217		749,802	788,501		608,947	541,267
5	1995	2,746,944	1,387,815	1,359,128	1,594,684	1,152,260		778,139	816,544		609,675	542,584
1	1996	2,803,332	1,416,144	1,387,187	1,650,313	1,151,362		806,238	844,070		608,981	542,380
2	1997	2,860,878	1,445,052	1,415,825	1,707,882	1,150,466		835,351	872,523		608,288	542,176
3	1998	2,919,605	1,474,550	1,445,054	1,767,460	1,149,569		865,515	901,936		607,595	541,972
4	1999	2,979,538	1,504,650	1,474,887	1,829,115	1,148,674		896,769	932,341		606,904	541,769
5	2000	3,040,701	1,535,364	1,505,336	1,892,922	1,147,779		929,151	963,770		606,213	541,565
1	2001	3,100,374	1,565,243	1,535,130	1,951,396	1,147,640		958,683	992,709		605,806	541,832
2	2002	3,161,217	1,595,703	1,565,513	2,011,677	1,147,501		989,155	1,022,517		605,400	542,099
3	2003	3,223,255	1,626,756	1,596,498	2,073,819	1,147,362		1,020,594	1,053,220		604,994	542,366
4	2004	3,286,510	1,658,414	1,628,096	2,137,882	1,147,223		1,053,033	1,084,845		604,588	542,633
5	2005	3,351,007	1,690,687	1,660,319	2,203,923	1,147,084		1,086,503	1,117,419		604,183	542,900
1	2006	3,410,987	1,719,791	1,691,192	2,263,228	1,146,665		1,116,290	1,146,936		603,570	543,093
2	2007	3,472,040	1,749,396	1,722,638	2,324,129	1,146,247		1,146,895	1,177,232		602,958	543,286
3	2008	3,534,186	1,779,511	1,754,669	2,386,669	1,145,829		1,178,338	1,208,328		602,347	543,479
4	2009	3,597,444	1,810,144	1,787,296	2,450,891	1,145,411		1,210,643	1,240,246		601,736	543,673
5	2010	3,661,835	1,841,305	1,820,530	2,516,842	1,144,993		1,243,834	1,273,007		601,126	543,866
1	2011	3,722,505	1,871,749	1,852,072	2,576,279	1,145,395		1,273,505	1,302,773		600,973	544,420
2	2012	3,784,180	1,903,085	1,884,426	2,637,119	1,145,798		1,303,884	1,333,234		600,820	544,975
3	2013	3,846,877	1,934,264	1,916,471	2,699,397	1,146,200		1,334,987	1,364,408		600,667	545,531
4	2014	3,910,612	1,965,087	1,948,188	2,763,145	1,146,603		1,366,833	1,396,310		600,515	546,086
5	2015	3,975,404	1,995,695	1,979,709	2,828,398	1,147,006		1,399,438	1,428,959		600,362	546,643
1	2016	4,034,255	2,026,044	2,010,999	2,885,579	1,148,083		1,427,787	1,457,791		600,624	547,458
2	2017	4,093,977	2,056,085	2,042,050	2,943,915	1,149,162		1,456,710	1,487,204		601,764	548,910
3	2018	4,154,583	2,085,950	2,072,833	3,003,431	1,150,241		1,486,219	1,517,211		603,897	551,014
4	2019	4,216,086	2,115,458	2,103,350	3,064,150	1,151,322		1,516,325	1,547,824		606,504	553,424

POBLACION TOTAL, URBANA Y RURAL , POR SEXO

								POBLACION SEXO					
AÑOS		POBLACION TOTAL	POBLACION MASC	POBLACION FEM			URBANA			RURAL			
					Ind.Mas. Urb	Masculina	Femenina	Ind.Mas. Rur	Masculina	Femenina			
5	2020	4,278,500	2,144,802	2,133,698	3,126,097	1,152,403		1,547,042	1,579,054		601,671	550,731	
1	2021	4,334,430	2,172,797	2,161,633	3,179,784	1,154,246		1,573,379	1,606,404		602,373	551,872	
2	2022	4,391,092	2,201,157	2,189,935	3,234,392	1,156,093		1,600,164	1,634,227		603,076	553,015	
3	2023	4,448,494	2,229,887	2,218,606	3,289,939	1,157,942		1,627,405	1,662,533		603,780	554,160	
4	2024	4,506,646	2,258,992	2,247,654	3,346,439	1,159,794		1,655,110	1,691,329		604,485	555,308	
5	2025	4,565,559	2,288,477	2,277,081	3,403,910	1,161,649		1,683,286	1,720,623		605,190	556,458	
1	2026	4,618,189	2,313,953	2,304,233	3,453,617	1,164,314		1,707,442	1,746,173		606,375	557,937	
2	2027	4,671,426	2,339,713	2,331,710	3,504,050	1,166,985		1,731,946	1,772,103		607,563	559,420	
3	2028	4,725,276	2,365,759	2,359,514	3,555,220	1,169,662		1,756,800	1,798,418		608,753	560,907	
4	2029	4,779,747	2,392,095	2,387,649	3,607,137	1,172,345		1,782,012	1,825,124		609,945	562,398	
5	2030	4,834,846	2,418,725	2,416,120	3,659,812	1,175,034		1,807,585	1,852,226		611,140	563,893	
1	2031	4,883,532	2,442,136	2,441,394	3,705,040	1,178,332		1,829,358	1,875,681		612,697	565,634	
2	2032	4,932,709	2,465,774	2,466,931	3,750,828	1,181,639		1,851,393	1,899,433		614,258	567,380	
3	2033	4,982,380	2,489,641	2,492,736	3,797,181	1,184,955		1,873,693	1,923,486		615,823	569,131	
4	2034	5,032,552	2,513,738	2,518,811	3,844,107	1,188,281		1,896,262	1,947,843		617,392	570,888	
5	2035	5,083,229	2,538,069	2,545,159	3,891,613	1,191,616		1,919,103	1,972,509		618,965	572,650	
1	2036	5,127,151	2,559,019	2,568,129	3,931,828	1,195,227		1,938,261	1,993,564		620,709	574,517	
2	2037	5,171,452	2,580,142	2,591,307	3,972,458	1,198,849		1,957,611	2,014,845		622,459	576,389	
3	2038	5,216,136	2,601,439	2,614,693	4,013,508	1,202,482		1,977,153	2,036,352		624,213	578,268	
4	2039	5,261,206	2,622,913	2,638,291	4,054,982	1,206,126		1,996,891	2,058,089		625,972	580,153	
5	2040	5,306,666	2,644,563	2,662,102	4,096,885	1,209,781		2,016,826	2,080,058		627,736	582,044	

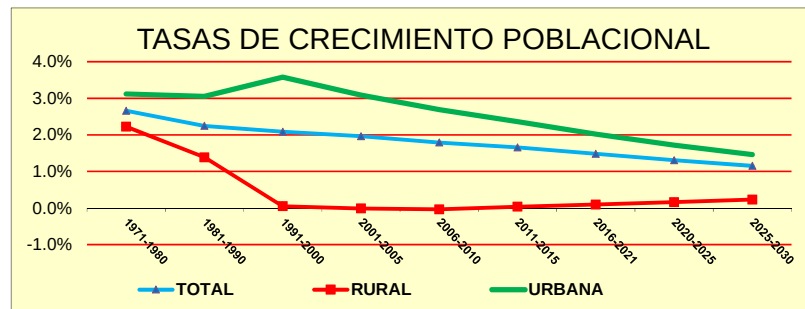
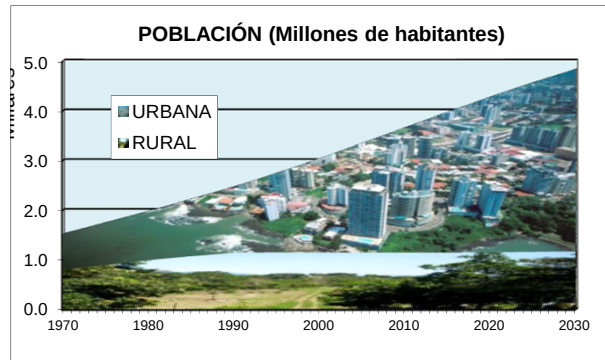
CUADRO No. 2
TASAS DE CRECIMIENTO DE POBLACION 1970-2030

AÑOS	POBTOT	RURAL	URBANA	POBTOT	RURAL	URBANA
	Población total	Población rural	Población urbana	Población total	Población rural	Población urbana
	Miles de habitantes	Miles de habitantes	Miles de habitantes	%	%	%
	Fórmula	Fórmula	Fórmula			
1970	1,524.4	799.0	725.5			
1971	1,567.1	818.0	749.1	2.8%	2.4%	3.3%
1972	1,611.0	837.4	773.6	2.8%	2.4%	3.3%
1973	1,656.1	857.3	798.8	2.8%	2.4%	3.3%
1974	1,702.5	877.7	824.9	2.8%	2.4%	3.3%
1975	1,750.3	898.5	851.8	2.8%	2.4%	3.3%
1976	1,794.2	917.1	877.1	2.5%	2.1%	3.0%
1977	1,839.3	936.1	903.2	2.5%	2.1%	3.0%
1978	1,885.5	955.4	930.1	2.5%	2.1%	3.0%
1979	1,932.9	975.2	957.7	2.5%	2.1%	3.0%
1980	1,981.6	995.4	986.2	2.5%	2.1%	3.0%
1981	2,027.8	1,010.5	1,017.3	2.3%	1.5%	3.2%
1982	2,075.2	1,025.8	1,049.4	2.3%	1.5%	3.2%
1983	2,123.9	1,041.3	1,082.6	2.3%	1.5%	3.2%
1984	2,173.9	1,057.1	1,116.8	2.4%	1.5%	3.2%
1985	2,225.1	1,073.1	1,152.0	2.4%	1.5%	3.2%
1986	2,272.5	1,086.6	1,186.0	2.1%	1.3%	2.9%
1987	2,321.1	1,100.2	1,220.9	2.1%	1.3%	2.9%
1988	2,370.9	1,114.0	1,256.9	2.1%	1.3%	2.9%
1989	2,421.9	1,127.9	1,293.9	2.2%	1.3%	2.9%
1990	2,474.1	1,142.1	1,332.0	2.2%	1.3%	2.9%
1991	2,525.0	1,144.1	1,380.9	2.1%	0.2%	3.7%
1992	2,577.6	1,146.1	1,431.5	2.1%	0.2%	3.7%
1993	2,632.1	1,148.2	1,483.9	2.1%	0.2%	3.7%
1994	2,688.5	1,150.2	1,538.3	2.1%	0.2%	3.7%
1995	2,746.9	1,152.3	1,594.7	2.2%	0.2%	3.7%
1996	2,801.7	1,151.4	1,650.3	2.0%	-0.1%	3.5%
1997	2,858.3	1,150.5	1,707.9	2.0%	-0.1%	3.5%
1998	2,917.0	1,149.6	1,767.5	2.1%	-0.1%	3.5%
1999	2,977.8	1,148.7	1,829.1	2.1%	-0.1%	3.5%
2000	3,040.7	1,147.8	1,892.9	2.1%	-0.1%	3.5%
2001	3,099.0	1,147.6	1,951.4	1.9%	0.0%	3.1%
2002	3,159.2	1,147.5	2,011.7	1.9%	0.0%	3.1%
2003	3,221.2	1,147.4	2,073.8	2.0%	0.0%	3.1%
2004	3,285.1	1,147.2	2,137.9	2.0%	0.0%	3.1%
2005	3,351.0	1,147.1	2,203.9	2.0%	0.0%	3.1%
2006	3,409.9	1,146.7	2,263.2	1.8%	0.0%	2.7%
2007	3,470.4	1,146.2	2,324.1	1.8%	0.0%	2.7%
2008	3,532.5	1,145.8	2,386.7	1.8%	0.0%	2.7%
2009	3,596.3	1,145.4	2,450.9	1.8%	0.0%	2.7%
2010	3,661.8	1,145.0	2,516.8	1.8%	0.0%	2.7%
2011	3,721.7	1,145.4	2,576.3	1.6%	0.0%	2.4%
2012	3,782.9	1,145.8	2,637.1	1.6%	0.0%	2.4%
2013	3,845.6	1,146.2	2,699.4	1.7%	0.0%	2.4%
2014	3,909.7	1,146.6	2,763.1	1.7%	0.0%	2.4%
2015	3,975.4	1,147.0	2,828.4	1.7%	0.0%	2.4%
2016	4,033.7	1,148.1	2,885.6	1.5%	0.1%	2.0%
2017	4,093.1	1,149.2	2,943.9	1.5%	0.1%	2.0%
2018	4,153.7	1,150.2	3,003.4	1.5%	0.1%	2.0%
2019	4,215.5	1,151.3	3,064.2	1.5%	0.1%	2.0%
2020	4,278.5	1,152.4	3,126.1	1.5%	0.1%	2.0%
2021	4,334.0	1,154.2	3,179.8	1.3%	0.2%	1.7%
2022	4,390.5	1,156.1	3,234.4	1.3%	0.2%	1.7%
2023	4,447.9	1,157.9	3,289.9	1.3%	0.2%	1.7%
2024	4,506.2	1,159.8	3,346.4	1.3%	0.2%	1.7%
2025	4,565.6	1,161.6	3,403.9	1.3%	0.2%	1.7%
2026	4,617.9	1,164.3	3,453.6	1.1%	0.2%	1.5%
2027	4,671.0	1,167.0	3,504.1	1.1%	0.2%	1.5%
2028	4,724.9	1,169.7	3,555.2	1.2%	0.2%	1.5%
2029	4,779.5	1,172.3	3,607.1	1.2%	0.2%	1.5%
2030	4,834.8	1,175.0	3,659.8	1.2%	0.2%	1.5%

	TOTAL	RURAL	URBANA
promedio			
1971-1980	2.66%	2.22%	3.12%
1981-1990	2.24%	1.38%	3.05%
1991-2000	2.08%	0.05%	3.58%
2001-2005	1.96%	-0.01%	3.09%
2006-2010	1.79%	-0.04%	2.69%
2011-2015	1.66%	0.04%	2.36%
2016-2021	1.48%	0.09%	2.02%
2020-2025	1.31%	0.16%	1.72%
2025-2030	1.15%	0.23%	1.46%

TASAS ANUALES ACUMULATIVAS, SEGÚN TIPOS DE POBLACION

PERIODOS	POB TOTAL	RURAL	URBANA
2010-2015	1.66%	0.04%	2.36%
2016-2019	1.48%	0.09%	2.02%
2020-2024	1.34%	0.15%	1.78%
2025-2030	1.18%	0.22%	1.50%
2020-2030	1.25%	0.19%	1.63%



0.01806201

924.1
15 1.27101642

VARIACION DE CRECIMIENTO DE LA POBLACION
 TOTAL POR AÑO CALENDARIO,
 SEGÚN CUATRO HIPOTESIS DE CRECIMIENTO

PERIODO 2010- 2030				
AÑO	HIPOTESIS CONSTANTE	HIPOTESIS ALTA	HIPOTESIS MEDIA RECOMENDADA	HIPOTESIS BAJA
2008				
2009	1.753%	1.722%	1.620%	1.291%
2010	1.732%	2.293%	1.569%	-0.912%
2011	1.711%	1.672%	1.518%	1.182%
2012	1.691%	1.648%	1.475%	1.128%
2013	1.671%	1.625%	1.436%	1.084%
2014	1.653%	1.604%	1.401%	1.049%
2015	1.637%	1.583%	1.370%	1.023%
2016	1.622%	1.565%	1.342%	1.002%
2017	1.606%	1.548%	1.313%	0.978%
2018	1.590%	1.527%	1.282%	0.946%
2019	1.583%	1.504%	1.247%	0.907%
2020	1.542%	1.478%	1.210%	0.861%
2021	1.533%	1.454%	1.174%	0.819%
2022	1.515%	1.431%	1.142%	0.782%
2023	1.499%	1.410%	1.110%	0.744%
2024	1.485%	1.389%	1.079%	0.703%
2025	1.473%	1.368%	1.049%	0.659%
2026	1.461%	1.351%	1.022%	0.618%
2027	1.449%	1.335%	1.010%	0.580%
2028	1.436%	1.315%	0.967%	0.540%
2029	1.423%	1.290%	0.936%	0.499%
2030	1.410%	1.262%	0.903%	0.456%
TASA	1.587%	1.521%	1.277%	0.924%
TASA(2014-2019)	1.692%	1.768%	1.480%	0.706%
TASA(2020-2024)	1.515%	1.432%	1.143%	0.782%
TASA(2025-2030)	1.442%	1.320%	0.981%	0.559%

TASAS ANUALES ACUMULATIVAS, SEGÚN
 ESCENARIOS

PERIODOS	MODERADO	OPTIMISTA	PESIMISTA
2007-2010	1.80%	1.80%	1.80%
2011-2015	1.44%	1.63%	1.09%
2016-2019	1.30%	1.54%	0.96%
2020-2025	1.13%	1.42%	0.76%
2026-2030	0.97%	1.31%	0.54%
2015-2030	1.12%	1.42%	0.74%

Nota: INEC ESTIMACIONES Y PROYECCIONES DE LA POBLACION
 TOTAL DEL PAIS , POR SEXO Y EDAD :AÑOS 1950 -2050
 SITUACION DEMOGRAFICA, SECCION 11, BOLETIN No. 7
 Noviembre de 2002

CUADRO No. 3
INFLACIÓN, 1970-2015

INFLACIÓN, 1970-2015
IPC EMPALMADO, AÑOS 1987, 2002, 2013

AÑOS	INDICE DE PRECIOS DE PANAMA - IPCPAN (*)					INFPAN
	SNE - COPE 1970 -2002 1987 = 100 Fórmula	IPC Anual de Panama	IPC Empalmado	IPC Anual de Panama	IPC Enpalmado	Inflación de Panamá % COPE 1971-2002
		2002 = 100		2003 = 100		
		INDICE	EMPALME	INDICE	EMPALME	
		1970-2003	2002 - 2014	1970-2014	2013 - 2015	
1970	42.9		37.1		25.0	
1971	43.7		37.8		25.5	1.9%
1972	46.1		39.9		26.9	5.5%
1973	49.2		42.6		28.7	6.7%
1974	57.6		49.9		33.6	17.1%
1975	60.7		52.6		35.4	5.4%
1976	63.1		54.6		36.8	4.0%
1977	66.0		57.1		38.5	4.6%
1978	68.8		59.6		40.2	4.2%
1979	74.3		64.3		43.4	8.0%
1980	84.5		73.2		49.3	13.7%
1981	90.7		78.5		53.0	7.3%
1982	94.5		81.8		55.2	4.2%
1983	96.5		83.5		56.3	2.1%
1984	98.1		84.9		57.3	1.7%
1985	99.1		85.8		57.9	1.0%
1986	99.0		85.7		57.8	-0.1%
1987	100.0		86.6		58.4	1.0%
1988	100.6		87.1		58.7	0.6%
1989	100.7		87.2		58.8	0.1%
1990	101.5		87.9		59.3	0.8%
1991	102.8		89.0		60.0	1.3%
1992	104.6		90.6		61.1	1.8%
1993	105.1		91.0		61.4	0.5%
1994	106.5		92.2		62.2	1.3%
1995	107.5		93.1		62.8	0.9%
1996	108.9		94.3		63.6	1.3%
1997	110.3		95.5		64.4	1.3%
1998	110.9		96.0		64.7	0.5%
1999	112.3		97.2		65.6	1.3%
2000	114.0		98.7		66.6	1.5%
2001	114.3		99.0		66.7	0.3%
2002	115.5	100.0	100.0		67.4	1.0%
2003	117.1	100.0	100.0		67.4	0.0%
2004		100.5	100.5		67.8	0.5%
2005		103.8	103.8		70.0	3.3%
2006		106.2	106.2		71.6	2.3%
2007		110.7	110.7		74.6	4.2%
2008		120.4	120.4		81.2	8.8%
2009		123.0	123.0		82.9	2.2%
2010		127.6	127.6		86.0	3.7%
2011		135.1	135.1		91.1	5.9%
2012		142.6	142.6		96.2	5.6%
2013		148.3	148.3	100.0	100.0	4.0%
2014		152.2	152.2	102.7	102.7	2.7%
2015				103.0	103.0	0.3%

PERIODO				TASA PROMEDIO
ANTES DE LA RESTRUCTURACION	1970-1998			3.4%
PRE - RESTRUCTURACION	1990-1999			1.1%
RESTRUCTURACION	1999-2014			2.8%
ANALISIS DE RESTRUCTURACION	1990-2007			1.3%
PRIMERA ETAP RESTRUCTURACION	1999-2007			1.3%
SEGUNDA ETAPA RESTRUCTURACION	2008-2015			4.1%

AÑOS	2010	2011	2012	2013	2014
GLOBAL	127.6	135.1 5.9%	142.6 5.6%	148.3 4.0%	152.2 2.6%
ALIMENTOS Y BEBIDAS	143.6	152 5.8%	164.1 8.0%	173.3 5.6%	178.9 3.2%
TRANSPORTE	140.4	157.6 12.3%	165.7 5.1%	168.3 1.6%	170.6 1.4%

CUADRO No. 4
PRONÓSTICO DEL PIB 2016, TENDENCIAL HISTÓRICO- (Millones de B/. 2007)

GRAN DIVISIÓN ECONÓMICA	BASE HISTÓRICA REAL									PREESTIMADO	E1
	DATOS PRELIMINARES COMPLETOS										
	2007	2008	2009	2010	2011	2012	2013	2014	2015		
											TENDENCIAL 2007-2015
1. Agricultura, silvicultura y caza	815.0	835.3	727.8	728.5	761.8	778.6	790.4	800.1	803.3		784.2
2. Pesca	259.6	267.7	242.8	182.9	152.7	144.8	165.3	232.3	223.3		170.5
3. Explotación de canteras	147.9	189.5	203.0	274.6	335.2	420.2	515.2	602.8	645.0		703.6
Subtotal Sector Primario	1,222.6	1,292.5	1,173.5	1,186.0	1,249.7	1,343.6	1,470.9	1,635.3	1,670.6		1,658.3
4. Industria Manufacturera	1,546.0	1,607.2	1,603.3	1,673.2	1,773.1	1,913.8	1,939.1	1,956.7	1,930.5		2,063.0
5. Electricidad, gas y agua	607.3	696.3	773.3	800.9	941.8	1,047.9	1,145.4	1,199.0	1,362.4		1,412.7
6. Construcción	1,401.2	1,837.4	1,912.2	2,074.7	2,545.8	3,306.6	4,333.6	4,940.3	5,276.9		5,643.7
7. Transporte, almacenamiento y comunicaciones	3,553.5	3,818.7	3,681.9	3,850.1	4,374.9	4,558.6	4,632.2	4,887.1	5,115.0		5,279.7
Subtotal Sector Secundario y de Infraestructura	7,108.0	7,959.5	7,970.7	8,399.0	9,635.6	10,826.8	12,050.3	12,983.2	13,684.8		14,399.1
8. Comercio al por mayor y al por menor	3,778.8	4,056.5	4,232.6	4,532.4	5,373.1	5,921.6	5,937.5	6,004.8	6,299.4		6,853.5
9. Hoteles y Restaurantes	616.2	673.4	678.2	723.7	833.9	907.6	918.4	922.4	951.2		1,032.1
10. Intermediación Financiera	1,615.7	1,794.5	1,930.7	1,914.6	2,053.8	2,249.4	2,430.4	2,505.2	2,766.1		2,812.4
11. Actividades Inmobiliarias, empresariales y de alquiler	1,586.9	1,724.2	1,794.6	2,044.4	2,236.3	2,416.4	2,623.6	2,885.9	3,120.5		3,241.1
12. Enseñanza Privada	207.0	217.0	245.2	275.0	288.2	317.9	325.3	339.2	359.1		384.2
Menos: Servicio de intermediación financiera	-501.7	-543.1	-567.5	-568.3	-624.0	-702.9	-740.0	-749.9	-802.7		-836.4
Subtotal Sector Terciario (comercial y financiero)	7,302.9	7,922.4	8,313.8	8,921.8	10,161.3	11,110.0	11,495.2	11,907.7	12,693.6		13,486.8
13. Actividades de servicio sociales y de salud privada	278.8	287.0	295.2	326.1	345.8	364.9	414.9	424.8	474.0		479.5
14. Otras actividades comunitarias, sociales y personales	458.8	468.0	478.9	496.2	545.5	571.2	667.3	716.7	742.8		766.2
15. Productores de servicios gubernamentales	1,866.5	1,950.1	1,999.7	2,015.2	2,084.3	2,138.2	2,083.5	2,149.8	2,314.1		2,290.2
Construcción	162.5	186.6	196.0	212.2	247.2	274.8	361.0	411.5	440.0		458.3
Actividades Inmobiliarias, empresariales y de alquiler	1,530.8	1,591.0	1,624.3	1,679.6	1,742.7	1,762.1	1,876.7	2,064.3	2,132.2		2,145.9
Hogares privados con servicio doméstico	182.6	184.5	169.4	163.6	170.1	176.8	168.1	174.5	173.6		169.1
16. Productores de servicios domésticos	1,875.9	1,962.1	1,989.6	2,055.5	2,160.0	2,213.8	2,405.7	2,650.3	2,745.8		2,773.3
Subtotal Sector Terciario (oficial y personal)	4,480.0	4,667.1	4,763.5	4,892.9	5,135.6	5,288.0	5,571.4	5,941.6	6,276.7		6,309.2
Más: Derechos de importación e ITBM											
Más: ITBM que graba las compras de los hogares											
Más: Otros impuestos a los productores											
Menos: Subvenciones a los productos											
Subtotal Impuestos y transferencias	844.5	921.3	887.4	1,026.3	1,122.7	1,249.6	1,333.1	1,440.6	1,424.0		1,554.7
Producto Interno Bruto Real	20,958.0	22,762.8	23,126.7	24,460.5	27,348.8	29,873.0	31,851.9	33,780.0	35,731.6		37,408.0
											26,354
TASA DE CRECIMIENTO ANUAL		8.61%	1.60%	5.77%	11.81%	9.23%	6.62%	6.05%	5.78%		4.6%
	20,958.0	22,762.8	23,108.9	24,426.0	27,305.0	29,818.1	31,920.9	33,908.4	35,749.7		

FUENTE: Dirección de Estadísticas y Censo, Panamá en Cifras 2002-06

Nuevos Estimados de Expertos publicados: LA PRENSA y Capital Financiero

	Desde	Hasta	Promedio
MEF- Gobierno	6.0	7.0	6.30
FMI	6.4	6.2	6.30
World Bank (Banco Mundial)	6.8	6.8	6.20
Banco Interamericano de Desarrollo (BID)		7.0	6.00
CEPAL	6.0	7.0	5.80
INDESA (Marcos Fernandez G. Chapman)	6.0	7.0	6.50
Panama Economic Insight			6.00
Deloitte	6.0	7.0	5.10
Moody's			
Fitch Ratings			
Latin Consulting			
JP Morgan's		6.5	6.50
Standart & Poor's			
BBVA			
ScotiaBank			
CAMARA DE COMERCIO DE PANAMA	7.0	7.0	7.00
APEDE			
Sindicato de Industriales de Panamá (SIP)			
CAPAC			
Colegio de Economistas		7.0	7.00
Otros Expeertos (N. Arditio barietta)			
Adolfo Quintero		6.5	6.50
Rolando Gordon			
INTRACORP			
The Economist Magazine			
IMAE (Dato original CGR)			
IMAE (Ajuste desfase histórico 3 últimos años)			
PIB IMAE (Ajuste desfase histórico 6 últimos años)			
Promedio simple	6.31	6.82	6.27
Promedio AJUSTADO (Sin Extremos)	6.24	6.87	6.31
MAXIMO			7.00
MINIMO			5.10

9.6%

AJUSTES A LAS ESTIMACIONES AÑO 2014

AJUSTADO POR ESTRUCTURAS BASE E2									
E2		E3		E4		E5			
PROMEDIO DE CAMBIO DE Ultimos 3 Años 2011-13		PROMEDIO DE CAMBIO DE Ultimos 2 años 2012-13		AJUSTADO Estructuras Base E2		AJUSTADO Estructuras Base E2 y Promedios Pronosticos		al 30/Nov/2014	
-0.8%	811.7	2.7%	809.8	2.5%	811.7	2.7%	721.8	-10.1%	
3.1%	256.4	55.1%	257.8	56.0%	256.4	55.1%	228.0	2.6%	
36.6%	744.0	44.4%	721.7	40.1%	744.0	44.4%	661.6	2.6%	
12.7%	1,812.2	23.2%	1,789	21.6%	1,812	23.2%	1,611	9.6%	
6.4%	1,936.1	-0.2%	1,926.2	-0.7%	1,936.1	-0.2%	1,721.7	-10.8%	
23.3%	1,487.0	29.8%	1,485.8	29.7%	1,487.0	29.8%	1,322.3	-2.9%	
30.2%	6,166.6	42.3%	5,822.9	34.4%	6,166.6	42.3%	5,483.7	3.9%	
14.0%	5,315.2	14.7%	5,375.0	16.0%	5,315.2	14.7%	4,726.6	-7.6%	
52.5%	14,905	23.7%	14,610	21.2%	14,905	23.7%	13,254	10.0%	
15.4%	6,430.6	8.3%	6,488.5	9.3%	6,430.6	8.3%	5,718.5	-9.2%	
12.4%	966.2	5.2%	968.0	5.4%	966.2	5.2%	859.2	-9.7%	
15.7%	2,963.5	21.9%	2,950.9	21.4%	2,963.5	21.9%	2,635.3	-4.7%	
23.5%	3,398.2	29.5%	3,403.2	29.7%	3,398.2	29.5%	3,021.8	-3.2%	
18.1%	374.0	15.0%	377.3	16.0%	374.0	15.0%	332.6	-7.4%	
13.0%	-839.0	13.4%	-836.0	13.0%	-839.0	13.4%	746.1	-7.0%	
38.3%	13,293	15.6%	13,352	16.2%	13,293	15.6%	11,821	2.8%	
32.1%	517.2	24.6%	506.6	22.1%	517.2	24.6%	459.9	-3.0%	
36.4%	810.8	21.5%	783.7	17.5%	810.8	21.5%	721.0	-2.9%	
16.9%	2,375.9	14.0%	2,438.8	17.1%	2,375.9	14.0%	2,112.8	-8.7%	
38.8%	514.7	42.6%	485.8	34.6%	514.7	42.6%	457.7	4.0%	
42.2%	2,272.1	21.1%	2,272.7	21.1%	2,272.1	21.1%	2,020.5	-5.2%	
10.6%	172.5	2.7%	176.4	5.0%	172.5	2.7%	153.4	-11.6%	
40.2%	2,959.3	23.0%	2,934.9	22.0%	2,959.3	23.0%	2,631.6	9.4%	
31.5%	6,663	19.6%	6,664	19.6%	6,663	19.6%	5,925	6.4%	
-	-	-	#iDIV/0!	-	#iDIV/0!	-	-	#iDIV/0!	
-	-	-	#iDIV/0!	-	#iDIV/0!	-	-	#iDIV/0!	
-	-	-	#iDIV/0!	-	#iDIV/0!	-	-	#iDIV/0!	
16.6%	1,487.4	0.0	1,471.8	10.4%	1,487.4	11.6%	0.0	-100.0%	
4.6%	38,161	37,887	38,161.0	38,161.0	38,161.0	33,935.1	32,612.4		
-0.299713117	6.75%	5.98%	6.75%	6.75%	6.31%				

13.7%

12.8%

13.7%

6.3%

0.4%

<--- Tasa promedio de consultas.

<--- Diferencia

1.1%

-5.11%

[illegible]

CUADRO No. 5
PRE-ESTIMACION DEL PIB DEL AÑO 2015, POR ACTIVIDAD ECONOMICA, DIVISION Y ESCENARIO (2007=100)

PIB PRE -ESTIMADO AL 2015
SEGÚN ACTIVIDAD ECONOMICA Y DIVISION ECONOMICA POR TRIMESTRE
POR PARTICIPACION ESTRUCTURAL Y EFECTO CICLICO TRIMESTRAL
AL TERCER TRIMESTRE DE 2015
(En millones de dólares de 1996)

GRAN DIVISION ECONOMICA	PIB 2014 (pE)	PIB I TRIM 2015 (E)	PIB II TRIM 2015 (E)	PIB III TRIM 2015 (E)	PIB ACUMULADO III TRIM 2015 (E)	TASA DE CRECIMIENTO ACUMULADA III TRIM	ESTRUCTURA III TRIM AÑO 2015 (%)	FACTOR DE AJUSTE CRECIMIENTO AL IV TRIM	TASA AJUSTADA PROMEDIO	TASA DE AJUSTE INDIVIDUAL ULTIMOS TRES	PIB CRECIMIENTO ESPERADO AL AÑO 2015 (%)	FACTOR MULTIPLE PROMEDIO (*)	PIB ESTRUCTURAL AÑO 2015 (%)	ESTRUCTURA AÑO 2015 (%)	FACTOR MULTIPLE AJUSTADO (**)	PIB PRE EST AÑO 2015 POR FACTOR MULT	TASA DE CRECIMIENTO 2015 ESTIMADA	ESTRUCTURA AÑO 2015 (%)
1. Agricultura, silvicultura y c	800.1	182.0	192.8	234.3	609.1	0.54%	2.29%	76.61%	0.42%	0.51%	804.2	1.31	797.0	2.22%	1.32	806.4	0.78%	2.25%
2. Pesca	232.3	38.1	42.0	78.8	158.9	-7.02%	0.60%	60.97%	-4.28%	-4.28%	222.4	1.39	221.4	0.62%	1.48	235.3	1.28%	0.66%
3. Explotación de minas y c	602.8	166.7	146.2	162.1	475.0	6.29%	1.79%	98.26%	6.18%	6.18%	640.0	1.35	639.2	1.78%	1.35	641.1	6.36%	1.79%
Subtotal Sector Primario	1,635.2	386.8	381.0	475.2	1,243.0	1.59%		102.81%			1,666.6	1.33	1,657.5	4.61%	1.35	1,682.7	2.91%	4.70%
4. Industria Manufacturera	1,956.7	481.1	492.9	507.7	1,481.7	-0.79%	5.58%	96.06%	-0.76%	-0.74%	1,942.2	1.32	1,957.2	5.44%	1.32	1,957.4	0.03%	5.47%
5. Electricidad, gas y agua	1,199.0	293.3	311.4	321.1	925.8	14.16%	3.48%	254.97%	36.09%	13.31%	1,358.5	1.37	1,270.8	3.54%	1.41	1,307.5	9.05%	3.65%
6. Construcción	4,940.3	1,356.1	1,190.7	1,380.3	3,927.1	6.09%	14.78%	95.78%	5.84%	5.73%	5,223.3	1.34	5,259.0	14.63%	1.34	5,251.7	6.30%	14.67%
7. Transporte, almacenamie	4,887.1	1,319.2	1,298.3	1,317.0	3,934.5	5.40%	14.81%	151.35%	8.17%	5.07%	5,135.1	1.35	5,314.2	14.78%	1.32	5,207.3	6.55%	14.54%
Subtotal Sector Secundario	12,983.1	3,449.7	3,293.3	3,526.1	10,269.1	5.44%		92.16%			13,659.1	1.34	13,801.2	38.39%	1.34	13,723.9	5.71%	38.33%
8. Comercio al por mayor y al	6,004.8	1,425.8	1,519.2	1,569.4	4,514.4	4.55%	16.99%	87.83%	3.99%	4.27%	6,261.4	1.39	6,257.9	17.41%	1.38	6,223.9	3.65%	17.38%
9. Hoteles y Restaurantes	922.4	253.5	223.5	222.9	699.9	3.66%	2.63%	6.77%	0.25%	3.44%	954.1	1.38	965.1	2.68%	1.37	959.5	4.02%	2.68%
10. Intermediación Financiera	2,505.2	675.6	664.0	667.5	2,007.1	10.74%	7.55%	88.26%	9.48%	10.09%	2,758.0	1.37	2,740.4	7.62%	1.37	2,755.6	9.99%	7.70%
11. Actividades Inmobiliarias	2,885.9	695.6	914.7	748.4	2,358.7	7.14%	8.88%	99.22%	7.09%	6.71%	3,079.6	1.34	3,171.3	8.82%	1.32	3,114.3	7.91%	8.70%
12. Enseñanza Privada	339.2	89.7	89.7	89.8	269.2	6.24%	1.01%	103.35%	6.44%	5.86%	359.1	1.34	359.5	1.00%	1.34	360.4	6.26%	1.01%
Menos: Servicio de intermed	-749.9	-180.6	-187.4	-206.9	-574.9	3.98%	-2.16%	75.29%	3.00%	3.74%	-777.9	1.36	-781.0	-2.17%	1.36	-782.1	4.30%	-2.18%
Subtotal Sector Terciario	11,907.6	2,959.6	3,223.7	3,091.1	9,274.4	6.51%		103.16%			12,634.3	1.37	12,713.2	35.36%	1.36	12,631.5	6.08%	35.28%
13. Actividades de servicio s	424.8	106.3	113.3	134.2	353.8	10.80%	1.33%	116.89%	12.63%	10.16%	467.9	1.34	473.2	1.32%	1.33	471.6	11.02%	1.32%
14. Otras actividades comu	716.7	198.2	193.0	184.5	575.7	4.31%	2.17%	96.12%	4.14%	4.05%	745.8	1.32	762.5	2.12%	1.31	757.0	5.63%	2.11%
15. Productores de servicios	2,153.4	561.9	575.5	589.7	1,727.1	7.82%	6.50%	123.24%	9.63%	7.35%	2,311.6	1.34	2,321.0	6.46%	1.35	2,333.4	8.36%	6.52%
Construcción	411.5	108.7	95.4	127.6	331.7	6.21%	1.25%	97.18%	6.04%	5.84%	435.5	1.33	442.6	1.23%	1.34	445.4	8.24%	1.24%
Actividades Inmobiliarias,	2,064.4	523.0	525.9	533.9	1,582.8	3.32%	5.96%	97.25%	3.22%	3.12%	2,128.7	1.34	2,123.8	5.91%	1.34	2,122.9	2.83%	5.93%
Hogares privados con ser	174.5	45.1	43.9	43.9	132.9	0.68%	0.50%	89.42%	0.61%	0.64%	175.6	1.33	177.2	0.49%	1.33	177.4	1.65%	0.50%
16. Productores de servicios	2,650.4	676.8	665.2	705.4	2,047.4	3.60%	7.70%	102.78%	3.70%		2,739.9	1.34	2,743.7	7.63%	1.34	2,745.6	3.59%	7.67%
Subtotal Sector Terciario	5,945.3	1,543.2	1,547.0	1,613.8	4,704.0	5.72%	17.70%	97.95%			6,265.2	1.34	6,300.4	17.53%	1.34	6,307.6	6.09%	17.62%
Más: Derechos de importanc																		
Más: ITBM que graba las co																		
Más: Otros impuestos a los																		
Menos: Subvenciones a los																		
Subtotal Impuestos y tr	1,440.6	350.9	371.4	360.0	1,082.3	-2.32%	4.07%	97.20%	-2.25%	-2.18%	1,409.2	1.36	1,477.1	4.11%	1.35	1,462.1	1.49%	4.08%
Producto Interno Bruto Re	33,780.0	8,581.1	8,725.4	8,954.7	26,261.2	5.83%	100.0%	97.5%			35,634.4	1.35	35,949.5	100.00%	1.34	35,807.8	6.00%	100.00%

TASA DE VARIACION 6.06% 5.83% 5.60% 5.83% 5.49% 6.42% 6.00%

COMPARATIVO DE TASAS DE CRECIMIENTO DEL PIB
SERIES INDEPENDIENTES 1970, 1982, 1996, 2007
AÑOS BASES 1982, 1996, 2003, 2007

DATOS	AÑOS	SERIES INDIVIDUALES					SERIES HISTÓRICAS											
		CGRP (INEC)					PREEICA		ETESA									
		BASE:1970	BASE:1982	BASE:1996 (R)	BASE: 2007	Nueva BASE: 2007	BASE:1970	BASE:1982	BASE:1982MOD	BASE:1996MOD	BASE:2007							
		Serie Constante Rev. S=1970 Años 1970-81	Serie Constante Rev. S=1982 Años 1980-95	Serie Constante Rev. S=1996 Años 1996-06	Resultados Preliminares Cambio de Base=2007	Volumenes Encadenados Cambio de Base=2007	DATASER.CONST 70	PROY PREEICA CONST 82	CONST 82 PREEICA MOD 70-01	PIB CONST BASE 1996	Resultados Preliminares Cambio de Base PRE 2007	Volumenes encadenados Cambio de Base 2007						
1	1970	1,021.2					1,016.3		2,725.2		2,421.0		3,541.4	4,379.1	4,345.2			
2	1971	1,119.4	9.6%				1,113.9	9.6%	2,977.7	9.3%	2,654.3	9.6%	3,883.0	9.6%	4,801.5	9.6%	4,764.3	9.6%
3	1972	1,170.7	4.6%				1,165.3	4.6%	3,153.1	5.9%	2,775.2	4.6%	4,059.8	4.6%	5,020.2	4.6%	4,981.3	4.6%
4	1973	1,233.5	5.4%				1,228.3	5.4%	3,323.6	5.4%	2,924.1	5.4%	4,277.6	5.4%	5,289.5	5.4%	5,248.5	5.4%
5	1974	1,263.7	2.4%				1,258.1	2.4%	3,459.6	4.1%	2,995.7	2.4%	4,382.3	2.4%	5,419.0	2.4%	5,377.0	2.4%
6	1975	1,285.7	1.7%				1,278.2	1.6%	3,541.6	2.4%	3,047.8	1.7%	4,458.6	1.7%	5,513.3	1.7%	5,470.6	1.7%
7	1976	1,307.1	1.7%				1,299.1	1.6%	3,612.6	2.0%	3,098.6	1.7%	4,532.8	1.7%	5,605.1	1.7%	5,561.6	1.7%
8	1977	1,321.4	1.1%				1,313.6	1.1%	3,692.9	2.2%	3,132.5	1.1%	4,582.4	1.1%	5,666.4	1.1%	5,622.5	1.1%
9	1978	1,450.8	9.8%				1,442.4	9.8%	3,980.3	7.8%	3,439.3	9.8%	5,031.2	9.8%	6,221.3	9.8%	6,173.1	9.8%
10	1979	1,516.3	4.5%				1,507.1	4.5%	4,205.9	5.7%	3,595.1	4.5%	5,258.3	4.5%	6,502.2	4.5%	6,451.8	4.5%
11	1980	1,714.7	13.1%	4,141.5	15.2%		1,736.4	15.2%	4,141.5	-1.5%	4,141.5	15.2%	6,058.7	15.2%	7,490.5	15.2%	7,432.5	15.2%
12	1981	1,780.1	3.8%	4,522.8	9.2%			9.4%	4,522.8	9.2%	4,522.8	9.2%	6,616.6	9.2%	8,180.1	9.2%	8,116.7	9.2%
13	1982			4,764.7	5.3%			4.2%	4,764.7	5.3%	4,764.7	5.3%	6,970.4	5.3%	8,617.7	5.3%	8,550.9	5.3%
14	1983			4,550.7	-4.5%			5.5%	4,550.7	-4.5%	4,550.7	-4.5%	6,657.4	-4.5%	8,230.6	-4.5%	8,166.8	-4.5%
15	1984			4,674.0	2.7%			2.9%	4,674.0	2.7%	4,674.0	2.7%	6,837.7	2.7%	8,453.6	2.7%	8,388.1	2.7%
16	1985			4,905.0	4.9%			1.8%	4,905.0	4.9%	4,905.0	4.9%	7,175.7	4.9%	8,871.4	4.9%	8,802.7	4.9%
17	1986			5,080.0	3.6%				5,080.0	3.6%	5,080.0	3.6%	7,431.7	3.6%	9,187.9	3.6%	9,116.7	3.6%
18	1987			4,988.1	-1.8%				4,988.1	-1.8%	4,988.1	-1.8%	7,297.3	-1.8%	9,021.7	-1.8%	8,951.8	-1.8%
19	1988			4,320.7	-13.4%				4,320.7	-13.4%	4,320.7	-13.4%	6,320.9	-13.4%	7,814.6	-13.4%	7,754.0	-13.4%
20	1989			4,388.2	1.6%				4,388.2	1.6%	4,388.2	1.6%	6,419.6	1.6%	7,936.7	1.6%	7,875.2	1.6%
21	1990			4,743.6	8.1%				4,743.6	8.1%	4,743.6	8.1%	6,939.6	8.1%	8,579.5	8.1%	8,513.0	8.1%
22	1991			5,190.4	9.4%				5,190.4	9.4%	5,190.4	9.4%	7,593.2	9.4%	9,387.6	9.4%	9,314.8	9.4%
23	1992			5,616.1	8.2%				5,616.1	8.2%	5,616.1	8.2%	8,216.0	8.2%	10,157.5	8.2%	10,078.8	8.2%
24	1993			5,922.5	5.5%				5,922.5	5.5%	5,922.5	5.5%	8,664.2	5.5%	10,711.7	5.5%	10,628.7	5.5%
25	1994			6,091.3	2.9%				6,091.3	2.9%	6,091.3	2.9%	8,911.2	2.9%	11,017.0	2.9%	10,931.6	2.9%
26	1995			6,198.0	1.8%				6,198.0	1.8%	6,198.0	1.8%	9,067.3	1.8%	11,210.0	1.8%	11,123.1	1.8%
27	1996			6,372.2	2.8%	9,322.1	2.8%		6,372.2	2.8%	6,372.2	2.8%	9,322.1	2.8%	11,525.1	2.8%	11,435.7	2.8%
28	1997			6,657.5	4.5%	9,924.4	6.5%		6,657.5	4.5%	6,657.5	4.5%	9,924.5	6.5%	12,269.8	6.5%	12,174.7	6.5%
29	1998			6,947.2	4.4%	10,653.0	7.3%		6,947.2	4.4%	6,947.2	4.4%	10,653.0	7.3%	13,170.5	7.3%	13,068.4	7.3%
30	1999			7,169.9	3.2%	11,070.3	3.9%		7,169.9	3.2%	7,169.9	3.2%	11,070.2	3.9%	13,686.3	3.9%	13,580.2	3.9%
31	2000			7,345.7	2.5%	11,370.9	2.7%		7,345.7	2.5%	7,345.8	2.5%	11,370.9	2.7%	14,058.0	2.7%	13,949.1	2.7%
32	2001			7,365.2	0.3%	11,436.2	0.6%		7,365.2	0.3%	7,301.5	0.3%	11,436.2	0.6%	14,138.7	0.6%	14,029.2	0.6%
33	2002					11,691.1	2.2%		7,667.7	4.1%			11,691.1	2.2%	14,453.9	2.2%	14,341.9	2.2%
34	2003					12,182.8	4.2%		7,867.1	2.6%			12,182.8	4.2%	15,061.8	4.2%	14,945.0	4.2%
35	2004					13,099.2	7.5%		8,358.2	6.2%			13,099.2	7.5%	16,194.7	7.5%	16,069.2	7.5%
36	2005					14,041.2	7.2%		9,064.1	8.4%			14,041.2	7.2%	17,359.3	7.2%	17,224.8	7.2%
37	2006					15,238.6	8.5%		9,770.8	7.8%			15,238.6	8.5%	18,839.7	8.5%	18,693.7	8.5%
38	2007					17,084.4	12.1%	21,121.9	10,981.9	12.4%			17,084.4	12.1%	21,121.9	12.1%	20,958.0	12.1%
39	2008					18,812.9	10.1%		12,110.5	10.3%			18,812.9	10.1%	23,053.9	9.1%	22,762.8	8.6%
40	2009					19,538.4	3.9%		12,504.9	3.3%			19,538.4	3.9%	23,970.1	4.0%	23,126.7	1.6%
41	2010					20,994.4	7.5%		13,497.8	7.9%			20,994.4	7.5%	25,372.8	5.9%	24,460.5	5.8%
42	2011					23,274.5	10.9%		14,925.0	10.6%			23,274.5	10.9%	28,105.5	10.8%	27,348.8	11.8%
43	2012								30,985.5	10.2%					30,985.5	10.2%	29,873.0	9.2%
44	2013																	
45	2014																	
46	2015																	

Notas:	Base :1982	Datos 1970-2001	Empalme de serie consyntantes	Historicos del PIB a Precios constantes 1946- 2000	Empalme deSeries a Precios del Año Base 1982	7.5%
	Base :1996	Datos 1996-en Adelante Datos hasta el año 2012	Cuentas Nacionales 1996-2003 Panama en Cifras, Años 2008 - 2012	Resultados finales del proceso de compilación y actualización del Año Base y series de las Cuentas Nacionales (CN), 1996,		7.3%
	Base :2007	Datos 2009 al 2013	Resultados Preliminares del Cambio de Año Base del Sistema de Cuentas Nacionales de Panamá, al año 2007 y Series Corrientes y Constantes: Años 2007-13 Panama en Cifras, Años 2009 - 2013	Resultados Preliminares del Cambio del Año Base 2007 - 2013	19 marzo del 2014	
	N Base :2007	Datos 2009 al 2013	El INEC, del CGR, presenta las nuevas series preliminares de (CN) con año de referencia 2007, y sus mediciones en términos reales, esto es, corregidas por el efecto de los precios como volúmenes encadenados. 31 julio del 2015			

ALTERNATIVAS A LA ESTIMACION DEL PIB DEL AÑO 2016
SEGÚN ACTIVIDAD ECONOMICA Y DIVISION ECONOMICA AL TERCER TRIMESTRE DEL 2015
 (En millones de dólares de 2007)

GRAN DIVISION ECONOMICA	AÑO 2015 PRE ESTIMADO				AÑO 2016								
					ESCENARIO OPTIMISTA (1)		ESCENARIO MODERADO (2)			ESCENARIO PESIMISTA (3)			
	PIB 2015 (PE)	ESTRUCTURA ESTIMADA(P) AÑO 2015 (%)	TASA DE CRECIMIENTO PRE ESTIMADA 2015/2014	VARIACION DEL PIB I SEM 2014-2013	VARIACION ANUAL DEL PIB AJUSTADA (Promedio)	PIB ESTIMADO AÑO 2016 OPTIMISTA	ESTRUCTUR A ESTIMADA AÑO 2016 (%)	VARIACION ANUAL DEL PIB AJUSTADA	PIB ESTIMADO AÑO 2016 MODERADO	ESTRUCTURA ESTIMADA AÑO 2016 (%)	VARIACION ANUAL DEL PIB AJUSTADA	PIB ESTIMADO AÑO 2016 PESIMISTA	ESTRUCTURA ESTIMADA AÑO 2016 (%)
1. Agricultura, silvicultura y caza	804.2	2.26%	0.51%	-0.47%	1.65%	817.5	2.14%	0.59%	809.0	2.13%	0.48%	808.0	2.16%
2. Pesca	222.4	0.62%	-4.28%	36.13%	0.31%	223.0	0.58%	0.31%	223.0	0.59%	0.31%	223.0	0.60%
3. Explotación de canteras	640.0	1.80%	6.18%	11.92%	7.88%	690.5	1.81%	6.18%	679.6	1.79%	6.18%	679.6	1.82%
Subtotal Sector Primario	1,666.6	4.68%		5.45%		1,731.0	4.54%		1,711.6	4.52%		1,710.6	4.57%
4. Industria Manufacturera	1,942.2	5.45%	-0.74%	0.53%	1.11%	1,963.8	5.15%	1.05%	1,962.6	5.18%	0.91%	1,959.8	5.24%
5. Electricidad, gas y agua	1,358.5	3.81%	13.31%	-1.02%	13.31%	1,539.3	4.03%	6.99%	1,453.5	3.84%	6.99%	1,453.5	3.84%
6. Construcción	5,223.3	14.66%	5.73%	15.51%	14.00%	5,954.6	15.61%	14.00%	5,954.6	15.71%	7.45%	5,612.4	15.00%
7. Transporte, almacenamiento y comunicaciones	5,135.1	14.41%	5.07%	7.67%	6.47%	5,467.3	14.33%	5.07%	5,395.6	14.24%	5.07%	5,395.6	14.42%
Subtotal Sector Secundario y de infraestructura	13,659.1	38.33%		8.59%		14,925.0	39.12%		14,766.3	38.96%		14,421.3	38.54%
8. Comercio al por mayor y al por menor	6,261.4	17.57%	4.27%	3.27%	5.45%	6,602.6	17.30%	4.95%	6,571.6	17.34%	4.27%	6,529.0	17.45%
9. Hoteles y Restaurantes	954.1	2.68%	3.44%	-1.41%	5.93%	1,010.7	2.65%	5.93%	1,010.7	2.67%	3.58%	988.3	2.64%
10. Intermediación Financiera	2,758.0	7.74%	10.09%	3.16%	6.47%	2,936.4	7.70%	6.47%	2,936.4	7.75%	6.47%	2,936.4	7.85%
11. Actividades Inmobiliarias, empresariales y de alquiler	3,079.6	8.64%	6.71%	9.23%	8.56%	3,343.2	8.76%	7.78%	3,319.2	8.76%	6.71%	3,286.3	8.78%
12. Enseñanza Privada	359.1	1.01%	5.86%	4.08%	7.47%	385.9	1.01%	6.79%	383.5	1.01%	5.86%	380.1	1.02%
Menos: Servicio de intermediación financiera	-777.9	-2.18%	3.74%	6.33%	4.77%	-815.1	-2.14%	4.34%	-811.7	-2.14%	3.74%	-807.0	-2.16%
Subtotal Sector Terciario (comercial y financiero)	12,634.3			3.91%		13,463.7	35.29%		13,409.7	35.38%		13,313.0	35.57%
13. Actividades de servicio sociales y de salud privada	467.9	1.31%	10.16%	1.67%	6.20%	497.0	1.30%	6.20%	497.0	1.31%	6.20%	497.0	1.33%
14. Otras actividades comunitarias, sociales y personales	745.8	2.09%	4.05%	4.37%	5.17%	784.3	2.06%	6.58%	794.8	2.10%	4.05%	776.0	2.07%
15. Productores de servicios gubernamentales	2,311.6	6.49%	7.35%	4.91%	3.07%	2,382.5	6.24%	2.06%	2,359.3	6.23%	2.06%	2,359.3	6.30%
Construcción	435.5	1.22%	5.84%	19.01%	7.45%	468.0	1.23%	6.77%	465.0	1.23%	5.84%	461.0	1.23%
Actividades Inmobiliarias, empresariales y de alquiler	2,128.7	5.97%	3.12%	2.99%	3.97%	2,213.4	5.80%	3.61%	2,205.7	5.82%	3.12%	2,195.1	5.87%
Hogares privados con servicio doméstico	175.6	0.49%	0.64%	3.61%	0.94%	177.3	0.46%	0.74%	176.9	0.47%	0.64%	176.7	0.47%
16. Productores de servicios domésticos	2,739.9	7.69%		5.01%		2,858.6	7.49%		2,847.6	7.51%		2,832.8	7.57%
Subtotal Sector Terciario (oficial y personal)	6,265.2			4.70%		6,522.4	17.09%		6,498.7	17.15%		6,465.1	17.28%
Más: Derechos de importacion e ITBM													
Más: ITBM que graba las compras de los hogares													
Más: Otros impuestos a los productores													
Menos: Subvenciones a los productos													
Subtotal Impuestos y transferencias	1,409.2	3.95%	-2.18%		7.37%	1,513.1	3.97%	7.37%	1,513.1	3.99%	7.37%	1,513.1	4.04%
Producto Interno Bruto Real	35,634.4			6.16%		38,155.2	100.00%	0.00%	37,899.4	100.00%		37,423.1	100.00%

TASA DE VARIACION

7.07%

6.36%

5.02%

Las tasas de variaciones utilizadas para definir el posible estado de los diferentes rubros del PIB en el año 2013, se enmarcan principalmente dentro de los pronósticos publicados por Entidades Internacionales y expertos economistas.

- (1) Comportamiento esperado con base en la variación anual de uno de los mejores año del periodo 2005-2011. Variación del Último año 2011 (10.85%). PIB Tres metodologías (M), Variación de Tasa de crecimiento Anual. Columna AL
- (2) Basado en el comportamiento histórico promedio de los años 2001-2011. Casi similar a la variación evidenciada en el año 2010. Resultando en una tasa de crecimiento promedio anual 2001-2011 (>7.4%). PIB Tres metodologías (M), Variación de Tasa de crecimiento Anual Promedio. Columna AM
- (3) Basado en el peor comportamiento del periodo 2001-2011, Variación anual del año 2009,(< 4.0%) . PIB Tres metodologías (M), Variación de Tasa de crecimiento Anual Promedio. Columna AJ

FUENTE: Desarrollo propio con base en data de la Dirección de Estadísticas y Censo, Panamá en Cifras 2002-06

CUADRO No. 8
PRONOSTICOS DEL PIB, AÑOS 2016 - 2030

ESTIMADOS DE MONTOS Y VARIACIONES ANUALES DEL PRODUCTO INTERNO BRUTO
DURANTE EL PERIODO DE EVALUACION DEL PESIN 2016-2030
EN CONSIDERACION AL PIB PRE-ESTIMADO DE 2015
A precios del Año 2007

Producto Interno Bruto Estimado al III Trimestre 2015 de 5.49% (1)						
AÑOS		ESCENARIO MODERADO		ESCENARIO OPTIMISTA (4)		ESCENARIO PESIMISTA (5)
		MODERADO		OPTIMISTA		PESIMISTA
		VAR. ANUAL		VAR. ANUAL		VAR. ANUAL
		(En miles de Balboas)	(En %)	(En miles de Balboas)	(En %)	(En miles de Balboas)
						(En %)
2007		20,958.0	11.90%	20,958.0	11.90%	20,958.0
2008		22,762.8	8.61%	22,762.8	8.61%	22,762.8
2009		23,126.7	1.60%	23,126.7	1.60%	23,126.7
2010	REAL	24,460.5	5.77%	24,460.5	5.77%	24,460.5
2011	PREEELIMINAR	27,348.8	11.81%	27,348.8	11.81%	27,348.8
2012		29,873.0	9.23%	29,873.0	9.23%	29,873.0
2013		31,851.9	6.62%	31,851.9	6.62%	31,851.9
2014		33,780.0	6.05%	33,780.0	6.05%	33,780.0
2015	ESTIMADO	35,634.4	5.49%	35,634.4	5.49%	35,634.4
2016		37,899.4	6.36%	38,155.2	7.07%	37,423.1
2017		40,400.8	6.60%	40,902.4	7.20%	39,668.5
2018		43,145.5	6.79%	45,401.6	11.00%	41,255.2
2019		45,486.1	5.43%	48,806.7	7.50%	42,905.4
2020		47,987.9	5.50%	52,223.2	7.00%	44,621.6
2021		50,387.3	5.00%	55,356.6	6.00%	46,183.4
2022		53,158.6	5.50%	58,954.8	6.50%	47,915.3
2023		56,082.3	5.50%	62,786.8	6.50%	49,592.3
2024		59,307.0	5.75%	66,868.0	6.50%	51,328.0
2025		62,865.4	6.00%	71,548.7	7.00%	53,252.8
2026		66,480.2	5.75%	76,199.4	6.50%	55,116.7
2027		70,302.8	5.75%	81,152.4	6.50%	57,045.8
2028		74,169.5	5.50%	86,021.5	6.00%	59,042.4
2029		77,877.9	5.00%	90,967.8	5.75%	60,813.6
2030		81,771.8	5.00%	96,198.4	5.75%	62,638.0

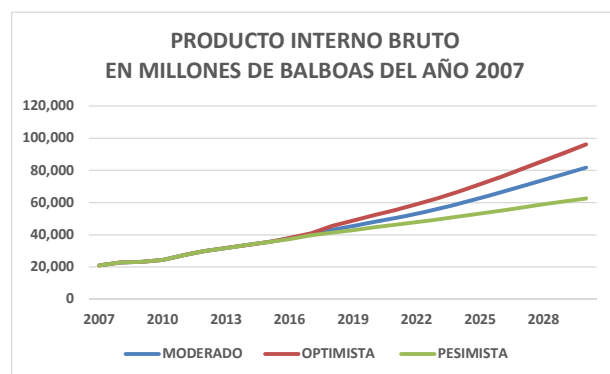
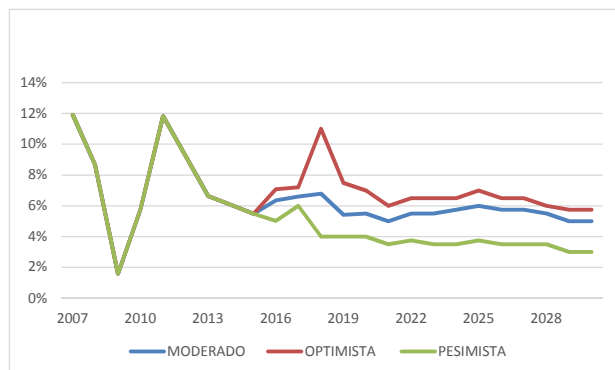
Crecimiento Anual

Tipo	Periodo				
Estudio	2007-2029	(2007-2026)	6.41%	7.14%	5.29%
Histórico	2006-2013	(2007-2014)	7.70%	7.70%	7.70%
Pronóstico	2016-2030	(2015-2029)	5.69%	6.84%	3.83%
Corto Plazo	2016-2019	(2016-2019)	6.29%	8.18%	4.75%
Medio Plazo	2019-2025	(2019-2025)	5.54%	6.58%	3.67%
Largo Plazo	2025-2029	(2025-2030)	5.40%	6.10%	3.30%
Periodo M y LP	2019-2028	(2019-2030)	5.48%	6.36%	3.50%

NOTAS:

- (1) Escenarios a partir de un Producto Interno Bruto preeliminar del 2013 de 8.35%, y del pre-estimado para el año 2014 de 6.43%.
- (2) Escenarios ajustados a partir de un Producto Interno Bruto estimado de año 2014 de 6.43%, derivado del comportamiento preliminar del PIB durante los dos primeros trimestres del año, con respecto al promedio estructural del mismo durante el periodo historico 2007-2013. Boletín de la Dirección de Estadísticas y Censo.
- (3) Las tasas de crecimiento de los escenarios moderado, optimista y pesimista para el 2015 con respecto al año precedente fueron estimadas en 6.98, 8.92 y 3.07 por ciento. Tasa derivadas de la simulación del PIB, desarrollado para el año 2012. La Hoja EXCEL es PIB Estructural Estimado 2012.
- (4) Las tasas de crecimiento previstas para el periodo inmediato de corto plazo 2015-2018, están basadas en las perspectivas generales emitidos por entidades internacionales como FMI, Cepal de acuerdo al comportamiento excepcional de los últimos años de la economía panameña.
- (5) Para el periodo de mediano y largo plazo, las tasas de crecimiento están basadas en el mismo concepto anterior, derivados de los efectos de la Ampliación del Canal de Panamá.
- (6) Escenario Moderado está basado en el escenario "más probable" un poco por debajo de los parámetros potenciales de crecimiento.
- (7) Escenario Optimista está basado en el "mejor escenario", definido por el potencial de la economía nacional de 7% anual sostenido.
- (8) Escenario Pesimista está basado en el "peor escenario", de casi la mitad del crecimiento potencial de la economía nacional, entre un tres (3) y un cuatro (4) % anual sostenido.

Fuente: Desarrollo de ETESA con base al registro preliminar del Tercer Trimestre del año 2015



CUADRO No. 9

PRONOSTICOS DE LA ACTIVIDAD DE MANUFACTURA, AÑOS 2016 - 2030

ESTIMADOS DE MONTOS Y VARIACIONES ANUALES DE LA ACTIVIDAD DE MANUFACTURA EN EL PRODUCTO INTERNO BRUTO DURANTE EL PERIODO DE EVALUACION DEL PLAN 2016-2030 EN CONSIDERACION AL PIB ESTIMADO DE 2015 EMPALMADO a Precios de 2007 (Datos Encadenados)

AÑOS	Producto Interno Bruto 2015 de 5.49%					
	ESCENARIO MODERADO		ESCENARIO OPTIMISTA		ESCENARIO PESIMISTA	
	MONTOS	VAR. ANUAL	MONTOS	VAR. ANUAL	MONTOS	VAR. ANUAL
	(En miles de Balboas)	(En %)	(En miles de Balboas)	(En %)	(En miles de Balboas)	(En %)
2007=100						
2007	1,546.0		1,546.0		1,546.0	
2008	1,607.2	3.95%	1,607.2	3.95%	1,607.2	3.95%
2009	1,603.3	-0.24%	1,603.3	-0.24%	1,603.3	-0.24%
2010	1,673.2	4.36%	1,673.2	4.36%	1,673.2	4.36%
2011	1,773.1	5.97%	1,773.1	5.97%	1,773.1	5.97%
2012	1,913.8	7.93%	1,913.8	7.93%	1,913.8	7.93%
2013	1,939.1	1.32%	1,939.1	1.32%	1,939.1	1.32%
2014	1,956.7	0.91%	1,956.7	0.91%	1,956.7	0.91%
2015	1,942.2	-0.74%	1,942.2	-0.74%	1,942.2	-0.74%
2016	1,962.3	1.04%	1,963.8	1.11%	1,959.8	0.91%
2017	2,014.0	2.63%	2,015.5	2.63%	1,961.3	0.08%
2018	2,067.0	2.63%	2,068.6	2.63%	1,979.2	0.91%
2019	2,121.4	2.63%	2,123.0	2.63%	1,997.2	0.91%
2020	2,177.3	2.63%	2,178.9	2.63%	2,015.3	0.91%
2021	2,250.0	3.34%	2,251.7	3.34%	2,068.4	2.63%
2022	2,325.1	3.34%	2,326.9	3.34%	2,122.8	2.63%
2023	2,402.8	3.34%	2,404.6	3.34%	2,178.7	2.63%
2024	2,483.0	3.34%	2,484.9	3.34%	2,236.1	2.63%
2025	2,548.4	2.63%	2,585.9	4.07%	2,295.0	2.63%
2026	2,615.5	2.63%	2,691.0	4.07%	2,355.4	2.63%
2027	2,684.3	2.63%	2,800.4	4.07%	2,417.4	2.63%
2028	2,755.0	2.63%	2,874.1	2.63%	2,481.0	2.63%
2029	2,827.5	2.63%	2,949.8	2.63%	2,546.3	2.63%
2030	2,902.0	2.63%	3,027.5	2.63%	2,613.4	2.63%

Crecimiento Anual

Tipo	Años	Periodo			
Estudio	23	(2007-2030)	2.79%	2.98%	2.33%
Histórico	7	(2007-2014)	3.42%	3.42%	3.42%
Pronostico	15	(2010-2023)	2.71%	3.00%	2.00%
Corto Plazo	4	(2011-2014)	2.23%	2.25%	0.70%
Medio Plazo	6	(2015-2020)	3.10%	3.34%	2.34%
Largo Plazo	5	(2030-2025)	2.63%	3.20%	2.63%

- NOTAS:
- (1) Escenarios a partir de un Producto Interno bruto al 2010 de 7.6%, estimado previsto inicial del MEF para este año.
 - (2) Escenarios a partir de un Producto Interno bruto al 2011 de 10.91%, derivado del comportamiento real del PIB durante los Evolucion Trimestral del PIB (II Trimestre del 2008). Con un incremento de 10.33% del I semestre del año con respecto a de enero-agosto del 2008 muestra un incremento sobre el 9 por ciento, con respecto al mismo periodo del año anterior.
 - (3) Escenario Moderado esta basado en el escenario "**mas probable**" definido por INTRACORP, Voumen III, xxiv .Con Expa
 - (4) Escenario Optimista esta basado en el "**mejor escenario**", definido por INTRACORP, Voumen III, xxiv .Con Expansion d
 - (5) Escenario Pesimista esta basado en el "**peor escenario**", definido por INTRACORP, Voumen III, xxiv .Con Expansion de
 - (6) Las tasas de crecimiento de los escenarios moderado, optimista y pesimista para el 2012 con respecto al año precedente del PIB, desarrollado para el año 2012. La Hoja EXCEL es PIB Estructural Estimado 2012.

Fuente: Desarrollo de ETESA basados en los escenarios elaborados por INTRACORP, por medio de un Modelo Matematico de Insur y del Conglomerado del canal en la economia nacional . "**Estudio del Impacto Economico del Canal y el Proyecto de Am**

CUADRO No. 10

PRODUCTO INTERNO BRUTO

ESCENARIO BASE MODERADO
Millones de Balboas de 2007

AÑO	TOTAL	VAR%	INDUSTRIA	VAR%	%/TOTAL
1970	4,345		545.9		12.6%
1971	4,764	9.6%	580.6	6.4%	12.2%
1972	4,981	4.6%	607.2	4.6%	12.2%
1973	5,248	5.4%	645.4	6.3%	12.3%
1974	5,377	2.4%	653.9	1.3%	12.2%
1975	5,471	1.7%	630.4	-3.6%	11.5%
1976	5,562	1.7%	646.2	2.5%	11.6%
1977	5,622	1.1%	653.9	1.2%	11.6%
1978	6,173	9.8%	664.2	1.6%	10.8%
1979	6,452	4.5%	751.4	13.1%	11.6%
1980	7,432	15.2%	822.6	9.5%	11.1%
1981	8,117	9.2%	756.0	-8.1%	9.3%
1982	8,551	5.3%	783.1	3.6%	9.2%
1983	8,167	-4.5%	766.3	-2.1%	9.4%
1984	8,388	2.7%	818.8	6.8%	9.8%
1985	8,803	4.9%	864.7	5.6%	9.8%
1986	9,117	3.6%	870.7	0.7%	9.6%
1987	8,952	-1.8%	930.5	6.9%	10.4%
1988	7,754	-13.4%	721.5	-22.5%	9.3%
1989	7,875	1.6%	730.9	1.3%	9.3%
1990	8,513	8.1%	831.6	13.8%	9.8%
1991	9,315	9.4%	918.6	10.5%	9.9%
1992	10,079	8.2%	1,002.7	9.2%	9.9%
1993	10,629	5.5%	1,066.2	6.3%	10.0%
1994	10,932	2.9%	1,111.6	4.3%	10.2%
1995	11,123	1.8%	1,113.8	0.2%	10.0%
1996	11,436	2.8%	1,367.0	22.7%	12.0%
1997	12,175	6.5%	1,411.5	3.3%	11.6%
1998	13,068	7.3%	1,443.0	2.2%	11.0%
1999	13,580	3.9%	1,458.4	1.1%	10.7%
2000	13,949	2.7%	1,354.0	-7.2%	9.7%
2001	14,029	0.6%	1,237.7	-8.6%	8.8%
2002	14,342	2.2%	1,217.0	-1.7%	8.5%
2003	14,945	4.2%	1,193.6	-1.9%	8.0%
2004	16,069	7.5%	1,205.4	1.0%	7.5%
2005	17,225	7.2%	1,269.6	5.3%	7.4%
2006	18,694	8.5%	1,318.8	3.9%	7.1%
2007	20,958	12.1%	1,546.0	17.2%	7.4%
2008	22,763	8.6%	1,607.2	3.95%	7.1%
2009	23,127	1.6%	1,603.3	-0.24%	6.9%
2010	24,461	5.8%	1,673.2	4.36%	6.8%
2011	27,349	11.8%	1,773.1	5.97%	6.5%
2012	29,873	9.2%	1,913.8	7.93%	6.4%
2013	31,852	6.6%	1,939.1	1.32%	6.1%
2014	33,780	6.1%	1,956.7	0.91%	5.8%
2015	35,732	5.8%	1,942.2	-0.74%	5.4%
2016	37,899	6.1%	1,962.3	1.04%	5.2%
2017	40,401	6.6%	2,014.0	2.63%	5.0%
2018	43,145	6.8%	2,067.0	2.63%	4.8%
2019	45,486	5.4%	2,121.4	2.63%	4.7%
2020	47,988	5.5%	2,177.3	2.63%	4.5%
2021	50,387	5.0%	2,250.0	3.34%	4.5%
2022	53,159	5.5%	2,325.1	3.34%	4.4%
2023	56,082	5.5%	2,402.8	3.34%	4.3%
2024	59,307	5.8%	2,483.0	3.34%	4.2%
2025	62,865	6.0%	2,548.4	2.63%	4.1%
2026	66,480	5.8%	2,615.5	2.63%	3.9%
2027	70,303	5.8%	2,684.3	2.63%	3.8%
2028	74,169	5.5%	2,755.0	2.63%	3.7%
2029	77,878	5.0%	2,827.5	2.63%	3.6%
2030	81,772	5.0%	2,902.0	2.63%	3.5%
PROMEDIO		5.7%		2.7%	4.3%

PREMISAS 7.695% 4.596%

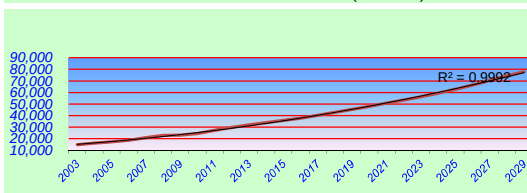
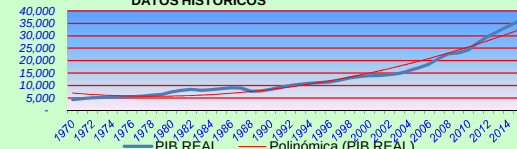
a) **PIB TOTAL:** Escenario conservador, con crecimiento promedio anual de 5.7%, para todo el periodo del horizonte de planeamiento.

b) **PIB MANUFACTURERO:** Escenario conservador, con crecimiento promedio inferior al PIB total, manteniendo su participación estructural, en 4.0% del PIB Total. Promedio de los últimos tres años.

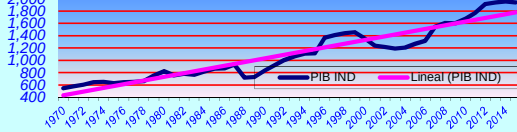
-3.8%

	PIB TOTAL	DIF TASAS	INDUSTRIA	
Promedios	TASA		TASA	% /TOTAL
1980-1990	2.81%	-1.41%	1.41%	9.71%
1991-2000	5.09%	0.16%	5.25%	10.51%
2001-2015	6.52%	-3.94%	2.58%	7.04%
Máximo	15.2%		22.7%	12.3%
Promedio 2014	5.78%		-0.74%	5.44%
2016-2015	6.07%	-5.03%	1.04%	5.18%
2016-2019	6.22%	-3.99%	2.23%	4.90%
2020-2030	5.48%	-2.59%	2.89%	4.05%
2005-2013	7.57%			
2008-2013	6.93%			
2010-2015	7.54%			
1970-2015	4.90%			

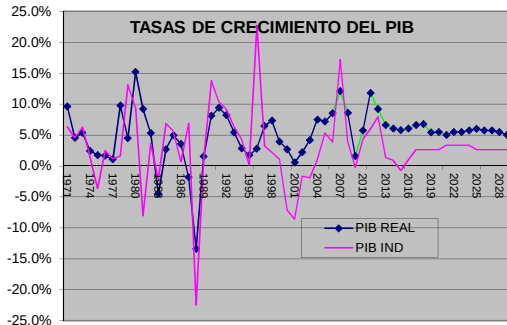
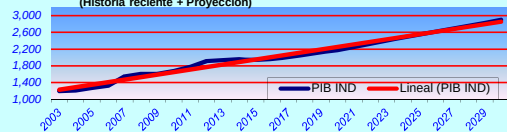
PIB (Millones de Balboas a precios de 2007)
DATOS HISTÓRICOS $R^2 = 0.9603$



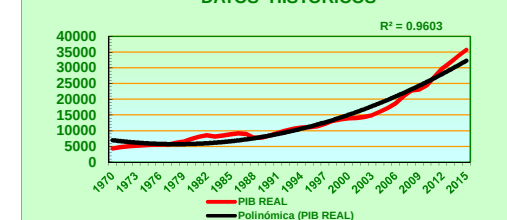
PIB MANUFACTURERO
(Millones de Balboas a precios de 2007)
DATOS HISTÓRICOS 1970-2014 $R^2 = 0.7725$



PIB MANUFACTURERO
(Millones de Balboas a precios de 2007)
2003 - 2029
(Historia reciente + Proyección) $R^2 = 0.9841$



PIB (Millones de Balboas a precios de 2007)
DATOS HISTÓRICOS $R^2 = 0.9603$



CUADRO No. 11

PRODUCTO INTERNO BRUTO

ESCENARIO ALTO OP ALTO

Millones de Balboas de 2007

AÑO	TOTAL	VAR%	INDUSTRIA	VAR%	%/TOTAL
1970	4,345		545.9		12.6%
1971	4,764	9.6%	580.6	6.4%	12.2%
1972	4,981	4.6%	607.2	4.6%	12.2%
1973	5,248	5.4%	645.4	6.3%	12.3%
1974	5,377	2.4%	653.9	1.3%	12.2%
1975	5,471	1.7%	630.4	-3.6%	11.5%
1976	5,562	1.7%	646.2	2.5%	11.6%
1977	5,622	1.1%	653.9	1.2%	11.6%
1978	6,173	9.8%	664.2	1.6%	10.8%
1979	6,452	4.5%	751.4	13.1%	11.6%
1980	7,432	15.2%	822.6	9.5%	11.1%
1981	8,117	9.2%	756.0	-8.1%	9.3%
1982	8,551	5.3%	783.1	3.6%	9.2%
1983	8,167	-4.5%	766.3	-2.1%	9.4%
1984	8,388	2.7%	818.8	6.8%	9.8%
1985	8,803	4.9%	864.7	5.6%	9.8%
1986	9,117	3.6%	870.7	0.7%	9.6%
1987	8,952	-1.8%	930.5	6.9%	10.4%
1988	7,754	-13.4%	721.5	-22.5%	9.3%
1989	7,875	1.6%	730.9	1.3%	9.3%
1990	8,513	8.1%	831.6	13.8%	9.8%
1991	9,315	9.4%	918.6	10.5%	9.9%
1992	10,079	8.2%	1,002.7	9.2%	9.9%
1993	10,629	5.5%	1,066.2	6.3%	10.0%
1994	10,932	2.9%	1,111.6	4.3%	10.2%
1995	11,123	1.8%	1,113.8	0.2%	10.0%
1996	11,436	2.8%	1,367.0	22.7%	12.0%
1997	12,175	6.5%	1,411.5	3.3%	11.6%
1998	13,068	7.3%	1,443.0	2.2%	11.0%
1999	13,580	3.9%	1,458.4	1.1%	10.7%
2000	13,949	2.7%	1,354.0	-7.2%	9.7%
2001	14,029	0.6%	1,237.7	-8.6%	8.8%
2002	14,342	2.2%	1,217.0	-1.7%	8.5%
2003	14,945	4.2%	1,193.6	-1.9%	8.0%
2004	16,069	7.5%	1,205.4	1.0%	7.5%
2005	17,225	7.2%	1,269.6	5.3%	7.4%
2006	18,694	8.5%	1,318.8	3.9%	7.1%
2007	20,958	12.1%	1,546.0	17.2%	7.4%
2008	22,763	8.6%	1,607.2	3.95%	7.1%
2009	23,127	1.6%	1,603.3	-0.24%	6.9%
2010	24,461	5.8%	1,673.2	4.36%	6.8%
2011	27,349	11.8%	1,773.1	5.97%	6.5%
2012	29,873	9.2%	1,913.8	7.93%	6.4%
2013	31,852	6.6%	1,939.1	1.32%	6.1%
2014	33,780	6.1%	1,956.7	0.91%	5.8%
2015	35,732	5.8%	1,942.2	-0.74%	5.4%
2016	38,155	6.8%	1,963.8	1.11%	5.1%
2017	40,902	7.2%	2,015.5	2.63%	4.9%
2018	45,402	11.0%	2,068.6	2.63%	4.6%
2019	48,807	7.5%	2,123.0	2.63%	4.3%
2020	52,223	7.0%	2,178.9	2.63%	4.2%
2021	55,357	6.0%	2,251.7	3.34%	4.1%
2022	58,955	6.5%	2,326.9	3.34%	3.9%
2023	62,787	6.5%	2,404.6	3.34%	3.8%
2024	66,868	6.5%	2,484.9	3.34%	3.7%
2025	71,549	7.0%	2,585.9	4.07%	3.6%
2026	76,199	6.5%	2,691.0	4.07%	3.5%
2027	81,152	6.5%	2,800.4	4.07%	3.5%
2028	86,022	6.0%	2,874.1	2.63%	3.3%
2029	90,968	5.8%	2,949.8	2.63%	3.2%
2030	96,198	5.8%	3,027.5	2.63%	3.1%
PROMEDIO		6.8%		3.0%	3.9%

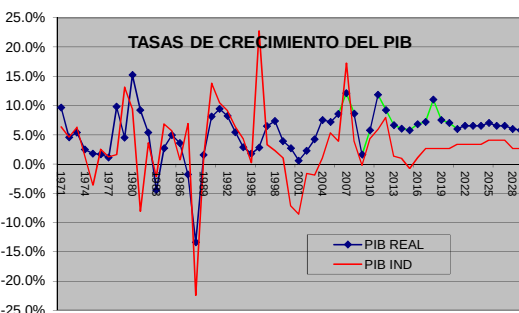
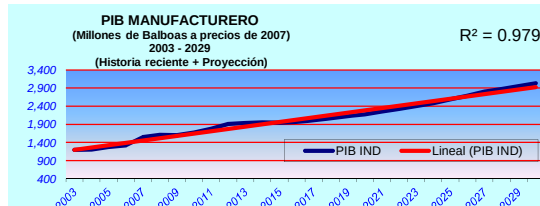
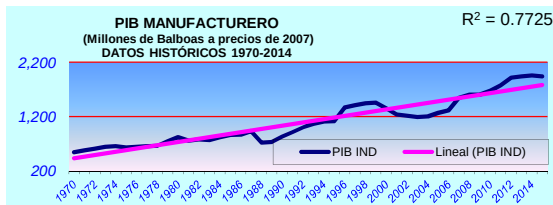
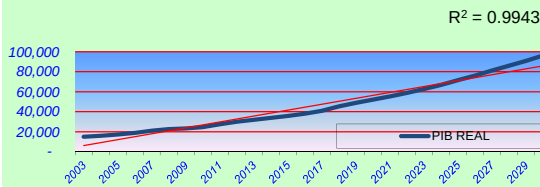
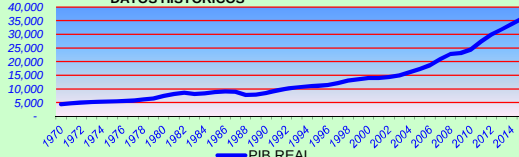
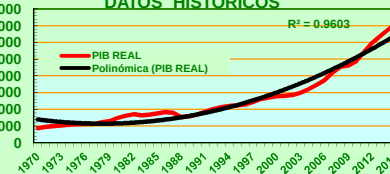
PREMIAS 7.695% 4.596%

a) **PIB TOTAL:** Escenario conservador, con crecimiento promedio anual de 6.6%, para todo el periodo del horizonte de planeamiento.

b) **PIB MANUFACTURERO:** Escenario conservador, con crecimiento promedio inferior al PIB total, manteniendo su participación estructural, en 4.9% del PIB Total. Promedio de los últimos tres años.

	PIB TOTAL	DIF	INDUSTRIA	
Promedios	TASA	TASAS	TASA	% /TOTAL
1980-1990	2.81%	-1.41%	1.41%	9.71%
1991-2000	5.09%	0.16%	5.25%	10.51%
2001-2015	6.52%	-3.94%	2.58%	7.04%
Máximo	15.2%		22.7%	12.3%
Promedio 2014		-1.73%		
2016-2015	5.78%	-0.74%	5.44%	
2016-2015	6.78%	-5.67%	1.11%	5.15%
2016-2019	8.12%	-5.87%	2.25%	4.75%
2020-2030	6.36%	-3.08%	3.28%	3.64%

2005-2013	7.57%
2008-2013	6.93%
2010-2015	7.54%
1970-2015	4.90%

PIB (Millones de Balboas a precios de 2007)
DATOS HISTÓRICOS**PIB (Millones de Balboas a precios de 2007)**
DATOS HISTÓRICOS

CUADRO No. 12
PRODUCTO INTERNO BRUTO
 ESCENARIO BAJO F BAJO
 Millones de Balboas de 2007

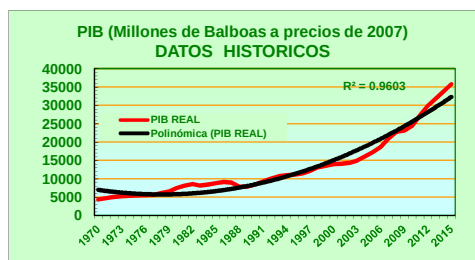
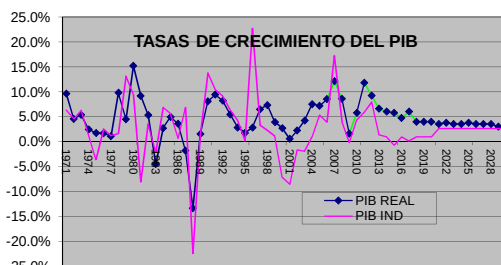
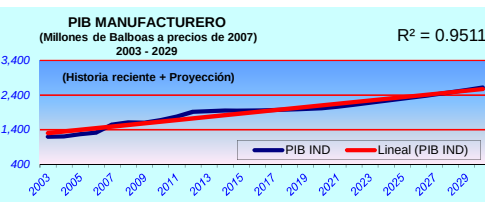
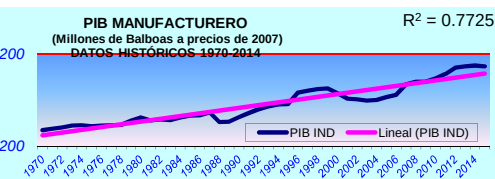
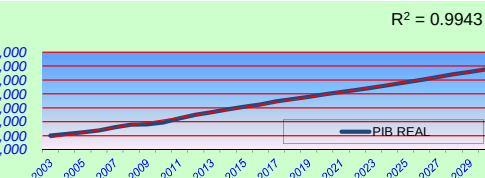
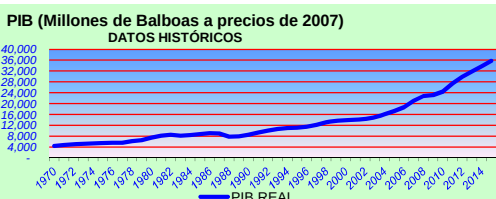
AÑO	TOTAL	VAR%	INDUSTRIA	VAR%	%TOTAL
	PIB REAL		PIB IND		
1970	4,345		545.9		12.6%
1971	4,764	9.6%	580.6	6.4%	12.2%
1972	4,981	4.6%	607.2	4.6%	12.2%
1973	5,248	5.4%	645.4	6.3%	12.3%
1974	5,377	2.4%	653.9	1.3%	12.2%
1975	5,471	1.7%	630.4	-3.6%	11.5%
1976	5,562	1.7%	646.2	2.5%	11.6%
1977	5,622	1.1%	653.9	1.2%	11.6%
1978	6,173	9.8%	664.2	1.6%	10.8%
1979	6,452	4.5%	751.4	13.1%	11.6%
1980	7,432	15.2%	822.6	9.5%	11.1%
1981	8,117	9.2%	756.0	-8.1%	9.3%
1982	8,551	5.3%	783.1	3.6%	9.2%
1983	8,167	-4.5%	766.3	-2.1%	9.4%
1984	8,388	2.7%	818.8	6.8%	9.8%
1985	8,803	4.9%	864.7	5.6%	9.8%
1986	9,117	3.6%	870.7	0.7%	9.6%
1987	8,952	-1.8%	930.5	6.9%	10.4%
1988	7,754	-13.4%	721.5	-22.5%	9.3%
1989	7,875	1.6%	730.9	1.3%	9.3%
1990	8,513	8.1%	831.6	13.8%	9.8%
1991	9,315	9.4%	918.6	10.5%	9.9%
1992	10,079	8.2%	1,002.7	9.2%	9.9%
1993	10,629	5.5%	1,066.2	6.3%	10.0%
1994	10,932	2.9%	1,111.6	4.3%	10.2%
1995	11,123	1.8%	1,113.8	0.2%	10.0%
1996	11,436	2.8%	1,367.0	22.7%	12.0%
1997	12,175	6.5%	1,411.5	3.3%	11.6%
1998	13,068	7.3%	1,443.0	2.2%	11.0%
1999	13,580	3.9%	1,458.4	1.1%	10.7%
2000	13,949	2.7%	1,354.0	-7.2%	9.7%
2001	14,029	0.6%	1,237.7	-8.6%	8.8%
2002	14,342	2.2%	1,217.0	-1.7%	8.5%
2003	14,945	4.2%	1,193.6	-1.9%	8.0%
2004	16,069	7.5%	1,205.4	1.0%	7.5%
2005	17,225	7.2%	1,269.6	5.3%	7.4%
2006	18,694	8.5%	1,318.8	3.9%	7.1%
2007	20,958	12.1%	1,546.0	17.2%	7.4%
2008	22,763	8.6%	1,607.2	4.0%	7.1%
2009	23,127	1.6%	1,603.3	-0.2%	6.9%
2010	24,461	5.8%	1,673.2	4.4%	6.8%
2011	27,349	11.8%	1,773.1	6.0%	6.5%
2012	29,873	9.2%	1,913.8	7.9%	6.4%
2013	31,852	6.6%	1,939.1	1.3%	6.1%
2014	33,780	6.1%	1,956.7	0.9%	5.8%
2015	35,732	5.8%	1,942.2	-0.74%	5.4%
2016	37,423	4.7%	1,959.8	0.91%	5.2%
2017	39,668	6.0%	1,961.3	0.08%	4.9%
2018	41,255	4.0%	1,979.2	0.91%	4.8%
2019	42,905	4.0%	1,997.2	0.91%	4.7%
2020	44,622	4.0%	2,015.3	0.91%	4.5%
2021	46,183	3.5%	2,068.4	2.63%	4.5%
2022	47,915	3.8%	2,122.8	2.63%	4.4%
2023	49,592	3.5%	2,178.7	2.63%	4.4%
2024	51,328	3.5%	2,236.1	2.63%	4.4%
2025	53,253	3.8%	2,295.0	2.63%	4.3%
2026	55,117	3.5%	2,355.4	2.63%	4.3%
2027	57,046	3.5%	2,417.4	2.63%	4.2%
2028	59,042	3.5%	2,481.0	2.63%	4.2%
2029	60,814	3.0%	2,546.3	2.63%	4.2%
2030	62,638	3.0%	2,613.4	2.63%	4.2%
PROMEDIO		3.8%		2.0%	4.5%

PREMISAS 7.713% 4.596%

a) **PIB TOTAL:** Escenario conservador, con crecimiento promedio anual de 3.7%, para todo el periodo del horizonte de planeamiento.

b) **PIB MANUFACTURERO:** Escenario conservador, con crecimiento promedio inferior al PIB total, manteniendo su participación estructural, en 3.4% del PIB Total. Promedio de los últimos tres años.

	PIB TOTAL	DIF	INDUSTRIA	
Promedios	TASA	TASAS	TASA	%/TOTAL
1980-1990	2.81%	-1.41%	1.41%	9.71%
1991-2000	5.09%	0.16%	5.25%	10.51%
2001-2015	6.52%	-3.94%	2.58%	7.04%
Máximo	15.2%		22.7%	12.3%
Promedio		-1.73%		
2014	5.78%		-0.74%	5.44%
2016-2015	4.73%	-3.83%	0.91%	5.24%
2016-2019	4.68%	-3.98%	0.70%	4.91%
2020-2030	3.50%	-1.02%	2.48%	4.32%
2005-2013	7.57%			
2008-2013	6.93%			
2010-2015	7.54%			
1970-2015	4.90%			



CUADRO No. 13

RESUMEN DE TASAS DE CRECIMIENTO DEL PIB, SEGÚN ESCENARIOS

**RESUMEN DE TASAS DE CRECIMIENTO DEL PIB, SEGÚN
ESCENARIOS
2016-2030**

PERIODOS	TOTAL	DIFERENCIAS	INDUSTRIAL	
			TASA	% /TOTAL
TASAS HISTÓRICAS (PIB- base 982)				
1980-1990	2.81%	-1.41%	1.41%	9.71%
1991-2000	5.09%	0.16%	5.25%	10.51%
2001-2012	6.52%	-3.94%	2.58%	7.04%
Máximo	15.20%	0.00%	22.74%	12.30%
Promedio		-1.73%		
ESCENARIO MODERADO				
2014	5.78%		-0.74%	5.44%
2016-2015	6.07%	-5.03%	1.04%	5.18%
2016-2019	6.22%	-3.99%	2.23%	4.90%
2020-2030	5.48%	-2.59%	2.89%	4.05%
ESCENARIO OPTIMISTA				
2014	5.78%		-0.74%	5.44%
2016-2015	6.78%	-5.67%	1.11%	5.15%
2016-2019	8.12%	-5.87%	2.25%	4.75%
2020-2030	6.36%	-3.08%	3.28%	3.64%
ESCENARIO PESISMISTA				
2014	5.78%		-0.74%	5.44%
2016-2015	4.73%	-3.83%	0.91%	5.24%
2016-2019	4.68%	-3.98%	0.70%	4.91%
2020-2030	3.50%	-1.02%	2.48%	4.32%

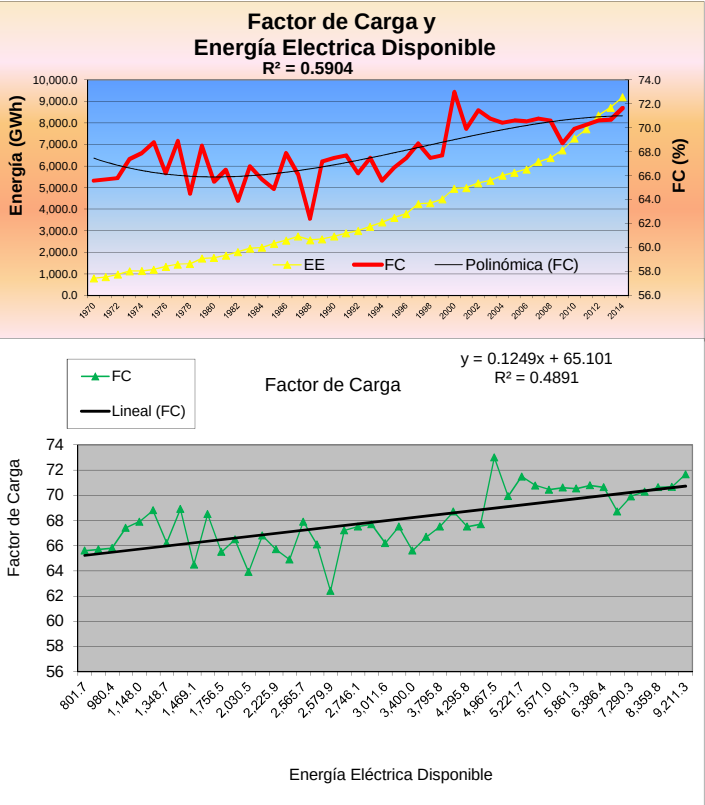
CUADRO No. 14
ANÁLISIS DEL FACTOR DE CARGA Y PROYECCIÓN LINEAL

	FC	Var Anual	EE	Estimado	Error	
1970	65.6		801.7	65.3	-0.31	0%
1971	65.7	0.2%	859.4	65.4	-0.29	0%
1972	65.8	0.2%	980.4	65.5	-0.27	0%
1973	67.4	2.4%	1,139.9	65.7	-1.75	-3%
1974	67.9	0.7%	1,148.0	65.8	-2.13	-3%
1975	68.8	1.3%	1,214.3	65.9	-2.91	-4%
1976	66.2	-3.8%	1,348.7	66.0	-0.19	0%
1977	68.9	4.1%	1,450.3	66.1	-2.77	-4%
1978	64.5	-6.4%	1,469.1	66.3	1.75	3%
1979	68.5	6.2%	1,724.0	66.4	-2.13	-3%
1980	65.5	-4.4%	1,756.5	66.5	0.99	2%
1981	66.5	1.5%	1,863.5	66.6	0.11	0%
1982	63.9	-3.9%	2,030.5	66.7	2.83	4%
1983	66.8	4.5%	2,193.5	66.9	0.05	0%
1984	65.7	-1.6%	2,225.9	67.0	1.27	2%
1985	64.9	-1.2%	2,412.9	67.1	2.20	3%
1986	67.9	4.6%	2,565.7	67.2	-0.68	-1%
1987	66.1	-2.7%	2,748.3	67.3	1.24	2%
1988	62.4	-5.6%	2,579.9	67.5	5.06	8%
1989	67.2	7.7%	2,624.7	67.6	0.38	1%
1990	67.5	0.4%	2,746.1	67.7	0.20	0%
1991	67.7	0.3%	2,896.6	67.8	0.12	0%
1992	66.2	-2.2%	3,011.6	67.9	1.74	3%
1993	67.5	2.0%	3,199.1	68.1	0.56	1%
1994	65.6	-2.8%	3,400.0	68.2	2.58	4%
1995	66.7	1.7%	3,619.4	68.3	1.60	2%
1996	67.5	1.2%	3,795.8	68.4	0.92	1%
1997	68.7	1.8%	4,254.4	68.5	-0.16	0%
1998	67.5	-1.7%	4,295.8	68.7	1.16	2%
1999	67.7	0.3%	4,474.5	68.8	1.08	2%
2000	73.0	7.8%	4,967.5	68.9	-4.10	-6%
2001	69.9	-4.2%	4,999.9	69.0	-0.90	-1%
2002	71.5	2.2%	5,221.7	69.1	-2.34	-3%
2003	70.8	-1.0%	5,342.6	69.3	-1.51	-2%
2004	70.4	-0.5%	5,571.0	69.4	-1.06	-1%
2005	70.6	0.2%	5,711.0	69.5	-1.11	-2%
2006	70.5	-0.1%	5,861.3	69.6	-0.90	-1%
2007	70.8	0.4%	6,208.8	69.7	-1.04	-1%
2008	70.6	-0.2%	6,386.4	69.9	-0.76	-1%
2009	68.7	-2.7%	6,753.7	70.0	1.27	2%
2010	69.9	1.7%	7,290.3	70.1	0.19	0%
2011	70.3	1.7%	7,722.5	70.2	-0.05	0%
2012	70.6	-0.9%	8,359.8	70.3	-0.28	0%
2013	70.7	-0.9%	8,722.1	70.5	-0.20	0%
2014	71.7	-0.9%	9,211.3	70.6	-1.07	-1%
2015						
	68.0	0.17%	Promedios----->		-0.04	-65.9%
		-0.2%				

Estimados: I PRONOSTICO MODERADO OPTIMISTA PESIMISTA
AÑOS LINEAL

2015	72.1	70.6	71.6	69.6	71.8
2016	72.3	70.6	71.6	69.4	68.5
2017	72.5	70.6	71.6	69.1	68.7
2018	72.7	70.6	71.7	68.8	68.9
2019	72.9	70.6	71.8	68.5	69.1
2020	73.2	70.5	71.9	68.7	69.3
2021	73.4	70.5	71.9	68.8	69.5
2022	73.6	70.4	72.0	68.9	69.7
2023	73.8	70.4	72.1	69.1	69.9
2024	74.0	70.4	72.2	69.2	70.1
2025	74.3	70.3	72.2	69.3	70.3
2026	74.5	70.3	72.3	69.5	70.5
2027	74.7	70.3	72.4	69.6	70.7
2028	74.9	70.2	72.5	69.8	70.9
2029	75.1	70.2	72.5	69.9	71.2
2030	75.4	70.1	72.6	70.0	71.2
2031	75.6	70.1	72.7	70.2	71.2
2032	75.8	70.1	72.8	70.3	72.2

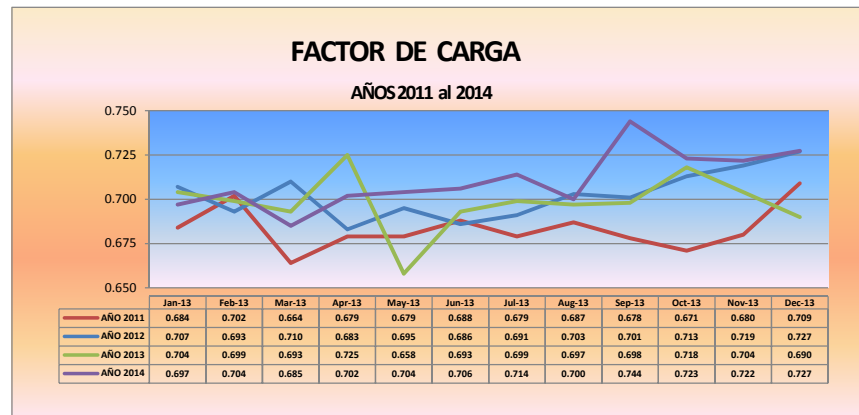
AÑOS	VALOR	TASA
MODERADO		
2012-2014	3	71.7 0.00%
2015-2016	12	71.2 -0.05%
PERIODO		-0.05%
OPTIMO		
2012-2014	3	70.6 -0.01%
2015-2016	12	71.5 0.11%
PERIODO		0.09%
PESIMISTA		
2012-2014	5	69.2 -0.39%
2015-2016	10	70.6 0.19%
PERIODO		0.05%



	PROMEDIO	VARIACION ANUAL
(1970-2010)	67.7	0.16%
(1970-1998)	66.6	0.10%
(1999-2008)	70.6	0.47%
(1999-2009)	70.4	0.15%
(1999-2010)	70.4	0.29%
(2000-2005)	71.0	0.70%
(2000-2008)	70.9	-0.41%
(2006-2010)	70.6	0.84%
(2009-2014)	70.3	0.24%
(2010-2014)	70.6	0.84%

FACTOR DE CARGA DEL SISTEMA INTERCONECTADO POR MESES (ENERO - DICIEMBRE) AÑOS 2011 -2014

		FC		FC	FC			FC
	AÑO 2011	AÑO 2012		AÑO 2013	AÑO 2013			AÑO 2014
	REGISTRO	REGISTRO			REGISTRO		Estimado	REGISTRO
Ene	0.684	Jan-12	0.707	Jan-13	0.704	Jan-14	0.704	0.697
Feb	0.702	Feb-12	0.693	Feb-13	0.699	Jan-14	0.699	0.704
Mar	0.664	Mar-12	0.710	Mar-13	0.693	Jan-14	0.693	0.685
Abr	0.679	Apr-12	0.683	Apr-13	0.725	Jan-14	0.725	0.702
May	0.679	May-12	0.695	May-13	0.658	Jan-14	0.658	0.704
Jun	0.688	Jun-12	0.686	Jun-13	0.693	Jan-14	0.693	0.706
jul	0.679	Jul-12	0.691	Jul-13	0.699	Jan-14	0.699	0.714
Ago	0.687	Aug-12	0.703	Aug-13	0.697	Jan-14	0.697	0.700
Sept	0.678	Sep-12	0.701	Sep-13	0.698	Jan-14	0.698	0.744
Oct	0.671	Oct-12	0.713	Oct-13	0.718	Jan-14	0.700	0.723
Nov	0.680	Nov-12	0.719	Nov-13	0.704	Jan-14	0.708	0.722
Dec	0.709	Dec-12	0.727	Dec-13	0.690	Jan-14	0.727	0.727
PROMEDIO	0.683		0.702		0.698		0.700	0.711
Maximo	0.709		0.727		0.725		0.727	0.744



CUADRO N°. 16
PREMISAS Y PROYECCIONES DE PERDIDAS DE ENERGIA

PREMISAS DE PROYECCIÓN DE PÉRDIDAS DE ENERGÍA

AÑO	Ventas de Energia Sectores Basicos	PERDIDAS		
		Total	Transmision	Distribución
2001	3,839	1,066	132.00	934.01
2002	4,014	1,109	191.64	917.08
2003	4,201	1,036	153.33	882.44
2004	4,475	976	186.63	789.76
2005	4,658	930	160.47	769.47
2006	4,813	927	118.39	809.40
2007	5,174	911	124.18	786.70
2008	5,320	778	149.76	774.50
2009	5,602	1,016	162.09	853.67
2010	6,094	1,058	189.54	868.07
2011	6,456	1,123	169.90	952.97
2012	7,015	1,190	231.00	958.68
2013	7,326	1,224	222.00	1,002.36
2014	7,645	1,328	257.13	1,070.80
2015	8,066	1,653	353.42	1,299.70

Estructura respecto a Energia Disponible		
	Transm.	Distrib.
5,000	2.6%	18.7%
5,222	3.7%	17.6%
5,343	2.9%	16.5%
5,571	3.4%	14.2%
5,711	2.8%	13.5%
5,861	2.0%	13.8%
6,209	2.0%	12.7%
6,386	2.3%	12.1%
6,754	2.4%	12.6%
7,290	2.6%	11.9%
7,723	2.2%	12.3%
8,360	2.8%	11.5%
8,722	2.5%	11.5%
9,151	2.8%	11.7%
9,906	3.6%	13.1%

TASAS 5.4% 3.2% 7.3% 2.4% 4.8% 0.5% -3.5%

PORECENTAJE DE PÉRDIDAS RESPECTO A VENTAS SECTORES BASICOS(Relación requerida por el modelo)

Año	Total	Transmisión	Distribución	Técnicas	No Técnicas
2001	27.77%	3.44%	24.33%	8.00%	16.33%
2002	27.62%	4.77%	22.84%	8.00%	14.84%
2003	24.66%	3.65%	21.01%	8.00%	13.01%
2004	21.81%	4.17%	17.65%	8.00%	9.65%
2005	19.96%	3.44%	16.52%	8.00%	8.52%
2006	19.26%	2.46%	16.82%	7.67%	9.14%
2007	17.61%	2.40%	15.20%	7.66%	7.54%
2008	14.62%	2.81%	14.56%	7.66%	6.90%
2009	18.13%	2.89%	15.24%	7.64%	7.60%
2010	17.36%	3.11%	14.25%	7.64%	6.61%
2011	17.39%	2.63%	14.76%	7.64%	7.12%
2012	16.96%	3.29%	13.67%	7.64%	6.03%
2013	16.71%	3.03%	13.68%	7.64%	6.04%
2014	17.37%	3.36%	14.01%	7.64%	6.37%
2015	20.49%	4.38%	16.11%	7.64%	8.47%
PROMEDIO					
2001-2012	20.26%	3.26%	17.24%	7.80%	9.44%
2001-2005	24.36%	3.9%	20.5%	8.0%	12.5%
2006-2010	17.40%	2.7%	15.2%	7.7%	7.6%
2011-2014	17.79%	3.08%	14.03%	7.64%	6.39%
2015	20.49%	4.38%	16.11%	7.64%	8.47%

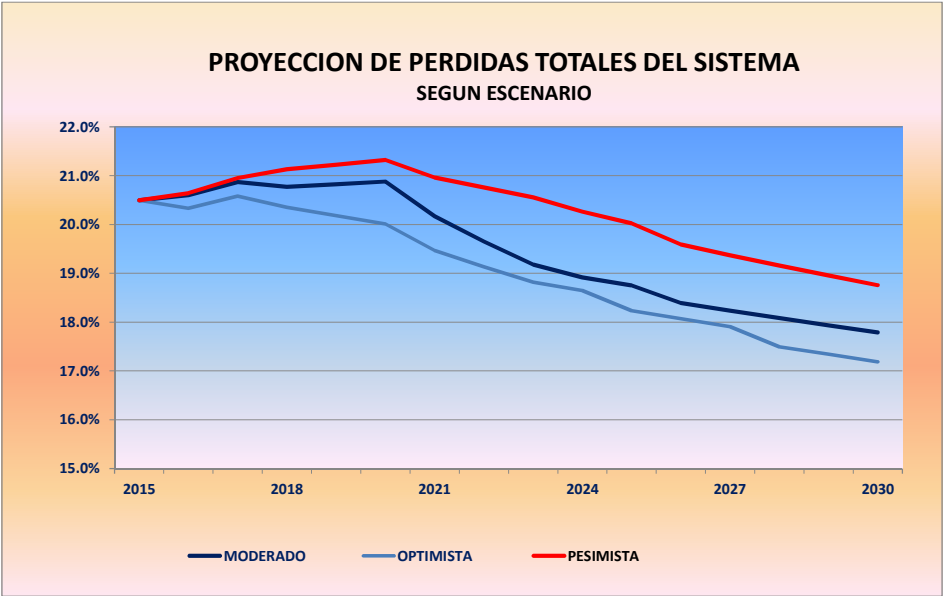
PROYECCIONES DE PERDIDAS POR ESCENARIO

AÑO	MODERADO		OPTIMISTA		PESIMISTA	
	PERDIDAS %	Δ %	PERDIDAS %	Δ %	PERDIDAS %	Δ %
2015	0.204943	1.17991	0.204943	1.17991	0.204943	1.17991
2016	0.206029	1.005299	0.203318	0.992067	0.206415	1.007180
2017	0.208727	1.013091	0.205807	1.012242	0.209493	1.014912
2018	0.207713	0.995145	0.203542	0.988997	0.211307	1.008659
2019	0.208229	1.002484	0.201803	0.991457	0.212249	1.004456
2020	0.208775	1.002621	0.200090	0.991509	0.213217	1.004561
2021	0.201656	0.965902	0.194639	0.972760	0.209602	0.983049
2022	0.196509	0.974476	0.191344	0.983071	0.207550	0.990208
2023	0.191790	0.975986	0.188196	0.983547	0.205557	0.990399
2024	0.189137	0.986170	0.186493	0.990947	0.202622	0.985722
2025	0.187517	0.991433	0.182318	0.977615	0.200226	0.988174
2026	0.183928	0.980862	0.180672	0.990971	0.195924	0.978512
2027	0.182370	0.991529	0.179053	0.991043	0.193711	0.988706
2028	0.180842	0.991622	0.174963	0.977153	0.191584	0.989020
2029	0.179344	0.991713	0.173399	0.991061	0.189539	0.989326
2030	0.177874	0.991803	0.171861	0.991132	0.187572	0.989624

PREMISAS PROYECCION ESCENARIO MODERADO					Tasas	
Transmisión aumenta al 2017 hasta no superar el					5.75%	0.07
disminuye del 2018 al 2020 a					5.25%	0.02
aumenta al 2023 hasta no > de					4.00%	-0.09
Al 2029 alcanza una tasa no > de					3.50%	-0.03
No Técnicas de Distribución disminuyen en una tasa anual de					0.75%	-0.28
Técnicas de Distribución permanecen aproximadamente en					<7.5%	
					<7.0%	
		Total	Transmisión	Distribución	Técnicas	No Técnicas
2010		17.36%	3.11%	14.2%	7.64%	6.61%
2011		17.39%	2.63%	14.8%	7.64%	7.12%
2012		16.96%	3.29%	13.7%	7.64%	6.03%
2013		16.71%	3.03%	13.7%	7.64%	6.04%
2014		17.37%	3.36%	14.0%	7.64%	6.37%
2015		20.49%	4.38%	16.1%	7.64%	8.47%
2016		20.60%	4.69%	15.9%	7.50%	8.41%
2017		20.87%	5.02%	15.8%	7.50%	8.35%
2018		20.77%	5.14%	15.6%	7.35%	8.29%
2019		20.82%	5.25%	15.6%	7.35%	8.22%
2020		20.88%	5.37%	15.5%	7.35%	8.16%
2021		20.17%	4.87%	15.3%	7.20%	8.10%
2022		19.65%	4.41%	15.2%	7.20%	8.04%
2023		19.18%	4.00%	15.2%	7.20%	7.98%
2024		18.91%	3.89%	15.0%	7.10%	7.92%
2025		18.75%	3.79%	15.0%	7.10%	7.86%
2026		18.39%	3.69%	14.7%	6.90%	7.80%
2027		18.24%	3.59%	14.6%	6.90%	7.74%
2028		18.08%	3.50%	14.6%	6.90%	7.68%
2029		17.93%	3.41%	14.5%	6.90%	7.63%
2030		17.79%	3.32%	14.5%	6.90%	7.57%
Variacion periodo completo			-1.1%	-1.6%	-0.7%	-0.9%
Variacion Anual Promedio Periodo		-0.94%	1.33%	0.33%	-0.60%	1.16%

PREMISAS PROYECCION ESCENARIO OPTIMISTA					Tasas	
Transmisión aumenta al 2017 % hasta no superar el					5.50%	0.07
disminuye del 2018 al 2020 a					4.75%	-0.02
aumenta al 2023 hasta no > de					4.00%	-0.06
Al 2029 alcanza una tasa de					3.90%	-0.02
No Técnicas de Distribución disminuyen en una tasa de					1.00%	-0.0229
Técnicas de Distribución permanecen aproximadamente en					<7.25%	
					<6.5%	
		Total	Transmisión	Distribución	Técnicas	No Técnicas
2010		17.36%	3.11%	14.2%	7.64%	6.61%
2011		17.39%	2.63%	14.8%	7.64%	7.12%
2012		16.96%	3.29%	13.7%	7.64%	6.03%
2013		16.71%	3.03%	13.7%	7.64%	6.04%
2014		17.37%	3.36%	14.0%	7.64%	6.37%
2015		20.49%	4.38%	16.1%	7.64%	8.47%
2016		20.33%	4.69%	15.6%	7.25%	8.39%
2017		20.58%	5.02%	15.6%	7.25%	8.31%
2018		20.35%	4.93%	15.4%	7.20%	8.22%
2019		20.18%	4.84%	15.3%	7.20%	8.14%
2020		20.01%	4.75%	15.3%	7.20%	8.06%
2021		19.46%	4.49%	15.0%	7.00%	7.98%
2022		19.13%	4.24%	14.9%	7.00%	7.90%
2023		18.82%	4.00%	14.8%	7.00%	7.82%
2024		18.65%	3.91%	14.7%	7.00%	7.74%
2025		18.23%	3.82%	14.4%	6.75%	7.66%
2026		18.07%	3.73%	14.3%	6.75%	7.59%
2027		17.91%	3.64%	14.3%	6.75%	7.51%
2028		17.50%	3.56%	13.9%	6.50%	7.44%
2029		17.34%	3.48%	13.9%	6.50%	7.36%
2030		17.19%	3.40%	13.8%	6.50%	7.29%
Variacion periodo completo			-1.0%	-2.3%	-1.1%	-1.2%
Variacion Anual Promedio Periodo		-1.17%	1.72%	0.45%	-0.77%	0.99%

PREMISAS PROYECCION ESCENARIO PESIMISTA				Tasas		
Transmisión aumenta al 2018 % hasta no superar el				5.75%	0.07	
disminuye del 2019 al 2020 a				5.25%	0.02	
aumenta al 2024 hasta no > de				4.75%	-0.03	
Al 2026 alcanza una tasa de				4.25%	-0.04	
No Tecnicas de Distribución disminuyen en una tasa de				0.025%	-0.0158	
Técnicas de Distribución permanecen aproximadamente en				<7.5%		
				2025	<6.5%	
		Total	Transmisión	Distribución	Técnicas	No Técnicas
2010		17.36%	3.11%	14.2%	7.64%	6.61%
2011		17.39%	2.63%	14.8%	7.64%	7.12%
2012		16.96%	3.29%	13.7%	7.64%	6.03%
2013		16.71%	3.03%	13.7%	7.64%	6.04%
2014		17.37%	3.36%	14.0%	7.64%	6.37%
2015		20.49%	4.38%	16.1%	7.64%	8.47%
2016		20.64%	4.69%	15.9%	7.50%	8.45%
2017		20.95%	5.02%	15.9%	7.50%	8.42%
2018		21.13%	5.38%	15.7%	7.35%	8.40%
2019		21.22%	5.50%	15.7%	7.35%	8.37%
2020		21.32%	5.62%	15.7%	7.35%	8.35%
2021		20.96%	5.44%	15.5%	7.20%	8.32%
2022		20.75%	5.26%	15.5%	7.20%	8.30%
2023		20.56%	5.08%	15.5%	7.20%	8.27%
2024		20.26%	4.91%	15.3%	7.10%	8.25%
2025		20.02%	4.70%	15.3%	7.10%	8.22%
2026		19.59%	4.49%	15.1%	6.90%	8.20%
2027		19.37%	4.30%	15.1%	6.90%	8.17%
2028		19.16%	4.11%	15.0%	6.90%	8.15%
2029		18.95%	3.93%	15.0%	6.90%	8.12%
2030		18.76%	3.76%	15.0%	6.90%	8.10%
Variacion periodo completo			-0.6%	-1.1%	-0.7%	-0.4%
Variacion Anual Promedio Periodo		-0.59%	1.87%	0.46%	-0.46%	1.47%



ESTADISTICAS DE ASEP						
VENTAS DE ENERGIA POR EMPRES Y TIPO DE CLIENTE						
	ENERGIA DISPONIBLE	ENERGIA RECIBIDA	PERDIDAS DISTRIBUCION DECLARADAS	DIIFERENCIA	OTROS CONSUMOS	
1.302465431	4999.9	4,594.49	711.86	15.49%	222.15	5.30
1.300715078	5221.7	4,777.63	739.12	15.47%	177.95	
1.271843851	5342.6	4,954.80	765.93	15.46%	116.51	
1.2448856	5571.0	5,117.03	659.79	12.89%	129.97	
1.225939251	5711.0	5,256.97	599.63	11.41%	169.83	
1.217728521	5861.3	5,540.28	654.93	11.82%	154.47	
1.199948746	6208.8	5,798.88	595.53	10.27%	191.17	
1.200373058	6386.4	5,963.75	688.40	11.54%	86.09	
1.205642852	6753.7	6,295.71	639.19	10.15%	214.48	
1.196367829	7290.3	6,593.88	652.73	9.90%	215.34	
1.196148761	7722.5	6,964.11	707.05	10.15%	245.92	
1.191632447	8359.8	7,547.83	749.83	9.93%	208.85	
1.19062902	8722.1	7,878.60	782.61	9.93%	219.75	
1.196959578	9150.5	8,230.19	883.70	10.74%	187.10	
1.228077556	9905.9	8187.0	971.60	11.87%	328.10	
	4.8%	4.6%	2.2%			
1.241060265	1.209926486					

2002	-0.00537039	-0.537039176
2003	-0.10732857	-10.73285684
2004	-0.11543247	-11.54324742
2005	-0.08493168	-8.493168372
2006	-0.03497927	-3.497927445
2007	-0.08580858	-8.58085802
2008	-0.16944898	-16.94489771
2009	0.24001664	24.0016637
2010	-0.04285923	-4.285923135
2011	0.00210007	0.210006685
2012	-0.02495850	-2.495850359
2013	-0.01441876	-1.441875768

ESCENARIO MODERADO

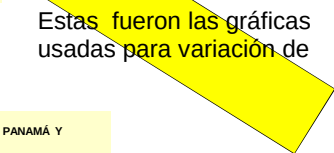
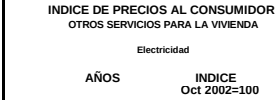
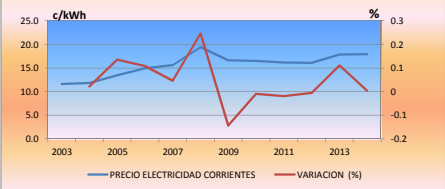
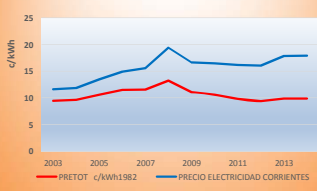
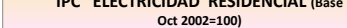
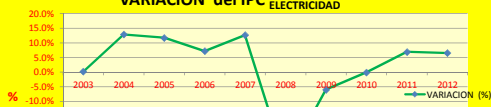
2009				
2010	-0.04285923	0.173557		
2011	0.00210007	0.173922		
2012	-0.02495850	0.169581		
2013	-0.01441876	0.167136		
2014	0.03924151	0.173695		
2015	0.17990741	0.204943		
2016	0.00529893	0.206029		
2017	0.01309111	0.208727		
2018	-0.00485484	0.207713		
2019	0.00248421	0.208229		
2020	0.00262139	0.208775		
2021	-0.03409840	0.201656		
2022	-0.02552445	0.196509		
2023	-0.02401442	0.191790		
2024	-0.01383043	0.189137		
2025	-0.00856663	0.187517	2017-2025	-0.01330503
2026	-0.01913835	0.183928		
2027	-0.00847076	0.182370	2028-2025	-0.01200880
2028	-0.00837848	0.180842		
2029	-0.00828714	0.179344		
2030	-0.00819676	0.177874		
		0.194029	19.40%	

ESCENARIO OPTIMISTA

2009				
2010	-0.04285923	0.173557		
2011	0.00210007	0.173922		
2012	-0.02495850	0.169581		
2013	-0.01441876	0.167136		
2014	0.03924151	0.173695		
2015	0.17990741	0.204943		
2016	-0.00793329	0.203318		
2017	0.01224195	0.205807		
2018	-0.01100276	0.203542		
2019	-0.00854260	0.201803		
2020	-0.00849106	0.200090		
2021	-0.02723974	0.194639		
2022	-0.01692929	0.191344		
2023	-0.01645252	0.188196		
2024	-0.00905300	0.186493		
2025	-0.02238523	0.182318	2017-2025	-0.01503401 -1.50340141
2026	-0.00902920	0.180672		
2027	-0.00895684	0.179053	2028-2025	-0.01363274 -1.36327377
2028	-0.02284711	0.174963		
2029	-0.00893900	0.173399		
2030	-0.00886772	0.171861		
		0.189166	18.92%	

2009			
2010	-0.04285923	0.173557	
2011	0.00210007	0.173922	
2012	-0.02495850	0.169581	
2013	-0.01441876	0.167136	
2014	0.03924151	0.173695	
2015	0.17990741	0.204943	
2016	0.00718030	0.206415	
2017	0.01491151	0.209493	
2018	0.00865899	0.211307	
2019	0.00445638	0.212249	
2020	0.00456093	0.213217	
2021	-0.01695141	0.209602	
2022	-0.00979237	0.207550	
2023	-0.00960124	0.205557	
2024	-0.01427801	0.202622	
2025	-0.01182577	0.200226	
2026	-0.02148777	0.195924	
2027	-0.01129396	0.193711	
2028	-0.01098034	0.191584	
2029	-0.01067426	0.189539	
2030	-0.01037572	0.187572	
		0.202438	20.24%
2017-2025	-0.00563947		
2028-2025	-0.01459947		

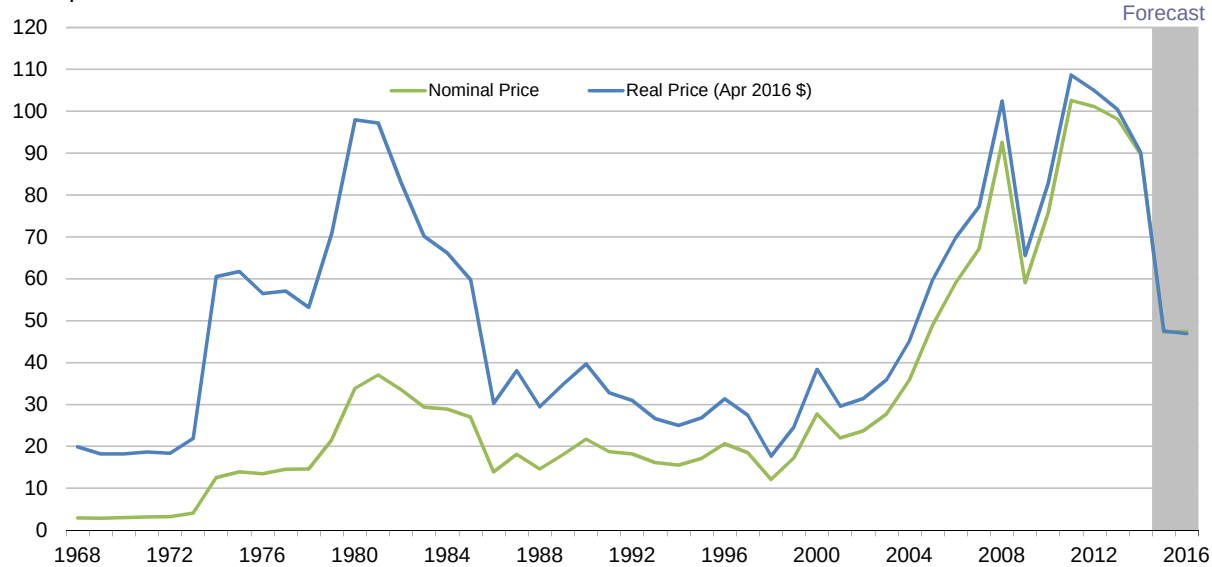
EVOLUCIÓN DE PRECIOS DE LA ELECTRICIDAD

15.3:11962.8%

ANOS	INDICE Oct 2002=100
2003	105.5
2004	105.7
2005	119.3
2006	133.3
2007	142.9
2008	161.0
2009	110.7
2010	104.1
2011	104.0
2012	111.2
2013	118.5
2014	113.5

Annual Imported Crude Oil Price

dollars per barrel



EIA Short-Term Energy Outlook, April 2016



Year	Consumer Price	Imported Crude Oil Price (\$/barrel)		
	Index (1982-84=1)	Nominal	Real	
1968	0.348	2.90	19.86	
1969	0.367	2.80	18.18	
1970	0.388	2.96	18.18	
1971	0.405	3.17	18.65	
1972	0.418	3.22	18.36	
1973	0.444	4.08	21.90	
1974	0.493	12.52	60.52	
1975	0.538	13.95	61.75	
1976	0.569	13.48	56.44	
1977	0.606	14.53	57.11	
1978	0.652	14.57	53.22	
1979	0.726	21.57	70.83	
1980	0.824	33.86	97.94	
1981	0.909	37.10	97.23	
1982	0.965	33.57	82.87	
1983	0.996	29.31	70.15	
1984	1.039	28.88	66.21	
1985	1.076	26.99	59.78	
1986	1.097	13.93	30.27	
1987	1.136	18.14	38.04	
1988	1.183	14.60	29.42	
1989	1.239	18.07	34.75	
1990	1.307	21.73	39.64	
1991	1.362	18.73	32.77	
1992	1.403	18.21	30.93	
1993	1.445	16.13	26.61	
1994	1.482	15.54	24.98	
1995	1.524	17.14	26.81	
1996	1.569	20.62	31.33	
1997	1.605	18.49	27.45	
1998	1.630	12.07	17.64	
1999	1.666	17.27	24.71	
2000	1.722	27.72	38.37	
2001	1.770	21.99	29.60	
2002	1.799	23.71	31.42	
2003	1.840	27.73	35.91	
2004	1.889	35.89	45.28	
2005	1.953	48.89	59.66	
2006	2.016	59.05	69.82	
2007	2.073	67.19	77.22	
2008	2.153	92.57	102.49	
2009	2.146	59.04	65.57	
2010	2.181	75.83	82.86	
2011	2.249	102.58	108.68	
2012	2.296	101.09	104.92	
2013	2.330	98.12	100.37	Forecast
2014	2.367	89.63	90.24	Values
2015	2.370	47.28	47.54	1
2016	2.412	47.48	46.91	1
Base CPI (4/2016)	2.383			

EIA Short-Term Energy Outlook, April 2016

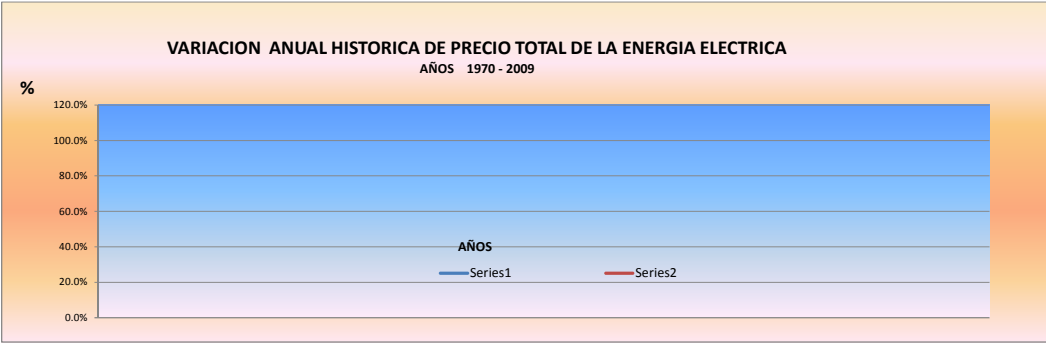
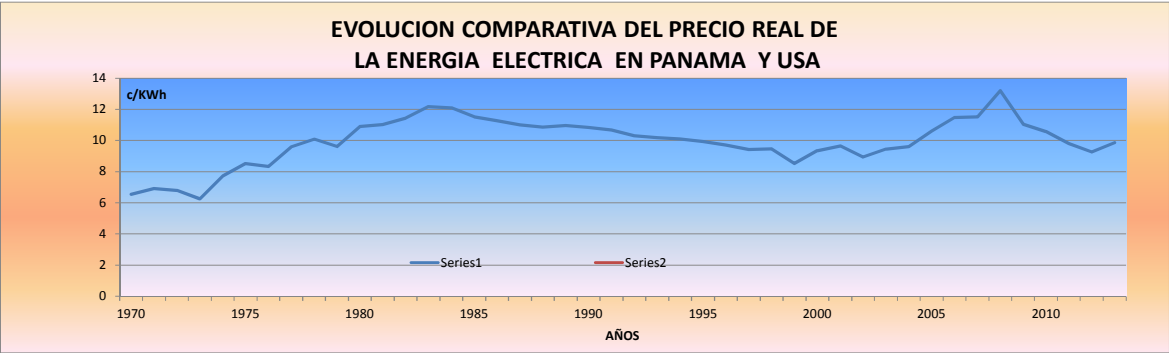
Forecast / estimated values shown in blue

Real Price (Apr 2016 \$)

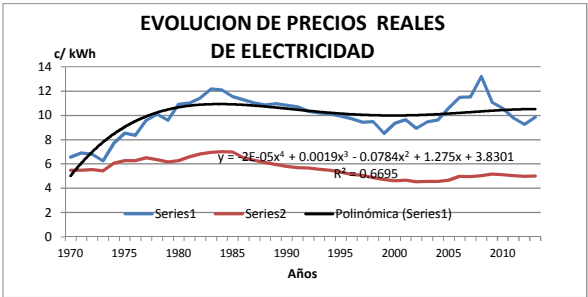
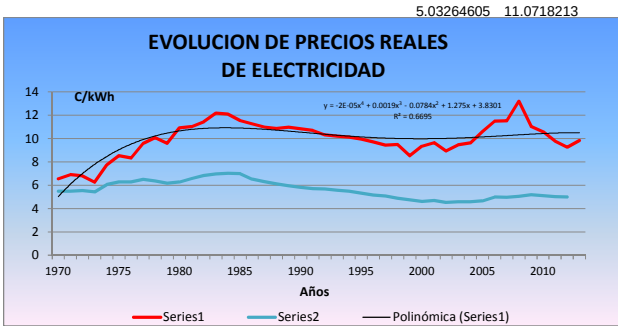
See Notes and Sources for more information

CUADRO N° 18
EVOLUCION DE PRECIO REAL DE LA ENERGIA ELECTRICA EE

Precio ponderado real de energía eléctrica															
DATOS	AÑOS	PRETOT			USA ELECTRICAL REAL				DIFERENCIAL DE VARIACION ANUAL			Consumer Price Index (Urban) Year		Implicit Price Deflator Year	
		Including Subsidios			Including Taxes				ANUAL			(Index 1982-1984 = 100)		2013 = 100)	
		Balboas/MWh constantes de 1982	Variacion anual de de precios	Balboas/MWh constantes de 2002	(Cents per Kilowatthour, (Nominal Prices)	Real(Cents per Kilowatthour r, (Dic año 2015)	(Cents per Kilowatthour, (Dic. 2015)	Variacion anual de de precios	CAMBIO ANUAL	TASA PROMEDIO					
1	1970	6.56			2.20	13.51	5.47				0.3880	38.80	0.1657	16.57	13.27
2	1971	6.92	5.5%		2.30	13.53	5.48	0.2%	5.3%		0.4050	40.50	0.1730	17.30	13.30
3	1972	6.80	-1.7%		2.40	13.68	5.54	1.1%	-2.8%		0.4180	41.80	0.1785	17.85	13.44
4	1973	6.26	-7.9%		2.50	13.42	5.44	-1.9%	-6.0%		0.4440	44.40	0.1897	18.97	
5	1974	7.72	23.4%		3.10	14.99	6.07	11.7%	11.7%		0.4930	49.30	0.2106	21.06	
6	1975	8.53	10.5%		3.50	15.50	6.28	3.4%	7.1%		0.5383	53.83	0.2299	22.99	
7	1976	8.35	-2.2%		3.70	15.49	6.27	-0.1%	-2.1%		0.5693	56.93	0.2432	24.32	
8	1977	9.60	15.0%		4.09	16.07	6.51	3.7%	11.2%		0.6062	60.62	0.2589	25.89	
9	1978	10.09	5.1%		4.30	15.72	6.37	-2.2%	7.3%		0.6524	65.24	0.2787	27.87	
10	1979	9.61	-4.8%		4.64	15.22	6.16	-3.2%	-1.6%		0.7258	72.58	0.3100	31.00	
11	1980	10.92	13.7%		5.36	15.50	6.28	1.8%	11.8%		0.8238	82.38	0.3519	35.19	
12	1981	11.03	1.0%		6.20	16.25	6.58	4.9%	-3.9%		0.9093	90.93	0.3884	38.84	
13	1982	11.45	3.8%		6.84	16.89	6.84	3.9%	-0.1%		0.9653	96.53	0.4123	41.23	
14	1983	12.17	6.4%		7.19	17.20	6.97	1.9%	4.5%		0.9958	99.58	0.4254	42.54	
15	1984	12.10	-0.6%		7.56	17.33	7.02	0.8%	-1.4%		1.0393	103.93	0.4439	44.39	
16	1985	11.53	-4.7%		7.79	17.26	6.99	-0.4%	-4.3%		1.0760	107.60	0.4596	45.96	
17	1986	11.28	-2.1%		7.41	16.09	6.52	-6.8%	4.6%		1.0969	109.69	0.4685	46.85	
18	1987	11.01	-2.5%		7.41	15.54	6.30	-3.4%	0.9%		1.1362	113.62	0.4853	48.53	
19	1988	10.86	-1.3%		7.49	15.09	6.11	-2.9%	1.6%		1.1828	118.28	0.5052	50.52	
20	1989	10.98	1.1%		7.64	14.70	5.95	-2.6%	3.7%		1.2394	123.94	0.5294	52.94	
21	1990	10.84	-1.2%		7.85	14.32	5.80	-2.6%	1.3%		1.3066	130.66	0.5581	55.81	
22	1991	10.69	-1.4%		8.05	14.09	5.71	-1.5%	0.2%		1.3617	136.17	0.5816	58.16	
23	1992	10.32	-3.5%		8.23	13.98	5.66	-0.8%	-2.7%		1.4031	140.31	0.5993	59.93	
24	1993	10.20	-1.2%		8.34	13.75	5.57	-1.7%	0.5%		1.4448	144.48	0.6171	61.71	
25	1994	10.11	-0.8%		8.40	13.51	5.47	-1.7%	0.9%		1.4823	148.23	0.6331	63.31	
26	1995	9.94	-1.7%		8.40	13.14	5.32	-2.8%	1.1%		1.5238	152.38	0.6509	65.09	
27	1996	9.72	-2.3%		8.36	12.70	5.14	-3.4%	1.1%		1.5686	156.86	0.6700	67.00	
28	1997	9.43	-2.9%		8.43	12.52	5.07	-1.5%	-1.5%		1.6053	160.53	0.6857	68.57	
29	1998	9.48	0.5%		8.26	12.08	4.89	-3.5%	4.0%		1.6301	163.01	0.6963	69.63	
30	1999	8.52	-10.1%		8.16	11.68	4.73	-3.3%	-6.8%		1.6658	166.58	0.7115	71.15	
31	2000	9.35	9.8%		8.24	11.40	4.62	-2.4%	12.2%		1.7219	172.19	0.7355	73.55	
32	2001	9.65	3.2%		8.58	11.56	4.68	1.4%	1.8%		1.7704	177.04	0.7562	75.62	
33	2002	8.94	-7.3%		8.45	11.19	4.53	-3.2%	-4.2%		1.7987	179.87	0.7683	76.83	
34	2003	9.46	5.8%		8.72	11.29	4.57	0.9%	4.9%		1.8400	184.00	0.7859	78.59	
35	2004	9.62	1.8%		8.95	11.29	4.57	-0.1%	1.8%		1.8891	188.91	0.8069	80.69	
36	2005	10.62	10.4%		9.43	11.51	4.66	2.0%	8.4%		1.9527	195.27	0.8341	83.41	
37	2006	11.49	8.1%		10.40	12.30	4.98	6.9%	1.2%		2.0156	201.56	0.8609	86.09	
38	2007	11.53	0.3%		10.65	12.24	4.96	-0.5%	0.8%		2.0734	207.34	0.8857	88.57	
39	2008	13.21	14.6%		11.26	12.47	5.05	1.9%	12.7%		2.1525	215.25	0.9194	91.94	
40	2009	11.06	-16.3%		11.51	12.78	5.18	2.5%	-18.8%		2.1456	214.56	0.9165	91.65	12.56
41	2010	10.58	-4.4%		11.54	12.61	5.11	-1.4%	-3.0%		2.1808	218.08	0.9315	93.15	12.38
42	2011	9.79	-7.4%		11.72	12.41	5.03	-1.5%	-5.9%		2.2493	224.93	0.9608	96.08	12.20
43	2012	9.26	-5.4%		11.88	12.33	4.99	-0.7%	-4.7%		2.2960	229.60	0.9807	98.07	12.11
44	2013	9.86	6.4%		12.13	12.40	5.02	0.6%	5.8%		2.3296	233.00	0.9952	99.52	12.18
45	2014				12.52	12.61					2.3671	236.80	1.0115	101.15	12.38
46	2015				12.61	12.68									
TASA CRECIMIENTO						10.47	5.18	-0.1%	-0.1%	2.1%	2.3349	234.11	1.0000	2.341	



CUADRO No. 18
PRECIOS REALES HISTORICOS DE LA ELECTRICIDAD



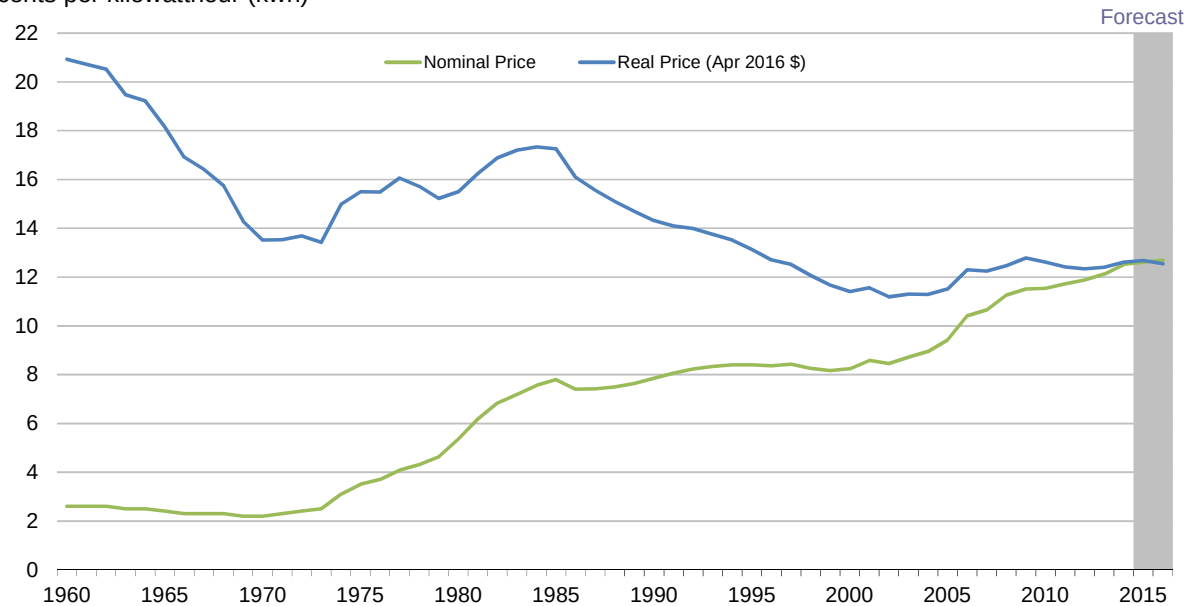
CUADRO N° 18 A
EVOLUCION DE PRECIO REAL DE LA ENERGIA ELECTRICA (2007=100)

PRECIO PONDERADO REAL DE LA ENERGIA ELECTRICA (EE)

DATOS	AÑOS	FACTOT	GWHTOT	IPC				PRETOT c/kWh (Incluye Subsidios)								USA ELECTRICAL REAL				DIFERENCIAL DE VARIACION ANUAL		Consumer Price Index (Urban) Year		Implicit Price Deflator Year			
		Facturación de energía eléctrica	Ventas de energía eléctrica					PRECIOS CORRIENTES	Balboas/MWh Constantes 1987=100		Balboas/MWh Constantes Oct. 2002=100		Balboas/MWh Constantes Oct. 2007=100		Balboas/MWh Constantes Oct. 2013=100		Including Taxes					CAMBIO ANUAL	TASA PROMEDIO		(Index 1982-1984 = 100)	2007 = 100)	
				1987=100	Oct. 2002 =100	2007=100	2013=100										(Cents per Kilowatt our, (Nominal Prices)	(Cents per Kilowatt our, (Bajo 2015)	(Cents per Kilowatt our, (en dolares dela año 2007)	Variacion anual de de precios							
				Mill de Balboas	GWh	c/kWh	Indice		Variacion Anual	Indice	Variacion Anual	Indice	Variacion Anual	Indice	Variacion Anual												
1	1970	20.8	710.3	42.2	36.5	33.0	24.7	2.93	1.24		8.03		8.88		11.86		2.20	13.51	0.41					0.3880	38.80	18.7128	1,871.28
2	1971	24.4	775.4	43.0	37.2	33.6	25.2	3.15	1.35	9.5%	8.47	5.5%	9.36	5.5%	12.51	5.5%	2.30	13.53	0.45	9.1%	-3.7%			0.4050	40.50	19.5327	1,953.27
3	1972	28.4	869.8	45.4	39.2	35.5	26.6	3.27	1.48	9.6%	8.32	-1.7%	9.20	-1.7%	12.29	-1.7%	2.40	13.68	0.48	7.7%	-9.4%			0.4180	41.80	20.1597	2,015.97
4	1973	31.6	984.0	48.5	41.9	37.9	28.4	3.21	1.56	5.1%	7.66	-7.9%	8.47	-7.9%	11.32	-7.9%	2.50	13.42	0.54	10.6%	-18.6%			0.4440	44.40	21.4137	2,141.37
5	1974	45.6	980.7	56.9	49.2	44.5	33.3	4.65	2.65	69.9%	9.45	23.4%	10.45	23.4%	13.97	23.4%	3.10	14.99	0.74	37.7%	-14.3%			0.4930	49.30	23.7769	2,377.69
6	1975	56.4	1,041.0	60.0	51.9	46.9	35.1	5.42	3.25	22.9%	10.45	10.5%	11.55	10.5%	15.43	10.5%	3.50	15.50	0.91	23.3%	-12.8%			0.5383	53.83	25.9593	2,595.93
7	1976	63.0	1,143.1	62.4	53.9	48.8	36.5	5.51	3.44	5.8%	10.22	-2.2%	11.30	-2.2%	15.09	-2.2%	3.70	15.49	1.02	11.8%	-14.0%			0.5693	56.93	27.4584	2,745.84
8	1977	83.7	1,260.1	65.4	56.5	51.1	38.3	6.64	4.34	26.3%	11.75	15.0%	12.99	15.0%	17.36	15.0%	4.09	16.07	1.19	17.6%	-2.6%			0.6062	60.62	29.2348	2,923.48
9	1978	92.5	1,268.2	68.3	59.0	53.4	40.0	7.29	4.98	14.7%	12.36	5.1%	13.66	5.1%	18.25	5.1%	4.30	15.72	1.35	13.3%	-8.2%			0.6524	65.24	31.4654	3,146.54
10	1979	111.1	1,480.9	73.8	63.8	57.7	43.2	7.50	5.54	11.1%	11.76	-4.8%	13.00	-4.8%	17.37	-4.8%	4.64	15.22	1.62	19.9%	-24.7%			0.7258	72.58	35.0062	3,500.62
11	1980	143.4	1,472.3	84.3	72.9	65.9	49.3	9.74	8.21	48.3%	13.37	13.7%	14.78	13.7%	19.75	13.7%	5.36	15.50	2.13	31.2%	-17.5%			0.8238	82.38	39.7327	3,973.27
12	1981	164.3	1,554.3	90.6	78.3	70.8	53.0	10.57	9.58	16.6%	13.50	1.0%	14.92	1.0%	19.94	1.0%	6.20	16.25	2.72	27.8%	-26.8%			0.9093	90.93	43.8562	4,385.62
13	1982	191.7	1,674.8	94.5	81.7	73.9	55.3	11.45	10.82	12.9%	14.01	3.8%	15.49	3.8%	20.70	3.8%	6.84	16.89	3.18	17.1%	-13.3%			0.9653	96.53	46.5571	4,655.71
14	1983	230.3	1,850.6	96.6	83.5	75.5	56.5	12.44	12.02	11.1%	14.91	6.4%	16.48	6.4%	22.02	6.4%	7.19	17.20	3.45	8.4%	-2.0%			0.9958	99.58	48.0280	4,802.80
15	1984	228.4	1,816.5	98.2	84.9	76.8	57.5	12.57	12.35	2.7%	14.81	-0.6%	16.38	-0.6%	21.88	-0.6%	7.56	17.33	3.79	9.7%	-10.4%			1.0393	103.93	50.1260	5,012.60
16	1985	235.1	1,944.1	99.1	85.7	77.5	58.0	12.09	11.98	-2.9%	14.12	-4.7%	15.61	-4.7%	20.85	-4.7%	7.79	17.26	4.04	6.7%	-11.4%			1.0760	107.60	51.8944	5,189.44
17	1986	242.0	2,045.1	99.1	85.7	77.5	58.0	11.83	11.73	-2.1%	13.82	-2.1%	15.27	-2.1%	20.41	-2.1%	7.41	16.09	3.92	-3.1%	1.0%			1.0969	109.69	52.9032	5,290.32
18	1987	255.2	2,191.1	100.0	86.4	78.2	58.5	11.65	11.65	-0.7%	13.48	-2.5%	14.90	-2.5%	19.90	-2.5%	7.41	15.54	4.06	3.6%	-6.1%			1.1362	113.62	54.7962	5,479.62
19	1988	238.3	2,063.1	100.5	86.9	78.6	58.8	11.55	11.61	-0.3%	13.30	-1.3%	14.70	-1.3%	19.64	-1.3%	7.49	15.09	4.27	5.2%	-6.6%			1.1828	118.28	57.0428	5,704.28
20	1989	231.8	1,983.6	100.6	86.9	78.7	58.9	11.69	11.76	1.3%	13.44	1.1%	14.86	1.1%	19.85	1.1%	7.64	14.70	4.57	6.9%	-5.8%			1.2394	123.94	59.7758	5,977.58
21	1990	238.8	2,053.0	101.4	87.6	79.3	59.3	11.63	11.79	0.3%	13.27	-1.2%	14.67	-1.2%	19.60	-1.2%	7.85	14.32	4.95	8.3%	-9.5%			1.3066	130.66	63.0152	6,301.52
22	1991	254.0	2,185.9	102.7	88.8	80.3	60.1	11.62	11.93	1.2%	13.09	-1.4%	14.47	-1.4%	19.34	-1.4%	8.05	14.09	5.29	6.9%	-8.3%			1.3617	136.17	65.6718	6,567.18
23	1992	263.8	2,311.4	104.5	90.3	81.7	61.1	11.41	11.93	-0.1%	12.64	-3.5%	13.97	-3.5%	18.66	-3.5%	8.23	13.98	5.57	5.3%	-8.8%			1.4031	140.31	67.6693	6,766.93
24	1993	281.7	2,486.2	105.0	90.8	82.1	61.4	11.33	11.90	-0.2%	12.49	-1.2%	13.80	-1.2%	18.44	-1.2%	8.34	13.75	5.81	4.3%	-5.4%			1.4448	144.48	69.6788	6,967.88
25	1994	304.2	2,671.9	106.4	92.0	83.2	62.3	11.39	12.11	1.8%	12.38	-0.8%	13.69	-0.8%	18.29	-0.8%	8.40	13.51	6.01	3.4%	-4.3%			1.4823	148.23	71.4874	7,148.74
26	1995	324.3	2,869.6	107.4	92.8	84.0	62.8	11.30	12.14	0.2%	12.17	-1.7%	13.46	-1.7%	17.98	-1.7%	8.40	13.14	6.18	2.8%	-4.4%			1.5238	152.38	73.4929	7,349.29
27	1996	333.9	2,984.0	108.8	94.0	85.1	63.7	11.19	12.17	0.3%	11.90	-2.3%	13.15	-2.3%	17.58	-2.3%	8.36	12.70	6.32	2.4%	-4.7%			1.5686	156.86	75.6512	7,565.12
28	1997	362.9	3,302.1	110.1	95.2	86.1	64.4	10.99	12.10	-0.6%	11.55	-2.9%	12.77	-2.9%	17.06	-2.9%	8.43	12.52	6.53	3.2%	-6.2%			1.6053	160.53	77.4196	7,741.96
29	1998	377.3	3,392.3	110.9	95.9	86.7	64.9	11.12	12.33	1.9%	11.60	0.5%	12.83	0.5%	17.14	0.5%	8.26	12.08	6.49	-0.5%	1.0%			1.6301	163.01	78.6173	7,861.73
30	1999	362.8	3,578.0	112.5	97.2	88.0	65.8	10.14	11.41	-7.5%	10.43	-10.1%	11.53	-10.1%	15.40	-10.1%	8.16	11.68	6.56	1.0%	-11.1%			1.6658	166.58	80.3415	8,034.15
31	2000	429.4	3,801.1	114.2	98.7	89.3	66.8	11.30	12.90	13.1%	11.45	9.8%	12.65	9.8%	16.91	9.8%	8.24	11.40	6.84	4.3%	5.5%			1.7219	172.19	83.0463	8,304.63
32	2001	459.9	3,933.9	114.5	99.0	89.5	67.0	11.69	13.39	3.8%	11.81	3.2%	13.06	3.2%	17.45	3.2%	8.58	11.56	7.33	7.2%	-4.0%			1.7704	177.04	85.3854	8,538.54
33	2002	450.2	4,113.0	115.7	100.0	90.5	67.7	10.95	12.66	-5.4%	10.95	-7.3%	12.10	-7.3%	16.17	-7.3%	8.45	11.19	7.33	0.0%	-7.3%			1.7987	179.87	86.7479	8,674.79
34	2003	499.2	4,306.8	115.8	100.1	90.5	67.8	11.59	13.42	6.0%	11.58	5.8%	12.80	5.8%	17.11	5.8%	8.72	11.29	7.74	5.6%	0.2%			1.8400	184.00	88.7413	8,874.13
35	2004	544.3	4,594.6	116.3	100.5	90.9	68.1	11.85	13.78	2.6%	11.79	1.8%	13.03	1.8%	17.41	1.8%	8.95	11.29	8.15	5.3%	-3.6%			1.8891	188.91	91.1086	9,110.86
36	2005	643.3	4,781.1	119.7	103.5	93.6	70.0	13.45	16.11	16.9%	13.01	10.3%	14.38	10.3%	19.21	10.3%	9.43	11.51	8.88	8.9%	1.4%			1.9527	195.27	94.1751	9,417.51
37	2006	735.9	4,933.5	122.7	106.1	95.9	71.8	14.92	18.30	13.6%	14.07	8.2%	15.55	8.2%	20.78	8.2%	10.40	12.30	10.11	13.9%	-5.7%			2.0156	201.56	97.2096	9,720.96
38	2007	826.5	5,297.9	127.9	110.5	100.0	74.8	15.60	19.95	9.0%	14.11	0.3%	15.60	0.3%	20.85	0.3											

Annual Residential Electricity Price

cents per kilowatthour (kwh)



Year	Consumer Price	Residential Electricity Price (¢/kwh)	
	Index (1982-84=1)	Nominal	Real
1960	0.296	2.60	20.93
1961	0.299	2.60	20.72
1962	0.302	2.60	20.52
1963	0.306	2.50	19.47
1964	0.310	2.50	19.22
1965	0.315	2.40	18.16
1966	0.324	2.30	16.92
1967	0.334	2.30	16.41
1968	0.348	2.30	15.75
1969	0.367	2.20	14.29
1970	0.388	2.20	13.51
1971	0.405	2.30	13.53
1972	0.418	2.40	13.68
1973	0.444	2.50	13.42
1974	0.493	3.10	14.99
1975	0.538	3.50	15.50
1976	0.569	3.70	15.49
1977	0.606	4.09	16.07
1978	0.652	4.30	15.72
1979	0.726	4.64	15.22
1980	0.824	5.36	15.50
1981	0.909	6.20	16.25
1982	0.965	6.84	16.89
1983	0.996	7.19	17.20
1984	1.039	7.56	17.33
1985	1.076	7.79	17.26
1986	1.097	7.41	16.09
1987	1.136	7.41	15.54
1988	1.183	7.49	15.09
1989	1.239	7.64	14.70
1990	1.307	7.85	14.32
1991	1.362	8.05	14.09
1992	1.403	8.23	13.98
1993	1.445	8.34	13.75
1994	1.482	8.40	13.51
1995	1.524	8.40	13.14
1996	1.569	8.36	12.70
1997	1.605	8.43	12.52
1998	1.630	8.26	12.08
1999	1.666	8.16	11.68
2000	1.722	8.24	11.40
2001	1.770	8.58	11.56
2002	1.799	8.45	11.19
2003	1.840	8.72	11.29
2004	1.889	8.95	11.29
2005	1.953	9.43	11.51
2006	2.016	10.40	12.30
2007	2.073	10.65	12.24
2008	2.153	11.26	12.47
2009	2.146	11.51	12.78
2010	2.181	11.54	12.61
2011	2.249	11.72	12.41
2012	2.296	11.88	12.33
2013	2.330	12.13	12.40
2014	2.367	12.52	12.61
2015	2.370	12.61	12.68
2016	2.412	12.70	12.54
Base CPI (4/2016)	2.383		

**Forecast
Values**
1
1

EIA Short-Term Energy Outlook, April 2016
Forecast / estimated values shown in **blue**
Real Price (Apr 2016 \$)
See Notes and Sources for more information

ref2015.d021915a

ref2015.d021915a	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
Report	Annual Energy Outlook 2015																													
Scenario	ref2015				Reference case																									
Datekey	d021915a																													
Release Date	April 2015																													

8. Electricity Supply, Disposition, Prices, and Emissions

(billion kilowatthours, unless otherwise noted)

Supply, Disposition, Prices, and Emissions	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2013-2040	
Net Generation by Fuel Type																															
Electric Power Sector 1/																															
Power Only 2/																															
Coal	1478	1550	1579	1556	1526	1558	1576	1636	1670	1675	1681	1687	1692	1685	1683	1681	1679	1676	1674	1671	1668	1666	1665	1665	1666	1664	1665	1663	1663	0.3%	
Petroleum	18	22	24	22	22	19	20	14	14	14	14	15	15	15	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	-1.6%	
Natural Gas 3/	1000	894	890	900	933	902	920	897	867	864	876	895	921	954	978	1005	1032	1054	1073	1083	1093	1107	1122	1143	1163	1177	1185	1189	1198	1.1%	
Nuclear Power	769	789	784	774	781	795	798	801	804	807	808	808	808	808	808	808	808	808	810	810	810	811	812	813	817	821	825	833	0.2%		
Pumped Storage/Other 4/	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	-0.1%		
Renewable Sources 5/	458	483	492	525	561	587	605	613	620	630	635	639	644	648	653	658	664	670	679	691	703	715	727	733	744	760	777	796	805	1.9%	
Distributed Generation (Natural Gas)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	--	
Total	3726	3741	3771	3779	3827	3865	3921	3964	3978	3993	4018	4047	4083	4113	4140	4170	4200	4226	4252	4273	4292	4317	4343	4372	4405	4436	4467	4493	4518	0.7%	
Combined Heat and Power 6/																															
Coal	22	22	24	24	23	24	24	25	26	25	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	25	26	26	26	0.5%	
Petroleum	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-4.0%	
Natural Gas	132	126	143	144	140	135	133	133	133	133	133	133	133	133	134	134	134	134	134	134	134	134	134	134	134	134	133	133	133	0.2%	
Renewable Sources	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8	8	8	1.7%	
Total	164	158	173	175	170	166	164	165	166	165	166	167	167	167	168	168	168	168	168	168	168	168	168	168	168	168	167	167	167	0.2%	
Total Net Electric Power Sector Generation	3890	3899	3944	3954	3997	4031	4086	4129	4144	4158	4184	4214	4250	4280	4308	4338	4368	4394	4420	4441	4460	4485	4511	4540	4573	4604	4634	4660	4686	0.7%	
Less Direct Use	13	13	13	13	13	13	13	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	0.2%	
Net Available to the Grid	3877	3886	3931	3941	3984	4018	4073	4116	4131	4145	4170	4200	4236	4267	4295	4324	4354	4381	4406	4427	4447	4471	4498	4527	4559	4591	4621	4646	4672	0.7%	
End-Use Sector 7/																															
Coal	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	0.0%	
Petroleum	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	-0.4%	
Natural Gas	95	98	101	103	106	109	112	113	116	119	122	126	130	134	139	144	150	156	163	169	176	184	191	199	207	215	222	228	235	3.3%	
Other Gaseous Fuels 8/	11	11	11	11	11	11	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	2.1%	
Renewable Sources 9/	39	42	44	47	50	51	51	52	53	54	55	57	58	60	62	64	66	68	70	72	75	77	80	82	85	88	91	94	97	3.1%	
Other 10/	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0.0%	
Total End-Use Sector Net Generation	164	171	175	181	186	199	201	204	207	211	216	221	227	233	239	247	254	262	271	280	290	299	309	320	330	341	351	360	370	2.9%	
Less Direct Use	126	132	136	141	146	159	162	163	167	171	175	179	185	190	196	203	210	217	225	233	241	250	259	269	278	287	296	305	313	3.3%	
Total Sales to the Grid	38	39	39	40	40	39	40	40	40	40	41	41	42	42	43	43	44	45	45	46	47	48	49	50	51	52	53	54	55	56	1.4%
Total Net Electricity Generation by Fuel																															
Coal	1514	1586	1616	1594	1563	1595	1614	1674	1709	1714	1720	1726	1732	1724	1723	1721	1718	1715	1713	1710	1708	1705	1704	1704	1705	1702	1704	1702	1702	0.3%	
Petroleum	23	27	28	25	25	23	23	18	18	18	18	18	18	18	18	18	18	18	18	17	17	17	17	18	18	18	18	18	18	-1.6%	
Natural Gas	1228	1118	1133	1147	1179	1148	1165	1144	1117	1116	1132	1155	1184	1223	1252	1284	1317	1346	1371	1388	1405	1426	1449	1478	1507	1528	1543	1553	1569	1.3%	
Nuclear Power	769	789	784	774	781	795	798	801	804	807	808	808	808	808	808	808	808	808	810	810	810	811	812	813	817	821	825	833	0.2%		
Renewable Sources 5,9/	501	530	542	578	618	644	663	671	679	690	698	703	710	716	723	729	737	746	756	770	785	800	814	823	836	855	876	897	909	2.0%	
Other 11/	19	20	17	17	17	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0.8%	
Total Net Electricity Generation	4055	4070	4119	4134	4183	4229	4287	4333	4351	4370	4400	4435	4477	4513	4548	4584	4622	4657	4691	4721	4750	4784	4821	4860	4903	4945	4985	5020	5056	0.8%	
Net Generation to the Grid	3916	3925	3970	3980	4024	4057	4112	4156	4171	4186	4211	4242	4278	4309	4338	4368	4399	4426	4453	4474	4495	4520	4548	4578	4611	4644	4675	4702	4729	0.7%	
Net Imports																															
	47	52	46	42	42	42	37	36	33	35	37	36	35	35	36	34	31	33	30	30	30	28	27	26	26	26	28	31	32	-1.8%	
Electricity Sales by Sector																															
Residential	1375	1391	1415	1407	1415	1419	1426	1434	1423	1420	1422	1427	1434	1441	1448	1458	1468	1479	1488	1497	1505	1513	1523	1533	1544	1555	1566	1576	1587	0.5%	
Commercial	1327	1338	1358	1365	1376	1383	1393	1405	1413	1420	1429	1439	1450	1461	1473	1485	1497	1511	1522	1533	1545	1557	1569	1583	1599	1615	1631	1646	1659	0.8%	
Industrial	986	955	959	970	997	1021	1056	1078	1096	1109	1127	1140	1154	1166	1174	1178	1181	1182	1183	1183	1181	1182	1185	1188	1193	1196	1200	1203	1206	0.9%	
Transportation	7	7	8	8	8	8	9	9	9	9	10	10	10	10	10	11	11	12	12	13	13	14	14	15	16	16	17	17	18	3.4%	
Total	3695	3691	3739	3750	3796	3831	3884	3926	3941	3958	3987	4015	4049	4078	4107	4132	4157	4184	4205	4226	4244	4266	4291	4319	4351	4383	4414	4443	4470	7.0%	
Direct Use	139	145	149	154	159	172	175	177	180	184	188	193	198	204	210	216	223	231	239	247	255	264	273	283	292	301	310	319	327	3.1%	
Total Electricity Use	3834	3836	3888	3904	3955	4003	4059	4103	4121	4184	4175	4208	4247	4282	4316	4348	4381	4415	4444	4473	4499	4530	4564	4602	4643	4684	4724	4761	4797	0.8%	
End-Use Prices																															
(2013 cents per kilowatthour)																															
Residential	12.1	12.2	12.0	12.1	12.5	12.6	12.5	12.6	12.9	13.1	13.2	13.3	13.4	13.5	13.6	13.6	13.7	13.6	13.6	13.7	13.8	13.9	13.9	14.0	14.0	14.2	14.3	14.5	0.8%		
Commercial	10.2	10.1	10.2	10.2	10.4	10.4	10.3	10.4	10.6	10.8	10.9	11.0	11.0	11.1	11.1	11.2	11.2	11.1	11.1	11.2	11.2	11.3	11.3	11.3	11.4	11.4	11.5	11.6	11.8	0.9%	
Industrial	6.8	6.9	7.2	7.1	7.1	7.1	7.1	7.1	7.3	7.4	7.4	7.5	7.5	7.6	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.9	7.9	8.0	8.1	8.2	8.3	8.4	0.7%		
Transportation	9.5	9.7	10.1	9.8	9.8	9.8	9.8	10.0	10.3	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.2	11.2	11.2	11.3	11.4	11.5	11.6	11.6	11.8	11.9	12.1	12.3	0.9%		
All Sectors Average	10.0	10.1	10.1	10.1	10.3	10.3	10.3	10.3	10.5	10.7	10.7	10.8	10.8	11.0	11.0	11.0	11.1	11.0	11.1	11.1	11.1	11.1	11.2	11.3	11.3	11.4	11.4	11.6	11.7	11.8	0.6%
(nominal cents per kilowatthour)																															
Residential	11.9	12.2	12.1	12.5	13.2	13.5	13.7	14.1	14.6	15.1	15.5	15.9	16.2	16.6	17.0	17.4	17.7	17.9	18.3	18.7	19.1	19.6	20.0	20.5	20.9	21.4	22.1	22.7	23.5	2.5%	
Commercial	10.1	10.1	10.4	10.5	10.9	11.2	11.3	11.6	12.0	12.5	12.8	13.1	13.3	13.6	13.9	14.2	14.5	14.7	14.9	15.2	15.5	15.9	16.3	16.6							

CUADRO No. 19
PROYECCION REAL DE PRECIOS DE LA ELECTRICIDAD (PRETOT)

AÑO	PRETOT HISTORICO En Balboas 2007	Historic Average Retail Prices of Electricity		PROYECCIONES REAL USA			PROYECCIONES DE PRECIOS PRETOT			VARIACIONES DE PRECIOS PRETOT		
				TOTAL AVERAGE ELECTRICITY USA			c/r Variaciones reales de Precios USA			Var. Reales de PRETOT/Precios USA		
		Cent 1982/ kWh	Cent 2012/ kWh	Reference case	High macroeconomic growth	Low macroeconomic growth	Reference case	High macroeconomic growth	Low macroeconomic growth	Reference case	High macroeconomic growth	Low macroeconomic growth
1998	12.83	12.00	11.63				Reference	High Growth	Low Growth	Reference	High Growth	Low Growth
1999	11.53	11.60	11.25									
2000	12.65	11.32	10.98									
2001	13.06	11.48	11.13									
2002	12.10	11.12	10.78									
2003	12.80	11.22	10.88									
2004	13.03	11.21	10.87									
2005	14.38	11.43	11.09									
2006	15.55	12.22	11.85									
2007	15.60	12.16	11.79									
2008	17.88	12.39	12.01									
2009	14.97	12.70	12.31									
2010	14.31	12.52	12.15									
2011	13.25	12.33	11.96	11.93	11.93	11.93						
2012	12.47	12.25	11.88	11.88	11.88	11.88						
2013	13.37	12.31	11.94	11.61	11.60	11.60	13.37	13.37	13.37			
2014	13.07	12.50	12.12	11.74	11.92	11.66	13.07	13.07	13.07			
2015				11.92	12.25	11.74	13.27	13.43	13.46	0.0155	0.0275	0.0297
2016				12.00	12.32	11.72	13.36	13.50	13.35	0.0063	0.0053	-0.0083
2017				12.12	12.25	11.91	13.49	13.43	13.58	0.0101	-0.0051	0.0171
2018				12.25	12.30	12.14	13.64	13.48	13.63	0.0111	0.0039	0.0043
2019				12.34	12.34	12.26	13.74	13.52	13.49	0.0074	0.0027	-0.0103
2020				12.33	12.29	12.35	13.73	13.47	13.47	-0.0009	-0.0035	-0.0020
2021				12.30	12.23	12.33	13.70	13.40	13.34	-0.0024	-0.0053	-0.0097
2022				12.22	12.16	12.37	13.60	13.33	13.42	-0.0071	-0.0054	0.0061
2023				12.18	12.14	12.37	13.56	13.31	13.36	-0.0030	-0.0018	-0.0044
2024				12.30	12.19	12.35	13.69	13.36	13.35	0.0097	0.0043	-0.0008
2025				12.33	12.30	12.40	13.73	13.48	13.42	0.0028	0.0086	0.0055
2026				12.37	12.36	12.36	13.77	13.55	13.32	0.0029	0.0055	-0.0078
2027				12.44	12.48	12.50	13.85	13.68	13.51	0.0062	0.0097	0.0148
2028				12.48	12.54	12.56	13.90	13.75	13.43	0.0030	0.0047	-0.0059
2029				12.53	12.59	12.58	13.95	13.80	13.39	0.0040	0.0041	-0.0034
2030				12.62	12.74	12.60	14.05	13.96	13.39	0.0070	0.0115	0.0000

12.0731	12.2811	11.8776	Corto Plazo (Promedio)	0.0108	0.0079	0.0107
-1.6%	-1.5%	-1.8%	Tasa	1.1%	0.8%	1.1%
12.3481	12.3290	12.4025	Largo Plazo (Promedio)	0.0020	0.0021	-0.0016
0.2%	0.2%	0.3%	Tasa	0.2%	0.2%	-0.2%

**INTEGRACION DE DARIEN AL SIN
SISTEMA SANTA FE- YAVIZA - LA PALMA
PROYECCION DE DEMANDAS ANUALES DE ENERGIA**

ESCENARIO UNICO

AÑO	MWh	GWh	Δ Anual %
2013	44,052.6	44.1	
2014	46,554.4	46.6	5.68%
2015	48,963.5	49.0	5.17%
2016	51,405.3	51.4	4.99%
2017	53,714.0	53.7	4.49%
2018	56,039.5	56.0	4.33%
2019	58,246.5	58.2	3.94%
2020	60,527.3	60.5	3.92%
2021	62,864.0	62.9	3.86%
2022	65,200.8	65.2	3.72%
2023	67,494.8	67.5	3.52%
2024	69,788.8	69.8	3.40%
2025	72,082.8	72.1	3.29%
2026	74,376.9	74.4	3.18%
2027	76,670.9	76.7	3.08%
2028	78,964.9	79.0	2.99%
2029	81,258.9	81.3	2.91%
2030	83,552.9	83.6	2.82%
2031	85,847.0	85.8	2.75%
2032	88,141.0	88.1	2.67%
2033	90,435.0	90.4	2.60%
TASA ANUAL			
2013-2017			5.08%
2018-2025			3.66%
2026-2033			2.83%

FUENTE: ENSA

INTEGRACION DE DARIEN AL SIN
SISTEMA SANTA FE- YAVIZA - LA PALMA
PROYECCION DE DEMANDAS ANUALES DE ENERGIA

ESCENARIO UNICO

AÑO	MWh	GWh	Δ Anual %
2018	56,039.5	56.0	4.33%
2019	58,246.5	58.2	3.94%
2020	60,527.3	60.5	3.92%
2021	62,864.0	62.9	3.86%
2022	65,200.8	65.2	3.72%
2023	67,494.8	67.5	3.52%
2024	69,788.8	69.8	3.40%
2025	72,082.8	72.1	3.29%
2026	74,376.9	74.4	3.18%
2027	76,670.9	76.7	3.08%
2028	78,964.9	79.0	2.99%
2029	81,258.9	81.3	2.91%
2030	83,552.9	83.6	2.82%
2031	85,847.0	85.8	2.75%
2032	88,141.0	88.1	2.67%
2033	90,435.0	90.4	2.60%
TASA ANUAL			
2018-2025			3.66%
2026-2033			2.83%

FUENTE: ENSA

CUADRO No. 21 - A
DEMANDA CONSOLIDADA DE MEGAPROYECTOS ESTATALES IDENTIFICADOS

CUADRO No. 21 - A DEMANDA CONSOLIDADA DE MEGAPROYECTOS ESTATALES IDENTIFICADOS (CARGA INTEGRADA AL SIN) Años 2015 -2030 En GWh										
AÑO	SANEAMIENTO DE LA BAHIA	TRANSPORTE METRO			AEREOPUERTO TOCUMEN *			TOTAL MEGAPROYECTOS		
		MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO
2011										
2012										
2013	14.19							14.19	14.19	14.19
2014	36.89	42.28	42.28	42.28	18.29	18.29	18.29	97.46	97.46	97.46
2015	62.45	51.91	51.91	51.91	18.29	18.29	18.29	132.64	132.64	132.64
2016	83.01	55.97	55.97	55.97	18.29	18.29	18.29	157.27	157.27	157.27
2017	83.18	60.35	60.35	60.35	18.29	18.29	18.29	161.81	161.81	161.81
2018	83.36	65.07	65.07	65.07	54.86	54.86	54.86	203.29	203.29	203.29
2019	93.76	137.61	137.61	132.12	54.86	54.86	54.86	286.23	286.23	280.74
2020	98.99	141.63	141.63	137.61	54.86	73.15	54.86	295.47	313.76	291.45
2021	99.16	145.11	157.78	140.99	54.86	73.15	54.86	299.13	330.09	295.01
2022	99.34	221.86	228.98	208.54	54.86	73.15	54.86	376.06	401.46	362.73
2023	99.51	230.04	269.55	213.15	73.15	73.15	54.86	402.70	442.21	367.52
2024	99.69	270.63	290.44	217.86	73.15	73.15	54.86	443.46	463.28	372.41
2025	99.96	293.79	315.66	222.68	73.15	73.15	54.86	466.90	488.77	377.51
2026	110.22	319.09	343.86	238.59	73.15	73.15	54.86	502.46	527.23	403.67
2027	110.40	343.86	413.71	256.01	73.15	73.15	54.86	527.40	597.25	421.27
2028	110.57	413.71	424.30	277.47	73.15	73.15	54.86	597.43	608.02	442.90
2029	110.75	424.30	435.88	300.96	73.15	73.15	54.86	608.20	619.78	466.56
2030	110.75	435.88	448.53	326.68	73.15	73.15	54.86	619.78	632.42	492.29

* Corresponde al incremento de consumo por la expansion de las operaciones aeroportuarias , originado en el inicio de entrada del nuevo Muelle Norte a mediados del 2012, y la futura expansion total con la construccion en el año 2015, del Muelle Sur. Expansion que debe cubrir hasta el año 2030.
Plan maestro de Desarrollo Aeroportuario 2006 2030.

CUADRO No. 21 - A
DEMANDA CONSOLIDADA DE MEGAPROYECTOS ESTATALES IDENTIFICADOS

CUADRO No. 21 - A DEMANDA INCREMENTAL CONSOLIDADA DE MEGAPROYECTOS ESTATALES IDENTIFICADOS (CARGA INTEGRADA AL SIN) Años 2015 -2030 En GWh										
AÑO	SANEAMIENTO DE LA BAHIA	TRANSPORTE METRO			AEREOPUERTO TOCUMEN *			TOTAL MEGAPROYECTOS		
		MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO
2011										
2012										
2013										
2014										
2015										
2016	5.23	4.06	4.06	4.06				9.29	9.29	9.29
2017	5.40	8.44	8.44	8.44				13.84	13.84	13.84
2018	5.58	13.16	13.16	13.16	36.57	36.57	36.57	55.31	55.31	55.31
2019	16.76	85.70	85.70	80.21	36.57	36.57	36.57	139.03	139.03	133.54
2020	28.98	89.72	89.72	85.70	36.57	54.86	36.57	155.27	173.56	151.26
2021	29.16	93.21	105.87	89.08	36.57	54.86	36.57	158.94	189.89	154.81
2022	29.33	169.96	177.07	156.63	36.57	54.86	36.57	235.86	261.27	222.54
2023	29.51	178.13	217.65	161.24	54.86	54.86	36.57	262.50	302.01	227.32
2024	29.68	218.72	238.54	165.95	54.86	54.86	36.57	303.26	323.08	232.21
2025	47.96	241.88	263.75	170.78	54.86	54.86	36.57	344.70	366.57	255.31
2026	48.03	267.18	291.95	186.68	54.86	54.86	36.57	370.07	394.84	271.28
2027	48.21	291.95	361.80	204.10	54.86	54.86	36.57	395.02	464.87	288.88
2028	48.38	361.80	372.39	225.56	54.86	54.86	36.57	465.04	475.63	310.51
2029	48.56	372.39	383.97	249.05	54.86	54.86	36.57	475.81	487.39	334.18
2030	48.56	383.97	396.62	274.78	54.86	54.86	36.57	487.39	500.04	359.90

* Corresponde al incremento de consumo por la expansion de las operaciones aeroportuarias , originado en el inicio de entrada del nuevo Muelle Norte a mediados del 2012, y la futura expansion total con la construccion en el año 2015, del Muelle Sur. Expansion que debe cubrir hasta el año 2030.
Plan maestro de Desarrollo Aeroportuario 2006 2030.

CUADRO No. 21 - A
DEMANDA CONSOLIDADA DEL SEGMENTO BLOQUE
 (CARGA INTEGRADA AL SIN)
 Años 2016 -2030

AÑO	ESC. MODERADO (a)		ESC. OPTIMISTA (b)		ESC. PESIMISTA (c)	
	GWh	TASAS (%)	GWh	TASAS (%)	GWh	TASAS (%)
2010	75.1		75.1		75.1	
2011	71.0	-5.5	71.0	-5.5	71.0	-5.5
2012	78.1	10.0	78.1	10.0	78.1	10.0
2013	83.5	6.9	83.5	6.9	83.5	6.9
2014	184.6	121.2	184.6	121.2	184.6	121.2
2015	175.8	-4.8	175.8	-4.8	175.8	-4.8
2016	157.3	-10.6	157.3	-10.6	157.3	-10.6
2017	161.8	2.9	161.8	2.9	161.8	2.9
2018	297.6	83.9	297.6	83.9	259.3	60.3
2019	382.8	28.6	382.8	28.6	377.3	45.5
2020	396.9	3.7	415.2	8.5	392.9	4.1
2021	408.1	2.8	439.0	5.7	403.9	2.8
2022	494.0	21.1	519.4	18.3	480.7	19.0
2023	529.6	7.2	569.1	9.6	494.4	2.9
2024	575.2	8.6	595.1	4.6	504.2	2.0
2025	605.9	5.3	627.8	5.5	516.5	2.4
2026	648.8	7.1	673.6	7.3	550.0	6.5
2027	681.2	5.0	751.0	11.5	575.0	4.5
2028	758.7	11.4	769.3	2.4	604.2	5.1
2029	771.7	1.7	783.3	1.8	630.1	4.3
2030	785.6	1.8	798.3	1.9	658.1	4.4
Tasa Anual	809.0%	10.01%	799.8%	10.11%	623.8%	8.53%

- (a) Corresponde a la suma de la demanda previstas en el Escenario Moderado de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025
- (b) Corresponde a la suma de la demanda previstas en el Escenario Optimista de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025
- (c) Corresponde a la suma de la demanda previstas en el Escenario Pesimista de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025

	-4.8%	-4.8%	-4.8%
	-10.6%	-10.6%	-10.6%
Corto Plazo	12.7%	12.7%	8.9%
Largo Plazo	9.0%	9.2%	8.4%

CUADRO No. 21 - B
DEMANDA CONSOLIDADA MEGAPROYECTOS ESTATALES IDENTIFICADOS y MINERA PANAMA

CUADRO No. 21 - A																
DEMANDA CONSOLIDADA DE AES - BOFCO, MEGAPROYECTOS ESTATALES IDENTIFICADOS y MINERA PANAMA																
(CARGA INTEGRADA AL SIN)																
Años 2016 -2030																
En GWh																
AÑOS	PRONOSTICOS AES-BOFCO			INTEGRACION DARIEN	SANEAMIENTO DE LA BAHIA	METRO			AEREOPUERTO TOCUMEN *			TOTAL MEGAPROYECTOS			MINERA PANAMA **	
	MODERADO	ALTO	BAJO			MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO	MODERADO	PESISMISTA
2010	75.1	75.1	75.1													
2011	71.0	71.0	71.0													
2012	78.1	78.1	78.1													
2013	83.5	83.5	83.5													
2014	87.2	87.2	87.2		36.89	42.28	42.28	42.28	18.29	18.29	18.29	97.46	97.46	97.46		
2015	43.2	43.2	43.2		62.45	51.91	51.91	51.91	18.29	18.29	18.29	132.64	132.64	132.64		
2016					83.01	55.97	55.97	55.97	18.29	18.29	18.29	157.27	157.27	157.27		
2017					83.18	60.35	60.35	60.35	18.29	18.29	18.29	161.81	161.81	161.81		
2018				56.0	83.36	65.07	65.07	65.07	54.86	54.86	54.86	203.29	203.29	203.29	38.31	
2019				58.2	93.76	137.61	137.61	132.12	54.86	54.86	54.86	286.23	286.23	280.74	40.89	38.31
2020				60.5	98.99	141.63	141.63	137.61	54.86	73.15	54.86	295.47	313.76	291.45	46.06	40.89
2021				62.9	99.16	145.11	157.78	140.99	54.86	73.15	54.86	299.13	330.09	295.01	52.74	46.06
2022				65.2	99.34	221.86	228.98	208.54	54.86	73.15	54.86	376.06	401.46	362.73	59.41	52.74
2023				67.5	99.51	230.04	269.55	213.15	73.15	73.15	54.86	402.70	442.21	367.52	62.00	59.41
2024				69.8	99.69	270.63	290.44	217.86	73.15	73.15	54.86	443.46	463.28	372.41	66.94	62.00
2025				72.1	99.96	293.79	315.66	222.68	73.15	73.15	54.86	466.90	488.77	377.51	71.97	66.94
2026				74.4	110.22	319.09	343.86	238.59	73.15	73.15	54.86	502.46	527.23	403.67	77.09	71.97
2027				76.7	110.40	343.86	413.71	256.01	73.15	73.15	54.86	527.40	597.25	421.27	82.29	77.09
2028				79.0	110.57	413.71	424.30	277.47	73.15	73.15	54.86	597.43	608.02	442.90	82.29	82.29
2029				81.3	110.75	424.30	435.88	300.96	73.15	73.15	54.86	608.20	619.78	466.56	82.29	82.29
2030				83.6	110.75	435.88	448.53	326.68	73.15	73.15	54.86	619.78	632.42	492.29	82.29	82.29
				*	Corresponde al incremento de consumo por la expansion de las operaciones aeroportuarias , originado en el inicio de entrada del nuevo Muelle Norte a mediados del 2012, y la futura expansion total con la construccion por etapas, entregables 2015-2017en el año 2015, del Muelle Sur. Expansion que debe cubrir hasta el año 2030. Plan maestro de Desarrollo Aeroportuario 2006 2030.											
				**	Corresponde al Informe de Viabilidad de Conexion de Central a carbon de 300 MW a Llano Sánchez											

[illegible]

CUADRO No. 21 - B
DEMANDA CONSOLIDADA DE MEGAPROYECTOS PRIVADOS IDENTIFICADOS

CUADRO No. 21 - B DEMANDA CONSOLIDADA DE MEGAPROYECTOS PRIVADOS IDENTIFICADOS (CARGA INTEGRADA AL SIN) Años 2015 -2029 En GWh						
AÑO	PANAMA COLON CONTAINER	MINERA MODERADO	PANAMA BAJO	TOTAL MEGAPROYECTOS		
				MODERADO	ALTO	BAJO
2011						
2012						
2013						
2014						
2015						
2016						
2017	25.00			25.00	25.00	25.00
2018	48.00	38.31		86.31	86.31	48.00
2019	48.00	40.89	38.31	88.89	88.89	86.31
2020	48.00	46.06	40.89	94.06	94.06	88.89
2021	48.00	52.74	46.06	100.74	100.74	94.06
2022	48.00	59.41	52.74	107.41	107.41	100.74
2023	48.00	62.00	59.41	110.00	110.00	107.41
2024	48.00	66.94	62.00	114.94	114.94	110.00
2025	48.00	71.97	66.94	119.97	119.97	114.94
2026	48.00	77.09	71.97	125.09	125.09	119.97
2027	48.00	82.29	77.09	130.29	130.29	125.09
2028	48.00	82.29	82.29	130.29	130.29	130.29
2029	48.00	82.29	82.29	130.29	130.29	130.29
2030	48.00	82.29	82.29	130.29	130.29	130.29

* Corresponde al incremento de consumo por la expansion de las operaciones aeroportuarias , originado en el inicio de entrada del nuevo Muelle Norte a mediados del 2012, y la futura expansion total con la construccion en el año 2015, del Muelle Sur. Expansion que debe cubrir hasta el año 2030.
Plan maestro de Desarrollo Aeroportuario 2006 2030.

CUADRO No. 22
RESUMEN DE PRONOSTICOS DE DEMANDA
Años 2015 -2029

PRONOSTICOS DE DEMANDA
ESCENARIOS
AÑOS 2016 - 2030

AÑOS	ENERGIA TOTAL ¹ (GWH)			DEMANDA ² (MW)		
	MODERADO	OPTIMISTA	PESIMISTA	MODERADO	OPTIMISTA	PESIMISTA
	EET- MOD	EET- OPT	EET- PES	DMG- MOD	DMG- OPT	DMG- PES
2009	6,753.7	6,753.7	6,753.7	1,122.0	1,122.0	1,122.0
2010	7,290.3	7,290.3	7,290.3	1,190.4	1,190.4	1,190.4
2011	7,722.5	7,722.5	7,722.5	1,254.5	1,254.5	1,254.5
2012	8,359.8	8,359.8	8,359.8	1,354.3	1,354.3	1,354.3
2013	8,722.1	8,722.1	8,722.1	1,412.9	1,412.9	1,412.9
2014	9,150.5	9,150.5	9,150.5	1,471.5	1,471.5	1,471.5
2015	9,905.9	9,905.9	9,905.9	1,581.0	1,581.0	1,581.0
2016	10,606.4	10,611.1	10,599.2	1,705.6	1,706.3	1,704.4
2017	11,300.6	11,314.0	11,276.8	1,803.6	1,805.7	1,799.8
2018	12,134.8	12,165.2	12,071.4	1,935.9	1,938.9	1,926.5
2019	12,950.4	12,977.1	12,900.0	2,065.1	2,065.5	2,058.6
2020	13,739.6	13,778.3	13,669.6	2,190.0	2,190.1	2,181.2
2021	14,470.4	14,556.0	14,421.3	2,305.4	2,310.5	2,301.0
2022	15,333.5	15,452.9	15,294.3	2,441.9	2,449.6	2,440.1
2023	16,186.1	16,360.4	16,144.7	2,576.5	2,589.9	2,575.6
2024	17,126.4	17,316.0	17,021.6	2,725.0	2,737.5	2,715.4
2025	18,126.3	18,316.7	17,975.4	2,882.8	2,891.7	2,867.3
2026	19,129.0	19,386.9	18,939.0	3,040.9	3,056.5	3,020.8
2027	20,213.2	20,556.0	19,984.0	3,211.9	3,236.4	3,187.3
2028	21,391.7	21,662.0	21,087.9	3,397.6	3,405.9	3,363.1
2029	22,564.8	22,868.1	22,240.7	3,582.4	3,590.7	3,546.7
2030	23,794.3	24,132.4	23,449.4	3,775.9	3,784.0	3,739.2

¹ GWHDIS Energía Disponible del Sistema

² MWDEM Demanda Máxima de Potencia Eléctrica

CUADRO No. 23
PARTICIPACION SECTORIAL EN EL PRONOSTICO DE ENERGIA ELECTRICA DE PANAMA
ESCENARIO MEDIO

AÑOS 2016 -2030
ESCENARIO MEDIO

ANO	GWHRES	GWHCOM	GWHIND	GWHOFI	GWHALU	GWHAUT	GWHBLQ	GWHOTR	GWHPER	GWH	D%GWH	MW
	Residencial	Comercial	Industrial	Oficial	Alumbrado publico	Autoconsumo	Bloque	Otros	Perdidas	Energia		Carga
1970	0.261	0.278	0.120	0.087	0.017	0.011	0.104	0.009	0.114	1.000		
1971	0.296	0.286	0.129	0.092	0.019	0.011	0.060	0.009	0.098	1.000		7.0%
1972	0.307	0.279	0.117	0.106	0.019	0.009	0.040	0.010	0.113	1.000		13.9%
1973	0.296	0.270	0.113	0.094	0.016	0.008	0.061	0.006	0.137	1.000		3.3%
1974	0.299	0.297	0.109	0.105	0.017	0.003	0.016	0.010	0.146	1.000		7.2%
1975	0.298	0.290	0.109	0.117	0.016	0.003	0.012	0.012	0.143	1.000		4.4%
1976	0.292	0.270	0.096	0.132	0.015	0.003	0.029	0.011	0.152	1.000		15.8%
1977	0.278	0.273	0.088	0.135	0.016	0.004	0.065	0.010	0.131	1.000		3.6%
1978	0.281	0.285	0.097	0.152	0.016	0.005	0.016	0.011	0.137	1.000		7.0%
1979	0.258	0.258	0.094	0.145	0.015	0.005	0.074	0.009	0.141	1.000		13.2%
1980	0.260	0.273	0.105	0.160	0.018	0.005	0.009	0.008	0.162	1.000		7.0%
1981	0.255	0.267	0.101	0.154	0.018	0.006	0.025	0.008	0.166	1.000		4.7%
1982	0.246	0.262	0.107	0.153	0.017	0.006	0.025	0.008	0.175	1.000		13.2%
1983	0.241	0.259	0.100	0.154	0.017	0.006	0.061	0.008	0.156	1.000		3.5%
1984	0.234	0.258	0.103	0.147	0.017	0.006	0.044	0.008	0.184	1.000		2.9%
1985	0.232	0.253	0.105	0.145	0.016	0.005	0.043	0.007	0.194	1.000		9.9%
1986	0.237	0.252	0.104	0.141	0.015	0.005	0.036	0.006	0.203	1.000		5.2%
1987	0.241	0.247	0.111	0.138	0.015	0.005	0.033	0.007	0.203	1.000		6.5%
1988	0.254	0.235	0.096	0.141	0.016	0.005	0.045	0.008	0.200	1.000		-0.8%
1989	0.234	0.233	0.097	0.136	0.016	0.005	0.027	0.008	0.244	1.000		-5.2%
1990	0.232	0.231	0.101	0.129	0.016	0.005	0.026	0.008	0.252	1.000		4.1%
1991	0.232	0.243	0.111	0.121	0.016	0.004	0.020	0.008	0.245	1.000		5.2%
1992	0.238	0.250	0.122	0.122	0.015	0.004	0.009	0.007	0.233	1.000		6.0%
1993	0.234	0.262	0.128	0.123	0.014	0.004	0.005	0.006	0.223	1.000		4.5%
1994	0.232	0.269	0.126	0.122	0.013	0.004	0.014	0.006	0.214	1.000		9.3%
1995	0.234	0.277	0.127	0.128	0.015	0.004	0.004	0.005	0.207	1.000		4.7%
1996	0.227	0.274	0.123	0.129	0.016	0.004	0.007	0.005	0.214	1.000		3.3%
1997	0.220	0.278	0.111	0.119	0.015	0.006	0.023	0.004	0.224	1.000		10.4%
1998	0.234	0.312	0.114	0.111	0.015	0.004	0.000	0.000	0.210	1.000		2.8%
1999	0.233	0.324	0.117	0.109	0.015	0.002	0.000	0.000	0.200	1.000		3.9%
2000	0.225	0.316	0.102	0.109	0.011	0.002	0.000	0.000	0.235	1.000		3.0%
2001	0.232	0.324	0.096	0.116	0.016	0.002	0.000	0.001	0.213	1.000		5.1%
2002	0.241	0.332	0.084	0.111	0.015	0.002	0.000	0.002	0.212	1.000		2.2%
2003	0.251	0.365	0.060	0.110	0.018	0.002	0.000	0.001	0.194	1.000		3.4%
2004	0.258	0.371	0.060	0.114	0.019	0.001	0.000	0.001	0.175	1.000		4.8%
2005	0.262	0.381	0.060	0.112	0.019	0.001	0.000	0.001	0.163	1.000		2.3%
2006	0.262	0.364	0.084	0.112	0.020	0.000	0.000	0.001	0.158	1.000		2.8%
2007	0.262	0.377	0.082	0.112	0.019	0.000	0.000	0.001	0.147	1.000		5.6%
2008	0.258	0.387	0.079	0.109	0.020	0.001	0.000	0.002	0.145	1.000		3.1%
2009	0.267	0.368	0.083	0.108	0.019	0.001	0.003	0.000	0.150	1.000		8.7%
2010	0.271	0.364	0.088	0.103	0.018	0.001	0.010	0.000	0.145	1.000		6.1%
2011	0.270	0.373	0.085	0.100	0.018	0.001	0.009	0.000	0.145	1.000		5.4%
2012	0.269	0.380	0.082	0.098	0.018	0.001	0.009	0.000	0.142	1.000		8.0%
2013	0.273	0.381	0.081	0.095	0.019	0.001	0.010	0.000	0.140	1.000		4.3%
2014	0.276	0.378	0.075	0.096	0.019	0.001	0.009	0.000	0.145	1.000		4.1%
2015	0.274	0.382	0.067	0.098	0.018	0.001	0.004	0.000	0.155	1.000		7.4%
2016	0.269	0.383	0.064	0.097	0.018	0.001	0.001	0.000	0.167	1.000		7.9%
2017	0.266	0.387	0.061	0.096	0.018	0.001	0.003	0.000	0.168	1.000		5.7%
2018	0.261	0.387	0.058	0.094	0.018	0.001	0.016	0.000	0.165	1.000		7.3%
2019	0.257	0.390	0.055	0.093	0.017	0.001	0.022	0.000	0.165	1.000		6.7%
2020	0.254	0.394	0.053	0.093	0.017	0.000	0.023	0.000	0.165	1.000		6.0%
2021	0.253	0.402	0.052	0.093	0.017	0.000	0.022	0.000	0.160	1.000		5.3%
2022	0.250	0.406	0.051	0.092	0.017	0.000	0.027	0.000	0.156	1.000		5.9%
2023	0.249	0.412	0.049	0.092	0.017	0.000	0.027	0.000	0.153	1.000		5.5%
2024	0.246	0.417	0.048	0.092	0.017	0.000	0.028	0.000	0.151	1.000		5.8%
2025	0.244	0.422	0.047	0.091	0.016	0.000	0.030	0.000	0.150	1.000		5.8%
2026	0.242	0.428	0.045	0.091	0.016	0.000	0.030	0.000	0.147	1.000		5.5%
2027	0.239	0.433	0.044	0.091	0.016	0.000	0.030	0.000	0.146	1.000		5.6%
2028	0.237	0.438	0.042	0.090	0.016	0.000	0.031	0.000	0.145	1.000		5.8%
2029	0.234	0.444	0.041	0.090	0.016	0.000	0.030	0.000	0.144	1.000		5.4%
2030	0.232	0.449	0.039	0.090	0.016	0.000	0.029	0.000	0.143	1.000		5.4%

CUADRO No. 21 - A
DEMANDA CONSOLIDADA DEL SEGMENTO BLOQUE
(CARGA INTEGRADA AL SIN)
Años 2016 -2030

AÑO	ESC. MODERADO (a)		ESC. OPTIMISTA (b)		ESC. PESIMISTA (c)	
	GWh	TASAS (%)	GWh	TASAS (%)	GWh	TASAS (%)
2010	75.1		75.1		75.1	
2011	71.0	-5.5	71.0	-5.5	71.0	-5.5
2012	78.1	10.0	78.1	10.0	78.1	10.0
2013	83.5	6.9	83.5	6.9	83.5	6.9
2014	85.6	2.6	85.6	2.6	85.6	2.6
2015	43.2	-49.5	43.2	-49.5	43.2	-49.5
2016	157.3	264.0	157.3	264.0	157.3	264.0
2017	186.8	18.8	186.8	18.8	186.8	18.8
2018	345.6	85.0	345.6	85.0	307.3	64.5
2019	433.4	25.4	433.4	25.4	425.3	38.4
2020	450.1	3.9	468.3	8.1	440.9	3.7
2021	462.7	2.8	493.7	5.4	451.9	2.5
2022	548.7	18.6	574.1	16.3	528.7	17.0
2023	580.2	5.7	619.7	7.9	542.4	2.6
2024	628.2	8.3	648.0	4.6	552.2	1.8
2025	659.0	4.9	680.8	5.1	564.5	2.2
2026	701.9	6.5	726.7	6.7	598.0	5.9
2027	734.4	4.6	804.2	10.7	623.0	4.2
2028	806.7	9.8	817.3	1.6	652.2	4.7
2029	819.7	1.6	831.3	1.7	678.1	4.0
2030	833.6	1.7	846.3	1.8	706.1	4.1
Tasa Anual	1829.7%	15.29%	18.6	15.40%	1534.6%	14.10%

(a) Corresponde a la suma de la demanda previstas en el Escenario Moderado de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025

(b) Corresponde a la suma de la demanda previstas en el Escenario Optimista de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025

(c) Corresponde a la suma de la demanda previstas en el Escenario Pesimista de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025

CUADRO No. 21 - B
DEMANDA CONSOLIDADA MEGAPROYECTOS ESTATALES IDENTIFICADOS y MINERA PANAMA

CUADRO No. 21 - C
DEMANDA CONSOLIDADA DE INTEGRACION DARIEN MEGAPROYECTOS ESTATALES Y PRIVADOS IDENTIFICADOS
(CARGA INTEGRADA AL SIN)
Años 2016 -2030
En GWh

AÑOS	INTEGRACION BOCAS DEL TORO	INTEGRACION DARIEN	MEGAPROYECTOS ESTATALES			MEGAPROYECTOS PRIVADOS		
			MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO
2010	75.1							
2011	71.0							
2012	78.1							
2013	83.5		14.19					
2014	85.6		97.46					
2015	43.2		132.64					
2016			157.27	157.27	157.27			
2017			161.81	161.81	161.81	25.00	25.00	25.00
2018		56.0	203.29	203.29	203.29	86.31	86.31	48.00
2019		58.2	286.23	286.23	280.74	88.89	88.89	86.31
2020		60.5	295.47	313.76	291.45	94.06	94.06	88.89
2021		62.9	299.13	330.09	295.01	100.74	100.74	94.06
2022		65.2	376.06	401.46	362.73	107.41	107.41	100.74
2023		67.5	402.70	442.21	367.52	110.00	110.00	107.41
2024		69.8	443.46	463.28	372.41	114.94	114.94	110.00
2025		72.1	466.90	488.77	377.51	119.97	119.97	114.94
2026		74.4	502.46	527.23	403.67	125.09	125.09	119.97
2027		76.7	527.40	597.25	421.27	130.29	130.29	125.09
2028		79.0	597.43	608.02	442.90	130.29	130.29	130.29
2029		81.3	608.20	619.78	466.56	130.29	130.29	130.29
2030		83.6	619.78	632.42	492.29	130.29	130.29	130.29

CUADRO No. 21 - A
DEMANDA CONSOLIDADA DEL SEGMENTO BLOQUE
(CARGA INTEGRADA AL SIN)
Años 2016 -2030

AÑO	ESC. MODERADO (a)		ESC. OPTIMISTA (b)		ESC. PESIMISTA (c)	
	GWh	TASAS (%)	GWh	TASAS (%)	GWh	TASAS (%)
2010	75.1		75.1		75.1	
2011	71.0	-5.5	71.0	-5.5	71.0	-5.5
2012	78.1	10.0	78.1	10.0	78.1	10.0
2013	83.5	6.9	83.5	6.9	83.5	6.9
2014	85.6	2.6	85.6	2.6	85.6	2.6
2015	43.2	-49.5	43.2	-49.5	43.2	-49.5
2016	9.3	-78.5	9.3	-78.5	9.3	-78.5
2017	38.8	317.9	38.8	317.9	38.8	317.9
2018	197.7	408.9	197.7	408.9	159.4	310.3
2019	286.2	44.8	286.2	44.8	278.1	74.5
2020	309.9	8.3	328.1	14.7	300.7	8.1
2021	322.5	4.1	353.5	7.7	311.7	3.7
2022	408.5	26.6	433.9	22.7	388.5	24.6
2023	440.0	7.7	479.5	10.5	402.2	3.5
2024	488.0	10.9	507.8	5.9	412.0	2.4
2025	536.8	10.0	558.6	10.0	442.3	7.4
2026	569.5	6.1	594.3	6.4	465.6	5.3
2027	602.0	5.7	671.8	13.0	490.6	5.4
2028	674.3	12.0	684.9	1.9	519.8	5.9
2029	687.4	1.9	698.9	2.1	545.7	5.0
2030	701.2	2.0	713.9	2.1	573.7	5.1
Tasa Anual	1523.2%	14.05%	15.5	14.18%	1228.1%	12.63%

(a) Corresponde a la suma de la demanda previstas en el Escenario Moderado de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025

(b) Corresponde a la suma de la demanda previstas en el Escenario Optimista de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025

(c) Corresponde a la suma de la demanda previstas en el Escenario Pesimista de la Provincia de Bocas del Toro mas los consumos previstos para los megaproyectos de infraestructura de la Ciudad de Panama hasta el año 2025

CUADRO No. 21 - B
DEMANDA CONSOLIDADA MEGAPROYECTOS ESTATALES IDENTIFICADOS y MINERA PANAMA

CUADRO No. 21 - C DEMANDA CONSOLIDADA DE INTEGRACION DARIEN MEGAPROYECTOS ESTATALES Y PRIVADOS IDENTIFICADOS (CARGA INTEGRADA AL SIN) Años 2016 -2030 En GWh								
AÑOS	INTEGRACION BOCAS DEL TORO	INTEGRACION DARIEN	MEGAPROYECTOS ESTATALES			MEGAPROYECTOS PRIVADOS		
			MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO
2010	75.1							
2011	71.0							
2012	78.1							
2013	83.5							
2014	85.6							
2015	43.2							
2016			9.29	9.29	9.29			
2017			13.84	13.84	13.84	25.00	25.00	25.00
2018		56.0	55.31	55.31	55.31	86.31	86.31	48.00
2019		58.2	139.03	139.03	133.54	88.89	88.89	86.31
2020		60.5	155.27	173.56	151.26	94.06	94.06	88.89
2021		62.9	158.94	189.89	154.81	100.74	100.74	94.06
2022		65.2	235.86	261.27	222.54	107.41	107.41	100.74
2023		67.5	262.50	302.01	227.32	110.00	110.00	107.41
2024		69.8	303.26	323.08	232.21	114.94	114.94	110.00
2025		72.1	344.70	366.57	255.31	119.97	119.97	114.94
2026		74.4	370.07	394.84	271.28	125.09	125.09	119.97
2027		76.7	395.02	464.87	288.88	130.29	130.29	125.09
2028		79.0	465.04	475.63	310.51	130.29	130.29	130.29
2029		81.3	475.81	487.39	334.18	130.29	130.29	130.29
2030		83.6	487.39	500.04	359.90	130.29	130.29	130.29

CUADRO No. 24
PARTICIPACION SECTORIAL EN EL PRONOSTICO DE ENERGIA ELECTRICA DE PANAMA
ESCENARIO ALTO

AÑOS 2016 -2030
ESCENARIO ALTO

ANO	GWHRES	GWHCOM	GWHIND	GWHOFI	GWHALU	GWHAUT	GWHBLQ	GWHOTR	GWHPER	GWH	D%GWH	MW
	Residencial	Comercial	Industrial	Oficial	Alumbrado public	Autoconsumo	Bloque	Otros	Perdidas	Energia		Carga
1970	0.261	0.278	0.120	0.087	0.017	0.011	0.104	0.009	0.114	1.000		
1971	0.296	0.286	0.129	0.092	0.019	0.011	0.060	0.009	0.098	1.000		7.0%
1972	0.307	0.279	0.117	0.106	0.019	0.009	0.040	0.010	0.113	1.000		13.9%
1973	0.296	0.270	0.113	0.094	0.016	0.008	0.061	0.006	0.137	1.000		3.3%
1974	0.299	0.297	0.109	0.105	0.017	0.003	0.016	0.010	0.146	1.000		7.2%
1975	0.298	0.290	0.109	0.117	0.016	0.003	0.012	0.012	0.143	1.000		4.4%
1976	0.292	0.270	0.096	0.132	0.015	0.003	0.029	0.011	0.152	1.000		15.8%
1977	0.278	0.273	0.088	0.135	0.016	0.004	0.065	0.010	0.131	1.000		3.6%
1978	0.281	0.285	0.097	0.152	0.016	0.005	0.016	0.011	0.137	1.000		7.0%
1979	0.258	0.258	0.094	0.145	0.015	0.005	0.074	0.009	0.141	1.000		13.2%
1980	0.260	0.273	0.105	0.160	0.018	0.005	0.009	0.008	0.162	1.000		7.0%
1981	0.255	0.267	0.101	0.154	0.018	0.006	0.025	0.008	0.166	1.000		4.7%
1982	0.246	0.262	0.107	0.153	0.017	0.006	0.025	0.008	0.175	1.000		13.2%
1983	0.241	0.259	0.100	0.154	0.017	0.006	0.061	0.008	0.156	1.000		3.5%
1984	0.234	0.258	0.103	0.147	0.017	0.006	0.044	0.008	0.184	1.000		2.9%
1985	0.232	0.253	0.105	0.145	0.016	0.005	0.043	0.007	0.194	1.000		9.9%
1986	0.237	0.252	0.104	0.141	0.015	0.005	0.036	0.006	0.203	1.000		5.2%
1987	0.241	0.247	0.111	0.138	0.015	0.005	0.033	0.007	0.203	1.000		6.5%
1988	0.254	0.235	0.096	0.141	0.016	0.005	0.045	0.008	0.200	1.000		-0.8%
1989	0.234	0.233	0.097	0.136	0.016	0.005	0.027	0.008	0.244	1.000		-5.2%
1990	0.232	0.231	0.101	0.129	0.016	0.005	0.026	0.008	0.252	1.000		4.1%
1991	0.232	0.243	0.111	0.121	0.016	0.004	0.020	0.008	0.245	1.000		5.2%
1992	0.238	0.250	0.122	0.122	0.015	0.004	0.009	0.007	0.233	1.000		6.0%
1993	0.234	0.262	0.128	0.123	0.014	0.004	0.005	0.006	0.223	1.000		4.5%
1994	0.232	0.269	0.126	0.122	0.013	0.004	0.014	0.006	0.214	1.000		9.3%
1995	0.234	0.277	0.127	0.128	0.015	0.004	0.004	0.005	0.207	1.000		4.7%
1996	0.227	0.274	0.123	0.129	0.016	0.004	0.007	0.005	0.214	1.000		3.3%
1997	0.220	0.278	0.111	0.119	0.015	0.006	0.023	0.004	0.224	1.000		10.4%
1998	0.234	0.312	0.114	0.111	0.015	0.004	0.000	0.000	0.210	1.000		2.8%
1999	0.233	0.324	0.117	0.109	0.015	0.002	0.000	0.000	0.200	1.000		3.9%
2000	0.225	0.316	0.102	0.109	0.011	0.002	0.000	0.000	0.235	1.000		3.0%
2001	0.232	0.324	0.096	0.116	0.016	0.002	0.000	0.001	0.213	1.000		5.1%
2002	0.241	0.332	0.084	0.111	0.015	0.002	0.000	0.002	0.212	1.000		2.2%
2003	0.251	0.365	0.060	0.110	0.018	0.002	0.000	0.001	0.194	1.000		3.4%
2004	0.258	0.371	0.060	0.114	0.019	0.001	0.000	0.001	0.175	1.000		4.8%
2005	0.262	0.381	0.060	0.112	0.019	0.001	0.000	0.001	0.163	1.000		2.3%
2006	0.262	0.364	0.084	0.112	0.020	0.000	0.000	0.001	0.158	1.000		2.8%
2007	0.262	0.377	0.082	0.112	0.019	0.000	0.000	0.001	0.147	1.000		5.6%
2008	0.258	0.387	0.079	0.109	0.020	0.001	0.000	0.002	0.145	1.000		3.1%
2009	0.267	0.368	0.083	0.108	0.019	0.001	0.003	0.000	0.150	1.000		8.7%
2010	0.271	0.364	0.088	0.103	0.018	0.001	0.010	0.000	0.145	1.000		6.1%
2011	0.270	0.373	0.085	0.100	0.018	0.001	0.009	0.000	0.145	1.000		5.4%
2012	0.269	0.380	0.082	0.098	0.018	0.001	0.009	0.000	0.142	1.000		8.0%
2013	0.273	0.381	0.081	0.095	0.019	0.001	0.010	0.000	0.140	1.000		4.3%
2014	0.276	0.378	0.075	0.096	0.019	0.001	0.009	0.000	0.145	1.000		4.1%
2015	0.274	0.382	0.067	0.098	0.018	0.001	0.004	0.000	0.155	1.000		7.4%
2016	0.269	0.383	0.064	0.097	0.018	0.001	0.001	0.000	0.167	1.000		7.9%
2017	0.266	0.387	0.061	0.096	0.018	0.001	0.003	0.000	0.168	1.000		5.7%
2018	0.261	0.387	0.058	0.094	0.018	0.001	0.016	0.000	0.165	1.000		7.3%
2019	0.257	0.390	0.055	0.093	0.017	0.001	0.022	0.000	0.165	1.000		6.7%
2020	0.254	0.394	0.053	0.093	0.017	0.000	0.023	0.000	0.165	1.000		6.0%
2021	0.253	0.402	0.052	0.093	0.017	0.000	0.022	0.000	0.160	1.000		5.3%
2022	0.250	0.406	0.051	0.092	0.017	0.000	0.027	0.000	0.156	1.000		5.9%
2023	0.249	0.412	0.049	0.092	0.017	0.000	0.027	0.000	0.153	1.000		5.5%
2024	0.246	0.417	0.048	0.092	0.017	0.000	0.028	0.000	0.151	1.000		5.8%
2025	0.244	0.422	0.047	0.091	0.016	0.000	0.030	0.000	0.150	1.000		5.8%
2026	0.242	0.428	0.045	0.091	0.016	0.000	0.030	0.000	0.147	1.000		5.5%
2027	0.239	0.433	0.044	0.091	0.016	0.000	0.030	0.000	0.146	1.000		5.6%
2028	0.237	0.438	0.042	0.090	0.016	0.000	0.031	0.000	0.145	1.000		5.8%
2029	0.234	0.444	0.041	0.090	0.016	0.000	0.030	0.000	0.144	1.000		5.4%
2030	0.232	0.449	0.039	0.090	0.016	0.000	0.029	0.000	0.143	1.000		5.4%

CUADRO No. 25
PARTICIPACION SECTORIAL EN EL PRONOSTICO DE ENERGIA ELECTRICA DE PANAMA
ESCENARIO BAJO

AÑOS 2016 -2030
ESCENARIO BAJO

ANO	GWHRES	GWHCOM	GWHIND	GWHOFI	GWHALU	GWHAUT	GWHBLQ	GWHOTR	GWHPER	GWH	D%GWH	MW
	Residencial	Comercial	Industrial	Oficial	Alumbrado publico	Autoconsumo	Bloque	Otros	Perdidas	Energia		Carga
1970	0.261	0.278	0.120	0.087	0.017	0.011	0.104	0.009	0.114	1.000		
1971	0.296	0.286	0.129	0.092	0.019	0.011	0.060	0.009	0.098	1.000		7.0%
1972	0.307	0.279	0.117	0.106	0.019	0.009	0.040	0.010	0.113	1.000		13.9%
1973	0.296	0.270	0.113	0.094	0.016	0.008	0.061	0.006	0.137	1.000		3.3%
1974	0.299	0.297	0.109	0.105	0.017	0.003	0.016	0.010	0.146	1.000		7.2%
1975	0.298	0.290	0.109	0.117	0.016	0.003	0.012	0.012	0.143	1.000		4.4%
1976	0.292	0.270	0.096	0.132	0.015	0.003	0.029	0.011	0.152	1.000		15.8%
1977	0.278	0.273	0.088	0.135	0.016	0.004	0.065	0.010	0.131	1.000		3.6%
1978	0.281	0.285	0.097	0.152	0.016	0.005	0.016	0.011	0.137	1.000		7.0%
1979	0.258	0.258	0.094	0.145	0.015	0.005	0.074	0.009	0.141	1.000		13.2%
1980	0.260	0.273	0.105	0.160	0.018	0.005	0.009	0.008	0.162	1.000		7.0%
1981	0.255	0.267	0.101	0.154	0.018	0.006	0.025	0.008	0.166	1.000		4.7%
1982	0.246	0.262	0.107	0.153	0.017	0.006	0.025	0.008	0.175	1.000		13.2%
1983	0.241	0.259	0.100	0.154	0.017	0.006	0.061	0.008	0.156	1.000		3.5%
1984	0.234	0.258	0.103	0.147	0.017	0.006	0.044	0.008	0.184	1.000		2.9%
1985	0.232	0.253	0.105	0.145	0.016	0.005	0.043	0.007	0.194	1.000		9.9%
1986	0.237	0.252	0.104	0.141	0.015	0.005	0.036	0.006	0.203	1.000		5.2%
1987	0.241	0.247	0.111	0.138	0.015	0.005	0.033	0.007	0.203	1.000		6.5%
1988	0.254	0.235	0.096	0.141	0.016	0.005	0.045	0.008	0.200	1.000		-0.8%
1989	0.234	0.233	0.097	0.136	0.016	0.005	0.027	0.008	0.244	1.000		-5.2%
1990	0.232	0.231	0.101	0.129	0.016	0.005	0.026	0.008	0.252	1.000		4.1%
1991	0.232	0.243	0.111	0.121	0.016	0.004	0.020	0.008	0.245	1.000		5.2%
1992	0.238	0.250	0.122	0.122	0.015	0.004	0.009	0.007	0.233	1.000		6.0%
1993	0.234	0.262	0.128	0.123	0.014	0.004	0.005	0.006	0.223	1.000		4.5%
1994	0.232	0.269	0.126	0.122	0.013	0.004	0.014	0.006	0.214	1.000		9.3%
1995	0.234	0.277	0.127	0.128	0.015	0.004	0.004	0.005	0.207	1.000		4.7%
1996	0.227	0.274	0.123	0.129	0.016	0.004	0.007	0.005	0.214	1.000		3.3%
1997	0.220	0.278	0.111	0.119	0.015	0.006	0.023	0.004	0.224	1.000		10.4%
1998	0.234	0.312	0.114	0.111	0.015	0.004	0.000	0.000	0.210	1.000		2.8%
1999	0.233	0.324	0.117	0.109	0.015	0.002	0.000	0.000	0.200	1.000		3.9%
2000	0.225	0.316	0.102	0.109	0.011	0.002	0.000	0.000	0.235	1.000		3.0%
2001	0.232	0.324	0.096	0.116	0.016	0.002	0.000	0.001	0.213	1.000		5.1%
2002	0.241	0.332	0.084	0.111	0.015	0.002	0.000	0.002	0.212	1.000		2.2%
2003	0.251	0.365	0.060	0.110	0.018	0.002	0.000	0.001	0.194	1.000		3.4%
2004	0.258	0.371	0.060	0.114	0.019	0.001	0.000	0.001	0.175	1.000		4.8%
2005	0.262	0.381	0.060	0.112	0.019	0.001	0.000	0.001	0.163	1.000		2.3%
2006	0.262	0.364	0.084	0.112	0.020	0.000	0.000	0.001	0.158	1.000		2.8%
2007	0.262	0.377	0.082	0.112	0.019	0.000	0.000	0.001	0.147	1.000		5.6%
2008	0.258	0.387	0.079	0.109	0.020	0.001	0.000	0.002	0.145	1.000		3.1%
2009	0.267	0.368	0.083	0.108	0.019	0.001	0.003	0.000	0.150	1.000		8.7%
2010	0.271	0.364	0.088	0.103	0.018	0.001	0.010	0.000	0.145	1.000		6.1%
2011	0.270	0.373	0.085	0.100	0.018	0.001	0.009	0.000	0.145	1.000		5.4%
2012	0.269	0.380	0.082	0.098	0.018	0.001	0.009	0.000	0.142	1.000		8.0%
2013	0.273	0.381	0.081	0.095	0.019	0.001	0.010	0.000	0.140	1.000		4.3%
2014	0.276	0.378	0.075	0.096	0.019	0.001	0.009	0.000	0.145	1.000		4.1%
2015	0.274	0.382	0.067	0.098	0.018	0.001	0.004	0.000	0.155	1.000		7.4%
2016	0.270	0.383	0.064	0.097	0.018	0.001	0.001	0.000	0.167	1.000		7.8%
2017	0.267	0.387	0.060	0.096	0.018	0.000	0.003	0.000	0.168	1.000		5.6%
2018	0.262	0.388	0.057	0.094	0.017	0.000	0.013	0.000	0.168	1.000		7.0%
2019	0.257	0.390	0.054	0.093	0.016	0.000	0.022	0.000	0.167	1.000		6.9%
2020	0.255	0.394	0.052	0.092	0.016	0.000	0.022	0.000	0.168	1.000		6.0%
2021	0.254	0.400	0.050	0.092	0.016	0.000	0.022	0.000	0.166	1.000		5.5%
2022	0.251	0.404	0.049	0.091	0.015	0.000	0.025	0.000	0.164	1.000		6.0%
2023	0.249	0.410	0.047	0.091	0.015	0.000	0.025	0.000	0.163	1.000		5.6%
2024	0.248	0.416	0.046	0.091	0.014	0.000	0.024	0.000	0.161	1.000		5.4%
2025	0.246	0.421	0.045	0.090	0.014	0.000	0.025	0.000	0.159	1.000		5.6%
2026	0.244	0.427	0.044	0.090	0.014	0.000	0.025	0.000	0.157	1.000		5.4%
2027	0.242	0.433	0.043	0.090	0.013	0.000	0.025	0.000	0.155	1.000		5.5%
2028	0.240	0.438	0.041	0.089	0.013	0.000	0.025	0.000	0.154	1.000		5.5%
2029	0.238	0.444	0.040	0.089	0.013	0.000	0.024	0.000	0.152	1.000		5.5%
2030	0.235	0.449	0.039	0.088	0.012	0.000	0.024	0.000	0.151	1.000		5.4%

REPARTICIÓN DE CARGA EN EL SISTEMA INTERCONECTADO NACIONAL 2016-2026 (MW)												
PRONÓSTICO MODERADO		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
TOTAL GENERACIÓN		1,705.58	1,803.60	2,137.88	2,267.09	2,391.96	2,507.43	2,643.86	2,778.50	2,926.97	3,084.79	3,242.92
PÉRDIDAS DE TRANSMISIÓN		66.28	111.41	124.05	142.47	65.04	68.43	61.08	62.73	53.79	56.69	59.60
% DE PÉRDIDAS		3.89%	6.18%	5.80%	6.28%	2.72%	2.73%	2.31%	2.26%	1.84%	1.84%	1.84%
CARGA (MW)		1,639.30	1,692.19	2,013.83	2,124.62	2,326.92	2,439.00	2,582.78	2,715.77	2,873.18	3,028.10	3,183.32
ENSA	COD.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Tocumen(Incluye Vipasa)	TOC	64.58	71.27	85.82	90.85	98.75	102.98	106.00	111.59	117.33	123.08	127.89
Cerro Viento	CVI	82.39	75.88	87.92	90.44	96.67	99.17	98.26	100.95	104.28	106.88	109.12
Santa María	SMA	82.07	83.94	99.49	103.63	111.72	116.05	121.37	125.65	130.54	134.70	138.45
Monte Oscuro	MOS	86.20	57.04	66.28	68.36	73.27	75.36	78.04	80.38	83.23	85.73	87.94
Tinajitas	TIN	63.79	66.30	79.68	81.34	91.07	77.83	82.12	84.97	88.38	91.42	94.17
Geehan	PAC	19.74	20.35	24.93	15.98	17.14	17.64	18.28	18.84	19.53	20.13	20.66
Chilibre(Incluye el IDAAN)	CHI115	37.87	37.87	43.72	44.80	47.72	48.78	50.21	51.41	52.92	54.20	55.29
Calzada Larga	CLA13.8	6.69	6.85	8.02	8.40	9.06	5.52	5.74	6.02	6.25	6.55	6.73
France Field	FF13.8	65.67	68.48	81.57	85.79	94.95	99.00	89.03	92.95	100.60	109.88	120.23
Bahía Las Minas	L.M.13B	17.87	18.65	22.71	23.93	26.04	27.11	28.26	29.19	30.30	31.29	32.17
Bahía Las Minas 44 kV (anillo 44 kV: carga SE COL+ SE MH)	MHOPE	34.66	36.17	44.03	46.40	50.51	52.57	54.80	56.61	58.77	60.68	62.39
Nueva S/E Llano Bonito	LBO13	34.26	27.40	33.74	36.54	41.36	44.26	47.57	51.04	54.51	58.01	62.93
Nueva S/E 24 de Diciembre	24DIC13	31.28	31.75	37.05	38.42	41.43	42.94	44.90	46.82	49.26	51.82	54.61
Nueva S/E Costa del Este	CDE13A		43.63	54.44	58.94	65.75	67.22	69.09	70.63	72.61	74.25	75.62
Nueva S/E Chepo	MET34				9.94	10.67	10.98	11.38	11.73	12.16	12.53	12.86
Nueva S/E Gonzalillo	GON13						20.02	23.04	26.89	29.69	33.80	38.52
Nueva S/E Brisas del Golf	BDG13							11.08	11.92	13.05	14.42	17.32
Nueva S/E Cativá	CAT513							16.37	17.04	17.91	18.73	19.34
TOTAL ENSA		627.05	645.60	769.39	803.76	876.12	907.42	955.53	994.60	1041.31	1088.08	1136.25
EDEMET	COD.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Llano Sánchez 115 KV	LSA115	123.55	127.81	152.49	161.34	177.77	187.59	199.34	210.86	224.67	238.00	251.21
Llano Sánchez 34.5 KV	LSA34	10.30	10.66	12.73	13.48	14.83	15.66	16.65	17.63	18.78	19.90	21.01
El Higo	EHIG34	35.78	37.00	44.11	46.62	51.44	54.24	57.61	60.91	64.91	68.74	72.54
Chorrera	CHO34	111.98	115.58	137.61	145.26	159.15	167.48	177.37	187.06	198.59	209.74	220.73
San Francisco	SFR	108.69	105.59	126.04	133.45	146.70	154.87	164.56	174.10	185.38	196.35	207.23
Locería	LOC	121.32	112.06	133.71	141.49	155.46	164.03	174.20	184.20	196.04	207.54	218.94
Marañón	MAR	97.99	88.49	105.57	111.69	122.68	129.41	137.40	145.25	154.55	163.59	172.53
Centro Bancario	CBA	99.59	96.40	115.07	121.83	133.93	141.38	150.22	158.92	169.21	179.22	189.14
El Coco	ECO34	20.29	21.11	25.44	27.24	29.48	31.42	33.56	35.74	37.98	40.39	42.77
Nueva S/E Burunga	BUR34	42.24	44.05	53.03	56.67	62.96	67.12	72.06	76.96	82.65	88.30	93.96
Nueva S/E Bella Vista	BVI13		29.37	35.35	37.78	41.97	44.75	48.04	51.31	55.10	58.87	62.64
Nueva S/E La Floresta	LAF13		10.69	12.82	13.65	15.09	16.05	17.17	18.26	19.51	20.80	22.04
TOTAL EDEMET		771.73	798.81	953.96	1010.51	1111.45	1173.98	1248.19	1321.21	1407.38	1491.43	1574.74
EDEMET (SERVICIO B)	COD.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Miraflores	MIR44	27.16	28.21	33.82	36.01	39.80	42.33	45.28	48.17	51.48	54.86	58.15
Balboa	BAL44	18.42	18.92	22.38	23.41	25.43	26.41	27.63	28.85	30.48	31.81	33.22
Summit	SUM44	1.22	1.26	1.51	1.61	1.78	1.90	2.03	2.16	2.30	2.46	2.60
Gamboa	GAM2	1.12	1.16	1.39	1.48	1.64	1.74	1.86	1.98	2.12	2.26	2.39
Howard	HOW12	14.18	14.72	17.65	18.80	20.77	22.09	23.63	25.14	26.87	28.63	30.35
TOTAL SERVICIO B		62.09	64.27	76.76	81.31	89.43	94.46	100.43	106.31	113.24	120.00	126.71
EDECHI	COD.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Caldera 115 KV	CAL115	0.15	0.16	0.19	0.20	0.23	0.24	0.25	0.27	0.29	0.30	0.32
Progreso 34.5 KV	PRO34	14.24	14.26	17.12	18.37	20.29	21.62	23.16	24.69	26.49	28.25	30.03
Progreso 115 KV	PRO115	1.06	1.09	1.31	1.39	1.53	1.62	1.72	1.83	1.95	2.06	2.18
Mata de Nance 34.5 KV	MDN34	23.51	24.91	21.10	22.84	24.93	26.60	28.42	30.26	32.43	34.50	36.62
Nueva S/E San Cristobal	SAC34	17.50	18.22	21.89	23.37	25.94	27.60	29.59	31.55	33.86	36.13	38.40
Cañazas (PTP)	CAN34	27.62	28.95	34.77	37.29	41.20	43.90	47.03	50.14	53.80	57.37	60.97
Isla Colon - Changuinola	CHA34	21.19	21.66	26.02	27.91	30.86	32.89	35.26	37.60	40.36	43.04	45.77
Boqueron III	BOQ34	22.41	23.35	28.04	30.08	33.23	35.40	37.93	40.44	43.39	46.27	49.17
Veladero	VEL34			4.39	4.71	5.20	5.54	5.93	6.33	6.79	7.24	7.69
TOTAL EDECHI		127.68	132.61	154.84	166.16	183.39	195.42	209.32	223.10	239.34	255.16	271.16
GRANDES CLIENTES (DEMANDA MÁXIMA NO COINCIDENTE EN MW)												
Grandes Clientes	COD.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Cemex	CEMEX	25.67	25.74	29.79	33.33	35.26	35.80	36.61	37.24	38.09	38.75	39.27
Argos	CPA115	8.85	8.82	10.15	10.04	10.64	10.99	11.29	11.53	11.55	12.02	12.25
Super 99 (total)	S99	5.55	5.51	6.32	6.44	6.80	6.91	7.06	7.20	7.35	7.47	7.57
Contraloría	SFR	1.25	1.24	1.43	1.45	1.54	1.56	1.59	1.62	1.66	1.69	1.71
Hotel Bijao	EHIG34	0.84	0.83	0.95	0.97	1.03	1.04	1.07	1.09	1.11	1.13	1.15
Gold Mills	LOC	1.00	1.00	1.14	1.16	1.23	1.25	1.28	1.30	1.33	1.35	1.37
AVIPAC	SMA	0.21	0.21	0.24	0.24	0.26	0.26	0.27	0.27	0.28	0.28	0.29
Cemento Interoceánico	CHO34	1.07	1.06	1.22	1.24	1.31	1.33	1.36	1.38	1.41	1.44	1.46
Embajada USA	CLA13.8	1.22	1.21	1.39	1.41	1.49	1.51	1.55	1.58	1.61	1.64	1.66
CSS	MAR	3.59	3.74	4.50	4.81	5.09	5.16	5.28	5.37	5.49	5.59	5.66
Vareal CIA	CVI	0.29	0.32	0.37	0.37	0.39	0.38	0.41	0.42	0.43	0.43	0.42
Vareal FAB	LSA115	1.22	1.21	1.39	1.41	1.49	1.51	1.55	1.58	1.61	1.64	1.66
Minera Panama - Auto Generador	PET34			202.00	202.00	202.00	202.00	202.00	202.00	202.00	202.00	202.00
TOTAL Grandes Clientes		50.75	50.89	58.88	62.88	66.53	67.72	69.32	70.56	71.91	73.43	74.47