

Plan de Expansión del Sistema
Interconectado Nacional
2015 – 2029

Tomo I
Estudios Básicos

ANEXO I - 3

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Cálculo.**

PLAN DE EXPANSIÓN 2015-2029

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ANEXO 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. 13

AÑOS	POBLACION TOTAL		POBLACION MASC	POBLACION FEM	TASAS URBANAS		TASAS INTERANUALES		
					POBLACION URBANA	RURAL	POBLACION URBANA	RURAL	
1970	1,524,445		778,163	746,281	725,459	798,986			
1975	1,750,317	2.80%	891,719	858,597	851,792	898,525	3.26%	2.38%	
1980	1,981,562	2.51%	1,007,171	974,390	986,184	995,378	2.97%	2.07%	
1985	2,225,132	2.35%	1,129,208	1,095,923	1,152,036	1,073,096	3.16%	1.51%	
1990	2,474,119	2.14%	1,252,452	1,221,666	1,332,040	1,142,079	2.95%	1.25%	
1995	2,746,944	2.11%	1,387,815	1,359,128	1,594,684	1,152,260	3.66%	0.18%	
2000	3,040,701	2.05%	1,535,364	1,505,336	1,892,922	1,147,779	3.49%	-0.08%	
2005	3,351,007	1.96%	1,690,687	1,660,319	2,203,923	1,147,084	3.09%	-0.01%	
2010	3,661,835	1.79%	1,844,961	1,816,873	2,516,842	1,144,993	2.69%	-0.04%	
2015	3,975,404	1.66%	1,999,800	1,975,603	2,828,398	1,147,006	2.36%	0.04%	
2020	4,278,500	1.48%	2,148,714	2,129,785	3,126,097	1,152,403	2.02%	0.09%	
2025	4,565,559	1.31%	2,288,477	2,277,081	3,403,910	1,161,649	1.72%	0.16%	
2030	4,834,846	1.15%	2,418,725	2,416,120	3,659,812	1,175,034	1.46%	0.23%	
2035	5,083,229	1.01%	2,538,069	2,545,159	3,891,613	1,191,616	1.24%	0.28%	
2040	5,306,666	0.86%	2,644,563	2,662,102	4,096,885	1,209,781	1.03%	0.30%	
2045	5,483,952	0.66%	2,727,814	2,756,137	4,260,041	1,223,911	0.78%	0.23%	
2050	5,625,442	0.51%	2,793,319	2,832,122	4,389,900	1,235,542	0.60%	0.19%	

POBLACION TOTAL, URBANA Y RURAL , POR SEXO

	AÑOS	POBLACION TOTAL	POBLACION MASC	POBLACION FEM		
	1970	1,524,445	778,163	746,281	725,459	798,986
1	1971	1,567,158	799,654	767,502	749,130	817,970
2	1972	1,611,068	821,738	789,327	773,573	837,405
3	1973	1,656,207	844,433	811,773	798,813	857,302
4	1974	1,702,612	867,754	834,857	824,877	877,671
5	1975	1,750,317	891,719	858,597	851,792	898,525
1	1976	1,794,299	913,699	880,599	877,119	917,111
2	1977	1,839,387	936,220	903,164	903,199	936,081
3	1978	1,885,607	959,297	926,308	930,054	955,443
4	1979	1,932,989	982,943	950,045	957,708	975,206
5	1980	1,981,562	1,007,171	974,390	986,184	995,378
1	1981	2,028,044	1,030,475	997,567	1,017,325	1,010,458
2	1982	2,075,616	1,054,318	1,021,296	1,049,449	1,025,766
3	1983	2,124,303	1,078,712	1,045,589	1,082,587	1,041,306
4	1984	2,174,133	1,103,671	1,070,460	1,116,772	1,057,081
5	1985	2,225,132	1,129,208	1,095,923	1,152,036	1,073,096
1	1986	2,272,839	1,152,846	1,119,991	1,185,977	1,086,551
2	1987	2,321,570	1,176,979	1,144,588	1,220,918	1,100,175
3	1988	2,371,345	1,201,617	1,169,724	1,256,889	1,113,969
4	1989	2,422,187	1,226,771	1,195,413	1,293,919	1,127,936
5	1990	2,474,119	1,252,452	1,221,666	1,332,040	1,142,079
1	1991	2,526,425	1,278,425	1,247,998	1,380,857	1,144,108
2	1992	2,579,837	1,304,936	1,274,899	1,431,463	1,146,141
3	1993	2,634,378	1,331,997	1,302,378	1,483,924	1,148,177

POBLACION TOTAL, URBANA Y RURAL , POR SEXO

	AÑOS	POBLACION TOTAL	POBLACION MASC	POBLACION FEM		
4	1994	2,690,072	1,359,620	1,330,451	1,538,308	1,150,217
5	1995	2,746,944	1,387,815	1,359,128	1,594,684	1,152,260
1	1996	2,803,332	1,416,144	1,387,187	1,650,313	1,151,362
2	1997	2,860,878	1,445,052	1,415,825	1,707,882	1,150,466
3	1998	2,919,605	1,474,550	1,445,054	1,767,460	1,149,569
4	1999	2,979,538	1,504,650	1,474,887	1,829,115	1,148,674
5	2000	3,040,701	1,535,364	1,505,336	1,892,922	1,147,779
1	2001	3,100,374	1,565,243	1,535,130	1,951,396	1,147,640
2	2002	3,161,217	1,595,703	1,565,513	2,011,677	1,147,501
3	2003	3,223,255	1,626,756	1,596,498	2,073,819	1,147,362
4	2004	3,286,510	1,658,414	1,628,096	2,137,882	1,147,223
5	2005	3,351,007	1,690,687	1,660,319	2,203,923	1,147,084
1	2006	3,410,987	1,720,474	1,690,512	2,263,228	1,146,665
2	2007	3,472,040	1,750,785	1,721,253	2,324,129	1,146,247
3	2008	3,534,186	1,781,630	1,752,554	2,386,669	1,145,829
4	2009	3,597,444	1,813,019	1,784,424	2,450,891	1,145,411
5	2010	3,661,835	1,844,961	1,816,873	2,516,842	1,144,993
1	2011	3,722,505	1,874,939	1,847,564	2,576,279	1,145,395
2	2012	3,784,180	1,905,403	1,878,774	2,637,119	1,145,798
3	2013	3,846,877	1,936,363	1,910,511	2,699,397	1,146,200
4	2014	3,910,612	1,967,826	1,942,785	2,763,145	1,146,603
5	2015	3,975,404	1,999,800	1,975,603	2,828,398	1,147,006
1	2016	4,034,255	2,028,733	2,005,520	2,885,579	1,148,083
2	2017	4,093,977	2,058,085	2,035,889	2,943,915	1,149,162
3	2018	4,154,583	2,087,862	2,066,719	3,003,431	1,150,241

POBLACION TOTAL, URBANA Y RURAL , POR SEXO

	AÑOS	POBLACION TOTAL	POBLACION MASC	POBLACION FEM		
4	2019	4,216,086	2,118,069	2,098,015	3,064,150	1,151,322
5	2020	4,278,500	2,148,714	2,129,785	3,126,097	1,152,403
1	2021	4,334,430	2,175,966	2,158,462	3,179,784	1,154,246
2	2022	4,391,092	2,203,565	2,187,524	3,234,392	1,156,093
3	2023	4,448,494	2,231,513	2,216,978	3,289,939	1,157,942
4	2024	4,506,646	2,259,815	2,246,829	3,346,439	1,159,794
5	2025	4,565,559	2,288,477	2,277,081	3,403,910	1,161,649
1	2026	4,618,189	2,313,953	2,304,233	3,453,617	1,164,314
2	2027	4,671,426	2,339,713	2,331,710	3,504,050	1,166,985
3	2028	4,725,276	2,365,759	2,359,514	3,555,220	1,169,662
4	2029	4,779,747	2,392,095	2,387,649	3,607,137	1,172,345
5	2030	4,834,846	2,418,725	2,416,120	3,659,812	1,175,034
1	2031	4,883,532	2,442,136	2,441,394	3,705,040	1,178,332
2	2032	4,932,709	2,465,774	2,466,931	3,750,828	1,181,639
3	2033	4,982,380	2,489,641	2,492,736	3,797,181	1,184,955
4	2034	5,032,552	2,513,738	2,518,811	3,844,107	1,188,281
5	2035	5,083,229	2,538,069	2,545,159	3,891,613	1,191,616
1	2036	5,127,151	2,559,019	2,568,129	3,931,828	1,195,227
2	2037	5,171,452	2,580,142	2,591,307	3,972,458	1,198,849
3	2038	5,216,136	2,601,439	2,614,693	4,013,508	1,202,482
4	2039	5,261,206	2,622,913	2,638,291	4,054,982	1,206,126
5	2040	5,306,666	2,644,563	2,662,102	4,096,885	1,209,781

POBLACION TOTAL, URBANA Y RURAL , POR SEXO

Ind.Mas. Urb	POBLACION SEXO					TASAS INTERANUALES			
	URBANA		Ind.Mas. Rur	RURAL		URBANA		RURAL	
	Masculina	Femenina		Masculina	Femenina	Masculina	Femenina	Masculina	Femenina
94.9	353,306	372,152	114	424,857	374,128				
94.5	413,775	438,016	114	477,944	420,580	3.21%	3.31%	2.38%	2.37%
93.9	477,701	508,482	114	529,469	465,908	2.91%	3.03%	2.07%	2.07%
94.2	558,839	593,196	113	570,369	502,726	3.19%	3.13%	1.50%	1.53%
94.3	646,406	685,633	113	606,045	536,033	2.95%	2.94%	1.22%	1.29%
95.3	778,139	816,544	112	609,675	542,584	3.78%	3.56%	0.12%	0.24%
96.4	929,151	963,770	112	606,213	541,565	3.61%	3.37%	-0.11%	-0.04%
97.2	1,086,503	1,117,419	111	604,183	542,900	3.18%	3.00%	-0.07%	0.05%
97.7	1,243,834	1,273,007	111	601,126	543,866	2.74%	2.64%	-0.10%	0.04%
97.9	1,399,438	1,428,959	110	600,362	546,643	2.39%	2.34%	-0.03%	0.10%
98.0	1,547,042	1,579,054	109	601,671	550,731	2.03%	2.02%	0.04%	0.15%
97.8	1,683,286	1,720,623	109	605,190	556,458	1.70%	1.73%	0.12%	0.21%
97.6	1,807,585	1,852,226	108	611,140	563,893	1.44%	1.48%	0.20%	0.27%
97.3	1,919,103	1,972,509	108	618,965	572,650	1.20%	1.27%	0.25%	0.31%
97.0	2,016,826	2,080,058	108	627,736	582,044	1.00%	1.07%	0.28%	0.33%
96.6	2,093,334	2,166,706	108	634,480	589,430	0.75%	0.82%	0.21%	0.25%
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

POBLACION SEXO					
URBANA			RURAL		
Ind.Mas. Urb	Masculina	Femenina	Ind.Mas. Rur	Masculina	Femenina
	353,306	372,152		424,857	374,128
	364,648	384,480		434,980	382,989
	376,354	397,217		445,345	392,059
	388,436	410,376		455,956	401,344
	400,905	423,971		466,821	410,850
	413,775	438,016		477,944	420,580
	363,605	383,422		487,831	429,278
	374,203	395,034		497,923	438,156
	385,111	406,997		508,224	447,218
	396,337	419,323		518,738	456,467
	477,701	508,482		529,469	465,908
	492,927	524,397		537,407	473,049
	508,637	540,810		545,465	480,300
	524,849	557,737		553,643	487,662
	541,577	575,193		561,944	495,137
	558,839	593,196		570,369	502,726
	575,348	610,628		577,332	509,218
	592,344	628,573		584,380	515,793
	609,843	647,045		591,514	522,453
	627,858	666,059		598,736	529,200
	646,406	685,633		606,045	536,033
	670,835	710,018		606,769	537,337
	696,187	735,270		607,494	538,644
	722,498	761,420		608,220	539,954

POBLACION TOTAL, URBANA Y RURAL , POR SEXO

POBLACION SEXO					
URBANA			RURAL		
Ind.Mas. Urb	Masculina	Femenina	Ind.Mas. Rur	Masculina	Femenina
	749,802	788,501		608,947	541,267
	778,139	816,544		609,675	542,584
	806,238	844,070		608,981	542,380
	835,351	872,523		608,288	542,176
	865,515	901,936		607,595	541,972
	896,769	932,341		606,904	541,769
	929,151	963,770		606,213	541,565
	958,683	992,709		605,806	541,832
	989,155	1,022,517		605,400	542,099
	1,020,594	1,053,220		604,994	542,366
	1,053,033	1,084,845		604,588	542,633
	1,086,503	1,117,419		604,183	542,900
	1,116,290	1,146,936		603,570	543,093
	1,146,895	1,177,232		602,958	543,286
	1,178,338	1,208,328		602,347	543,479
	1,210,643	1,240,246		601,736	543,673
	1,243,834	1,273,007		601,126	543,866
	1,273,505	1,302,773		600,973	544,420
	1,303,884	1,333,234		600,820	544,975
	1,334,987	1,364,408		600,667	545,531
	1,366,833	1,396,310		600,515	546,086
	1,399,438	1,428,959		600,362	546,643
	1,427,787	1,457,791		600,624	547,458
	1,456,710	1,487,204		601,764	548,910
	1,486,219	1,517,211		603,897	551,014

POBLACION TOTAL, URBANA Y RURAL , POR SEXO

POBLACION SEXO					
Ind.Mas. Urb	URBANA		Ind.Mas. Rur	RURAL	
	Masculina	Femenina		Masculina	Femenina
	1,516,325	1,547,824		606,504	553,424
	1,547,042	1,579,054		601,671	550,731
	1,573,379	1,606,404		602,373	551,872
	1,600,164	1,634,227		603,076	553,015
	1,627,405	1,662,533		603,780	554,160
	1,655,110	1,691,329		604,485	555,308
	1,683,286	1,720,623		605,190	556,458
	1,707,442	1,746,173		606,375	557,937
	1,731,946	1,772,103		607,563	559,420
	1,756,800	1,798,418		608,753	560,907
	1,782,012	1,825,124		609,945	562,398
	1,807,585	1,852,226		611,140	563,893
	1,829,358	1,875,681		612,697	565,634
	1,851,393	1,899,433		614,258	567,380
	1,873,693	1,923,486		615,823	569,131
	1,896,262	1,947,843		617,392	570,888
	1,919,103	1,972,509		618,965	572,650
	1,938,261	1,993,564		620,709	574,517
	1,957,611	2,014,845		622,459	576,389
	1,977,153	2,036,352		624,213	578,268
	1,996,891	2,058,089		625,972	580,153
	2,016,826	2,080,058		627,736	582,044

CUADRO No. 2
TASAS DE CRECIMIENTO DE POBLACION 1970-2025

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%
promedio				TOTAL	RURAL	URBANA
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
2012-2015	1.66%	0.04%	2.36%
2015-2018	1.52%	0.08%	2.11%
2019-2024	1.37%	0.14%	1.82%
2025-2029	1.18%	0.22%	1.51%
2019-2029	1.28%	0.17%	1.68%

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

PERIODO 2010 2010 - 2030

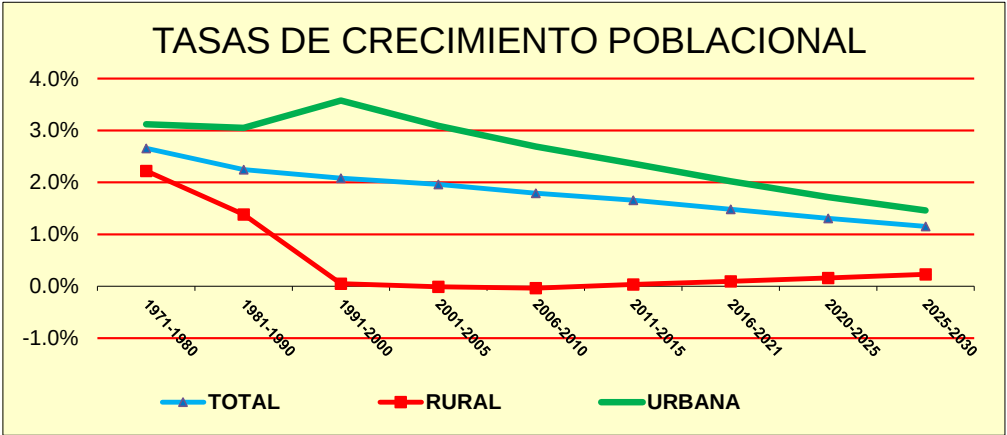
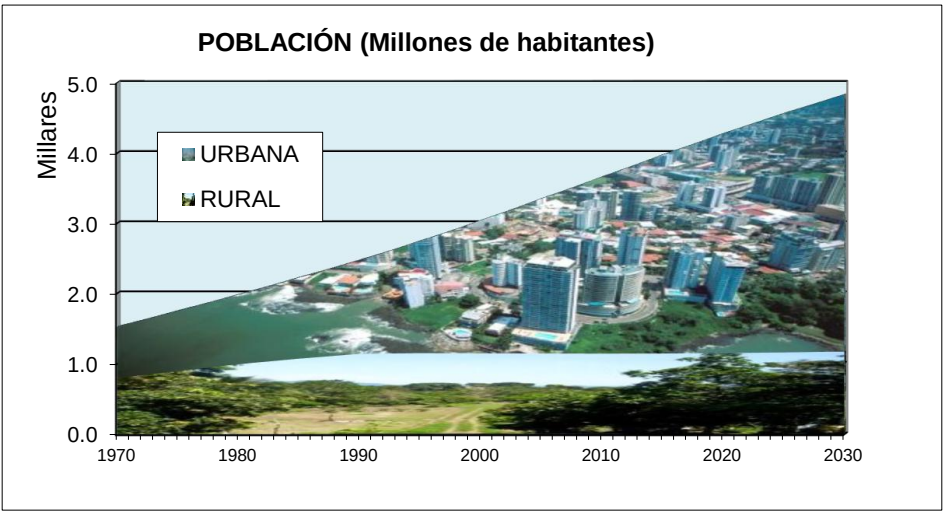
AÑO	HIPOTESIS CONSTANTE	HIPOTESIS ALTA	HIPOTESIS MEDIA RECOMENDADA	HIPOTESIS BAJA
2008				
2009	1.753%	1.722%	1.620%	1.291%
2010	1.732%	2.293%	1.569%	-0.912%
2011	1.711%	1.672%	1.518%	1.182%
2012	1.691%	1.648%	1.475%	1.128%
2013	1.671%	1.625%	1.436%	1.084%
2014	1.653%	1.604%	1.401%	1.049%
2015	1.637%	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(2025-2029)	1.449%	1.332%	0.997%	0.579%

TASAS ANUALES ACUMULATIVAS, SEGUN
ESCENARIOS

PERIODOS	MODERADO	OPTIMISTA	PESIMISTA
2007-2010	1.80%	1.80%	1.80%
2011-2014	1.46%	1.64%	1.11%
2015-2019	1.33%	1.56%	0.99%
2020-2024	1.14%	1.43%	0.78%
2025-2029	1.00%	1.33%	0.58%
2019-2029	1.09%	1.39%	0.70%
2015-2029	1.15%	1.44%	0.78%

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CUADRO No. 3
INFLACIÓN, 1970-2014

AÑOS	IPCPAN	INFPAN
	IPC Anual de Panamá	Inflación de Panamá
	2002 = 100 Fórmula	% COPE 1971-2002
1970	36.5	
1971	37.2	1.9%
1972	39.2	5.6%
1973	41.9	6.8%
1974	49.2	17.3%
1975	51.9	5.4%
1976	53.9	4.0%
1977	56.5	4.8%
1978	59.0	4.4%
1979	63.8	8.1%
1980	72.9	14.2%
1981	78.3	7.5%
1982	81.7	4.3%
1983	83.5	2.2%
1984	84.9	1.7%
1985	85.7	0.9%
1986	85.7	0.0%
1987	86.4	0.9%
1988	86.9	0.5%
1989	86.9	0.1%
1990	87.6	0.8%
1991	88.8	1.3%
1992	90.3	1.8%
1993	90.8	0.5%
1994	92.0	1.3%
1995	92.8	0.9%
1996	94.0	1.3%
1997	95.2	1.2%
1998	95.9	0.7%
1999	97.2	1.4%
2000	98.7	1.5%
2001	99.0	0.3%
2002	100.0	1.0%
2003	100.1	0.1%
2004	100.5	0.4%
2005	103.5	2.9%
2006	106.1	2.5%
2007	110.5	4.2%
2008	120.1	8.7%
2009	123.0	2.4%
2010	127.3	3.5%
2011	134.8	5.9%
2012	142.5	5.7%
2013	147.7	3.6%
2014	151.7	2.7%

PERIODO	PROMEDIO	TASA
1990-1999	1.0%	1.1%
1999-2014	3.0%	3.0%
1990-2007	1.3%	1.4%
1999-2005	1.1%	1.1%
2006-2012	4.6%	4.6%

(Millones de Balboas del 2007)

CUADRO No. 5
PRONÓSTICO DEL PIB 2014, TENDENCIAL HISTÓRICO- (Millones de B/. 2007)

GRAN DIVISIÓN ECONÓMICA	BASE HISTÓRICA REAL						PRELIMINAR	E1	E2	E3	E4	E5					
	2007	2008	2009	2010	2011	2012	2013	TENDENCIAL 2007-2013	PROMEDIO DE CAMBIO DE ÚLTIMOS 3 AÑOS 2011-13	PROMEDIO DE CAMBIO DE ÚLTIMOS 2 años 2012-13	AJUSTADO Estructuras Base E2	AJUSTADO Estructuras Base E2 y Promedios Pronósticos Publicados					
1. Agricultura, silvicultura y caza	826.6	848.1	749.9	764.4	808.2	847.5	863.1	839.2	-2.8%	898.7	4.1%	891.9	3.3%	898.7	4.1%	868.1	0.6%
2. Pesca	259.6	265.9	256.0	150.7	118.7	122.7	141.3	76.6	-45.8%	138.4	-2.1%	154.2	9.1%	138.4	-2.1%	133.6	-5.4%
3. Explotación de canteras	147.9	189.9	198.6	213.1	252.7	325.5	427.7	417.1	-2.5%	539.4	26.1%	556.3	30.1%	539.4	26.1%	521.0	21.8%
Subtotal Sector Primario	1,234.2	1,303.8	1,204.5	1,128.2	1,179.6	1,295.6	1,432.1	1,332.9	-6.9%	1,576.5	10.1%	1,602	11.9%	1,577	10.1%	1,523	6.3%
4. Industria Manufacturera	1,530.7	1,577.2	1,553.1	1,596.0	1,650.3	1,655.1	1,699.8	1,717.5	1.0%	1,735.9	21.1%	1,725.2	1.5%	1,739.9	2.1%	1,676.7	-1.4%
5. Electricidad, gas y agua	606.3	692.9	932.2	756.1	901.9	936.4	980.2	946.1	0.3%	930.8	4.3%	931.9	0.2%	930.8	4.3%	970.8	0.8%
6. Construcción	1,393.1	1,821.4	1,905.6	2,043.2	2,435.4	3,149.9	4,111.4	4,028.8	-2.0%	5,190.6	29.9%	5,342.0	29.9%	5,190.6	26.2%	5,013.5	21.9%
7. Transporte, almacenamiento y comunicaciones	3,591.8	3,822.8	4,165.5	4,713.4	5,295.2	5,892.5	6,253.2	6,712.5	7.3%	6,871.1	9.6%	6,795.3	8.7%	6,871.1	9.9%	6,636.5	6.1%
Subtotal Sector Secundario y de Infraestructura	7,121.9	7,904.3	8,566.4	9,108.7	10,282.7	11,534.0	12,926.6	13,404.9	52.5%	14,698	13.7%	14,706	13.8%	14,698	13.7%	14,197	9.8%
8. Comercio al por mayor y al por menor	3,755.6	4,169.7	4,237.1	4,661.2	5,292.5	5,747.8	5,949.0	6,372.1	7.1%	6,453.0	8.7%	6,307.3	6.0%	6,307.3	8.5%	6,232.8	1.8%
9. Hoteles y Restaurantes	616.2	678.2	702.5	777.1	901.2	1,023.3	1,093.5		6.9%	1,121.7	9.6%	1,090.5	6.6%	1,121.7	9.6%	1,083.4	5.9%
10. Intermediación Financiera	1,807.9	1,988.6	1,969.9	2,011.1	2,184.0	2,341.4	2,566.8	2,575.2	0.3%	2,784.3	8.5%	2,795.5	8.5%	2,784.3	8.5%	2,689.2	4.8%
11. Actividades inmobiliarias, empresariales y de alquiler	1,592.4	1,741.6	1,728.6	1,782.7	1,880.1	2,124.3	2,315.1	2,322.0	0.3%	2,527.3	11.0%	2,570.7	9.1%	2,527.3	9.1%	2,441.0	5.4%
12. Enseñanza Privada	207.0	219.2	244.0	258.2	270.6	282.1	294.2	312.8	6.3%	307.3	4.4%	306.7	4.3%	307.3	4.4%	296.8	0.9%
Menos: Servicio de intermediación financiera	-538.8	-570.1	-607.6	-630.5	-663.8	-709.5	-762.9	-784.4	2.8%	-812.9	7.2%	-817.8	7.2%	-812.9	7.2%	-785.2	2.9%
Subtotal Sector Terciario (comercial y financiero)	7,440.2	8,227.2	8,274.6	8,858.8	9,844.6	10,750.3	11,386.6	11,891.2	38.3%	12,381	8.7%	12,253	7.6%	12,381	8.7%	11,958	5.0%
13. Actividades de servicio sociales y de salud privada	278.8	278.9	303.6	333.0	346.3	366.9	390.4	405.9	32.1%	411.7	5.4%	414.6	6.2%	411.7	5.4%	397.6	1.8%
14. Otras actividades comunitarias, sociales y personales	475.6	475.9	499.2	528.3	581.5	634.1	679.6	702.7	36.4%	739.1	8.8%	734.7	8.1%	739.1	8.8%	713.9	5.0%
15. Productores de servicios gubernamentales	1,848.4	1,923.6	1,953.7	2,007.5	2,108.3	2,264.0	2,379.5	2,416.2	16.8%	2,518.3	5.8%	2,528.0	6.2%	2,518.3	5.8%	2,432.3	2.2%
16. Productores de servicios domésticos	180.5	207.2	209.1	212.3	235.5	288.2	352.2	341.5	38.8%	417.0	22.0%	429.8	18.4%	417.0	22.0%	402.8	14.4%
Actividades Inmobiliarias, empresariales y de alquiler	1,530.8	1,582	1,746.0	1,880.0	2,012.5	2,143.2	2,297.5	2,411.5	42.2%	2,456.3	6.9%	2,454.8	6.9%	2,456.3	6.9%	2,372.4	3.3%
Hogares privados con servicio doméstico	182.6	188.7	187.2	190.0	202.0	207.0	203.5	210.7	10.6%	208.2	0.3%	204.3	0.4%	208.2	0.3%	201.1	-1.2%
Menos: Productores de servicios domésticos	1,894.0	1,978.1	2,142.3	2,282.3	2,451.0	2,638.4	2,853.2	2,963.8	40.2%	3,081.5	8.0%	3,088.9	8.3%	3,081.5	8.0%	2,976.4	4.3%
Subtotal Sector Terciario (oficial y personal)	4,480.0	4,666.8	4,898.7	5,151.2	5,487.1	5,903.4	6,302.8	6,488.6	31.5%	6,751	7.1%	6,766	7.4%	6,751	7.1%	6,520	3.4%
Más: Derechos de importación e ITBM	978.0	1,095.3	1,119.5	1,279.1	1,453.0	1,638.0	1,664.4	1,815.1	0.09	1,817.0	9.2%	1,781.3	7.0%	1,817.0	9.2%	1,755.0	5.4%
Más: ITBM que graba las compras de los hogares										-	-	-	-	-	-	-	-
Más: Otros impuestos a los productores										-	-	-	-	-	-	-	-
Menos: Subvenciones a los productores	-132.5	-143.5	-93.5	-154.2	-141.5	-135.7	-139.0	-141.7	0.02	-134.3	-3.4%	-137.8	-0.9%	-134.3	-3.4%	-129.7	-6.7%
Subtotal Impuestos y transferencias	845.6	951.8	1,025.9	1,124.9	1,311.5	1,502.3	1,525.3	1,673.3	9.7%	1,682.7	10.3%	1,643.5	7.7%	1,682.7	10.3%	1,625.3	6.6%
Producto Interno Bruto Real	21,121.9	23,053.9	23,970.1	25,372.8	28,105.5	30,985.5	33,573.5	34,791.0	3.6%	37,089		36,970		37,088.8		35,822.9	35,822.9
TASA DE CRECIMIENTO ANUAL		9.15%	3.97%	5.85%	10.77%	10.25%	8.35%	3.6%	-56.6%	10.47%		10.12%		10.47%	6.7%	6.70%	
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CUADRO No. 5
PRONOSTICO DEL PIB TENDENCIAL HISTORICO
(Millones de Balboas del 2007)

CUADRO No. 4
PRONÓSTICOS DEL PIB 2015, Emitidos y Publicados por Expertos
Pronosticos Estimados de Expertos publicados

	Desde	Hasta	Promedio
MEF- Gobierno	6.0	7.0	6.50
FMI	6.6	6.6	7.20
World Bank (Banco Mundial)	6.8	6.8	6.80
Banco Interamericano de Desarrollo (BID)		7.0	7.00
CEPAL	6.0	7.0	6.50
INDESA(Marcos Fernandez G. Chapman)	6.0	7.0	6.50
Panama Economic Insight			
Deloitte	6.0	7.0	6.50
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. Ardito barletta)			
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	6.34	6.85	6.73
Promedio AJUSTADO (Sin Extremos)	6.28	6.88	6.70
MAXIMO			7.20
MINIMO			6.50

9.6%

|

CUADRO No. 5
PRONOSTICO DEL PIB TENDENCIAL HISTORICO
(Millones de Balboas del 2007)

TASAS DE CRECIMIENTO													
ANUAL									TASA ACUMULADA				
2007	2008	2009	2010	2011	2012	2013			CAMBIO PROMEDIO ANUAL				
							Mejor Tasa	Peor Tasa					
							Mejor Tasa	Peor Tasa	Historica	Ultimos 5 Años	Ultimos 4 Años	Ultimos 3 Años	Ultimos 2 Años
	2.6%	-11.6%	1.9%	5.7%	4.9%	1.8%	5.7%	-11.6%	0.7%	0.4%	3.6%	4.1%	3.3%
	2.4%	-3.7%	-41.2%	-21.2%	3.4%	15.2%	15.2%	-41.2%	-9.6%	-11.9%	-13.8%	-2.1%	9.1%
	28.4%	4.6%	7.3%	18.6%	28.8%	31.4%	31.4%	4.6%	19.4%	17.6%	21.1%	26.1%	30.1%
	5.6%	-7.6%	-6.3%	4.6%	9.8%	10.5%	10.5%	-7.6%	2.5%	1.9%	4.4%	8.3%	10.2%
	3.0%	-0.9%	2.1%	3.4%	0.3%	2.7%	3.4%	-0.9%	1.8%	1.51%	2.1%	2.1%	1.5%
	12.6%	36.5%	-18.9%	19.3%	-7.3%	3.1%	36.5%	-18.9%	6.0%	4.8%	-1.9%	4.5%	-2.2%
	30.7%	4.6%	7.2%	19.2%	29.3%	30.5%	30.7%	4.6%	19.8%	17.7%	21.2%	26.2%	29.9%
	6.4%	9.0%	13.2%	12.3%	11.3%	6.1%	13.2%	6.1%	9.7%	10.3%	10.7%	9.9%	8.7%
	11.0%	8.4%	6.3%	12.9%	12.2%	12.1%	12.9%	6.3%	10.4%	10.3%	10.8%	12.4%	12.1%
	11.0%	1.6%	10.0%	13.5%	8.6%	3.5%	13.5%	1.6%	8.0%	7.4%	8.9%	8.5%	6.0%
	10.1%	3.6%	10.6%	16.0%	7.0%	6.1%	16.0%	3.6%	8.8%	8.6%	9.9%	9.6%	6.6%
	10.0%	-0.9%	2.1%	7.6%	8.2%	9.6%	10.0%	-0.9%	6.0%	5.2%	6.8%	8.5%	8.9%
	9.4%	-0.7%	3.1%	5.5%	13.0%	9.0%	13.0%	-0.7%	6.4%	5.9%	7.6%	9.1%	11.0%
	5.9%	11.3%	5.8%	4.8%	4.3%	4.3%	11.3%	4.3%	6.0%	6.1%	4.8%	4.4%	4.3%
	5.8%	6.6%	3.8%	5.3%	6.9%	7.5%	7.5%	3.8%	6.0%	6.0%	5.9%	6.6%	7.2%
	10.6%	0.6%	7.1%	11.1%	9.2%	5.9%	11.1%	0.6%	7.3%	6.7%	8.3%	8.7%	7.5%
	3.8%	4.9%	9.7%	4.0%	6.0%	6.4%	9.7%	3.8%	5.8%	6.2%	6.5%	5.4%	6.2%
	3.7%	5.0%	5.8%	10.1%	9.0%	7.2%	10.1%	3.7%	6.8%	7.4%	8.0%	8.8%	8.1%
	4.1%	1.6%	2.8%	5.0%	7.4%	5.1%	7.4%	1.6%	4.3%	4.3%	5.1%	5.8%	6.2%
	14.8%	0.9%	1.5%	11.4%	21.9%	22.2%	22.2%	0.9%	11.8%	11.2%	13.9%	18.4%	22.0%
	3.4%	10.4%	7.7%	7.0%	6.5%	7.2%	10.4%	3.4%	7.0%	7.7%	7.1%	6.9%	6.8%
	3.3%	-0.8%	1.5%	6.3%	2.4%	-1.7%	6.3%	-1.7%	1.8%	1.5%	2.1%	2.3%	0.4%
	4.4%	8.3%	6.5%	7.4%	7.6%	8.1%	8.3%	4.4%	7.1%	7.6%	7.4%	7.7%	7.9%
	4.2%	5.0%	5.2%	6.5%	7.6%	6.8%	7.6%	4.2%	5.9%	6.2%	6.5%	7.0%	7.2%
	12.0%	2.2%	14.3%	13.6%	12.7%	1.6%	14.3%	1.6%	9.3%	8.7%	10.4%	9.2%	7.0%
	8.3%	-34.8%	64.9%	-8.3%	-4.1%	2.4%	64.9%	-34.8%	0.8%	-0.6%	10.4%	-3.4%	-0.9%
	12.6%	7.8%	9.6%	16.6%	14.5%	1.5%	16.6%	1.5%	10.3%	9.9%	10.4%	10.7%	7.8%
	9.1%	4.0%	5.9%	10.8%	10.2%	8.4%	10.8%	4.0%	8.0%	7.8%	8.8%	9.8%	9.3%

PIB PRE ESTIMADO AÑO 2014
 SEGUN ACTIVIDAD ECONOMICA Y DIVISION ECONOMICA POR TRIMESTRE
 SEGUNDO TRIMESTRE DEL 2014

CUADRO No. 6
 PIB ESTIMADO AL AÑO 2014, POR ACTIVIDAD ECONOMICA, DIVISION, ESCENARIO (2007=100)
 (En millones de Dólares de 2007)

GRAN DIVISION ECONOMICA	PIB I TRIM 2014 (E)	PIB II TRIM 2014 (E)	PIB I SEM 2014 (E)	TASAS DE CRECIMIENTO 2014-2013	ESTRUCTURA I SEMESTRE AÑO 2014 (%)	FACTOR MULTIPLE PROMEDIO (*)	PIB ESTRUCTURAL AÑO 2013 (%)	ESTRUCTURA AÑO 2013 (%)	FACTOR MULTIPLE AJUSTADO (**)	PIB PRE ESTIMADO AJUSTADO AÑO 2014	ESTRUCTURA AÑO 2014 (%)	
1. Agricultura, silvicultura y caza	199.6	248.2	447.8	17.16%	2.59%	1.84	822.1	2.30%	1.90	850.9	2.38%	16.52%
2. Pesca	27.0	31.4	58.4	-11.78%	0.34%	2.30	134.1	0.37%	2.75	160.6	0.45%	-13.67%
3. Explotación de minas y canteras	122.0	110.8	232.8	4.35%	1.34%	2.02	470.5	1.32%	2.01	467.2	1.31%	5.25%
Subtotal Sector Primario	348.6	390.4	739.0	10.05%	4.27%	1.94	1,426.7	3.99%	2.00	1,478.7	4.14%	8.71%
4. Industria Manufacturera	425.2	433.2	858.4	36.49%	4.96%	2.00	1,714.7	4.79%	2.00	1,715.6	4.80%	36.34%
5. Electricidad, gas y agua	206.0	199.9	405.9	17.69%	2.34%	2.04	826.3	2.31%	2.06	837.5	2.34%	19.19%
6. Construcción	1,188.3	1,087.5	2,275.8	143.27%	13.14%	2.04	4,646.1	12.99%	2.01	4,584.9	12.83%	146.62%
7. Transporte, almacenamiento y comunicaciones	1,669.7	1,593.1	3,262.8	6.81%	18.84%	2.05	6,701.9	18.74%	2.04	6,643.1	18.59%	8.02%
Subtotal Sector Secundario y de Infraestructura	3,489.2	3,313.7	6,802.9	37.04%	39.29%	2.04	13,888.9	38.83%	2.03	13,781.1	38.57%	38.23%
8. Comercio al por mayor y al por menor	1,422.9	1,462.8	2,885.7	64.61%	16.67%	2.16	6,236.7	17.44%	2.14	6,186.7	17.31%	66.91%
9. Hoteles y Restaurantes	264.0	226.2	490.2	35.53%	2.83%	2.12	1,037.0	2.90%	2.12	1,040.4	2.91%	33.70%
10. Intermediación Financiera	645.7	647.2	1,292.9	17.48%	7.47%	1.99	2,572.8	7.19%	1.98	2,557.9	7.16%	20.13%
11. Actividades Inmobiliarias, empresariales y de alquiler	594.9	691.1	1,286.0	100.25%	7.43%	2.04	2,618.8	7.32%	2.03	2,607.6	7.30%	95.71%
12. Enseñanza Privada	76.5	76.5	153.0	94.90%	0.88%	2.00	306.3	0.86%	2.00	305.5	0.86%	94.83%
Menos: Servicio de intermediación financiera	-198.6	-196.4	-395.0	58.25%	-2.28%	2.02	-796.0	-2.23%	2.01	-793.6	-2.22%	57.86%
Subtotal Sector Terciario (comercial y financiero)	2,805.4	2,907.4	5,712.8	54.97%	32.99%	2.09	11,975.7	33.48%	2.08	11,904.6	33.32%	56.63%
13. Actividades de servicio sociales y de salud privada	95.8	98.9	194.7	88.85%	1.12%	2.03	395.6	1.11%	2.03	395.0	1.11%	90.05%
14. Otras actividades comunitarias, sociales y personales	172.2	171.7	343.9	-4.37%	1.99%	2.05	703.4	1.97%	2.06	707.1	1.98%	-3.27%
15. Productores de servicios gubernamentales	603.1	628.0	1,231.1	64.19%	7.11%	2.07	2,551.5	7.13%	2.05	2,529.5	7.08%	63.25%
Construcción	111.1	96.1	207.2	553.63%	1.20%	1.99	412.9	1.15%	1.98	410.7	1.15%	552.24%
Actividades Inmobiliarias, empresariales y de alquiler	585.1	588.6	1,173.7	1.78%	6.78%	2.03	2,379.5	6.65%	2.02	2,371.0	6.64%	1.83%
Hogares privados con servicio doméstico	52.2	54.1	106.3	64.81%	0.61%	2.00	212.6	0.59%	1.98	210.0	0.59%	66.93%
16. Productores de servicios domésticos	748.4	738.8	1,487.2	19.03%	8.59%	2.03	3,005.1	8.40%	2.02	2,991.7	8.37%	18.85%
Subtotal Sector Terciario (oficial y personal)	1,619.5	1,637.4	3,256.9	32.29%	18.81%	2.04	6,655.6	18.61%	2.03	6,623.3	18.54%	32.32%
Más: Derechos de importancia e ITBM								0.00%		0.0		
Más: ITBM que graba las compras de los hogares								0.00%		0.0		
Más: Otros impuestos a los productores								0.00%		0.0		
Menos: Subvenciones a los productos								0.00%		0.0		
Subtotal Impuestos y transferencias	395.8	408.3	804.1	2.43%	4.64%	2.26	1,818.4	5.08%	2.42	1,943.0	5.44%	4.97%
Producto Interno Bruto Real	8,658.5	8,657.2	17,315.7	37.8%	100.0%	2.06	35,765.3	100.00%	2.06	35,730.7	100.00%	38.56%
							35671.7					
TASA DE VARIACION	6.04%	6.28%	6.16%				6.53%			6.43%		
		-0.02%										

Fuente: Elaboracion propia con base en los boletines INEC, Panamá en Cifras 2002-06

CUADRO No. 7
ESTIMACION DEL PIB DEL AÑO 2015, POR ACTIVIDAD ECONOMICA, DIVISION, ESCENARIO (2007=100)

ALTERNATIVAS A LA ESTIMACION DEL PIB DEL AÑO 2015
SEGÚN ACTIVIDAD ECONOMICA Y DIVISION ECONOMICA AL SEGUNDO TRIMESTRE DEL 2013
(En millones de dólares de 2007

GRAN DIVISION ECONOMICA	AÑO 2014					AÑO 2015								
						ESCENARIO OPTIMISTA (1)			ESCENARIO MODERADO (2)			ESCENARIO PESIMISTA (3)		
	PIB 2013 (P)	ESTRUCTURA ESTIMADA(P) AÑO 2013 (%)	PIB PRE-ESTIMADO AÑO 2014 (Est II Trim.)	VARIACION DEL PIB I SEM 2014-2013	VARIACION ANUAL DEL PIB ESTIMADA 2012-2011	VARIACION ANUAL DEL PIB AJUSTADA (Promedio)	PIB ESTIMADO AÑO 2013 OPTIMISTA	ESTRUCTUR A ESTIMADA AÑO 2013 (%)	VARIACION ANUAL DEL PIB AJUSTADA	PIB ESTIMADO AÑO 2013 MODERADO	ESTRUCTURA ESTIMADA AÑO 2013 (%)	VARIACION ANUAL DEL PIB AJUSTADA	PIB ESTIMADO AÑO 2013 PESIMISTA	ESTRUCTURA ESTIMADA AÑO 2013 (%)
1. Agricultura, silvicultura y caza	863.1	2.57%	850.9	-0.47%	-1.41%	0.72%	857.1	2.20%	1.93%	867.4	2.27%	-0.70%	845.0	2.29%
2. Pesca	141.3	0.42%	160.6	36.13%	13.64%	-9.64%	145.1	0.37%	0.00%	160.6	0.42%	0.00%	160.6	0.44%
3. Explotación de canteras	427.7	1.27%	467.2	11.92%	9.23%	19.35%	557.6	1.43%	7.35%	501.5	1.31%	-1.81%	458.7	1.25%
Subtotal Sector Primario	1,432.1	4.27%	1,478.7	5.45%		5.48%	1,559.8	4.01%	3.43%	1,529.4	4.00%	0.00%	1,464.3	3.98%
4. Industria Manufacturera	1,699.8	5.06%	1,715.6	0.53%	0.93%	1.76%	1,745.9	4.49%	2.11%	1,751.8	4.58%	1.67%	1,744.3	4.74%
5. Electricidad, gas y agua	862.2	2.57%	837.5	-1.02%	-2.87%	6.05%	888.1	2.28%	6.05%	888.1	2.32%	17.42%	983.4	2.57%
6. Construcción	4,111.4	12.25%	4,584.9	15.51%	11.52%	19.77%	5,491.2	14.11%	7.22%	4,915.9	12.86%	4.62%	4,796.9	13.02%
7. Transporte, almacenamiento y comunicaciones	6,253.2	18.63%	6,643.1	7.67%	6.23%	9.68%	7,286.2	18.72%	9.68%	7,286.2	19.06%	1.05%	6,712.5	18.23%
Subtotal Sector Secundario y de infraestructura	12,926.6	38.50%	13,781.1	8.59%		11.83%	15,411.3	39.60%	7.70%	14,842.0	38.83%	0.00%	14,237.1	38.66%
8. Comercio al por mayor y al por menor	5,949.0	17.72%	6,186.7	3.27%	4.00%	7.97%	6,679.7	17.16%	10.01%	6,805.9	17.81%	1.62%	6,286.8	17.07%
9. Hoteles y Restaurantes	1,023.3	3.05%	1,040.4	-1.41%	1.68%	8.82%	1,132.2	2.91%	10.62%	1,151.0	3.01%	3.58%	1,077.7	2.93%
10. Intermediación Financiera	2,566.8	7.65%	2,557.9	3.16%	-0.35%	6.02%	2,711.8	6.97%	2.09%	2,611.4	6.83%	5.11%	2,688.6	7.30%
11. Actividades Inmobiliarias, empresariales y de alquiler	2,316.1	6.90%	2,607.6	9.23%	12.59%	6.44%	2,775.6	7.13%	3.13%	2,689.1	7.04%	-0.74%	2,588.2	7.03%
12. Enseñanza Privada	294.2	0.88%	305.5	4.08%	3.85%	6.04%	324.0	0.83%	5.83%	323.3	0.85%	11.78%	341.5	0.93%
Menos: Servicio de intermediación financiera	-762.9	-2.27%	-793.6	6.33%	4.03%	5.97%	-841.0	-2.16%	3.76%	-823.5	-2.15%	10.49%	-876.8	-2.38%
Subtotal Sector Terciario (comercial y financiero)	11,386.5		11,904.6	3.91%		7.37%	12,782.3	32.84%	7.16%	12,757.2	33.38%	0.00%	12,106.0	32.87%
13. Actividades de servicio sociales y de salud privada	390.4	1.16%	395.0	1.67%	1.18%	5.77%	417.8	1.07%	9.71%	433.4	1.13%	4.88%	414.3	1.12%
14. Otras actividades comunitarias, sociales y personales	679.6	2.02%	707.1	4.37%	4.05%	6.77%	754.9	1.94%	5.84%	748.4	1.96%	4.96%	742.2	2.02%
15. Productores de servicios gubernamentales	2,379.5	7.09%	2,529.5	4.91%	6.30%	4.30%	2,638.3	6.78%	2.76%	2,599.2	6.80%	1.56%	2,569.0	6.98%
Construcción	352.2	1.05%	410.7	19.01%	16.61%	11.79%	459.1	1.18%	1.53%	417.0	1.09%	0.88%	414.3	1.13%
Actividades Inmobiliarias, empresariales y de alquiler	2,297.5	6.84%	2,371.0	2.99%	3.20%	7.00%	2,537.0	6.52%	7.68%	2,553.0	6.68%	10.36%	2,616.5	7.10%
Hogares privados con servicio doméstico	203.5	0.61%	210.0	3.61%	3.21%	1.82%	213.9	0.55%	1.49%	213.2	0.56%	-0.78%	208.4	0.57%
16. Productores de servicios domésticos	2,853.2	8.50%	2,991.7	5.01%	4.86%	7.29%	3,210.0	8.25%	6.40%	3,183.2	8.33%	0.00%	3,239.3	8.80%
Subtotal Sector Terciario (oficial y personal)	6,302.7		6,623.3	4.70%		6.00%	7,021.0	18.04%	5.15%	6,964.2	18.22%	0.00%	6,964.7	18.91%
Más: Derechos de importancion e ITBM	1,664.4	4.96%	2,120.1				2,339.1	6.01%		0.0	0.00%		2,244.2	6.09%
Más: ITBM que graba las compras de los hogares	0.0	0.00%	0.0				0.0	0.00%		0.0	0.00%		0.0	0.00%
Más: Otros impuestos a los productores	0.0	0.00%	0.0				0.0	0.00%		0.0	0.00%		0.0	0.00%
Menos: Subvenciones a los productos	-139.0	-0.41%	-177.1				-195.3	-0.50%		0.0	0.00%		-187.4	-0.51%
Subtotal Impuestos y transferencias	1,525.4	4.54%	1,943.0	5.44%	27.38%	10.33%	2,143.8	5.51%		2,130.4	5.57%	5.86%	2,056.8	5.58%
Producto Interno Bruto Real	33,573.3		35,730.7	6.16%	6.43%		38,918.1	100.00%		38,223.3	100.00%		36,828.9	100.00%
			35,730.7											

TASA DE VARIACION

6.43%

8.92%

6.98%

3.07%

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

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

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

Más: Derechos de importacion e ITBM	2120.1	5.93%	2339.1	6.01%	2,324.6	6.08%	2,244.2	6.09%
Más: ITBM que graba las compras de los hogares	0.0		0.0		0.0		0.0	
Más: Otros impuestos a los productores	0.0		0.0		0.0		0.0	
Menos: Subvenciones a los productos	-177.1	-0.50%	-195.3	-0.50%	-194.1	-0.51%	-187.4	-0.51%
Subtotal Impuestos y transferencias	1,943.0		2,143.8		2,130.4		2,056.8	

PROPORCION ESTRUCTURAL DEL 2008

Más: Derechos de importacion e ITBM	599.1	661.0	656.9	634.2
Más: ITBM que graba las compras de los hogares	518.5	572.1	568.5	548.9
Más: Otros impuestos a los productores	1096.5	1209.8	1202.3	1160.7
Menos: Subvenciones a los productos	-271.1	-299.1	-297.2	-287.0
Subtotal Impuestos y transferencias	1943.0	2143.8	2130.4	2056.8

CUADRO No. 8
PRONOSTICOS DEL PIB, AÑOS 2015 - 2029

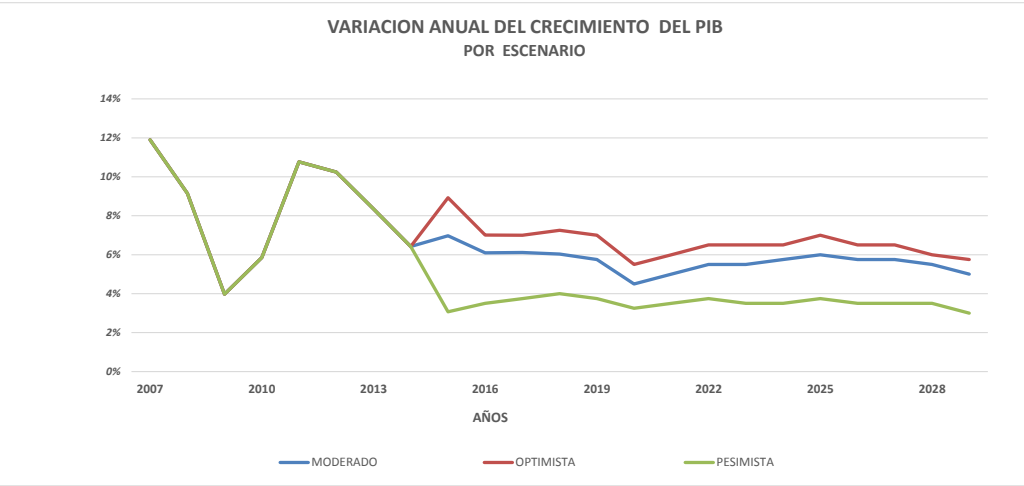
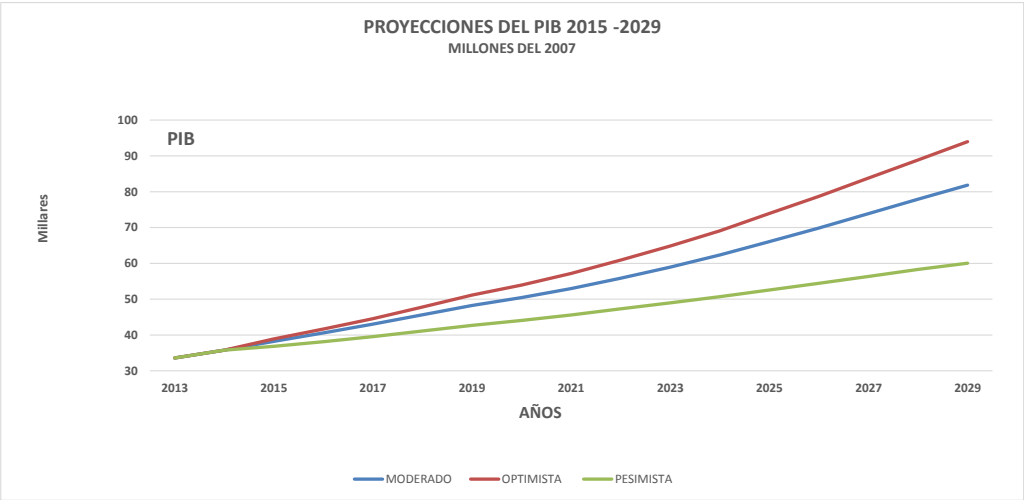
ESTIMADOS DE MONTOS Y VARIACIONES ANUALES DEL PRODUCTO INTERNO BRUTO
DURANTE EL PERIODO DE EVALUACION DEL PESIN 2015-2029
EN CONSIDERACION AL PIB ESTIMADO DE 2014
A precios del Año 2007

Producto Interno Bruto 2014 de 6.43% (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	REAL	21,121.9	11.90%	21,121.9	11.90%	21,121.9	11.90%
2008		23,053.9	9.15%	23,053.9	9.15%	23,053.9	9.15%
2009		23,970.1	3.97%	23,970.1	3.97%	23,970.1	3.97%
2010		25,372.8	5.85%	25,372.8	5.85%	25,372.8	5.85%
2011		28,105.5	10.77%	28,105.5	10.77%	28,105.5	10.77%
2012		30,985.5	10.25%	30,985.5	10.25%	30,985.5	10.25%
2013	PREELIMINAR	33,573.5	8.35%	33,573.5	8.35%	33,573.5	8.35%
2014	ESTIMADO	35,730.7	6.43%	35,730.7	6.43%	35,730.7	6.43%
2015		38,223.3	6.98%	38,918.1	8.92%	36,828.9	3.07%
2016	PRONOSTICOS	40,554.9	6.10%	41,646.3	7.01%	38,118.0	3.50%
2017		43,034.8	6.12%	44,561.5	7.00%	39,547.4	3.75%
2018		45,630.4	6.03%	47,792.3	7.25%	41,129.3	4.00%
2019		48,254.1	5.75%	51,137.7	7.00%	42,671.6	3.75%
2020		50,425.5	4.50%	53,950.3	5.50%	44,058.5	3.25%
2021		52,946.8	5.00%	57,187.3	6.00%	45,600.5	3.50%
2022		55,858.9	5.50%	60,904.5	6.50%	47,310.5	3.75%
2023		58,931.1	5.50%	64,863.3	6.50%	48,966.4	3.50%
2024		62,319.7	5.75%	69,079.4	6.50%	50,680.2	3.50%
2025		66,058.9	6.00%	73,914.9	7.00%	52,580.7	3.75%
2026		69,857.2	5.75%	78,719.4	6.50%	54,421.0	3.50%
2027		73,874.0	5.75%	83,836.2	6.50%	56,325.8	3.50%
2028		77,937.1	5.50%	88,866.3	6.00%	58,297.2	3.50%
2029		81,834.0	5.00%	93,976.2	5.75%	60,046.1	3.00%
Crecimiento Anual							
Tipo							
Estudio	2007-2029	Periodo (2007-2026)					
				6.60%	7.24%	5.20%	
Histórico	2006-2013	(2007-2013)		8.06%	8.06%	8.06%	
Pronostico	2015-2029	(2015-2029)		5.59%	6.50%	3.55%	
Corto Plazo	2015-2018	(2015-2018)		6.30%	7.54%	3.58%	
Medio Plazo	2019-2024	(2019-2024)		5.33%	7.11%	3.55%	
Largo Plazo	2025-2029	(2025-2029)		5.60%	6.50%	3.60%	
Periodo M y LP	2019-2028	(2019-2029)		5.45%	6.34%	3.50%	

NOTAS:

- (1) Escenarios a partir de un Producto Interno Bruto preliminar 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 basada 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 esta basado en el escenario "mas probable" un poco por debajo de los parametros potenciales de crecimiento.
- (7) Escenario Optimista esta basado en el "mejor escenario", definido por el potencial de la economía nacional de 7% anual sostenido.
- (8) Escenario Pesimista esta 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 en al Segundo Trimestre del año 2014



CUADRO No. 9
PRONOSTICOS DE LA ACTIVIDAD DE MANUFACTURA, AÑOS 2015 - 2029

ESTIMADOS DE MONTOS Y VARIACIONES ANUALES DE LA ACTIVIDAD DE
MANUFACTURA EN EL PRODUCTO INTERNO BRUTO
DURANTE EL PERIODO DE EVALUACION DEL PLAN 2015-2029
EN CONSIDERACION AL PIB ESTIMADO DE 2013
A Precios de 2007

Producto Interno Bruto 2011 de 10.91% (2)						
AÑOS	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 %)
1982=100						
2000	1,354.0		1,354.0		1,354.0	
2001	1,237.7		1,237.7		1,237.7	
2002	1,217.0		1,217.0		1,217.0	
2003	1,193.6		1,193.6		1,193.6	
2004	1,205.4		1,205.4		1,205.4	
2005	1,269.6		1,269.6		1,269.6	
2006	1,318.8	3.87%	1,318.8	3.87%	1,318.8	3.87%
2007	1,530.7	16.07%	1,530.7	16.07%	1,530.7	16.07%
2008	1,577.2	3.04%	1,577.2	3.04%	1,577.2	3.04%
2009	1,563.1	-0.90%	1,563.1	-0.90%	1,563.1	-0.90%
2010	1,596.0	2.11%	1,596.0	2.11%	1,596.0	2.11%
2011	1,650.3	3.40%	1,650.3	3.40%	1,650.3	3.40%
2012	1,655.1	0.30%	1,655.1	0.30%	1,655.1	0.30%
2013	1,699.8	2.70%	1,699.8	2.70%	1,699.8	2.70%
2014	1,715.6	0.93%	1,715.6	0.93%	1,715.6	0.93%
2015	1,751.8	2.11%	1,745.9	1.76%	1,751.8	2.11%
2016	1,820.6	3.93%	1,829.0	4.76%	1,818.2	3.79%
2017	1,964.5	7.90%	2,002.5	9.49%	1,940.8	6.74%
2018	2,028.5	3.26%	2,098.9	4.81%	1,984.8	2.27%
2019	2,103.6	3.70%	2,195.3	4.59%	2,047.5	3.16%
2020	2,191.2	4.16%	2,306.3	5.06%	2,120.4	3.56%
2021	2,275.3	3.84%	2,417.3	4.81%	2,189.6	3.27%
2022	2,370.5	4.19%	2,537.7	4.98%	2,268.9	3.62%
2023	2,458.1	3.70%	2,654.0	4.58%	2,339.6	3.12%
2024	2,542.2	3.42%	2,783.0	4.86%	2,408.1	2.93%
2025	2,619.4	3.04%	2,914.0	4.71%	2,469.4	2.55%
2026	2,755.6	5.20%	3,075.5	5.54%	2,580.5	4.50%
2027	2,850.2	3.43%	3,209.2	4.35%	2,651.9	2.77%
2028	2,957.2	3.75%	3,363.4	4.81%	2,735.9	3.17%
2029	3,068.2	3.75%	3,525.1	4.81%	2,822.6	3.17%

REAL						
2000					589.2	589.2
2001					555.6	555.6
2002					541.0	541.0
2003					522.6	522.6
2004					533.5	533.5
2005					541.0	555.9
2006					522.6	577.5
2007					533.5	610.0
2008					555.9	633.9
2009					577.5	630.1
2010					609.4	637.0
2011					619.8	657.6
2012						679.7
2013						675.7
2014						684.0
2015						692.4
2016						701.0
2017						709.6
2018						718.3
2019						727.2
2020						736.1
2021						745.2
2022						754.4
2023						763.7
2024						773.1
2025						782.6
2026						792.2
2027						802.0
2028						
2029						

PRELIMINAR						
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Crecimiento Anual						
Tipo	Años	Periodo				
Estudio	23	(2006-2029)	3.79%	4.39%	3.43%	
Histórico	4	(2000-2013)	1.77%	1.77%	1.77%	
Pronostico	15	(2015-2029)	3.95%	4.92%	3.37%	
Corto Plazo	4	(2015-2018)	4.28%	5.17%	3.71%	
Medio Plazo	6	(2019-2023)	3.83%	4.81%	3.27%	
Largo Plazo	5	(2025-2029)	3.83%	4.84%	3.23%	

Fuente: Desarrollo de ETESA basados en La actualizacion de las series de cuentas Nacionales del INEC , a precios del año 2007.

CUADRO No. 10

PRODUCTO INTERNO BRUTO					
ESCENARIO BASE			MODERADO		
Millones de Balboas de 2007					
AÑO	TOTAL	VAR%	INDUSTRIA	VAR%	%TOTAL
1970	4,379		545.9		12.5%
1971	4,801	9.6%	580.6	6.4%	12.1%
1972	5,020	4.6%	607.2	4.6%	12.1%
1973	5,289	5.4%	645.4	6.3%	12.2%
1974	5,419	2.4%	653.9	1.3%	12.1%
1975	5,513	1.7%	630.4	-3.6%	11.4%
1976	5,605	1.7%	646.2	2.5%	11.5%
1977	5,669	1.1%	653.9	1.2%	11.5%
1978	6,242	10.1%	664.2	1.6%	10.6%
1979	6,668	6.8%	751.4	13.1%	11.3%
1980	7,880	18.2%	822.6	9.5%	10.4%
1981	8,180	3.8%	756.0	-8.1%	9.2%
1982	8,618	5.3%	783.1	3.6%	9.1%
1983	8,231	-4.5%	766.3	-2.1%	9.3%
1984	8,454	2.7%	818.8	6.8%	9.7%
1985	8,871	4.9%	864.7	5.6%	9.7%
1986	9,188	3.6%	870.7	0.7%	9.5%
1987	9,022	-1.8%	930.5	6.9%	10.3%
1988	7,815	-13.4%	721.5	-22.5%	9.2%
1989	7,937	1.6%	730.9	1.3%	9.2%
1990	8,579	8.1%	831.6	13.8%	9.7%
1991	9,388	9.4%	918.6	10.5%	9.8%
1992	10,158	8.2%	1,002.7	9.2%	9.9%
1993	10,712	5.5%	1,066.2	6.3%	10.0%
1994	11,017	2.9%	1,111.6	4.3%	10.1%
1995	11,210	1.8%	1,113.8	0.2%	9.9%
1996	11,525	2.8%	1,367.0	22.7%	11.9%
1997	12,270	6.5%	1,411.5	3.3%	11.5%
1998	13,170	7.3%	1,443.0	2.2%	11.0%
1999	13,686	3.9%	1,458.4	1.1%	10.7%
2000	14,058	2.7%	1,354.0	-7.2%	9.6%
2001	13,791	-1.9%	1,237.7	-8.6%	9.0%
2002	14,596	5.8%	1,217.0	-1.7%	8.3%
2003	15,292	4.8%	1,193.6	-1.9%	7.8%
2004	16,022	4.8%	1,205.4	1.0%	7.5%
2005	17,547	9.5%	1,269.6	5.3%	7.2%
2006	18,839	7.4%	1,318.8	3.9%	7.0%
2007	21,122	12.1%	1,530.7	16.1%	7.2%
2008	23,054	9.1%	1,577.2	3.04%	6.8%
2009	23,970	4.0%	1,563.1	-0.90%	6.5%
2010	25,373	5.9%	1,596.0	2.11%	6.3%
2011	28,106	10.8%	1,650.3	3.40%	5.9%
2012	30,986	10.2%	1,655.1	0.30%	5.3%
2013	33,573	8.4%	1,699.8	2.70%	5.1%
2014	35,731	6.4%	1,715.6	0.93%	4.8%
2015	38,223	7.0%	1,751.8	2.11%	4.6%
2016	40,555	6.1%	1,820.6	3.93%	4.5%
2017	43,035	6.1%	1,964.5	7.90%	4.6%
2018	45,630	6.0%	2,028.5	3.26%	4.4%
2019	47,912	5.0%	2,103.6	3.70%	4.4%
2020	50,068	4.5%	2,191.2	4.16%	4.4%
2021	52,571	5.0%	2,275.3	3.84%	4.3%
2022	55,463	5.5%	2,370.5	4.19%	4.3%
2023	58,513	5.5%	2,458.1	3.70%	4.2%
2024	61,878	5.8%	2,542.2	3.42%	4.1%
2025	65,745	6.3%	2,619.4	3.04%	4.0%
2026	69,690	6.0%	2,755.6	5.20%	4.0%
2027	73,871	6.0%	2,850.2	3.43%	3.9%
2028	78,303	6.0%	2,957.2	3.75%	3.8%
2029	82,453	5.3%	3,068.2	3.75%	3.7%
PROMEDIO		5.7%		4.0%	4.2%

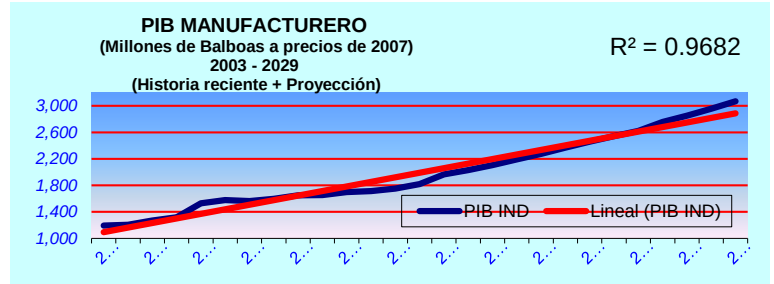
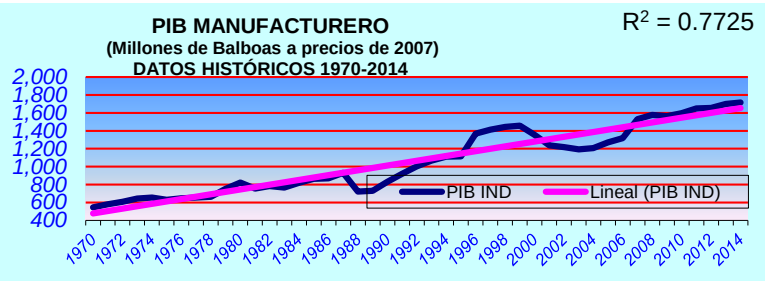
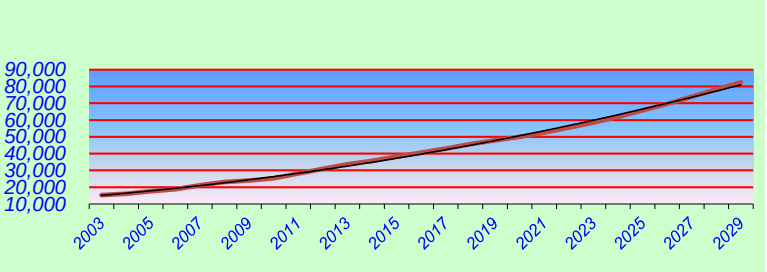
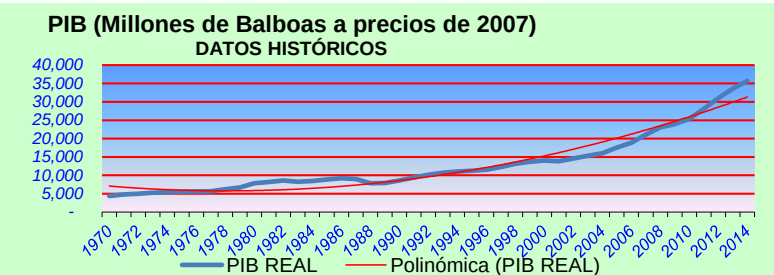
PREMISAS 8.021% 3.353%

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

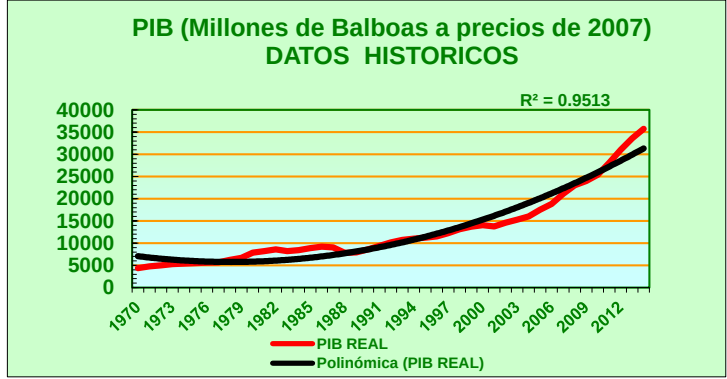
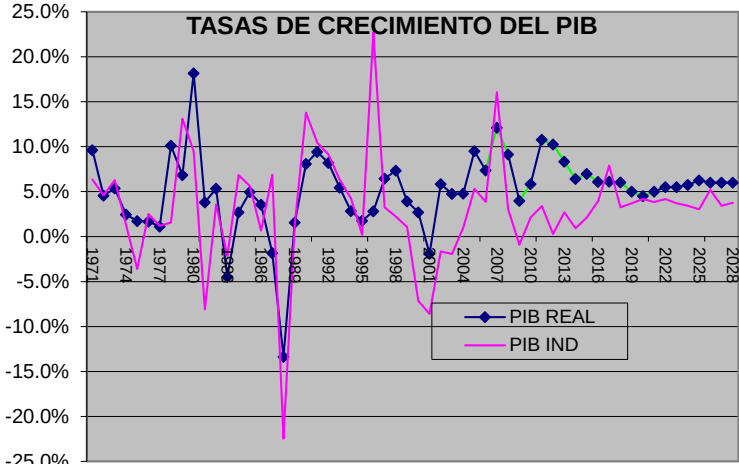
b) **PIB MANUFACTURERO:** Escenario conservador, con crecimiento promedio inferior al PIB total, manteniendo su participación estructural, en 4.0% del PIB Total. Promedio de los ultimos tres años.

	PIB TOTAL	DIF TASAS	INDUSTRIA	
Promedios	TASA		TASA % /TOTAL	
1980-1990	2.59%	-1.19%	1.41%	9.59%
1991-2000	5.09%	0.16%	5.25%	10.42%
2001-2013	6.99%	-5.08%	1.90%	6.93%
Máximo	18.2%		22.7%	12.2%
Promedio		-2.04%		
2014	6.43%		0.93%	4.80%
2014-2013	8.35%	-5.65%	2.70%	5.06%
2014-2017	6.40%	-2.69%	3.72%	4.61%
2018-2028	5.59%	-1.80%	3.79%	4.15%

2005-2013	8.38%
2008-2013	8.06%
2010-2013	8.81%
1970-2013	4.97%



PIB MANUFACTURA



CUADRO No. 11

PRODUCTO INTERNO BRUTO

ESCENARIO ALTO

ALTO

Millones de Balboas de 2007

AÑO	TOTAL	VAR%	INDUSTRIA	VAR%	%TOTAL
1970	4,379		545.9		12.5%
1971	4,801	9.6%	580.6	6.4%	12.1%
1972	5,020	4.6%	607.2	4.6%	12.1%
1973	5,289	5.4%	645.4	6.3%	12.2%
1974	5,419	2.4%	653.9	1.3%	12.1%
1975	5,513	1.7%	630.4	-3.6%	11.4%
1976	5,605	1.7%	646.2	2.5%	11.5%
1977	5,669	1.1%	653.9	1.2%	11.5%
1978	6,242	10.1%	664.2	1.6%	10.6%
1979	6,668	6.8%	751.4	13.1%	11.3%
1980	7,880	18.2%	822.6	9.5%	10.4%
1981	8,180	3.8%	756.0	-8.1%	9.2%
1982	8,618	5.3%	783.1	3.6%	9.1%
1983	8,231	-4.5%	766.3	-2.1%	9.3%
1984	8,454	2.7%	818.8	6.8%	9.7%
1985	8,871	4.9%	864.7	5.6%	9.7%
1986	9,188	3.6%	870.7	0.7%	9.5%
1987	9,022	-1.8%	930.5	6.9%	10.3%
1988	7,815	-13.4%	721.5	-22.5%	9.2%
1989	7,937	1.6%	730.9	1.3%	9.2%
1990	8,579	8.1%	831.6	13.8%	9.7%
1991	9,388	9.4%	918.6	10.5%	9.8%
1992	10,158	8.2%	1,002.7	9.2%	9.9%
1993	10,712	5.5%	1,066.2	6.3%	10.0%
1994	11,017	2.9%	1,111.6	4.3%	10.1%
1995	11,210	1.8%	1,113.8	0.2%	9.9%
1996	11,525	2.8%	1,367.0	22.7%	11.9%
1997	12,270	6.5%	1,411.5	3.3%	11.5%
1998	13,170	7.3%	1,443.0	2.2%	11.0%
1999	13,686	3.9%	1,458.4	1.1%	10.7%
2000	14,058	2.7%	1,354.0	-7.2%	9.6%
2001	13,791	-1.9%	1,237.7	-8.6%	9.0%
2002	14,596	5.8%	1,217.0	-1.7%	8.3%
2003	15,292	4.8%	1,193.6	-1.9%	7.8%
2004	16,022	4.8%	1,205.4	1.0%	7.5%
2005	17,547	9.5%	1,269.6	5.3%	7.2%
2006	18,839	7.4%	1,318.8	3.9%	7.0%
2007	21,122	12.1%	1,530.7	16.1%	7.2%
2008	23,054	9.1%	1,577.2	3.04%	6.8%
2009	23,970	4.0%	1,563.1	-0.90%	6.5%
2010	25,373	5.9%	1,596.0	2.11%	6.3%
2011	28,106	10.8%	1,650.3	3.40%	5.9%
2012	30,986	10.2%	1,655.1	0.30%	5.3%
2013	33,573	8.4%	1,699.8	2.70%	5.1%
2014	35,731	6.4%	1,715.6	0.93%	4.8%
2015	38,918	8.9%	1,745.9	1.76%	4.5%
2016	41,409	6.4%	1,829.0	4.76%	4.4%
2017	44,515	7.5%	2,002.5	9.49%	4.5%
2018	47,742	7.2%	2,098.9	4.81%	4.4%
2019	51,084	7.0%	2,195.3	4.59%	4.3%
2020	53,638	5.0%	2,306.3	5.06%	4.3%
2021	56,856	6.0%	2,417.3	4.81%	4.3%
2022	60,552	6.5%	2,537.7	4.98%	4.2%
2023	64,488	6.5%	2,654.0	4.58%	4.1%
2024	68,680	6.5%	2,783.0	4.86%	4.1%
2025	73,487	7.0%	2,914.0	4.71%	4.0%
2026	78,264	6.5%	3,075.5	5.54%	3.9%
2027	83,351	6.5%	3,209.2	4.35%	3.9%
2028	88,352	6.0%	3,363.4	4.81%	3.8%
2029	93,432	5.8%	3,525.1	4.81%	3.8%
PROMEDIO		6.6%		4.9%	4.2%

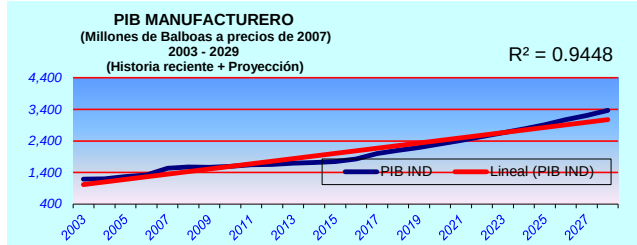
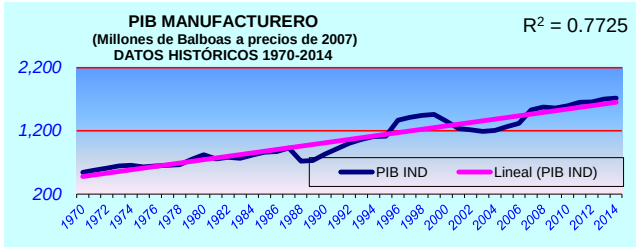
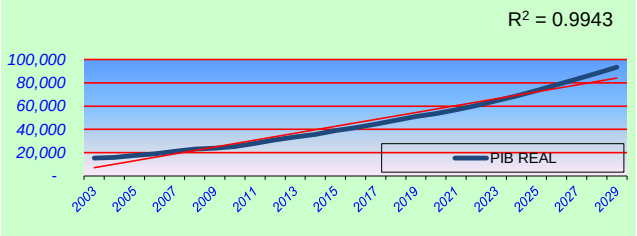
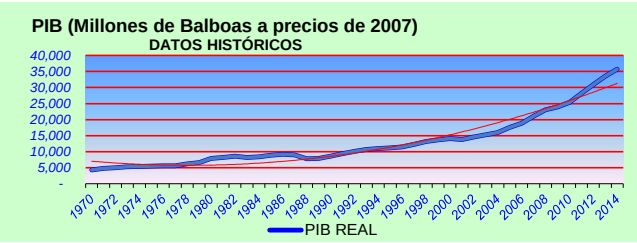
PREMISAS 8.021% 3.353%

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 ultimos tres años.

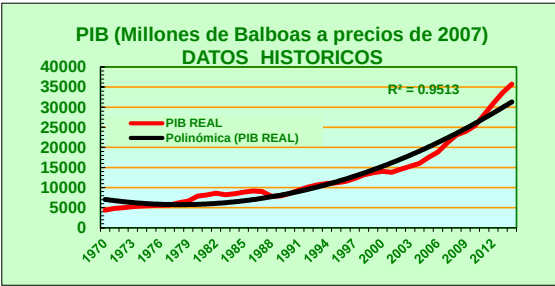
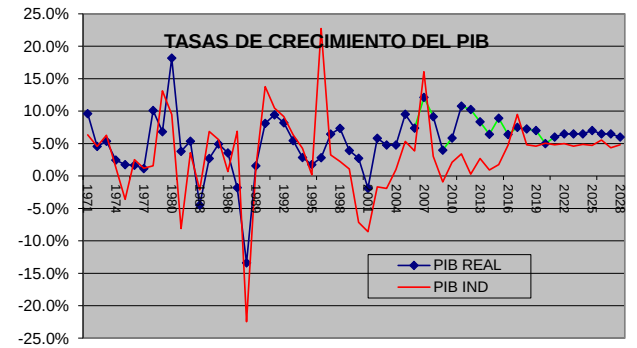
Promedios	PIB TOTAL	DIF	INDUSTRIA	% /TOTAL
	TASA	TASAS	TASA	
1980-1990	2.59%	-1.19%	1.41%	9.59%
1991-2000	5.09%	0.16%	5.25%	10.42%
2001-2013	6.99%	-5.08%	1.90%	6.93%
Máximo Promedio 2014	18.2%		22.7%	12.2%
2015-2014	6.43%	-2.04%	0.93%	4.80%
2015-2018	8.35%	-5.65%	2.70%	5.06%
2015-2018	7.31%	-3.08%	4.23%	4.55%
2019-2029	6.43%	-1.60%	4.83%	4.11%

2005-2013	8.38%
2008-2013	8.06%
2010-2013	8.81%
1970-2013	4.97%



PIB

MANUFACTURA



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	4,379		545.9		12.5%
1971	4,801	9.6%	580.6	6.4%	12.1%
1972	5,020	4.6%	607.2	4.6%	12.1%
1973	5,289	5.4%	645.4	6.3%	12.2%
1974	5,419	2.4%	653.9	1.3%	12.1%
1975	5,513	1.7%	630.4	-3.6%	11.4%
1976	5,605	1.7%	646.2	2.5%	11.5%
1977	5,669	1.1%	653.9	1.2%	11.5%
1978	6,242	10.1%	664.2	1.6%	10.6%
1979	6,668	6.8%	751.4	13.1%	11.3%
1980	7,880	18.2%	822.6	9.5%	10.4%
1981	8,180	3.8%	756.0	-8.1%	9.2%
1982	8,618	5.3%	783.1	3.6%	9.1%
1983	8,231	-4.5%	766.3	-2.1%	9.3%
1984	8,454	2.7%	818.8	6.8%	9.7%
1985	8,871	4.9%	864.7	5.6%	9.7%
1986	9,188	3.6%	870.7	0.7%	9.5%
1987	9,022	-1.8%	930.5	6.9%	10.3%
1988	7,815	-13.4%	721.5	-22.5%	9.2%
1989	7,937	1.6%	730.9	1.3%	9.2%
1990	8,579	8.1%	831.6	13.8%	9.7%
1991	9,388	9.4%	918.6	10.5%	9.8%
1992	10,158	8.2%	1,002.7	9.2%	9.9%
1993	10,712	5.5%	1,066.2	6.3%	10.0%
1994	11,017	2.9%	1,111.6	4.3%	10.1%
1995	11,210	1.8%	1,113.8	0.2%	9.9%
1996	11,525	2.8%	1,367.0	22.7%	11.9%
1997	12,270	6.5%	1,411.5	3.3%	11.5%
1998	13,170	7.3%	1,443.0	2.2%	11.0%
1999	13,686	3.9%	1,458.4	1.1%	10.7%
2000	14,058	2.7%	1,354.0	-7.2%	9.6%
2001	13,791	-1.9%	1,237.7	-8.6%	9.0%
2002	14,596	5.8%	1,217.0	-1.7%	8.3%
2003	15,292	4.8%	1,193.6	-1.9%	7.8%
2004	16,022	4.8%	1,205.4	1.0%	7.5%
2005	17,547	9.5%	1,269.6	5.3%	7.2%
2006	18,839	7.4%	1,318.8	3.9%	7.0%
2007	21,122	12.1%	1,530.7	16.1%	7.2%
2008	23,054	9.1%	1,577.2	3.0%	6.8%
2009	23,970	4.0%	1,563.1	-0.9%	6.5%
2010	25,373	5.9%	1,596.0	2.1%	6.3%
2011	28,106	10.8%	1,650.3	3.4%	5.9%
2012	30,986	10.2%	1,655.1	0.3%	5.3%
2013	33,573	8.4%	1,699.8	2.7%	5.1%
2014	35,731	6.4%	1,715.6	0.93%	4.8%
2015	36,829	3.1%	1,751.8	2.11%	4.8%
2016	38,486	4.5%	1,818.2	3.79%	4.7%
2017	40,411	5.0%	1,940.8	6.74%	4.8%
2018	42,027	4.0%	1,984.8	2.27%	4.7%
2019	43,603	3.8%	2,047.5	3.16%	4.7%
2020	45,020	3.3%	2,120.4	3.56%	4.7%
2021	46,596	3.5%	2,189.6	3.27%	4.7%
2022	48,343	3.8%	2,268.9	3.62%	4.7%
2023	50,035	3.5%	2,339.6	3.12%	4.7%
2024	51,786	3.5%	2,408.1	2.93%	4.7%
2025	53,728	3.8%	2,469.4	2.55%	4.6%
2026	55,609	3.5%	2,580.5	4.50%	4.6%
2027	57,555	3.5%	2,651.9	2.77%	4.6%
2028	59,570	3.5%	2,735.9	3.17%	4.6%
2029	61,357	3.0%	2,822.6	3.17%	4.6%
PROMEDIO		3.7%		3.4%	4.7%

- PREMISAS

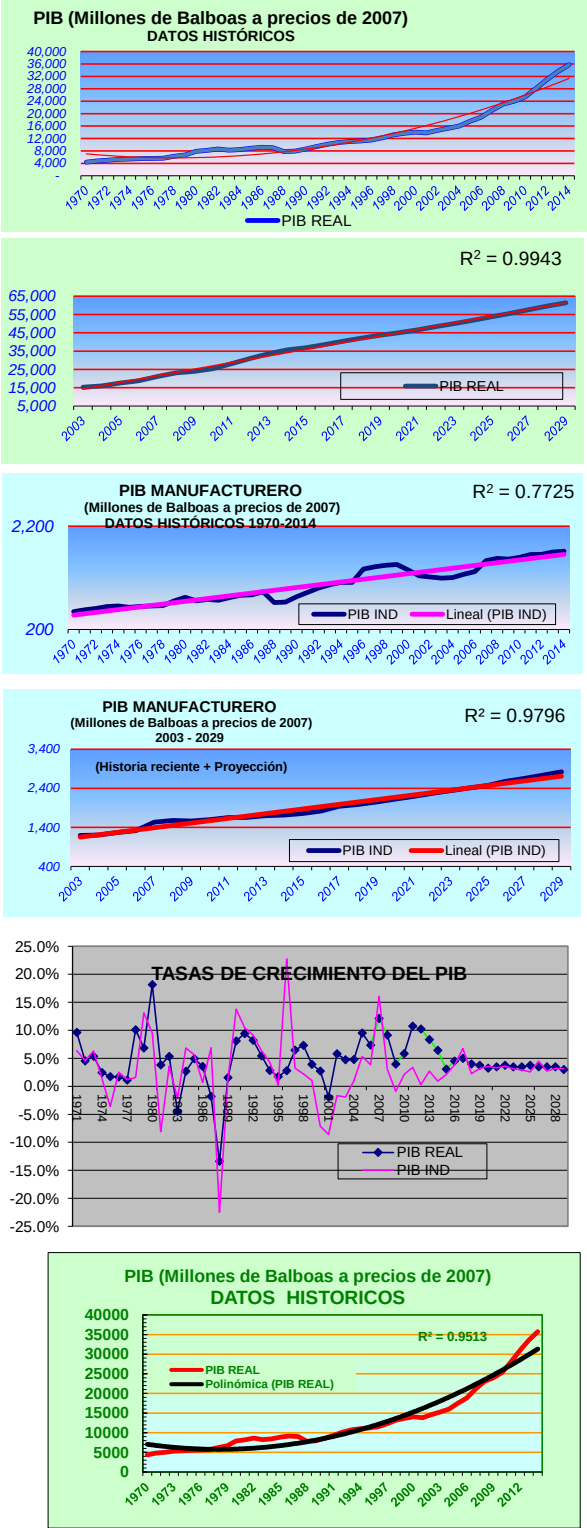
8.351%

3.353%
- 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 ultimos tres años.

	PIB TOTAL	DIF	INDUSTRIA	
Promedios	TASA	TASAS	TASA	% /TOTAL
1980-1990	2.59%	-1.19%	1.41%	9.59%
1991-2000	5.09%	0.16%	5.25%	10.42%
2001-2012	6.99%	-5.08%	1.90%	6.93%
Máximo	18.2%		22.7%	12.2%
Promedio		-2.04%		
2014	6.43%		0.93%	4.80%
2014-2013	8.35%	-5.65%	2.70%	5.06%
2014-2017	4.75%	-1.36%	3.39%	4.77%
2018-2028	3.59%	-0.42%	3.17%	4.66%
2005-2013	8.38%			
2008-2013	8.06%			
2010-2013	8.81%			
1970-2013	4.97%			



PIB MANUFACTURA

CUADRO No. 13

RESUMEN DE TASAS DE CRECIMIENTO DEL PIB, SEGÚN ESCENARIOS

**RESUMEN DE TASAS DE CRECIMIENTO DEL PIB, SEGÚN
ESCENARIOS
2015-2029**

PERIODOS	TOTAL	DIFERENCIAS	INDUSTRIAL	
			TASA	% /TOTAL
TASAS HISTÓRICAS (PIB- base 982)				
1980-1990	2.59%	-1.19%	1.41%	9.59%
1991-2000	5.09%	0.16%	5.25%	10.42%
2001-2012	6.99%	-5.08%	1.90%	6.93%
Máximo	18.16%	0.00%	22.74%	12.20%
Promedio		-2.04%		
ESCENARIO MODERADO				
2013	6.43%		0.93%	4.80%
2014-2013	8.35%	-5.65%	2.70%	5.06%
2014-2017	6.40%	-2.69%	3.72%	4.61%
2018-2028	5.59%	-1.80%	3.79%	4.15%
ESCENARIO OPTIMISTA				
2013	6.43%		0.93%	4.80%
2014-2013	8.35%	-5.65%	2.70%	5.06%
2014-2017	7.31%	-3.08%	4.23%	4.55%
2018-2028	6.43%	-1.60%	4.83%	4.11%
ESCENARIO PESISMISTA				
2013	6.43%		0.93%	4.80%
2014-2013	8.35%	-5.65%	2.70%	5.06%
2014-2017	4.75%	-1.36%	3.39%	4.77%
2018-2028	3.59%	-0.42%	3.17%	4.66%

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%
	68.0	0.17%	Promedios---->		-0.04	-65.9%

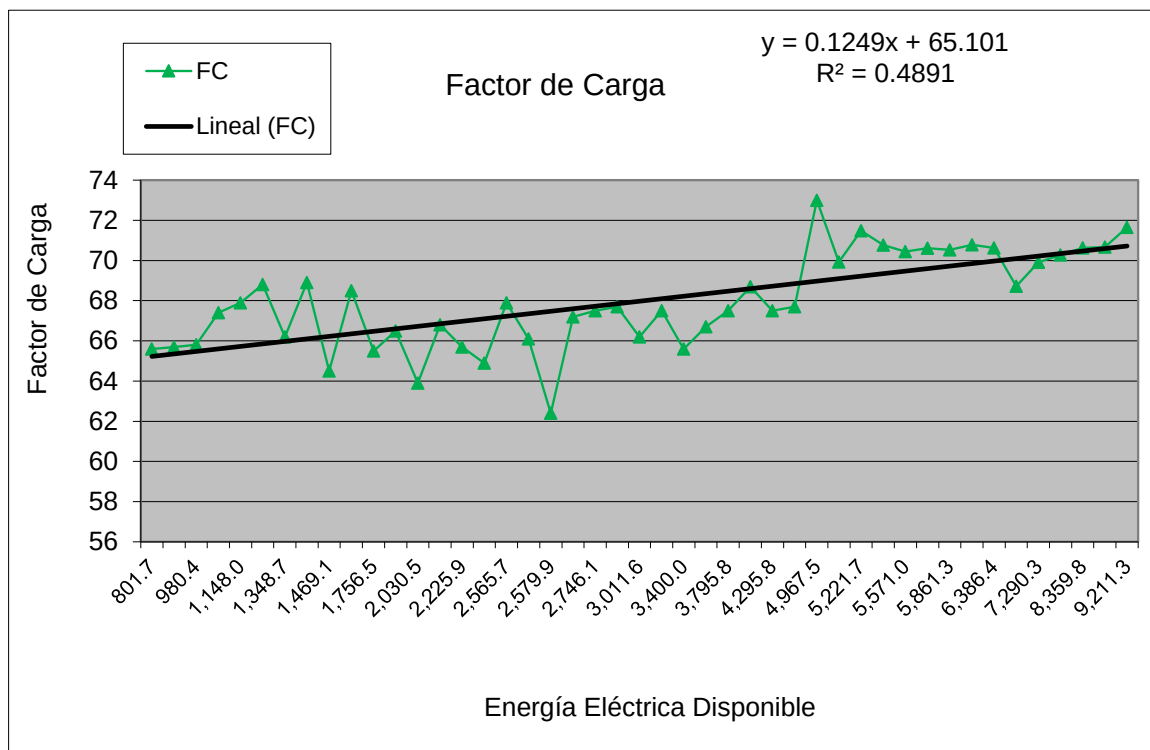
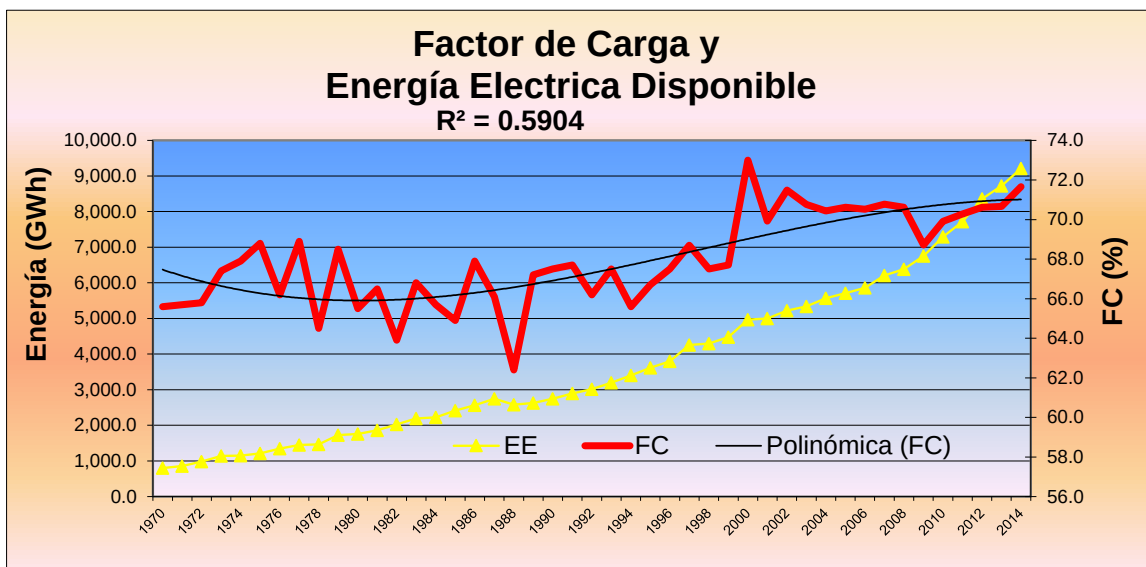
-0.2%

Estimados: I PRNOSTICO 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

<--valores ideales a adopar por el modelo
por mecanismo de cálculo de variación anual

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%

CUADRO No. 15 - A

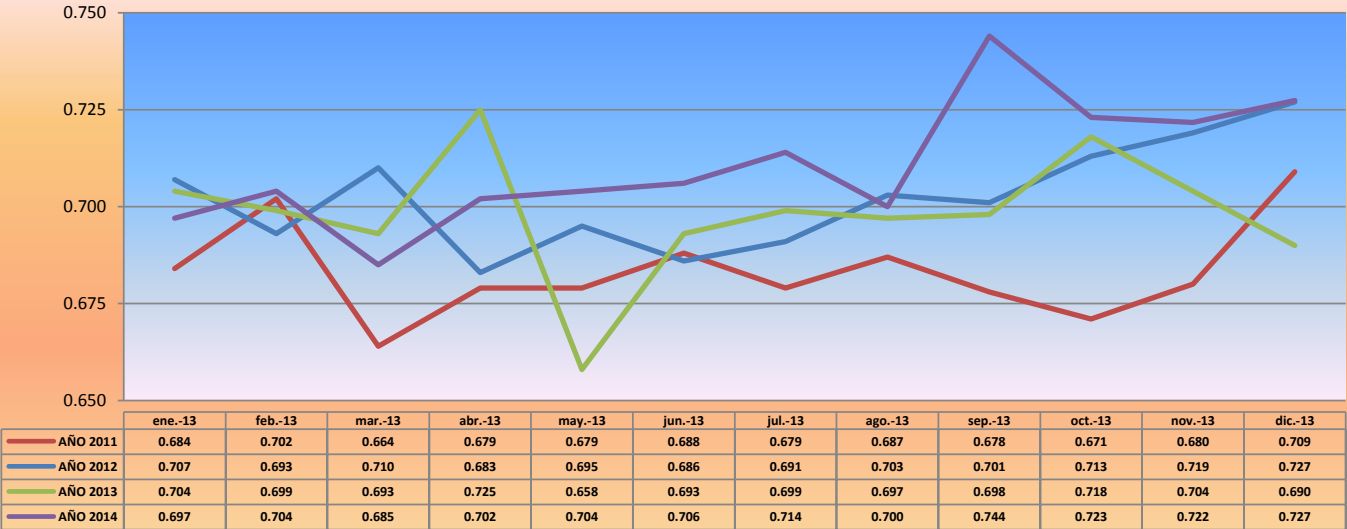
ANÁLISIS DEL FACTOR DE CARGA SISTEMA INTERCONECTADO Años 2010 -2014

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

	AÑO 2011	FC AÑO 2012		FC AÑO 2013	FC AÑO 2013		FC AÑO 2014	
	REGISTRO	REGISTRO		REGISTRO	REGISTRO	Estimado	REGISTRO	
Ene	0.684	ene-12	0.707	ene-13	0.704	ene-14	0.704	0.697
Feb	0.702	feb-12	0.693	feb-13	0.699	ene-14	0.699	0.704
Mar	0.664	mar-12	0.710	mar-13	0.693	ene-14	0.693	0.685
Abr	0.679	abr-12	0.683	abr-13	0.725	ene-14	0.725	0.702
May	0.679	may-12	0.695	may-13	0.658	ene-14	0.658	0.704
Jun	0.688	jun-12	0.686	jun-13	0.693	ene-14	0.693	0.706
jul	0.679	jul-12	0.691	jul-13	0.699	ene-14	0.699	0.714
Ago	0.687	ago-12	0.703	ago-13	0.697	ene-14	0.697	0.700
Sept	0.678	sep-12	0.701	sep-13	0.698	ene-14	0.698	0.744
Oct	0.671	oct-12	0.713	oct-13	0.718	ene-14	0.700	0.723
Nov	0.680	nov-12	0.719	nov-13	0.704	ene-14	0.708	0.722
Dec	0.709	dic-12	0.727	dic-13	0.690	ene-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

FACTOR DE CARGA

AÑOS 2011 al 2014



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	928	118.39	809.40
2007	5.174	911	124.18	786.70
2008	5.320	924	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	7.330	1.220	222.00	998.38
2014	7.603	1.429	276.60	1.152.69

TASAS 5.4% 2.3% 5.9% 1.6%

Estructura respecto a Energía 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%	11.4%
9,211	3.0%	12.5%

4.8% 1.0% -3.0%

ESTADISTICAS DE ASEP

VENTAS DE ENERGIA POR EMPRES Y TIPO DE CLIENTE

ENERGIA DISPONIBLE	ENERGIA COMPRADA	PERDIDAS DISTRIBUCION DECLARADAS	DIIFERENCIA	OTROS CONSUMOS
1.302465431	4999.9	4,594.49	711.86	15.49%
1.300715078	5221.7	4,777.63	739.12	15.47%
1.271843851	5342.6	4,954.80	765.93	15.46%
1.2448856	5571.0	5,117.03	659.79	12.89%
1.225939251	5711.0	5,256.97	599.63	11.41%
1.217728521	5861.3	5,540.28	654.93	11.82%
1.199948746	6208.8	5,798.88	595.53	10.27%
1.200373058	6386.4	5,963.75	688.40	11.54%
1.205642852	6753.7	6,295.71	639.19	10.15%
1.196367829	7290.3	6,593.88	652.73	9.90%
1.196148761	7722.5	6,964.11	707.05	10.15%
1.191632447	8359.8	7,547.83	749.83	9.93%
1.189996694	8722.1	7,878.60	782.61	9.93%
1.211478899	9211.3	8,148.10	877.20	10.77%

4.8% 4.5% 1.6%

1.241060265 1.209926486

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	21.82%	4.17%	17.65%	8.00%	9.65%
2005	19.96%	3.44%	16.52%	8.00%	8.52%
2006	19.28%	2.46%	16.82%	7.67%	9.14%
2007	17.60%	2.40%	15.20%	7.66%	7.54%
2008	17.37%	2.81%	14.6%	7.66%	6.90%
2009	18.13%	2.89%	15.2%	7.64%	7.60%
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	16.65%	3.03%	13.6%	7.64%	5.98%
2014	18.80%	3.64%	15.2%	7.64%	7.52%
PROMEDIO					
2001-2012	20.49%	3.26%	17.24%	7.80%	9.44%
2001-2005	24.36%	3.9%	20.5%	8.0%	12.5%
2006-2010	17.95%	2.7%	15.2%	7.7%	7.6%
2011-2013	17.00%	2.98%	14.02%	7.64%	6.38%
2014	18.80%	3.64%	15.16%	7.64%	7.52%

PROYECCIONES DE PERDIDAS POR ESCENARIO

AÑO	MODERADO		OPTIMISTA		PESIMISTA	
	PERDIDAS %	Δ %	PERDIDAS %	Δ %	PERDIDAS %	Δ %
2015	0.192426	1.02364	0.189738	1.00934	0.192740	1.02531
2016	0.199384	1.036158	0.196511	1.035696	0.200008	1.037706
2017	0.207667	1.041544	0.204612	1.041227	0.208596	1.042942
2018	0.202202	0.973686	0.199220	0.973646	0.217239	1.041431
2019	0.198439	0.981388	0.194628	0.976950	0.212976	0.980377
2020	0.194865	0.981991	0.190316	0.977843	0.208945	0.981072
2021	0.189443	0.972177	0.184963	0.971875	0.204044	0.976543
2022	0.185757	0.980541	0.181765	0.982708	0.200803	0.984120
2023	0.182290	0.981336	0.178712	0.983207	0.197716	0.984624
2024	0.179709	0.985840	0.177104	0.990997	0.193773	0.980058
2025	0.178159	0.991377	0.173023	0.976958	0.190891	0.985129
2026	0.174641	0.980250	0.171470	0.991023	0.186148	0.975152
2027	0.173152	0.991478	0.169943	0.991099	0.183536	0.985967
2028	0.171693	0.991575	0.165944	0.976464	0.181048	0.986444
2029	0.170263	0.991671	0.164470	0.991119	0.178678	0.986908

PREMISAS PROYECCION ESCENARIO MODERADO				Tasas	
Transmisión aumenta al 2017 hasta no superar el				5.75%	0.18
disminuye del 2018 al 2020 a				5.25%	-0.06
aumenta al 2023 hasta no > de				4.00%	-0.07
Al 2029 alcanza una tasa no > de				3.50%	-0.03
No Tecnicas de Distribución disminuyen en una tasa anual de				0.75%	-0.28
Técnicas de Distribución permanecen aproximadamente en				<7.5%	
2025				<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	16.65%	3.03%	13.6%	7.64%	5.98%
2014	18.80%	3.64%	15.2%	7.64%	7.52%
2015	19.24%	4.28%	15.0%	7.50%	7.47%
2016	19.94%	5.03%	14.9%	7.50%	7.41%
2017	20.77%	5.91%	14.9%	7.50%	7.35%
2018	20.22%	5.57%	14.6%	7.35%	7.30%
2019	19.84%	5.25%	14.6%	7.35%	7.24%
2020	19.49%	4.95%	14.5%	7.35%	7.19%
2021	18.94%	4.61%	14.3%	7.20%	7.14%
2022	18.58%	4.29%	14.3%	7.20%	7.08%
2023	18.23%	4.00%	14.2%	7.20%	7.03%
2024	17.97%	3.89%	14.1%	7.10%	6.98%
2025	17.82%	3.79%	14.0%	7.10%	6.92%
2026	17.46%	3.69%	13.8%	6.90%	6.87%
2027	17.32%	3.59%	13.7%	6.90%	6.82%
2028	17.17%	3.50%	13.7%	6.90%	6.77%
2029	17.03%	3.41%	13.6%	6.90%	6.72%
Variacion periodo completo		-0.2%	-1.5%	-0.7%	-0.8%
Variacion Anual Promedio Periodo		-0.66%	1.33%	-0.10%	0.31%

PREMISAS PROYECCION ESCENARIO OPTIMISTA				Tasas	
Transmisión aumenta al 2017 % hasta no superar el				5.50%	0.18
disminuye del 2018 al 2020 a				4.75%	-0.07
aumenta al 2023 hasta no > de				4.00%	-0.06
Al 2029 alcanza una tasa de				3.90%	-0.02
No Tecnicas de Distribución disminuyen en una tasa de				1.00%	-0.0229
Técnicas de Distribución permanecen aproximadamente en				<7.25%	
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	16.65%	3.03%	13.6%	7.64%	5.98%
2014	18.80%	3.64%	15.2%	7.64%	7.52%
2015	18.97%	4.28%	14.7%	7.25%	7.45%
2016	19.65%	5.03%	14.6%	7.25%	7.37%
2017	20.46%	5.91%	14.5%	7.25%	7.30%
2018	19.92%	5.50%	14.4%	7.20%	7.23%
2019	19.46%	5.11%	14.4%	7.20%	7.15%
2020	19.03%	4.75%	14.3%	7.20%	7.08%
2021	18.50%	4.49%	14.0%	7.00%	7.01%
2022	18.18%	4.24%	13.9%	7.00%	6.94%
2023	17.87%	4.00%	13.9%	7.00%	6.87%
2024	17.71%	3.91%	13.8%	7.00%	6.80%
2025	17.30%	3.82%	13.5%	6.75%	6.73%
2026	17.15%	3.73%	13.4%	6.75%	6.67%
2027	16.99%	3.64%	13.4%	6.75%	6.60%
2028	16.59%	3.56%	13.0%	6.50%	6.53%
2029	16.45%	3.48%	13.0%	6.50%	6.47%
2030	16.30%	3.40%	12.9%	6.50%	6.40%
Variacion periodo completo		-0.2%	-2.3%	-1.1%	-1.1%
Variacion Anual Promedio Periodo		-0.89%	1.72%	-0.11%	0.13%

ESCENARIO MODERADO

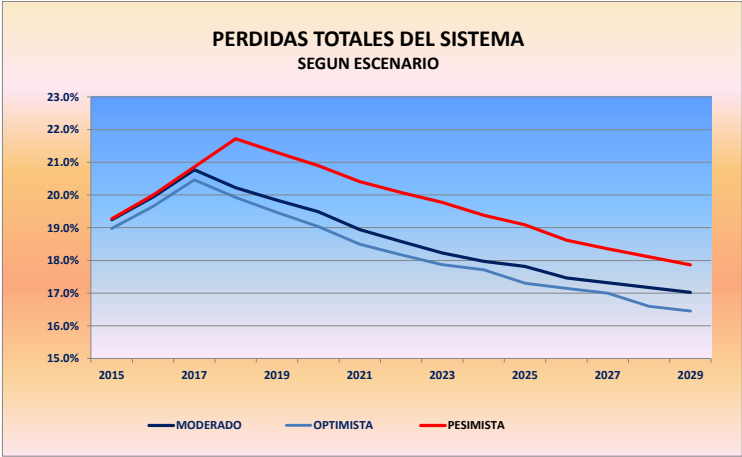
2009			
2010	-0.04285923	0.173557	
2011	0.00210007	0.173922	
2012	-0.02495850	0.169581	
2013	-0.01815280	0.166503	
2014	0.12900454	0.187982	
2015	0.02363877	0.192426	
2016	0.03615756	0.199384	
2017	0.04154358	0.207667	
2018	-0.02631381	0.202202	
2019	-0.01861190	0.198439	
2020	-0.01800874	0.194865	
2021	-0.02782327	0.189443	
2022	-0.01945939	0.185757	
2023	-0.01866399	0.182290	
2024	-0.01416034	0.179709	
2025	-0.00862259	0.178159	2017-2025 -0.01897481
2026	-0.01974967	0.174641	
2027	-0.00852239	0.173152	2028-2025 -0.01224678
2028	-0.00842525	0.171693	
2029	-0.00832909	0.170263	
		0.186673	18.67%

ESCENARIO OPTIMISTA

2009			
2010	-0.04285923	0.173557	
2011	0.00210007	0.173922	
2012	-0.02495850	0.169581	
2013	-0.01815280	0.166503	
2014	0.12900454	0.187982	
2015	0.00933932	0.189738	
2016	0.03569608	0.196511	
2017	0.04122726	0.204612	
2018	-0.02635370	0.199220	
2019	-0.02304975	0.194628	
2020	-0.02215689	0.190316	
2021	-0.02812512	0.184963	
2022	-0.01729179	0.181765	
2023	-0.01679259	0.178712	
2024	-0.00900274	0.177104	
2025	-0.02304182	0.173023	2017-2025 -0.02074360 -2.07435991
2026	-0.00897705	0.171470	
2027	-0.00890085	0.169943	2028-2025 -0.01382865 -1.38286531
2028	-0.02353580	0.165944	
2029	-0.00888134	0.164470	
		0.182334	18.23%

PREMISAS PROYECCION ESCENARIO PESIMISTA				Tasas		
Transmisión aumenta al 2018 % hasta no superar el				5.75%	0.18	
disminuye del 2019 al 2020 a				5.25%	-0.06	
aumenta al 2024 hasta no > de				4.75%	-0.05	
Al 2026 alcanza una tasa de				4.25%	-0.05	
No Técnicas 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		16.65%	3.03%	13.6%	7.64%	5.98%
2014		18.80%	3.64%	15.2%	7.64%	7.52%
2015		19.27%	4.28%	15.0%	7.50%	7.50%
2016		20.00%	5.03%	15.0%	7.50%	7.47%
2017		20.86%	5.91%	14.9%	7.50%	7.45%
2018		21.72%	6.95%	14.8%	7.35%	7.42%
2019		21.30%	6.55%	14.7%	7.35%	7.40%
2020		20.89%	6.17%	14.7%	7.35%	7.37%
2021		20.40%	5.86%	14.5%	7.20%	7.35%
2022		20.08%	5.56%	14.5%	7.20%	7.32%
2023		19.77%	5.27%	14.5%	7.20%	7.30%
2024		19.38%	5.01%	14.4%	7.10%	7.27%
2025		19.09%	4.74%	14.3%	7.10%	7.25%
2026		18.61%	4.49%	14.1%	6.90%	7.22%
2027		18.35%	4.26%	14.1%	6.90%	7.20%
2028		18.10%	4.03%	14.1%	6.90%	7.17%
2029		17.87%	3.82%	14.0%	6.90%	7.15%
Variacion periodo completo			0.8%	0.4%	-0.7%	1.2%
Variacion Anual Promedio Periodo		-0.34%	1.75%	-0.10%	-0.46%	0.62%

2009		
2010	-0.04285923	0.173557
2011	0.00210007	0.173922
2012	-0.02495850	0.169581
2013	-0.01815280	0.166503
2014	0.12900454	0.187982
2015	0.02530984	0.192740
2016	0.03770649	0.200008
2017	0.04294241	0.208596
2018	0.04143065	0.217239
2019	-0.01962275	0.212976
2020	-0.01892795	0.208945
2021	-0.02345676	0.204044
2022	-0.01588043	0.200803
2023	-0.01537647	0.197716
2024	-0.01994169	0.193773
2025	-0.01487094	0.190891
2026	-0.02484783	0.186148
2027	-0.01403267	0.183536
2028	-0.01355576	0.181048
2029	-0.01309217	0.178678
		0.197143
2017-2025	-0.01102597	19.71%
2028-2025	-0.01749262	



EVOLUCIÓN DE PRECIOS DE LA ELECTRICIDAD

15.33

CLASE	AÑOS											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
PRECIO ELECTRICIDAD	11.6	11.8	13.5	14.9	15.6	19.4	16.7	16.5	16.2	16.1	17.9	17.9
VARIACION (%)		2.2%	13.6%	10.9%	4.6%	24.5%	-14.3%	-1.0%	-2.0%	-0.5%	11.1%	0.4%

11%

1.8%1.5%

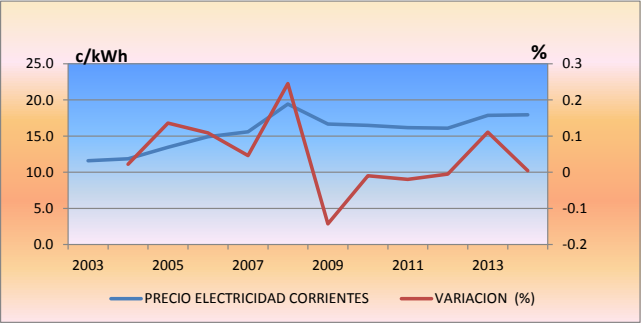
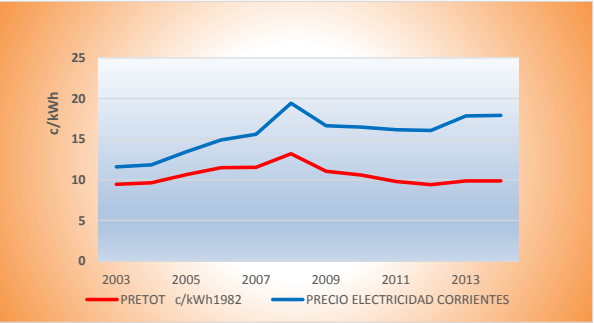
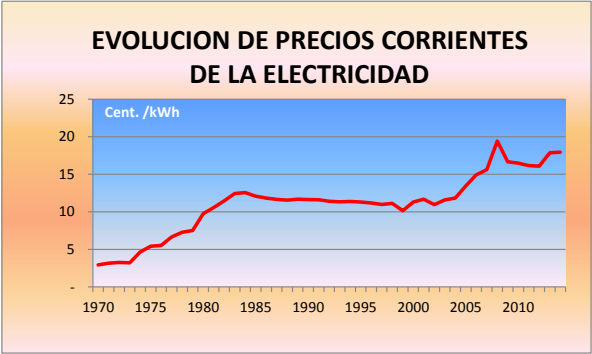
4.4%4.2%

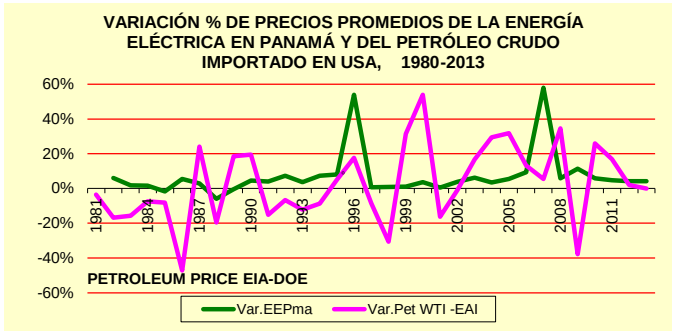
4.0%

CLASE	AÑOS											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
IPC ELECTRICIDAD RESIDENCIAL (Base 100)	105.5	105.7	119.3	133.3	142.9	161.0	110.7	104.1	104.0	111.2	118.5	113.5
VARIACION (%)		0.2%	12.9%	11.7%	7.2%	12.7%	-31.2%	-6.0%	-0.1%	6.9%	6.6%	-4.2%

2.8%

CLASE	AÑOS											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
PRETOT c/kWh ₁₉₈₂	9.46	9.62	10.62	11.49	11.53	13.21	11.06	10.58	9.79	9.40	9.86	9.86
VARIACION (%)		1.8%	10.4%	8.1%	0.3%	14.6%	-16.3%	-4.4%	-7.4%	-4.0%	4.8%	0.0%





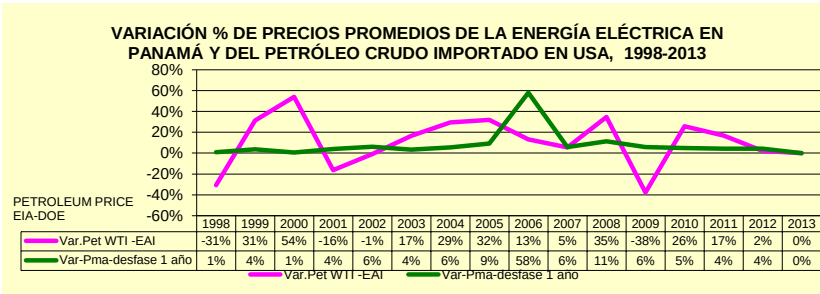
Desfase 1 año Pma

INCE DE PRECIOS AL CONSUMIDOR

AÑOS

2006

Estas fueron las gráficas usadas para variación de



	32%
	-28%
	-53%
	20%
	7%
	-13%
	-24%
	-23%
	45%
1998-2006	-4%
2000-2006	-6%
2002-2006	-2%
203-2006	-4%

10.88% -4.62% 5.62%

-13.56% 0.59%

1.61%

**INDICE DE PRECIOS AL CONSUMIDOR
OTROS SERVICIOS PARA LA VIVIENDA**

Electricidad

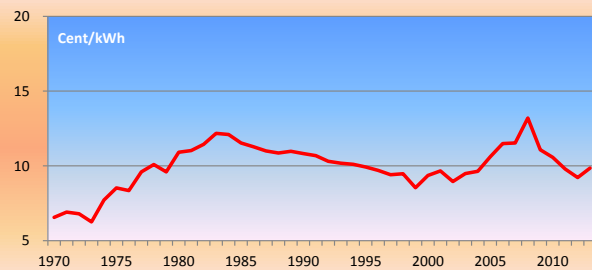
AÑOS **INDICE
Oct 2002=100**

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

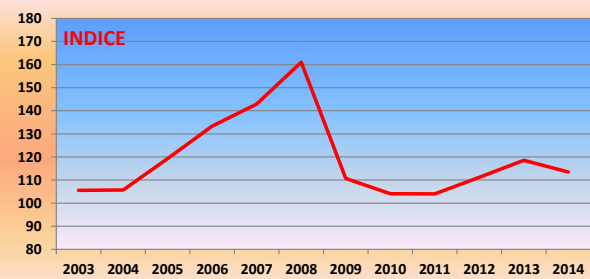
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| 104.0 | 111.2 |

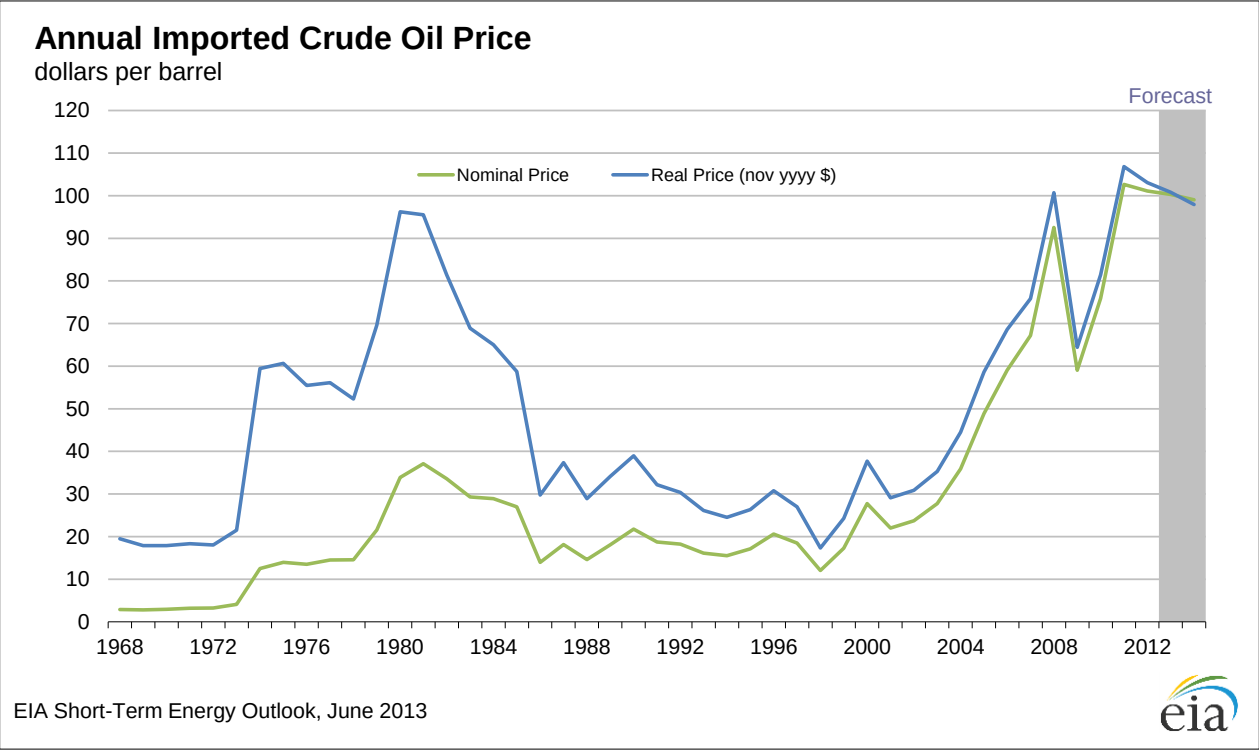
**EVOLUCION HISTORICA DE PRECIOS
REALES DE LA ELECTRICIDAD**



**IPC ELECTRICIDAD RESIDENCIAL (Base Oct
2002=100)**



EIA Short-Term Energy Outlook, noviembre 2013
Annual Average Imported Crude Oil Price
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Year	Consumer Price	Imported Crude Oil Price (\$/barrel)		Real(1982-84 =100)
	Index (1982-84=1)	Nominal	Real(Nov 20131)	
1968	0.348	2.90	19.51	8.33
1969	0.367	2.80	17.86	7.63
1970	0.388	2.96	17.86	7.63
1971	0.405	3.17	18.32	7.83
1972	0.418	3.22	18.03	7.70
1973	0.444	4.08	21.51	9.19
1974	0.493	12.52	59.45	25.40
1975	0.538	13.95	60.66	25.91
1976	0.569	13.48	55.45	23.68
1977	0.606	14.53	56.10	23.96
1978	0.652	14.57	52.28	22.33
1979	0.726	21.57	69.58	29.72
1980	0.824	33.86	96.22	41.10
1981	0.909	37.10	95.52	40.80
1982	0.965	33.57	81.41	34.77
1983	0.996	29.31	68.92	29.44
1984	1.039	28.88	65.05	27.78
1985	1.076	26.99	58.73	25.08
1986	1.097	13.93	29.74	12.70
1987	1.136	18.14	37.37	15.96
1988	1.183	14.60	28.90	12.35
1989	1.239	18.07	34.14	14.58
1990	1.307	21.73	38.94	16.63
1991	1.362	18.73	32.20	13.75
1992	1.403	18.21	30.38	12.98
1993	1.445	16.13	26.14	11.17
1994	1.482	15.54	24.54	10.48
1995	1.524	17.14	26.34	11.25
1996	1.569	20.62	30.77	13.14
1997	1.605	18.49	26.96	11.52
1998	1.630	12.07	17.33	7.40
1999	1.666	17.27	24.27	10.37
2000	1.722	27.72	37.69	16.10
2001	1.770	21.99	29.08	12.42
2002	1.799	23.71	30.86	13.18
2003	1.840	27.73	35.28	15.07
2004	1.889	35.89	44.48	19.00
2005	1.953	48.89	58.61	25.04
2006	2.016	59.05	68.59	29.30
2007	2.073	67.19	75.86	32.40
2008	2.153	92.57	100.68	43.01
2009	2.146	59.04	64.42	27.51
2010	2.181	75.87	81.45	34.79
2011	2.249	102.65	106.84	45.63
2012	2.296	101.09	103.07	44.03
2013	2.330	100.29	100.79	43.05
2014	2.368	99.03	97.93	41.83
Base CPI (11/yyyy)	2.341			0

EIA Short-Term Energy Outlook, noviembre yyyy
Forecast / estimated values shown in blue
Real Price (nov yyyy \$)
[See Notes and Sources for more information](#)

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

PRECIO PONDERADO REAL DE LA ENERGIA ELECTRICA (EE)

DATOS	AÑOS	IPC			PRETOT c/kWh (Incluye Subsidios)						
					PRECIOS CORRIENTES	Balboas/MWh Constantes 1987=100		Balboas/MWh Constantes Oct. 2002=100		Balboas/MWh Constantes Oct. 2007=100	
		1987=100	2002=100	2007=100							
		c/kWh	Indice	Variacion Anual	Indice	Variacion Anual	Indice	Variacion Anual			
1	1970	42.2	36.5	33.0	2.93	1.24		8.03		8.88	
2	1971	43.0	37.2	33.6	3.15	1.35	9.5%	8.47	5.5%	9.36	5.5%
3	1972	45.4	39.2	35.5	3.27	1.48	9.6%	8.32	-1.7%	9.20	-1.7%
4	1973	48.5	41.9	37.9	3.21	1.56	5.1%	7.66	-7.9%	8.47	-7.9%
5	1974	56.9	49.2	44.5	4.65	2.65	69.9%	9.45	23.4%	10.45	23.4%
6	1975	60.0	51.9	46.9	5.42	3.25	22.9%	10.45	10.5%	11.55	10.5%
7	1976	62.4	53.9	48.8	5.51	3.44	5.8%	10.22	-2.2%	11.30	-2.2%
8	1977	65.4	56.5	51.1	6.64	4.34	26.3%	11.75	15.0%	12.99	15.0%
9	1978	68.3	59.0	53.4	7.29	4.98	14.7%	12.36	5.1%	13.66	5.1%
10	1979	73.8	63.8	57.7	7.50	5.54	11.1%	11.76	-4.8%	13.00	-4.8%
11	1980	84.3	72.9	65.9	9.74	8.21	48.3%	13.37	13.7%	14.78	13.7%
12	1981	90.6	78.3	70.8	10.57	9.58	16.6%	13.50	1.0%	14.92	1.0%
13	1982	94.5	81.7	73.9	11.45	10.82	12.9%	14.01	3.8%	15.49	3.8%
14	1983	96.6	83.5	75.5	12.44	12.02	11.1%	14.91	6.4%	16.48	6.4%
15	1984	98.2	84.9	76.8	12.57	12.35	2.7%	14.81	-0.6%	16.38	-0.6%
16	1985	99.1	85.7	77.5	12.09	11.98	-2.9%	14.12	-4.7%	15.61	-4.7%
17	1986	99.1	85.7	77.5	11.83	11.73	-2.1%	13.82	-2.1%	15.27	-2.1%
18	1987	100.0	86.4	78.2	11.65	11.65	-0.7%	13.48	-2.5%	14.90	-2.5%
19	1988	100.5	86.9	78.6	11.55	11.61	-0.3%	13.30	-1.3%	14.70	-1.3%
20	1989	100.6	86.9	78.7	11.69	11.76	1.3%	13.44	1.1%	14.86	1.1%
21	1990	101.4	87.6	79.3	11.63	11.79	0.3%	13.27	-1.2%	14.67	-1.2%
22	1991	102.7	88.8	80.3	11.62	11.93	1.2%	13.09	-1.4%	14.47	-1.4%
23	1992	104.5	90.3	81.7	11.41	11.93	-0.1%	12.64	-3.5%	13.97	-3.5%
24	1993	105.0	90.8	82.1	11.33	11.90	-0.2%	12.49	-1.2%	13.80	-1.2%
25	1994	106.4	92.0	83.2	11.39	12.11	1.8%	12.38	-0.8%	13.69	-0.8%
26	1995	107.4	92.8	84.0	11.30	12.14	0.2%	12.17	-1.7%	13.46	-1.7%
27	1996	108.8	94.0	85.1	11.19	12.17	0.3%	11.90	-2.3%	13.15	-2.3%
28	1997	110.1	95.2	86.1	10.99	12.10	-0.6%	11.55	-2.9%	12.77	-2.9%
29	1998	110.9	95.9	86.7	11.12	12.33	1.9%	11.60	0.5%	12.83	0.5%
30	1999	112.5	97.2	88.0	10.14	11.41	-7.5%	10.43	-10.1%	11.53	-10.1%
31	2000	114.2	98.7	89.3	11.30	12.90	13.1%	11.45	9.8%	12.65	9.8%
32	2001	114.5	99.0	89.5	11.69	13.39	3.8%	11.81	3.2%	13.06	3.2%
33	2002	115.7	100.0	90.5	10.95	12.66	-5.4%	10.95	-7.3%	12.10	-7.3%
34	2003	115.8	100.1	90.5	11.59	13.42	6.0%	11.58	5.8%	12.80	5.8%
35	2004	116.3	100.5	90.9	11.84	13.78	2.6%	11.78	1.8%	13.03	1.8%

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

PRECIO PONDERADO REAL DE LA ENERGIA ELECTRICA (EE)

DATOS	AÑOS	IPC			PRETOT c/kWh (Incluye Subsidios)						
					PRECIOS CORRIENTES	Balboas/MWh Constantes 1987=100		Balboas/MWh Constantes Oct. 2002=100		Balboas/MWh Constantes Oct. 2007=100	
		1987=100	2002=100	2007=100	c/kWh	Indice	Variacion Anual	Indice	Variacion Anual	Indice	Variacion Anual
36	2005	119.7	103.5	93.6	13.46	16.11	16.9%	13.01	10.4%	14.38	10.4%
37	2006	122.7	106.1	95.9	14.92	18.30	13.6%	14.07	8.1%	15.55	8.1%
38	2007	127.9	110.5	100.0	15.60	19.95	9.0%	14.11	0.3%	15.60	0.3%
39	2008	139.0	120.1	108.7	20.98	29.16	46.1%	17.46	23.7%	19.30	23.7%
40	2009	142.3	123.0	111.3	16.65	23.70	-18.7%	13.54	-22.5%	14.97	-22.5%
41	2010	147.3	127.3	115.2	16.48	24.28	2.5%	12.95	-4.4%	14.31	-4.4%
42	2011	156.0	134.8	122.0	16.16	25.21	3.8%	11.99	-7.4%	13.25	-7.4%
43	2012	164.9	142.5	128.9	16.08	26.51	5.2%	11.28	-5.9%	12.47	-5.9%
44	2013	170.9	147.7	133.6	17.86	30.52	15.1%	12.09	7.2%	13.37	7.2%
45	2014	175.5	151.7	137.2	17.94	31.48	3.1%	11.82	-2.2%	13.07	-2.2%
TASA CRECIMIENTO					0.8%						

* IPC Pma y S.Mgto Var. % IPC 2014_{B 2007} = 2.70%

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
							Reference	High Growth	Low Growth	Reference	High Growth	Low Growth
1998	12.83	12.00	11.63									
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%

CUADRO No. 20

DEMANDA DE LA PROVINCIA DE BOCAS DEL TORO (CARGA INTEGRADA AL SIN) Años 2013 -2027

Estimado 2012 y Proyecciones 2013 - 2027

AÑO	BOFCO			ESC. MODERADO (a)		ESC. OPTIMISTA (b)		ESC. PESIMISTA (c)	
	Pronostico AES - BOFCO			Σ BOFCO		Ajuste BOFCO + 10%		Ajuste BOFCO -2. 5%	
	MWh	GWh	TASAS (%)	GWh	TASAS (%)	GWh	TASAS (%)	GWh	TASAS (%)
2009	23112.63								
2010	75,136.1	75.14		75.1		75.1		75.1	
2011	70,992.6	70.99	-5.51%	71.0	-5.51%	71.0	-5.51%	71.0	5.51
2012	78,543.5	78.08	9.99%	78.1	9.99%	78.1	9.99%	78.1	9.99
2013	81,466.1	83.47	6.89%	83.5	6.89%	83.5	6.89%	83.5	6.89
2014	82,688.1	87.15	4.42%	87.2	4.42%	87.2	4.42%	87.2	4.42
2015	83,928.4	83.93	-3.70%	83.9	-3.70%	88.1	1.11%	81.8	6.11
2016	85,292.1	85.29	1.62%	85.3	1.62%	89.6	1.62%	83.2	1.62
2017	86,571.5	86.57	1.50%	86.6	1.50%	95.2	6.33%	84.4	1.50
2018	87,870.1	87.87	1.50%	87.9	1.50%	96.7	1.50%	85.7	1.50
2019	89,188.1	89.19	1.50%	89.2	1.50%	98.1	1.50%	87.0	1.50
2020	90,526.0	90.53	1.50%	90.5	1.50%	99.6	1.50%	88.3	1.50
2021	93,609.0	93.61	3.41%	93.6	3.41%	103.0	3.41%	91.3	3.41
2022	93,749.4	93.75	0.15%	93.7	0.15%	103.1	0.15%	91.4	0.15
2023	95,507.6	95.51	1.88%	95.5	1.88%	105.1	1.88%	93.1	1.88
2024	97,299.1	97.30	1.88%	97.3	1.88%	107.0	1.88%	94.9	1.88
2025	99,124.6	99.12	1.88%	99.1	1.88%	109.0	1.88%	96.6	1.88
2026	100,984.9	100.98	1.88%	101.0	1.88%	111.1	1.88%	98.5	1.88
2027	102,883.4	102.88	1.88%	102.9	1.88%	113.2	1.88%	100.3	1.88
2028	104,817.6	104.82	1.88%	104.8	1.88%	115.3	1.88%	102.2	1.88
2029	106,788.2	106.79	1.88%	106.8	1.88%	117.5	1.88%	104.1	1.88
Tasa Anual			2.32%	44.9%	2.19%	59.41%	2.73%	41.30%	2.04%

Crecimiento del consumo

31.9%

45.1%

28.6%

(a) Corresponde a la suma de la demanda previstas por BOFCO y AES (Jul. 2010) en el Informe Indicativo de Demanda 2011-2031, del CND.

(b) Se considera un crecimiento adicional de 5% para el consumo previsto por BOFCO, a partir del año 2015, a efecto de una expansión económica de la región Bocatoreña en concordancia con in impulso adicional al desarrollo del país.

(c) Se considera una contracción de 2.5% en el consumo pronosticado por BOFCO, a partir del año 2015, consecuente con un probable retroceso en la economía global y sus consecuentes efectos en la economía del País y específicamente en la región.

CUADRO No. 21**DEMANDA CONSOLIDADA DE MEGAPROYECTOS ESTATALES IDENTIFICADOS**

CUADRO No. 21 - A DEMANDA CONSOLIDADA DE MEGAPROYECTOS ESTATALES IDENTIFICADOS (CARGA INTEGRADA AL SIN) Años 2014 -2028 En GWh							
AÑO	SANEAMIENTO DE LA BAHIA	TRANSPORTE METRO		AEROPUERTO TUCUMEN *		TOTAL MEGAPROYECTOS	
		MODERADO	ALTO	MODERADO	BAJO	MODERADO	ALTO
2011							
2012				46.6	46.6	46.65	46.65
2013	56.7			52.3	52.3	109.04	109.04
2014	58.0	18.8	18.8	58.6	58.6	135.50	135.50
2015	59.1	53.1	53.1	65.7	65.7	177.99	177.99
2016	60.3	55.8	55.8	80.5	80.5	196.61	196.61
2017	61.4	56.4	56.4	98.6	98.6	216.34	216.34
2018	62.6	56.9	56.9	101.5	101.5	221.07	221.07
2019	63.8	107.0	112.6	104.6	104.6	275.36	281.01
2020	67.9	118.0	118.3	107.7	107.7	293.51	293.80
2021	76.3	121.5	152.2	110.9	110.9	308.78	339.45
2022	77.5	146.3	154.8	118.3	114.2	342.03	346.50
2023	78.6	150.7	158.5	121.8	117.7	351.12	354.76
2024	79.7	152.2	160.1	125.5	121.2	357.42	361.01
2025	81.0	153.7	161.7	129.2	124.8	363.95	367.48
2026	82.0	155.3	163.3	133.1	128.6	370.43	373.91
2027	83.2	156.8	164.9	137.1	132.4	377.15	380.58
2028	84.4	158.4	166.6	141.21	136.42	384.02	387.39
2029	85.6	160.0	168.2	145.44	140.51	391.03	394.34

* 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 CONSOLIDADA DE MEGAPROYECTOS ESTATALES IDENTIFICADOS (CARGA INTEGRADA AL SIN) Años 2015 -2029 En GWh									
AÑO	SANEAMIENTO DE LA BAHIA	TRANSPORTE METRO		AEREOPUERTO TOCUMEN *			TOTAL MEGAPROYECTOS		
		MODERADO	ALTO	MODERADO	ALTO	BAJO	MODERADO	ALTO	BAJO
2011									
2012									
2013	14.19						14.19	14.19	14.19
2014	36.89	18.85	18.85	18.29	18.29	18.29	74.02	74.02	74.02
2015	62.45	53.15	53.15	18.29	18.29	18.29	133.88	133.88	133.88
2016	83.01	55.81	55.81	18.29	18.29	18.29	157.10	157.10	157.10
2017	83.18	56.36	56.36	18.29	18.29	18.29	157.83	157.83	157.83
2018	83.36	56.93	56.93	54.86	54.86	54.86	195.15	195.15	195.15
2019	93.76	106.97	112.63	54.86	54.86	54.86	255.59	261.24	255.59
2020	98.99	117.97	118.26	54.86	73.15	54.86	271.82	290.39	271.82
2021	99.16	121.54	152.20	54.86	73.15	54.86	275.56	324.51	275.56
2022	99.34	122.75	154.80	54.86	73.15	54.86	276.95	327.28	276.95
2023	99.51	149.53	158.48	73.15	73.15	54.86	322.19	331.14	303.91
2024	99.69	156.68	160.06	73.15	73.15	54.86	329.52	332.90	311.23
2025	99.96	158.44	161.66	73.15	73.15	54.86	331.55	334.77	313.26
2026	100.03	160.02	163.28	73.15	73.15	54.86	333.21	336.46	314.92
2027	100.21	161.62	164.91	73.15	73.15	54.86	334.98	338.27	316.69
2028	100.38	163.24	166.56	73.15	73.15	54.86	336.77	340.09	318.48
2029	100.56	164.87	168.23	73.15	73.15	54.86	338.58	341.93	320.29

* 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 DEL SEGMENTO BLOQUE
(CARGA INTEGRADA AL SIN)
Años 2015 -2029

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	161.2	93.1	161.2	93.1	161.2	93.1
2015	245.3	52.2	249.5	54.8	215.7	33.8
2016	570.1	132.4	574.3	130.2	240.3	11.4
2017	324.3	-43.1	333.0	-42.0	242.2	0.8
2018	318.1	-1.9	326.9	-1.8	315.9	30.4
2019	383.1	20.4	397.7	21.7	380.9	20.6
2020	403.2	5.3	430.9	8.3	401.0	5.3
2021	415.2	3.0	473.5	9.9	412.9	3.0
2022	423.4	2.0	483.1	2.0	421.1	2.0
2023	477.1	12.7	495.6	2.6	456.4	8.4
2024	488.8	2.5	501.9	1.3	468.1	2.6
2025	497.6	1.8	510.8	1.8	476.9	1.9
2026	506.2	1.7	519.5	1.7	485.4	1.8
2027	515.0	1.7	528.5	1.7	494.1	1.8
2028	523.9	1.7	537.7	1.7	503.0	1.8
2029	527.7	0.7	541.7	0.7	506.7	0.7
Tasa Anual	527.7%	8.23%	533.2%	8.42%	502.6%	7.94%

(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

	52.2%	54.8%	33.8%
	132.4%	130.2%	11.4%
Corto Plazo	18.5%	19.3%	18.3%
Largo Plazo	4.7%	4.7%	4.4%

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 2014 -2028 En GWh								
AÑOS	PRONOSTICOS AES-BOFCO			TOTAL MEGAPROYECTOS			MINERA PANAMA **	
	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	74.02	74.02	74.02		
2015	83.9	88.1	81.8	133.88	133.88	133.88	27.53	
2016	85.3	89.6	83.2	157.10	157.10	157.10	327.67	
2017	86.6	95.2	84.4	157.83	157.83	157.83	79.92	
2018	87.9	96.7	85.7	195.15	195.15	195.15	35.07	35.07
2019	89.2	98.1	87.0	255.59	261.24	255.59	38.31	38.31
2020	90.5	99.6	88.3	271.82	290.39	271.82	40.89	40.89
2021	93.6	103.0	91.3	275.56	324.51	275.56	46.06	46.06
2022	93.7	103.1	91.4	276.95	327.28	276.95	52.74	52.74
2023	95.5	105.1	93.1	322.19	331.14	303.91	59.41	59.41
2024	97.3	107.0	94.9	329.52	332.90	311.23	62.00	62.00
2025	99.1	109.0	96.6	331.55	334.77	313.26	66.94	66.94
2026	101.0	111.1	98.5	333.21	336.46	314.92	71.97	71.97
2027	102.9	113.2	100.3	334.98	338.27	316.69	77.09	77.09
2028	104.8	115.3	102.2	336.77	340.09	318.48	82.29	82.29
2029	106.8	117.5	104.1	338.58	341.93	320.29	82.29	82.29
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CUADRO No. 22
RESUMEN DE PRONOSTICOS DE DEMANDA
Años 2015 -2029

PRONOSTICOS DE DEMANDA
ESCENARIOS
AÑOS 2015 - 2029

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	1,351.3	1,351.3	1,351.3
2013	8,722.1	8,722.1	8,722.1	1,408.9	1,408.9	1,408.9
2014	9,211.3	9,211.3	9,211.3	1,467.5	1,467.5	1,467.5
2015	9,687.4	9,697.9	9,661.0	1,547.8	1,549.4	1,543.5
2016	10,563.6	10,604.3	10,208.4	1,689.7	1,696.2	1,632.8
2017	10,935.4	11,009.3	10,817.1	1,748.1	1,758.3	1,729.8
2018	11,468.9	11,573.2	11,383.1	1,832.3	1,845.6	1,820.0
2019	12,110.9	12,241.7	11,993.7	1,933.8	1,949.3	1,917.2
2020	12,734.8	12,890.1	12,587.6	2,032.2	2,049.4	2,011.7
2021	13,420.5	13,640.6	13,269.4	2,140.3	2,165.5	2,120.2
2022	14,156.2	14,394.6	13,982.4	2,256.3	2,281.7	2,233.6
2023	14,974.7	15,192.3	14,726.8	2,385.4	2,404.5	2,352.0
2024	15,707.8	16,026.3	15,466.8	2,500.7	2,532.7	2,469.7
2025	16,489.6	16,837.0	16,237.5	2,623.6	2,656.8	2,592.2
2026	17,298.7	17,751.0	17,020.5	2,750.8	2,796.8	2,716.6
2027	18,177.0	18,682.2	17,883.7	2,888.7	2,939.1	2,853.7
2028	19,103.4	19,661.6	18,792.4	3,034.2	3,088.6	2,998.1
2029	20,112.2	20,710.8	19,768.3	3,192.5	3,248.5	3,153.1

¹ GWHDIS Energia 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 2014 -2028
ESCENARIO MEDIO

AÑO	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		0.054
2012	0.269	0.380	0.082	0.098	0.018	0.001	0.009	0.000	0.142	1.000		0.077
2013	0.273	0.381	0.081	0.096	0.019	0.001	0.010	0.000	0.140	1.000		0.043
2014	0.274	0.373	0.076	0.093	0.018	0.001	0.009	0.000	0.155	1.000		8.8%
2015	0.267	0.373	0.074	0.091	0.018	0.001	0.025	0.000	0.153	1.000		7.4%
2016	0.255	0.366	0.070	0.087	0.016	0.001	0.053	0.000	0.153	1.000		6.9%
2017	0.255	0.377	0.072	0.088	0.016	0.001	0.029	0.000	0.162	1.000		7.0%
2018	0.253	0.385	0.072	0.087	0.017	0.001	0.027	0.000	0.159	1.000		5.8%
2019	0.249	0.390	0.071	0.086	0.017	0.001	0.031	0.000	0.155	1.000		5.5%
2020	0.246	0.397	0.071	0.085	0.017	0.001	0.031	0.000	0.152	1.000		5.4%
2021	0.243	0.404	0.071	0.085	0.017	0.001	0.030	0.000	0.149	1.000		5.6%
2022	0.240	0.411	0.071	0.084	0.017	0.001	0.029	0.000	0.147	1.000		5.8%
2023	0.236	0.416	0.071	0.084	0.017	0.001	0.031	0.000	0.144	1.000		5.5%
2024	0.233	0.423	0.070	0.083	0.017	0.001	0.031	0.000	0.143	1.000		4.9%
2025	0.230	0.430	0.070	0.083	0.017	0.001	0.030	0.000	0.141	1.000		4.9%
2026	0.226	0.436	0.070	0.082	0.017	0.001	0.029	0.000	0.140	1.000		4.7%
2027	0.222	0.443	0.069	0.082	0.017	0.001	0.028	0.000	0.139	1.000		4.9%
2028	0.218	0.450	0.069	0.082	0.017	0.001	0.027	0.000	0.136	1.000		4.9%
2029	0.214	0.457	0.069	0.081	0.017	0.001	0.026	0.000	0.135	1.000		5.1%

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

ESCENARIO ALTO

AÑO	GWHRES	GWHCOM	GWHIND	GWHOFI	GWHALU	GWHAUT	GWHBLQ	GWHOTR	GWHPER	GWH	D%GWH	MW
	Residencial	Comercial	Industrial	Oficial	Alumbrado públi	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		7.7%
2013	0.273	0.381	0.081	0.096	0.019	0.001	0.010	0.000	0.140	1.000		4.3%
2014	0.274	0.373	0.076	0.093	0.018	0.001	0.009	0.000	0.155	1.000		9.0%
2015	0.266	0.372	0.073	0.091	0.018	0.001	0.025	0.000	0.154	1.000		7.8%
2016	0.253	0.364	0.070	0.087	0.017	0.001	0.053	0.000	0.155	1.000		7.1%
2017	0.254	0.375	0.072	0.087	0.017	0.001	0.030	0.000	0.164	1.000		7.5%
2018	0.248	0.378	0.072	0.086	0.017	0.001	0.027	0.000	0.170	1.000		5.8%
2019	0.244	0.383	0.071	0.085	0.017	0.001	0.031	0.000	0.167	1.000		5.5%
2020	0.241	0.389	0.071	0.084	0.017	0.001	0.032	0.000	0.164	1.000		5.6%
2021	0.237	0.395	0.071	0.083	0.017	0.001	0.034	0.000	0.161	1.000		5.9%
2022	0.234	0.402	0.072	0.083	0.017	0.001	0.033	0.000	0.159	1.000		5.7%
2023	0.231	0.408	0.072	0.082	0.017	0.001	0.032	0.000	0.157	1.000		5.6%
2024	0.228	0.415	0.072	0.082	0.017	0.001	0.031	0.000	0.154	1.000		5.5%
2025	0.224	0.422	0.072	0.081	0.018	0.001	0.030	0.000	0.153	1.000		5.0%
2026	0.221	0.429	0.072	0.081	0.018	0.001	0.029	0.000	0.149	1.000		5.3%
2027	0.217	0.436	0.072	0.081	0.018	0.001	0.028	0.000	0.148	1.000		5.0%
2028	0.213	0.442	0.072	0.080	0.018	0.001	0.027	0.000	0.146	1.000		5.0%
2029	0.210	0.449	0.072	0.080	0.018	0.001	0.026	0.000	0.145	1.000		5.0%

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

AÑOS 2014 -2028
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		7.7%
2013	0.273	0.381	0.081	0.096	0.019	0.001	0.010	0.000	0.140	1.000		4.3%
2014	0.274	0.373	0.076	0.093	0.018	0.001	0.009	0.000	0.155	1.000		4.2%
2015	0.267	0.373	0.074	0.091	0.018	0.001	0.022	0.000	0.155	1.000		7.2%
2016	0.263	0.377	0.072	0.090	0.015	0.000	0.023	0.000	0.160	1.000		6.0%
2017	0.258	0.380	0.072	0.088	0.015	0.000	0.022	0.000	0.166	1.000		6.2%
2018	0.254	0.385	0.071	0.087	0.015	0.000	0.027	0.000	0.161	1.000		5.6%
2019	0.250	0.390	0.070	0.086	0.015	0.000	0.031	0.000	0.158	1.000		5.6%
2020	0.247	0.396	0.070	0.085	0.015	0.000	0.031	0.000	0.156	1.000		5.2%
2021	0.244	0.403	0.070	0.085	0.015	0.000	0.030	0.000	0.152	1.000		4.9%
2022	0.241	0.410	0.070	0.084	0.015	0.000	0.029	0.000	0.150	1.000		5.0%
2023	0.238	0.416	0.069	0.083	0.015	0.000	0.030	0.000	0.147	1.000		5.1%
2024	0.235	0.423	0.069	0.083	0.015	0.000	0.030	0.000	0.145	1.000		5.0%
2025	0.231	0.430	0.068	0.082	0.015	0.000	0.029	0.000	0.144	1.000		5.0%
2026	0.228	0.437	0.068	0.082	0.015	0.000	0.028	0.000	0.142	1.000		4.9%
2027	0.224	0.443	0.067	0.081	0.015	0.000	0.027	0.000	0.141	1.000		5.1%
2028	0.220	0.450	0.067	0.081	0.015	0.000	0.026	0.000	0.140	1.000		5.1%
2029	0.216	0.456	0.066	0.081	0.015	0.000	0.025	0.000	0.139	1.000		5.1%

CUADRO No. 26
PARTICIPACION SECTORIAL EN EL PRONOSTICO DE ENERGIA ELECTRICA DE PANAMA
ESCENARIO BAJO

REPARTICIÓN DE CARGA EN EL SISTEMA INTERCONECTADO NACIONAL 2014-2028 (MW)															
PRONÓSTICO MEDIO	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
TOTAL GENERACIÓN	1,533.16	1,645.95	1,759.55	1,883.33	1,991.82	2,100.80	2,213.42	2,338.45	2,473.85	2,610.91	2,739.03	2,874.36	3,010.41	3,157.09	3,309.92
PÉRDIDAS DE TRANSMISIÓN	64.70	67.40	108.90	101.00	110.90	110.90	110.90	126.80	126.80	126.80	126.80	126.80	126.80	126.80	126.80
% DE PÉRDIDAS	4.22%	4.09%	6.19%	5.36%	5.57%	5.28%	5.01%	5.42%	5.13%	4.86%	4.63%	4.41%	4.21%	4.02%	3.83%
CARGA (MW)	1,468.46	1,578.55	1,650.65	1,782.33	1,880.92	1,989.90	2,102.52	2,211.65	2,347.05	2,484.11	2,612.23	2,747.56	2,883.61	3,030.29	3,183.12
DISTRIBUIDORES (DEMANDA MÁXIMA COINCIDENTE EN MW)															
ENSA	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Tocumen (Incluye Vipasa)	54.62	56.84	58.49	61.84	70.88	74.11	78.88	83.40	90.05	97.80	79.95	86.40	90.99	94.65	98.89
Cerro Viento	69.87	71.98	72.29	74.90	75.22	75.25	76.23	76.73	74.60	75.59	75.81	76.28	76.99	77.88	78.93
Santa María	79.13	83.82	86.45	90.81	93.56	95.06	97.39	99.54	102.41	104.86	106.04	107.42	109.17	111.13	113.32
Monte Oscuro	76.19	81.65	82.65	86.04	87.03	53.65	54.62	55.24	56.24	57.25	57.68	58.30	59.10	60.04	61.11
Tinajitas	47.61	53.47	55.96	60.21	62.90	65.60	69.48	73.97	75.33	80.69	63.60	65.55	66.82	68.24	69.82
Geehan	12.43	13.89	14.51	15.61	15.85	16.02	16.37	16.95	17.64	18.35	18.53	18.77	19.07	19.42	19.81
Chilibre (Incluye el IDAAN)	34.11	34.45	34.21	35.13	35.25	35.23	35.66	35.86	36.31	36.76	36.83	37.03	37.35	37.75	38.23
Calzada Larga	5.66	6.00	6.24	6.69	6.99	7.27	7.63	7.95	8.32	8.70	5.24	5.42	5.63	5.84	6.07
France Field	68.19	83.36	85.39	89.50	90.74	91.62	93.66	95.10	83.97	85.71	86.65	87.86	89.39	90.93	92.14
Bahía Las Minas	15.25	16.30	17.12	17.95	19.17	20.06	20.54	20.92	21.41	21.81	21.98	22.22	22.53	22.89	23.30
Bahía Las Minas 44 kV (anillo 44 kV: carga SE COL+ SE MH)1	34.84	37.15	38.69	41.57	43.52	45.14	47.33	49.12	51.27	53.75	55.10	56.62	58.32	60.17	62.16
Nueva S/E Llano Bonito	30.66	34.85	42.80	52.02	57.28	62.27	68.02	75.27	85.17	90.98	95.78	100.35	103.31	106.31	109.47
Nueva S/E 24 de Diciembre	26.64	28.39	29.36	30.95	31.86	32.75	34.17	35.92	38.22	40.94	45.22	47.49	49.49	51.50	52.77
Nueva S/E Gonzalillo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.20	40.78	45.39	49.24	52.53
Nueva S/E Costa del Este	0.00	0.00	0.00	0.00	0.00	56.60	57.17	57.38	57.98	58.59	58.59	58.80	59.18	59.71	60.35
Nueva S/E Brisas del Golf	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.89	10.85	12.86	13.80	14.60	15.37	15.76
Nueva S/E Cativá	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.24	13.56	13.75	13.98	14.25	14.56	14.90
Nueva S/E Don Bosco	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.32	29.84	32.68	35.29	36.28
EDEMET	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Llano Sánchez 115 KV	134.17	143.88	151.82	166.20	177.43	187.86	201.40	214.68	229.91	246.15	261.04	276.73	293.79	312.61	332.57
Llano Sánchez 34.5 KV	12.97	13.91	14.68	16.07	17.16	18.16	19.47	20.76	22.23	23.80	25.24	26.76	28.41	30.22	32.15
El Higo	26.45	28.36	29.93	32.76	34.98	37.03	39.70	42.32	45.32	48.52	51.46	54.55	57.91	61.62	65.56
Chorrera	101.78	109.14	76.03	84.15	90.73	96.78	104.51	112.22	120.93	130.25	138.99	148.01	157.72	168.45	179.70
San Francisco	101.86	109.51	109.46	120.40	129.09	137.13	147.52	157.73	169.40	181.86	193.44	205.48	218.56	233.00	248.30
Locería	115.59	124.28	118.88	130.92	140.51	149.38	160.82	172.09	184.94	198.68	211.47	224.74	239.14	255.04	271.87
Marañón	96.52	103.77	97.65	107.59	115.52	122.85	132.30	141.61	152.22	163.57	174.14	185.10	196.99	210.13	224.02
Centro Bancario	93.31	100.32	99.95	109.94	117.89	125.23	134.73	144.07	154.73	166.12	176.70	187.71	199.66	212.86	226.84
Nueva S/E Bella Vista	0.00	0.00	27.40	29.34	30.70	32.00	33.78	35.44	37.42	39.52	41.31	43.33	45.59	48.07	50.79
Nueva S/E Burunga (Arraiján)	0.00	0.00	39.14	41.91	43.86	45.72	48.26	50.62	53.46	56.46	59.02	61.90	65.13	68.68	72.56
Nueva S/E La Floresta (Clayton)	0.00	0.00	9.98	10.64	11.09	11.51	12.09	12.65	13.31	14.01	14.57	15.24	15.97	16.78	17.63

