



ENERGY SECURITY PROFILE: MEXICO



The following energy security profile provides brief snapshot of the energy security risks for Mexico, including how it scores compared with the OECD average and a description of those factors that have had the greatest impact, both positively and negatively, on its energy security.

The information in the country profile is as follows:

1. A table summarizing world ranking in energy production, energy consumption, and power generation and whether the country is a net importer or exporter of oil, natural gas, and coal.
2. A table showing current- and previous-year total risk scores and those years with the historically highest and lowest risk scores, both absolutely and relative to the OECD baseline average. (More detailed data on the energy security risk scores for each country are presented in Appendix 3.)
3. A pie chart showing the current estimated energy demand mix.
4. A pie chart showing the current estimated power generation energy mix.
5. A line chart showing the country's energy security risk trend and the OECD average trend since 1980.
6. A line chart showing the country's risk trend relative to the OECD average (measured as percent variance) since 1980. This provides an indication of progress or deterioration in energy security risks compared with an international baseline
7. A line chart showing trends in the country's risk ranking since 1980.
8. Two area charts showing the weighted contribution of the eight metric groups since 1980. One shows the absolute contribution of each metric group to the total risk score and the other shows the relative contribution, as a percent, of each metric group to the total risk score.
9. A table showing by metric grouping how the country's risk scores fare against the comparable OECD averages in five-year increments, plus the most recent year of data. Cells highlighted in green indicate risk scores at least 10% lower (better) than the comparable OECD scores, while cells highlighted in red indicate country risk scores at least 10% higher (worse) than the comparable OECD scores. Cells with no highlighting indicate risk scores within 10% either way of the comparable OECD average. These tables provide an indication of how the country's metric groups have performed over time vis-à-vis the OECD average, with those cells in green performing considerably better and those in red performing considerably worse.
10. A table showing the country's International Energy Security Risk Index Scores by metric.



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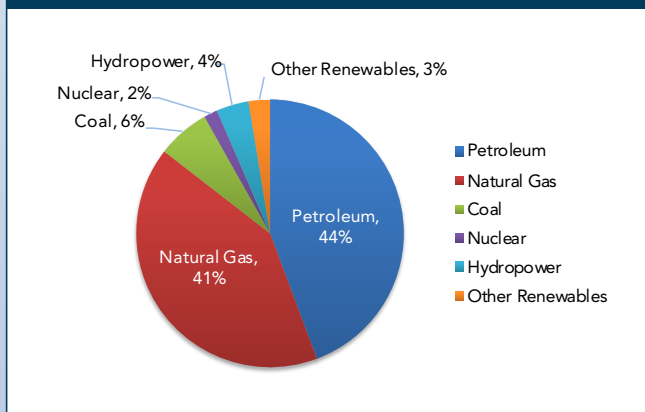
Mexico: Energy at a Glance

Production:	World Rank
Petroleum	12
Natural Gas	29
Coal	21
Consumption:	World Rank
Petroleum	13
Natural Gas	10
Coal	23
Total Energy	15
Power Generation:	World Rank
Conventional Fossil	10
Nuclear	20
Hydropower	23
Other Renewables	19
Total Generation	15
Net Importer/Exporter of:	Status in 2018
Petroleum	Exporter
Natural Gas	Importer
Coal	Importer

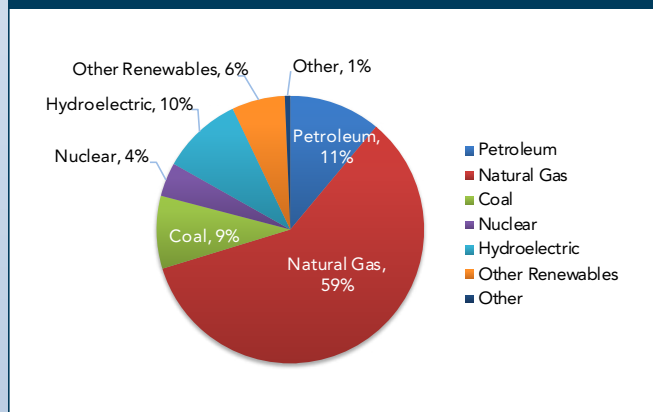
Mexico: Energy Security Risk Summary

Risk Scores:	
2018 Energy Security Risk Score	966
2018 Large Energy User Group Rank	11
Score in Previous Year	975
Rank in Previous Year	11
Score in 1980	742
Average Score: 1980-2018	778
Best Energy Security Risk Score	626 (1994)
Worst Energy Security Risk Score	975 (2017)
Risk Scores Relative to OECD Average:	
Average Annual Difference 1980-2018	-9%
Best Relative Score	-30% (1981)
Worst Relative Score	9% (2018)
Country-Specific Metric Ranking—2018:	
Number in Top Five	4
Number in Bottom Five	1

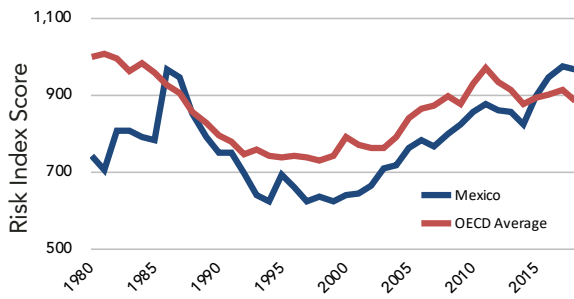
Mexico: Energy Mix



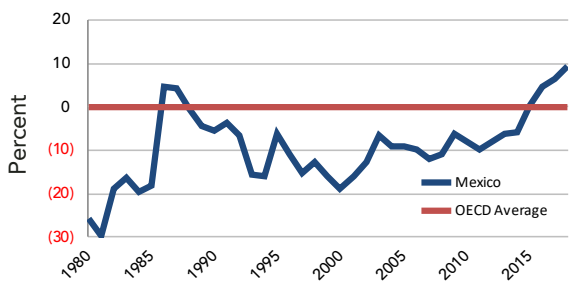
Mexico: Power Generation Mix



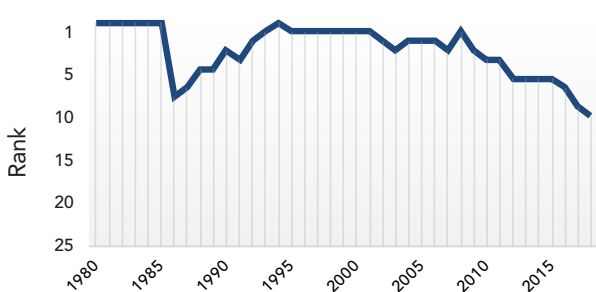
Mexico vs. OECD: Risk Index Scores



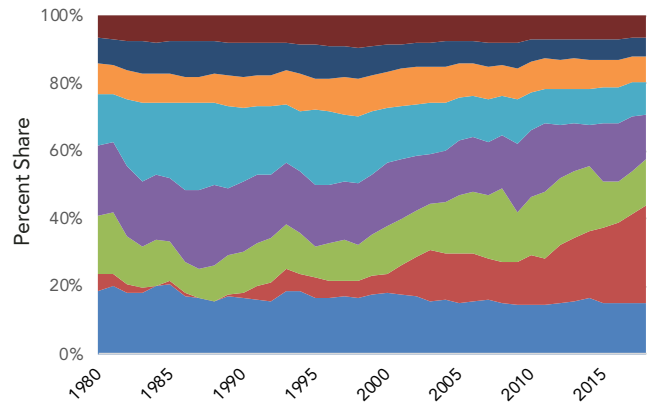
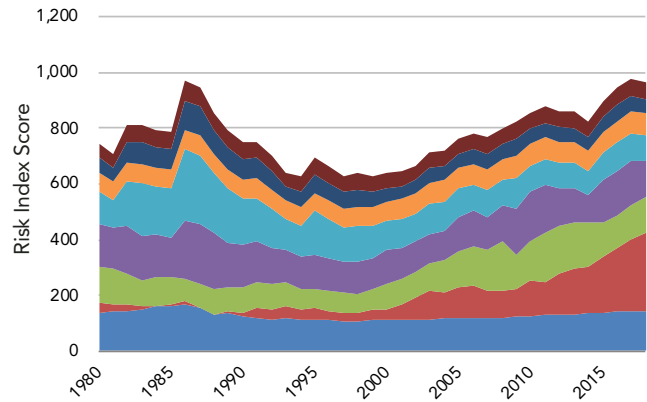
Mexico: Risk Variance from OECD



Mexico: Risk Ranking



Mexico: Risk Scores by Metric Group and Share of Total Risk by Metric Group



- Environmental
- Transportation Sector
- Electric Power Sector
- Energy Use Intensity
- Price & Market Volatility
- Energy Expenditures
- Fuel Imports
- Global Fuel

Mexico vs. OECD: Percent Difference (Weighted Within Group)

(Red Cells ≥10% Above OECD; Green Cells ≤10% Below OECD; White Cells <10% to <-10% of OECD)

Metric Group	1980	1985	1990	1995	2000	2005	2010	2015	2016	2017	2018
Global Fuels Metrics	0	0	0	0	0	0	0	0	0	0	0
Fuel Import Metrics	-79	-96	-93	-72	-79	-46	-42	-8	-2	9	20
Energy Expenditure Metrics	-36	-37	-27	-40	-13	-6	-16	-17	-15	-16	-15
Price & Market Volatility Metrics	2	17	70	76	27	34	21	25	28	27	36
Energy Use Intensity Metrics	-18	17	40	37	-12	-3	-4	-4	5	1	0
Electric Power Sector Metrics	-4	7	9	7	11	17	26	29	34	35	36
Transportation Sector Metrics	-18	0	22	12	-26	-17	-6	-9	-3	-7	-9
Environmental Metrics	-25	-2	8	5	-7	-5	10	17	25	23	23
Total Weighted Index	-26	-18	-5	-6	-19	-9	-8	1	5	7	9

INTERNATIONAL ENERGY SECURITY RISK INDEX SCORES:

MEXICO



METRIC	1980	1985	1990	1995	2000	2005	2010	2015	2016	2017	2018
Global Fuels											
Global Oil Reserves	1,000	1,040	1,241	1,313	1,277	870	882	973	1,036	1,060	1,121
Global Oil Production	1,000	914	783	751	697	742	786	851	901	922	928
Global Gas Reserves	1,000	1,360	865	876	993	979	928	1,003	1,082	1,076	1,035
Global Gas Production	1,000	1,466	917	666	715	768	778	882	916	991	988
Global Coal Reserves	1,000	1,075	688	566	582	644	616	615	615	615	615
Global Coal Production	1,000	1,074	844	832	788	1,118	1,490	1,647	1,616	1,663	1,663
Fuel Imports											
Oil Import Exposure	0	0	0	0	0	0	0	0	0	0	0
Gas Import Exposure	0	0	91	665	540	1,098	1,071	2,620	3,119	3,806	4,190
Coal Import Exposure	1,746	374	380	776	716	3,082	3,895	4,299	4,346	4,657	4,862
Total Energy Import Exposure	18	4	17	122	100	281	286	574	660	736	816
Fossil Fuel Import Expenditure per GDP	4	1	7	53	29	103	115	291	385	420	465
Energy Expenditures											
Energy Expenditure Intensity	351	637	727	554	636	750	703	760	809	742	697
Energy Expenditures per Capita	120	143	170	145	279	339	324	333	319	305	293
Retail Electricity Prices	680	342	470	320	484	684	665	702	706	710	715
Crude Oil Prices	1,000	618	434	275	427	726	963	580	479	583	748
Price & Market Volatility											
Crude Oil Price Volatility	1,000	425	410	155	605	671	1,702	1,310	1,391	1,342	678
Energy Expenditure Volatility	351	438	708	414	80	85	113	92	112	118	125
World Oil Refinery Usage	1,000	1,005	1,197	1,194	1,227	1,299	1,176	1,213	1,216	1,249	1,242
GDP per Capita	1,709	2,108	2,069	1,956	1,510	1,486	1,472	1,510	1,592	1,560	1,543
Energy Use Intensity											
Energy Consumption per Capita	305	321	308	325	359	352	355	343	340	337	335
Energy Intensity	890	1,428	1,320	1,242	818	778	769	783	862	820	796
Petroleum Intensity	1,356	2,088	1,958	1,796	1,160	1,051	934	894	974	918	883
Electric Power Sector											
Electricity Diversity	926	953	933	897	937	1,017	1,050	1,000	1,020	1,002	981
Non-Carbon Generation	1,055	1,027	1,071	1,028	1,097	1,156	1,175	1,210	1,259	1,254	1,253
Transportation Sector											
Transport Energy per Capita	390	358	382	377	407	444	473	445	439	433	427
Transport Energy Intensity	1,140	1,589	1,635	1,441	929	980	1,026	1,016	1,113	1,053	1,016
Environmental											
CO ₂ Emissions Trend	1,000	1,160	1,257	1,348	1,588	1,686	1,869	1,898	1,945	1,928	1,913
CO ₂ per Capita	322	334	327	321	351	348	358	340	345	338	331
CO ₂ GDP Intensity	941	1,481	1,400	1,229	800	768	776	776	873	821	788
Total Index	742	784	751	695	642	765	857	900	948	975	966