

INTERNATIONAL ENERGY SECURITY RISK INDEX 2020 EDITION: SINGAPORE

What do the numbers mean?

The numbers in these tables and charts relate to the energy security risk index scores calculated for each country. A higher index score indicates greater risk, a lower score lesser risk. The data provide a historical view of how energy security risks have trended both within each country since 1980 and in relation to the average index for the Organization for Economic Co-operation and Development (OECD).

The OECD average index provides a baseline against which the scores of each country can be compared. The OECD index was set with a 1980 value equaling 1,000. The year 1980 was a year of very high risk, so a total index risk score around 1,000 indicates a relatively high level of risk. Country scores range from 500 to just below 6,000, with an average of about 1,200.

The first chart plots the raw index scores for each country and the OECD. The second chart plots percent difference between each country and the OECD and provides a picture of how each country's risk has trended over time compared to OECD baseline risk. Again, a higher value indicates greater risk, a lower value lesser risk.

The final table provides historical index scores for each of the 29 metrics used to calculate each country's total index score.

Energy Security Risk Summary: Singapore

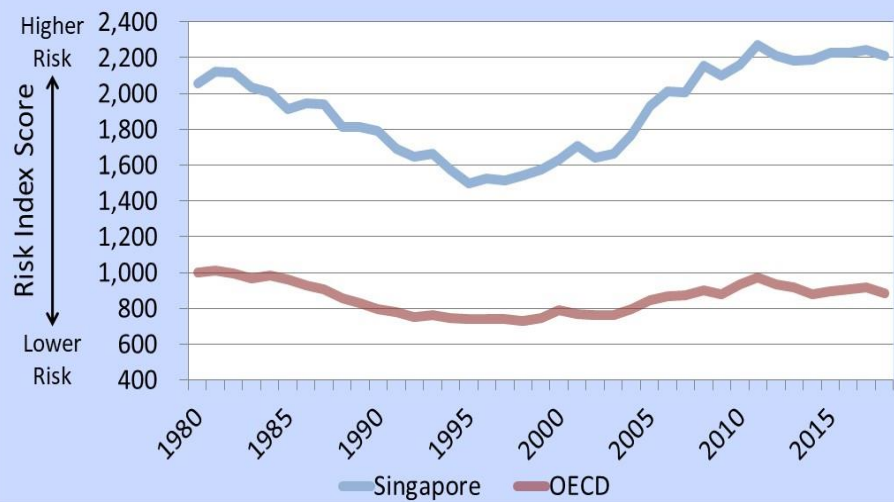
Risk Scores:

2018 Energy Security Risk Score	2,211
Score in Previous Year	2,246
Score in 1980	2,058
Best Energy Security Risk Score	1,495 (1995)
Worst Energy Security Risk Score	2,273 (2011)

Risk Scores Relative to OECD Average:

Average Annual Difference 1980-2018	122%
Best Relative Score	100% (1985)
Worst Relative Score	150% (2018)

SINGAPORE vs. OECD: Risk Index Scores



SINGAPORE: Risk Variance from OECD



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International Energy Security Risk Index Scores: SINGAPORE

Metric	1980	1985	1990	1995	2000	2005	2010	2015	2017	2018
Global Fuel										
Global Oil Reserves	1,000	1,040	1,241	1,313	1,277	870	882	973	1,059	1,121
Global Oil Production	1,000	914	783	751	696	742	786	851	922	928
Global Gas Reserves	1,000	1,360	865	876	993	979	928	1,003	1,076	1,035
Global Gas Production	1,000	1,466	917	666	715	768	778	882	991	988
Global Coal Reserves	1,000	1,075	688	566	582	644	616	615	615	615
Global Coal Production	1,000	1,074	844	832	788	1,118	1,490	1,647	1,663	1,663
Fuel Imports										
Oil Import Exposure	1,558	1,424	1,220	1,170	1,085	1,156	1,226	1,326	1,437	1,446
Gas Import Exposure	3,629	6,839	5,246	4,279	4,596	4,933	5,001	5,670	6,367	6,348
Coal Import Exposure	5,790	7,137	5,592	5,509	5,220	7,405	9,872	10,914	11,018	11,018
Total Energy Import Exposure	2,904	2,903	2,895	2,892	2,894	2,899	2,890	3,267	3,596	3,790
Fossil Fuel Import Expenditure/GDP	6,144	4,228	4,032	2,300	3,043	4,704	4,237	4,483	4,206	4,019
Energy Expenditures										
Energy Expenditure Intensity	4,053	2,789	2,660	1,508	1,998	2,484	2,657	2,801	2,623	2,502
Energy Expenditures per Capita	2,260	1,711	2,369	2,500	2,919	4,070	6,245	7,113	7,005	6,999
Retail Electricity Prices	1,012	826	894	885	633	685	1,086	1,105	1,119	1,126
Crude Oil Prices	1,000	618	434	275	427	726	963	580	583	748
Price & Market Volatility										
Crude Oil Price Volatility	1,000	425	410	155	605	671	1,702	1,310	1,342	678
Energy Expenditure Volatility	4,053	3,551	2,013	1,312	239	394	903	230	222	349
World Oil Refinery Usage	1,000	1,005	1,197	1,194	1,227	1,299	1,176	1,212	1,249	1,242
GDP per Capita	1,339	1,277	1,060	777	827	781	652	628	612	598
Energy Use Intensity										
Energy Consumption per Capita	1,022	1,016	1,474	1,886	2,116	2,830	3,170	3,087	2,979	2,938
Energy Intensity	1,833	1,657	1,655	1,138	1,449	1,727	1,349	1,216	1,115	1,050
Petroleum Intensity	4,008	3,620	3,605	2,360	3,040	3,341	2,616	2,588	2,616	2,582
Electric Power Sector										
Electricity Capacity Diversity	1,638	1,638	1,620	1,602	1,582	1,573	1,573	1,564	1,537	1,515
Non-Carbon Generation	1,460	1,460	1,440	1,426	1,434	1,424	1,419	1,383	1,347	1,337
Transportation Sector										
Transport Energy per Capita	922	917	1,429	1,728	1,684	1,518	1,923	2,048	2,153	2,213
Transport Energy Intensity	1,655	1,494	1,604	1,043	1,153	926	818	807	806	791
Environmental										
CO ₂ Emissions Trend	1,000	1,122	1,973	2,820	3,671	4,557	6,513	7,861	8,032	7,959
CO ₂ per Capita	1,115	1,104	1,742	2,153	2,452	2,875	3,452	3,822	3,851	3,798
CO ₂ GDP Intensity	2,000	1,799	1,956	1,299	1,679	1,754	1,469	1,505	1,442	1,358
Total Weighted Index	2,058	1,915	1,789	1,495	1,628	1,927	2,160	2,226	2,246	2,211