

```
In [1]: import pandas as pd
```

```
In [76]: import numpy as np
```

```
In [2]: df=pd.read_json(r'C:\Users\nishant\Desktop\jsondata.json')
```

```
In [3]: print(df)
```

				added		country	end_year	impact	\
0	January, 20	2017	03:51:25	United States of America					
1	January, 20	2017	03:51:24	United States of America					
2	January, 20	2017	03:51:23	United States of America					
3	January, 20	2017	03:26:40		Mexico				
4	January, 19	2017	00:55:54						
5	January, 19	2017	00:55:52						
6	January, 18	2017	02:23:13				2027	3	
7	January, 17	2017	04:19:59				2018		
8	January, 17	2017	03:25:45		Nigeria		2018		
9	January, 17	2017	03:18:22		Lebanon				
10	January, 17	2017	02:21:11	United States of America					
11	January, 17	2017	02:21:10	United States of America					
12	January, 17	2017	01:51:12						
13	January, 17	2017	01:51:10						
14	January, 17	2017	01:17:33		Russia				
15	January, 17	2017	00:55:16						
16	January, 16	2017	05:54:47				2025		
17	January, 16	2017	03:42:24						
18	January, 16	2017	02:25:00						
19	January, 16	2017	02:24:59		Saudi Arabia		2040		
20	January, 15	2017	05:21:39		Angola				
21	January, 15	2017	05:21:36						
22	January, 15	2017	04:36:06						
23	January, 15	2017	03:50:31	United States of America			2200		
24	January, 15	2017	03:07:03						
25	January, 15	2017	03:07:02						
26	January, 15	2017	03:06:36		Egypt				
27	January, 15	2017	02:41:44	United States of America					
28	January, 15	2017	02:40:46						
29	January, 14	2017	03:35:43					3	
..			
970	July, 10	2016	01:44:40	United States of America			2026		
971	July, 10	2016	01:30:45				2021		
972	July, 10	2016	01:30:44				2020		
973	July, 10	2016	01:26:37		Nigeria				
974	July, 08	2016	03:55:38		India				
975	July, 08	2016	03:08:25						
976	July, 07	2016	02:48:41	United States of America			2035		
977	July, 07	2016	02:34:44	United States of America					
978	July, 07	2016	02:27:55						
979	July, 07	2016	02:27:51						
980	July, 07	2016	02:27:51						
981	July, 07	2016	02:27:42		India				
982	July, 07	2016	01:39:05						
983	July, 07	2016	00:50:44		Cyprus		2017		
984	July, 06	2016	17:13:58				2025		
985	July, 06	2016	04:00:02				2036	3	
986	July, 06	2016	03:51:54		Belize				
987	July, 06	2016	03:51:53						
988	July, 06	2016	01:54:35						
989	July, 06	2016	01:26:08	United States of America					
990	July, 05	2016	02:16:13						
991	July, 05	2016	02:16:13						
992	July, 05	2016	00:55:08		Poland				
993	July, 04	2016	02:06:29						
994	July, 04	2016	01:36:39						

995	July, 03 2016 06:00:29		
996	July, 03 2016 06:00:25	United States of America	2016
997	July, 03 2016 06:00:25		
998	July, 03 2016 06:00:23		2016
999	July, 03 2016 05:28:48		

insight intensity likelihood

\			
0	Annual Energy Outlook	6	3
1	Annual Energy Outlook	6	3
2	Annual Energy Outlook	6	3
3	WRI Partnership Aims to Foster Supply Chain Tr...	6	2
4	N-Hexane Market Hit at a CAGR of 5% by 2024 - ...	6	3
5	N-Hexane Market Hit at a CAGR of 5% by 2024 - ...	6	3
6	E-Boats, Anyone? Electric Boat Market To Reach...	60	4
7	Oil prices will be much more volatile in 2017	16	4
8	IMF affirms Nigeria's recovery from recession,...	16	4
9	Lebanon: No Land for Beginning Politicians	6	3
10	The Slow Road Back: Oil & Gas Industry Outlook...	4	2
11	The Slow Road Back: Oil & Gas Industry Outlook...	6	3
12	NM oil patch outlook	6	2
13	NM oil patch outlook	6	2
14	OPEC sees market stability in 2017, Venezuela ...	12	4
15	Cargill's quest for fish food grows, enriching...	16	4
16	How Electric Trucks Will Shape The Auto Transp...	9	3
17	Energy Roundup	16	4
18	The Peak Oil President?	4	2
19	The Peak Oil President?	8	2
20	World Bank Forecasts Nigeria To Exit Recession...	8	4
21	World Bank Forecasts Nigeria To Exit Recession...	16	4
22	Paris department stores expect rebound in 2017...	16	4
23	Goldman Sachs Maps Out Its Top Ten Market Them...	24	4
24	Key events for 2017; Global growth conditions ...	16	4
25	Key events for 2017; Global growth conditions ...	6	3
26	Egypt Petroleum Show (EGYPS 2017)	6	3
27	US Dollar: Will It Impact Natural Gas Prices?	6	2
28	US dollar moves dominated Sterling during the ...	6	3
29	21 research reports forecast double-digit grow...	72	4
..
970	Lower methane emissions, kick your beef habit	4	4
971	Strong Growth Ahead for Lithium Ion Battery Ma...	6	3
972	Strong Growth Ahead for Lithium Ion Battery Ma...	12	4
973	How the Crude Oil Market Is Rebalancing	6	3
974	India Is Cutting Oil Deals Worldwide	6	3
975	The Obama administration just made Arctic dril...		
976	A Just Transition for U.S. Fossil Fuel Industr...	16	4
977	ExxonMobil Investigated over Questionable Oil ...	9	3
978	McKinsey: Cars, petrochemicals in oil-market '...	3	3
979	McKinsey: Cars, petrochemicals in oil-market '...	6	3
980	McKinsey: Cars, petrochemicals in oil-market '...	3	3
981	India needs to shore up the share of natural g...	4	2
982	Thanks to Fracking U.S. Has More Reserves Than...	3	3
983	Italy's Eni says drilling off Cyprus to start ...	3	3
984	Is peak oil demand in sight?	12	4
985	Seaways turns elsewhere for submersible support	18	2
986	Our Planet: The Environmental Dimension of the...	2	2
987	Our Planet: The Environmental Dimension of the...	2	2

988	Britain's Plummeting Pound Is Bad News for Ame...	2	2
989	U.S. has more untapped oil than Saudi Arabia o...	4	2
990	Nomura's Kwan Sees Big Data Among Game Changer...		
991	Nomura's Kwan Sees Big Data Among Game Changer...	2	2
992	Biogas buses are the green solution for cities	2	2
993	Supergelators Could Make for More Effective Oi...	2	2
994	Advances in energy-storage technology, burgeon...	3	3
995	Global oil demand to slow in 2016: IEA	2	2
996	IEA Says Oil Prices May Fall Even Further Befo...		
997	IEA Says Oil Prices May Fall Even Further Befo...	16	4
998	IEA Says Oil Prices May Fall Even Further Befo...	3	3
999	Greenhouse gas	2	2

	pestle	published	region	relevance
\				
0	Industries	January, 09 2017 00:00:00	Northern America	2
1	Industries	January, 09 2017 00:00:00	Northern America	2
2	Industries	January, 09 2017 00:00:00	Northern America	2
3	Environmental	January, 18 2017 00:00:00	Central America	3
4	Economic	January, 18 2017 00:00:00	World	2
5	Economic	January, 18 2017 00:00:00	World	2
6	Political	January, 13 2017 00:00:00		5
7	Economic	January, 16 2017 00:00:00	World	4
8	Economic	January, 16 2017 00:00:00	Western Africa	4
9	Political	January, 07 2017 00:00:00	Western Asia	2
10	Industries		Northern America	2
11	Economic		Northern America	2
12	Industries	January, 16 2017 00:00:00		3
13	Industries	January, 16 2017 00:00:00		3
14	Industries	January, 17 2017 00:00:00	Eastern Europe	3
15	Economic	January, 14 2017 00:00:00	World	4
16	Technological	January, 10 2017 00:00:00		3
17			World	4
18	Political	January, 11 2017 00:00:00	World	2
19	Industries	January, 11 2017 00:00:00	Western Asia	4
20	Economic	January, 13 2017 00:00:00	Central Africa	2
21	Economic	January, 13 2017 00:00:00	World	4
22	Economic	January, 13 2017 00:00:00		4
23	Organization		Northern America	6
24	Economic	January, 12 2017 00:00:00	World	4
25	Economic	January, 12 2017 00:00:00	World	2
26	Economic	January, 08 2017 00:00:00	Northern Africa	2
27	Industries	January, 12 2017 00:00:00	Northern America	3
28	Political		World	2
29	Economic	September, 01 2017 00:00:00	World	6
..
970		July, 03 2016 00:00:00	Northern America	1
971	Economic	July, 06 2016 00:00:00	World	2
972	Industries	July, 06 2016 00:00:00		3
973	Industries	July, 04 2016 00:00:00	Western Africa	2
974	Political	July, 07 2016 00:00:00	Southern Asia	2
975	Environmental			1
976	Environmental	July, 06 2016 00:00:00	Northern America	4
977	Political	June, 24 2016 00:00:00	Northern America	3
978	Economic	June, 07 2016 00:00:00		1
979	Industries	June, 07 2016 00:00:00	Europe	2
980	Political	June, 07 2016 00:00:00		1

981	Industries	July, 06 2016 00:00:00	Southern Asia	2
982	Political	July, 05 2016 00:00:00		1
983		July, 07 2016 00:00:00	Western Asia	1
984	Economic	June, 01 2016 00:00:00		3
985	Industries	July, 04 2016 00:00:00		3
986		May, 13 2016 00:00:00	Central America	1
987		May, 13 2016 00:00:00	World	1
988	Industries	July, 05 2016 00:00:00		1
989	Industries	July, 05 2016 00:00:00	Northern America	2
990	Environmental	June, 28 2016 00:00:00		5
991	Social	June, 28 2016 00:00:00		1
992		July, 04 2016 00:00:00	Eastern Europe	1
993	Environmental	June, 30 2016 00:00:00		1
994	Economic	July, 01 2016 00:00:00		1
995	Economic	July, 10 2015 00:00:00		1
996	Economic	July, 10 2015 00:00:00	Northern America	4
997	Economic	July, 10 2015 00:00:00		4
998	Economic	July, 10 2015 00:00:00		1
999		July, 03 2016 00:00:00	World	1

	sector	source	start_year	\
0	Energy	EIA		
1	Energy	EIA		
2	Energy	EIA		
3	Environment	sustainablebrands.com		
4		SBWire		
5	Energy	SBWire		
6	Government	CleanTechnica		
7	Energy	TRAC News	2017	
8		Vanguard News	2017	
9	Aerospace & defence	Avi Melamed		
10	Manufacturing	WSJ		
11	Retail	WSJ		
12	Energy	Abq	2017	
13	Energy	Abq		
14	Energy	Reuters		
15	Energy	Star Tribune	2019	
16	Energy	EV Obsession		
17	Financial services	creamermedia	2017	
18	Aerospace & defence	Resilience		
19	Energy	Resilience		
20	Financial services	TheNews.NG		
21		TheNews.NG	2017	
22	Support services	FashionNetwork.com	2017	
23		Bloomberg Business	2017	
24	Energy	Yes Bank	2017	
25	Energy	Yes Bank		
26	Energy	EGYPS		
27	Energy	marketrealist		
28		PDQFX news		
29	Information Technology	therobotreport	2022	
..	
970		dailytexanonline	2016	
971	Energy	EPS News	2016	
972	Energy	EPS News		
973	Energy	marketrealist		
974	Energy	Bloomberg Business		

975	Support services	Washington Post	
976	Energy	The American Prospect	
977	Retail	Face2face Africa	
978	Environment	Oil and Gas Journal	
979	Energy	Oil and Gas Journal	
980	Manufacturing	Oil and Gas Journal	
981	Energy	Infracircle	
982	Energy	uschamber	
983		energy news cyprus	
984	Energy	McKinsey & Company	
985	Energy	Imeche	2016
986		UNEP	
987		UNEP	
988	Energy	Foreign Policy	
989	Energy	CNNMoney	
990	Energy	Rigzone	2016
991	Energy	Rigzone	
992		Europe in My Region	
993	Energy	IHS Engineering 360	
994	Energy	Engineering News	
995	Financial services	CNBC	
996	Manufacturing	Bloomberg Business	
997		Bloomberg Business	2016
998	Retail	Bloomberg Business	
999		Wikipedia	

	title	topic \
0	U.S. natural gas consumption is expected to in...	gas
1	Reference case U.S. crude oil production is pr...	oil
2	U.S. petroleum consumption is projected to rem...	consumption
3	Mars, Unilever, Cargill and MondelÄ“z are alre...	oil
4	Polymerization will remain top 3 end-users in ...	market
5	High demand for n-Hexane in oil extraction owi...	oil
6	The market for non-military electric watercraf...	market
7	Global oil prices will witness much more volat...	oil
8	Nigeria Gross Domestic Product will grow by 0...	gdp
9	A war in Lebanon will increase the already hea...	war
10	U.S. production could begin to ramp back up fo...	production
11	More U.S. LNG (liquified natural gas) export c...	export
12	2017 could be another record-breaking year in ...	oil
13	Oil prices could climb above \$60 quite rapidly.	oil
14	OPEC, Russia and other non-members of the prod...	oil
15	Industry demand for fish oil will bypass the w...	oil
16	Experts predict the costs of replacing electri...	battery
17	The global investment cycle will show the firs...	
18	While in the past decade downturns in output f...	biofuel
19	By 2040, the world could need to replace over ...	oil
20	Angola is projected to expand at a moderate 1...	policy
21	The global economy will accelerate moderately ...	economy
22	Analysts at Exane BNP Paribas for their part a...	market
23	Expect that modest improvements in the macroec...	strategy
24	Oil prices in 2017 will be a function of produ...	oil
25	The rise in crude oil prices will play a key r...	oil
26	The future success of the transformation of Eg...	gas
27	Natural gas prices could develop a relationshi...	gas
28	Brexit fears and global market trends will ten...	market
29	Global logistics robots market is expected to ...	robot

..
970	U.S. beef consumption is forecasted to decreas...	
971	Anticipated growth in global energy demand is ...	energy
972	Demand for energy is forecast to increase from...	oil
973	Fresh militant attacks in Nigeria will continu...	oil
974	Strong bilateral relations will ensure India's...	security
975	The Obama administration finalized rules that ...	gas
976	By 2035, U.S. coal consumption will need to fa...	coal
977	The US Securities and Exchange Commission is e...	energy
978	Carbon dioxide emissions related to energy wil...	energy
979	Energy demand will grow in emerging and develo...	energy
980	Demand for liquid hydrocarbons will become a t...	war
981	A well-diversified fuel basket for India could...	gas
982	Fracking's importance will not be going away a...	fracking
983	Exploratory drilling off Cyprus southern shore...	
984	Oil demand growth will flatten to 0.4 percent ...	oil
985	Decommissioning more than 400 oil platforms in...	oil
986	The Belize barrier reef is under threat from o...	
987	Almost half of all natural World Heritage site...	
988	The continued fallout from Brexit could keep o...	oil
989	The U.S. could shoulder even more of the weigh...	oil
990	Exploration in deepwater and ultra-deepwater i...	oil
991	Robots are being deployed in refineries and na...	gas
992	Combustion of methane in buses could significa...	
993	Newly developed supergelators could help clean...	oil
994	The low price of oil is leading to questions a...	oil
995	A possible Greek exit from European Monetary U...	oil
996	U.S. production growth will slow to 300,000 ba...	growth
997	Non-OPEC supply growth is expected to grind to...	growth
998	There will be no overall production growth out...	export
999	Earth's surface temperature could exceed histo...	

url

0	http://www.eia.gov/outlooks/aeo/pdf/0383(2017)...
1	http://www.eia.gov/outlooks/aeo/pdf/0383(2017)...
2	http://www.eia.gov/outlooks/aeo/pdf/0383(2017)...
3	http://www.sustainablebrands.com/news_and_view...
4	http://www.sbwire.com/press-releases/n-hexane-...
5	http://www.sbwire.com/press-releases/n-hexane-...
6	https://cleantechnica.com/2017/01/12/e-boats-a...
7	http://www.news.tracanada.ca/2017/01/16/oil-pr...
8	http://www.vanguardngr.com/2017/01/imf-affirms...
9	https://www.avimelamed.com/2017/01/07/lebanon-...
10	http://deloitte.wsj.com/riskandcompliance/2017...
11	http://deloitte.wsj.com/riskandcompliance/2017...
12	https://www.abqjournal.com/928238/nm-oil-patch...
13	https://www.abqjournal.com/928238/nm-oil-patch...
14	http://www.reuters.com/article/us-venezuela-op...
15	http://www.startribune.com/cargill-s-quest-for...
16	http://evobsession.com/electric-trucks-will-sh...
17	http://newsletters.creamermedia.co.za/p/m/s/tw...
18	http://www.resilience.org/stories/2017-01-11/t...
19	http://www.resilience.org/stories/2017-01-11/t...
20	https://www.thenews.ng/2017/01/world-bank-fore...
21	https://www.thenews.ng/2017/01/world-bank-fore...
22	http://za.fashionnetwork.com/news/Paris-depart...
23	https://www.bloomberg.com/news/articles/2016-1...

24 https://www.yesbank.in/pdf/monthly_market_pres...
25 https://www.yesbank.in/pdf/monthly_market_pres...
26 <http://www.egyps.com/media/530316/egyps-show-p...>
27 <http://marketrealist.com/2017/01/us-dollar-wil...>
28 <https://www.pdqfx.com/latest-news/13-01-2017>
29 <https://www.therobotreport.com/news/21-researc...>
..
970 <http://www.dailytexanonline.com/2016/07/03/low...>
971 <https://epsnews.com/2016/07/06/lithium-ion-bat...>
972 <https://epsnews.com/2016/07/06/lithium-ion-bat...>
973 <http://marketrealist.com/2016/07/crude-oil-mar...>
974 <http://www.bloomberg.com/news/articles/2016-07...>
975 <https://www.washingtonpost.com/news/energy-env...>
976 <http://prospect.org/article/just-transition-us...>
977 <https://face2faceafrica.com/article/exxonmobil...>
978 <http://www.ogj.com/articles/2016/07/mckinsey-c...>
979 <http://www.ogj.com/articles/2016/07/mckinsey-c...>
980 <http://www.ogj.com/articles/2016/07/mckinsey-c...>
981 <http://www.vccircle.com/infracircle/india-need...>
982 <https://www.uschamber.com/above-the-fold/thank...>
983 <http://www.energynewscyprus.com/italys-eni-say...>
984 <http://www.mckinsey.com/industries/oil-and-gas...>
985 <http://www.imeche.org/news/news-article/seaway...>
986 <http://apps.unep.org/publications/index.php?op...>
987 <http://apps.unep.org/publications/index.php?op...>
988 <http://foreignpolicy.com/2016/07/05/britains-p...>
989 <http://money.cnn.com/2016/07/05/investing/us-u...>
990 http://www.rigzone.com/news/oil_gas/a/145268/N...
991 http://www.rigzone.com/news/oil_gas/a/145268/N...
992 <http://euinmyregion.blogactiv.eu/2016/07/04/bi...>
993 <http://insights.globalspec.com/article/2880/su...>
994 <http://www.engineeringnews.co.za/article/advan...>
995 <http://www.cnn.com/2015/07/10/global-oil-dema...>
996 <http://www.bloomberg.com/news/articles/2015-07...>
997 <http://www.bloomberg.com/news/articles/2015-07...>
998 <http://www.bloomberg.com/news/articles/2015-07...>
999 https://en.wikipedia.org/wiki/Greenhouse_gas

[1000 rows x 17 columns]



In [4]: df.head(10)

Out[4]:

	added	country	end_year	impact	insight	intensity	likelihood	pestle	publishe
0	January, 20 2017 03:51:25	United States of America			Annual Energy Outlook	6	3	Industries	Januar 09 201 00:00:0
1	January, 20 2017 03:51:24	United States of America			Annual Energy Outlook	6	3	Industries	Januar 09 201 00:00:0
2	January, 20 2017 03:51:23	United States of America			Annual Energy Outlook	6	3	Industries	Januar 09 201 00:00:0
3	January, 20 2017 03:26:40	Mexico			WRI Partnership Aims to Foster Supply Chain Tr...	6	2	Environmental	Januar 18 201 00:00:0
4	January, 19 2017 00:55:54				N-Hexane Market Hit at a CAGR of 5% by 2024 - ...	6	3	Economic	Januar 18 201 00:00:0
5	January, 19 2017 00:55:52				N-Hexane Market Hit at a CAGR of 5% by 2024 - ...	6	3	Economic	Januar 18 201 00:00:0
6	January, 18 2017 02:23:13		2027	3	E-Boats, Anyone? Electric Boat Market To Reach...	60	4	Political	Januar 13 201 00:00:0
7	January, 17 2017 04:19:59		2018		Oil prices will be much more volatile in 2017	16	4	Economic	Januar 16 201 00:00:0
8	January, 17 2017 03:25:45	Nigeria	2018		IMF affirms Nigeria's recovery from recession,...	16	4	Economic	Januar 16 201 00:00:0
9	January, 17 2017 03:18:22	Lebanon			Lebanon: No Land for Beginning Politicians	6	3	Political	Januar 07 201 00:00:0

```
In [5]: df1=df.drop(['end_year','insight','url','impact','added','published','country',  
                  , 'relevance','source','likelihood'],axis=1)
```

```
In [6]: df1.rename(columns={'start_year':'year'},inplace=True)
```

In [7]: df1

Out[7]:

	intensity	pestle	region	sector	year	title	topic
0	6	Industries	Northern America	Energy		U.S. natural gas consumption is expected to in...	gas
1	6	Industries	Northern America	Energy		Reference case U.S. crude oil production is pr...	oil
2	6	Industries	Northern America	Energy		U.S. petroleum consumption is projected to rem...	consumption
3	6	Environmental	Central America	Environment		Mars, Unilever, Cargill and MondelÃ“z are alre...	oil
4	6	Economic	World			Polymerization will remain top 3 end-users in ...	market
5	6	Economic	World	Energy		High demand for n-Hexane in oil extraction owi...	oil
6	60	Political		Government		The market for non-military electric watercraf...	market
7	16	Economic	World	Energy	2017	Global oil prices will witness much more volat...	oil
8	16	Economic	Western Africa		2017	Nigeria Gross Domestic Product will grow by 0....	gdp
9	6	Political	Western Asia	Aerospace & defence		A war in Lebanon will increase the already hea...	war
10	4	Industries	Northern America	Manufacturing		U.S. production could begin to ramp back up fo...	production
11	6	Economic	Northern America	Retail		More U.S. LNG (liquified natural gas) export c...	export
12	6	Industries		Energy	2017	2017 could be another record-breaking year in ...	oil
13	6	Industries		Energy		Oil prices could climb above \$60 quite rapidly.	oil
14	12	Industries	Eastern Europe	Energy		OPEC, Russia and other non-members of the prod...	oil
15	16	Economic	World	Energy	2019	Industry demand for fish oil will bypass the w...	oil
16	9	Technological		Energy		Experts predict the costs of replacing electri...	battery
17	16		World	Financial services	2017	The global investment cycle will show the firs...	

	intensity	pestle	region	sector	year	title	topic
18	4	Political	World	Aerospace & defence		While in the past decade downturns in output f...	biofuel
19	8	Industries	Western Asia	Energy		By 2040, the world could need to replace over ...	oil
20	8	Economic	Central Africa	Financial services		Angola is projected to expand at a moderate 1....	policy
21	16	Economic	World		2017	The global economy will accelerate moderately ...	economy
22	16	Economic		Support services	2017	Analysts at Exane BNP Paribas for their part a...	market
23	24	Organization	Northern America		2017	Expect that modest improvements in the macroec...	strategy
24	16	Economic	World	Energy	2017	Oil prices in 2017 will be a function of produ...	oil
25	6	Economic	World	Energy		The rise in crude oil prices will play a key r...	oil
26	6	Economic	Northern Africa	Energy		The future success of the transformation of Eg...	gas
27	6	Industries	Northern America	Energy		Natural gas prices could develop a relationshi...	gas
28	6	Political	World			Brexit fears and global market trends will ten...	market
29	72	Economic	World	Information Technology	2022	Global logistics robots market is expected to ...	robot
...
970	4		Northern America		2016	U.S. beef consumption is forecasted to decreas...	
971	6	Economic	World	Energy	2016	Anticipated growth in global energy demand is ...	energy
972	12	Industries		Energy		Demand for energy is forecast to increase from...	oil
973	6	Industries	Western Africa	Energy		Fresh militant attacks in Nigeria will continu...	oil
974	6	Political	Southern Asia	Energy		Strong bilateral relations will ensure India's...	security
975		Environmental		Support services		The Obama administration finalized rules that ...	gas
976	16	Environmental	Northern America	Energy		By 2035, U.S. coal consumption will need to fa...	coal

	intensity	pestle	region	sector	year	title	topic
977	9	Political	Northern America	Retail		The US Securities and Exchange Commission is e...	energy
978	3	Economic		Environment		Carbon dioxide emissions related to energy wil...	energy
979	6	Industries	Europe	Energy		Energy demand will grow in emerging and develo...	energy
980	3	Political		Manufacturing		Demand for liquid hydrocarbons will become a t...	war
981	4	Industries	Southern Asia	Energy		A well-diversified fuel basket for India could...	gas
982	3	Political		Energy		Fracking's importance will not be going away a...	fracking
983	3		Western Asia			Exploratory drilling off Cyprus southern shore...	
984	12	Economic		Energy		Oil demand growth will flatten to 0.4 percent ...	oil
985	18	Industries		Energy	2016	Decommissioning more than 400 oil platforms in...	oil
986	2		Central America			The Belize barrier reef is under threat from o...	
987	2		World			Almost half of all natural World Heritage site...	
988	2	Industries		Energy		The continued fallout from Brexit could keep o...	oil
989	4	Industries	Northern America	Energy		The U.S. could shoulder even more of the weigh...	oil
990		Environmental		Energy	2016	Exploration in deepwater and ultra-deepwater i...	oil
991	2	Social		Energy		Robots are being deployed in refineries and na...	gas
992	2		Eastern Europe			Combustion of methane in buses could significa...	
993	2	Environmental		Energy		Newly developed supergelators could help clean...	oil
994	3	Economic		Energy		The low price of oil is leading to questions a...	oil

	intensity	pestle	region	sector	year	title	topic
995	2	Economic		Financial services		A possible Greek exit from European Monetary U...	oil
996		Economic	Northern America	Manufacturing		U.S. production growth will slow to 300,000 ba...	growth
997	16	Economic			2016	Non-OPEC supply growth is expected to grind to...	growth
998	3	Economic		Retail		There will be no overall production growth out...	export
999	2		World			Earth's surface temperature could exceed histo...	

1000 rows × 7 columns

```
In [8]: df2=df1[['title','topic','year','intensity','sector','region','pestle']]
```


In [9]:

```
df2
```

Out[9]:

	title	topic	year	intensity	sector	region	pestle
0	U.S. natural gas consumption is expected to in...	gas		6	Energy	Northern America	Industries
1	Reference case U.S. crude oil production is pr...	oil		6	Energy	Northern America	Industries
2	U.S. petroleum consumption is projected to rem...	consumption		6	Energy	Northern America	Industries
3	Mars, Unilever, Cargill and MondelÄ“z are alre...	oil		6	Environment	Central America	Environmental
4	Polymerization will remain top 3 end-users in ...	market		6		World	Economic
5	High demand for n-Hexane in oil extraction owi...	oil		6	Energy	World	Economic
6	The market for non-military electric watercraf...	market		60	Government		Political
7	Global oil prices will witness much more volat...	oil	2017	16	Energy	World	Economic
8	Nigeria Gross Domestic Product will grow by 0....	gdp	2017	16		Western Africa	Economic
9	A war in Lebanon will increase the already hea...	war		6	Aerospace & defence	Western Asia	Political
10	U.S. production could begin to ramp back up fo...	production		4	Manufacturing	Northern America	Industries
11	More U.S. LNG (liquified natural gas) export c...	export		6	Retail	Northern America	Economic
12	2017 could be another record-breaking year in ...	oil	2017	6	Energy		Industries
13	Oil prices could climb above \$60 quite rapidly.	oil		6	Energy		Industries
14	OPEC, Russia and other non-members of the prod...	oil		12	Energy	Eastern Europe	Industries
15	Industry demand for fish oil will bypass the w...	oil	2019	16	Energy	World	Economic
16	Experts predict the costs of replacing electri...	battery		9	Energy		Technological
17	The global investment cycle will show the firs...		2017	16	Financial services	World	
18	While in the past decade downturns in output f...	biofuel		4	Aerospace & defence	World	Political

	title	topic	year	intensity	sector	region	pestle
19	By 2040, the world could need to replace over ...	oil		8	Energy	Western Asia	Industries
20	Angola is projected to expand at a moderate 1....	policy		8	Financial services	Central Africa	Economic
21	The global economy will accelerate moderately ...	economy	2017	16		World	Economic
22	Analysts at Exane BNP Paribas for their part a...	market	2017	16	Support services		Economic
23	Expect that modest improvements in the macroec...	strategy	2017	24		Northern America	Organization
24	Oil prices in 2017 will be a function of produ...	oil	2017	16	Energy	World	Economic
25	The rise in crude oil prices will play a key r...	oil		6	Energy	World	Economic
26	The future success of the transformation of Eg...	gas		6	Energy	Northern Africa	Economic
27	Natural gas prices could develop a relationshi...	gas		6	Energy	Northern America	Industries
28	Brexit fears and global market trends will ten...	market		6		World	Political
29	Global logistics robots market is expected to ...	robot	2022	72	Information Technology	World	Economic
...
970	U.S. beef consumption is forecasted to decreas...		2016	4		Northern America	
971	Anticipated growth in global energy demand is ...	energy	2016	6	Energy	World	Economic
972	Demand for energy is forecast to increase from...	oil		12	Energy		Industries
973	Fresh militant attacks in Nigeria will continu...	oil		6	Energy	Western Africa	Industries
974	Strong bilateral relations will ensure India's...	security		6	Energy	Southern Asia	Political
975	The Obama administration finalized rules that ...	gas			Support services		Environmental
976	By 2035, U.S. coal consumption will need to fa...	coal		16	Energy	Northern America	Environmental
977	The US Securities and Exchange Commission is e...	energy		9	Retail	Northern America	Political

	title	topic	year	intensity	sector	region	pestle
978	Carbon dioxide emissions related to energy wil...	energy		3	Environment		Economic
979	Energy demand will grow in emerging and develo...	energy		6	Energy	Europe	Industries
980	Demand for liquid hydrocarbons will become a t...	war		3	Manufacturing		Political
981	A well-diversified fuel basket for India could...	gas		4	Energy	Southern Asia	Industries
982	Fracking's importance will not be going away a...	fracking		3	Energy		Political
983	Exploratory drilling off Cyprus southern shore...			3		Western Asia	
984	Oil demand growth will flatten to 0.4 percent ...	oil		12	Energy		Economic
985	Decommissioning more than 400 oil platforms in...	oil	2016	18	Energy		Industries
986	The Belize barrier reef is under threat from o...			2		Central America	
987	Almost half of all natural World Heritage site...			2		World	
988	The continued fallout from Brexit could keep o...	oil		2	Energy		Industries
989	The U.S. could shoulder even more of the weigh...	oil		4	Energy	Northern America	Industries
990	Exploration in deepwater and ultra-deepwater i...	oil	2016		Energy		Environmental
991	Robots are being deployed in refineries and na...	gas		2	Energy		Social
992	Combustion of methane in buses could significa...			2		Eastern Europe	
993	Newly developed supergelators could help clean...	oil		2	Energy		Environmental
994	The low price of oil is leading to questions a...	oil		3	Energy		Economic
995	A possible Greek exit from European Monetary U...	oil		2	Financial services		Economic
996	U.S. production growth will slow to 300,000 ba...	growth			Manufacturing	Northern America	Economic

	title	topic	year	intensity	sector	region	pestle
997	Non-OPEC supply growth is expected to grind to...	growth	2016	16			Economic
998	There will be no overall production growth out...	export		3	Retail		Economic
999	Earth's surface temperature could exceed histo...			2		World	

1000 rows × 7 columns

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In [10]: df2.to_json(r'C:\Users\nishant\Desktop\data5.json',orient='records')
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In [11]: df2.to_json(orient='records')
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times the current crude oil output of Saudi Arabia (or more than 40 mbd).", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "Western Asia", "pestle": "Industries"}, {"title": "Angola is projected to expand at a moderate 1.2 percent pace as high inflation and tight policy continue to weigh on consumption and investment.", "topic": "policy", "year": "", "intensity": 8, "sector": "Financial services", "region": "Central Africa", "pestle": "Economic"}, {"title": "The global economy will accelerate moderately to 2.7 percent in 2017.", "topic": "economy", "year": 2017, "intensity": 16, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "Analysts at Exane BNP Paribas for their part are expecting a rise in demand on the main luxury goods markets in 2017.", "topic": "market", "year": 2017, "intensity": 16, "sector": "Support services", "region": "", "pestle": "Economic"}, {"title": "Expect that modest improvements in the macroeconomic backdrop will help lift S&P 500 operating EPS by 10 percent to \$116 and they have a year-end S&P 500 target of 2200.", "topic": "strategy", "year": 2017, "intensity": 24, "sector": "", "region": "Northern America", "pestle": "Organization"}, {"title": "Oil prices in 2017 will be a function of producers sticking to the production cuts and recovery in global demand conditions.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "The rise in crude oil prices will play a key role in shaping global inflation dynamics.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "The future success of the transformation of Egypt's oil and gas industry will further be related to the diversification of energy resources and liberalisation of the North Africa region's energy markets.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern Africa", "pestle": "Economic"}, {"title": "Natural gas prices could develop a relationship with the US Dollar Index that's similar to the relationship between crude oil and the US Dollar Index.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Brexit fears and global market trends will tend to dominate in the short term.", "topic": "market", "year": "", "intensity": 6, "sector": "", "region": "World", "pestle": "Political"}, {"title": "Global logistics robots market is expected to grow to around \$11.18 billion in 2022.", "topic": "robot", "year": 2022, "intensity": 72, "sector": "Information Technology", "region": "World", "pestle": "Economic"}, {"title": "World trade volumes are seen rising 3.6% this year, followed by 4.0% in 2018, and crude oil prices are expected to average \$55 per barrel.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Growth in South Africa and oil exporters is expected to be weaker.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Southern Africa", "pestle": "Economic"}, {"title": "South Asia: Regional growth is expected to pick up modestly to 7.1 percent in 2017 with continued support from strong growth in India.", "topic": "growth", "year": 2017, "intensity": 16, "sector": "", "region": "Southern Asia", "pestle": "Economic"}, {"title": "Saudi Arabia is forecast to accelerate modestly to a 1.6 percent growth rate in 2017.", "topic": "growth", "year": 2017, "intensity": 16, "sector": "", "region": "Western Asia", "pestle": "Economic"}, {"title": "Growth in Ukraine is projected to accelerate to a 2 percent rate.", "topic": "growth", "year": "", "intensity": 8, "sector": "", "region": "Eastern Europe", "pestle": "Economic"}, {"title": "Azerbaijan is expected to expand 1.2 percent and Kazakhstan is anticipated to grow by 2.2 percent as commodity prices stabilize and as economic imbalances narrow.", "topic": "economic", "year": "", "intensity": 8, "sector": "", "region": "Central Asia", "pestle": "Economic"}, {"title": "Shrinking energy consumption per capita puts the world (or individual countries in the world) at the risk of recession.", "topic": "energy", "year": "", "intensity": 4, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Not until mid-1Q of 2017 will there be definitive signs regarding whether the coordinated output cut of 1.8 million barrels per day is actually winning down global supply.", "topic": "", "year": 2017, "intensity": 12, "sector": ""}

r":"","region":"World","pestle":""},{ "title":"The debate over potential risks comes as European officials are pressuring the \$44 billion palm oil industry to list edible oil as a cancer risk.", "topic":"oil","year":"","intensity":18,"sector":"Healthcare","region":"","pestle":"Healthcare"},{ "title":"U.S. crude oil production next year is expected to top 7 million barrels per day for the first time since 1992.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"The current wide price gap between a key U.S. and a world benchmark crude oil is expected to narrow significantly over the next two years.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"U.S. crude oil production is expected to keep rising over the next two years.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"The United States will need fewer oil imports over the next two years because of rising U.S. oil production.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"The United States will rely less on imports of crude oil and petroleum products to meet domestic demand next year.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"Northern America","pestle":"Economic"},{ "title":"U.S. crude oil production over the next two years is expected to grow to its highest level since the early 1970s.", "topic":"oil","year":"","intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"Rising U.S. crude oil production will help non-OPEC supply growth exceed global demand growth for the next two years.", "topic":"oil","year":2017,"intensity":20,"sector":"Energy","region":"Northern America","pestle":"Economic"},{ "title":"U.S. production of tight crude oil is expected to make up a larger share of total U.S. oil output in the years ahead.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"Global oil production is expected to continue to exceed oil demand.", "topic":"oil","year":"","intensity":6,"sector":"Energy","region":"World","pestle":"Economic"},{ "title":"Growing domestic U.S. oil production has contributed to a significant decline in petroleum liquid imports and is expected to average 9.5 million barrels per day next year.", "topic":"oil","year":2017,"intensity":12,"sector":"Energy","region":"","pestle":"Industries"},{ "title":"High U.S. crude oil production will help further reduce America's reliance on oil imports during the next two years.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"U.S. commercial crude oil inventories which are already at the highest level since 1930 are expected to continue growing over the next two months.", "topic":"oil","year":"","intensity":6,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"Oil production is expected to be about the same next year as in 2015.", "topic":"oil","year":"","intensity":12,"sector":"Energy","region":"","pestle":"Industries"},{ "title":"U.S. crude oil production has been more resilient to lower oil prices since mid-2014 than many had expected.", "topic":"oil","year":"","intensity":6,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"U.S. monthly crude oil production is expected to decline through the middle of next year in response to low prices.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"U.S. households that rely on electric heat will see their average bill decline by about \$30.", "topic":"","year":"","intensity":8,"sector":"","region":"","pestle":""},{ "title":"Total oil production from countries outside of OPEC is expected to decline next year for the first time since 2008.", "topic":"oil","year":"","intensity":16,"sector":"Energy","region":"","pestle":"Industries"},{ "title":"Global oil inventories are expected to continue strong growth over the next two years which should keep oil prices low.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"World","pestle":"Ec

onomic"}, {"title": "Record high U.S. oil inventories along with growing global oil production are expected to keep crude oil prices low.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "World oil production is expected to increase at a slower rate than the increase in oil demand requiring a bite out of oil inventories in late 2017.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Higher global oil demand growth will be led by stronger fuel consumption in China and India.", "topic": "oil", "year": "", "intensity": 6, "sector": "Aerospace & defence", "region": "Eastern Asia", "pestle": "Political"}, {"title": "Global oil use is expected to increase by 1.6 million barrels per day next year.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "A stronger economy in the United States and in other countries will lead to higher global oil demand during 2017 than previously expected.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "Oil prices above \$50 could encourage major oil producing countries that are not members of OPEC to boost their output.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Production could increase in some U.S. regions that have tight oil.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "U.S. oil production is expected to average 9 million barrels per day in 2017.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Most of the growth in oil output during the last quarter of 2016 came from drilling in the federal waters of the Gulf of Mexico, according to EIA. Higher average oil prices in 2017 compared with last year are expected to support more production in the coming months.", "topic": "oil", "year": 2017, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Oil benchmark of \$42.5 a barrel is realistic given the current and projected near term price of above \$55 a barrel.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The research and deployment of cost-effective technologies that could reduce the energy used in materials production could offer energy savings of up to 1.6 quadrillion BTU annually in the U.S. - more than the electricity, oil and other energy consumed by New Hampshire, Hawaii, Delaware.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Northern America", "pestle": "Social"}, {"title": "Russia's economy could face collapse if oil and gas prices fall too far.", "topic": "gas", "year": "", "intensity": 4, "sector": "Energy", "region": "Eastern Europe", "pestle": "Economic"}, {"title": "The fastest pace of growth for Chinese producer prices in five years propelled gains in industrial metals and other raw materials amid prospects the world's second-largest economy will export inflation around the world via its supply chains.", "topic": "export", "year": 2017, "intensity": 16, "sector": "Retail", "region": "World", "pestle": "Economic"}, {"title": "The consensus of analysts was that Colombia's economy will grow by 2.5%.", "topic": "economy", "year": "", "intensity": 8, "sector": "", "region": "South America", "pestle": "Economic"}, {"title": "Oil output and Nigeria's ability to curb militancy in the Niger Delta will matter.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "Western Africa", "pestle": "Industries"}, {"title": "Dealers add that the additional rigs and recent uptick in hedging activity to protect future output for 2018 and beyond could put more pressure into the market.", "topic": "market", "year": 2018, "intensity": 6, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Speculation abounds that increased production in Libya could counter OPEC's anticipated cuts.", "topic": "production", "year": "", "intensity": 6, "sector": "Manufacturing", "region": "Northern Africa", "pestle": "Industries"}, {"title": "Food products like Hellman's Mayonnaise or Extra Virgin Olive Oil will be able to deliver exclusive 3D recipe tutorials given by a Rachel Ray hologram.", "topic": "food", "year": "", "intensity": 6, "sector": "Food", "region": "World", "pestle": "Economic"}]

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l"}, {"title":"The world\'s largest private power production company warns the
sector that renewables could drive the oil price as low as \$10 a barrel.", "to
pic":"oil", "year":"","intensity":6, "sector":"Energy", "region":"","pestle":"In
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new US administration takes over.", "topic":"administration", "year":"","intens
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million b\\d in 2016 and 0.4 million b\\d in 2017.", "topic":"oil", "yea
r":"","intensity":16, "sector":"Energy", "region":"World", "pestle":"Industrie
s"}, {"title":"Oil producers such as Brazil, Nigeria and Russia could suffer s
ocial instability as unemployment rose.", "topic":"unemployment", "year":"","in
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t administration. Federal rules governing methane emissions, the leasing of government lands, exports, and much more could be revised in the coming years.", "topic": "export", "year": "", "intensity": 6, "sector": "Retail", "region": "", "pestle": "Political"}, {"title": "Sino-US tension remains the major economic risk for the \\\"new\\\" Europe.", "topic": "tension", "year": "", "intensity": 4, "sector": "", "region": "Europe", "pestle": "Political"}, {"title": "In Mali and Burkina Faso, the intensification of the rivalry between Al Qaida and the Islamic State could create new security challenges for both states to find an efficient response to terrorism in the region.", "topic": "terrorism", "year": "", "intensity": 4, "sector": "Aerospace & defence", "region": "Western Africa", "pestle": "Political"}, {"title": "Traders are signalling they expect oil demand to exceed supply in the second half of 2017 and throughout 2018.", "topic": "oil", "year": 2017, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Civil disobedience is the only way to dislodge Hugo Chavez's unpopular successor and moderates who fear that could spark bloodshed and backfire in the OPEC member nation with the world's largest oil reserves.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Oil prices were steady on Friday as the start of supply cuts by Saudi Arabia and Abu Dhabi supported the market but doubts that all producers will implement output reductions agreed in a landmark deal last year kept markets from rising further.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "The U.S. is likely to become a major exporter of energy because it is expected to produce about 20 percent more energy than it does today through 2040 while using only about 5 percent more energy.", "topic": "energy", "year": "", "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Electricity generation is expected to remain the largest single use of energy in the U.S.", "topic": "energy", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "The U.S. could become a net energy exporter by 2026 as crude oil and natural gas production continues to increase in the country.", "topic": "gas", "year": "", "intensity": 8, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Land transport is expected to consume 43 Mtoe less per year in 2030 than it did in 2010.", "topic": "transport", "year": "", "intensity": 9, "sector": "Retail", "region": "", "pestle": "Industries"}, {"title": "Growth in emissions from shipping and aviation will add 19 million tonnes of oil equivalent (Mtoe) in emissions between 2010 and 2030.", "topic": "oil", "year": "", "intensity": 12, "sector": "Aerospace & defence", "region": "", "pestle": "Economic"}, {"title": "Peak oil demand could hit in the next five years.", "topic": "peak oil", "year": 2017, "intensity": 6, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "With similar-minded individuals appointed to control the EPA and DoE the fear that all support for electric vehicles will be withdrawn come post-inauguration is a very real one.", "topic": "vehicle", "year": "", "intensity": 6, "sector": "Automotive", "region": "", "pestle": "Industries"}, {"title": "In 2017, more travelers will move away from being traditional \\\"tourists\\\" and will be looking for something completely unique.", "topic": "tourist", "year": 2017, "intensity": 12, "sector": "Tourism & hospitality", "region": "", "pestle": "Lifestyles"}, {"title": "The AI market in APAC is expected to grow at the highest CAGR between 2015 and 2020.", "topic": "artificial intelligence", "year": "", "intensity": 12, "sector": "Information Technology", "region": "", "pestle": "Economic"}, {"title": "Growth in renewable energy could push the cost of oil down to as low as \$10 in less than 10 years.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "In Germany, biofuels are set to benefit from the country's 'climate protection rate' that will raise to 4% in 2017 from 3.5% in 2016, meaning oil companies will have to reduce the greenhouse gas emissions of the fuels they sell by 4%.", "topic": "oil", "year": "", "intensity": 8, "sector": "Aerospace & defence", "region": "Western Europe", "pestle": "Political"}]

ical"}, {"title": "In Germany, biofuels are set to benefit from the country's climate protection rate that will raise to 4% in 2017 from 3.5% in 2016.", "topic": "climate", "year": "", "intensity": 16, "sector": "Energy", "region": "Western Europe", "pestle": "Environmental"}, {"title": "A renewable energy market analysis revealed that the GCC region could save 11 trillion litres of water withdrawal (a 16 per cent decrease).", "topic": "energy", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "U.S.-China relations could change from big-power co-existence with a careful combination of competition and cooperation.", "topic": "power", "year": "", "intensity": 4, "sector": "Energy", "region": "Eastern Asia", "pestle": "Political"}, {"title": "Crude oil prices will rise to only about \$52 per barrel in 2017.", "topic": "oil", "year": 2017, "intensity": 20, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "For Saudi Arabia, 2017 will be defined by an existential crisis resulting from its failure to secure hegemony across the Arab world and emerge victorious in its long rivalry with Iran.", "topic": "crisis", "year": 2017, "intensity": 16, "sector": "", "region": "Southern Asia", "pestle": "Political"}, {"title": "The share of biofuels in transport fuel demand is expected to increase only marginally from 3% in 2015 to 4% by 2021.", "topic": "transport", "year": "", "intensity": 12, "sector": "Aerospace & defence", "region": "", "pestle": "Political"}, {"title": "Oil will drop to around \$10 a barrel by 2025.", "topic": "oil", "year": "", "intensity": 20, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The profound lack of investment in oil development will have a future impact on supplies so look for a big upside movement in oil prices somewhere between 2018 and 2021.", "topic": "oil", "year": 2018, "intensity": 12, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "Libya and Nigeria will add oil output in 2017.", "topic": "", "year": 2017, "intensity": 12, "sector": "", "region": "Northern Africa", "pestle": ""}, {"title": "The global transmission oil pump market is expected to grow at a CAGR of more than 6% during the forecast period.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "A more inflationary US fiscal policy comprised of corporate tax cuts and infrastructure spending could spur growth in 2017.", "topic": "policy", "year": 2017, "intensity": 8, "sector": "Financial services", "region": "Northern America", "pestle": "Political"}, {"title": "Production of fuel oil could decline by more than 2 MMt due to an increase in export duty from Jan. 1 2017.", "topic": "export", "year": 2017, "intensity": 6, "sector": "Retail", "region": "", "pestle": "Political"}, {"title": "Russia's output of oil products is expected to fall by about 2.5% in 2017 due to further work on a massive refinery modernization program aimed at boosting fuel quality.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Aerospace & defence", "region": "Eastern Europe", "pestle": "Political"}, {"title": "For the next decades, there will definitely be ice in the Arctic.", "topic": "ice", "year": 2016, "intensity": 9, "sector": "", "region": "", "pestle": "Environmental"}, {"title": "China will lift restrictions on foreign investment in unconventional oil and gas production.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "Fracking of shale gas could contribute to the UK's future energy needs and ensure the UK has gas security.", "topic": "gas", "year": "", "intensity": 4, "sector": "Energy", "region": "Northern Europe", "pestle": "Political"}, {"title": "Expanding energy demands will exhaust coal, oil and natural gas supplies over the next 110 years.", "topic": "gas", "year": 2016, "intensity": 9, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "An increasing proportion of fish oil will be derived from trimmings as a by-product of fish processing over the next four years.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Technavio's market research analyst predicts the fish oil products market in the US to grow at a CAGR of around 1% between 2016 and 2020.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "Kuwait faces a similar threat fr

om IS as up to 30 per cent of its population are Shia Muslims.", "topic": "population", "year": "", "intensity": 4, "sector": "", "region": "Western Asia", "pestle": "Social"}, {"title": "Robots could push more humans out of the oil field by 2020.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Social"}, {"title": "US oil production will likely rise to fill some of the gap left by OPEC and other oil-producing countries.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "The world price of crude oil will increase 21.5% in the next year alone.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "OPEC's agreement will impact businesses and consumers across the globe as the world price of oil finally recovers after a two-year slump.", "topic": "oil", "year": "", "intensity": 9, "sector": "Support services", "region": "World", "pestle": "Social"}, {"title": "Paying attention to weak signals will be essential for US oil and gas competitiveness and success.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Mergers and acquisitions will play an important role in achieving growth goals in 2017 for US oil and gas companies.", "topic": "growth", "year": 2017, "intensity": 12, "sector": "", "region": "", "pestle": "Economic"}, {"title": "The influx of millennials in the global workforce will create challenges for the industry in 2017 and beyond.", "topic": "industry", "year": 2017, "intensity": 16, "sector": "", "region": "World", "pestle": "Social"}, {"title": "Oil is not projected to trade past \$60 for any prolonged period.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "GE's fundamentals could continue to struggle in 2017.", "topic": "", "year": 2017, "intensity": 6, "sector": "", "region": "", "pestle": ""}, {"title": "In the coming years, oil revenues will no longer be sufficient for governments to act as the main employer of their fast-growing young populations.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Government", "region": "", "pestle": "Political"}, {"title": "2017 will see demand and growth drop to just 1.3 mb/d.", "topic": "growth", "year": 2017, "intensity": 12, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Oil prices could fall to as low as \$10 per barrel within a decade as a tsunami of threats could undo demand.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "China's leadership transition will make Beijing a more unpredictable player in regional and international politics.", "topic": "politics", "year": "", "intensity": 2, "sector": "Government", "region": "Eastern Asia", "pestle": "Political"}, {"title": "Russia, Saudi Arabia, Venezuela and others will continue to seek solutions to the existential threat posed to their economies by persistently low oil prices.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Eastern Europe", "pestle": "Economic"}, {"title": "The long-term erosion of Russia's power and financial reserves will eventually give Putin good reasons to create international distractions.", "topic": "power", "year": "", "intensity": 6, "sector": "Financial services", "region": "Eastern Europe", "pestle": "Political"}, {"title": "The DOE estimates U.S. hydropower could grow a surprising 50 percent by 2050.", "topic": "", "year": "", "intensity": 6, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "Oil company revenue could fall by more than \$22 trillion over the next 25 years.", "topic": "oil", "year": 2016, "intensity": 40, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Overall 2017 will be a year of stability and opportunity for oil and gas companies in positions of financial strength.", "topic": "gas", "year": 2017, "intensity": 12, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "Substantial additional shale oil supplies could be produced throughout the United States and globally over the coming decades.", "topic": "", "year": 2016, "intensity": 6, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "Qatar's business moves could be an indication of indirectly inserting itself into an emerging Russian-US-Egypt nexus.", "topic": "business", "year": "", "intensity": 4, "sector": "Support serv

ices", "region": "Northern Africa", "pestle": "Organization"}, {"title": "Millions of people around the world will be grateful to President Obama for permanently protecting much of the Arctic and the Atlantic coasts from catastrophic oil exploration and development.", "topic": "oil", "year": "", "intensity": 6, "sector": "Environment", "region": "World", "pestle": "Environmental"}, {"title": "Some suspect that the United States will further incentivize oil exploration and production.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Decommissioning work is increasing as offshore oil and gas fields come to the end of their economic life and it is anticipated that the number of decommissioning programmes will continue to increase over the coming years.", "topic": "work", "year": 2016, "intensity": 12, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Canada will designate all Arctic Canadian waters as indefinitely off limits to future offshore Arctic oil and gas licensing.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Environmental"}, {"title": "Indicators from rig counts to payrolls to M&A indicate rising prices will fuel some sort of recovery in American oil production next year.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Aerospace & defence", "region": "", "pestle": "Political"}, {"title": "The return of Libya's oil production will be met with the drop in Venezuela's oil production.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern Africa", "pestle": "Industries"}, {"title": "OPEC is expected to cut production by about ~1.2 million b\\d.", "topic": "production", "year": "", "intensity": 8, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Libyan production increases could still be reversed or disrupted by political and armed disputes that continue to plague the North African country five years after the uprising that toppled long-time leader Muammar Gaddafi.", "topic": "production", "year": "", "intensity": 4, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Icahn has been demanding the EPA shift the compliance burden because the cost of RINs is crippling the refining business and could spur a 2008-style financial crisis as smaller refineries die off.", "topic": "crisis", "year": "", "intensity": 4, "sector": "Financial services", "region": "", "pestle": "Political"}, {"title": "Energy is expected to stabilize in 2017 with flattish payouts.", "topic": "energy", "year": 2017, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Iraq is undertaking bold transformational reforms that will safeguard economic stability and lay the foundations for longer term private sector development and inclusive growth for all Iraqis.", "topic": "growth", "year": "", "intensity": 6, "sector": "Government", "region": "Western Asia", "pestle": "Political"}, {"title": "Global coal use will need to be close to zero by 2040.", "topic": "coal", "year": "", "intensity": 12, "sector": "Energy", "region": "World", "pestle": "Environmental"}, {"title": "Analysts cautioned that Trump's courtship of the Kremlin could be part of a bigger game to counterbalance the rise of China.", "topic": "gamification", "year": "", "intensity": 6, "sector": "", "region": "Eastern Asia", "pestle": "Lifestyles"}, {"title": "By 2040, average global fuel economy for new light-duty vehicles is expected to improve by about two-thirds.", "topic": "economy", "year": "", "intensity": 6, "sector": "Aerospace & defence", "region": "World", "pestle": "Political"}, {"title": "Oil will provide about one third of the world's energy in 2040.", "topic": "oil", "year": 2040, "intensity": 12, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "In 2040, oil and natural gas are expected to make up nearly 60 percent of global supplies, while nuclear and renewables will be approaching 25 percent.", "topic": "gas", "year": 2040, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Libya will continue to record large fiscal deficits in coming years.", "topic": "finance", "year": 2016, "intensity": 16, "sector": "Financial services", "region": "Northern Africa", "pestle": "Economic"}, {"title": "The rebound in shale production from higher prices might not be as impressive as organizations like the EIA expect.", "topic": "production", "year": ""}]

r":"","intensity":6,"sector":"Manufacturing","region":"","pestle":"Industries"}, {"title":"The EIA assumes that tight oil production will begin to grow strongly in 2017.", "topic":"oil", "year":2017, "intensity":16, "sector":"Energy", "region":"","pestle":"Industries"}, {"title":"American energy dominance will be declared a strategic economic and foreign policy goal of the United States.", "topic":"energy", "year":"","intensity":6, "sector":"Energy", "region":"Northern America", "pestle":"Economic"}, {"title":"Preferred usage of LNG is likely to have a favourable impact on the demand for liquid bulk terminals, serving vitally for oil and natural gas storage and trade activities. Several terminals in the Americas, APAC, and Europe are expected to start full-scale operations in the next few years.", "topic":"","year":2016, "intensity":12, "sector":"","region":"Europe", "pestle":""}, {"title":"The latest OPEC decision will see emergence of lesser known oil and gas producers and skew the market to bring down prices again.", "topic":"gas", "year":"","intensity":6, "sector":"Energy", "region":"","pestle":"Economic"}, {"title":"Geopolitical turmoil in certain key energy-producing regions of the world will continue to keep oil and gas markets on edge.", "topic":"gas", "year":"","intensity":6, "sector":"Energy", "region":"World", "pestle":"Political"}, {"title":"Bloomberg News calculations based on OPEC data show that across the whole of 2017 there will be little overall reduction in record oil inventories.", "topic":"oil", "year":2017, "intensity":16, "sector":"Information Technology", "region":"","pestle":"Social"}, {"title":"OPEC itself forecasts oil demand will grow by 1.15 million barrels a day next year.", "topic":"oil", "year":2016, "intensity":16, "sector":"Energy", "region":"","pestle":"Economic"}, {"title":"Analysts expect higher U.S. interest rates to hit emerging market demand.", "topic":"interest rate", "year":"","intensity":6, "sector":"","region":"Northern America", "pestle":"Economic"}, {"title":"Even as oil has rallied following OPEC's agreement to cut supply, demand next year could increase at its slowest pace since 2014.", "topic":"demand", "year":2016, "intensity":6, "sector":"","region":"","pestle":"Economic"}, {"title":"Balance of risk is skewed entirely against the Canadian dollar in 2017 despite the mild euphoria of an OPEC pact.", "topic":"risk", "year":2017, "intensity":8, "sector":"","region":"","pestle":"Organization"}, {"title":"Trump's corporate tax repatriation plan (\$2.5 trillion US offshore assets) and protectionist moves against NAFTA and Canadian lumber \\\\/ auto part exports to the US could lead to a loss of confidence in the loonie in Planet Forex.", "topic":"export", "year":"","intensity":32, "sector":"Retail", "region":"Northern America", "pestle":"Political"}, {"title":"US economic growth could accelerate above 3% in 2017 while Canada will be lucky to manage 1% growth.", "topic":"economic growth", "year":2017, "intensity":8, "sector":"","region":"Northern America", "pestle":"Economic"}, {"title":"Argentina could become a regional or even global energy powerhouse.", "topic":"energy", "year":"","intensity":4, "sector":"Energy", "region":"South America", "pestle":"Industries"}, {"title":"Mexico's shale gas resources could support increased natural gas reserves and production.", "topic":"gas", "year":"","intensity":4, "sector":"Energy", "region":"Central America", "pestle":"Environmental"}, {"title":"A struggling CDN economy and slightly higher crude oil prices in 2017 will not be enough to offset a falling CDN\$.", "topic":"oil", "year":2017, "intensity":12, "sector":"Energy", "region":"","pestle":"Economic"}, {"title":"Global oil demand growth is better than expected and rose by 1.4 million barrels a day in 2016.", "topic":"oil", "year":2016, "intensity":16, "sector":"Energy", "region":"World", "pestle":"Economic"}, {"title":"The ingenuity of the U.S. shale-oil industry has diffused serious OPEC threats of production cuts.", "topic":"oil", "year":"","intensity":6, "sector":"Energy", "region":"Northern America", "pestle":"Industries"}, {"title":"Food industry environmental sustainability targets for 2020 will continue to focus on energy use \\\\/ renewable energy.", "topic":"food", "year":2020, "intensity":12, "sector":"Energy", "region":"","pestle":"Environmental"}, {"title":"Demand for lithium's use in electric vehicles could grow 11-fold to more

than 300,000 tonnes by 2025.", "topic": "vehicle", "year": "", "intensity": 6, "sector": "Automotive", "region": "", "pestle": "Economic"}, {"title": "Growth in Canadian energy exports is expected to moderate in the coming years but to remain positive as oil sands projects currently under construction are completed.", "topic": "export", "year": 2016, "intensity": 12, "sector": "Construction", "region": "", "pestle": "Economic"}, {"title": "Growth is expected to pick up in the rest of the world over 2017-18 as the Russian economy stabilizes and other oil-exporting economies adjust to lower oil prices.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "The global oil market is now expected to remain in excess supply into 2017.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "The global oil market is expected to gradually rebalance as growth in world demand continues and growth in supply slows.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "GDP growth in India will likely remain in the 7 to 8 per cent range through 2017.", "topic": "growth", "year": "", "intensity": 16, "sector": "", "region": "Southern Asia", "pestle": "Economic"}, {"title": "Accommodative monetary policy, low oil prices and past exchange rate depreciations are expected to underpin continued expansions in the euro area and Japan.", "topic": "oil", "year": "", "intensity": 6, "sector": "Financial services", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "Lower commodity prices are expected to lead to even weaker U.S. investment in the oil and mining sectors during 2016.", "topic": "oil", "year": "", "intensity": 6, "sector": "Financial services", "region": "Northern America", "pestle": "Economic"}, {"title": "The global economy is expected to resume a strengthening trend over the next two years.", "topic": "economy", "year": 2016, "intensity": 16, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "OPEC agreements to limit pumping are expected to hold and help drive up oil prices somewhat.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Russia's inflation is expected to fall to average annual rates of 8.5% and 6.2% in 2016 and 2017.", "topic": "inflation", "year": 2016, "intensity": 12, "sector": "", "region": "", "pestle": "Economic"}, {"title": "The repeal of international sanctions on Iran is expected to provide some lift to Turkish export growth.", "topic": "export", "year": "", "intensity": 6, "sector": "Retail", "region": "Southern Asia", "pestle": "Political"}, {"title": "The increased inflow of asylum-seekers to Austria during 2015 is expected to continue in 2016.", "topic": "asylum", "year": 2016, "intensity": 16, "sector": "Government", "region": "Western Europe", "pestle": "Political"}, {"title": "Spain's economy is expected to have expanded by 3.2% in 2015 and is forecast to grow by 2.8% and 2.5% in 2016 and 2017.", "topic": "economy", "year": "", "intensity": 16, "sector": "", "region": "Southern Europe", "pestle": "Economic"}, {"title": "Persistently low international oil prices could further impair Estonia's shale-oil industry and exports.", "topic": "export", "year": "", "intensity": 4, "sector": "Retail", "region": "Northern Europe", "pestle": "Political"}, {"title": "Prices for Brent oil are projected to be on average 35.80 USD \\ / bbl in 2016 and 42.50 USD \\ / bbl in 2017.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The renewed fall in oil prices early this year and the depreciation of the euro's exchange rate vis-\\ / vis the US dollar are expected to remain key determinants of both export and import prices in 2016.", "topic": "export", "year": 2016, "intensity": 16, "sector": "Retail", "region": "Northern America", "pestle": "Economic"}, {"title": "Global oil markets will swing into deficit during the first half of next year amid OPEC's recent agreement to curb supply.", "topic": "oil", "year": 2016, "intensity": 20, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Prices for Brent are expected to stay within the \$ 50-55 range in H 1:17 before climbing to around \$60 by the end of 2017 as inventories are gradually worked down.", "topic": "", "year": 2017, "intensity": 16, "sector": "", "region": "", "pestle": ""}, {"title": ""

e": "Palm oil output in world No.1 producer Indonesia is expected to grow by a round 10% in 2017 as planters devote more land to the crop.", "topic": "oil", "year": 2017, "intensity": 20, "sector": "Food & agriculture", "region": "South-Eastern Asia", "pestle": "Environmental"}, {"title": "India and China each consume more palm oil than the EU, and production is projected to increase 50% by 2020.", "topic": "production", "year": "", "intensity": 12, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Demand for palm oil has undergone a phenomenal growth and is expected to more than double by 2030 and triple by 2050.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Bond yields and oil prices are forecast to trend higher next year.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Russia's total grain exports of 38.6 million tons are projected for 2016.", "topic": "export", "year": 2016, "intensity": 12, "sector": "Retail", "region": "", "pestle": "Economic"}, {"title": "A 2016 report from Fitch found that several oil majors have not taken necessary steps to diversify in response to the threat posed to the industry by innovation in battery technologies.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "At least 105 North American oil and gas companies have filed for bankruptcy between January 2015 and October 2016, representing nearly \$68 billion in cumulative secured and unsecured debt. Analysts anticipate more producer bankruptcy filings in 2017.", "topic": "coal", "year": "", "intensity": 12, "sector": "Energy", "region": "World", "pestle": "Environmental"}, {"title": "ExxonMobil and Chevron shareholders have pressured the companies to disclose climate risk and to explain how resilient their portfolios and strategy would be if policy measures to restrict warming to 2°C.", "topic": "policy", "year": "", "intensity": 4, "sector": "Environment", "region": "", "pestle": "Environmental"}, {"title": "Civil conflict over control of Libya's hydrocarbon resources will allow ISIS to solidify new safe havens in Libya's interior.", "topic": "resource", "year": "", "intensity": 9, "sector": "Government", "region": "Northern Africa", "pestle": "Political"}, {"title": "McDonald's will continue to lose market share in the U.S. due to heightened competition due to the rise of specialty burger competitors and increasing breakfast competition.", "topic": "market", "year": "", "intensity": 9, "sector": "", "region": "Northern America", "pestle": "Economic"}, {"title": "The global high pressure seal market is projected to witness significant growth rate over the forecast period.", "topic": "growth", "year": "", "intensity": 6, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "A senior Trump campaign advisor has indicated that NASA will no longer take on climate projects under a Trump administration.", "topic": "climate", "year": "", "intensity": 6, "sector": "Support services", "region": "", "pestle": "Social"}, {"title": "Refiners will be forced to blend 4.28 billion gallons of advanced biofuels next year.", "topic": "biofuel", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Improved energy efficiency measures could reduce Europe's gas imports by 174m tonnes of oil equivalent annually by 2030.", "topic": "gas", "year": "", "intensity": 8, "sector": "Energy", "region": "Europe", "pestle": "Industries"}, {"title": "Nigeria is wallowing in a recession and even with a rise in the oil price there is little hope things will improve in the near future.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Western Africa", "pestle": "Industries"}, {"title": "By 2020, Ikea hopes that 100% of the material in its plastic products will be renewable or recyclable.", "topic": "plastic", "year": "", "intensity": 12, "sector": "Manufacturing", "region": "", "pestle": "Environmental"}, {"title": "11 countries will join the announced cut by OPEC members of 1.164 million barrels per day in the first half of next year.", "topic": "", "year": 2016, "intensity": 12, "sector": "", "region": "", "pestle": ""}, {"title": "Representatives of 12 oil companies will form a working group to monitor implementation of agreements on oil production reduction in the first half of 2017.", "topic": "oil", "year": 2017, "intensity": 12, "s

ector":"Energy","region":"","pestle":"Industries"}, {"title":"Electricity rates in Hungary will have to be far higher than current levels for the government to earn back the cost of the new reactors in a reasonable amount of time.", "topic":"electricity", "year":"","intensity":6, "sector":"Energy", "region":"Eastern Europe", "pestle":"Political"}, {"title":"The Arctic is estimated to contain 13 percent of the world's undiscovered oil and more oil developers are expected to enter the region as ice retreats in the Arctic Sea.", "topic":"oil", "year":"","intensity":8, "sector":"Energy", "region":"World", "pestle":"Environmental"}, {"title":"The Federal Reserve's rate increase on Wednesday will ease pressure on the Norwegian bank after the krone slid as much as 1.8 percent against the dollar.", "topic":"bank", "year":"","intensity":8, "sector":"Financial services", "region":"","pestle":"Economic"}, {"title":"By 2035 wind and solar will represent 11% of world electricity demand.", "topic":"electricity", "year":"","intensity":16, "sector":"Energy", "region":"World", "pestle":"Economic"}, {"title":"Cost parity of wind with gas can be expected not long after 2030 heralding the beginning of the end of gas as an interim solution.", "topic":"gas", "year":2030, "intensity":12, "sector":"Energy", "region":"","pestle":"Industries"}, {"title":"Electric vehicles could erode as much as 10% of global gasoline demand by 2035.", "topic":"gasoline", "year":"","intensity":8, "sector":"Energy", "region":"World", "pestle":"Economic"}, {"title":"Lower production will still lead to an annual crude price average of US\$53 to \$58 per barrel on benchmark Brent Crude.", "topic":"production", "year":"","intensity":12, "sector":"Manufacturing", "region":"","pestle":"Industries"}, {"title":"IHS Markit has increased the average oil prices forecast for 2017 by a few dollars to \$55 (dated Brent) due to the recent OPEC agreement to cut output.", "topic":"oil", "year":2017, "intensity":24, "sector":"Energy", "region":"","pestle":"Industries"}, {"title":"A 1.8 million barrel per day cut in global supply will result in global demand exceeding global supply; thus, oil inventories will fall returning historical levels as early as the summer of 2017.", "topic":"demand", "year":"","intensity":8, "sector":"","region":"World", "pestle":"Economic"}, {"title":"Australia could generate 220 million litres of oil by 2020.", "topic":"oil", "year":"","intensity":8, "sector":"Energy", "region":"Oceania", "pestle":"Industries"}, {"title":"Russia has agreed to cut its crude-oil production from the current level of around 11.2mmbd from January 1.", "topic":"production", "year":"","intensity":6, "sector":"Manufacturing", "region":"Eastern Europe", "pestle":"Industries"}, {"title":"Nigeria and Morocco have signed a joint venture to construct a gas pipeline that will connect the two nations as well as some other African countries to Europe.", "topic":"gas", "year":"","intensity":9, "sector":"Energy", "region":"Europe", "pestle":"Industries"}, {"title":"U.S. oil companies are using the post-OPEC rally to hedge their oil price risk for next year and 2018 above \$50 a barrel.", "topic":"oil", "year":2016, "intensity":14, "sector":"Energy", "region":"Northern America", "pestle":"Industries"}, {"title":"Rebuilding Fort MacMurray after 2016's forest fires will also positively affect the province's economy.", "topic":"economy", "year":2016, "intensity":12, "sector":"","region":"","pestle":"Economic"}, {"title":"Alberta is finally out of recession and can expect to see real (economic) growth of 2.2 per cent in 2017.", "topic":"growth", "year":2017, "intensity":12, "sector":"","region":"","pestle":"Economic"}, {"title":"Global oil demand in 2016 is expected to rise by 1.2 MMbpd.", "topic":"oil", "year":2016, "intensity":16, "sector":"Energy", "region":"World", "pestle":"Economic"}, {"title":"McKinsey report forecasts global refining capacity growth to exceed demand until 2020.", "topic":"growth", "year":2016, "intensity":20, "sector":"","region":"World", "pestle":"Economic"}, {"title":"Oil majors such as BP and ENI indicate they will maintain low capex levels until at least 2018.", "topic":"oil", "year":2018, "intensity":16, "sector":"Energy", "region":"","pestle":"Industries"}, {"title":"Land transport in Europe will consume 42mtoe (million tonnes of oil equivalent) less fuel in 2030 than it did in 2010.", "topic":"oil", "year":"","intensity":16, "sector":"Energy", "region":"","pestle":"Industries"}]

sity":16,"sector":"Aerospace & defence","region":"Europe","pestle":"Political"},{"title":"Smallholder farmers in Africa will need support from the private sector if they are to see the benefits of palm oil expansion into the continent.", "topic":"oil", "year":"", "intensity":6, "sector":"Energy", "region":"Africa", "pestle":"Economic"}, {"title":"As much as 22m hectares (54m acres) of land in west and central Africa could be converted to palm plantations over the next five years.", "topic":"", "year":2016, "intensity":6, "sector":"", "region":"Africa", "pestle":""}, {"title":"Global oil prices are expected to remain low-an ongoing challenge for US state and local governments that rely on taxes or other revenues from energy resources to fund their budgets.", "topic":"oil", "year":"", "intensity":6, "sector":"Energy", "region":"Northern America", "pestle":"Political"}, {"title":"North America has the largest market for wireline services and is expected to continue its growth during the forecast period due to rapidly increasing oil and gas production levels and logging services.", "topic":"gas", "year":"", "intensity":6, "sector":"Energy", "region":"Northern America", "pestle":"Economic"}, {"title":"In the coming decade, each new autonomous vehicle is projected to replace 10 cars.", "topic":"car", "year":2016, "intensity":9, "sector":"Manufacturing", "region":"", "pestle":"Social"}, {"title":"The price of oil will be \$56 a barrel by 2021.", "topic":"oil", "year":"", "intensity":20, "sector":"Energy", "region":"", "pestle":"Industries"}, {"title":"A boom in electric vehicles made by the likes of Tesla Motors could erode as much as 10 per cent of global petrol demand by 2035.", "topic":"vehicle", "year":"", "intensity":10, "sector":"Automotive", "region":"World", "pestle":"Economic"}, {"title":"World oil demand will rise by 17 million bpd to around 110 million bpd by 2040.", "topic":"oil", "year":"", "intensity":16, "sector":"Energy", "region":"World", "pestle":"Economic"}, {"title":"In India alone oil demand is projected to rise to more than 10 million barrels per day (bpd) by 2040.", "topic":"oil", "year":"", "intensity":12, "sector":"Energy", "region":"", "pestle":"Economic"}, {"title":"India is expected to consume more oil in 2040 than the whole of Europe.", "topic":"oil", "year":2040, "intensity":12, "sector":"Energy", "region":"Europe", "pestle":"Industries"}, {"title":"Crude could range between \$50 to \$60 a barrel in the first half of next year.", "topic":"", "year":2016, "intensity":8, "sector":"", "region":"", "pestle":""}, {"title":"Buoyant economic growth and investment will continue to drive growth in India's oil consumption in 2017-18.", "topic":"economic growth", "year":2017, "intensity":16, "sector":"Financial services", "region":"Southern Asia", "pestle":"Economic"}, {"title":"A risk of surrendering market share to shale producers could materialise in the event that OPEC members respect their quotas.", "topic":"market", "year":"", "intensity":4, "sector":"", "region":"", "pestle":"Economic"}, {"title":"Renaissance Capital forecasts a total \$54 billion of export receipts and capital inflows to Iran in 2016.", "topic":"export", "year":2016, "intensity":72, "sector":"Financial services", "region":"Southern Asia", "pestle":"Economic"}, {"title":"The volume of LNG contracted by China's three government owned oil and gas companies will increase by 8 mtpa to 31 mtpa in 2016 as new trains in Australia come on stream.", "topic":"gas", "year":2016, "intensity":16, "sector":"Energy", "region":"Eastern Asia", "pestle":"Political"}, {"title":"Motorists in South Africa can expect some relief at the fuel pumps come December 2016 as a result of lower international oil prices and a stronger Rand\\US Dollar exchange rate during the month of November.", "topic":"oil", "year":2016, "intensity":20, "sector":"Aerospace & defence", "region":"Northern America", "pestle":"Political"}, {"title":"The ECB will probably not turn on the monetary spigot again either.", "topic":"money", "year":"", "intensity":6, "sector":"Financial services", "region":"", "pestle":"Economic"}, {"title":"Oil prices pose a significant threat in 2017.", "topic":"oil", "year":2017, "intensity":6, "sector":"Energy", "region":"", "pestle":"Industries"}, {"title":"2017 will likely be more difficult for private consumption as oil prices are expected to rise 10% in dollar terms and the fiscal rules are expected to bite again

n.", "topic": "oil", "year": 2017, "intensity": 12, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "Article 7 could deliver at least 119 million tonnes of oil equivalent of energy savings by 2020.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "With increased exploration activity for onshore oil and gas in Western Australia the land access agreement will assist negotiations between petroleum companies and farmers.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Oceania", "pestle": "Industries"}, {"title": "OPEC countries will reduce oil output by 1.2 mln barrels daily to 32.5 mln barrels starting from January.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "China will lead global EV growth as the government's push to leapfrog the conventional automotive sector gains speed.", "topic": "growth", "year": "", "intensity": 6, "sector": "Government", "region": "Eastern Asia", "pestle": "Political"}, {"title": "EIA expects Brent crude oil prices will average close to \$48\\\$/ barrel (b) in the fourth quarter of 2016 and in the first quarter of 2017.", "topic": "oil", "year": 2016, "intensity": 24, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The annual value of U.S. agricultural production is forecast at \$403.7 billion.", "topic": "production", "year": "", "intensity": 48, "sector": "Manufacturing", "region": "Northern America", "pestle": "Industries"}, {"title": "Saudi Arabia is signaling that it will not budge on market share even as it works with members of the Organization of Petroleum Exporting Countries to finalize plans for a production cut at their Nov. 30 meeting.", "topic": "export", "year": "", "intensity": 6, "sector": "Retail", "region": "Western Asia", "pestle": "Economic"}, {"title": "The OPEC agreement could push oil above \$60 a barrel within weeks.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Australia will generate 55 million disused tyres a year by 2020.", "topic": "", "year": 2016, "intensity": 12, "sector": "", "region": "Oceania", "pestle": ""}, {"title": "Technological and geological fundamentals will continue to drive the profile of North America's cross-border markets.", "topic": "technology", "year": "", "intensity": 6, "sector": "Information Technology", "region": "Northern America", "pestle": "Economic"}, {"title": "More than two thirds (67 per cent) of oil and gas businesses have cut jobs in 2016 and more cuts have been predicted for the next 12 months.", "topic": "gas", "year": 2016, "intensity": 12, "sector": "Support services", "region": "", "pestle": "Economic"}, {"title": "Over the next two years, more Saudi oil could be freed up for export (as crude or as higher-value petroleum products) if natural gas is substituted for crude in domestic power generation.", "topic": "export", "year": 2016, "intensity": 6, "sector": "Retail", "region": "", "pestle": "Political"}, {"title": "Saudi Arabia's growth is forecast to slow from 3.4% in 2015 to 1.6% in 2016 amid lower oil prices and renewed fiscal restraint.", "topic": "oil", "year": "", "intensity": 12, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "Price of Brent crude will average just US\$60.5\\\$/b a year in 2017-21.", "topic": "", "year": 2016, "intensity": 16, "sector": "", "region": "", "pestle": ""}, {"title": "Petroleum consumption in California, Japan and South Korea will decline.", "topic": "consumption", "year": "", "intensity": 6, "sector": "Energy", "region": "Eastern Asia", "pestle": "Industries"}, {"title": "All new buildings in OECD member countries will need to be zero-energy by 2020 to make the building sector compatible with the 1.5C warming target of COP21.", "topic": "energy", "year": "", "intensity": 16, "sector": "Construction", "region": "", "pestle": "Industries"}, {"title": "Global oil production will still be at a historically high level.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "A new groundbreaking type of canola in development by Cargill could give aquaculture farmers a more sustainable way to raise fish with EPA\\\$/DHA omega-3 fatty acids.", "topic": "aquaculture", "year": "", "intensity": 4, "sector": "Environment", "region": "", "pestle": "Environmental"}, {"title": "Prime Minister Justin Trudeau approved two more major pipeline

projects in British Columbia that will vastly expand the amount of oil transported from the Alberta Tar Sands to global markets.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Allowing Kinder Morgan to build a second pipeline next to its existing Trans Mountain line in Canada will help ensure oil exports reach Asia and reduce reliance on the US market.", "topic": "export", "year": "", "intensity": 9, "sector": "Retail", "region": "Asia", "pestle": "Economic"}, {"title": "There will be more thirst for oil in 2017 and oil prices will stabilize without OPEC intervention.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "If a large cut is announced, oil prices could soar to \$55 a barrel or higher.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Carbon capture is considered an expensive technology and the possibility of making it more secure and affordable could be a boon to coal-fired plants.", "topic": "technology", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Technological"}, {"title": "If oil prices stay below \$50 a barrel, US producers will pump out 2.5 million fewer barrels per day in 2020.", "topic": "", "year": 2020, "intensity": 12, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "Biofuels will stall at about 4 percent of motor fuels through 2020.", "topic": "biofuel", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Political"}, {"title": "Saudis could raise oil output again as sparring with Iran returns.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "OPEC has raised concerns that Libya's exports will force global oil prices down.", "topic": "export", "year": "", "intensity": 9, "sector": "Retail", "region": "Northern Africa", "pestle": "Economic"}, {"title": "India imported 2 million barrels of Iran and is going to import another 4 million barrels in November 2016.", "topic": "", "year": 2016, "intensity": 12, "sector": "", "region": "Southern Asia", "pestle": ""}, {"title": "Sustained low oil prices and continuing production disruptions in the Niger Delta could cause industry NPL ratios to rise more dramatically.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "Western Africa", "pestle": "Industries"}, {"title": "Turkey is actively threatening the territorial integrity of both Iraq and Syria and Turkish moves into both nations is directly aimed at securing oil and gas reserves.", "topic": "gas", "year": "", "intensity": 4, "sector": "Energy", "region": "Western Asia", "pestle": "Industries"}, {"title": "Spain's inflation is expected to pick up in 2017 as oil prices increase and core inflation recovers.", "topic": "oil", "year": 2017, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "UK primary energy demand is projected to fall to 183 Mtoe (million tonnes of oil equivalent) in 2025 from 207 Mtoe in 2015 before rising back to 3% below current levels in 2035.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Current U.S. federal oil leases will last through 2055 and halting new fossil fuel leases on federal land and waters would prevent the release of up to 450 billion tons of carbon pollution.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "OPEC's focus has shifted to negotiations with Iran and non-member Russia for production curbs after Iraq's prime minister signaled it will agree to cut output.", "topic": "production", "year": "", "intensity": 9, "sector": "Manufacturing", "region": "Eastern Europe", "pestle": "Industries"}, {"title": "OPEC will likely reach an agreement over oil output.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "India will require up to 329 MMT of oil products annually by 2030.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "The world will still need to invest in oil to the tune of almost \$1trn a year for the next 25 years.", "topic": "oil", "year": 2016, "intensity": 96, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Mark Carney has given warning that the en

ergy transition could put severe strains on financial stability.", "topic": "energy", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "The U.S. government will require energy companies to use a record amount of biofuel next year.", "topic": "energy", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Political"}, {"title": "As many as two-thirds of all cars on the road in some wealthy cities could be electric by 2030.", "topic": "city", "year": "", "intensity": 6, "sector": "Manufacturing", "region": "", "pestle": "Social"}, {"title": "The IEA reckons other types of refined oil, such as jet fuel and diesel, will continue to grow.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The global oil market will shift into a supply deficit in the second-half of next year.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Spain is going to have increased production compared to last year, resulting in a surplus of extra oil.", "topic": "production", "year": "", "intensity": 6, "sector": "Manufacturing", "region": "Southern Europe", "pestle": "Industries"}, {"title": "Greece will be the third highest in estimated production volume (behind Italy and Spain) and will have a 50,000 metric ton oil surplus.", "topic": "production", "year": "", "intensity": 8, "sector": "Manufacturing", "region": "Southern Europe", "pestle": "Industries"}, {"title": "The US could further increase imports of Canadian crude oil.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "The recent hike in interest rates in the US could lead to a tightening of financial markets and increase the costs of financing.", "topic": "interest rate", "year": "", "intensity": 4, "sector": "Financial services", "region": "Northern America", "pestle": "Economic"}, {"title": "Hydrocarbon GDP growth is expected to slow down to 2 percent in 2016 from an estimated 4.6 percent in 2015.", "topic": "growth", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Low oil prices continue to threaten growth and fiscal sustainability in the Kingdom of Saudi Arabia.", "topic": "oil", "year": "", "intensity": 4, "sector": "Financial services", "region": "Western Asia", "pestle": "Economic"}, {"title": "Over the medium term, growing competition and the emergence of a global spot market in gas prices could pose a challenge to Qatar's dominance in global LNG markets.", "topic": "gas", "year": "", "intensity": 4, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "Cost push pressures from rising global food prices and subsidy reform are expected to increase inflation to 2.8 percent by 2018.", "topic": "food", "year": "", "intensity": 16, "sector": "Food & agriculture", "region": "World", "pestle": "Political"}, {"title": "Continued fiscal austerity measures and revenue mobilization will allow the budget deficit to further narrow to 10 percent of GDP in 2018.", "topic": "gdp", "year": 2018, "intensity": 12, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "Oman is expected to focus its infrastructure investment in tourism and logistics.", "topic": "investment", "year": "", "intensity": 6, "sector": "Construction", "region": "Western Asia", "pestle": "Economic"}, {"title": "Lower oil sector investment in 2016 in Oman is expected to slow hydrocarbon GDP growth to 1.1 percent from 4 percent in 2015.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Non-oil sector growth in Iraq is projected to recover to 0.2 percent in 2017.", "topic": "oil", "year": 2017, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Fiscal and current account deficits are expected to be financed by an increase in indirect monetary financing by the Central Bank of Iraq.", "topic": "money", "year": "", "intensity": 9, "sector": "Financial services", "region": "Western Asia", "pestle": "Economic"}, {"title": "Overall real GDP growth in Iraq is expected to reach 4.8 percent in 2016.", "topic": "growth", "year": 2016, "intensity": 12, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Iran's economy is expected to grow at an annual average rate of 4.6 percent in 2016-18.", "topic": "economy", "year": 2016, "intensity": 16, "sector": "", "region": "Southern Asia"}]

a","pestle":"Economic"},{"title":"Growth in Iran will accelerate to 4.3 percent in 2016.", "topic":"growth", "year":2016, "intensity":16, "sector":"","region":"Southern Asia", "pestle":"Economic"}, {"title":"Growth in oil exporters in MENA is expected to remain subdued at 2.3 percent in 2016 due to a sharp drop in growth in the GCC countries.", "topic":"oil", "year":2016, "intensity":16, "sector":"Energy", "region":"","pestle":"Economic"}, {"title":"Real GDP growth in MENA for 2016 is projected to fall to its lowest level since 2013, 2.3 percent, lower than last year's growth by half a percentage point and about one percentage point lower than predicted in April 2016.", "topic":"growth", "year":2016, "intensity":16, "sector":"","region":"","pestle":"Economic"}, {"title":"OPEC revenue is expected to fall to \$341 billion in 2016 before rising to \$427 billion in 2017.", "topic":"revenue", "year":2016, "intensity":72, "sector":"","region":"","pestle":"Economic"}, {"title":"The global outlook remains weak with growth expected to stay below the average of 2000-07 for the seventh year in a row.", "topic":"growth", "year":"","intensity":6, "sector":"","region":"World", "pestle":"Economic"}, {"title":"Among Middle East oil exporters, growth in the GCC countries is expected to fall sharply with Saudi Arabia's declining to one percent in 2016 from above 3 percent last year.", "topic":"growth", "year":2016, "intensity":20, "sector":"","region":"Western Asia", "pestle":"Economic"}, {"title":"Nigeria's and Angola's growth will fall below 1 percent in 2016 from almost 3 percent a year ago.", "topic":"growth", "year":2016, "intensity":16, "sector":"","region":"Central Africa", "pestle":"Economic"}, {"title":"Nigeria's growth could reach 2.5 percent next year.", "topic":"growth", "year":2016, "intensity":6, "sector":"","region":"","pestle":"Economic"}, {"title":"U.S. emissions are projected to decrease by 1.7 percent in 2016.", "topic":"emission", "year":2016, "intensity":16, "sector":"Energy", "region":"Northern America", "pestle":"Environmental"}, {"title":"The drop in emissions forecast for China in 2016 is largely down to a reduction in coal emissions of 1.8%.", "topic":"coal", "year":2016, "intensity":16, "sector":"Energy", "region":"Eastern Asia", "pestle":"Environmental"}, {"title":"Industrial-scale production of palm oil threatens the biodiversity of wetland ecosystems in parts of southeast Asia, Africa, and other developing countries.", "topic":"oil", "year":"","intensity":4, "sector":"Environment", "region":"Africa", "pestle":"Environmental"}, {"title":"One in every six species on Earth could become extinct if climate change were to continue apace.", "topic":"climate change", "year":"","intensity":4, "sector":"Food & agriculture", "region":"World", "pestle":"Environmental"}, {"title":"Coupled with development of proper infrastructure in the country are the major factors that are expected to drive India PVC market through 2025.", "topic":"infrastructure", "year":"","intensity":12, "sector":"Construction", "region":"Southern Asia", "pestle":"Economic"}, {"title":"Global olive oil supplies in 2016\\17 are forecast to tighten as production prospects for major producers in the Mediterranean basin are revised lower. Total global production is forecast at 2.8 million tons, down 8 percent from the previous campaign.", "topic":"production", "year":"","intensity":12, "sector":"Manufacturing", "region":"World", "pestle":"Industries"}, {"title":"Coal consumption will grow very little in the next 25 years.", "topic":"coal", "year":2016, "intensity":9, "sector":"Energy", "region":"","pestle":"Environmental"}, {"title":"Another year of lower upstream oil investment in 2017 would create a significant risk of a shortfall in new conventional supply within a few years.", "topic":"oil", "year":2017, "intensity":6, "sector":"Financial services", "region":"","pestle":"Economic"}, {"title":"UK inflation could remain at only around 1% on average in 2017.", "topic":"","year":2017, "intensity":6, "sector":"","region":"Northern Europe", "pestle":""}, {"title":"Oil prices could fall next year if the supply surplus persists.", "topic":"oil", "year":"","intensity":6, "sector":"Energy", "region":"","pestle":"Industries"}, {"title":"Inspectors at an oil and gas pipeline company can now take reams of data from acoustic pressure measurements and filter out unnecessary noise to focus on data that might signal the r

risk of a dangerous leak.", "topic": "gas", "year": "", "intensity": 2, "sector": "Information Technology", "region": "", "pestle": "Technological"}, {"title": "Investments in fossil-fuel energy sources will continue to lose value over time.", "topic": "energy", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Political"}, {"title": "Arab governments will need to privatize many state-controlled companies.", "topic": "government", "year": "", "intensity": 3, "sector": "Government", "region": "", "pestle": "Political"}, {"title": "Oil demand could begin declining by 2030.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "The Dubai World Expo 2020 will be an additional economic driver for the region.", "topic": "economic", "year": 2020, "intensity": 16, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Over the period to 2040, the amount of energy used in the water sector is projected to more than double.", "topic": "energy", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "A near-term risk to oil markets could arise from the opposite direction if the cuts in upstream spending in 2015-2016 are prolonged for another year.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "By 2020, 80% of large Oil & Gas companies will run their business with help from a cognitive\\AI agent capable of learning, reasoning, and solving complex problems.", "topic": "gas", "year": "", "intensity": 12, "sector": "Information Technology", "region": "", "pestle": "Social"}, {"title": "By 2020, 50% of companies will monitor and inspect oilfield assets and pipelines for purposes of security and safety and to rapidly react to problematic, and even dangerous, conditions.", "topic": "security", "year": "", "intensity": 12, "sector": "Security", "region": "", "pestle": "Political"}, {"title": "By 2019, 40% of all Oil & Gas companies will have basic platforms for managing data and generating analytics and cognitive\\artificial intelligence solutions for performance-related insights.", "topic": "gas", "year": "", "intensity": 12, "sector": "Information Technology", "region": "", "pestle": "Technological"}, {"title": "By 2019, Oil & Gas companies that executed digital transformation plans in 2016 will have reduced costs and increased efficiencies (10-50%) by evolving IT to 3rd Platform technologies.", "topic": "gas", "year": 2016, "intensity": 16, "sector": "Information Technology", "region": "", "pestle": "Technological"}, {"title": "By 2018, more than 50% of Oil & Gas companies will acknowledge cybersecurity as the top IT initiative because of the vast numbers of new sensors, devices, and software presenting multiple, new entry points.", "topic": "gas", "year": "", "intensity": 12, "sector": "Information Technology", "region": "", "pestle": "Technological"}, {"title": "By 2018, 50%+ of companies will update software that will reduce costs and help build a stable IT environment, automating workflows, filling functionality gaps, and aligning processes.", "topic": "software", "year": "", "intensity": 12, "sector": "Information Technology", "region": "", "pestle": "Technological"}, {"title": "By 2018, 50% of Oil & Gas companies will be using proven assembly-line and just-in-time manufacturing methodologies and approaches to well development and production.", "topic": "gas", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Saudi Arabia could see some tumultuous economic policy changes provoked by the lower oil price era and the emerging challenge from renewable energies.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "USA emissions are projected to decrease by 1.7 per cent in 2016.", "topic": "emission", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Environmental"}, {"title": "Oil rose almost 6 percent as investors once again grew hopeful that the OPEC cartel will agree to cut fuel production in a few weeks.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Moody's Analytics does not expect oil prices to top \$100 per barrel for another decade.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The lifting of some Iranian sanctions is expected to add about half

a million barrels of oil a day to the global supply by the end of 2016.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "IHS expects overall global oil demand growth will average just 0.6 percent per year through 2040.", "topic": "oil", "year": "", "intensity": 20, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Scotland's CO2 equivalent emissions in 2035 could be between 1.1 and 2.6 megatonnes per year.", "topic": "emission", "year": 2035, "intensity": 6, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Canada's trade relations with the U.S. will take a hit.", "topic": "trade", "year": "", "intensity": 6, "sector": "", "region": "Northern America", "pestle": "Economic"}, {"title": "Shipping's SO2 emissions will be reduced by 85% compared with today's levels.", "topic": "emission", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Companies such as ExxonMobil are at risk from declining demand and plentiful low-cost supply.", "topic": "risk", "year": "", "intensity": 2, "sector": "", "region": "", "pestle": "Economic"}, {"title": "A surge in EV sales would threaten oil investments.", "topic": "oil", "year": "", "intensity": 2, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "The growth in electric vehicles will be held up by several aspects of EV infrastructure.", "topic": "growth", "year": "", "intensity": 3, "sector": "Construction", "region": "", "pestle": "Economic"}, {"title": "A series of massive investments in the region by the U.S. military even control over Kirkuk will not be enough to lift Kurdistan from its dire straits.", "topic": "investment", "year": "", "intensity": 6, "sector": "Financial services", "region": "Northern America", "pestle": "Political"}, {"title": "Elon Musk predicts robots will take so many jobs from people governments will be forced to pay everyone a basic wage.", "topic": "robot", "year": "", "intensity": 6, "sector": "Government", "region": "", "pestle": "Political"}, {"title": "Slower global economic growth and more modest demand in previous consumption hot spots such as India and China mean overall demand for oil will likely not pick up next year.", "topic": "economic growth", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "2017 could be another year of relentless global oil supply growth similar to that seen in 2016.", "topic": "growth", "year": 2016, "intensity": 8, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "2017 could see oil inventories building again if there is no cut from OPEC.", "topic": "building", "year": 2017, "intensity": 8, "sector": "Construction", "region": "", "pestle": "Industries"}, {"title": "Trump's pledge to promote more oil and gas exploration could help keep down prices.", "topic": "gas", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Saudi Arabia, the world's biggest oil exporter, is projecting a budget deficit of \$87bn in 2016.", "topic": "oil", "year": 2016, "intensity": 72, "sector": "Energy", "region": "Western Asia", "pestle": "Industries"}, {"title": "Obama's temporary moratorium on coal production on federal land will likely be overturned by Trump.", "topic": "coal", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Palm oil is forecast to replace iron ore as Liberia's leading export and employ more than 100,000 people in an economy that was ravaged by a commodity price slump and the worst-ever Ebola outbreak.", "topic": "export", "year": "", "intensity": 8, "sector": "Retail", "region": "Western Africa", "pestle": "Economic"}, {"title": "Trump would likely quash efforts to institute new greenhouse gas performance standards for petroleum refineries and could push to weaken future fuel economy standards for light-duty vehicles.", "topic": "economy", "year": "", "intensity": 2, "sector": "Environment", "region": "", "pestle": "Economic"}, {"title": "Core inflation in the euro area is expected to rise gradually amid higher wage growth and a further narrowing of the output gap.", "topic": "growth", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Saudi Arabia has informed Egypt that shipments of oil products expected under a \$23 billion aid deal have been halted indefinitely.", "topic": "oil", "year": "", "intensity": 48, "sector": "Energy", "r

egion":"Northern Africa","pestle":"Industries"},{"title":"Egypt will enter the international oil market and seek better prices to supplant suspended deliveries from Saudi Arabia.", "topic":"oil", "year":"", "intensity":6, "sector":"Energy", "region":"Northern Africa", "pestle":"Political"}, {"title":"Peak oil demand could come as soon as 2030.", "topic":"demand", "year":"", "intensity":2, "sector":"", "region":"", "pestle":"Economic"}, {"title":"Russia's largest private oil company Lukoil will freeze output, if the Organization of the Petroleum Exporting Countries (OPEC) makes such a decision at its Nov. 30 meeting in Vienna and Russia joins it.", "topic":"oil", "year":"", "intensity":9, "sector":"Energy", "region":"Eastern Europe", "pestle":"Industries"}, {"title":"Some of the world's biggest oil companies will invest \$1 billion over the next 10 years to develop technologies to capture and store emissions of greenhouse gases and improve energy efficiency.", "topic":"oil", "year":2016, "intensity":72, "sector":"Energy", "region":"World", "pestle":"Technological"}, {"title":"Oil prices could get a lift from the return of a risk premium if Trump continues with the bellicose language that's been heard on the campaign trail about Iran and scraps President Barack Obama's nuclear deal with the country.", "topic":"oil", "year":"", "intensity":6, "sector":"Aerospace & defence", "region":"Southern Asia", "pestle":"Political"}, {"title":"In Asia, China will bear the brunt of risks if Trump wins.", "topic":"", "year":"", "intensity":3, "sector":"", "region":"Eastern Asia", "pestle":""}, {"title":"Indonesia will need Rp 5.5 quadrillion for its infrastructure projects from 2014 to 2019.", "topic":"infrastructure", "year":"", "intensity":16, "sector":"Transport", "region":"South-Eastern Asia", "pestle":"Environmental"}, {"title":"Riyadh is threatening to raise oil output steeply to bring prices down if Tehran refuses to limit its supply.", "topic":"oil", "year":"", "intensity":2, "sector":"Energy", "region":"", "pestle":"Industries"}, {"title":"GBP depreciation could translate into lower export growth for Denmark.", "topic":"export", "year":"", "intensity":4, "sector":"Retail", "region":"Northern Europe", "pestle":"Economic"}, {"title":"The effects of some of the drivers of 2015 and 2016 (cheaper oil, weaker euro) are going to dissipate.", "topic":"oil", "year":"", "intensity":12, "sector":"Energy", "region":"", "pestle":"Industries"}, {"title":"Nigeria's economy will likely be resilient.", "topic":"economy", "year":"", "intensity":6, "sector":"", "region":"Western Africa", "pestle":"Economic"}, {"title":"With the collapse of global oil and mineral prices, 2016 will offer an important reality check for many African governments and some hard lessons on the limits of growth without vision, diversification, and broad-based development.", "topic":"growth", "year":2016, "intensity":16, "sector":"Government", "region":"World", "pestle":"Political"}, {"title":"In 2017, growth can be expected to recover slightly to 7.1 per cent in Turkmenistan.", "topic":"growth", "year":2017, "intensity":12, "sector":"", "region":"", "pestle":"Economic"}, {"title":"Growth in Central Asia is expected to decelerate further in 2016 before recovering in 2017.", "topic":"growth", "year":2016, "intensity":16, "sector":"", "region":"Central Asia", "pestle":"Economic"}, {"title":"Russia's economy is expected to return to modest growth in late 2016 and 2017 after another year of recession in 2016.", "topic":"economy", "year":2016, "intensity":16, "sector":"", "region":"Eastern Europe", "pestle":"Economic"}, {"title":"Growth in EEC region as a whole is expected to remain negative in 2016 reflecting headwinds from the recession in Russia.", "topic":"growth", "year":2016, "intensity":16, "sector":"", "region":"Eastern Europe", "pestle":"Economic"}, {"title":"Czech GDP growth is expected to slow down in 2016 to a forecasted 2.7%.", "topic":"growth", "year":2016, "intensity":12, "sector":"", "region":"", "pestle":"Economic"}, {"title":"Economic growth in France is forecast to rise gradually to 1.3% in 2016 and 1.6% in 2017 underpinned by external factors such as lower oil prices, a weaker euro and continued expansion in monetary policy in the Eurozone and by domestic factors such as improvement in corporate profit margins.", "topic":"economic growth", "year":2016, "intensity":12, "sector":"Energy", "region":"", "pestle":"Political"}, {"title":"The German"}

n economy grew by 1.4% in 2015, and is expected to grow by 1.8% in 2016 and 1.6% in 2017 driven by low oil prices, low interest rates and low inflation that will continue to drive private consumption and outweigh the decline in external demand caused by the slowdown in emerging economies.", "topic": "energy", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Germany's unemployment fell even further to 4.8% and is expected to remain at historic lows in 2016 and 2017.", "topic": "unemployment", "year": 2016, "intensity": 12, "sector": "", "region": "", "pestle": "Economic"}, {"title": "The global outlook remains mixed and the changing balance of global growth, low oil prices and geopolitical risks will determine the global economic outlook for 2016.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Liquefied natural gas is not a panacea to reducing greenhouse gas emissions and its increasing use as a marine fuel could be worse for the environment than burning heavy fuel oil.", "topic": "gas", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Crude palm oil prices could rise to \$650-\$675 per tonne by mid-2016 as top producer Indonesia uses more palm-based biodiesel.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "South-Eastern Asia", "pestle": "Industries"}, {"title": "Malaysia will implement higher biodiesel mandates for transportation and industrial sector from December 1.", "topic": "transportation", "year": "", "intensity": 6, "sector": "Transport", "region": "South-Eastern Asia", "pestle": "Industries"}, {"title": "In the absence of good governance Lebanon's energy windfall will likely lead to more corruption.", "topic": "energy", "year": "", "intensity": 6, "sector": "Energy", "region": "Western Asia", "pestle": "Political"}, {"title": "Lebanon's potential hydrocarbon wealth could indeed transform the country.", "topic": "wealth", "year": "", "intensity": 4, "sector": "", "region": "Western Asia", "pestle": "Economic"}, {"title": "The persistent market dynamic of softer demand and stronger supply will become a more dominant driver of prices as the impact of OPEC's verbal interventions begins to fade and expectations for coordinated cuts are readjusted.", "topic": "market", "year": "", "intensity": 6, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Ukraine's largest oil producer, Ukrnafta, forecasts a decline in crude oil production by 15% in 2017 in connection with high royalties and the unsolved problem of the company's tax debts.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "Eastern Europe", "pestle": "Political"}, {"title": "Oil prices will remain below \$60 a barrel in 2017.", "topic": "oil", "year": 2017, "intensity": 20, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Fitch Predict Oil \"Death Spiral\" As Early As 2023.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "General Electric will combine its oil and gas business with Baker Hughes to create a \$32 billion oil services company and is \"exploring options\" for selling its water business.", "topic": "gas", "year": "", "intensity": 48, "sector": "Support services", "region": "", "pestle": "Environmental"}, {"title": "Saudi Arabia and the Gulf states will face increasing pressure from populations long accustomed to the lavish wealth of the petro-state economy.", "topic": "economy", "year": "", "intensity": 6, "sector": "", "region": "Western Asia", "pestle": "Economic"}, {"title": "Russia's gas supplies could create the conditions for a new petrochemical industry in the region.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Eastern Europe", "pestle": "Industries"}, {"title": "Crude oil prices will rise in the first half of next year as the commodity's fundamentals return to balance.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The Ukraine Central Bank reserve will become exhausted soon.", "topic": "", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": ""}, {"title": "Under the new global cap, ships will have to use fuel oil on board with a sulphur content of no more than 0.50% m/m.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "World", "pestle": "Industrie"}

s"}, {"title": "Prices of everyday items including clothing, wine, bread and fruit are expected to come under increasing pressure as Brexit nears.", "topic": "clothing", "year": "", "intensity": 3, "sector": "Manufacturing", "region": "", "pestle": "Political"}, {"title": "The Bank of England will announce the bank rate on Nov 3 (Thu), and given the lingering uncertainty with regard to Brexit, investors are expecting the central bank to maintain the current rate of 0.25%.", "topic": "bank", "year": "", "intensity": 4, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "There is no certainty that the recent decision by OPEC to cut production (and thus bolster prices) will hold fast.", "topic": "production", "year": "", "intensity": 6, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Libya's liquidity crisis will not be resolved without improved security and trust in the banking system.", "topic": "security", "year": "", "intensity": 6, "sector": "", "region": "Northern Africa", "pestle": "Political"}, {"title": "Energy companies will be installing 1 billion smart meters on homes, businesses, and factories by 2020.", "topic": "energy", "year": "", "intensity": 12, "sector": "Support services", "region": "", "pestle": "Technological"}, {"title": "An estimated 5.4 million IoT devices will be used on oil and gas extraction sites around the world by 2020.", "topic": "gas", "year": "", "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Technological"}, {"title": "The IMF forecasts growth in Africa will pick up next year to slightly less than 3 percent.", "topic": "growth", "year": "2016", "intensity": 16, "sector": "", "region": "", "pestle": "Economic"}, {"title": "The truly high cost oil exporters within OPEC will suffer sovereign defaults and social unrest.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "GMO soya and chemical-intensive palm oil plantations are the primary driving forces of the tropical deforestation that threatens to smother the literal lungs of the planet.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "North America is expected to witness growth in oil & gas and manufacturing industry due to the recent discoveries of shale gas and shale oil in the region and strong manufacturing base in.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "Jordan has the 5th largest oil-shale reserves in the world that could be commercially exploited in the central and northern regions west of the country.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Western Asia", "pestle": "Industries"}, {"title": "Crude futures could swell to \$60 per barrel by the end of the year.", "topic": "", "year": "", "intensity": 4, "sector": "", "region": "", "pestle": ""}, {"title": "Asia's population and consumer growth will support oil demand.", "topic": "oil", "year": "", "intensity": 6, "sector": "Retail", "region": "Asia", "pestle": "Economic"}, {"title": "South Africa is a net importing country of vegetable oil and prices are expected to remain high.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Southern Africa", "pestle": "Industries"}, {"title": "The coincidence of ample supplies of corn, feed wheat, oil meals and sunflower meal will lead to increased competition amongst suppliers and prices will be determined by consumers rather than producers.", "topic": "oil", "year": "", "intensity": 3, "sector": "Retail", "region": "", "pestle": "Social"}, {"title": "North America has effectively become a swing producer that will be able to respond rapidly to any global supply shortage.", "topic": "shortage", "year": "", "intensity": 6, "sector": "", "region": "Northern America", "pestle": "Economic"}, {"title": "The Bank of Russia will not intervene in the currency market unless the ruble's swings threaten the stability of the nation's banking industry.", "topic": "bank", "year": "", "intensity": 6, "sector": "Financial services", "region": "Eastern Europe", "pestle": "Economic"}, {"title": "International rating agencies do not see the risk of a new collapse of the Russian economy.", "topic": "economy", "year": "", "intensity": 2, "sector": "", "region": "", "pestle": "Political"}, {"title": "Russia's central bank predicted its economy would shrink -4.5% in 2015 and -1.1% in 2016.", "topic": "bank", "year": ""}

r":"","intensity":16,"sector":"Financial services","region":"Eastern Europe","pestle":"Economic"}, {"title":"Russia could lose \$40 billion annually in exports due to sanctions, and between \$90 and \$100 billion on account of sharply lower oil prices.", "topic":"export", "year":"","intensity":24, "sector":"Retail", "region":"Eastern Europe", "pestle":"Economic"}, {"title":"2016, EU threatens more sanctions over Syria.", "topic":"","year":2016, "intensity":8, "sector":"","region":"Western Asia", "pestle":""}, {"title":"2016, Russia will join OPEC's efforts to cut global crude output.", "topic":"","year":2016, "intensity":16, "sector":"","region":"Eastern Europe", "pestle":""}, {"title":"Peru now ranks 21st on the list of producing countries and large areas are under threat as global demand for palm oil continues to grow.", "topic":"export", "year":"","intensity":4, "sector":"Energy", "region":"South America", "pestle":"Economic"}, {"title":"The EU is expected to import 6.6 million tonnes of palm oil in 2016.", "topic":"oil", "year":2016, "intensity":16, "sector":"Energy", "region":"","pestle":"Industries"}, {"title":"Oil and gas will remain a vital part of the global energy mix for many decades.", "topic":"gas", "year":"","intensity":6, "sector":"Energy", "region":"World", "pestle":"Industries"}, {"title":"US sunflower seed production is forecast by USDA to decrease by 16% to 1.1 Mt.", "topic":"production", "year":"","intensity":12, "sector":"Manufacturing", "region":"Northern America", "pestle":"Industries"}, {"title":"Canadian flaxseed exports are forecast to remain relatively stable at 0.6 Mt as buying is constrained by competition from burdensome world oilseed and vegetable oil supplies.", "topic":"export", "year":"","intensity":6, "sector":"Energy", "region":"World", "pestle":"Economic"}, {"title":"At the world level, production of rapeseed-canola is expected to decline by about 2.0 Mt from last year.", "topic":"production", "year":"","intensity":6, "sector":"Manufacturing", "region":"World", "pestle":"Industries"}, {"title":"The recent rebound in oil prices could spur more economic activity among drillers and other energy producers in the months ahead.", "topic":"oil", "year":"","intensity":2, "sector":"Energy", "region":"","pestle":"Economic"}, {"title":"Within 3-4 years, Saudi Arabia's foreign reserves will likely be much lower and the country would find itself in a debtor position.", "topic":"","year":"","intensity":3, "sector":"","region":"Western Asia", "pestle":""}, {"title":"By the year 2035, India's gas import will increase by a staggering 573 percent, oil import by 169 percent and coal import by 85 percent.", "topic":"gas", "year":"","intensity":8, "sector":"Energy", "region":"Southern Asia", "pestle":"Industries"}, {"title":"A growing number of investors see global warming not only as a looming environmental problem but also an investment risk.", "topic":"investment", "year":"","intensity":4, "sector":"Food & agriculture", "region":"","pestle":"Economic"}, {"title":"Exxon's finances show signs of significant deterioration and the company could be on the brink of irreversible decline.", "topic":"energy", "year":"","intensity":4, "sector":"Energy", "region":"","pestle":"Economic"}, {"title":"Delaying payments on \$2.8 billion is nothing compared to the \$65 billion outstanding and Venezuela will default anyway as oil output continues to drop and there is no sign of change in the government or policy.", "topic":"","year":"","intensity":48, "sector":"Energy", "region":"South America", "pestle":""}, {"title":"Countries such as Cote d'Ivoire, Ethiopia, Senegal, and Tanzania are expected to continue to grow at more than 6 percent for the next couple of years.", "topic":"","year":2016, "intensity":12, "sector":"","region":"Eastern Africa", "pestle":""}, {"title":"Many experts expect oil markets to balance in 2017.", "topic":"oil", "year":2017, "intensity":12, "sector":"Energy", "region":"","pestle":"Economic"}, {"title":"By 2035 gas imports to India will rise by 573 percent.", "topic":"gas", "year":"","intensity":16, "sector":"Energy", "region":"Southern Asia", "pestle":"Industries"}, {"title":"Oil edged above US\$50 a barrel on Thursday as a further drop in U.S. crude inventories countered investor doubts that OPEC will be able to implement a production cut.", "topic":"oil", "year":"","intensity":20, "sector":"Energy", "region":"Northern America", "pestl

e":"Economic"}, {"title": "Moscow views any gas source or transit route that challenges Russia's monopoly over European demand as a national security risk.", "topic": "gas", "year": "", "intensity": 4, "sector": "Energy", "region": "Eastern Europe", "pestle": "Political"}, {"title": "Biomass will play a growing role as a backup, dispatchable energy source.", "topic": "energy", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Next year will be a test of strength for Saudi Arabia, the world's largest oil exporter, as it tries to regain control of the market and lift prices.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "The next collapse of oil prices will occur within 10 years.", "topic": "oil", "year": 2016, "intensity": 9, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Bloomberg New Energy Finance has already told investors to expect the 'big crash' in oil by 2028.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Oil halted its advance near \$50 a barrel as Iraq threatened to derail OPEC's plan to stabilize crude markets by saying it should be exempt from planned output cuts.", "topic": "oil", "year": "", "intensity": 10, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "A relentless rise in borrowing by China's largest companies could eventually require a capital injection of nearly \$2-trillion to clean up the country's banking sector.", "topic": "capital", "year": "", "intensity": 4, "sector": "Financial services", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "India will depend increasingly on imports for its energy.", "topic": "", "year": 2016, "intensity": 20, "sector": "Energy", "region": "Southern Asia", "pestle": ""}, {"title": "The sustained decline in global oil and gas prices has brought into sharp focus the significant risks facing the mature UK offshore oil and gas industry.", "topic": "gas", "year": "", "intensity": 4, "sector": "Energy", "region": "Northern Europe", "pestle": "Industries"}, {"title": "By 2017, the oil refining capacity of India is expected to rise and reach more than 310 million tonnes.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "Energy prices are forecast to jump 24 percent in the coming year.", "topic": "energy", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Oil prices are forecast to rise to \$55 per barrel next year from \$43 per barrel in 2016 as markets readjust after an era of abundant supply that outpaced demand.", "topic": "oil", "year": 2016, "intensity": 20, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Greater volatility in oil price futures could be associated with rising uncertainty around global growth forecasts.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Oil & gas reserves in Africa will further drive the market for water treatment chemicals in the oil & gas industry.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Africa", "pestle": "Economic"}, {"title": "As much as \$3.4 trillion or one quarter of global corporate debt could be at risk if there is a widespread shift to electric-powered vehicles.", "topic": "debt", "year": "", "intensity": 32, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "Disruptive battery technologies could set off a death spiral in the credit markets as the demand for gasoline and diesel melts away in the next few decades.", "topic": "technology", "year": 2016, "intensity": 3, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Energy prices are projected to jump almost 25% overall next year.", "topic": "energy", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The lack of capital investment in the last year or two in the U.S. and globally in oil and gas could be a problem five years from now.", "topic": "gas", "year": "", "intensity": 4, "sector": "Financial services", "region": "Northern America", "pestle": "Economic"}, {"title": "The IMF projects oil prices to barely reach \$60 a barrel by 2021.", "topic": "", "year": "", "intensity": 20, "sector": "", "region": "", "pestle": ""}, {"title": "Oil prices-the key driver of growth for MENA's oil exporters-are p

rejected to remain low over the coming years.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Washington based think-tank SAFE expects that global oil supply could fall up to 4 million barrels per day by 2018 as a result of recent capex cuts.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "World", "pestle": "Political"}, {"title": "New sources of oil will prevent a supply crunch in the next few years.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Several hundred billion dollars must be invested over the next few years to bring oil out of the ground from a far more concentrated set of opportunities.", "topic": "oil", "year": 2016, "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "U.S. oil is expected to break a resistance zone of \$51.67-\$52.11 per barrel.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Social"}, {"title": "Agriculture will become Africa's new oil.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Africa", "pestle": "Environmental"}, {"title": "The future millionaires of Africa will come from agriculture.", "topic": "agriculture", "year": "", "intensity": 6, "sector": "", "region": "Africa", "pestle": "Environmental"}, {"title": "Despite sitting on the world's largest oil reserves, Venezuela is running out of food, medicine and cash as its citizens go hungry. Things could get much worse if PDVSA defaults on its debt.", "topic": "debt", "year": "", "intensity": 4, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Venezuela's government-run oil giant is warning that it could default on its bonds as early as next week.", "topic": "oil", "year": "", "intensity": 4, "sector": "Government", "region": "South America", "pestle": "Political"}, {"title": "Widespread adoption of battery-powered vehicles is a serious threat to the oil industry.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Technological"}, {"title": "Both oil and gas markets will improve over the next 12 to 18 months.", "topic": "gas", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "More aggressive adoption of low-carbon policies could bring a lower 2030 peak of 94 million barrels a day.", "topic": "policy", "year": 2030, "intensity": 6, "sector": "", "region": "", "pestle": "Organization"}, {"title": "The anticipated increase in demand of about 20 million barrels a day over the next two decades will probably be big enough to overwhelm the impact of the electric car.", "topic": "car", "year": 2016, "intensity": 12, "sector": "Manufacturing", "region": "", "pestle": "Social"}, {"title": "By 2030 carbon-powered vehicles will be the exception rather than the norm.", "topic": "vehicle", "year": "", "intensity": 9, "sector": "", "region": "", "pestle": "Industries"}, {"title": "Disruption could spread to the oil industry as electric vehicles become more economic than gasoline or diesel cars.", "topic": "oil", "year": "", "intensity": 1, "sector": "Manufacturing", "region": "", "pestle": "Economic"}, {"title": "Petroleum consumption will peak in 2030 and decline thereafter.", "topic": "consumption", "year": 2030, "intensity": 9, "sector": "", "region": "", "pestle": "Lifestyles"}, {"title": "The last major reserves of oil in Africa will become increasingly important.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Africa", "pestle": "Industries"}, {"title": "Nearly \$2tn of investments in African oil and gas are expected in the next two decades.", "topic": "gas", "year": 2016, "intensity": 9, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Oil substitution is not yet imminent and is not expected to reach more than 5% for the next five years.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The Federal Reserve is expected to raise the discount rate to about 1.5% by the end of 2017.", "topic": "", "year": 2017, "intensity": 12, "sector": "", "region": "", "pestle": ""}, {"title": "OPEC's decision to embrace production cuts will help move crude prices toward a target of \$50 to \$60 per barrel.", "topic": "production", "year": "", "intensity": 16, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Greater energy efficiency and the substitution of some existing resource

s, such as coal and oil, by alternatives, including wind and solar, could improve the energy productivity of the global economy by almost 75 percent.", "topic": "energy", "year": "", "intensity": 4, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Cement-grinding plants can cut energy consumption by 5 percent or more with customized controls that predict peak demand.", "topic": "energy", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "By 2030, electric vehicles could represent about 30 percent of all new cars sold globally.", "topic": "car", "year": "", "intensity": 2, "sector": "Manufacturing", "region": "", "pestle": "Social"}, {"title": "Norway will account for 31% of world fish oil imports in 2025.", "topic": "oil", "year": 2025, "intensity": 16, "sector": "Energy", "region": "Northern Europe", "pestle": "Industries"}, {"title": "Fish oil is still expected to be used in the aquaculture industry.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "In 2025, fishmeal obtained from by-products is expected to account for 38% of total fishmeal production by 2025.", "topic": "production", "year": 2025, "intensity": 12, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Overall, freshwater species, such as carp will account for most of the increase in aquaculture production and represent around 60% of total aquaculture production in 2025.", "topic": "production", "year": 2025, "intensity": 12, "sector": "Manufacturing", "region": "", "pestle": "Environmental"}, {"title": "Aquaculture will overtake capture fisheries in 2021 and reach 52% of total fish production in 2025.", "topic": "production", "year": 2021, "intensity": 12, "sector": "Manufacturing", "region": "", "pestle": "Environmental"}, {"title": "The average price of traded fish products for human consumption is expected to decline during the outlook period.", "topic": "consumption", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": "Lifestyles"}, {"title": "World production of fishmeal is expected to increase by 15% in 2025 relative to the average 2013-15 level.", "topic": "production", "year": "", "intensity": 16, "sector": "Manufacturing", "region": "World", "pestle": "Industries"}, {"title": "World fish production is projected to grow at 1.5% p.a.", "topic": "production", "year": "", "intensity": 8, "sector": "Manufacturing", "region": "World", "pestle": "Industries"}, {"title": "Demand peaks for coal and oil have the potential to take the world from stranded assets predominantly in the private sector to state-owned stranded resources and could cause significant stress to the current global economic equilibrium with unforeseen consequences on geopolitical agendas.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "The EU's steel demand recovery is expected to stay on track, backed by resilient consumption and a mild recovery in construction despite heightened uncertainties following the UK referendum on exiting the EU.", "topic": "", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": ""}, {"title": "Falling tax revenue amid Brazil's worst recession since the Great Depression will cause a 2016 state deficit of as much as 20 billion reais (\$6.23 billion).", "topic": "tax", "year": "", "intensity": 48, "sector": "", "region": "South America", "pestle": "Political"}, {"title": "East Coast cities including New York City and Toronto will face low growth or even a reduction because of an over-supply of hotel rooms.", "topic": "city", "year": "", "intensity": 3, "sector": "Construction", "region": "", "pestle": "Economic"}, {"title": "It is anticipated that Eastern Europe hotel prices will fall 2.4 percent, Western Europe prices will increase 1.8 percent, and Middle East and Africa rates will fall slightly, by 0.5 percent. Prices in Latin America and the Caribbean are projected to decrease by 0.9 percent.", "topic": "", "year": "", "intensity": 4, "sector": "", "region": "South America", "pestle": ""}, {"title": "Solar and wind accounted for 4% of power generation in 2014 but could supply up to 39% by 2060.", "topic": "power", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Political"}, {"title": "Volatility of crude oil prices is expected to encourage various manufacturers in the market to increase biofuel production over the next eight years which in turn will propel technol

ogy demand.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Declining U.S. oil production is expected to bring down global oversupply and reduced investment in new production should lead to greater output declines in the future and help markets rebalance in 2017.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Financial services", "region": "Northern America", "pestle": "Economic"}, {"title": "Global oil demand will rise by 1.3 million barrels per day (MMbbl/d) in 2016 to 96.1 MMbbl/d.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "CCS facilities could help fund themselves by using the carbon dioxide they capture to make new products.", "topic": "carbon", "year": "", "intensity": 2, "sector": "Environment", "region": "", "pestle": "Environmental"}, {"title": "Only unexpected demand from Asia or the reopening of rice imports into Nigeria could have some stabilizing impact on rice prices.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Asia", "pestle": ""}, {"title": "Oil markets are future oriented and will undoubtedly anticipate rising prices.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Global methane emissions from the oil and gas industries could be as much as 60 percent higher than previously reported.", "topic": "gas", "year": "", "intensity": 4, "sector": "Energy", "region": "World", "pestle": "Environmental"}, {"title": "Electronics exports (33% share) will be constrained by weak global demand which has reduced intermediate supply chain flows through China.", "topic": "export", "year": "", "intensity": 8, "sector": "Information Technology", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "The impact of a decline in oil will affect Malaysia as it contributes to 28% of Government's revenue and as a commodity export constitutes about 21% of GDP.", "topic": "export", "year": "", "intensity": 8, "sector": "Retail", "region": "South-Eastern Asia", "pestle": "Political"}, {"title": "Algeria's fiscal deficit is expected to remain large at about 13.2% of GDP in 2016 (albeit gradually, narrowing to 8.0% in 2018) as low oil prices weigh on fiscal receipts.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Oil production will progressively increase without reaching full capacity before 2020 due to the time necessary to restore the heavily damaged oil infrastructure.", "topic": "oil", "year": "", "intensity": 12, "sector": "Transport", "region": "", "pestle": "Environmental"}, {"title": "In 2016, the world economy is expected to see sustainable growth in the U.S. and European economies, taking advantage of low oil prices, and rising consumption and infrastructure development in India and Southeast Asia, among other regions, despite some concerns.", "topic": "economy", "year": 2016, "intensity": 16, "sector": "", "region": "Northern America", "pestle": "Economic"}, {"title": "There will be limits on how much the yen will weaken because of differences in direction of monetary policies in Japan and the United States and it will be difficult for the yen to stabilize at over ¥120 to the dollar.", "topic": "policy", "year": "", "intensity": 6, "sector": "Financial services", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "The U.S. could reduce pollution and not seriously harm economic growth.", "topic": "economic growth", "year": "", "intensity": 4, "sector": "Environment", "region": "Northern America", "pestle": "Economic"}, {"title": "Fitch Ratings is reducing its 2016 US high yield bond default rate forecast to 5% from 6% and expects the overall 2017 rate to finish at 3%.", "topic": "", "year": 2017, "intensity": 16, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "The OPEC output deal could add US\$10 to crude prices.", "topic": "", "year": "", "intensity": 6, "sector": "", "region": "", "pestle": ""}, {"title": "Remittances flows to Sub-Saharan Africa are expected to decline by 0.5 percent in 2016.", "topic": "", "year": 2016, "intensity": 12, "sector": "", "region": "Africa", "pestle": ""}, {"title": "Industry expectations forecast Brent Crude below-\$70 per barrel through 2020.", "topic": "industry", "year": "", "intensity": 20, "sector": "", "region": "", "pestle": "Industries"}, {"title": "The increase in Libyan and Nigerian exports alone could be enough to offset"}

et the possible OPEC cut.", "topic": "export", "year": "", "intensity": 4, "sector": "Retail", "region": "", "pestle": "Economic"}, {"title": "Libya's oil production has now reached about 500,000 b\\d and is expected to climb to 600,000 by the end of the month.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "Northern Africa", "pestle": "Industries"}, {"title": "By 2020, countries will release their long-term plans to cut emissions.", "topic": "emission", "year": "", "intensity": 12, "sector": "", "region": "", "pestle": "Environmental"}, {"title": "The 240-megawatt facility outside Houston, Texas is expected to capture 90% of the carbon dioxide from its exhaust gas, and pump it 80 miles away before injecting it into depleted oil wells out of the atmosphere.", "topic": "gas", "year": "", "intensity": 4, "sector": "Environment", "region": "", "pestle": "Environmental"}, {"title": "Risks of [oil] supply restraint will resurface long before risks of global demand peaking.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "World", "pestle": ""}, {"title": "By 2030, annual growth of the world natural gas market will be about 2% and that LNG will be about 4%, while the growth of the world oil market will be barely above 0.5%.", "topic": "gas", "year": "", "intensity": 8, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Oman will build an oil independent economy through implementing diversification programs as part of Oman Vision 2020.", "topic": "oil", "year": 2020, "intensity": 16, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "Platts RigData projects the U.S. rig count will grow by an average of 131 rigs or 29% year over year during 2017.", "topic": "", "year": "", "intensity": 8, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "Prices could stay within a \$40-to-\$55-a-barrel band because of adjustments made by the OPEC cartel and U.S. shale producers to effectively prop up prices at the low end and contain them at the high end.", "topic": "", "year": "", "intensity": 8, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "India will be the number one country for oil demand growth worldwide.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Southern Asia", "pestle": "Economic"}, {"title": "In 2016, the U.S. Environmental Protection Agency will issue long-awaited rules to control methane emissions from the oil and gas industry.", "topic": "gas", "year": 2016, "intensity": 16, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Natural gas prices are projected to fall in 2016.", "topic": "gas", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Non-OPEC production outside the U.S. is expected to fall by 0.1 mb\\d.", "topic": "production", "year": "", "intensity": 9, "sector": "Manufacturing", "region": "Northern America", "pestle": "Industries"}, {"title": "OECD oil consumption is expected to be flat with a modest gain in North America nearly offsetting declines elsewhere. Non-OECD oil consumption is projected to rise by 1.2 mb\\d (2.4 percent). Consumption growth is expected to be considerably slower in Asia.", "topic": "growth", "year": "", "intensity": 6, "sector": "", "region": "Asia", "pestle": "Economic"}, {"title": "OECD oil consumption is expected to be flat with a modest gain in North America nearly offsetting declines elsewhere.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "For 2016, world oil consumption growth is expected to slow to 1.3 percent (1.2 mb\\d) to an average global consumption of 95.7 mb\\d.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Exports from the Islamic Republic of Iran are expected to rise sharply as sanctions that had hampered oil sector investment and exports have been lifted.", "topic": "export", "year": "", "intensity": 6, "sector": "Energy", "region": "Southern Asia", "pestle": "Economic"}, {"title": "Stringent regulations imposed in North America and Europe will also adversely affect the growth of the acrylic acid market.", "topic": "growth", "year": "", "intensity": 6, "sector": "", "region": "Europe", "pestle": "Political"}, {"title": "Overall, global crude oil supply is expected to grow by about 2.4%.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "World", "pestle": ""}

e":"Industries"}},{ "title":"Brazil\'s economy is projected to contract by 3% t his year and Venezuela\'s by 10%.", "topic":"economy", "year":"", "intensity": 8, "sector":"", "region":"South America", "pestle":"Economic"}, {"title":"Norwegi an gas production could peak in 2018.", "topic":"gas", "year":2018, "intensity": 6, "sector":"Energy", "region":"", "pestle":"Industries"}, {"title":"During the n ext decade, global soybean trade is projected to increase by 22 percent.", "to pic":"trade", "year":2016, "intensity":16, "sector":"", "region":"World", "pestl e":"Economic"}, {"title":"Increasing global demand for agricultural commoditie s, especially by developing countries, leads to higher production and exports by major exporting countries throughout the projection period. The European U nion (EU) are expected to remain important exporters during the coming decad e.", "topic":"", "year":2016, "intensity":9, "sector":"", "region":"", "pestl e":""}, {"title":"U.S. farm production expenses are projected to increase afte r 2017 as crude oil prices and interest rates rise.", "topic":"oil", "year":201 7, "intensity":12, "sector":"Energy", "region":"", "pestle":"Economic"}, {"titl e":"Economic growth in the European Union is projected at about 1.8 percent p er year over the next decade.", "topic":"economic growth", "year":2016, "intens ity":16, "sector":"", "region":"", "pestle":"Economic"}, {"title":"Weak global dem and from relatively slow growth in developed countries and economic transitio n in China will be a drag on growth in export-oriented economies while lower oil prices will moderate these challenges.", "topic":"export", "year":"", "inte nsity":6, "sector":"Retail", "region":"Eastern Asia", "pestle":"Economic"}, {"tit le":"Seyed Hossein Mousavian argues that Brexit creates an opportunity for a new EU-Iran relationship.", "topic":"brexit", "year":"", "intensity":6, "secto r":"", "region":"Southern Asia", "pestle":"Political"}, {"title":"The expected f all in crude oil production in key US shales will negatively affect the perfo rmance of oilfield services companies like McDermott International (MDR).", "t opic":"oil", "year":"", "intensity":6, "sector":"Energy", "region":"Northern Amer ica", "pestle":"Political"}, {"title":"Euro-zone growth is expected to reach 1. 5 percent with inflation of around 1 percent in 2016.", "topic":"growth", "yea r":2016, "intensity":12, "sector":"", "region":"", "pestle":"Economic"}, {"titl e":"Emerging economies like Brazil, South Africa, Thailand, and Turkey will b e the real sources of concern in 2016.", "topic":"economy", "year":2016, "intens ity":16, "sector":"", "region":"South America", "pestle":"Economic"}, {"title":"M ost native species are severely threatened by ongoing nutrient pollution and acidification of freshwater habitats caused by atmospheric pollution, defore station, oil-palm plantations and a lack of functioning wastewater treatment particularly in rural areas.", "topic":"oil", "year":"", "intensity":2, "secto r":"Energy", "region":"", "pestle":"Environmental"}, {"title":"Carbon emissions will cause global warming to surpass 2 \\\u00c2\\\u00b0C if the world produces all of the oil, gas and coal in reserves that are already being exploited or developed.", "topic":"gas", "year":"", "intensity":6, "sector":"Energy", "regio n":"World", "pestle":"Environmental"}, {"title":"Any price growth higher than \$50 per barrel will lead to an increase of drilling in the US and the renewa l of shale production growth.", "topic":"growth", "year":"", "intensity":16, "sec tor":"Manufacturing", "region":"Northern America", "pestle":"Economic"}, {"titl e":"Oil is expected to remain below \$60 per barrel through 2017.", "topic":"oi l", "year":"", "intensity":20, "sector":"Energy", "region":"", "pestle":"Industrie s"}, {"title":"Russia\'s economy will remain in poor shape for the foreseeable future and fiscal austerity will be unavoidable.", "topic":"economy", "yea r":"", "intensity":6, "sector":"", "region":"Eastern Europe", "pestle":"Economi c"}, {"title":"The rising demand for organic personal care products along with formulation development for specific consumer group is expected to create new market avenues for cultivators and producers of jojoba oil.", "topic":"oil", "y ear":"", "intensity":3, "sector":"Retail", "region":"", "pestle":"Economic"}, {"ti tle":"The global jojoba oil market is expected to reach USD 254.2 million by 2024.", "topic":"oil", "year":"", "intensity":48, "sector":"Energy", "region":"Wo

rld", "pestle": "Economic"}, {"title": "If the production cut to 32.5-33 million barrels a day is strictly implemented in 1H17", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Saudi Arabia, the largest oil producer, is expected to give up 350,000 barrels a day.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "Western Asia", "pestle": "Industries"}, {"title": "OPEC oil production is expected to be reduced to a range of 32.5 to 33 million barrels of oil per day from 33.4 million.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The global predictive analytics market could reach as high as \$9 billion by 2020.", "topic": "market", "year": "", "intensity": 7, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "Oil and gas companies could employ more PhD-level data scientists than geologists.", "topic": "gas", "year": "", "intensity": 2, "sector": "Information Technology", "region": "", "pestle": "Technological"}, {"title": "A deal to limit oil production could be a reality when OPEC next meet on November 30.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Social"}, {"title": "Goldman Sachs forecasts the U.S. will be pumping an additional 600,000 to 700,000 barrels of oil a day by the end of next year-making up for every drop lost in the bust.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Palm oil is now the most widely used vegetable oil on the planet, accounting for 65 percent of all vegetable oil traded internationally and the use of palm oil is expected to double by 2020.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "By 2034, Africa is expected to have a larger workforce than either China or India.", "topic": "workforce", "year": "", "intensity": 12, "sector": "", "region": "Africa", "pestle": "Organization"}, {"title": "Oil will continue to be used long after 2040 as it is still the most efficient fuel for planes by far.", "topic": "oil", "year": "2040", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Saudi Arabia will cut ministers' salaries by 20 percent and scale back financial perks for public sector employees in one of the most drastic measures yet by the energy-rich kingdom to save money at a time of low oil prices.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "Ecuadorian GDP growth will expand modestly in 2016 (0.7%) following a contraction in 2015.", "topic": "growth", "year": "", "intensity": 12, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Currently, China receives nearly 60% of its oil and over 30% of its natural gas from foreign sources. For domestic production to make up 85% of total energy consumption by 2020, China will need to increase its production of natural gas, shale gas and coalbed methane.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Eastern Asia", "pestle": "Industries"}, {"title": "In the short-term, electric vehicles could actually lead to a spike in the oil price.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Solving America's energy problems will be a major election issue and a top priority for the next president.", "topic": "energy", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Political"}, {"title": "Beef imports into Russia are not expected to change in the coming years.", "topic": "change", "year": "2016", "intensity": 16, "sector": "", "region": "Eastern Europe", "pestle": "Organization"}, {"title": "There is a shared concern among some automakers and lubricant manufacturers that the possible proliferation of lubricant products could overwhelm and further confuse the aftermarket.", "topic": "automaker", "year": "", "intensity": 2, "sector": "", "region": "", "pestle": "Industries"}, {"title": "Oil supply will continue to exceed demand at least during the first half of the year 2017.", "topic": "oil", "year": "2017", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Back-up oil boilers in Denmark are going to be banned in all new construc

tions by 2017.", "topic": "oil", "year": "", "intensity": "", "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "With demand for palm oil expected to double by 2020 there will be increasing pressure on tropical forests and biodiversity.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Prices will remain at or near \$50 a barrel for the rest of 2016.", "topic": "", "year": 2016, "intensity": 16, "sector": "", "region": "", "pestle": ""}, {"title": "Oil prices will increase to \$80 a barrel in 2017.", "topic": "oil", "year": 2017, "intensity": "", "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Ghana could become the fourth biggest oil producer in sub-Saharan Africa by 2020 once two new offshore fields come on stream.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "Africa", "pestle": "Industries"}, {"title": "The global industrial valves market is projected to cross \$78 billion by 2021.", "topic": "market", "year": "", "intensity": 72, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "Early-to-market automated mobility service providers could capture over \$100 billion in revenue at the expense of incumbents like oil companies and traditional carmakers.", "topic": "oil", "year": "", "intensity": 18, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "The number of robotic systems working in oil fields around the world will be nearly a million by 2025.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "The IMF expects that Chinese authorities will improve the reporting of its reserves composition, achieving full coverage within two to three years.", "topic": "", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": ""}, {"title": "In an aging world, Africa has the advantage of a young and growing population and will soon have the fastest urbanization rate in the world.", "topic": "population", "year": "", "intensity": 6, "sector": "Construction", "region": "Africa", "pestle": "Social"}, {"title": "Scientists create innovative hydrogen fuel \"nano-reactor\" that could make hydrogen cars much cheaper.", "topic": "car", "year": 2016, "intensity": 6, "sector": "Manufacturing", "region": "", "pestle": "Social"}, {"title": "Major oil producers will rely on acquisitions for about half their reserve replacement in the future after cutting exploration budgets to weather the crude-price collapse.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "China is particularly important for Saudi Arabia because China's oil demand is expected to grow from 6m bbl today to 13m bbl/day by 2035.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "Eastern Asia", "pestle": "Industries"}, {"title": "Increasing desertification, changing weather patterns and more intense and frequent extreme weather events (such as heat waves, snow, dust storms, floods and droughts) will all be factors affecting Egypt's energy sector.", "topic": "energy", "year": "", "intensity": 6, "sector": "Food & agriculture", "region": "Northern Africa", "pestle": "Environmental"}, {"title": "Methane from gas extraction and transportation poses a greater short-term climate change risk than burning carbon fuels like coal and oil.", "topic": "gas", "year": "", "intensity": 2, "sector": "Food & agriculture", "region": "", "pestle": "Environmental"}, {"title": "External risks to Russia have abated to a significant extent.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Eastern Europe", "pestle": ""}, {"title": "A fall in global oil prices beginning in 2015 cast petroleum industries into a state of uncertainty and fast gains for ceramic proppants are not expected to be repeated through 2020.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Using biomass for chemical production could yield at least 10 times more value, compared to burning it to make electricity.", "topic": "production", "year": "", "intensity": 2, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "World oil stockpiles will continue to accumulate into late 2017.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "U.S. gasoline prices are not expected to recover much in 2016, as they reflect demand worldwide and are s

till subject to speculation.", "topic": "gasoline", "year": 2016, "intensity": "", "sector": "Automotive", "region": "", "pestle": "Industries"}, {"title": "Countries in the Middle East and Russia will continue to expand their oil production.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Eastern Europe", "pestle": "Industries"}, {"title": "2016 will be the first full year in which US crudes are available for export.", "topic": "export", "year": 2016, "intensity": 16, "sector": "Retail", "region": "Northern America", "pestle": "Economic"}, {"title": "In 2017, the demand for OPEC crude is projected at 32.5 mb\\d.", "topic": "", "year": 2017, "intensity": 12, "sector": "", "region": "", "pestle": ""}, {"title": "Kazakhstan is forecast to see the second highest oil growth in 2017 at 0.21 mb\\d.", "topic": "growth", "year": 2017, "intensity": 16, "sector": "", "region": "Central Asia", "pestle": "Economic"}, {"title": "Growth in oil production in GoM in 2017 will be mostly on the back of ramp-ups of projects implemented in 2016.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "US onshore crude oil is forecast to decline by 0.58 mb\\d to average 6.7 mb\\d in 2017.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "OECD Asia Pacific will keep oil output steady next year.", "topic": "", "year": 2016, "intensity": "", "sector": "", "region": "Asia", "pestle": ""}, {"title": "Other regions total FSU oil supply is expected to grow by 0.12 mb\\d in 2016 at an average of 13.81 mb\\d.", "topic": "oil", "year": 2016, "intensity": "", "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Africa Africa's oil supply is projected to average 2.12 mb\\d in 2016.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Africa", "pestle": "Industries"}, {"title": "Brazil's liquid supply is expected to average 3.13 mb\\d in 2016.", "topic": "", "year": 2016, "intensity": 12, "sector": "", "region": "South America", "pestle": ""}, {"title": "Latin America oil supply is now expected to decline in 2016 due to heavy declines in Colombia and lower growth in Brazil compared to remarkable growth in 2015 and 2014.", "topic": "growth", "year": "", "intensity": "", "sector": "", "region": "South America", "pestle": "Economic"}, {"title": "2015-2017 Non-OPEC oil supply is now forecast to contract by 0.61 mb\\d in 2016 to average 56.32 mb\\d.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "For 2016, China's oil demand is projected to rise by around 0.28 mb\\d.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Eastern Asia", "pestle": "Industries"}, {"title": "Substitution towards natural gas and geopolitical concerns are expected to weigh on product demand growth in 2017 in Saudi Arabia.", "topic": "gas", "year": 2017, "intensity": "", "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Saudi Arabia is expected to be the oil demand growth driver in the region with transportation fuels and petrochemical feedstocks projected to be contributing to product growth.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "Latin American oil demand is expected to decrease by 0.06 mb\\d in 2016.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "OECD Asia Pacific oil consumption growth is projected to fall by 0.06 mb\\d in 2016.", "topic": "oil", "year": 2016, "intensity": 20, "sector": "Energy", "region": "Asia", "pestle": "Economic"}, {"title": "Japanese direct oil usage is most likely expected to decline further in the remaining part of 2016.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "OECD Europe oil demand is projected to grow by 0.10 mb\\d in 2016 for the second consecutive year and oil demand in 2017 will slightly decline compared with 2016.", "topic": "oil", "year": 2017, "intensity": "", "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "In 2016, OECD Americas oil demand is projected to grow by 0.26 mb\\d compared with the previous year.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The US is projected to remain the main contributor to anticipated O

ECD oil demand growth during 2017.", "topic": "oil", "year": "", "intensity": "", "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "US oil demand is projected to remain strong throughout the remainder of 2016.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Healthy gasoline demand is projected to remain the main driver behind US oil demand growth for the remainder of 2016 and 2017.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "Government debt in India has seen strong nominal growth versus the debt ratio and manageability of external debt will support economic growth in 2017.", "topic": "economic growth", "year": 2017, "intensity": "", "sector": "Government", "region": "", "pestle": "Political"}, {"title": "OPEC NGLs are expected to average 6.43 mb/d in 2017.", "topic": "", "year": 2017, "intensity": 12, "sector": "", "region": "", "pestle": ""}, {"title": "World Oil Supply Non-OPEC oil supply in 2016 is now expected to contract by 0.61 mb/d.", "topic": "oil", "year": 2016, "intensity": 20, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "World oil demand growth in 2016 is now anticipated to increase by 1.23 mb/d after a marginal upward revision.", "topic": "oil", "year": 2016, "intensity": "", "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The prospect of sustained lower oil prices over the next decade offers the oil-dependent economies of the Gulf Cooperation Council (GCC) an unprecedented opportunity to implement economic diversification strategies and reform policies that will underpin more sustainable and resilient economies.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Political"}, {"title": "IoT and wearables will continue to play a big role in the future of oil and gas.", "topic": "gas", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "India will require up to 329 MMtpy of oil products by 2030.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "Barclays identified more than \$22 trillion in revenue that could be at risk for the oil and gas sector alone.", "topic": "gas", "year": "", "intensity": 32, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Record-high inventories remain a threat to the recent stability of oil prices.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "OPEC now expects that more oil will be pumped by non-member countries next year.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The global surplus will continue into the first half of 2017 due to slower than expected growth in worldwide demand and increasing crude production.", "topic": "growth", "year": 2017, "intensity": 16, "sector": "Manufacturing", "region": "World", "pestle": "Economic"}, {"title": "The GCC automotive aftermarket will enjoy double-digit growth of about 12% annually once oil prices rebound.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Electric car charging points could appear alongside petrol pumps at Shell's UK service stations as soon as next year.", "topic": "car", "year": "", "intensity": 4, "sector": "Manufacturing", "region": "Northern Europe", "pestle": "Social"}, {"title": "World oil demand is rising at a slower pace than expected.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "New plastics will consume 20% of all oil production within 35 years, up from an estimated 5% today.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Carbon capture and storage (CCS) could deliver clean electricity at a lower cost than an expanded Hinkley Point nuclear power station and almost all renewables.", "topic": "power", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Political"}, {"title": "Between now and 2050 up to \$8 trillion could be saved due to less oil consumption.", "topic": "oil", "year": 2016, "intensity": 40, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Local actors remain wary of signing ag

reements that will limit Iran's ability to benefit from oil exports and parliament has to sign off on individual deals.", "topic": "export", "year": "", "intensity": 6, "sector": "Retail", "region": "Southern Asia", "pestle": "Economic"}, {"title": "Tehran has pointedly refused and insists that Iran will increase production (which contributes to lower prices) instead.", "topic": "production", "year": "", "intensity": 6, "sector": "Manufacturing", "region": "Southern Asia", "pestle": "Industries"}, {"title": "Gartner believes that by 2018, more than 3 million workers globally will be supervised by a \"robo boss\" who will increasingly make decisions that previously could only have been made by a human manager.", "topic": "worker", "year": "", "intensity": 4, "sector": "", "region": "", "pestle": "Organization"}, {"title": "The global population is expected to reach nine billion by 2040.", "topic": "population", "year": "", "intensity": 16, "sector": "", "region": "World", "pestle": "Social"}, {"title": "Iraq could produce twice as much oil as it does currently, by 2035.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Western Asia", "pestle": ""}, {"title": "A meeting in Algiers at the end of September between OPEC and Russia has raised expectations that a deal could be struck to boost prices.", "topic": "", "year": "", "intensity": 4, "sector": "", "region": "Eastern Europe", "pestle": ""}, {"title": "A recent rocket attack by Yemeni rebels on the Saudi Aramco facilities in the South of Saudi Arabia has highlighted the risk to the country's oil sector.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Western Asia", "pestle": "Political"}, {"title": "Future shale gas growth will have to come from so-called \"brownfield\" expansions where costs have come down as a result of lower construction activity, improved operating efficiencies and cheaper natural gas.", "topic": "gas", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Canada's oil sands production will grow by 42 per cent to 3.4 million barrels per day by 2025.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "China's oil consumption will exceed that of the United States by 2034.", "topic": "", "year": "", "intensity": "", "sector": "", "region": "Eastern Asia", "pestle": ""}, {"title": "The U.S. could be one of the first countries to adopt fully autonomous (Level 5) driving.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "Average West Texas Intermediate (WTI) crude oil prices are forecast to be \$1/b lower than Brent prices in 2016 and 2017.", "topic": "oil", "year": 2016, "intensity": 20, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Brent prices are forecast to average \$52/b in 2017.", "topic": "", "year": 2017, "intensity": 16, "sector": "", "region": "", "pestle": ""}, {"title": "Continuing builds and high inventory levels will likely contribute to Brent prices maintaining the recent \$40/b to \$50/b trading range during the next two quarters.", "topic": "", "year": "", "intensity": 8, "sector": "", "region": "", "pestle": ""}, {"title": "A second LNG import terminal will soon be built in Pakistan to realise government plans to replace some oil-fired power plants with three proposed LNG-to-power units.", "topic": "power", "year": "", "intensity": 6, "sector": "Government", "region": "Southern Asia", "pestle": "Political"}, {"title": "The contribution of HICP energy inflation to headline inflation in the EU is expected to swing from -0.6 percentage point in 2016 to around +0.1 to 0.2 percentage point in 2017 and 2018.", "topic": "energy", "year": 2016, "intensity": "", "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Real GDP in the EU is expected to grow by 1.7% in 2016 and by 1.6% in 2017 and 2018.", "topic": "gdp", "year": 2016, "intensity": "", "sector": "", "region": "", "pestle": "Economic"}, {"title": "Sharp increases in oil prices pose the biggest threat to growth because consumers suffer a sudden hit to purchasing power.", "topic": "power", "year": "", "intensity": "", "sector": "Energy", "region": "", "pestle": "Political"}, {"title": "Cyber-attacks continue to pose a huge threat to the energy industry across Europe.", "topic": "energy", "year": "", "intensity": 4, "sector": "Energy", "region": "Europe", "pestle": "Industries"}, {"title": "North Korea's move could trigger"}

er a regional escalation if South Korea responds by launching its own nuclear program or Japan enhances its offensive capabilities.", "topic": "nuclear", "year": "", "intensity": 4, "sector": "Aerospace & defence", "region": "Eastern Asia", "pestle": "Political"}, {"title": "North Korea is now capable of putting a nuclear warhead on a short or medium-range missile that could hit Japan or South Korea.", "topic": "nuclear", "year": "", "intensity": 4, "sector": "Aerospace & defence", "region": "Eastern Asia", "pestle": "Political"}, {"title": "Charging points will outnumber petrol stations in the UK by 2020.", "topic": "", "year": "", "intensity": 12, "sector": "", "region": "Northern Europe", "pestle": ""}, {"title": "Gabon will struggle to sell more debt in the future.", "topic": "debt", "year": "", "intensity": 6, "sector": "", "region": "Central Africa", "pestle": "Economic"}, {"title": "Political uncertainty in Gabon will make external lenders more hesitant to finance the ambitious government spending programmes designed to create a more enticing business environment for foreign companies.", "topic": "business", "year": "", "intensity": 3, "sector": "Support services", "region": "", "pestle": "Political"}, {"title": "They have pointed to \$50 oil as a level that could bring more U.S. production back on line if prices hold.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "The EU's 28 member countries consumed 72m tonnes of oil equivalent less than had been projected for 2020.", "topic": "oil", "year": 2020, "intensity": 16, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Closer collaboration between the world's top two exporters of crude oil may stoke hopes that OPEC and other big producers will agree to freeze production.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Saudi Arabia said on Tuesday it would go along with a freeze in oil output if other producers agreed but cautioned that Iran could foil any attempt to limit output.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "India will likely begin auctioning its major oil and gas blocks early next year under its fresh Hydrocarbon Exploration Licensing Policy (HELP) that heralds a major shift from the previous policy by bringing in revenues sharing between companies and the government.", "topic": "gas", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Southern Asia", "pestle": "Political"}, {"title": "63% of consumer industries strategy officers agree that by 2030 at-home manufacturing will be mainstream in both developed and developing markets as consumers 3D/4D print a wide variety of products at home.", "topic": "3D", "year": "", "intensity": 12, "sector": "Information Technology", "region": "", "pestle": "Economic"}, {"title": "75% of chemistry and advanced materials strategy officers agree that by 2025 the primary feedstock for chemical production will shift from oil & gas to biobased and recycled materials.", "topic": "gas", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The oil & gas industry accounts for almost four-fifths of the corrosion monitoring market and the trend is projected to remain more or less constant during the forecast period.", "topic": "gas", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Global production of palm oil has doubled over the last decade and is expected to double again by 2050.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "The implementation of B20 will increase the demand and price of crude palm oil (CPO) highly.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Analysts expect Malaysian palm oil output to slip to 19 million tonnes in 2016.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "U.S. manufacturing will not reach its pre-recession production level until the third quarter of 2017.", "topic": "production", "year": 2017, "intensity": "", "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "FDA has found that from face creams to soaps and other items of personal care, cosmetics companies are taking the general pu

blic for a ride. Oil could be coming from eels or shark.", "topic": "oil", "year": "", "intensity": "", "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "2016-17 US sunflower seed production is forecast by AAFC to fall by 20% to 1.1 Mt.", "topic": "production", "year": 2016, "intensity": 16, "sector": "Manufacturing", "region": "Northern America", "pestle": "Industries"}, {"title": "Soy, palm oil and beef supplies represent a high deforestation risk in some parts of the world.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Exports are projected to be driven mainly by increasing demand in Asia (including China, where the SMP proportion of powder imports is increasing) and Africa.", "topic": "export", "year": "", "intensity": 6, "sector": "Retail", "region": "Africa", "pestle": "Economic"}, {"title": "Oilseed prices will decline further in line with general crop price projections, sluggish world economic growth and low crude oil prices.", "topic": "economic growth", "year": "", "intensity": "", "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Biodiesel production accounts for over 40% of vegetable oil demand in the EU and any change is expected to have a considerable impact on vegetable oil prices.", "topic": "oil", "year": "", "intensity": 8, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Ozone pollution caused by oil and gas drilling will lead to 30,000 childhood asthma attacks just in Philadelphia.", "topic": "gas", "year": "", "intensity": 8, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "For next year, oil price declines will be less of a drag.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Two new nuclear reactors will save Iran approximately 22 million barrels of oil per year.", "topic": "oil", "year": "", "intensity": "", "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "The volume of oil and gas production from areas identified by Verisk Maplecroft as being at high and extreme risk of water stress in the US is set to double.", "topic": "gas", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Environmental"}, {"title": "Japan will propose a broad cooperation in the energy sector with Russia that could include a nearly \$10 billion investment in Russian state-owned oil giant Rosneft.", "topic": "oil", "year": "", "intensity": 60, "sector": "Energy", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "The end of the U.S. driving season and the prospect of building inventories create downward risk for the oil price and may see further pressure on energy stocks.", "topic": "oil", "year": "", "intensity": "", "sector": "Construction", "region": "Northern America", "pestle": "Industries"}, {"title": "US lorries will produce 10% less CO2 and consume 10% less fuel by 2027 than they do now.", "topic": "", "year": "", "intensity": 12, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "The UAE and other Gulf countries do not expect to replace oil revenues with the commercialization of science.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Western Asia", "pestle": "Economic"}, {"title": "Researchers from the University of Maryland have discovered a new type of fire tornado called a 'blue whirl' and could be used to aid oil spill clean-up.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "World population will reach 9.9 billion in 2050.", "topic": "population", "year": 2050, "intensity": 16, "sector": "", "region": "World", "pestle": "Social"}, {"title": "In the Middle East internal investment will suffer as a result of the fall in oil prices as governments will continue to impose new austerity measures on the region as long as oil prices remain low.", "topic": "oil", "year": "", "intensity": 3, "sector": "Government", "region": "", "pestle": "Political"}, {"title": "Demand for oil has proven to have been weaker than most Middle Eastern countries expected.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "America's oil and natural industry could support as many as 1 million additional American jobs in 2025 and as many as 2.3 million jobs in 2030.", "topic": "oil", "year": 2025, "intensity": 8, "sector": "Energy", "region": "North"}

ern America", "pestle": "Economic"}, {"title": "By 2022, electric vehicles will cost the same as their internal combustion counterparts.", "topic": "vehicle", "year": "", "intensity": "", "sector": "", "region": "", "pestle": "Industries"}, {"title": "Large fiscal and current account deficits in Saudi Arabia will be recorded (perhaps -15 per cent and -8.5 per cent of GDP in 2016, respectively) and GDP growth is likely to be halved to around +1.5 per cent in 2016.", "topic": "growth", "year": 2016, "intensity": "", "sector": "", "region": "", "pestle": "Economic"}, {"title": "Analysts have predicted a steady increase in the price of oil in the near future.", "topic": "oil", "year": "", "intensity": "", "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Signs of higher wage growth and a tighter labor market more generally will no doubt be seized upon by Fed hawks as attesting to the prospect of a tick up in underlying U.S. inflation in the coming months.", "topic": "growth", "year": "", "intensity": "", "sector": "", "region": "Northern America", "pestle": "Economic"}, {"title": "Energy storage among 12 technologies McKinsey believes will transform life, business, and the global economy.", "topic": "energy", "year": "", "intensity": 9, "sector": "Support services", "region": "World", "pestle": "Economic"}, {"title": "Technological advances and new sources such as shale gas will dramatically reduce dependence on oil- and gas-rich countries.", "topic": "gas", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Technological"}, {"title": "Nearly all (94%) of global power executives surveyed by PwC expect complete transformation or important changes to the power utility business model.", "topic": "power", "year": "", "intensity": 12, "sector": "Support services", "region": "World", "pestle": "Political"}, {"title": "Can operate in deeper water-resulting in significant cost reductions.23 Incremental improvements in everything from the reliability of turbines to rapid access for service personnel could result in significant cost savings.", "topic": "water", "year": "", "intensity": 2, "sector": "Water", "region": "", "pestle": "Environmental"}, {"title": "The use of quinones could cut the cost of energy storage materials by two-thirds or more.", "topic": "energy", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "By mid-century, Nigeria will have the 13th largest GDP (PPP) in the world.27.", "topic": "gdp", "year": "", "intensity": 9, "sector": "", "region": "Western Africa", "pestle": "Economic"}, {"title": "Consumers need and eagerly want innovations-such as new data visualization techniques-that will deliver more useful information in less time.", "topic": "data", "year": "", "intensity": 3, "sector": "Retail", "region": "", "pestle": "Social"}, {"title": "A shortfall of private and government investment could hamper the development of wave and tidal technologies.", "topic": "energy", "year": "", "intensity": 2, "sector": "Energy", "region": "Northern Europe", "pestle": "Political"}, {"title": "Drilling for fossil fuels will need to take place in increasingly expensive and difficult-to-access locations.", "topic": "fossil fuel", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "By 2035, global production of liquid oil will fall to a projected 26 million barrels per day unless significant advances are made in locating new oil fields.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Market research company BCC Research valued the nanotech market at \$US26 billion in 2014 and predicts it will reach about \$US64 billion in 2019.", "topic": "market", "year": 2019, "intensity": 16, "sector": "", "region": "", "pestle": "Economic"}, {"title": "New research indicates that California's Central Valley harbors three times more groundwater than previously estimated, but challenges to using it include pumping costs, ground subsidence and possible contamination from fracking and other oil and gas activities.", "topic": "", "year": "", "intensity": "", "sector": "", "region": "", "pestle": ""}, {"title": "Oil oversupply will disappear in the latter part of 2016.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Global oil demand growth is now expected to slow to 1.2 million barrels per day in 2017 from 1.4 mb/d this year \\\"due to a dimmer macroeconomic outlook\\\".", "topic":

c":"growth","year":2017,"intensity":"","sector":"","region":"","pestle":"Economic"}, {"title":"Estimates are suggesting Tehran will add a further 500,000 barrels a day (b\\ /pd) to the world's bloated stockpiles within weeks.", "topic":"","year":"","intensity":4,"sector":"","region":"World","pestle":""}, {"title":"The world's largest online retailer Amazon is partnering with the multinational oil company Shell to create a network of package delivery stations in Germany that could one day challenge market leader DHL.", "topic":"oil","year":"","intensity":6,"sector":"Energy","region":"Western Europe","pestle":"Economic"}, {"title":"Oil prices are being driven higher by speculation that OPEC will reach some kind of output freeze agreement on the side lines of an energy conference in September.", "topic":"oil","year":"","intensity":6,"sector":"Energy","region":"","pestle":"Industries"}, {"title":"Some analysts remain optimistic that China's overall oil use could rise in the third quarter.", "topic":"oil","year":"","intensity":4,"sector":"Energy","region":"Eastern Asia","pestle":"Industries"}, {"title":"The growing use of augmented reality in businesses generally could have a tangible side benefit in reducing transportation emissions, by eliminating the need to dispatch repair workers.", "topic":"business","year":"","intensity":2,"sector":"Support services","region":"","pestle":"Technological"}, {"title":"Iraq will increase exports by about 150,000 barrels a day as shipments resume from the Baba Gorgor, Jambour and Khabbaz fields.", "topic":"export","year":"","intensity":8,"sector":"Retail","region":"Western Asia","pestle":"Economic"}, {"title":"Iraq will boost crude shipments by about 5 percent in the next few days after an agreement to resume exports from three oil fields in Kirkuk.", "topic":"export","year":"","intensity":8,"sector":"Retail","region":"Western Asia","pestle":"Economic"}, {"title":"North America is expected to dominate the Global Next Generation Batteries Market with the largest market share due to growing electric vehicle market and government policies which are encouraging batteries market in U.S. region.", "topic":"policy","year":"","intensity":6,"sector":"Energy","region":"Northern America","pestle":"Political"}, {"title":"A proposal to build the United States' largest oil-by-rail terminal in Vancouver, Washington, could transform the Columbia River into a major conduit for fossil fuel.", "topic":"oil","year":"","intensity":4,"sector":"Energy","region":"Northern America","pestle":"Political"}, {"title":"The United States will not be allowed to supply \\\"rebel s\\\" in Syria which indirectly aid and abet ISIS leaving a much longer supply route after the U.S. election via Jordan.", "topic":"election","year":"","intensity":9,"sector":"","region":"Northern America","pestle":"Political"}, {"title":"Even at \$60 per barrel, two-thirds of future oil reserves could be uneconomical.", "topic":"oil","year":"","intensity":2,"sector":"Energy","region":"","pestle":"Industries"}, {"title":"Although the Persian Gulf population has long been accustomed to some of the lowest energy prices in the world, subsidized energy prices have exacerbated domestic consumption and threaten to undermine oil and gas exports.", "topic":"export","year":"","intensity":2,"sector":"Energy","region":"","pestle":"Economic"}, {"title":"A new report by Columbia University's Center on Global Energy Policy calls Venezuela a growing supply risk for oil markets in 2017.", "topic":"oil","year":2017,"intensity":10,"sector":"Energy","region":"South America","pestle":"Economic"}, {"title":"Venezuela's oil output could plunge even lower.", "topic":"oil","year":"","intensity":4,"sector":"Energy","region":"South America","pestle":"Industries"}, {"title":"Venezuela's deepening chaos could soon create tremors in the global oil markets.", "topic":"oil","year":"","intensity":4,"sector":"Energy","region":"South America","pestle":"Economic"}, {"title":"Iraq and Iran, are getting close to the limit of what they can produce. Libya is expected to bring some oil back on line, while Nigeria still has many barrels shut in.", "topic":"oil","year":"","intensity":"","sector":"Energy","region":"Northern Africa","pestle":"Industries"}, {"title":"Saudi Arabia is sending signals that it could boost its crude oil supplies in August.", "topic":"oil","year":"","intensity":}

4,"sector":"Energy","region":"Western Asia","pestle":"Industries"},{"title":"The people at Bloomberg predict a recovery and rise of oil prices.","topic":"oil","year":"","intensity":6,"sector":"Energy","region":"","pestle":"Industries"},{"title":"In the U.S. GHG emissions from heavy-duty vehicles are growing rapidly and are expected to surpass emissions from passenger vehicles by 2030.","topic":"greenhouse gas","year":"","intensity":12,"sector":"Environment","region":"Northern America","pestle":"Environmental"},{"title":"Crude is being carried higher by vague hopes that OPEC, Russia and other major oil producers will agree to \\\"freeze\\\" production.","topic":"oil","year":"","intensity":9,"sector":"Energy","region":"Eastern Europe","pestle":"Industries"},{"title":"The lack of meaningful energy investment in Afghanistan will keep the country from returning its oil and natural gas output to the levels it enjoyed during the late 1960s.","topic":"gas","year":"","intensity":"","sector":"Energy","region":"","pestle":"Economic"},{"title":"The biocompatibility of nanoribbons was noticed by the researchers to possess the potential use for sensors that could travel through the body and provide information on what they discover.","topic":"information","year":"","intensity":2,"sector":"Healthcare","region":"","pestle":"Technological"},{"title":"Sovereign-wealth funds will need to adjust their allocations based on the funding needs of their states, which in large part will be driven by oil prices.","topic":"wealth","year":"","intensity":3,"sector":"","region":"","pestle":"Economic"},{"title":"Algerian shale production is projected to account for one-third of the country's total natural gas production by 2040.","topic":"gas","year":"","intensity":9,"sector":"Energy","region":"","pestle":"Industries"},{"title":"Algeria has begun a pilot shale gas well project and developed a 20-year investment plan to produce shale gas commercially by 2020.","topic":"shale gas","year":"","intensity":16,"sector":"Financial services","region":"Northern Africa","pestle":"Economic"},{"title":"Shale gas production in Canada is projected to continue increasing and to account for almost 30% of Canada's total natural gas production by 2040.","topic":"gas","year":"","intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{"title":"With higher prices for oil, and lower prices for batteries and electric buses, the cost of moving the bus fleet to electric could be 30% less than continuing to operate Ice buses in Australia.","topic":"ice","year":"","intensity":4,"sector":"","region":"Oceania","pestle":"Environmental"},{"title":"Plans to drill for oil in the pristine Great Australian Bight marine park will significantly increase the risk of oil spills.","topic":"oil","year":"","intensity":3,"sector":"Energy","region":"","pestle":"Industries"},{"title":"Increased use of remote-sensing technologies could help scientists and governments better identify which remaining natural forests should be made a conservation priority.","topic":"technology","year":"","intensity":2,"sector":"Government","region":"","pestle":"Political"},{"title":"Iran's oil and gas ambitions will not go unnoticed by other large energy players as Saudi Arabia and Russia.","topic":"gas","year":"","intensity":6,"sector":"Energy","region":"Eastern Europe","pestle":"Industries"},{"title":"By increasing oil and gas production and exports to the international energy market, Iran will be able to create some kind of an \\\"anti-American hydrocarbon consortium.\\\"","topic":"","year":"","intensity":6,"sector":"","region":"Southern Asia","pestle":""},{"title":"Iran hopes the substantial amount of foreign investment will help it revitalize its oil and gas sector with the goal of increasing its production capacity to 5 million barrels per day.","topic":"gas","year":"","intensity":8,"sector":"Energy","region":"Southern Asia","pestle":"Economic"},{"title":"The introduction of semi and fully autonomous cars and drones to replace domestic delivery will surely have a substantial impact on global oil demand.","topic":"oil","year":"","intensity":6,"sector":"Transport","region":"World","pestle":"Social"},{"title":"Speedy penetration of EVs will certainly displace sizeable oil demand in decades to come and could be detrimental for the oil industry."}]

try.", "topic": "oil", "year": 2016, "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "India's oil demand is expected to grow as the ownership of vehicles is still expected to increase significantly.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "Increasing U.S. Russia cooperation in Syria reduces the risk of an accidental conflict between the two nations.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Eastern Europe", "pestle": ""}, {"title": "Less than half the world's total conventional oil reserves will have been exhausted by 2030.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "In 2040 fossil fuels will still produce 78% of the world's energy. Oil will grow at a 0.7% annual rate and natural gas will grow 1.6% per year.", "topic": "gas", "year": "", "intensity": 8, "sector": "Energy", "region": "world", "pestle": "Industries"}, {"title": "More than five million EVs will be on U.S. roads by 2035.", "topic": "", "year": "", "intensity": 12, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "Fewer new offshore oil developments in China are expected to come online in 2017.", "topic": "", "year": 2017, "intensity": 16, "sector": "", "region": "Eastern Asia", "pestle": ""}, {"title": "Total US crude oil is forecast to decline by 0.42 mb/d to average 8.47 mb/d.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "The forecast for non-OPEC supply in 2017 is associated with a high level of risk.", "topic": "", "year": 2017, "intensity": 6, "sector": "", "region": "", "pestle": ""}, {"title": "Oil supply in the OECD, FSU and China in 2017 is expected to contract by 0.24 mb/d, 0.11 mb/d and 0.06 mb/d.", "topic": "", "year": 2017, "intensity": 20, "sector": "", "region": "Eastern Asia", "pestle": ""}, {"title": "Declining oil output in China could be attributed to hefty spending cuts in 2016 by major Chinese oil companies.", "topic": "oil", "year": 2016, "intensity": 8, "sector": "Energy", "region": "Eastern Asia", "pestle": "Industries"}, {"title": "Russia Russian oil output is expected to increase by 0.13 mb/d to average 10.98 mb/d in 2016.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Eastern Europe", "pestle": "Industries"}, {"title": "In 2016, oil production in Russia will increase.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "Eastern Europe", "pestle": "Industries"}, {"title": "Latin America's oil supply is now expected to decline in 2016 after the drop in oil prices.", "topic": "oil", "year": 2016, "intensity": 16, "sector": "Energy", "region": "South America", "pestle": "Industries"}, {"title": "Total oil output in Malaysia and Thailand is forecast to grow by 50 tb/d, while oil production in India, Brunei and Vietnam will decrease in 2016.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "South-Eastern Asia", "pestle": "Industries"}, {"title": "OECD Total OECD liquids production in 2016 is expected to contract by 0.58 mb/d to average 24.66 mb/d.", "topic": "production", "year": 2016, "intensity": 16, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "OPEC NGL production is forecast to grow by 0.16 mb/d and 0.15 mb/d to average 6.29 mb/d and 6.43 mb/d in 2016 and 2017.", "topic": "production", "year": 2016, "intensity": 16, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Transportation fuels are expected to lead oil demand growth.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "The high historical baseline and reduced price elasticities for road transportation fuels represent risks to the downside.", "topic": "transportation", "year": "", "intensity": 2, "sector": "Transport", "region": "", "pestle": "Industries"}, {"title": "2017 OECD Americas oil demand is expected to be higher by 0.20 mb/d compared with 2016.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "2016 Mexican oil demand is expected to remain flat y-o-y as projected during last month.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "US oil demand in 2016 remains strongly dependent on the

development of the US economy and oil price developments with risks being balanced as compared to last month's projections.", "topic": "oil", "year": 2016, "intensity": 8, "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "OPEC NGL production is forecast to grow by 0.16 mb/d and 0.15 mb/d in 2016 and 2017.", "topic": "production", "year": 2016, "intensity": 16, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Increasing environmental concerns coupled with stringent regulations on PP nonwoven fabrics from government bodies such as EPA is expected to hamper the market growth over the forecast period.", "topic": "growth", "year": "", "intensity": 6, "sector": "Government", "region": "", "pestle": "Political"}, {"title": "World production of sunmeal is forecast at a record high of 18.4Mt for 2016/17.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Growth in the volume of world trade is expected to remain sluggish in 2016 at 2.8%, the same as in 2015.", "topic": "growth", "year": 2016, "intensity": 16, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "The current overhang in crude oil inventories globally will be offset by refinery demand in the second half of 2016.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Ever-increasing cost of machinery and focus of the global market on bio-degradable films could impede the market to a certain extent.", "topic": "market", "year": "", "intensity": 4, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "Lower rig counts and declining production amid stabilizing global demand forecasts will eventually build a floor for recovery.", "topic": "production", "year": "", "intensity": 6, "sector": "Manufacturing", "region": "World", "pestle": "Industries"}, {"title": "Researchers have discovered a new type of fire tornado called a 'blue whirl', which burns fuel more efficiently than other fire whirls, and could be used to aid oil spill clean-up.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Biomass and biowaste will continue to dominate the fuel mix of EU domestic renewable production.", "topic": "production", "year": "", "intensity": 6, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Oil is likely to remain in the energy mix even in 2050 and will mainly fuel parts of long distance passenger and freight transport.", "topic": "oil", "year": 2050, "intensity": 9, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "In the EU oil products used in transport are projected to decrease by 51 to 67 Mtoe (13-17%) by 2030 compared to 2010 levels.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "EUC027 and EUC030 scenarios are projected to result in significant improvements in energy intensity of passenger transport by 2030.", "topic": "energy", "year": "", "intensity": 9, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "EU energy use in transport is projected to decrease by 5% between 2010 and 2030 and to slightly increase post-2030.", "topic": "energy", "year": "", "intensity": 16, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "International maritime transport activity is projected to continue growing strongly with rising demand for oil, coal, steel and other primary resources.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "The market share of internal combustion engine (ICE) electric hybrids is expected to increase due to their lower fuel consumption compared to conventional ICE vehicles.", "topic": "market", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Oil price is projected to reach 87 \$/barrel in 2020 (in year 2013-prices).", "topic": "oil", "year": 2020, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Global oil markets will continue to re-balance this year as a pick-up in demand from refiners absorbs record output from several Persian Gulf producers.", "topic": "", "year": "", "intensity": "", "sector": "", "region": "", "pestle": ""}, {"title": "For 2017, demand for OPEC crude is forecast at 33 million barrels a day.", "topic": "", "year": 2017, "intensity": 12, "sector": "", "region": ""}

n":"","pestle":"","},{ "title":"In 2017, non-OPEC supply is expected to decline by 150,000 barrels a day.", "topic":"","year":"","intensity":12,"sector":"","region":"","pestle":"","},{ "title":"For 2017, world oil demand is forecast to grow by 1.15 million barrels a day.", "topic":"oil","year":2017,"intensity":16,"sector":"Energy","region":"World","pestle":"Industries"},{ "title":"Blending five percent of biodiesel with regular diesel and 10 percent ethanol with gasoline could boost the market to 500 billion rupees (\$7.5 billion) by 2022.", "topic":"gasoline","year":"","intensity":30,"sector":"Energy","region":"","pestle":"Economic"},{ "title":"Inflation in Venezuela is predicted to rise to 500 percent in 2016 and further next year.", "topic":"","year":2016,"intensity":12,"sector":"","region":"South America","pestle":"","},{ "title":"India in a decade could achieve 20 percent blending of ethanol in gasoline and as much as 10 percent of biodiesel in diesel.", "topic":"gasoline","year":"","intensity":4,"sector":"Energy","region":"Southern Asia","pestle":"Industries"},{ "title":"Commodity sectors are expected to remain under stress with an overall default rate forecast of 10.0% for Metals & Mining and 7.2% for Oil & Gas for US issuers over the coming year.", "topic":"gas","year":"","intensity":12,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"The EIA thinks the U.S. could achieve complete energy independence by 2022.", "topic":"energy","year":"","intensity":10,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"By 2020, the U.S. will import just 11% of its daily oil needs.", "topic":"oil","year":"","intensity":16,"sector":"Energy","region":"Northern America","pestle":"Industries"},{ "title":"The shale oil and gas revolution of the last couple of decades has made the improbable goal of American energy independence close to reality. Analysts at Raymond James recently predicted the U.S. will be tantalizingly close by 2020.", "topic":"","year":"","intensity":"","sector":"","region":"Northern America","pestle":"","},{ "title":"Oil, gas, and coal prices are currently low and could remain so as renewables continue to grow.", "topic":"gas","year":"","intensity":2,"sector":"Energy","region":"","pestle":"Environmental"},{ "title":"The European Union's Nearly Zero-Emissions Buildings will include on-site solar power production.", "topic":"power","year":"","intensity":6,"sector":"Energy","region":"","pestle":"Political"},{ "title":"Total renewable energy use (as primary energy) will increase by about 46% in REmap.", "topic":"energy","year":"","intensity":8,"sector":"Energy","region":"","pestle":"Industries"},{ "title":"The production costs of biofuels are expected to decrease.", "topic":"production","year":"","intensity":3,"sector":"Energy","region":"","pestle":"Industries"},{ "title":"New non-renewable energy technologies could be more costly.", "topic":"energy","year":"","intensity":2,"sector":"Energy","region":"","pestle":"Technological"},{ "title":"One can expect lower coal prices to pose little threat to the uptake of renewables in the power sector.", "topic":"power","year":"","intensity":3,"sector":"Energy","region":"","pestle":"Political"},{ "title":"Renewable power generation will have to increase still more.", "topic":"power","year":"","intensity":3,"sector":"Energy","region":"","pestle":"Political"},{ "title":"Efforts to stimulate the economy by making rates superlow or even negative are self-defeating because savers will become even thriftier to reach their nest egg targets.", "topic":"economy","year":"","intensity":3,"sector":"","region":"","pestle":"Economic"},{ "title":"Natural gas consumption has increased steadily since the 1970s, now accounting for nearly 25 percent of global primary energy consumption. Global demand for natural gas is projected to increase strongly over the medium term.", "topic":"gas","year":"","intensity":"","sector":"Energy","region":"World","pestle":"Industries"},{ "title":"The expansion of the middle class in emerging giants is expected to increase dramatically the demand for transport services and the level of car ownership and to support oil demand growth.", "topic":"oil","year":"","intensity":3,"sector":"Energy","region":"","pestle":"Economic"},{ "title":"Non-OPEC supply is expected to shrink for the first time in eight years."}]

s.", "topic": "", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": ""}, {"title": "For the next year, world oil demand is expected to grow at the much slower pace of 1.2 mbd.", "topic": "oil", "year": 2016, "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "The Philippines will move towards becoming an economy of traders and smugglers rather than manufacturers.", "topic": "economy", "year": "", "intensity": 6, "sector": "", "region": "South-Eastern Asia", "pestle": "Economic"}, {"title": "Technavio's analysts forecast the global maritime information market to grow at a CAGR of 9.39% during the period 2016-2020.", "topic": "information", "year": 2016, "intensity": 16, "sector": "", "region": "World", "pestle": "Economic"}, {"title": "Soybean export value is forecast to drop \$3.2 billion to \$18.1 billion while soybean meal is projected \$1.0 billion lower at \$4.0 billion. Soybean oil export value is also forecast to fall. Growing exports from South America are expected to hinder sales from the United States.", "topic": "export", "year": "", "intensity": 36, "sector": "Retail", "region": "Northern America", "pestle": "Economic"}, {"title": "U.S. soybean export value is forecast to drop \$3.2 billion to \$18.1 billion while soybean meal is projected \$1.0 billion lower at \$4.0 billion. Soybean oil export value is also forecast to fall.", "topic": "export", "year": "", "intensity": 48, "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "The EU is expected to continue its slow recovery.", "topic": "", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": ""}, {"title": "The rest of South and Southeast Asia, excluding India and Japan, is expected to remain steady in 2015 and 2016 despite widespread medium-term concern about debt levels, inflation, and slowing demand from China.", "topic": "debt", "year": 2016, "intensity": 16, "sector": "", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "Japan is expected to avoid a recession as easing credit conditions have supported domestic demand and export expansion.", "topic": "export", "year": "", "intensity": 6, "sector": "Retail", "region": "Eastern Asia", "pestle": "Economic"}, {"title": "3D printing key materials are expected to have a total market of over \$9B by 2026.", "topic": "market", "year": "", "intensity": 9, "sector": "", "region": "", "pestle": "Economic"}, {"title": "The state of emergency declared following the latest coup attempt in Turkey could enable the government in Ankara to legislate without going through the parliament.", "topic": "government", "year": "", "intensity": 4, "sector": "Government", "region": "Western Asia", "pestle": "Political"}, {"title": "Royal Dutch Shell's \$54 billion purchase of BG Group could turn out to be a major loser if LNG markets remain depressed for years to come.", "topic": "market", "year": "", "intensity": 24, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Latin American GDP is still forecast to contract 0.5% in 2016.", "topic": "gdp", "year": 2016, "intensity": 12, "sector": "", "region": "", "pestle": "Economic"}, {"title": "The recession in Russia is now forecast to be slightly more mild (-0.9% now forecast for 2016 instead of -1.2%).", "topic": "", "year": "", "intensity": 4, "sector": "", "region": "Eastern Europe", "pestle": ""}, {"title": "An existing fuel-oil tank could be replaced by a bi-ION tank.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Any foreign oil tankers approaching the Libyan coast will be attacked by the country's air force.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "UK household consumption growth is projected to slow gradually.", "topic": "growth", "year": "", "intensity": 6, "sector": "", "region": "Northern Europe", "pestle": "Economic"}, {"title": "Stringent environmental regulations in the European Union and fluctuating crude oil prices will further encourage the demand for electric vehicle batteries.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Technological"}, {"title": "A new catalyst could make biodegradable plastics derived from renewable materials-promising alternatives to plastics made from oil.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Oil and gas needs to hire between 80,000 and 100,000 people by the end of 2018 just to keep up.", "topic": "ga

s","year":2018,"intensity":"","sector":"Energy","region":"","pestle":"Industries"}, {"title":"About 7 million people in the Central and Eastern U.S. are at risk of man-made earthquakes powerful enough to crack walls.","topic":"","year":"","intensity":2,"sector":"","region":"Northern America","pestle":""}, {"title":"Brent crude, the international oil-price benchmark, will average \$56 a barrel next year.","topic":"","year":2016,"intensity":8,"sector":"","region":"","pestle":""}, {"title":"A properly integrated low carbon industrial strategy has to send a signal that the UK will not be indefinitely open for high carbon business.","topic":"business","year":"","intensity":6,"sector":"Support services","region":"Northern Europe","pestle":"Organization"}, {"title":"The Economist Intelligence Unit does not expect a marked recovery in oil prices before 2017 and investor confidence is likely to lag.","topic":"oil","year":"","intensity":16,"sector":"Security","region":"","pestle":"Economic"}, {"title":"An ambitious plan to break Saudi Arabia's dependence on oil but that will not happen for years.","topic":"oil","year":"","intensity":6,"sector":"Energy","region":"Western Asia","pestle":"Industries"}, {"title":"Lots of profit taking could ensue in natural resources-related stocks as well as emerging-markets should oil prices sink well below \$40.","topic":"oil","year":"","intensity":6,"sector":"Energy","region":"","pestle":"Economic"}, {"title":"The recent slide in oil prices represents a potential risk as investors remain wary of another sharp downturn that could again act as a headwind for stock prices.","topic":"oil","year":"","intensity":2,"sector":"Energy","region":"","pestle":"Economic"}, {"title":"The demand for commodities, in particular crude oil, base metals and gold will remain healthy in 2016.","topic":"oil","year":2016,"intensity":12,"sector":"Energy","region":"","pestle":"Economic"}, {"title":"Lower energy demand would mean that China could cut its projected oil imports by up to 15 percent and its CO2 emissions by at least 20 percent by 2020-while helping reduce other environmental costs.","topic":"oil","year":"","intensity":8,"sector":"Energy","region":"Eastern Asia","pestle":"Environmental"}, {"title":"The world oil market will work through its current oversupply and rebalance in early 2020 at market-clearing prices that will be in the range of \$53 to \$60 a barrel.","topic":"oil","year":2020,"intensity":24,"sector":"Energy","region":"World","pestle":"Economic"}, {"title":"Ultraviolet light is changing the structure of the oil spilled during the Deepwater Horizon (DWH) accident in the Gulf of Mexico into something more toxic, possibly further threatening commercially and ecologically important fishes.","topic":"oil","year":"","intensity":4,"sector":"Energy","region":"Central America","pestle":"Environmental"}, {"title":"EU inflation is predicted to recover gradually over 2017 on the back of higher oil prices, and a slightly lower euro towards the dollar, with nominal GDP growth reaching 3.6% in 2017, 0.3 pps. less than expected in spring. Growth is projected to ease further in 2018 to 2.1%.","topic":"growth","year":2018,"intensity":6,"sector":"","region":"","pestle":"Economic"}, {"title":"Inflation in Spain is predicted to recover gradually over 2017 on the back of higher oil prices.","topic":"oil","year":"","intensity":6,"sector":"Energy","region":"Southern Europe","pestle":"Industries"}, {"title":"The price of oil is probably going to stay very low for years to come..","topic":"oil","year":2016,"intensity":3,"sector":"Energy","region":"","pestle":"Industries"}, {"title":"Higher temperatures related to climate change could shrink global economic output by over \$2 trillion by 2030.","topic":"climate change","year":"","intensity":48,"sector":"Food & agriculture","region":"World","pestle":"Environmental"}, {"title":"The Energy Information Administration's AEO 2015 projected a wide range of possible oil prices out to 2040.","topic":"oil","year":"","intensity":12,"sector":"Energy","region":"","pestle":"Industries"}, {"title":"Analysts for Goldman Sachs <GS> predicted crude oil prices would stay in the \$45-to -\$50 \\barrel range till mid-2017.","topic":"oil","year":"","intensity":24,"sector":"Energy","region":"","pestle":"Industries"}, {"title":"Production levels in the United States are going to be cut by 10% by 2020 as the shale oil boom fades."}]

ng to begin to decline again because the oil debt crisis is about to explode.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Political"}, {"title": "Oil prices will remain in a \$45 a barrel to \$50 a barrel trading range through mid-2017.", "topic": "oil", "year": "", "intensity": 20, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Rising crude oil and natural gas prices will impact the competitiveness of conventional solvents.", "topic": "gas", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Green solvent demand will outpace conventional solvent demand in food production, chemical processing, cosmetics and toiletries.", "topic": "food", "year": "", "intensity": 3, "sector": "Food & agriculture", "region": "", "pestle": "Industries"}, {"title": "Ghana's real gross domestic product (GDP) growth is projected to rebound to 5,2 percent in 2016 from 3,4 in 2015.", "topic": "growth", "year": "", "intensity": 6, "sector": "", "region": "Western Africa", "pestle": "Economic"}, {"title": "Mining will remain the top 3 end-users in the global water and wastewater treatment chemicals market.", "topic": "water", "year": "", "intensity": 9, "sector": "Water", "region": "World", "pestle": "Economic"}, {"title": "Gas prices are projected to remain low until the EIA expects global oil inventory draws to begin in the third quarter of 2017.", "topic": "gas", "year": 2017, "intensity": 20, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Workers face a significant health risk from inhalation of RCS during hydraulic fracturing and other oil and gas extraction tasks.", "topic": "gas", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Healthcare"}, {"title": "Gas prices will be influenced by oil prices for several years.", "topic": "gas", "year": 2016, "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Natural gas use in transportation will balloon by more than 200 percent between 2014 and 2035.", "topic": "gas", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Non-OPEC output will drop just 100,000 next year.", "topic": "", "year": 2016, "intensity": 4, "sector": "", "region": "", "pestle": ""}, {"title": "Oil explorers will be able to add 9 million barrels a day to global supply by 2025 with Brent crude under \$60.", "topic": "oil", "year": "", "intensity": 24, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Global inflation is expected to pick up somewhat in 2017 as past commodity price decreases gradually fall out of 12-month inflation rate calculations.", "topic": "", "year": 2017, "intensity": 12, "sector": "", "region": "World", "pestle": ""}, {"title": "A combination of plunging oil revenues and weakened investor confidence will push Nigeria into recession.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Western Africa", "pestle": "Economic"}, {"title": "Stepping back from the Middle East means risking the near-term collapse of Egypt, Jordan, Lebanon.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Northern Africa", "pestle": ""}, {"title": "A single-window neutron detector with a conversion layer will be the first product to reach the market.", "topic": "market", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": "Economic"}, {"title": "A cost-effective and compact neutron sensor for use in harsh environments will become available to the nuclear industry (nuclear power plant monitoring and development, defence and the oil-well industries as well as the high energy and nuclear physics communities).", "topic": "power", "year": "", "intensity": 3, "sector": "Aerospace & defence", "region": "", "pestle": "Political"}, {"title": "Water-scarce California could have almost three times as much fresh groundwater as previously thought.", "topic": "water", "year": "", "intensity": 2, "sector": "Water", "region": "", "pestle": "Environmental"}, {"title": "Sustaining the enormous amount of political willpower that was garnered to achieve the landmark nuclear agreement will be challenging but critical for a resurgence of Iran's oil sector.", "topic": "oil", "year": "", "intensity": 6, "sector": "Aerospace & defence", "region": "Southern Asia", "pestle": "Political"}, {"title": "Iran has projected it will need around \$135 billion for the upstream sector in the sixth Five-Year Development Plan that runs from 2016 to 2021.", "topic": "oil", "year": 2016, "intensity": 12, "sector": "Energy", "region": "Middle East", "pestle": "Political"}]

m 2016-21.", "topic": "", "year": 2016, "intensity": 60, "sector": "", "region": "Southern Asia", "pestle": ""}, {"title": "End users such as chemical, petrochemicals, industrial metallic tools, and metal processing are predicted to register mediocre growth over the course of the forecast period.", "topic": "growth", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Close to 20 % of the EU's Cohesion Policy funds (around EUR 70 billion over the period 2014-2020) is expected to support transport investments.", "topic": "policy", "year": "", "intensity": 48, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "Libya could enter the ongoing OPEC price war with an advantage because its high-quality oil is easily refined and turned into products like gasoline.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern Africa", "pestle": "Political"}, {"title": "U.S. oil production could double under Trump.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "The EIA predicted the U.S. would achieve energy independence in 2028 if oil prices continue a modest and slow rise.", "topic": "oil", "year": 2028, "intensity": 15, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Although copper lags behind the 2016 performances of oil and gold, it seems like the bottom was reached back in January, which is a good news. Moreover a copper market deficit is expected to emerge in the coming years.", "topic": "market", "year": 2016, "intensity": "", "sector": "", "region": "", "pestle": "Economic"}, {"title": "Some expect future U.S. administrations to take a tougher approach toward Saudi Arabia on the question of radical religious ideology.", "topic": "administration", "year": "", "intensity": 6, "sector": "Support services", "region": "Western Asia", "pestle": "Organization"}, {"title": "In Nigeria, economic activity is now projected to contract in 2016, as the economy adjusts to foreign currency shortages as a result of lower oil receipts, low power generation, and weak investor confidence. GDP is projected to remain flat in 2016.", "topic": "gdp", "year": 2016, "intensity": 12, "sector": "", "region": "Western Africa", "pestle": "Economic"}, {"title": "The global economy remains highly vulnerable to adverse shocks with market turbulence, oil price crash, weak commodity prices & continued geo-political conflict as key threats & risk factors.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Trimmer inventories and a pickup in household demand will underpin factory activity.", "topic": "factory", "year": "", "intensity": 3, "sector": "Manufacturing", "region": "", "pestle": "Industries"}, {"title": "Many analysts project a soft oil market with very low US and EU growth and slower growth in BRIC economies.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "There will be at least 100 times as many wind farms as there are today by 2035.", "topic": "farm", "year": "", "intensity": 9, "sector": "", "region": "", "pestle": "Environmental"}, {"title": "Offshore energy supplies will expand by 2035 - offshore oil production is expected to be 48% of world supply and natural gas will see a 60% increase.", "topic": "gas", "year": "", "intensity": 9, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "The reduction of US exports will itself be an almost-certain consequence of Brexit.", "topic": "export", "year": "", "intensity": 6, "sector": "Retail", "region": "Northern America", "pestle": "Economic"}, {"title": "Shale producers could surprise once again to the upside and if that's how it works out the additional supply from OPEC could bring about an increase in supply that outpaces demand.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "", "pestle": ""}, {"title": "India's demand will carry oil next year.", "topic": "oil", "year": 2016, "intensity": 6, "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "Expectations are oil demand for 2017 will reach 95.3 million barrels per day.", "topic": "oil", "year": 2017, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "In its most recent report OPEC said the surplus for oil will decline in 2017, driven primarily by an increase in demand and a drop in sup

ply from the U.S., Norway and Mexico.", "topic": "oil", "year": 2017, "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Technologies in communications and new forms of networking will enable citizens to coalesce and challenge governments and multi-billion dollar corporations.", "topic": "technology", "year": "", "intensity": 3, "sector": "Media & entertainment", "region": "", "pestle": "Political"}, {"title": "Trialled and\\ or commercialised.19 Increased emphasis will be placed on \\ cleaner\\ forms of transport.", "topic": "transport", "year": "", "intensity": 3, "sector": "Retail", "region": "", "pestle": "Industries"}, {"title": "There will be an increased need to use non-energy resources sustainably.", "topic": "energy", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Greater global demand for energy will continue.", "topic": "energy", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "By 2017, all European companies will have to comply with an EU Sustainability Disclosure mandate for sustainability communications.", "topic": "communication", "year": "", "intensity": 16, "sector": "Media & entertainment", "region": "", "pestle": "Social"}, {"title": "Most global oil demand will come from the transport sector in non-OECD countries.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Intense storms will become more frequent.", "topic": "storm", "year": "", "intensity": 3, "sector": "", "region": "", "pestle": "Environmental"}, {"title": "Oil use is expected to grow in China by 57% between 2012 and 2040.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "Eastern Asia", "pestle": "Industries"}, {"title": "Most of the increase in demand for petroleum-based fuels is expected to occur in the developing world.", "topic": "", "year": "", "intensity": 3, "sector": "", "region": "World", "pestle": ""}, {"title": "Greenhouse gas emissions are expected to rise by an estimated 34% between 2012 and 2040 (from 32.3 billion to 43.2 billion metric tons).", "topic": "greenhouse gas", "year": "", "intensity": 12, "sector": "Environment", "region": "", "pestle": "Environmental"}, {"title": "Oil consumption is expected to increase by 34% from 90 million to 121 million barrels per day by 2040.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "In 2040, fossil fuels will still have a grip on a staggering 78% of the world energy market.", "topic": "energy", "year": 2040, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Palm oil is expected to grow as a global commodity.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "15% of Indonesia's road fuel demand could potentially be displaced by biofuel made from palm residues without negatively impacting sustainable plantation practices.", "topic": "biofuel", "year": "", "intensity": 4, "sector": "Energy", "region": "South-Eastern Asia", "pestle": "Industries"}, {"title": "Planting oil palm on degraded sites could lead to net increases in landscape carbon in only 10 years.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Lakes are threatened by palm oil expansion.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "One-third of new oil palm plantations in Indonesia and Malaysia will be established on peat soils.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "South-Eastern Asia", "pestle": "Industries"}, {"title": "Without a new vision for biofuel production, there is great risk that this part of Indonesia's renewable energy policy will increase rather than reduce Indonesian emissions.", "topic": "energy", "year": "", "intensity": 4, "sector": "Energy", "region": "South-Eastern Asia", "pestle": "Environmental"}, {"title": "Total harvested oil palm area in Indonesia grew from 4.1 million ha in 2006 to an estimated 8.9 million ha in 2015 and is projected to reach 17 million ha by 2025.", "topic": "oil", "year": "", "intensity": 20, "sector": "Energy", "region": "South-Eastern Asia", "pestle": "Industries"}, {"title": "Policies that continue to promote growing for the use of palm and other oils in biofuel will thus likely exceed the capacity of the industry

to expand sustainably.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "New oil palm plantations site d on degraded or Imperata grasslands could realize significant carbon savings with low biodiversity impacts.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "In the coming years the price of energy commodities in the global markets will remain at a moderate level.", "topic": "energy", "year": 2016, "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Oil production growth in the OPEC countries will be largely offset by deepening declines in oil production in the United States.", "topic": "oil", "year": "", "intensity": 9, "sector": "Energy", "region": "Northern America", "pestle": "Economic"}, {"title": "In the absence of agreement as to the measures aimed at increasing oil prices, high oil production in the OPEC countries should be expected.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Oil prices in the global markets are expected to stabilise.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Less-than-expected growth in bio consumption by Indonesia's largest diesel buyer could weigh on palm prices as more supplies are diverted to the global market.", "topic": "growth", "year": "", "intensity": 4, "sector": "", "region": "South-Eastern Asia", "pestle": "Economic"}, {"title": "Vietnam's oil product imports will rise further through next year with growing demand.", "topic": "oil", "year": "", "intensity": 6, "sector": "", "region": "South-Eastern Asia", "pestle": ""}, {"title": "The economic fallout of Brexit will only potentially delay the pace of oil price recovery and will not derail it.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Oil prices will move higher as the global stock surplus falls substantially in 2H16 and 2017.", "topic": "oil", "year": 2017, "intensity": 16, "sector": "Energy", "region": "World", "pestle": "Industries"}, {"title": "Conflicts have the potential to fracture Nigerian society.", "topic": "", "year": "", "intensity": "", "sector": "", "region": "", "pestle": ""}, {"title": "Forecasts the industrial robotics market in APAC to grow at a CAGR of 8.7% during the period 2016-2020 in the top 5 segments.", "topic": "robot", "year": 2016, "intensity": 12, "sector": "Information Technology", "region": "", "pestle": "Economic"}, {"title": "There is risk for an impact on the general consumer sentiment across Europe.", "topic": "consumer", "year": "", "intensity": 4, "sector": "Retail", "region": "Europe", "pestle": "Social"}, {"title": "Fed sees U.S. Brexit risks.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "Rhetoric promoting the rise in American oil production and related decline in the relevance of Middle Eastern producers (and thus of geopolitical concerns) is misplaced-and in fact quite the opposite could be true.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Libya anticipates it will resume oil exports from the Es Sider and Ras Lanuf oil ports (two of the country's largest) within a week.", "topic": "export", "year": "", "intensity": 6, "sector": "Retail", "region": "Northern Africa", "pestle": "Economic"}, {"title": "Countries threatened by larger-scale insurgencies might want to consider giving regional groups some share in central government decision-making.", "topic": "government", "year": "", "intensity": 2, "sector": "Government", "region": "", "pestle": "Political"}, {"title": "20 times more sensitivity gravity sensor will transform oil discoveries.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Technological"}, {"title": "In short, future investment dollars will increasingly find their way into U.S. shale at the expense of deepwater.", "topic": "investment", "year": "", "intensity": 6, "sector": "Financial services", "region": "Northern America", "pestle": "Economic"}, {"title": "Each year 3 to 4 million tons of naturally occurring carbon dioxide produced with the natural gas on Gorgon Island in Western Australia will be captured and injected into a deep sandstone formation around 1.5 miles beneath the island.", "topic": "gas", "year": "", "intensity": 8, "sector": "Environment"}]

t","region":"Oceania","pestle":"Environmental"},{"title":"According to a recent U.S. Department of Energy study, an increased supply of CO2 could enable the EOR industry to produce an additional 21-63 billion barrels of oil with today's technology and store 10-20 billion tons of CO2, or up to four years' worth of national emissions.", "topic":"oil", "year":"", "intensity":2, "sector":"Energy", "region":"", "pestle":"Technological"}, {"title":"Real GDP in Canada is expected to grow by 1.3% in 2016.", "topic":"gdp", "year":2016, "intensity":16, "sector":"", "region":"Northern America", "pestle":"Economic"}, {"title":"Corporate profits are expected to shrink for the fourth-consecutive quarter as the one-two punch of cheap oil and the strong U.S. dollar continue to dent bottom lines.", "topic":"oil", "year":"", "intensity":6, "sector":"Energy", "region":"Northern America", "pestle":"Industries"}, {"title":"China's appetite for raw materials will continue to diminish.", "topic":"material", "year":"", "intensity":6, "sector":"", "region":"Eastern Asia", "pestle":"Industries"}, {"title":"The U.S. economy is expected to bounce back to 2.5 percent by 2017.", "topic":"economy", "year":"", "intensity":16, "sector":"", "region":"Northern America", "pestle":"Economic"}, {"title":"Use of IoT and embedded systems will be high in EMEA due to positive response to Industrial IoT and growth of embedded systems in electrical grids, automobile and healthcare.", "topic":"growth", "year":"", "intensity":3, "sector":"Energy", "region":"", "pestle":"Economic"}, {"title":"Among verticals, oil and gas will lead the LPWAN market with a wide range of organizations adopting LPWAN solutions in all regions.", "topic":"gas", "year":"", "intensity":3, "sector":"Energy", "region":"", "pestle":"Economic"}, {"title":"World oil prices will be \$80 per barrel by the end of 2016 and will be at or near \$100 per barrel by the end of 2017.", "topic":"oil", "year":2016, "intensity":24, "sector":"Energy", "region":"World", "pestle":"Industries"}, {"title":"Fish oil is expected to be increasingly processed for direct human use as it is considered beneficial for a wide range of biological functions.", "topic":"oil", "year":"", "intensity":3, "sector":"Energy", "region":"", "pestle":"Industries"}, {"title":"Fishmeal and fish oil will be more frequently used as strategic ingredients to enhance growth at specific stages of fish production.", "topic":"oil", "year":"", "intensity":3, "sector":"Energy", "region":"", "pestle":"Economic"}, {"title":"The percentage of fishmeal and fish oil in compound feeds in aquaculture will continue its downward trend.", "topic":"oil", "year":"", "intensity":3, "sector":"Energy", "region":"", "pestle":"Environmental"}, {"title":"Developing countries will maintain their key role in aquaculture production.", "topic":"production", "year":"", "intensity":3, "sector":"Manufacturing", "region":"", "pestle":"Environmental"}, {"title":"Long-term fish oil prices are not expected revert to lower levels.", "topic":"oil", "year":"", "intensity":3, "sector":"Energy", "region":"", "pestle":"Industries"}, {"title":"Any increase in fishmeal production will need to come from recycling by-products.", "topic":"production", "year":"", "intensity":3, "sector":"Manufacturing", "region":"", "pestle":"Industries"}, {"title":"The fate of Syria will be decided by Moscow and Washington rather than by any of the other diplomatic players.", "topic":"Washington", "year":"", "intensity":6, "sector":"", "region":"Western Asia", "pestle":"Political"}, {"title":"In Saudi Arabia, non-oil revenue in the next four years is expected to rise from \$43 billion to \$141 billion.", "topic":"oil", "year":2016, "intensity":48, "sector":"Energy", "region":"Western Asia", "pestle":"Economic"}, {"title":"Iraq could have become a beacon of oil industry privatisation.", "topic":"oil", "year":"", "intensity":4, "sector":"Energy", "region":"Western Asia", "pestle":"Industries"}, {"title":"The hydrocarbon solvents market is forecast to grow at a CAGR of 2.23% during 2016.", "topic":"market", "year":"", "intensity":"", "sector":"", "region":"", "pestle":"Economic"}, {"title":"Cohen thinks oil prices will go further down in the third quarter of this year before staging a rebound around the fourth quarter of 2017.", "topic":"oil", "year":2017, "intensity":12, "sector":"Energy", "region":"", "pestle":"Industries"}, {"title":"In the Euro area, inflation remains too low, a

nd weak investment, still high unemployment, and the aging of the population will continue to hurt productivity.", "topic": "unemployment", "year": "", "intensity": 3, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "'Information economy' is probably halfway through an S-shaped growth curve and will mature sometime between the 2020s and the 2040s.", "topic": "economy", "year": "", "intensity": 9, "sector": "", "region": "", "pestle": "Economic"}, {"title": "Environmentalists have warned of greater risks of haze and forest fires in Southeast Asia after major palm oil firms ditched a landmark 'zero deforestation' pact in Indonesia.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "South-Eastern Asia", "pestle": "Industries"}, {"title": "The higher US dollar/ringgit rate improves CPO competitiveness against soybean oil (which is priced in US dollar) as CPO price (when translated to US dollar) will be lower.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Palm oil is regaining its competitiveness level against soybean oil and it will likely win global market share of vegetable oils going forward.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Levels of air pollution within European recommended levels have been linked to an increased risk of severe heart attack.", "topic": "pollution", "year": "", "intensity": 2, "sector": "Environment", "region": "", "pestle": "Environmental"}, {"title": "Canada's oil sands production will grow by 42 percent to 3.4 million barrels per day by 2025.", "topic": "oil", "year": "", "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "India's \$13 billion pay increase for federal employees will boost car and motorcycle purchases.", "topic": "car", "year": "", "intensity": 48, "sector": "Manufacturing", "region": "Southern Asia", "pestle": "Social"}, {"title": "Investing large amounts of money in the volatile Middle East carries considerable political risk.", "topic": "money", "year": "", "intensity": 4, "sector": "Financial services", "region": "Western Asia", "pestle": "Economic"}, {"title": "Iran and the Kurdistan Regional Government (KRG) have hammered out the technical details of a plan to build a pipeline that could transfer as much as 250,000 barrels a day of Kurdish oil to Iran.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Southern Asia", "pestle": "Political"}, {"title": "The forests of Indonesia and Malaysia are projected to disappear completely in 20 years if deforestation is not curbed.", "topic": "", "year": "", "intensity": 3, "sector": "", "region": "South-Eastern Asia", "pestle": ""}, {"title": "Experts have pinpointed the destruction of Sumatran and Bornean rainforests in order to produce palm oil as one of the greatest threats to orangutan survival.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Iron ore consumption in Asia is expected to increase at a CAGR of 5.2% to reach 2.6 billion metric tons in 2020.", "topic": "", "year": 2020, "intensity": 12, "sector": "", "region": "Asia", "pestle": ""}, {"title": "Objective-based regulation is considered to be the most suitable form of regulation to manage the environmental risks associated with oil and gas activities.", "topic": "gas", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "U.S. beef consumption is forecasted to decrease by three percent over the next decade.", "topic": "", "year": 2016, "intensity": 4, "sector": "", "region": "Northern America", "pestle": ""}, {"title": "Anticipated growth in global energy demand is expected to boost adoption of lithium-ion batteries over the course of next five years.", "topic": "energy", "year": 2016, "intensity": 6, "sector": "Energy", "region": "World", "pestle": "Economic"}, {"title": "Demand for energy is forecast to increase from 12,928.4 Million Ton Oil Equivalent (MTOE) in 2014 to 17,000 MTOE by 2020.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "Fresh militant attacks in Nigeria will continue to impact oil prices.", "topic": "oil", "year": "", "intensity": 6, "sector": "Energy", "region": "Western Africa", "pestle": "Industries"}, {"title": "Strong bilateral relations will ensure India's energy security

for a long term.", "topic": "security", "year": "", "intensity": 6, "sector": "Energy", "region": "Southern Asia", "pestle": "Political"}, {"title": "The Obama administration finalized rules that will require companies to have strict safety and environmental protection plans in place before they drill for oil or natural gas in the Arctic Ocean.", "topic": "gas", "year": "", "intensity": "", "sector": "Support services", "region": "", "pestle": "Environmental"}, {"title": "By 2035, U.S. coal consumption will need to fall by 60 percent.", "topic": "coal", "year": "", "intensity": 16, "sector": "Energy", "region": "Northern America", "pestle": "Environmental"}, {"title": "The US Securities and Exchange Commission is expected to make a ruling on the Dodd-Frank Wall Street Reform and Consumer Protection Act that requires all energy companies to disclose the specific payments they make to foreign governments for mining and drilling rights.", "topic": "energy", "year": "", "intensity": 9, "sector": "Retail", "region": "Northern America", "pestle": "Political"}, {"title": "Carbon dioxide emissions related to energy will flatten and start to subside about 2035 as efficiency of combustion engines improves.", "topic": "energy", "year": "", "intensity": 3, "sector": "Environment", "region": "", "pestle": "Economic"}, {"title": "Energy demand will grow in emerging and developing countries and decline in Europe and North America.", "topic": "energy", "year": "", "intensity": 6, "sector": "Energy", "region": "Europe", "pestle": "Industries"}, {"title": "Demand for liquid hydrocarbons will become a tug of war between growth the petrochemical sector and declining demand from passenger cars.", "topic": "war", "year": "", "intensity": 3, "sector": "Manufacturing", "region": "", "pestle": "Political"}, {"title": "A well-diversified fuel basket for India could perforce imply much higher contributions of natural gas.", "topic": "gas", "year": "", "intensity": 4, "sector": "Energy", "region": "Southern Asia", "pestle": "Industries"}, {"title": "Fracking's importance will not be going away anytime soon.", "topic": "fracking", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Political"}, {"title": "Exploratory drilling off Cyprus southern shore will begin next year.", "topic": "", "year": "", "intensity": 3, "sector": "", "region": "Western Asia", "pestle": ""}, {"title": "Oil demand growth will flatten to 0.4 percent by 2025.", "topic": "oil", "year": "", "intensity": 12, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "Decommissioning more than 400 oil platforms in the North Sea could cost up to \\u00c2\\u00a370 billion over the next 20 years.", "topic": "oil", "year": 2016, "intensity": 18, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The Belize barrier reef is under threat from overfishing.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Central America", "pestle": ""}, {"title": "Almost half of all natural World Heritage sites are threatened by harmful industrial activities and operations.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "World", "pestle": ""}, {"title": "The continued fallout from Brexit could keep oil prices lower for longer.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Industries"}, {"title": "The U.S. could shoulder even more of the weight of global oil production in the future.", "topic": "oil", "year": "", "intensity": 4, "sector": "Energy", "region": "Northern America", "pestle": "Industries"}, {"title": "Exploration in deepwater and ultra-deepwater is not expected anytime soon despite signs that oil prices could reach \$70 per barrel by end of 2016.", "topic": "oil", "year": 2016, "intensity": "", "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "Robots are being deployed in refineries and natural gas pipelines to investigate problems, to xic spills, oil spills or managing risk in hazardous areas.", "topic": "gas", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Social"}, {"title": "Combustion of methane in buses could significantly improve air quality (especially in Poland).", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "Eastern Europe", "pestle": ""}, {"title": "Newly developed supergelators could help clean oil spills more efficiently and avoid the secondary pollution associated with some alternative cleanup methods.", "topic": "oil", "year": "", "intensity": 2, "sector": "Energy", "region": "", "pestle": "Environmental"}, {"title": "T

he low price of oil is leading to questions about the projected high demand for EV sales.", "topic": "oil", "year": "", "intensity": 3, "sector": "Energy", "region": "", "pestle": "Economic"}, {"title": "A possible Greek exit from European Monetary Union (euro zone) could dampen not only Greek oil product demand, but also potentially curb deliveries across the continent if macro-economic activity were to weaken.", "topic": "oil", "year": "", "intensity": 2, "sector": "Financial services", "region": "", "pestle": "Economic"}, {"title": "U.S. production growth will slow to 300,000 barrels day next year from 900,000 a day in 2015.", "topic": "growth", "year": "", "intensity": "", "sector": "Manufacturing", "region": "Northern America", "pestle": "Economic"}, {"title": "Non-OPEC supply growth is expected to grind to a halt in 2016.", "topic": "growth", "year": 2016, "intensity": 16, "sector": "", "region": "", "pestle": "Economic"}, {"title": "There will be no overall production growth outside the Organization of Petroleum Exporting Countries next year for the first time since 2008.", "topic": "export", "year": "", "intensity": 3, "sector": "Retail", "region": "", "pestle": "Economic"}, {"title": "Earth's surface temperature could exceed historical values as early as 2047.", "topic": "", "year": "", "intensity": 2, "sector": "", "region": "World", "pestle": ""}]'

In [12]: df2

Out[12]:

	title	topic	year	intensity	sector	region	pestle
0	U.S. natural gas consumption is expected to in...	gas		6	Energy	Northern America	Industries
1	Reference case U.S. crude oil production is pr...	oil		6	Energy	Northern America	Industries
2	U.S. petroleum consumption is projected to rem...	consumption		6	Energy	Northern America	Industries
3	Mars, Unilever, Cargill and MondelÄ“z are alre...	oil		6	Environment	Central America	Environmental
4	Polymerization will remain top 3 end-users in ...	market		6		World	Economic
5	High demand for n-Hexane in oil extraction owi...	oil		6	Energy	World	Economic
6	The market for non-military electric watercraf...	market		60	Government		Political
7	Global oil prices will witness much more volat...	oil	2017	16	Energy	World	Economic
8	Nigeria Gross Domestic Product will grow by 0....	gdp	2017	16		Western Africa	Economic
9	A war in Lebanon will increase the already hea...	war		6	Aerospace & defence	Western Asia	Political
10	U.S. production could begin to ramp back up fo...	production		4	Manufacturing	Northern America	Industries
11	More U.S. LNG (liquified natural gas) export c...	export		6	Retail	Northern America	Economic
12	2017 could be another record-breaking year in ...	oil	2017	6	Energy		Industries
13	Oil prices could climb above \$60 quite rapidly.	oil		6	Energy		Industries
14	OPEC, Russia and other non-members of the prod...	oil		12	Energy	Eastern Europe	Industries
15	Industry demand for fish oil will bypass the w...	oil	2019	16	Energy	World	Economic
16	Experts predict the costs of replacing electri...	battery		9	Energy		Technological
17	The global investment cycle will show the firs...		2017	16	Financial services	World	
18	While in the past decade downturns in output f...	biofuel		4	Aerospace & defence	World	Political

	title	topic	year	intensity	sector	region	pestle
19	By 2040, the world could need to replace over ...	oil		8	Energy	Western Asia	Industries
20	Angola is projected to expand at a moderate 1....	policy		8	Financial services	Central Africa	Economic
21	The global economy will accelerate moderately ...	economy	2017	16		World	Economic
22	Analysts at Exane BNP Paribas for their part a...	market	2017	16	Support services		Economic
23	Expect that modest improvements in the macroec...	strategy	2017	24		Northern America	Organization
24	Oil prices in 2017 will be a function of produ...	oil	2017	16	Energy	World	Economic
25	The rise in crude oil prices will play a key r...	oil		6	Energy	World	Economic
26	The future success of the transformation of Eg...	gas		6	Energy	Northern Africa	Economic
27	Natural gas prices could develop a relationshi...	gas		6	Energy	Northern America	Industries
28	Brexit fears and global market trends will ten...	market		6		World	Political
29	Global logistics robots market is expected to ...	robot	2022	72	Information Technology	World	Economic
...
970	U.S. beef consumption is forecasted to decreas...		2016	4		Northern America	
971	Anticipated growth in global energy demand is ...	energy	2016	6	Energy	World	Economic
972	Demand for energy is forecast to increase from...	oil		12	Energy		Industries
973	Fresh militant attacks in Nigeria will continu...	oil		6	Energy	Western Africa	Industries
974	Strong bilateral relations will ensure India's...	security		6	Energy	Southern Asia	Political
975	The Obama administration finalized rules that ...	gas			Support services		Environmental
976	By 2035, U.S. coal consumption will need to fa...	coal		16	Energy	Northern America	Environmental
977	The US Securities and Exchange Commission is e...	energy		9	Retail	Northern America	Political

	title	topic	year	intensity	sector	region	pestle
978	Carbon dioxide emissions related to energy wil...	energy		3	Environment		Economic
979	Energy demand will grow in emerging and develo...	energy		6	Energy	Europe	Industries
980	Demand for liquid hydrocarbons will become a t...	war		3	Manufacturing		Political
981	A well-diversified fuel basket for India could...	gas		4	Energy	Southern Asia	Industries
982	Fracking's importance will not be going away a...	fracking		3	Energy		Political
983	Exploratory drilling off Cyprus southern shore...			3		Western Asia	
984	Oil demand growth will flatten to 0.4 percent ...	oil		12	Energy		Economic
985	Decommissioning more than 400 oil platforms in...	oil	2016	18	Energy		Industries
986	The Belize barrier reef is under threat from o...			2		Central America	
987	Almost half of all natural World Heritage site...			2		World	
988	The continued fallout from Brexit could keep o...	oil		2	Energy		Industries
989	The U.S. could shoulder even more of the weigh...	oil		4	Energy	Northern America	Industries
990	Exploration in deepwater and ultra-deepwater i...	oil	2016		Energy		Environmental
991	Robots are being deployed in refineries and na...	gas		2	Energy		Social
992	Combustion of methane in buses could significa...			2		Eastern Europe	
993	Newly developed supergelators could help clean...	oil		2	Energy		Environmental
994	The low price of oil is leading to questions a...	oil		3	Energy		Economic
995	A possible Greek exit from European Monetary U...	oil		2	Financial services		Economic
996	U.S. production growth will slow to 300,000 ba...	growth			Manufacturing	Northern America	Economic

	title	topic	year	intensity	sector	region	pestle
997	Non-OPEC supply growth is expected to grind to...	growth	2016	16			Economic
998	There will be no overall production growth out...	export		3	Retail		Economic
999	Earth's surface temperature could exceed histo...			2		World	

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In [13]: pd.set_option('display.max_colwidth',400)
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In [14]: df2

Out[14]:

	title	topic	year	intensity	sector	region	pestle
0	U.S. natural gas consumption is expected to increase during much of the projection period.	gas		6	Energy	Northern America	Industries
1	Reference case U.S. crude oil production is projected to recover from recent declines.	oil		6	Energy	Northern America	Industries
2	U.S. petroleum consumption is projected to remain below the 2005 level.	consumption		6	Energy	Northern America	Industries
3	Mars, Unilever, Cargill and Mondeľ“z are already using GFW Commodities to assess deforestation risks in their palm oil, soy and cocoa supply chains across a collective area of land the size of Mexico.	oil		6	Environment	Central America	Environmental
4	Polymerization will remain top 3 end-users in global n-Hexane Market.	market		6		World	Economic
5	High demand for n-Hexane in oil extraction owing to its effectiveness and high yield is expected to propel the global n-Hexane Market.	oil		6	Energy	World	Economic
6	The market for non-military electric watercraft and marine motors will balloon to over \$20 billion worldwide by 2027.	market		60	Government		Political
7	Global oil prices will witness much more volatility in 2017 even though markets may rebalance in the first half of the year if output cuts pledged by producers are implemented.	oil	2017	16	Energy	World	Economic
8	Nigeria Gross Domestic Product will grow by 0.8 percent in 2017 and 2.3 percent in 2018.	gdp	2017	16		Western Africa	Economic
9	A war in Lebanon will increase the already heavy economic burden Saudi Arabia is carrying.	war		6	Aerospace & defence	Western Asia	Political

	title	topic	year	intensity	sector	region	pestle
10	U.S. production could begin to ramp back up following the rig count upturn.	production		4	Manufacturing	Northern America	Industries
11	More U.S. LNG (liquified natural gas) export capacity is expected to hit the market.	export		6	Retail	Northern America	Economic
12	2017 could be another record-breaking year in oil production.	oil	2017	6	Energy		Industries
13	Oil prices could climb above \$60 quite rapidly.	oil		6	Energy		Industries
14	OPEC, Russia and other non-members of the producer group will curtail oil output by nearly 1.8 million bpd.	oil		12	Energy	Eastern Europe	Industries
15	Industry demand for fish oil will bypass the world's fish oil supply in 2019.	oil	2019	16	Energy	World	Economic
16	Experts predict the costs of replacing electric batteries will decrease by 2.5x by 2025.	battery		9	Energy		Technological
17	The global investment cycle will show the first signs of growth in 2017, since 2014, as confidence the oil and gas sector will start to return, with exploration and production spend set to rise by 3% to \$450-billion.		2017	16	Financial services	World	
18	While in the past decade downturns in output from old oilfields were replaced with new production enabling steady overall conventional oil supplies, replacement of production is much more doubtful in the immediate years ahead.	biofuel		4	Aerospace & defence	World	Political
19	By 2040, the world could need to replace over 4 times the current crude oil output of Saudi Arabia (or more than 40 mbd).	oil		8	Energy	Western Asia	Industries

	title	topic	year	intensity	sector	region	pestle
20	Angola is projected to expand at a moderate 1.2 percent pace as high inflation and tight policy continue to weigh on consumption and investment.	policy		8	Financial services	Central Africa	Economic
21	The global economy will accelerate moderately to 2.7 percent in 2017.	economy	2017	16		World	Economic
22	Analysts at Exane BNP Paribas for their part are expecting a rise in demand on the main luxury goods markets in 2017.	market	2017	16	Support services		Economic
23	Expect that modest improvements in the macroeconomic backdrop will help lift S&P 500 operating EPS by 10 percent to \$116 and they have a year-end S&P 500 target of 2200.	strategy	2017	24		Northern America	Organization
24	Oil prices in 2017 will be a function of producers sticking to the production cuts and recovery in global demand conditions.	oil	2017	16	Energy	World	Economic
25	The rise in crude oil prices will play a key role in shaping global inflation dynamics.	oil		6	Energy	World	Economic
26	The future success of the transformation of Egypt's oil and gas industry will further be related to the diversification of energy resources and liberalisation of the North Africa region's energy markets.	gas		6	Energy	Northern Africa	Economic
27	Natural gas prices could develop a relationship with the US Dollar Index that's similar to the relationship between crude oil and the US Dollar Index.	gas		6	Energy	Northern America	Industries
28	Brexit fears and global market trends will tend to dominate in the short term.	market		6		World	Political

	title	topic	year	intensity	sector	region	pestle
29	Global logistics robots market is expected to grow to around \$11.18 billion in 2022.	robot	2022	72	Information Technology	World	Economic
...
970	U.S. beef consumption is forecasted to decrease by three percent over the next decade.		2016	4		Northern America	
971	Anticipated growth in global energy demand is expected to boost adoption of lithium-ion batteries over the course of next five years.	energy	2016	6	Energy	World	Economic
972	Demand for energy is forecast to increase from 12,928.4 Million Ton Oil Equivalent (MTOE) in 2014 to 17,000 MTOE by 2020.	oil		12	Energy		Industries
973	Fresh militant attacks in Nigeria will continue to impact oil prices.	oil		6	Energy	Western Africa	Industries
974	Strong bilateral relations will ensure India's energy security for a long term.	security		6	Energy	Southern Asia	Political
975	The Obama administration finalized rules that will require companies to have strict safety and environmental protection plans in place before they drill for oil or natural gas in the Arctic Ocean.	gas			Support services		Environmental
976	By 2035, U.S. coal consumption will need to fall by 60 percent.	coal		16	Energy	Northern America	Environmental
977	The US Securities and Exchange Commission is expected to make a ruling on the Dodd-Frank Wall Street Reform and Consumer Protection Act that requires all energy companies to disclose the specific payments they make to foreign governments for mining and drilling rights.	energy		9	Retail	Northern America	Political

	title	topic	year	intensity	sector	region	pestle
978	Carbon dioxide emissions related to energy will flatten and start to subside about 2035 as efficiency of combustion engines improves.	energy		3	Environment		Economic
979	Energy demand will grow in emerging and developing countries and decline in Europe and North America.	energy		6	Energy	Europe	Industries
980	Demand for liquid hydrocarbons will become a tug of war between growth the petrochemical sector and declining demand from passenger cars.	war		3	Manufacturing		Political
981	A well-diversified fuel basket for India could perforce imply much higher contributions of natural gas.	gas		4	Energy	Southern Asia	Industries
982	Fracking's importance will not be going away anytime soon.	fracking		3	Energy		Political
983	Exploratory drilling off Cyprus southern shore will begin next year.			3		Western Asia	
984	Oil demand growth will flatten to 0.4 percent by 2025.	oil		12	Energy		Economic
985	Decommissioning more than 400 oil platforms in the North Sea could cost up to £70 billion over the next 20 years.	oil	2016	18	Energy		Industries
986	The Belize barrier reef is under threat from overfishing.			2		Central America	
987	Almost half of all natural World Heritage sites are threatened by harmful industrial activities and operations.			2		World	
988	The continued fallout from Brexit could keep oil prices lower for longer.	oil		2	Energy		Industries
989	The U.S. could shoulder even more of the weight of global oil production in the future.	oil		4	Energy	Northern America	Industries

	title	topic	year	intensity	sector	region	pestle
990	Exploration in deepwater and ultra-deepwater is not expected anytime soon despite signs that oil prices could reach \$70 per barrel by end of 2016.	oil	2016		Energy		Environmental
991	Robots are being deployed in refineries and natural gas pipelines to investigate problems, toxic spills, oil spills or managing risk in hazardous areas.	gas		2	Energy		Social
992	Combustion of methane in buses could significantly improve air quality (especially in Poland).			2		Eastern Europe	
993	Newly developed supergelators could help clean oil spills more efficiently and avoid the secondary pollution associated with some alternative cleanup methods.	oil		2	Energy		Environmental
994	The low price of oil is leading to questions about the projected high demand for EV sales.	oil		3	Energy		Economic
995	A possible Greek exit from European Monetary Union (euro zone) could dampen not only Greek oil product demand, but also potentially curb deliveries across the continent if macro-economic activity were to weaken.	oil		2	Financial services		Economic
996	U.S. production growth will slow to 300,000 barrels day next year from 900,000 a day in 2015.	growth			Manufacturing	Northern America	Economic
997	Non-OPEC supply growth is expected to grind to a halt in 2016.	growth	2016	16			Economic
998	There will be no overall production growth outside the Organization of Petroleum Exporting Countries next year for the first time since 2008.	export		3	Retail		Economic
999	Earth's surface temperature could exceed historical values as early as 2047.			2		World	

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In [49]: df3=df2[['topic']]
```

```
In [50]: df4=df3.to_csv('textre.txt',sep=' ', index=False)
```

```
In [52]: df4
```

```
In [66]: punctuations = ' '!()-[]{};:'"\<>./?@$%^&*~'''
```

```
my_str = " gas oil consumption oil market oil market oil gdp war production ex
port oil oil oil oil battery "" biofuel oil policy economy market strategy oil
oil gas gas market robot oil oil growth growth growth economic energy "" oil o
il oil oil oil oil oil oil oil oil oil oil oil oil "" oil oil oil oil
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n oil oil oil oil emission trade emission risk oil growth investment robot eco
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oduction oil production oil oil energy energy oil market oil "" "" "" oil gaso
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s coal energy energy energy war gas fracking "" oil oil "" "" oil oil oil gas
"" oil oil oil growth growth export ""

```
# To take input from the user
# my_str = input("Enter a string: ")

# remove punctuation from the string
no_punct = ""
for char in my_str:
    if char not in punctuations:
        no_punct = no_punct + char

# display the unpunctuated string
print(no_punct)
```

gas oil consumption oil market oil market oil gdp war production export oil
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l export government oil investment gas oil gdp oil material economy growth ga
s oil oil oil oil production oil production Washington oil oil market oil une
mployment economy oil oil oil pollution oil car money oil oil gas energy o
il oil security gas coal energy energy energy war gas fracking oil oil oil
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```
In [26]: wordstring = 'gas oil consumption oil market oil market oil gdp war production
export oil oil oil oil battery biofuel oil policy economy market strategy oil
oil gas gas market robot oil oil growth growth growth economic energy oil oil
oil oil oil oil oil oil oil oil oil oil oil oil oil oil oil oil oil oil oil o
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gence oil oil climate energy power oil crisis transport oil oil oil policy ex
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y oil oil growth oil politics oil power oil gas business oil oil work gas o
il oil production production crisis energy growth coal gamification economy oi
l gas finance production oil energy gas gas oil oil interest rate demand risk
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mate biofuel gas oil plastic oil electricity oil bank electricity gas gasolin
e production oil demand oil production gas oil economy growth oil growth oil o
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n consumption production production oil tax city power oil oil oil carbon o
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gas fracking oil oil oil oil oil gas oil oil oil growth growth export '

```
wordlist = wordstring.split()
```

```
wordfreq = []
```

```
for w in wordlist:
```

```
    wordfreq.append(wordlist.count(w))
```

```
print("String\n" + wordstring + "\n")
```

```
print("List\n" + str(wordlist) + "\n")
```

```
print("Frequencies\n" + str(wordfreq) + "\n")
```

```
print("Pairs\n" + str(list(zip(wordlist, wordfreq))))
```

String

gas oil consumption oil market oil market oil gdp war production export oil o
il oil oil battery biofuel oil policy economy market strategy oil oil gas ga
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business oil oil oil oil gas 3D gas gas oil oil oil production oil production
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List

['gas', 'oil', 'consumption', 'oil', 'market', 'oil', 'market', 'oil', 'gdp',
'war', 'production', 'export', 'oil', 'oil', 'oil', 'oil', 'battery', 'biofue
l', 'oil', 'policy', 'economy', 'market', 'strategy', 'oil', 'oil', 'gas', 'g
as', 'market', 'robot', 'oil', 'oil', 'growth', 'growth', 'growth', 'economi
c', 'energy', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil',
'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil',
'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'gas', 'expor
t', 'economy', 'oil', 'market', 'production', 'food', 'oil', 'administratio
n', 'oil', 'unemployment', 'gas', 'gas', 'market', 'oil', 'oil', 'trade', 'oi
l', 'oil', 'oil', 'oil', 'oil', 'demand', 'growth', 'economic', 'growth', 'en
ergy', 'export', 'oil', 'industry', 'capital', 'food', 'oil', 'worker', 'oi
l', 'growth', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'export', 'tension', 'terror
ism', 'oil', 'oil', 'oil', 'energy', 'energy', 'gas', 'transport', 'oil', 'pe
ak', 'oil', 'vehicle', 'tourist', 'artificial', 'intelligence', 'oil', 'oil',
'climate', 'energy', 'power', 'oil', 'crisis', 'transport', 'oil', 'oil', 'oi
l', 'policy', 'export', 'oil', 'ice', 'gas', 'gas', 'gas', 'oil', 'oil', 'pop
ulation', 'oil', 'oil', 'oil', 'oil', 'gas', 'growth', 'industry', 'oil', 'oi
l', 'growth', 'oil', 'politics', 'oil', 'power', 'oil', 'gas', 'business', 'o
il', 'oil', 'work', 'gas', 'oil', 'oil', 'production', 'production', 'crisi
s', 'energy', 'growth', 'coal', 'gamification', 'economy', 'oil', 'gas', 'fin
ance', 'production', 'oil', 'energy', 'gas', 'gas', 'oil', 'oil', 'interest',
'rate', 'demand', 'risk', 'export', 'economic', 'growth', 'energy', 'gas', 'o
il', 'oil', 'oil', 'food', 'vehicle', 'export', 'oil', 'oil', 'oil', 'growt
h', 'oil', 'oil', 'economy', 'oil', 'inflation', 'export', 'asylum', 'econom
y', 'export', 'oil', 'export', 'oil', 'oil', 'production', 'oil', 'oil', 'exp
ort', 'oil', 'coal', 'policy', 'resource', 'market', 'growth', 'climate', 'bi
ofuel', 'gas', 'oil', 'plastic', 'oil', 'electricity', 'oil', 'bank', 'electr
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n', 'gas', 'oil', 'economy', 'growth', 'oil', 'growth', 'oil', 'oil', 'oil',
'oil', 'gas', 'car', 'oil', 'vehicle', 'oil', 'oil', 'oil', 'economic', 'grow
th', 'market', 'export', 'gas', 'oil', 'money', 'oil', 'oil', 'oil', 'gas',
'oil', 'growth', 'oil', 'production', 'export', 'oil', 'technology', 'gas',
'export', 'oil', 'consumption', 'energy', 'oil', 'aquaculture', 'oil', 'expor
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wth', 'oil', 'gas', 'food', 'gdp', 'investment', 'oil', 'oil', 'money', 'grow
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owth', 'growth', 'emission', 'coal', 'oil', 'climate', 'change', 'infrastruct
ure', 'production', 'coal', 'oil', 'oil', 'gas', 'energy', 'government', 'oi

l', 'economic', 'energy', 'oil', 'gas', 'security', 'gas', 'gas', 'gas', 'software', 'gas', 'oil', 'emission', 'oil', 'oil', 'oil', 'oil', 'emission', 'trade', 'emission', 'risk', 'oil', 'growth', 'investment', 'robot', 'economic', 'growth', 'growth', 'building', 'gas', 'oil', 'coal', 'export', 'economy', 'growth', 'oil', 'oil', 'demand', 'oil', 'oil', 'oil', 'infrastructure', 'oil', 'export', 'oil', 'economy', 'growth', 'growth', 'growth', 'economy', 'growth', 'growth', 'economic', 'growth', 'energy', 'unemployment', 'oil', 'gas', 'oil', 'transportation', 'energy', 'wealth', 'market', 'oil', 'oil', 'oil', 'gas', 'economy', 'gas', 'oil', 'oil', 'clothing', 'bank', 'production', 'security', 'energy', 'gas', 'growth', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'oil', 'oil', 'shortage', 'bank', 'economy', 'bank', 'export', 'export', 'oil', 'gas', 'production', 'export', 'production', 'oil', 'gas', 'investment', 'energy', 'oil', 'gas', 'oil', 'gas', 'energy', 'oil', 'oil', 'oil', 'oil', 'capital', 'gas', 'oil', 'energy', 'oil', 'oil', 'gas', 'debt', 'technology', 'energy', 'gas', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'agriculture', 'debt', 'oil', 'oil', 'gas', 'policy', 'car', 'vehicle', 'oil', 'consumption', 'oil', 'gas', 'oil', 'production', 'energy', 'energy', 'car', 'oil', 'oil', 'production', 'production', 'production', 'consumption', 'production', 'production', 'oil', 'tax', 'city', 'power', 'oil', 'oil', 'oil', 'carbon', 'oil', 'gas', 'export', 'export', 'oil', 'oil', 'economy', 'policy', 'economic', 'growth', 'industry', 'export', 'oil', 'emission', 'gas', 'gas', 'oil', 'oil', 'gas', 'gas', 'production', 'growth', 'oil', 'oil', 'export', 'growth', 'oil', 'economy', 'gas', 'trade', 'oil', 'economic', 'growth', 'export', 'brexit', 'oil', 'growth', 'economy', 'oil', 'gas', 'growth', 'oil', 'economy', 'oil', 'oil', 'oil', 'oil', 'oil', 'market', 'gas', 'oil', 'oil', 'oil', 'workforce', 'oil', 'oil', 'growth', 'gas', 'oil', 'energy', 'change', 'automaker', 'oil', 'oil', 'oil', 'oil', 'oil', 'market', 'oil', 'oil', 'population', 'car', 'oil', 'oil', 'energy', 'gas', 'oil', 'production', 'oil', 'gasoline', 'oil', 'export', 'growth', 'oil', 'oil', 'oil', 'oil', 'oil', 'growth', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'economic', 'growth', 'oil', 'oil', 'oil', 'oil', 'gas', 'oil', 'gas', 'oil', 'oil', 'growth', 'oil', 'car', 'oil', 'oil', 'power', 'oil', 'export', 'production', 'worker', 'population', 'oil', 'gas', 'oil', 'oil', 'power', 'energy', 'gdp', 'power', 'energy', 'nuclear', 'nuclear', 'debt', 'business', 'oil', 'oil', 'oil', 'oil', 'gas', '3D', 'gas', 'gas', 'oil', 'oil', 'oil', 'production', 'oil', 'production', 'oil', 'export', 'economic', 'growth', 'oil', 'gas', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'oil', 'population', 'oil', 'oil', 'oil', 'vehicle', 'growth', 'oil', 'growth', 'energy', 'gas', 'power', 'water', 'energy', 'gdp', 'data', 'energy', 'fossil', 'fuel', 'oil', 'market', 'oil', 'growth', 'oil', 'oil', 'oil', 'business', 'export', 'export', 'policy', 'oil', 'election', 'oil', 'export', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'greenhouse', 'gas', 'oil', 'gas', 'information', 'wealth', 'gas', 'shale', 'gas', 'gas', 'ice', 'oil', 'technology', 'gas', 'gas', 'oil', 'oil', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'production', 'production', 'oil', 'transportation', 'oil', 'oil', 'oil', 'production', 'growth', 'oil', 'growth', 'oil', 'market', 'production', 'oil', 'production', 'oil', 'oil', 'energy', 'energy', 'oil', 'market', 'oil', 'oil', 'gasoline', 'gasoline', 'gas', 'energy', 'oil', 'gas', 'power', 'energy', 'production', 'energy', 'power', 'power', 'economy', 'gas', 'oil', 'oil', 'economy', 'information', 'export', 'export', 'debt', 'export', 'market', 'government', 'market', 'gdp', 'oil', 'oil', 'growth', 'oil', 'oil', 'gas', 'business', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'growth', 'oil', 'oil', 'climate', 'change', 'oil', 'oil', 'oil', 'oil', 'gas', 'food', 'growth', 'water', 'gas', 'gas', 'gas', 'gas', 'oil', 'oil', 'market', 'power', 'water', 'oil', 'growth', 'policy', 'oil', 'oil', 'oil', 'market', 'administration', 'gdp', 'oil', 'factory', 'oil', 'farm', 'gas', 'export', 'oil', 'oil', 'oil', 'technology', 'transport', 'energy', 'energy', 'communication', 'oil', 'storm', 'oil', 'greenhouse', 'gas', 'o

il', 'energy', 'oil', 'biofuel', 'oil', 'oil', 'oil', 'energy', 'oil', 'oil',
'oil', 'energy', 'oil', 'oil', 'oil', 'growth', 'oil', 'oil', 'robot', 'con-
sumer', 'oil', 'export', 'government', 'oil', 'investment', 'gas', 'oil', 'gd
p', 'oil', 'material', 'economy', 'growth', 'gas', 'oil', 'oil', 'oil', 'oi
l', 'production', 'oil', 'production', 'Washington', 'oil', 'oil', 'market',
'oil', 'unemployment', 'economy', 'oil', 'oil', 'oil', 'pollution', 'oil', 'c
ar', 'money', 'oil', 'oil', 'gas', 'energy', 'oil', 'oil', 'security', 'gas',
'coal', 'energy', 'energy', 'energy', 'war', 'gas', 'fracking', 'oil', 'oil',
'oil', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'growth', 'growth', 'expor
t']

Frequencies

[92, 404, 4, 404, 19, 404, 19, 404, 7, 2, 35, 38, 404, 404, 404, 404, 1, 4, 4
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'oil', 'production', 'production', 'production', 'consumption', 'production', 'production', 'oil', 'tax', 'city', 'power', 'oil', 'oil', 'oil', 'carbon', 'oil', 'gas', 'export', 'export', 'oil', 'oil', 'economy', 'policy', 'economic', 'growth', 'industry', 'export', 'oil', 'emission', 'gas', 'gas', 'oil', 'oil', 'gas', 'gas', 'production', 'growth', 'oil', 'oil', 'export', 'growth', 'oil', 'economy', 'gas', 'trade', 'oil', 'economic', 'growth', 'export', 'brexit', 'oil', 'growth', 'economy', 'oil', 'gas', 'growth', 'oil', 'economy', 'oil', 'oil', 'oil', 'oil', 'market', 'gas', 'oil', 'oil', 'oil', 'workforce', 'oil', 'oil', 'growth', 'gas', 'oil', 'energy', 'change', 'automaker', 'oil', 'oil', 'oil', 'oil', 'market', 'oil', 'oil', 'population', 'car', 'oil', 'oil', 'energy', 'gas', 'oil', 'production', 'oil', 'gasoline', 'oil', 'export', 'growth', 'oil', 'oil', 'oil', 'oil', 'growth', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'economic', 'growth', 'oil', 'oil', 'oil', 'gas', 'oil', 'gas', 'oil', 'oil', 'growth', 'oil', 'car', 'oil', 'oil', 'power', 'oil', 'export', 'production', 'worker', 'population', 'oil', 'gas', 'oil', 'oil', 'power', 'energy', 'gdp', 'power', 'energy', 'nuclear', 'nuclear', 'debt', 'business', 'oil', 'oil', 'oil', 'oil', 'gas', '3D', 'gas', 'gas', 'oil', 'oil', 'oil', 'production', 'oil', 'production', 'oil', 'export', 'economic', 'growth', 'oil', 'gas', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'oil', 'population', 'oil', 'oil', 'oil', 'vehicle', 'growth', 'oil', 'growth', 'energy', 'gas', 'power', 'water', 'energy', 'gdp', 'data', 'energy', 'fossil', 'fuel', 'oil', 'market', 'oil', 'growth', 'oil', 'oil', 'oil', 'business', 'export', 'export', 'policy', 'oil', 'election', 'oil', 'export', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'greenhouse', 'gas', 'oil', 'gas', 'information', 'wealth', 'gas', 'shale', 'gas', 'gas', 'ice', 'oil', 'technology', 'gas', 'gas', 'oil', 'oil', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'production', 'production', 'oil', 'transportation', 'oil', 'oil', 'oil', 'production', 'growth', 'oil', 'growth', 'oil', 'market', 'production', 'oil', 'production', 'oil', 'oil', 'energy', 'energy', 'oil', 'market', 'oil', 'oil', 'gasoline', 'gasoline', 'gas', 'energy', 'oil', 'gas', 'power', 'energy', 'production', 'energy', 'power', 'power', 'economy', 'gas', 'oil', 'oil', 'economy', 'information', 'export', 'export', 'debt', 'export', 'market', 'government', 'market', 'gdp', 'oil', 'oil', 'growth', 'oil', 'oil', 'gas', 'business', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'oil', 'growth', 'oil', 'oil', 'climate', 'change', 'oil', 'oil', 'oil', 'oil', 'gas', 'food', 'growth', 'water', 'gas', 'gas', 'gas', 'gas', 'oil', 'oil', 'market', 'power', 'water', 'oil', 'growth', 'policy', 'oil', 'oil', 'oil', 'market', 'administration', 'gdp', 'oil', 'factory', 'oil', 'farm', 'gas', 'export', 'oil', 'oil', 'oil', 'technology', 'transport', 'energy', 'energy', 'communication', 'oil', 'storm', 'oil', 'greenhouse', 'gas', 'oil', 'energy', 'oil', 'biofuel', 'oil', 'oil', 'oil', 'energy', 'oil', 'oil', 'oil', 'energy', 'oil', 'oil', 'oil', 'growth', 'oil', 'oil', 'robot', 'consumer', 'oil', 'export', 'government', 'oil', 'investment', 'gas', 'oil', 'gdp', 'oil', 'material', 'economy', 'growth', 'gas', 'oil', 'oil', 'oil', 'oil', 'production', 'oil', 'production', 'Washington', 'oil', 'oil', 'market', 'oil', 'unemployment', 'economy', 'oil', 'oil', 'oil', 'pollution', 'oil', 'car', 'money', 'oil', 'oil', 'gas', 'energy', 'oil', 'oil', 'security', 'gas', 'coal', 'energy', 'energy', 'energy', 'war', 'gas', 'fracking', 'oil', 'oil', 'oil', 'oil', 'oil', 'gas', 'oil', 'oil', 'oil', 'growth', 'growth', 'export']

In [29]: [92, 404, 4, 404, 19, 404, 19, 404, 7, 2, 35, 38, 404, 404, 404, 404, 1, 4, 40
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9, 35, 5, 404, 2, 404, 3, 92, 92, 19, 404, 404, 3, 404, 404, 404, 404, 404, 4,
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2, 404, 6, 38, 20, 60, 404, 404, 4, 404, 404, 404, 2, 404, 38, 404, 20, 60, 60
, 60, 20, 60, 60, 11, 60, 43, 3, 404, 92, 404, 2, 43, 2, 19, 404, 404, 404, 92
, 20, 92, 404, 404, 1, 4, 35, 3, 43, 92, 60, 404, 404, 92, 404, 404, 404, 404,
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3, 6, 404, 404, 35, 35, 35, 4, 35, 35, 404, 1, 2, 11, 404, 404, 404, 1, 404, 9
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43, 92, 404, 35, 404, 4, 404, 38, 60, 404, 404, 404, 404, 60, 404, 404, 92, 40
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404, 404, 60, 404, 6, 404, 404, 11, 404, 38, 35, 2, 4, 404, 92, 404, 404, 11,
43, 7, 11, 43, 2, 2, 4, 4, 404, 404, 404, 404, 92, 1, 92, 92, 404, 404, 404, 3
5, 404, 35, 404, 38, 11, 60, 404, 92, 404, 404, 92, 404, 404, 404, 404, 4, 404
, 404, 404, 5, 60, 404, 60, 43, 92, 11, 3, 43, 7, 1, 43, 1, 1, 404, 19, 404, 6
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19, 11, 3, 404, 60, 7, 404, 404, 404, 19, 2, 7, 404, 1, 404, 1, 92, 38, 404, 4
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43, 404, 404, 404, 43, 404, 404, 404, 60, 404, 404, 3, 1, 404, 38, 3, 404, 4,
92, 404, 7, 404, 1, 20, 60, 92, 404, 404, 404, 404, 35, 404, 35, 1, 404, 404,
19, 404, 3, 20, 404, 404, 404, 1, 404, 6, 3, 404, 404, 92, 43, 404, 404, 3, 92
, 6, 43, 43, 43, 2, 92, 1, 404, 404, 404, 404, 404, 92, 404, 404, 404, 60, 60,
38]

In [30]: df5

Out[30]:

0	
0	gas
1	oil
2	consumption
3	oil
4	market
5	oil
6	market
7	oil
8	gdp
9	war
10	production
11	export
12	oil
13	oil
14	oil
15	oil
16	battery
17	biofuel
18	oil
19	policy
20	economy
21	market
22	strategy
23	oil
24	oil
25	gas
26	gas
27	market
28	robot
29	oil
...	...
896	oil
897	car
898	money
899	oil

	0
900	oil
901	gas
902	energy
903	oil
904	oil
905	security
906	gas
907	coal
908	energy
909	energy
910	energy
911	war
912	gas
913	fracking
914	oil
915	oil
916	oil
917	oil
918	oil
919	gas
920	oil
921	oil
922	oil
923	growth
924	growth
925	export

926 rows × 1 columns

```
In [33]: ls2=[92, 404, 4, 404, 19, 404, 19, 404, 7, 2, 35, 38, 404, 404, 404, 404, 1, 4
, 404, 7, 20, 19, 1, 404, 404, 92, 92, 19, 3, 404, 404, 60, 60, 60, 11, 43, 40
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04, 19, 35, 5, 404, 2, 404, 3, 92, 92, 19, 404, 404, 3, 404, 404, 404, 404, 40
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5, 6, 404, 4, 3, 2, 35, 6, 404, 404, 92, 43, 3, 404, 11, 43, 404, 92, 3, 92, 9
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60, 60, 60, 20, 60, 60, 11, 60, 43, 3, 404, 92, 404, 2, 43, 2, 19, 404, 404, 4
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404, 35, 404, 35, 404, 38, 11, 60, 404, 92, 404, 404, 92, 404, 404, 404, 404,
4, 404, 404, 404, 5, 60, 404, 60, 43, 92, 11, 3, 43, 7, 1, 43, 1, 1, 404, 19,
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404, 60, 404, 19, 35, 404, 35, 404, 404, 43, 43, 404, 19, 404, 404, 4, 4, 92,
43, 404, 92, 11, 43, 35, 43, 11, 11, 20, 92, 404, 404, 20, 2, 38, 38, 4, 38, 1
9, 3, 19, 7, 404, 404, 60, 404, 404, 92, 4, 404, 404, 404, 404, 404, 404, 404,
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404, 404, 404, 5, 3, 43, 43, 1, 404, 1, 404, 2, 92, 404, 43, 404, 4, 404, 404,
404, 43, 404, 404, 404, 43, 404, 404, 404, 60, 404, 404, 3, 1, 404, 38, 3, 404
, 4, 92, 404, 7, 404, 1, 20, 60, 92, 404, 404, 404, 404, 35, 404, 35, 1, 404,
404, 19, 404, 3, 20, 404, 404, 404, 1, 404, 6, 3, 404, 404, 92, 43, 404, 404,
3, 92, 6, 43, 43, 43, 2, 92, 1, 404, 404, 404, 404, 404, 92, 404, 404, 404, 60
, 60, 38]
```

```
In [35]: df6 = pd.DataFrame(ls2)
```

In [36]: df6

Out[36]:

	0
0	92
1	404
2	4
3	404
4	19
5	404
6	19
7	404
8	7
9	2
10	35
11	38
12	404
13	404
14	404
15	404
16	1
17	4
18	404
19	7
20	20
21	19
22	1
23	404
24	404
25	92
26	92
27	19
28	3
29	404
...	...
896	404
897	6
898	3
899	404

	0
900	404
901	92
902	43
903	404
904	404
905	3
906	92
907	6
908	43
909	43
910	43
911	2
912	92
913	1
914	404
915	404
916	404
917	404
918	404
919	92
920	404
921	404
922	404
923	60
924	60
925	38

926 rows × 1 columns

```
In [38]: df_col = pd.concat([df5,df6], axis=1)
```

In [39]: df_col

Out[39]:

	0	0
0	gas	92
1	oil	404
2	consumption	4
3	oil	404
4	market	19
5	oil	404
6	market	19
7	oil	404
8	gdp	7
9	war	2
10	production	35
11	export	38
12	oil	404
13	oil	404
14	oil	404
15	oil	404
16	battery	1
17	biofuel	4
18	oil	404
19	policy	7
20	economy	20
21	market	19
22	strategy	1
23	oil	404
24	oil	404
25	gas	92
26	gas	92
27	market	19
28	robot	3
29	oil	404
...
896	oil	404
897	car	6
898	money	3
899	oil	404

	0	0
900	oil	404
901	gas	92
902	energy	43
903	oil	404
904	oil	404
905	security	3
906	gas	92
907	coal	6
908	energy	43
909	energy	43
910	energy	43
911	war	2
912	gas	92
913	fracking	1
914	oil	404
915	oil	404
916	oil	404
917	oil	404
918	oil	404
919	gas	92
920	oil	404
921	oil	404
922	oil	404
923	growth	60
924	growth	60
925	export	38

926 rows × 2 columns

```
In [40]: df7 = df_col.drop_duplicates()
```

In [41]: df7

Out[41]:

	0	0
0	gas	92
1	oil	404
2	consumption	4
4	market	19
8	gdp	7
9	war	2
10	production	35
11	export	38
16	battery	1
17	biofuel	4
19	policy	7
20	economy	20
22	strategy	1
28	robot	3
31	growth	60
34	economic	11
35	energy	43
71	food	5
73	administration	2
75	unemployment	3
81	trade	3
87	demand	4
94	industry	3
95	capital	2
98	worker	2
107	tension	1
108	terrorism	1
115	transport	3
117	peak	1
119	vehicle	5
...
404	transportation	2
406	wealth	2
416	clothing	1
430	shortage	1

	0	0
461	debt	4
471	agriculture	1
497	tax	1
503	carbon	1
538	brexit	1
557	workforce	1
565	automaker	1
634	nuclear	2
643	3D	1
676	water	3
679	data	1
681	fossil	1
682	fuel	1
695	election	1
704	greenhouse	2
708	information	2
711	shale	1
827	factory	1
829	farm	1
839	communication	1
841	storm	1
864	consumer	1
874	material	1
885	Washington	1
895	pollution	1
913	fracking	1

98 rows × 2 columns

```
In [42]: df7.columns = ['x', 'value']
```

In [43]:

```
df7
```


Out[43]:

	x	value
0	gas	92
1	oil	404
2	consumption	4
4	market	19
8	gdp	7
9	war	2
10	production	35
11	export	38
16	battery	1
17	biofuel	4
19	policy	7
20	economy	20
22	strategy	1
28	robot	3
31	growth	60
34	economic	11
35	energy	43
71	food	5
73	administration	2
75	unemployment	3
81	trade	3
87	demand	4
94	industry	3
95	capital	2
98	worker	2
107	tension	1
108	terrorism	1
115	transport	3
117	peak	1
119	vehicle	5
...
404	transportation	2
406	wealth	2
416	clothing	1
430	shortage	1

	x	value
461	debt	4
471	agriculture	1
497	tax	1
503	carbon	1
538	brexit	1
557	workforce	1
565	automaker	1
634	nuclear	2
643	3D	1
676	water	3
679	data	1
681	fossil	1
682	fuel	1
695	election	1
704	greenhouse	2
708	information	2
711	shale	1
827	factory	1
829	farm	1
839	communication	1
841	storm	1
864	consumer	1
874	material	1
885	Washington	1
895	pollution	1
913	fracking	1

98 rows × 2 columns

```
In [47]: df7.to_json(r'C:\Users\nishant\Desktop\djson1.json',orient='records')
```

```
In [53]: df7.nlargest(10, 'value')
```

Out[53]:

	x	value
1	oil	404
0	gas	92
31	growth	60
35	energy	43
11	export	38
10	production	35
20	economy	20
4	market	19
34	economic	11
127	power	11

```
In [55]: df8=df2[['sector']]
```

In [56]: df8

Out[56]:

	sector
0	Energy
1	Energy
2	Energy
3	Environment
4	
5	Energy
6	Government
7	Energy
8	
9	Aerospace & defence
10	Manufacturing
11	Retail
12	Energy
13	Energy
14	Energy
15	Energy
16	Energy
17	Financial services
18	Aerospace & defence
19	Energy
20	Financial services
21	
22	Support services
23	
24	Energy
25	Energy
26	Energy
27	Energy
28	
29	Information Technology
...	...
970	
971	Energy
972	Energy
973	Energy

	sector
974	Energy
975	Support services
976	Energy
977	Retail
978	Environment
979	Energy
980	Manufacturing
981	Energy
982	Energy
983	
984	Energy
985	Energy
986	
987	
988	Energy
989	Energy
990	Energy
991	Energy
992	
993	Energy
994	Energy
995	Financial services
996	Manufacturing
997	
998	Retail
999	

1000 rows × 1 columns

```
In [77]: df8.replace('', np.nan, inplace=True)
```

C:\Users\nishant\Anaconda3\lib\site-packages\pandas\core\frame.py:4042: SettingWithCopyWarning:

A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: <http://pandas.pydata.org/pandas-docs/stable/indexing.html#indexing-view-versus-copy>
method=method)

In [78]: df8

Out[78]:

	sector
0	Energy
1	Energy
2	Energy
3	Environment
4	NaN
5	Energy
6	Government
7	Energy
8	NaN
9	Aerospace & defence
10	Manufacturing
11	Retail
12	Energy
13	Energy
14	Energy
15	Energy
16	Energy
17	Financial services
18	Aerospace & defence
19	Energy
20	Financial services
21	NaN
22	Support services
23	NaN
24	Energy
25	Energy
26	Energy
27	Energy
28	NaN
29	Information Technology
...	...
970	NaN
971	Energy
972	Energy
973	Energy

	sector
974	Energy
975	Support services
976	Energy
977	Retail
978	Environment
979	Energy
980	Manufacturing
981	Energy
982	Energy
983	NaN
984	Energy
985	Energy
986	NaN
987	NaN
988	Energy
989	Energy
990	Energy
991	Energy
992	NaN
993	Energy
994	Energy
995	Financial services
996	Manufacturing
997	NaN
998	Retail
999	NaN

1000 rows × 1 columns

In [81]: `df8.dropna()`

Out[81]:

	sector
0	Energy
1	Energy
2	Energy
3	Environment
5	Energy
6	Government
7	Energy
9	Aerospace & defence
10	Manufacturing
11	Retail
12	Energy
13	Energy
14	Energy
15	Energy
16	Energy
17	Financial services
18	Aerospace & defence
19	Energy
20	Financial services
22	Support services
24	Energy
25	Energy
26	Energy
27	Energy
29	Information Technology
30	Energy
31	Energy
36	Energy
38	Healthcare
39	Energy
...	...
961	Environment
962	Energy
963	Manufacturing
964	Financial services

	sector
965	Energy
967	Energy
969	Energy
971	Energy
972	Energy
973	Energy
974	Energy
975	Support services
976	Energy
977	Retail
978	Environment
979	Energy
980	Manufacturing
981	Energy
982	Energy
984	Energy
985	Energy
988	Energy
989	Energy
990	Energy
991	Energy
993	Energy
994	Energy
995	Financial services
996	Manufacturing
998	Retail

771 rows × 1 columns

```
In [82]: df8.to_csv('textre4.txt', sep=';', index=False)
```

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In [83]: my_str ="sector Energy Energy Energy Environment "" Energy Government Energy
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```
# To take input from the user
my_str = input("Enter a string: ")

# remove punctuation from the string
no_punct = ""
for char in my_str:
    if char not in punctuations:
        no_punct = no_punct + char
```

```
# display the unpunctuated string  
print(no_punct)
```

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```
wordlist = wordstring.split()
```

```
wordfreq = []
```

```
for w in wordlist:
```

```
    wordfreq.append(wordlist.count(w))
```

```
print("String\n" + wordstring + "\n")
```

```
print("List\n" + str(wordlist) + "\n")
```

```
print("Frequencies\n" + str(wordfreq) + "\n")
```

```
print("Pairs\n" + str(list(zip(wordlist, wordfreq))))
```

String

sector Energy Energy Energy Environment Energy Government Energy Aerospace
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List

['sector', 'Energy', 'Energy', 'Energy', 'Environment', 'Energy', 'Governmen
t', 'Energy', 'Aerospace', 'defence', 'Manufacturing', 'Retail', 'Energy', 'E
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[illegible]

Frequencies

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Pairs

[('sector', 1), ('Energy', 525), ('Energy', 525), ('Energy', 525), ('Environm

[illegible]

[illegible]

[illegible]

[illegible]

```
In [85]: ls4=['sector','Energy','Energy','Energy','Environment','Government',
'ent','Energy','Aerospace','defence','Manufacturing','Retail','Energy',
'Energy','Energy','Energy','Energy','Financial','services','Aerospace',
'defence','Energy','Financial','services','Support','services','Energy',
'Energy','Energy','Energy','Information','Technology','Energy','Energy',
'Energy','Healthcare','Energy','Energy','Energy','Energy','Energy','Ene
rgy','Energy','Energy','Energy','Energy','Energy','Energy','Energy','E
nergy','Energy','Energy','Energy','Energy','Energy','Aerospace','defenc
e','Energy','Energy','Energy','Energy','Energy','Energy','Energy','Ene
rgy','Energy','Retail','Energy','Manufacturing','Information','Technolog
y','Energy','Support','services','Energy','Energy','Financial','service
s','Energy','Aerospace','defence','Energy','Aerospace','defence','Energ
y','Energy','Energy','Energy','Energy','Support','services','Support',
'services','Retail','Energy','Financial','services','Food','agriculture'
,'Financial','services','Energy','Energy','Energy','Energy','Energy',
'Energy','Retail','Aerospace','defence','Energy','Energy','Energy','Ene
rgy','Energy','Energy','Retail','Aerospace','defence','Energy','Automot
ive','Tourism','hospitality','Information','Technology','Energy','Aerosp
ace','defence','Energy','Energy','Energy','Energy','Aerospace','defenc
e','Energy','Financial','services','Energy','Financial','services','Ret
ail','Aerospace','defence','Energy','Energy','Energy','Energy','Energy'
,'Energy','Energy','Energy','Support','services','Energy','Energy','Go
vernment','Energy','Government','Energy','Financial','services','Energy'
,'Financial','services','Support','services','Environment','Energy','En
ergy','Aerospace','defence','Energy','Manufacturing','Manufacturing','Fi
nancial','services','Energy','Government','Energy','Aerospace','defence'
,'Energy','Energy','Financial','services','Manufacturing','Energy','Ene
rgy','Energy','Energy','Information','Technology','Energy','Retail','En
ergy','Energy','Energy','Energy','Energy','Energy','Automotive','Constr
uction','Energy','Energy','Energy','Financial','services','Financial',
'services','Energy','Retail','Government','Retail','Energy','Retail','E
nergy','Food','agriculture','Manufacturing','Energy','Energy','Retail',
'Energy','Energy','Environment','Government','Support','services','Energ
y','Energy','Energy','Manufacturing','Energy','Energy','Energy','Financ
ial','services','Energy','Energy','Energy','Manufacturing','Energy','En
ergy','Manufacturing','Energy','Energy','Energy','Energy','Aerospace',
'defence','Energy','Energy','Energy','Manufacturing','Energy','Automotiv
e','Energy','Energy','Energy','Financial','services','Financial','servi
ces','Energy','Aerospace','defence','Financial','services','Energy','Fi
nancial','services','Energy','Energy','Energy','Government','Energy','M
anufacturing','Retail','Energy','Information','Technology','Support','se
rvices','Retail','Financial','services','Energy','Construction','Energy'
,'Environment','Energy','Retail','Energy','Energy','Energy','Energy',
'Energy','Retail','Energy','Energy','Energy','Energy','Energy','Manufac
turing','Energy','Energy','Energy','Energy','Energy','Energy','Manufacturing','E
nergy','Energy','Manufacturing','Manufacturing','Energy','Financial','se
rvices','Energy','Financial','services','Energy','Food','agriculture',
'Financial','services','Construction','Energy','Energy','Financial','ser
vices','Energy','Energy','Energy','Environment','Food','agriculture','C
onstruction','Manufacturing','Energy','Financial','services','Energy','I
nformation','Technology','Energy','Government','Energy','Energy','Energ
y','Information','Technology','Security','Information','Technology','Inf
ormation','Technology','Information','Technology','Information','Technolo
gy','Energy','Energy','Energy','Energy','Energy','Energy','Energy','En
ergy','Energy','Financial','services','Construction','Financial','servi
ces','Government','Energy','Construction','Energy','Energy','Energy','Re
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tail', 'Environment', 'Energy', 'Energy', 'Energy', 'Energy', 'Aerospace', 'de
fence', 'Transport', 'Energy', 'Retail', 'Energy', 'Government', 'Energy', 'En
ergy', 'Energy', 'Energy', 'Energy', 'Transport', 'Energy', 'Energy', 'Energy'
, 'Energy', 'Support', 'services', 'Energy', 'Energy', 'Energy', 'Manufacturin
g', 'Financial', 'services', 'Manufacturing', 'Support', 'services', 'Energy',
'Energy', 'Energy', 'Energy', 'Energy', 'Retail', 'Energy', 'Retail', 'Financi
al', 'services', 'Financial', 'services', 'Retail', 'Energy', 'Energy', 'Ener
gy', 'Manufacturing', 'Energy', 'Manufacturing', 'Energy', 'Energy', 'Food', 'a
griculture', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Ener
gy', 'Energy', 'Energy', 'Energy', 'Energy', 'Financial', 'services', 'Energy'
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gy', 'Financial', 'services', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy',
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'Energy', 'Energy', 'Energy', 'Manufacturing', 'Energy', 'Energy', 'Manufactur
ing', 'Energy', 'Energy', 'Manufacturing', 'Manufacturing', 'Manufacturing',
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, 'Financial', 'services', 'Energy', 'Environment', 'Energy', 'Energy', 'Infor
mation', 'Technology', 'Retail', 'Energy', 'Transport', 'Financial', 'service
s', 'Environment', 'Retail', 'Energy', 'Environment', 'Energy', 'Energy', 'Ene
rgy', 'Energy', 'Energy', 'Manufacturing', 'Energy', 'Energy', 'Energy', 'Ener
gy', 'Energy', 'Energy', 'Retail', 'Energy', 'Energy', 'Energy', 'Manufacturin
g', 'Energy', 'Retail', 'Energy', 'Energy', 'Energy', 'Energy', 'Information',
'Technology', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Ene
rgy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'E
nergy', 'Construction', 'Manufacturing', 'Energy', 'Energy', 'Food', 'agricult
ure', 'Food', 'agriculture', 'Energy', 'Manufacturing', 'Energy', 'Automotive',
, 'Energy', 'Retail', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Ener
gy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Ene
rgy', 'Energy', 'Energy', 'Government', 'Energy', 'Energy', 'Energy', 'Energy',
, 'Energy', 'Energy', 'Energy', 'Energy', 'Manufacturing', 'Energy', 'Manufact
uring', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Retail', 'Manufacturing', 'En
ergy', 'Energy', 'Energy', 'Energy', 'Energy', 'Government', 'Energy', 'Energy', 'Ener
gy', 'Aerospace', 'defence', 'Aerospace', 'defence', 'Support', 'services', 'En
ergy', 'Energy', 'Energy', 'Energy', 'Energy', 'Information', 'Technology', 'E
nergy', 'Energy', 'Energy', 'Energy', 'Energy', 'Manufacturing', 'Energy', 'Ma
nufacturing', 'Energy', 'Retail', 'Energy', 'Energy', 'Energy', 'Energy', 'Ene
rgy', 'Energy', 'Energy', 'Construction', 'Energy', 'Energy', 'Government', 'E
nergy', 'Energy', 'Energy', 'Support', 'services', 'Energy', 'Support', 'servi
ces', 'Water', 'Energy', 'Retail', 'Energy', 'Energy', 'Energy', 'Energy', 'En
ergy', 'Energy', 'Energy', 'Support', 'services', 'Retail', 'Retail', 'Energy',
, 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Ener
gy', 'Energy', 'Environment', 'Energy', 'Energy', 'Healthcare', 'Energy', 'Fina
ncial', 'services', 'Energy', 'Energy', 'Government', 'Energy', 'Energy', 'Tra
nsport', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy',
'Energy', 'Energy', 'Energy', 'Manufacturing', 'Manufacturing', 'Energy', 'Tra
nsport', 'Energy', 'Energy', 'Energy', 'Manufacturing', 'Government', 'Energy',
, 'Energy', 'Manufacturing', 'Energy', 'Manufacturing', 'Energy', 'Energy', 'E
nergy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy',
'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy',
, 'Energy', 'Energy', 'Energy', 'Energy', 'Retail', 'Energy', 'Retail', 'Gover
nment', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Support', 'service
s', 'Security', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'Energy', 'E
nergy', 'Energy', 'Energy', 'Food', 'agriculture', 'Energy', 'Energy', 'Ener
gy', 'Energy', 'Energy', 'Food', 'agriculture', 'Water', 'Energy', 'Energy', 'E
nergy', 'Energy', 'Energy', 'Energy', 'Aerospace', 'defence', 'Water', 'Aerosp
ace', 'defence', 'Financial', 'services', 'Energy', 'Energy', 'Energy', 'Suppo
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```

```
In [86]: df10 = pd.DataFrame(ls4)
```

```
In [87]: ls5=[1, 525, 525, 525, 14, 525, 18, 525, 19, 19, 49, 38, 525, 525, 525, 525, 5
25, 39, 56, 19, 19, 525, 39, 56, 17, 56, 525, 525, 525, 525, 15, 15, 525, 525,
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, 56, 525, 38, 18, 38, 525, 38, 525, 9, 9, 49, 525, 525, 38, 525, 525, 14, 18,
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49, 39, 56, 525, 525, 525, 525, 525, 525, 525, 17, 56, 525, 38, 14, 525, 49, 5
25, 525, 525, 525, 525, 525, 525, 525, 525, 39, 56, 49, 38]
```

```
In [88]: df11= pd.DataFrame(ls5)
```



```
In [89]: df12 = pd.concat([df10,df11], axis=1)
```

In [90]: df12

Out[90]:

	0	0
0	sector	1
1	Energy	525
2	Energy	525
3	Energy	525
4	Environment	14
5	Energy	525
6	Government	18
7	Energy	525
8	Aerospace	19
9	defence	19
10	Manufacturing	49
11	Retail	38
12	Energy	525
13	Energy	525
14	Energy	525
15	Energy	525
16	Energy	525
17	Financial	39
18	services	56
19	Aerospace	19
20	defence	19
21	Energy	525
22	Financial	39
23	services	56
24	Support	17
25	services	56
26	Energy	525
27	Energy	525
28	Energy	525
29	Energy	525
...
844	Financial	39
845	services	56
846	Energy	525
847	Energy	525

	0	0
848	Energy	525
849	Energy	525
850	Energy	525
851	Energy	525
852	Energy	525
853	Support	17
854	services	56
855	Energy	525
856	Retail	38
857	Environment	14
858	Energy	525
859	Manufacturing	49
860	Energy	525
861	Energy	525
862	Energy	525
863	Energy	525
864	Energy	525
865	Energy	525
866	Energy	525
867	Energy	525
868	Energy	525
869	Energy	525
870	Financial	39
871	services	56
872	Manufacturing	49
873	Retail	38

874 rows × 2 columns

```
In [91]: df13 = df12.drop_duplicates()
```

In [92]: df13

Out[92]:

	0	0
0	sector	1
1	Energy	525
4	Environment	14
6	Government	18
8	Aerospace	19
9	defence	19
10	Manufacturing	49
11	Retail	38
17	Financial	39
18	services	56
24	Support	17
30	Information	15
31	Technology	15
35	Healthcare	2
97	Food	9
98	agriculture	9
120	Automotive	4
121	Tourism	1
122	hospitality	1
201	Construction	9
351	Security	2
388	Transport	5
645	Water	3
785	Media	2
786	entertainment	2

In [93]: df13.columns = ['x', 'value']

```
In [94]: df13.nlargest(10, 'value')
```

Out[94]:

	x	value
1	Energy	525
18	services	56
10	Manufacturing	49
17	Financial	39
11	Retail	38
8	Aerospace	19
9	defence	19
6	Government	18
24	Support	17
30	Information	15

```
In [95]: df13.to_json(r'C:\Users\nishant\Desktop\djson2.json',orient='records')
```

```
In [96]: df14=df2[['region']]
```

```
In [97]: df14.replace('', np.nan, inplace=True)
```

In [98]: df14.dropna()

Out[98]:

	region
0	Northern America
1	Northern America
2	Northern America
3	Central America
4	World
5	World
7	World
8	Western Africa
9	Western Asia
10	Northern America
11	Northern America
14	Eastern Europe
15	World
17	World
18	World
19	Western Asia
20	Central Africa
21	World
23	Northern America
24	World
25	World
26	Northern Africa
27	Northern America
28	World
29	World
31	Southern Africa
32	Southern Asia
33	Western Asia
34	Eastern Europe
35	Central Asia
...	...
940	Eastern Asia
941	Northern America
944	World
951	Western Asia

	region
952	Western Asia
953	Western Asia
958	South-Eastern Asia
959	Northern America
960	World
962	Northern America
963	Southern Asia
964	Western Asia
965	Southern Asia
966	South-Eastern Asia
968	Asia
970	Northern America
971	World
973	Western Africa
974	Southern Asia
976	Northern America
977	Northern America
979	Europe
981	Southern Asia
983	Western Asia
986	Central America
987	World
989	Northern America
992	Eastern Europe
996	Northern America
999	World

547 rows × 1 columns

```
In [99]: df14.to_csv('textre7.txt', sep=';', index=False)
```

```
In [100]: punctuations='"!()-[]{};:'"<>./?@$%^&*~' ''  
my_str ="region Northern America Northern America Northern America Central Ame  
rica World World "" World Western Africa Western Asia Northern America Norther  
n America "" "" Eastern Europe World "" World World Western Asia Central Afric  
a World "" Northern America World World Northern Africa Northern America World  
World "" Southern Africa Southern Asia Western Asia Eastern Europe Central Asi  
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# To take input from the user
# my_str = input("Enter a string: ")

# remove punctuation from the string
no_punct = ""

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```
for char in my_str:
    if char not in punctuations:
        no_punct = no_punct + char

# display the unpunctuated string
print(no_punct)
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wordlist = wordstring.split()

wordfreq = []
for w in wordlist:
    wordfreq.append(wordlist.count(w))

print("String\n" + wordstring + "\n")
print("List\n" + str(wordlist) + "\n")
print("Frequencies\n" + str(wordfreq) + "\n")
print("Pairs\n" + str(list(zip(wordlist, wordfreq))))
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In [102]: ls11=['region', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Central', 'America', 'World', 'World', 'World', 'Western', 'Africa', 'Western', 'Asia', 'Northern', 'America', 'Northern', 'America', 'Eastern', 'Europe', 'World', 'World', 'World', 'World', 'Western', 'Asia', 'Central', 'Africa', 'World', 'Northern', 'America', 'World', 'World', 'Northern', 'Africa', 'Northern', 'America', 'World', 'World', 'Southern', 'Africa', 'Southern', 'Asia', 'Western', 'Asia', 'Eastern', 'Europe', 'Central', 'Asia', 'World', 'World', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'World', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'World', 'Northern', 'America', 'World', 'Eastern', 'Asia', 'World', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Eastern', 'Europe', 'World', 'South', 'America', 'Western', 'Africa', 'Northern', 'Africa', 'Northern', 'America', 'World', 'Eastern', 'Europe', 'Northern', 'America', 'Northern', 'America', 'World', 'Western', 'Africa', 'Western', 'Asia', 'SouthEastern', 'Asia', 'Western', 'Asia', 'Southern', 'Asia', 'Southern', 'Asia', 'Western', 'Asia', 'Eastern', 'Asia', 'Northern', 'America', 'Northern', 'America', 'SouthEastern', 'Asia', 'Eastern', 'Africa', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Eastern', 'Asia', 'Northern', 'America', 'Northern', 'America', 'South', 'America', 'Europe', 'Western', 'Africa', 'World', 'Western', 'Asia', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Western', 'Europe', 'Western', 'Europe', 'Eastern', 'Asia', 'Southern', 'Asia', 'Northern', 'Africa', 'World', 'Northern', 'America', 'Eastern', 'Europe', 'Eastern', 'Asia', 'Northern', 'Europe', 'Northern', 'America', 'Western', 'Asia', 'Northern', 'America', 'World', 'World', 'Northern', 'America', 'World', 'Eastern', 'Asia', 'Eastern', 'Europe', 'Eastern', 'Europe', 'Northern', 'America', 'Northern', 'America', 'Northern', 'Africa', 'World', 'Northern', 'America', 'Northern', 'America', 'Northern', 'Africa', 'Western', 'Asia', 'World', 'Eastern', 'Asia', 'World', 'World', 'World', 'Northern', 'Africa', 'Northern', 'America', 'Europe', 'World', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'South', 'America', 'Central', 'America', 'World', 'Northern', 'America', 'World', 'World', 'World', 'Southern', 'Asia', 'Eastern', 'Asia', 'Northern', 'America', 'World', 'Southern', 'Asia', 'Western', 'Europe', 'Southern', 'Europe', 'Northern', 'Europe', 'Northern', 'America', 'World', 'SouthEastern', 'Asia', 'World', 'Northern', 'Africa', 'Northern', 'America', 'World', 'Europe', 'Western', 'Africa', 'Eastern', 'Europe', 'World', 'World', 'World', 'World', 'Oceania', 'Eastern', 'Europe', 'Europe', 'Northern', 'America', 'World', 'World', 'Europe', 'Africa', 'Africa', 'Northern', 'America', 'Northern', 'America', 'World', 'World', 'Europe', 'Southern', 'Asia', 'Southern', 'Asia', 'Eastern', 'Asia', 'Northern', 'America', 'Oceania', 'Eastern', 'Asia', 'Northern', 'America', 'Western', 'Asia', 'Oceania', 'Northern', 'America', 'Eastern', 'Asia', 'World', 'World', 'Asia', 'Northern', 'America', 'Southern', 'Asia', 'Northern', 'Africa', 'Southern', 'Asia', 'Western', 'Africa', 'Western', 'Asia', 'Eastern', 'Europe', 'Southern', 'Asia', 'World', 'Northern', 'America', 'World', 'Southern', 'Europe', 'Southern', 'Europe', 'Northern', 'America', 'Northern', 'America', 'Western', 'Asia', 'Western', 'Asia', 'World', 'Western', 'Asia', 'Western', 'Asia', 'Southern', 'Asia', 'Southern', 'Asia', 'World', 'Western', 'Asia', 'Central', 'Africa', 'Northern', 'America', 'Eastern', 'Asia', 'Africa', 'World', 'Southern', 'Asia', 'World', 'Northern', 'Europe', 'Western', 'Asia', 'Northern', 'America', 'World', 'World', 'Northern', 'America', 'Northern', 'America', 'Eastern', 'Asia', 'World', 'Western', 'Asia', 'Western', 'Africa', 'Northern', 'Africa', 'Northern', 'Africa', 'Eastern', 'Europe', 'World', 'Southern', 'Asia', 'Eastern', 'Asia', 'SouthEastern', 'Asia', 'Northern', 'Europe', 'Western', 'Africa', 'World', 'Central', 'Asia', 'Eastern', 'Europe', 'Eastern', 'Europe', 'World', 'SouthEastern
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n', 'Asia', 'SouthEastern', 'Asia', 'Western', 'Asia', 'Western', 'Asia', 'Eastern', 'Europe', 'Western', 'Asia', 'Eastern', 'Europe', 'World', 'Northern', 'Africa', 'World', 'Northern', 'America', 'Western', 'Asia', 'Asia', 'Southern', 'Africa', 'Northern', 'America', 'Eastern', 'Europe', 'Eastern', 'Europe', 'Eastern', 'Europe', 'Western', 'Asia', 'Eastern', 'Europe', 'South', 'America', 'World', 'Northern', 'America', 'World', 'World', 'Western', 'Asia', 'Southern', 'Asia', 'South', 'America', 'Eastern', 'Africa', 'Southern', 'Asia', 'Northern', 'America', 'Eastern', 'Europe', 'Western', 'Asia', 'Western', 'Asia', 'Eastern', 'Asia', 'Southern', 'Asia', 'Northern', 'Europe', 'Southern', 'Asia', 'World', 'Africa', 'World', 'Northern', 'America', 'World', 'Northern', 'America', 'Africa', 'Africa', 'South', 'America', 'Africa', 'World', 'Northern', 'Europe', 'World', 'World', 'World', 'South', 'America', 'South', 'America', 'Northern', 'America', 'World', 'Asia', 'World', 'Eastern', 'Asia', 'SouthEastern', 'Asia', 'Northern', 'America', 'Eastern', 'Asia', 'South', 'America', 'Northern', 'America', 'World', 'Asia', 'World', 'Eastern', 'Asia', 'Southern', 'Asia', 'Northern', 'America', 'South', 'America', 'World', 'Northern', 'America', 'Eastern', 'Europe', 'World', 'Western', 'Asia', 'World', 'Northern', 'America', 'Africa', 'Western', 'Asia', 'Eastern', 'Asia', 'Northern', 'America', 'Eastern', 'Europe', 'Africa', 'World', 'World', 'Africa', 'Eastern', 'Asia', 'Northern', 'Africa', 'Eastern', 'Europe', 'World', 'World', 'Eastern', 'Europe', 'Northern', 'America', 'Central', 'Asia', 'Northern', 'America', 'Asia', 'Africa', 'South', 'America', 'South', 'America', 'Eastern', 'Asia', 'Western', 'Asia', 'Asia', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'World', 'Southern', 'Asia', 'World', 'Northern', 'Europe', 'World', 'Southern', 'Asia', 'Southern', 'Asia', 'World', 'Western', 'Asia', 'Eastern', 'Europe', 'Western', 'Asia', 'Northern', 'America', 'Eastern', 'Asia', 'Northern', 'America', 'Southern', 'Asia', 'Europe', 'Eastern', 'Asia', 'Eastern', 'Asia', 'Northern', 'Europe', 'Central', 'Africa', 'Northern', 'America', 'World', 'Southern', 'Asia', 'Southern', 'Asia', 'World', 'Northern', 'America', 'World', 'Africa', 'World', 'Southern', 'Asia', 'Northern', 'America', 'Eastern', 'Asia', 'Northern', 'America', 'Northern', 'America', 'Western', 'Asia', 'World', 'Northern', 'America', 'Northern', 'America', 'World', 'World', 'Western', 'Africa', 'Northern', 'Europe', 'World', 'World', 'Western', 'Europe', 'Eastern', 'Asia', 'Western', 'Asia', 'Western', 'Asia', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'South', 'America', 'South', 'America', 'South', 'America', 'Northern', 'Africa', 'Western', 'Asia', 'Northern', 'America', 'Eastern', 'Europe', 'Northern', 'Africa', 'Northern', 'America', 'Oceania', 'Eastern', 'Europe', 'Southern', 'Asia', 'Southern', 'Asia', 'World', 'Southern', 'Asia', 'Eastern', 'Europe', 'World', 'world', 'Northern', 'America', 'Eastern', 'Asia', 'Northern', 'America', 'Eastern', 'Asia', 'Eastern', 'Asia', 'Eastern', 'Europe', 'Eastern', 'Europe', 'South', 'America', 'SouthEastern', 'Asia', 'Northern', 'America', 'World', 'World', 'World', 'World', 'World', 'South', 'America', 'Southern', 'Asia', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'Northern', 'America', 'World', 'World', 'SouthEastern', 'Asia', 'World', 'Northern', 'America', 'Northern', 'America', 'Eastern', 'Asia', 'Eastern', 'Asia', 'Western', 'Asia', 'Eastern', 'Europe', 'Northern', 'Europe', 'Northern', 'America', 'Northern', 'Europe', 'Western', 'Asia', 'Eastern', 'Asia', 'World', 'Central', 'America', 'Southern', 'Europe', 'World', 'Northern', 'America', 'Western', 'Africa', 'World', 'World', 'World', 'World', 'World', 'Western', 'Africa', 'Northern', 'Africa', 'Southern', 'Asia', 'Southern', 'Asia', 'Northern', 'Africa', 'Northern', 'America', 'Northern', 'America', 'Western', 'Asia', 'Western', 'Africa', 'World', 'Northern', 'America', 'World', 'Northern', 'America', 'Southern', 'Asia', 'World', 'World', 'Eastern', 'Asia', 'World', 'World', 'World', 'SouthEastern',

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'Asia', 'SouthEastern', 'Asia', 'SouthEastern', 'Asia', 'SouthEastern', 'Asia',  
, 'World', 'Northern', 'America', 'World', 'SouthEastern', 'Asia', 'SouthEaste  
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'Northern', 'America', 'Oceania', 'Northern', 'America', 'Northern', 'America'  
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'World', 'Northern', 'America', 'Southern', 'Asia', 'Western', 'Asia', 'Southe  
rn', 'Asia', 'SouthEastern', 'Asia', 'Asia', 'Northern', 'America', 'World',  
'Western', 'Africa', 'Southern', 'Asia', 'Northern', 'America', 'Northern', 'A  
merica', 'Europe', 'Southern', 'Asia', 'Western', 'Asia', 'Central', 'America'  
, 'World', 'Northern', 'America', 'Eastern', 'Europe', 'Northern', 'America',  
'World']
```

```
In [103]: df15 = pd.DataFrame(ls11)
```

```
In [104]: ls12=[1, 161, 153, 161, 153, 161, 153, 10, 153, 131, 131, 131, 61, 51, 61, 145
, 161, 153, 161, 153, 68, 61, 131, 131, 131, 61, 145, 10, 51, 131, 161, 153, 1
31, 131, 161, 51, 161, 153, 131, 131, 46, 51, 46, 145, 61, 145, 68, 61, 10, 14
5, 131, 131, 161, 153, 161, 153, 161, 153, 161, 153, 161, 153, 161, 153, 161,
153, 161, 153, 131, 161, 153, 161, 153, 161, 153, 161, 153, 131, 161, 153, 131
, 68, 145, 131, 161, 153, 161, 153, 161, 153, 161, 153, 68, 61, 131, 17, 153,
61, 51, 161, 51, 161, 153, 131, 68, 61, 161, 153, 161, 153, 131, 61, 51, 61, 1
45, 17, 145, 61, 145, 46, 145, 46, 145, 61, 145, 68, 145, 161, 153, 161, 153,
17, 145, 68, 51, 161, 153, 161, 153, 161, 153, 68, 145, 161, 153, 161, 153, 17
, 153, 61, 61, 51, 131, 61, 145, 161, 153, 161, 153, 161, 153, 61, 61, 61, 61,
68, 145, 46, 145, 161, 51, 131, 161, 153, 68, 61, 68, 145, 161, 61, 161, 153,
61, 145, 161, 153, 131, 131, 161, 153, 131, 68, 145, 68, 61, 68, 61, 161, 153,
161, 153, 161, 51, 131, 161, 153, 161, 153, 161, 51, 61, 145, 131, 68, 145, 13
1, 131, 131, 161, 51, 161, 153, 61, 131, 161, 153, 161, 153, 161, 153, 17, 153
, 10, 153, 131, 161, 153, 131, 131, 131, 46, 145, 68, 145, 161, 153, 131, 46,
145, 61, 61, 46, 61, 161, 61, 161, 153, 131, 17, 145, 131, 161, 51, 161, 153,
131, 61, 61, 51, 68, 61, 131, 131, 131, 131, 5, 68, 61, 61, 161, 153, 131, 131
, 61, 51, 51, 161, 153, 161, 153, 131, 131, 61, 46, 145, 46, 145, 68, 145, 161
, 153, 5, 68, 145, 161, 153, 61, 145, 5, 161, 153, 68, 145, 131, 131, 145, 161
, 153, 46, 145, 161, 51, 46, 145, 61, 51, 61, 145, 68, 61, 46, 145, 131, 161,
153, 131, 46, 61, 46, 61, 161, 153, 161, 153, 61, 145, 61, 145, 131, 61, 145,
61, 145, 46, 145, 46, 145, 131, 61, 145, 10, 51, 161, 153, 68, 145, 51, 131, 4
6, 145, 131, 161, 61, 61, 145, 161, 153, 131, 131, 161, 153, 161, 153, 68, 145
, 131, 61, 145, 61, 51, 161, 51, 161, 51, 68, 61, 131, 46, 145, 68, 145, 17, 1
45, 161, 61, 61, 51, 131, 10, 145, 68, 61, 68, 61, 131, 17, 145, 17, 145, 61,
145, 61, 145, 68, 61, 61, 145, 68, 61, 131, 161, 51, 131, 161, 153, 61, 145, 1
45, 46, 51, 161, 153, 68, 61, 68, 61, 68, 61, 61, 145, 68, 61, 17, 153, 131, 1
61, 153, 131, 131, 61, 145, 46, 145, 17, 153, 68, 51, 46, 145, 161, 153, 68, 6
1, 61, 145, 61, 145, 68, 145, 46, 145, 161, 61, 46, 145, 131, 51, 131, 161, 15
3, 131, 161, 153, 51, 51, 17, 153, 51, 131, 161, 61, 131, 131, 131, 17, 153, 1
7, 153, 161, 153, 131, 145, 131, 68, 145, 17, 145, 161, 153, 68, 145, 161, 153
, 161, 153, 51, 161, 51, 131, 131, 61, 145, 161, 153, 161, 153, 46, 145, 161,
153, 145, 161, 153, 131, 46, 145, 61, 131, 17, 153, 131, 68, 145, 46, 145, 161
, 153, 17, 153, 131, 161, 153, 68, 61, 131, 61, 145, 131, 161, 153, 51, 61, 14
5, 68, 145, 161, 153, 68, 61, 51, 131, 131, 51, 68, 145, 161, 51, 68, 61, 131,
131, 68, 61, 161, 153, 10, 145, 161, 153, 145, 51, 17, 153, 17, 153, 68, 145,
61, 145, 145, 161, 153, 161, 153, 161, 153, 131, 46, 145, 131, 161, 61, 131, 4
6, 145, 46, 145, 131, 61, 145, 68, 61, 61, 145, 161, 153, 68, 145, 161, 153, 4
6, 145, 61, 68, 145, 68, 145, 161, 61, 10, 51, 161, 153, 131, 46, 145, 46, 145
, 131, 161, 153, 131, 51, 131, 46, 145, 161, 153, 68, 145, 161, 153, 161, 153,
61, 145, 131, 161, 153, 161, 153, 131, 131, 61, 51, 161, 61, 131, 131, 61, 61,
68, 145, 61, 145, 61, 145, 161, 153, 161, 153, 161, 153, 17, 153, 17, 153, 17,
153, 161, 51, 61, 145, 161, 153, 68, 61, 161, 51, 161, 153, 5, 68, 61, 46, 145
, 46, 145, 131, 46, 145, 68, 61, 131, 1, 161, 153, 68, 145, 161, 153, 68, 145,
68, 145, 68, 61, 68, 61, 17, 153, 17, 145, 161, 153, 131, 131, 131, 131, 131,
17, 153, 46, 145, 161, 153, 161, 153, 161, 153, 161, 153, 131, 131, 17, 145, 1
31, 161, 153, 161, 153, 68, 145, 68, 145, 61, 145, 68, 61, 161, 61, 161, 153,
161, 61, 61, 145, 68, 145, 131, 10, 153, 46, 61, 131, 161, 153, 61, 51, 131, 1
31, 131, 131, 61, 51, 161, 51, 46, 145, 46, 145, 161, 51, 161, 153, 161, 153,
61, 145, 61, 51, 131, 161, 153, 131, 161, 153, 46, 145, 131, 131, 68, 145, 131
, 131, 131, 17, 145, 17, 145, 17, 145, 17, 145, 131, 161, 153, 131, 17, 145, 1
7, 145, 131, 61, 161, 153, 161, 51, 161, 153, 5, 161, 153, 161, 153, 68, 145,
161, 153, 131, 61, 145, 61, 145, 61, 145, 17, 145, 161, 153, 131, 161, 153, 46
, 145, 61, 145, 46, 145, 17, 145, 145, 161, 153, 131, 61, 51, 46, 145, 161, 15
3, 161, 153, 61, 46, 145, 61, 145, 10, 153, 131, 161, 153, 68, 61, 161, 153, 1
31]
```

```
In [105]: df16 = pd.DataFrame(ls12)
```

```
In [106]: df17 = pd.concat([df15,df16], axis=1)
```

In [107]: df17

Out[107]:

	0	0
0	region	1
1	Northern	161
2	America	153
3	Northern	161
4	America	153
5	Northern	161
6	America	153
7	Central	10
8	America	153
9	World	131
10	World	131
11	World	131
12	Western	61
13	Africa	51
14	Western	61
15	Asia	145
16	Northern	161
17	America	153
18	Northern	161
19	America	153
20	Eastern	68
21	Europe	61
22	World	131
23	World	131
24	World	131
25	Western	61
26	Asia	145
27	Central	10
28	Africa	51
29	World	131
...
898	Asia	145
899	SouthEastern	17
900	Asia	145
901	Asia	145

	0	0
902	Northern	161
903	America	153
904	World	131
905	Western	61
906	Africa	51
907	Southern	46
908	Asia	145
909	Northern	161
910	America	153
911	Northern	161
912	America	153
913	Europe	61
914	Southern	46
915	Asia	145
916	Western	61
917	Asia	145
918	Central	10
919	America	153
920	World	131
921	Northern	161
922	America	153
923	Eastern	68
924	Europe	61
925	Northern	161
926	America	153
927	World	131

928 rows × 2 columns

```
In [108]: df18 = df17.drop_duplicates()
```

```
In [109]: df18.columns = ['x', 'value']
```

```
In [110]: df18
```

```
Out[110]:
```

	x	value
0	region	1
1	Northern	161
2	America	153
7	Central	10
9	World	131
12	Western	61
13	Africa	51
15	Asia	145
20	Eastern	68
21	Europe	61
40	Southern	46
95	South	17
115	SouthEastern	17
275	Oceania	5
734	world	1

```
In [111]: df18.nlargest(10,'value')
```

```
Out[111]:
```

	x	value
1	Northern	161
2	America	153
15	Asia	145
9	World	131
20	Eastern	68
12	Western	61
21	Europe	61
13	Africa	51
40	Southern	46
95	South	17

```
In [112]: df18.to_json(r'C:\Users\nishant\Desktop\djson3.json',orient='records')
```

```
In [113]: df19=df2[['pestle']]
```

```
In [114]: df19.replace('', np.nan, inplace=True)
```

In [115]: df19

Out[115]:

	pestle
0	Industries
1	Industries
2	Industries
3	Environmental
4	Economic
5	Economic
6	Political
7	Economic
8	Economic
9	Political
10	Industries
11	Economic
12	Industries
13	Industries
14	Industries
15	Economic
16	Technological
17	NaN
18	Political
19	Industries
20	Economic
21	Economic
22	Economic
23	Organization
24	Economic
25	Economic
26	Economic
27	Industries
28	Political
29	Economic
...	...
970	NaN
971	Economic
972	Industries
973	Industries

	pestle
974	Political
975	Environmental
976	Environmental
977	Political
978	Economic
979	Industries
980	Political
981	Industries
982	Political
983	NaN
984	Economic
985	Industries
986	NaN
987	NaN
988	Industries
989	Industries
990	Environmental
991	Social
992	NaN
993	Environmental
994	Economic
995	Economic
996	Economic
997	Economic
998	Economic
999	NaN

1000 rows × 1 columns

In [116]: `df19.dropna()`

Out[116]:

	pestle
0	Industries
1	Industries
2	Industries
3	Environmental
4	Economic
5	Economic
6	Political
7	Economic
8	Economic
9	Political
10	Industries
11	Economic
12	Industries
13	Industries
14	Industries
15	Economic
16	Technological
18	Political
19	Industries
20	Economic
21	Economic
22	Economic
23	Organization
24	Economic
25	Economic
26	Economic
27	Industries
28	Political
29	Economic
30	Industries
...	...
962	Industries
963	Social
964	Economic
965	Political

	pestle
967	Industries
969	Industries
971	Economic
972	Industries
973	Industries
974	Political
975	Environmental
976	Environmental
977	Political
978	Economic
979	Industries
980	Political
981	Industries
982	Political
984	Economic
985	Industries
988	Industries
989	Industries
990	Environmental
991	Social
993	Environmental
994	Economic
995	Economic
996	Economic
997	Economic
998	Economic

907 rows × 1 columns

```
In [117]: df19.to_csv('textre13.txt',sep=';', index=False)
```



```
In [118]: punctuations = ' '!()-[]{};:'"\<>./?@$%^&*~_''
my_str ="pestle Industries Industries Industries Environmental Economic Econom
ic Political Economic Economic Political Industries Economic Industries Indust
ries Industries Economic Technological "" Political Industries Economic Econom
ic Economic Organization Economic Economic Economic Industries Political Econo
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ustries Economic Industries Economic Political Economic Economic Economic Econ
omic Economic Political Industries Economic Economic Environmental Industries
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omic Political Industries Economic Industries Economic Economic Economic "" In
dustries Industries Industries Economic Economic Economic Economic Economic In
dustries Economic "" Economic Political Industries Industries Social Environme
ntal Environmental Economic Political Technological Economic Organization Soci
al Industries Economic Lifestyles Industries Economic Industries "" Industries
Economic Industries Social Industries Environmental Industries Environmental E
nvironmental Lifestyles Industries Industries Economic "" Political Economic
"" Political Economic Economic Industries Environmental "" Economic Environme
ntal Economic Political Economic Environmental Economic Economic Economic ""
"" "" Industries Economic Industries Environmental Environmental "" Economic
Economic "" "" Economic Environmental Industries Industries Economic Industri
es Economic Economic Political Industries Economic Industries Economic "" Econ
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ironmental Economic Industries Economic Economic Economic Industries Industrie
s Industries Economic Technological Social Industries Industries Organization
Industries Economic Economic Industries Industries Political Organization Ind
ustries Industries Industries Industries "" Industries Industries Economic Eco
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Economic Technological Economic Industries Economic Industries Environmental
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# To take input from the user  
# my_str = input("Enter a string: ")  
  
# remove punctuation from the string  
no_punct = ""  
for char in my_str:  
    if char not in punctuations:  
        no_punct = no_punct + char  
  
# display the unpunctuated string  
print(no_punct)
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wordlist = wordstring.split()  
  
wordfreq = []  
for w in wordlist:  
    wordfreq.append(wordlist.count(w))  
  
print("String\n" + wordstring + "\n")  
print("List\n" + str(wordlist) + "\n")  
print("Frequencies\n" + str(wordfreq) + "\n")  
print("Pairs\n" + str(list(zip(wordlist, wordfreq))))
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329, 26,

[illegible]

[illegible]

[illegible]

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l', 'Economic', 'Economic', 'Economic', 'Economic', 'Economic']

```

```
In [121]: df20 = pd.DataFrame(ls11)
```

In [122]:

```
df20
```


Out[122]:

0	
0	Industries
1	Industries
2	Industries
3	Environmental
4	Economic
5	Economic
6	Political
7	Economic
8	Economic
9	Political
10	Industries
11	Economic
12	Industries
13	Industries
14	Industries
15	Economic
16	Technological
17	Political
18	Industries
19	Economic
20	Economic
21	Economic
22	Organization
23	Economic
24	Economic
25	Economic
26	Industries
27	Political
28	Economic
29	Industries
...	...
877	Industries
878	Social
879	Economic
880	Political

881	Industries
882	Industries
883	Economic
884	Industries
885	Industries
886	Political
887	Environmental
888	Environmental
889	Political
890	Economic
891	Industries
892	Political
893	Industries
894	Political
895	Economic
896	Industries
897	Industries
898	Industries
899	Environmental
900	Social
901	Environmental
902	Economic
903	Economic
904	Economic
905	Economic
906	Economic

907 rows × 1 columns

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29, 344, 344, 329, 26, 3
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```
In [124]: df21 = pd.DataFrame(ls12)
```

```
In [125]: df22 = pd.concat([df20,df21], axis=1)
```

In [126]:

```
df22
```

Out[126]:

	0	0
0	Industries	344
1	Industries	344
2	Industries	344
3	Environmental	72
4	Economic	329
5	Economic	329
6	Political	99
7	Economic	329
8	Economic	329
9	Political	99
10	Industries	344
11	Economic	329
12	Industries	344
13	Industries	344
14	Industries	344
15	Economic	329
16	Technological	20
17	Political	99
18	Industries	344
19	Economic	329
20	Economic	329
21	Economic	329
22	Organization	11
23	Economic	329
24	Economic	329
25	Economic	329
26	Industries	344
27	Political	99
28	Economic	329
29	Industries	344
...
877	Industries	344
878	Social	26
879	Economic	329
880	Political	99

	0	0
881	Industries	344
882	Industries	344
883	Economic	329
884	Industries	344
885	Industries	344
886	Political	99
887	Environmental	72
888	Environmental	72
889	Political	99
890	Economic	329
891	Industries	344
892	Political	99
893	Industries	344
894	Political	99
895	Economic	329
896	Industries	344
897	Industries	344
898	Industries	344
899	Environmental	72
900	Social	26
901	Environmental	72
902	Economic	329
903	Economic	329
904	Economic	329
905	Economic	329
906	Economic	329

907 rows × 2 columns

In [127]: `df23 = df22.drop_duplicates()`

In [131]: df23

Out[131]:

	x	value
0	Industries	344
3	Environmental	72
4	Economic	329
6	Political	99
16	Technological	20
22	Organization	11
36	Healthcare	2
64	Social	26
118	Lifestyles	4

In [128]: df23.columns = ['x', 'value']

In [129]: df23

Out[129]:

	x	value
0	Industries	344
3	Environmental	72
4	Economic	329
6	Political	99
16	Technological	20
22	Organization	11
36	Healthcare	2
64	Social	26
118	Lifestyles	4

In [132]: df23.to_json(r'C:\Users\nishant\Desktop\djson4.json',orient='records')

In []: