



APPENDIX TABLE 6-61

USPTO patents granted in fuel cell technology, by region, country, or economy: 1998–2016

(Number)

Region, country, or economy	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World	119	159	201	264	353	444	520	481	555	503	525	641	1,031	964	1,106	907	918	853	745
North America	65	98	122	171	218	269	294	272	291	244	229	257	389	360	352	312	317	286	251
Canada	8	7	9	10	18	34	41	44	31	23	23	25	18	21	29	20	29	26	13
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United States	57	90	113	161	199	235	253	228	259	221	206	232	370	339	324	292	287	260	238
Central and South America	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Europe	20	29	41	34	44	68	65	61	55	66	81	66	122	96	110	101	116	114	94
EU	18	26	40	28	42	65	63	57	52	66	78	64	116	94	105	93	112	106	86
Austria	1	0	0	0	0	0	1	1	2	0	0	2	1	1	0	1	3	2	1
Belgium	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	2	0
Denmark	2	0	0	0	0	1	3	2	0	2	2	3	4	3	6	4	7	7	6
Finland	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	3	2	3



Region, country, or economy	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
France	1	0	1	2	4	1	4	1	5	8	3	7	11	16	17	15	23	14	18
Germany	11	21	32	25	30	55	43	42	35	45	51	39	72	51	55	48	51	56	22
Hungary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Italy	0	2	2	0	3	1	3	2	2	2	3	3	7	8	7	5	4	2	4
Netherlands	0	1	1	1	3	2	2	2	2	2	4	1	3	1	1	1	0	6	0
Spain	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	2	0	0
Sweden	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	1	3	2	3
United Kingdom	3	2	4	0	1	4	6	7	3	6	11	7	10	10	15	15	14	12	27
All others	0	0	0	0	1	1	0	0	0	0	0	0	5	1	1	1	1	0	0
Other Europe	2	3	1	6	2	3	2	4	3	0	3	2	6	2	5	8	4	9	8
Former Soviet Union	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1
Russia	0	0	0	0	0	2	0	2	0	0	1	0	1	0	1	2	0	0	0
Switzerland	1	3	1	6	2	1	2	2	3	0	2	2	5	2	4	5	4	6	7
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asia	33	31	36	57	84	105	156	146	203	192	211	313	514	501	637	489	484	445	390
China	0	0	0	0	0	1	1	0	1	2	3	4	5	8	2	6	3	21	10
India	0	0	0	0	0	0	0	0	0	1	0	0	2	0	3	0	2	2	4



Region, country, or economy	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Japan	33	29	33	55	81	100	147	137	184	168	178	240	361	337	483	341	332	296	244
Malaysia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Singapore	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	0	0
South Korea	0	1	3	2	2	4	6	7	11	15	24	52	124	131	125	117	127	110	121
Taiwan	0	1	0	0	1	0	2	2	7	6	6	17	19	24	24	25	18	15	11
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Middle East	0	0	0	0	4	2	3	1	3	0	2	2	3	3	4	3	1	6	5
Israel	0	0	0	0	4	2	3	1	3	0	2	2	2	3	2	3	1	4	2
All others	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	2	3
Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
South Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Australia and Oceania	1	1	1	2	4	0	2	1	3	1	2	2	3	4	1	1	0	1	1
Australia	1	1	1	2	4	0	2	1	3	1	2	2	3	4	0	1	0	1	1
New Zealand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Unclassified	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

EU = European Union; USPTO = U.S. Patent and Trademark Office.

Note(s)



Patents are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. The EU includes 28 member countries. Technologies are based on a classification developed by The Patent Board.

Source(s)

Science-Metrix; PatentsView and USPTO patent data.

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