



APPENDIX TABLE 6-69

USPTO patents granted in cleaner coal 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	68	47	51	37	38	52	32	42	30	23	31	43	66	71	70	118	93	88	83
North America	43	31	35	26	29	43	22	29	23	19	23	27	42	49	52	65	58	57	43
Canada	2	0	2	0	1	0	3	0	1	1	0	1	0	1	0	2	1	1	1
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	41	31	33	26	28	43	19	29	22	18	23	27	42	48	52	62	57	56	42
Central and South America	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Europe	7	7	5	4	5	3	2	4	1	2	3	7	4	7	7	15	16	9	10
EU	7	7	4	4	4	3	2	4	1	2	3	4	4	7	7	14	14	8	8
Austria	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
Belgium	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Denmark	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0
Finland	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1



Region, country, or economy	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
France	0	1	2	0	1	0	1	1	0	1	0	0	0	0	2	1	1	0	2
Germany	5	5	1	1	3	1	1	2	1	0	0	1	2	2	3	7	9	3	1
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	0	0	0	0	0	0	0	0	0
Italy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Spain	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Sweden	1	0	0	0	0	0	0	1	0	0	0	2	1	1	0	0	1	1	2
United Kingdom	1	1	0	1	0	0	0	0	0	0	2	0	0	3	1	3	2	1	1
All others	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1
Other Europe	0	0	1	0	1	0	0	0	0	0	0	4	1	0	0	1	2	1	2
Former Soviet Union	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1
Russia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Switzerland	0	0	1	0	1	0	0	0	0	0	0	4	0	0	0	0	1	0	1
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asia	15	8	9	7	2	4	7	8	5	1	4	6	17	13	8	33	16	16	29
China	0	0	0	0	1	0	0	0	0	0	0	0	2	2	2	4	2	1	7
India	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	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
Japan	15	6	9	7	1	4	7	6	4	1	3	5	14	10	5	25	10	13	17
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	0	0	0	0	0	0	0
South Korea	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	1	1	2
Taiwan	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	2	0	0	1	1	0	0	0	0	0	0	0
Middle East	2	0	0	0	0	2	1	0	0	0	0	0	1	1	0	1	1	2	1
Israel	2	0	0	0	0	2	1	0	0	0	0	0	1	1	0	1	1	2	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
South Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
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	2	0	2	0	0	1	2	1	1	2	2	1	1	3	2	3	0
Australia	1	1	2	0	2	0	0	1	2	1	1	2	2	1	1	3	2	3	0
New Zealand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unclassified	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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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