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# AII Glossary, acronyms and abbreviations

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No	Word/term	Description
1	Abatement	Reduction in the degree or intensity of emissions or other pollutants.
2	Absorption	Chemical or physical take-up of molecules into the bulk of a solid or liquid, forming either a solution or compound.
3	Acid gas	Any gas mixture that turns to an acid when dissolved in water (normally refers to $\text{H}_2\text{S} + \text{CO}_2$ from sour gas (q.v.)).
4	Adiabatic	A process in which no heat is gained or lost by the system.
5	Adsorption	The uptake of molecules on the surface of a solid or a liquid.
6	Afforestation	Planting of new forests on lands that historically have not contained forests.
7	Aluminium silicate mineral	Natural mineral – such as feldspar, clays, micas, amphiboles – composed of $\text{Al}_2\text{O}_3$ and $\text{SiO}_2$ plus other cations.
8	Amine	Organic chemical compound containing one or more nitrogens in $-\text{NH}_2$ , $>\text{NH}$ or $\equiv\text{N}$ groups.
9	Anaerobic condition	Reducing condition that only supports life which does not require free oxygen.
10	Anhydrite	Calcium sulphate: the common hydrous form is called gypsum.
11	Antarctic Treaty	Applies to the area south of 60 degrees South, and declares that Antarctica shall be used for peaceful purposes only.
12	Anthracite	Coal with the highest carbon content and therefore the highest rank (q.v.).
13	Anthropogenic source	Source which is man-made as opposed to natural.
14	Anticline	Folded geological strata that is convex upwards.
15	API	American Petroleum Institute; degree API is a measure of oil density given by $(141.5/\text{specific gravity}) - 131.5$ .
16	Aquifer	Geological structure containing water and with significant permeability to allow flow; it is bound by seals.
17	Assessment unit	A geological province with high petroleum potential.
18	Assigned amount	The amount by which a Party listed in Annex B of the Kyoto Protocol agrees to reduce its anthropogenic emissions.
19	ATR	Auto thermal reforming: a process in which the heat for the reaction of $\text{CH}_4$ with steam is generated by partial oxidation of $\text{CH}_4$ .
20	Autoproduction	The production of electricity for own use.
21	Avoided cost	The cost of reducing $\text{CO}_2$ emissions by one unit while producing the same amount as a reference plant without capture.
22	Basalt	A type of basic igneous rock which is typically erupted from a volcano.
23	Basel Convention	UN Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, which was adopted at Basel on 22 March 1989.
24	Baseline	The datum against which change is measured.
25	Basin	A geological region with strata dipping towards a common axis or centre.
26	Bathymetric	Pertaining to the depth of water.
27	Benthic	Pertaining to conditions at depth in bodies of water.

No	Word/term	Description
28	Bicarbonate ion	The anion formed by dissolving carbon dioxide in water, $\text{HCO}_3^-$ .
29	Biomass	Matter derived recently from the biosphere.
30	Biomass-based CCS	Carbon capture and storage in which the feedstock (q.v.) is biomass
31	Bituminous coal	An intermediate rank of coal falling between the extremes of peat and anthracite, and closer to anthracite.
32	Blow-out	Refers to catastrophic failure of a well when the petroleum fluids or water flow unrestricted to the surface.
33	Bohr effect	The pH-dependent change in the oxygen affinity of blood.
34	Bottom-up model	A model that includes technological and engineering details in the analysis.
35	Boundary	In GHG accounting, the separation between accounting units, be they national, organizational, operational, business units or sectors.
36	Break-even price	The price necessary at a given level of production to cover all costs.
37	Buoyancy	Tendency of a fluid or solid to rise through a fluid of higher density.
38	Cap rock	Rock of very low permeability that acts as an upper seal to prevent fluid flow out of a reservoir.
39	Capillary entry pressure	Additional pressure needed for a liquid or gas to enter a pore and overcome surface tension.
40	Capture efficiency	The fraction of $\text{CO}_2$ separated from the gas stream of a source
41	Carbon credit	A convertible and transferable instrument that allows an organization to benefit financially from an emission reduction.
42	Carbon trading	A market-based approach that allows those with excess emissions to trade that excess for reduced emissions elsewhere.
43	Carbonate	Natural minerals composed of various anions bonded to a $\text{CO}_3^{2-}$ cation (e.g. calcite, dolomite, siderite, limestone).
44	Carbonate neutralization	A method for storing carbon in the ocean based upon the reaction of $\text{CO}_2$ with a mineral carbonate such as limestone to produce bicarbonate anions and soluble cations.
45	Casing	A pipe which is inserted to stabilize the borehole of a well after it is drilled.
46	CBM	Coal bed methane
47	CCS	Carbon dioxide capture and storage
48	CDM	Clean development mechanism: a Kyoto Protocol mechanism to assist non-Annex 1 countries to contribute to the objectives of the Protocol and help Annex I countries to meet their commitments.
49	Certification	In the context of carbon trading, certifying that a project achieves a quantified reduction in emissions over a given period.
50	Chemical looping combustion	A process in which combustion of a hydrocarbon fuel is split into separate oxidation and reduction reactions by using a metal oxide as an oxygen carrier between the two reactors.
51	Chlorite	A magnesium-iron aluminosilicate sheet silicate clay mineral.

No	Word/term	Description
52	Class "x" well	A regulatory classification for wells used for the injection of fluids into the ground.
53	Claus plant	A plant that transforms H <sub>2</sub> S into elemental sulphur.
54	Cleats	The system of joints, cleavage planes, or planes of weakness found in coal seams along which the coal fractures.
55	CO <sub>2</sub> avoided	The difference between CO <sub>2</sub> captured, transmitted and/or stored, and the amount of CO <sub>2</sub> generated by a system without capture, net of the emissions not captured by a system with CO <sub>2</sub> capture.
56	CO <sub>2</sub> equivalent	A measure used to compare emissions of different greenhouse gases based on their global warming potential.
57	Co-benefit	The additional benefits generated by policies that are implemented for a specific reason.
58	COE	Cost of electricity, value as calculated by Equation 1 in Section 3.7.
59	Co-firing	The simultaneous use of more than one fuel in a power plant or industrial process.
60	Completion of a well	Refers to the cementing and perforating of casing and stimulation to connect a well bore to reservoir.
61	Congruence	The quality of agreement between two entities.
62	Conservative values	Parameter values selected so that a parameter, such as CO <sub>2</sub> leakage, is over-estimated.
63	Containment	Restriction of movement of a fluid to a designated volume (e.g. reservoir).
64	Continental shelf	The extension of the continental mass beneath the ocean.
65	COREX	A process for producing iron.
66	Cryogenic	Pertaining to low temperatures, usually under about -100°C.
67	D, Darcy	A non-SI unit of permeability, abbreviated D, and approximately = 1 µm <sup>2</sup> .
68	Dawsonite	A mineral: dihydroxide sodium aluminium carbonate.
69	Deep saline aquifer	A deep underground rock formation composed of permeable materials and containing highly saline fluids.
70	Deep sea	The sea below 1000m depth.
71	Default emissions factor	An approximate emission factor that may be used in the absence of precise or measured values of an Emissions Factor.
72	Demonstration phase	Demonstration phase means that the technology is implemented in a pilot project or on a small scale, but not yet economically feasible at full scale.
73	Dense phase	A gas compressed to a density approaching that of the liquid.
74	Dense fluid	A gas compressed to a density approaching that of the liquid.
75	Depleted	Of a reservoir: one where production is significantly reduced.
76	Diagenesis	Processes that cause changes in sediment after it has been deposited and buried under another layer.
77	DIC	Dissolved Inorganic Carbon.
78	Dip	In geology, the angle below the horizontal taken by rock strata.
79	Discharge	The amount of water issuing from a spring or in a stream that passes a specific point in a given period of time.
80	Discordant sequence	In geology, sequence of rock strata that is markedly different

No	Word/term	Description
		from strata above or below.
81	Dolomite	A magnesium-rich carbonate sedimentary rock. Also, a magnesium-rich carbonate mineral ( $\text{CaMgCO}_3$ ).
82	Double-grip packer	A device used to seal a drill string equipped with two gripping mechanisms.
83	Down-hole log	Record of conditions in a borehole.
84	Drill cuttings	The solid particles recovered during the drilling of a well.
85	Drill string	The assembly of drilling rods that leads from the surface to the drilling tool.
86	Drive	Fluid flow created in formations by pressure differences arising from borehole operations.
87	Dry ice	Solid carbon dioxide
88	Dynamic miscibility	The attainment of mixing following the prolonged injection of gas into an oilfield.
89	ECBM	Enhanced coal bed methane recovery; the use of $\text{CO}_2$ to enhance the recovery of the methane present in unminable coal beds through the preferential adsorption of $\text{CO}_2$ on coal.
90	Economic potential	The amount of greenhouse gas emissions reductions from a specific option that could be achieved cost-effectively, given prevailing circumstances
91	Economically feasible under specific conditions	Technological development that is sufficient for full-scale implementation under specific conditions, for instance a favourable tax regime, but for which there is not yet general market penetration.
92	EGR	Enhanced gas recovery: the recovery of gas additional to that produced naturally by fluid injection or other means..
93	Emission factor	A normalized measure of GHG emissions in terms of activity, e.g., tonnes of GHG emitted per tonne of fuel consumed.
94	Emissions credit	A commodity giving its holder the right to emit a certain quantity of GHGs (q.v.).
95	Emissions trading	A trading scheme that allows permits for the release of a specified number of tonnes of a pollutant to be sold and bought.
96	Endothermic	Concerning a chemical reaction that absorbs heat, or requires heat to drive it.
97	Enhanced gas recovery	See EGR.
98	Enhanced oil recovery	See EOR
99	Entrained flow	Flow in which a solid or liquid, in the form of fine particles, is transported in diluted form by high velocity gas.
100	Entrainment gas	The gas employed in entrained flow (q.v.).
101	EOR	Enhanced oil recovery: the recovery of oil additional to that produced naturally by fluid injection or other means.
102	Euphotic zone	The zone of the ocean reached by sunlight.
103	Evaporite	A rock formed by evaporation.
104	Exothermic	Concerning a chemical reaction that releases heat, such as combustion.
105	Ex-situ mineralization	A process where minerals are mined, transferred to an industrial facility, reacted with carbon dioxide and processed.
106	Exsolution	The formation of different phases during the cooling of a

No	Word/term	Description
		homogeneous fluid.
107	Extended reach well	Borehole that is diverted into a more horizontal direction to extend its reach.
108	Extremophile	Microbe living in environments where life was previously considered impossible.
109	Far field	A region remote from a signal source.
110	Fault	In geology, a surface at which strata are no longer continuous, but displaced.
111	Fault reactivation	The tendency for a fault to become active, i.e. for movement to occur.
112	Fault slip	The extent to which a fault has slipped in past times.
113	FBC	Fluidized bed combustion: – combustion in a fluidized bed (q.v.).
114	Feldspar	A group of alumino-silicate minerals that makes up much of the Earth's crust.
115	Feedstock	The material that is fed to a process
116	FGD	Flue gas desulphurization.
117	Fischer-Tropsch	A process that transforms a gas mixture of CO and H <sub>2</sub> into liquid hydrocarbons and water.
118	Fixation	The immobilization of CO <sub>2</sub> by its reaction with another material to produce a stable compound
119	Fixed bed	A gas-solid contactor or reactor formed by a bed of stationary solid particles that allows the passage of gas between the particles.
120	Flood	The injection of a fluid into an underground reservoir.
121	Flue gas	Gases produced by combustion of a fuel that are normally emitted to the atmosphere.
122	Fluidized bed	A gas-solid contactor or reactor comprising a bed of fine solid particles suspended by passing a gas through the bed at sufficiently high velocity.
123	Folding	In geology, the bending of rock strata from the plane in which they were formed.
124	Formation	A body of rock of considerable extent with distinctive characteristics that allow geologists to map, describe, and name it.
125	Formation water	Water that occurs naturally within the pores of rock formations.
126	Fouling	Deposition of a solid on the surface of heat or mass transfer equipment that has the effect of reducing the heat or mass transfer.
127	Fracture	Any break in rock along which no significant movement has occurred.
128	Fuel cell	Electrochemical device in which a fuel is oxidized in a controlled manner to produce an electric current and heat directly.
129	Fugitive emission	Any releases of gases or vapours from anthropogenic activities such as the processing or transportation of gas or petroleum.
130	FutureGen Project	US Government initiative for a new power station with low CO <sub>2</sub> emissions.

No	Word/term	Description
131	Gas turbine	A machine in which a fuel is burned with compressed air or oxygen and mechanical work is recovered by the expansion of the hot products.
132	Gasification	Process by which a carbon-containing solid fuel is transformed into a carbon- and hydrogen-containing gaseous fuel by reaction with air or oxygen and steam.
133	Geochemical trapping	The retention of injected CO <sub>2</sub> by geochemical reactions.
134	Geological setting	The geological environment of various locations.
135	Geological time	The time over which geological processes have taken place.
136	Geomechanics	The science of the movement of the Earth's crust.
137	Geosphere	The earth, its rocks and minerals, and its waters.
138	Geothermal	Concerning heat flowing from deep in the earth.
139	GHG	Greenhouse gases: carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF <sub>6</sub> ).
140	Hazardous and non-hazardous waste	Potentially harmful and non-harmful substances that have been released or discarded into the environment.
141	Hazardous waste directive	European directive in force to regulate definitions of waste classes and to regulate the handling of the waste classes.
142	HAZOP	HAZard and OPerability, a process used to assess the risks of operating potentially hazardous equipment.
143	Helsinki Convention	International legal convention protecting the Baltic water against pollution.
144	Henry's Law	States that the solubility of a gas in a liquid is proportional to the partial pressure of the gas in contact with the liquid.
145	HHV	Higher heating value: the energy released from the combustion of a fuel that includes the latent heat of water.
146	Host rock	In geology, the rock formation that contains a foreign material.
147	Hybrid vehicle	Vehicle that combines a fossil fuel internal combustion engine and an alternative energy source, typically batteries.
148	Hydrate	An ice-like compound formed by the reaction of water and CO <sub>2</sub> , CH <sub>4</sub> or similar gases.
149	Hydrodynamic trap	A geological structure in which fluids are retained by low levels of porosity in the surrounding rocks.
150	Hydrogeological	Concerning water in the geological environment.
151	Hydrostatic	Pertaining to the properties of a stationary body of water.
152	Hypercapnia	Excessively high CO <sub>2</sub> levels in the blood.
153	Hypoxia	Having low rates of oxygen transfer in living tissue.
154	Hysteresis	The phenomenon of a lagging recovery from deformation or other disturbance.
155	IEA GHG	International Energy Agency – Greenhouse Gas R&D Programme.
156	IGCC	Integrated gasification combined cycle: power generation in which hydrocarbons or coal are gasified (q.v.) and the gas is used as a fuel to drive both a gas and a steam turbine.
157	Igneous	Rock formed when molten rock (magma) has cooled and solidified (crystallized).
158	Immature basin	A basin in which the processes leading to oil or gas formation have started but are incomplete.

No	Word/term	Description
159	Infrared spectroscopy	Chemical analysis using infrared spectroscopy method.
160	Injection	The process of using pressure to force fluids down wells.
161	Injection well	A well in which fluids are injected rather than produced.
162	Injectivity	A measure of the rate at which a quantity of fluid can be injected into a well.
163	<i>In-situ</i> mineralization	A process where minerals are not mined: carbon dioxide is injected in the silicate formation where it reacts with the minerals, forming carbonates and silica.
164	International Seabed Authority	An organization established under the 1982 UN Convention on the Law of the Sea, headquartered in Kingston, Jamaica.
165	Ion	An atom or molecule that has acquired a charge by either gaining or losing electrons.
166	IPCC	Intergovernmental Panel on Climate Change
167	JI	Joint Implementation: under the Kyoto Protocol, it allows a Party with a GHG emission target to receive credits from other Annex 1 Parties.
168	Kyoto Protocol	Protocol to the United Nations Framework Convention on Climate Change, which was adopted at Kyoto on 11 December 1997.
169	Leach	To dissolve a substance from a solid.
170	Leakage	In respect of carbon trading, the change of anthropogenic emissions by sources or removals by sinks which occurs outside the project boundary.
171	Leakage	In respect of carbon storage, the escape of injected fluid from storage.
172	Levellized cost	The future values of an input or product that would make the NPV (q.v.) of a project equal to zero.
173	LHV	Lower heating value: energy released from the combustion of a fuel that excludes the latent heat of water.
174	Lignite/sub-bituminous coal	Relatively young coal of low rank with a relatively high hydrogen and oxygen content.
175	Limestone	A sedimentary rock made mostly of the mineral calcite (calcium carbonate), usually formed from shells of dead organisms.
176	LNG	Liquefied natural gas
177	Lithology	Science of the nature and composition of rocks
178	Lithosphere	The outer layer of the Earth, made of solid rock, which includes the crust and uppermost mantle up to 100 km thick.
179	Log	Records taken during or after the drilling of a well.
180	London Convention	On the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, which was adopted at London, Mexico City, Moscow and Washington on 29 December 1972.
181	London Protocol	Protocol to the Convention adopted in London on 2 November 1996 but which had not entered into force at the time of writing.
182	Low-carbon energy carrier	Fuel that provides low fuel-cycle-wide emissions of CO <sub>2</sub> , such as methanol.
183	Macro-invertebrate	Small creature living in the seabed and subsoil, like earthworms, snails and beetles.



No	Word/term	Description
184	Madrid Protocol	A protocol to the 11th Antarctic Treaty to provide for Antarctica's environmental protection.
185	Mafic	Term used for silicate minerals, magmas, and rocks, which are relatively high in the heavier elements.
186	Magmatic activity	The flow of magma (lava).
187	Marginal cost	Additional cost that arises from the expansion of activity. For example, emission reduction by one additional unit.
188	Maturation	The geological process of changing with time. For example, the alteration of peat into lignite, then into sub-bituminous and bituminous coal, and then into anthracite.
189	Mature sedimentary basins	Geological provinces formed by the deposition of particulate matter under water when the deposits have matured into hydrocarbon reserves.
190	MEA	Mono-ethanolamine
191	Medium-gravity oil	Oil with a density of between about 850 and 925kg/m <sup>3</sup> (between 20 and 30 API).
192	Membrane	A sheet or block of material that selectively separates the components of a fluid mixture.
193	Metamorphic	Of rocks that have been altered by heat or pressure.
194	Mica	Class of silicate minerals with internal plate structure.
195	Microseismicity	Small-scale seismic tremors.
196	Migration	The movement of fluids in reservoir rocks.
197	Mineral trap	A geological structure in which fluids are retained by the reaction of the fluid to form a stable mineral.
198	Miscible displacement	Injection process that introduces miscible gases into the reservoir, thereby maintaining reservoir pressure and improving oil displacement.
199	Mitigation	The process of reducing the impact of any failure.
200	Monitoring	The process of measuring the quantity of carbon dioxide stored and its location.
201	Monte Carlo	A modelling technique in which the statistical properties of outcomes are tested by random inputs.
202	Mudstone	A very fine-grained sedimentary rock formed from mud.
203	MWh	Megawatt-hour
204	National Greenhouse Gas Inventory	An inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases prepared by Parties to the UNFCCC.
205	Natural analogue	A natural occurrence that mirrors in most essential elements an intended or actual human activity.
206	Natural underground trap	A geological structure in which fluids are retained by natural processes.
207	Navier-Stokes equations	The general equations describing the flow of fluids.
208	Near-field	The region close to a signal source.
209	NGCC	Natural gas combined cycle: natural-gas-fired power plant with gas and steam turbines.
210	Non-hazardous waste	Non-harmful substances that have been released or discarded into the environment.
211	NPV	Net present value: the value of future cash flows discounted to the present at a defined rate of interest.

No	Word/term	Description
212	Numerical approximation	Representation of physico-mathematical laws through linear approximations.
213	Observation well	A well installed to permit the observation of subsurface conditions.
214	OECD	Organization for Economic Co-operation and Development Convention for the Protection of the Marine Environment of the North-East Atlantic, which was adopted at Paris on 22 September 1992.
215	OSPAR	
216	Outcrop	The point at which a particular stratum reaches the earth's surface.
217	Overburden	Rocks and sediments above any particular stratum.
218	Overpressure	Pressure created in a reservoir that exceeds the pressure inherent at the reservoir's depth.
219	Oxidation	The loss of one or more electrons by an atom, molecule, or ion.
220	Oxyfuel combustion	Combustion of a fuel with pure oxygen or a mixture of oxygen, water and carbon dioxide.
221	Packer	A device for sealing off a section of a borehole or part of a borehole.
222	Partial oxidation	The oxidation of a carbon-containing fuel under conditions that produce a large fraction of CO and hydrogen.
223	Partial pressure	The pressure that would be exerted by a particular gas in a mixture of gases if the other gases were not present.
224	pCO <sub>2</sub>	The partial pressure (q.v.) of CO <sub>2</sub> .
225	PC	Pulverized coal: usually used in connection with boilers fed with finely ground coal.
226	Pejus level	The level in the ocean below which the functioning of animals deteriorates significantly.
227	Pelagic	Relating to, or occurring, or living in, or frequenting, the open ocean.
228	Perfluorocarbon	A greenhouse gas emitted during industrial or commercial operations.
229	Permeability	Ability to flow or transmit fluids through a porous solid such as rock.
230	Permian	A geological age between 290 and 248 million years ago.
231	Phytotoxic	Poisonous to plants.
232	Piezo-electric transducer	Crystals or films that are able to convert mechanical energy in electrical energy or vice-versa.
233	Pig	A device that is driven down pipelines to inspect and/or clean them.
234	Point source	An emission source that is confined to a single small location
235	Polygeneration	Production of more than one form of energy, for example synthetic liquid fuels plus electricity.
236	Pore space	Space between rock or sediment grains that can contain fluids.
237	Poroelectric	Elastic behaviour of porous media.
238	Porosity	Measure for the amount of pore space in a rock.
239	Post-combustion capture	The capture of carbon dioxide after combustion.
240	POX	Partial oxidation (q.v.)
241	Pre-combustion capture	The capture of carbon dioxide following the processing of the

No	Word/term	Description
		fuel before combustion.
242	Primary legal source	Legal source not depending on authority given by others.
243	Probability density function	Function that describes the probability for a series of parameter values.
244	Prospectivity	A qualitative assessment of the likelihood that a suitable storage location is present in a given area based on the available information
245	Proven reserve	For oil declared by operator to be economical; for gas about which a decision has been taken to proceed with development and production; see Resource.
246	Province	An area with separate but similar geological formations.
247	PSA	Pressure swing adsorption: a method of separating gases using the physical adsorption of one gas at high pressure and releasing it at low pressure.
248	Rank	Quality criterion for coal.
249	Reduction	The gain of one or more electrons by an atom, molecule, or ion
250	Reduction commitment	A commitment by a Party to the Kyoto Protocol to meet its quantified emission limit.
251	Reforestation	Planting of forests on lands that have previously contained forests but that have been converted to some other use.
252	Regional scale	A geological feature that crosses an entire basin.
253	Remediation	The process of correcting any source of failure.
254	Renewables	Energy sources that are inherently renewable such as solar energy, hydropower, wind, and biomass.
255	Rep. Value	Representative value
256	Reproductive dysfunction	Inability to reproduce.
257	Reserve	A resource (q.v.) from which it is generally economic to produce valuable minerals or hydrocarbons.
258	Reservoir	A subsurface body of rock with sufficient porosity and permeability to store and transmit fluids.
259	Residual saturation	The fraction of the injected CO <sub>2</sub> that is trapped in pores by capillary forces.
260	Resource	A body of a potentially valuable mineral or hydrocarbon.
261	Retrofit	A modification of the existing equipment to upgrade and incorporate changes after installation.
262	Risk assessment	Part of a risk-management system.
263	Root anoxia	Lack, or deficiency, of oxygen in root zone.
264	Root zone	Part of the soil in which plants have their roots.
265	Safe Drinking Water Act	An Act of the US Congress originally passed in 1974. It regulates, among other things, the possible contamination of underground water.
266	Saline formation	Sediment or rock body containing brackish water or brine.
267	Saline groundwater	Groundwater in which salts are dissolved.
268	Sandstone	Sand that has turned into a rock due to geological processes.
269	Saturated zone	Part of the subsurface that is totally saturated with groundwater.
270	Scenario	A plausible description of the future based on an internally consistent set of assumptions about key relationships and

No	Word/term	Description
		driving forces.
271	SCR	Selective catalytic reduction
272	Scrubber	A gas-liquid contacting device for the purification of gases or capture of a gaseous component.
273	Seabed	Borderline between the free water and the top of the bottom sediment.
274	Seal	An impermeable rock that forms a barrier above and around a reservoir such that fluids are held in the reservoir.
275	Secondary recovery	Recovery of oil by artificial means after natural production mechanisms like overpressure have ceased.
276	Sedimentary basin	Natural large-scale depression in the earth's surface that is filled with sediments.
277	Seismic profile	A two-dimensional seismic image of the subsurface.
278	Seismic technique	Measurement of the properties of rocks by the speed of sound waves generated artificially or naturally.
279	Seismicity	The episodic occurrence of natural or man-induced earthquakes.
280	Selexol	A commercial physical absorption process to remove CO <sub>2</sub> using glycol dimethylethers.
281	Shale	Clay that has changed into a rock due to geological processes.
282	Shift convertor	A reactor in which the water-gas shift reaction, $\text{CO} + \text{H}_2\text{O} = \text{CO}_2 + \text{H}_2$ , takes place.
283	Simplex orifice fitting	An apparatus for measuring the flow rate of gases or liquids.
284	Sink	The natural uptake of CO <sub>2</sub> from the atmosphere, typically in soils, forests or the oceans.
285	SMR	Steam methane reforming: a catalytic process in which methane reacts with steam to produce a mixture of H <sub>2</sub> , CO and CO <sub>2</sub> .
286	SNG	Synthetic natural gas: fuel gas with a high concentration of methane produced from coal or heavy hydrocarbons.
287	SOFC	Solid oxide fuel cell: a fuel cell (q.v.) in which the electrolyte is a solid ceramic composed of calcium- or yttria-stabilized zirconium oxides.
288		
289	Soil gas	Gas contained in the space between soil grains
290	Solubility trapping	A process in which fluids are retained by dissolution in liquids naturally present.
291	Sour gas	Natural gas containing significant quantities of acid gases like H <sub>2</sub> S and CO <sub>2</sub> .
292	Source	Any process, activity or mechanism that releases a greenhouse gas, an aerosol, or a precursor thereof into the atmosphere.
293	Speciation	The determination of the number of species into which a single species will divide over time.
294	Spill point	The structurally lowest point in a structural trap (q.v.) that can retain fluids lighter than background fluids.
295	Spoil pile	Heap of waste material derived from mining or processing operations.
296	SRES	Special Report on Emissions Scenarios; used as a basis for the climate projections in the TAR (q.v.).

No	Word/term	Description
297	Stabilization	Relating to the stabilization atmospheric concentrations of greenhouse gases.
298	Stable geological formation	A formation (q.v.) that has not recently been disturbed by tectonic movement.
299	Steam reforming	A catalytic process in which a hydrocarbon is reacted with steam to produce a mixture of H <sub>2</sub> , CO and CO <sub>2</sub> .
300	Storage	A process for retaining captured CO <sub>2</sub> so that it does not reach the atmosphere.
301	Strain gauge	Gauge to determine the deformation of an object subjected to stress.
302	Stratigraphic	The order and relative position of strata.
303	Stratigraphic column	A column showing the sequence of different strata.
304	Stratigraphic trap	A sealed geological container capable of retaining fluids, formed by changes in rock type, structure or facies.
305	Stimulation	The enhancement of the ability to inject fluids into, or recover fluids from, a well.
306	Stripper	A gas-liquid contacting device, in which a component is transferred from liquid phase to the gas phase.
307	Structural trap	Geological structure capable of retaining hydrocarbons, sealed structurally by a fault or fold.
308	Structure	Geological feature produced by the deformation of the Earth's crust, such as a fold or a fault; a feature within a rock such as a fracture; or, more generally, the spatial arrangement of rocks.
309	Structure contour map	Map showing the contours of geological structures.
310	Subsoil	Term used in London and OSPAR conventions, meaning the sediments below the seabed.
311	Sub-bituminous coal	Coal of a rank between lignite (q.v.) and bituminous (q.v.) coal.
312	Sustainable	Of development, that which is sustainable in ecological, social and economic areas.
313	Supercritical	At a temperature and pressure above the critical temperature and pressure of the substance concerned.
314	Syngas	Synthesis gas (q.v.)
315	Synthesis gas	A gas mixture containing a suitable proportion of CO and H <sub>2</sub> for the synthesis of organic compounds or combustion.
316	Synfuel	Fuel, typically liquid fuel, produced by processing fossil fuel.
317	Tail gas	Effluent gas at the end of a process.
318	Tailing	The waste resulting from the extraction of value from ore.
319	TAR	Third Assessment Report of the Intergovernmental Panel on Climate Change
320	TCR	Total capital requirement
321	Technical Potential	The amount by which it is possible to reduce greenhouse gas emissions by implementing a technology or practice that has reached the demonstration phase.
322	Tectonically active area	Area of the Earth where deformation is presently causing structural changes.
323	Tertiary	Geological age about 65 to 2 million years ago.
324	Tertiary recovery	Oil generated by a third method; the first is by pressure release or depletion, and the second by oil driven out by the injection

No	Word/term	Description
		of water.
325	Thermocline	The ocean phenomenon characterized by a sharp change in temperature with depth.
326	Thermohaline	The vertical overturning of water masses due to seasonal heating, evaporation, and cooling.
327	Top-down model	A model based on applying macro-economic theory and econometric techniques to historical data about consumption, prices, etc.
328	Toxemia	Poisoning, usually of the blood.
329	Toxicology	Scientific study of poisons and their effects.
330	Tracer	A chemical compound or isotope added in small quantities to trace flow patterns.
331	Transaction cost	The full cost of transferring property or rights between parties.
332	Trap	A geological structure that physically retains fluids that are lighter than the background fluids, e.g. an inverted cup.
333	Ultramafic rocks	An igneous rock consisting almost entirely of iron- and magnesium-rich minerals with a silica content typically less than 45%.
334	UNCLOS	United Nations Convention on the Law of the Sea, which was adopted at Montego Bay on 10 December 1982.
335	Unconformity	A geological surface separating older from younger rocks and representing a gap in the geological record.
336	Under-saturated	A solution that could contain more solute than is presently dissolved in it.
337	UNFCCC	United Nations Framework Convention on Climate Change, which was adopted at New York on 9 May 1992.
338	Unminable	Extremely unlikely to be mined under current or foreseeable economic conditions
339	Updip	Inclining upwards following a structural contour of strata.
340	Upper ocean	The ocean above 1000m depth.
341	Vacuum residue	The heavy hydrocarbon mixture that is produced at the bottom of vacuum distillation columns in oil refineries.
342	Vadose zone	Region from the water table to the ground surface, also called the unsaturated zone because it is partially water-saturated.
343	Validation	In the context of CDM (q.v.), the process of the independent evaluation of a project by a designated operational entity on the basis of set requirements.
344	Ventilation	The exchange of gases dissolved in sea-water with the atmosphere, or gas exchange between an animal and the environment.
345	Verification	The proving, to a standard still to be decided, of the results of monitoring (q.v.). In the context of CDM, the independent review by a designated operational entity of monitored reductions in anthropogenic emissions.
346	Viscous fingering	Flow phenomenon arising from the flow of two largely immiscible fluids through a porous medium.
347	Well	Manmade hole drilled into the earth to produce liquids or gases, or to allow the injection of fluids.
348	Well with multiple	Well drilled with multiple branching holes and more than one

No	Word/term	Description
	completions	hole being made ready for use.
349	Well-bore annulus	The annulus between the rock and the well casing.
350	Wellhead pressure	Pressure developed on surface at the top of the well.
351	Wettability	Surface with properties allowing water to contact the surface intimately.
352	Zero-carbon energy carrier	Carbon-free energy carrier, typically electricity or hydrogen.