



The Earth is dynamic with great forces of energy all around us. As the sun heats the atmosphere, wind whips across open landscapes. The ocean is under constant wave and tidal movement, sometimes calmly undulating and then furiously churning. Rainfall and melted snow makes the inevitably downhill race to the oceans, only to evaporate and repeat the same journey. Our great cities and spreading farms lie innocently above a tempest of molten rock.

The Electric Earth Index includes the companies that are attempting to capture earth's energy in mechanical designs from wind mills, to wave machines, to solar concentrators. Many investors will miss the solar cell producers. We have included photovoltaic solar cell developers in The Atomics Index, where they fit well with other companies harnessing the power of the atom.

ELECTRIC EARTH INDEX

GEOTHERMAL GROUP

COMPANY	Country	PUBLIC/ PRIVATE	OPERATIONS	WEB SITE
Altarock Energy, Inc.	US	Private	Geothermal power production	http://altarockenergy.com/
Alterra Power Corp.	Canada	AXY.TSX	Geothermal power generation	http://www.alterrapower.ca/
Calpine Corp.	US	CPN	Natural gas, geothermal power	http://www.calpine.com/
Energy Development Corp.	Philippines	Private	Geothermal power generation	http://www.energy.com.ph/
Geodynamics Corp.	Australia	GDY: AX	Geothermal power generation	http://www.geodynamics.com.au/
Landvirkjun hf	Iceland	Private	Geothermal power generation	http://www.landsvirkjun.com/
Melink Corporation	US	Private	Geothermal for HVAC	https://melinkcorp.com/
Ormat Technologies, Inc.	US	ORA	Geothermal power, recovered energy	http://www.ormat.com/
Ram Power Corp.	US	PIF.TSX	Geothermal power generation	http://www.ram-power.com/
US Geothermal, Inc.	US	HTM	Geothermal exploration	http://www.usgeothermal.com/
WaterFurnace International	US	WFI.TO	Residential heating solution	http://www.waterfurnace.com/

Stock symbols when provided are assumed to be U.S. exchanges unless otherwise indicated.

WIND GROUP

COMPANY	Country	PUBLIC/ PRIVATE	OPERATIONS	WEB SITE
AES Corp.	US	AES	Conventional, wind energy production	http://www.aes.com/
Alstom, SA	France	ALSMY	Power generation equipment	http://www.power.alstom.com/
Altaeros Energies	US	Private	High altitude wind power development	http://www.altaiosenergies.com/
Audax Renovables, SA	Spain	ADX.MC	Wind power generation	http://www.audaxrenovables.es/
Boralex	Canada	BLX.TO	Renewable power generation	http://www.boralex.com/en/
Broadwind Energy, Inc.	US	BWEN	Wind components and services	http://www.broadwindenergy.com/
Brookfield Asset Management, Inc.	Canada	BAM	Conventional, wind energy	http://www.brookfield.com/
Centrica Plc	UK	CNA: L	Conventional, wind energy	http://www.centrica.com/
China High Speed Transmission Equipment Group Co., Ltd.	China	658: HK	Wind equipment, components	http://www.chste.com/en/
China Longyuan Power Group	China	0916: HK	Wind power production	http://www.clypg.com.cn/en/
City Windmills Plc.	UK	CYW.L	Vertical wind power development	http://www.citywindmills.com/
Clean Solar Energy Tower	US	SWET	Wind tower development	http://www.cleanwindenergytower.com/index.html
Clipper Windpower Plc	US	Private	Wind turbine manufacturer	http://www.clipperwind.com/
Concord New Energy Group Ltd.	China	0182: HK	Wind power generation	http://www.cnegroup.com
E.ON AG	Germany	EOAN: FWB	Conventional, wind energy production	http://www.eon.com/en/
EDF Energies Nouvelles SA	France	EEN: PA	Wind, renewable power generation	http://www.edf-energies-nouvelles.com/
EDP Renovaveis S/A	Portugal	EDW.BE	Wind turbines, power generation	http://www.edprenovaveis.com/
Endesa SA	Spain	ELE.MC	Conventional, wind energy	http://www.endesa.com/en/home
Enel SpA	Italy	ENEL: MI	Conventional, wind energy	http://www.enel.com/en-GB/
EnergieKontor, AG	France	EKTG.F	Wind farm development	http://www.energiekontor.de/
EnerKite GmbH	Germany	Private	Airborne wind energy	http://www.enerkite.de/en/
Ever Power Wind Holdings, Inc.	US	Private	Wind power development	http://www.everpower.com/
Falck Renewables	Italy	FKR.MI	Mixed power generation, incl. wind	http://www.falckrenewables.eu/?sc_lang=en
General Electric Co.	US	GE	Wind turbines and equipment	http://www.ge.com/
Iberdrola Renovables SA	Spain	Private	Wind energy production	http://www.iberdrolarenovablesenergia.com/home
Japan Wind Development Co., Ltd.	Japan	2766: JP	Wind power generation	http://www.jwd.co.jp/english
Juhl Wind	US	JUHL	Wind energy development	http://www.juhlenergy.com/
LTA Windpower	Canada	Private	Airborne tethered wind turbine	http://www.ltawind.com/
Makani Power, Inc. (Google)	US	Private	Wind power with high altitude kites	http://www.google.com/makani/
Mass Megawatts Wind Power	US	MMMW	Wind power development	http://www.massmegawatts.com/
Mitsubishi Heavy Industries Ltd.	Japan	7011: JP	Power generation equipment	http://www.mhi.co.jp/en/
NaiKun Wind Energy	Canada	NKW.V	Wind power development	http://naikun.ca/

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WIND GROUP continued:

COMPANY	Country	PUBLIC/ PRIVATE	OPERATIONS	WEB SITE
Nordex AG	Germany	NDX1.DE	Wind turbine manufacturer	http://www.nordex-
Northern Power Systems, Inc.	US	NPS.TSX	Wind power systems	http://www.northernpower.com/
NTS GmbH	Germany	Private	High altitude wind power with	https://x-wind.de/en/
NZ Windfarms	New Zealand	NWF.NZ	Wind power generation	https://www.nzwindfarms.co.nz/
Owens Corning Corp.	US	OC	Wind equipment materials	http://www.owenscorning.com/
PNE Wind AG	Germany	PNE3.F	Wind farm engineering, planning	http://www.pnewind.com/
Principle Power, Inc.	US	Private	Floating wind turbine foundation	http://www.principlepowerinc.co
Sauer Energy	US	SENY	Wind turbine development	http://www.sauerenergy.com/
Sauer Energy	US	SENY	Vertical wind power solution	http://www.sauerenergy.com/
Sea Breeze Power Corp.	Canada	SBX.V	Wind power development	http://www.seabreezepower.com
Senvion SA	Germany	SEN.DE	Wind turbine manufacturer	http://www.repower.de/index.ph
Siemens AG	Germany	SI	Wind turbines and equipment	http://www.siemens.com/entry/c
Sinovel Wind Group, Ltd.	China	601558: SH	Wind turbines, generation sys-	http://www.sinovel.com/en/
Sky Windpower Corp.	US	Private	Flying electric generators	http://www.skywindpower.com/
SkySails GmbH	Germany	Private	Automated towing kite systems	http://www.skysails.info/
Solar Wind Energy Tower, Inc.	US	SWET	Wind energy, solar convection	http://www.solarwindenergytowe
Suzlong Energy	India	SULLON.NS	Wind turbine development	http://www.suzlon.com/
Terna Energy SA	Greece	44T.F	Wind, hydroelectric power gen- eration	http://www.terna-energy.gr/
TPI Composites, Inc.	US	TPIC	Composite wind blades	http://www.tpicomposites.com/
Vestas Wind Systems A/S	Denmark	VWS.CO	Wind turbines and equipment	http://www.vestas.com/
Wasatch Wind, Inc.	US	Private	Wind energy developer	http://www.wasatchwind.com/
Xinjiang Goldwind Science &	China	002202.SZ	Wind turbine producer	http://goldwindglobal.com
Xzeres Wind	US	Private	Small wind turbine development	http://www.windenergy.com/

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OCEAN GROUP

COMPANY	Country	PUBLIC/ PRIVATE	OPERATIONS	WEB SITE
Able Technologies LLC	US	Private	Wave power research	http://www.abletechnologiesllc.com/
Aquamarine Power, Inc.	Scotland	Private	Wave energy devices, technology	http://www.aquamarinepower.com/
Atlantis Resources Ltd.	Singapore	ARL.L	Tidal power turbines	http://atlantisresourcesltd.com/
AW-Energy Oy	Finland	Private	Ocean wave energy capture	http://aw-energy.com/
AWS Ocean Energy Ltd.	UK	Private	Wave energy development	http://www.awsocan.com/
Biopower Systems Pty., Ltd.	Australia	Private	Wave, tidal energy power development	http://www.biopowersystems.com/
Blue Energy Canada, Inc.	Canada	Private	Tidal energy turbine	http://www.blueenergy.com/
Carnegie Clean Energy Ltd.	Australia	CCE: ASX	Wave energy technology	http://www.carnegiwave.com/
Checkmate SeaEnergy Ltd.	U.K.	Private	Wave energy devices, equipment	http://www.checkmateuk.com/seaenergy/
DP Energy Ireland Ltd.	Ireland	Private	Tidal power development	http://www.dpenergy.com/
M3 Wave LLC	US	Private	Wave power development	http://www.m3wave.com/
Ocean Energy Ltd.	Ireland	Private	Wave energy technology	http://www.oceanenergy.ie/
Ocean Power Technologies	US	OPTT	Wave power generation equipment	http://www.oceanpowertechnologies.com/
Ocean Renewable Power Co.	US	Private	Tidal power development	http://www.orpc.co/
Ocean Thermal Energy Corp.	US	Private	Heating, cooling with ocean technologies	http://www.otecorporation.com/
OpenHydro, Inc. (DCNS Co.)	Ireland	Private	Tidal power systems	http://www.openhydro.com/home.html
Oscilla Power, Inc.	US	Private	Wave power development	http://oscillapower.com/
OWWE Ltd.	Norway	Private	Wave energy development	http://www.owwe.net/
Seabased AB	Denmark	Private	Wave energy development	http://www.seabased.com/
Verdant Power, Inc.	US	Private	Tidal, wave power development	http://www.verdantpower.com/
Wavestar A/S	Denmark	Private	Energy from ocean waves, swells	http://wavestarenergy.com/

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SOLAR CONCENTRATING GROUP

COMPANY	Country	PUBLIC/ PRIVATE	OPERATIONS	WEB SITE
Abengoa Solar, S.A.	Spain	ABG: MC	Mixed power generation, incl. CSP	http://www.abengoasolar.com/
Acciona, S.A.	Spain	AANA.MC	Mixed power generation, incl. CSP	http://www.acciona.com/
Arzon Solar, Inc.	US	Private	Solar power concentrators	http://arzensolar.com/
BrightSource Energy, Inc.	US	Private	Solar thermal power plant systems	http://www.brightsourceenergy.com/
Concentrix-Solar	Germany	Private	Concentrating solar panels	http://www.concentrix-solar.de/
Epiphany Solar Water Systems, Inc.	US	Private	Solar-power water purification	http://epiphanysws.com/
eSolar, Inc.	US	Private	Solar concentrator technology	http://www.esolar.com/
SkyFuel, Inc.	US	Private	Solar concentration technology	http://www.skyfuel.com/
Solar Millenium, AG	Germany	S2M: GR	Solar thermal power plant construc-	http://www.solarmillennium.de/
Suntrough Energy	US	Private	Mixed power generation, incl. CSP	http://suntrough.com/

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HYDROPOWER GROUP

COMPANY	Country	PUBLIC/ PRIVATE	OPERATIONS	WEB SITE
Advanced Hydro Solutions	Private	US	Hydroelectric turbines	http://www.advancedhydrosolutions.com/
AECOM Technology Corporation	ACM	US	Professional engineering	http://www.aecom.com/
Alden Research Laboratory, Inc.	Private	US	Fluids flow engineering	http://www.aldenlab.com/
Hydro Consulting & Maintenance Services	Private	US	hydro consulting	http://www.hydro911.com/
Hydro Power Equipment Ltd.	Private	South Africa	Hydro energy applications	http://www.hpesa.com/
Mavel	Private	Czech Rep	Turbine engineering	http://www.mavel.cz/home.html
Natel Energy, Inc.	Private	US	Hyrdo power engineering	http://www.natelenergy.com/
Sinohydro	Private	China	Hydroelectric dam construction	http://www.sinohydro.com/
Toshiba	Private	Japan	Hydroelectric equipment	http://www3.toshiba.co.jp/
Voith Hydro Services, Inc.	Private	US	Turbine maintenance, repair	http://www.voithhydro.com/
Weir Group Plc	WEIGF	UK	Hydroelectric turbines, pumps	http://www.weirpowerindustrial.com

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