

H.E. Mr. Nicolas Sarkozy
President of France
President of the European Council

H.E. Mr. José Manuel Barroso
President of the European Commission

Dear Presidents Sarkozy and Barroso,

We are writing to encourage you urgently to begin work on creating the new infrastructure Europe needs if we are to make a rapid shift to clean energy.

It is now possible to build an efficient high-voltage direct current (HVDC) "supergrid" spanning the Europe-Mediterranean region. Such a grid would enable us to transmit energy over large distances with very little loss in transmission.

This in turn would enable us to generate renewable energy in the places where it is most abundant, and make it available to the whole region. Southern Europe, North Africa and the Middle East could feed in cheap, reliable and unlimited energy from solar thermal power stations. Iceland, Italy and other areas could feed in geothermal energy. Areas rich in wind energy could provide a more steady supply, as the wind is always blowing in parts of the region. To further ensure stability of supply, wind, wave and photovoltaic energy could be integrated with increased energy storage by pumping water into uphill reservoirs in mountainous areas, as many countries already do.

The urgent requirement to reduce CO2 concentrations in the atmosphere, and the rising price of fossil fuels, mean that Europe will need to go far beyond the 20% renewables goal in the years beyond 2020. A regional supergrid could make this much easier to achieve. The benefits of a steady expansion of renewables include job creation, enhanced energy security, and less pollution.

We urge you to take two steps immediately:

1. Ensure that a strong "solar plan" is included in the initiative for a Mediterranean Union, including cross-Mediterranean transmission links and development of solar thermal power stations in deserts and drylands to help meet the energy needs of people on all sides of the Mediterranean.
2. Initiate a European Commission study of options for implementation of a clean energy supergrid, including: (a) estimated costs and options for cost-sharing, (b) integration of solar, wind, wave, hydro storage, geothermal and other technologies across the region to provide steady and reliable supply, (c) options for incentives to ensure the fastest development of generating capacity in energy-rich areas as the supergrid is built, (d) long-term potential cost savings for the region from using energy sources where the fuel is free, and (e) possible first steps towards implementation.

We believe this could become a flagship project for Europe's leadership in the race to clean energy.

Sincerely,

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Germany, Vice-Chair, Greens/European
Free Alliance
Vice-Chair, Committee on Climate Change

Sirpa Pietikäinen MEP
Finland, European People's Party
(Christian Democrats)
Committee on Economic Affairs

Paolo Casaca MEP
Portugal, Socialist Group
Committee on Budgets

Daniel Cohn-Bendit MEP
Germany, Co-President, Greens/
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France, Chair, European People's Party
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Spain, Greens/European Free Alliance
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Committee on Environment

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Paul Rubig MEP
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United Kingdom, Chair, Alliance of Liberals
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e-Parliament

Background information

Can Europe switch to clean energy and keep the lights on?

The most recent warnings from the climate scientists suggest that we need to end our dependence on fossil fuels very quickly. But could we power the European economy largely from sun, wind and water within 20 years? If we approach the problem from a regional rather than from a national perspective, the answer is yes. Here's how:



Build a "supergrid" linking the whole Europe-Mediterranean region, using high voltage direct current (HVDC) cables. HVDC lines, which lose very little energy in transmission, can bring in solar, wind, wave, hydro or geothermal energy from wherever these sources are abundant to the rest of the region.



Feed into the grid cheap, reliable energy from solar thermal power stations in the sun-rich areas of Southern Europe, North Africa and the Middle East. These power stations, like this one in Spain, use mirrors to concentrate the sun's heat to boil water and drive a steam turbine.



Expand our capacity to store renewable energy in Europe's mountain ranges by pumping water uphill into reservoirs, large and small. When electricity is needed, water is run downhill through a turbine, returning 75% of the original energy into the grid. As in this French reservoir, "pumped storage" is already widely used.



Rapidly expand wind power. Across the whole region, the supply is fairly steady: when the wind drops in one place, it is blowing elsewhere. Some wind energy can be stored in the mountains as backup to ensure 100% reliable supply, thus allowing us to depend on wind for a larger part of our energy.



Put solar photovoltaic (PV) panels on rooftops and in solar farms, like this one in Germany, throughout the region. The cost of PV is falling fast, and new developments such as "thin film" technology are about to reduce costs further. Some of the energy generated in the daytime can be stored for night time use, thus ensuring a steady supply.