



Green Grids Accelerators

To avoid a climate catastrophe, humanity must stay within a safe carbon budget.

Recent IPCC reports show that this means ending almost all uses of fossil fuels very rapidly. To replace fossil fuels with renewable energy, we need rooftop solar everywhere plus a massive expansion of large-scale solar and wind power in the best locations. The best places for huge solar power stations are deserts, where strong sunshine is combined with cheap land, and where covering large areas with solar panels doesn't displace food production. The best locations for wind are often equally remote, such as Patagonia, the south coast of Morocco, or offshore.

In order to link cities and factories to the most energy-rich places, and to combine many different sources in different time zones into a reliable 24/7 supply of clean energy for all, we need continental-scale grids. High voltage direct current (HVDC) transmission lines can transport energy over long distances – overhead, underground or underwater – with little loss. Clean energy highways can be built most rapidly using underwater cables wherever possible, on the seabed or on riverbeds, to avoid the permitting delays and public opposition that overhead lines often encounter.

Here are some examples of clean energy highways which could replace huge amounts of fossil fuels. Some of them will connect together, like a Lego set.

- **Australian desert solar to a regional hub**, perhaps in Singapore, delivering clean power from there to Southeast Asia and southern China. **Sun Cable** has already secured agreement for the first connections from Australia to Singapore.
- **Gulf and Middle East to North Africa and Europe**, extending the solar day for everyone, with desert solar delivered to Europe by day, and with surplus European and North African wind transmitted eastwards during the night.
- **India to the Gulf and Middle East**, enabling mutually beneficial trade in solar and wind power between two deserts in different time zones, and enabling South Asia to draw on solar power from the west during its evening.
- **India's Thar Desert to Southeast Asia**, thus linking ASEAN nations to two deserts.
- **Morocco to North Sea nations**, linking Europe to Saharan solar and wind power.
- **Namibian coastal wind and desert solar** to the big cities in the east of Southern Africa.
- **Patagonian wind and Atacama Desert solar** to South America's major cities.
- **Texan and New Mexican desert solar** to the US East Coast via cables running down the Rio Grande and around the coast, with East Coast offshore wind power flowing westwards when the East Coast sleeps.

Many of the relevant governments have expressed support for projects along these lines. The connections to Europe would be particularly timely as Europe seeks to diversify its energy sources. The **Climate Parliament**, the **Harvard Negotiation Project** and the **United Nations Industrial Development Organisation (UNIDO)** propose to organise **Green Grids Accelerators** to move from talk to action. Each Accelerator will involve three sets of activities taking place in parallel, focused on one energy highway.

1. Business leaders and both private and public investors, in a *Climate Parliament CEO and Investor Council*, explore the creation of consortia to propose and build massive solar power stations and wind farms, and long-distance transmission to bring the power to market.

Co-convenors of the CEO and Investor Council include: Anand Mahindra, Chairman of the **Mahindra Group**, one of India's largest industrial conglomerates; Norman Moyo, CEO of **Distributed Power Africa**; Paddy Padmanathan, CEO of **ACWA Power**, which has built many of the world's largest solar power stations; and Audrey Zibelman who leads Tapestry, which **Alphabet** calls its "moonshot for the electric grid." Other participating companies include: **Macquarie**, the world's largest infrastructure investor; **National Grid**, the world's largest owner of undersea cables; **Nexans**, a major builder of long-distance transmission; and **Xlinks**. After conducting feasibility studies, Xlinks is offering to deliver Moroccan renewable energy to northern Europe for less than 6 US cents/kWh. Donor agencies and multilateral funds that invest in clean energy infrastructure, or that provide seed money for such investments, are invited to participate.

2. Legislators and governments work to deliver rapid approval for power generation sites, transmission routes, and agreed prices for power delivered.

The **Climate Parliament** is a network of Members of Parliament and Congress promoting renewable energy and green grids. Cross-party support in national and regional parliaments will be mobilised to help green infrastructure projects advance more rapidly. The Climate Parliament conceived and developed the **Green Grids Initiative** which was launched at the COP26 Glasgow summit in November 2021 by heads of government and ministers of **Australia, France, India, Nigeria, Samoa, the United Kingdom and the United States**. The "**Green Grids Initiative-One Sun One World One Grid**" released a **One Sun Declaration**, originally drafted by the Climate Parliament and now endorsed by 93 governments, committing governments to work together on international grids for renewable energy. The Climate Parliament remains involved in what is now a separate, government-led process with a ministerial Steering Group. Government ministers, officials and legislators will be invited to participate in Green Grids Accelerator discussions.

3. Universities, think tanks, foundations and NGOs, linked through a *Climate Parliament Civil Society Council*, will conduct or support modelling and analysis on each clean energy highway, to help prepare the ground for investment.

The Climate Parliament is a member of the **Climate Compatible Growth** research consortium, including **Cambridge, Oxford, Sweden's Royal Institute of Technology** and other universities, who have developed a global grid model that can support this process. Advocacy NGOs can ensure that projects meet high standards of sustainability, and can help to deliver public support. The **Climate Action Network**, which brings together 1900 NGOs in 130 countries, has already decided to support the Green Grids Initiative.

By enabling all these key players to act in parallel, we can create an accelerated project pipeline to build the green grid infrastructure on which our future depends.

For more information, visit www.greengrids.world, or contact info@climateparl.net