Climate Parliament

Catalysing the Renewables Revolution

The Climate Parliament's strategy to build EUMENA cooperation on renewable energy

Contents

The Challenge: Avoiding a +2˚C World

Accounting for around 60% of global carbon emissions, the burning of fossil fuels to generate electricity is a key driver of climate change. Indeed, the International Energy Agency has calculated that, to keep global temperatures below the 2˚C danger threshold, at least two thirds of currently proven reserves of coal, gas and oil must be left in the ground. If the world is to have any hope of avoiding catastrophic climate change, it is clear that we must switch our energy supply away from hydrocarbons to clean and sustainable sources of power such as solar, wind and hydropower.

Luckily, we already have all the technology we need to make the transition. Large scale energy generation from wind and solar has already been achieved: in the first quarter of 2013, 70% of Portugal's electricity supply was generated from renewables. And renewable electricity is getting cheaper all the time. Research by Citigroup found that, thanks to technological improvements and economies of scale, utility-scale wind and solar are already outcompeting fossil fuels on price in some countries; by 2020, Citigroup concluded, utility-scale solar will be cheaper than fossil-fired power in all key markets around the world, including China, India, the US, Russia, Germany and even the UK.

The cheapest renewable energy of all is to be found in the areas where that energy is most abundant – such as solar power in deserts, or wind power on windy coastlines – which are often far from the big cities. The energy is cheaper because the equipment costs the same in any location, and the fuel is free. Thus where there is more sun, wind or water, more electricity is generated for the same up-front investment, and the unit cost falls. And in deserts land is much cheaper.

This electricity can be efficiently dispatched over long distances using high-voltage direct current (HVDC) cables, which lose only around 3% of power every 1,000km, and only around 1¢ per kWh in distribution costs. Everyone can be connected to energy-rich areas, and different energy sources can be linked into an integrated regional grid to overcome problems of intermittency and ensure a reliable supply of clean electricity.

Challenges remain, however. Urgent investment in infrastructure is required if the world is to take advantage of this shift in the global energy paradigm at the speed required. The world's energy systems must be weaned away from the baseload model that has dominated the industry for the last century, and embrace new technologies such as

smart grids, HVDC transmission, and cross-border interconnectors in order to integrate renewable energy sources into a grid that can provide reliable, affordable power on demand.

Financial barriers to growth in the renewable energy industry must be surmounted, and new investment vehicles must be created to overcome the unique capital challenges posed by renewable projects. The International Energy Agency (IEA) estimates that, to avoid dangerous climate change, around US$ 1 trillion needs to be invested in renewable energy per annum. Yet according to UNEP figures, in 2011 global investment in renewable energy reached a record high of US$257 billion, less than a quarter of what is needed annually – and subsequently fell by 11% in 2012.

This situation is compounded by the fact that market prices for fossil fuels remain an inaccurate reflection of their actual economic, environmental and social costs. According to one recent report, climate change already costs the world economy more than $1.2 trillion a year – reducing global GDP by 1.6%. By 2030, the world's least developed countries could be suffering losses of up to 11% of their GDP. According to the World Health Organisation (WHO), almost two and a half million people die every year from fossil-fuel related air pollution, more than HIV and malaria fatalities combined. Indeed, a 2005 report for the Canadian Ministry of Energy found that when health impacts are accounted for, the "true cost" of coal-based electricity is at least 5 times current market price.

Fossil fuels remain radically underpriced, and thus over-consumed, thanks in part to vast subsidies – estimated by the International Monetary Fund in 2013 to be worth $1.9 trillion per annum, equivalent to 2.7% of global GDP. These subsidies must be dismantled to create an accurate and undistorted market price for hydrocarbon energy. Once this is done, renewable energy – especially from places where it is most abundant – will be able to outcompete fossil fuels in the open marketplace.

New regulatory and legislative frameworks are urgently required. Robust, consistent and transparent government policies are essential to catalyse deployment, support innovation and investment, and smooth the transition to renewables for producers and consumers alike. Regional conditions for renewables vary widely, and there is no such thing as a one-size fits all approach to energy legislation, but nationally-appropriate policies could include power purchase agreements, feed-in tariffs, legally binding national targets, renewable obligations on power companies, and more.

The Solution: A Global Five-Year Push

It would be unwise to rely on consensus negotiations among almost 200 governments to solve these intertwined problems of climate, energy and finance. However, there is a solution. While talks continue, national governments can pass domestic legislation to accelerate the needed transition to renewable energy. We are not far away from the point where renewables can outcompete fossil fuels on price; when that tipping point is reached, market forces will do the rest. Experts believe that a bold policy programme, undertaken by enough national governments acting independently but concurrently, could get us to that point within five years; we're calling it the Five Year Push.

To be effective, the Five Year Push must contain five key elements:

1. Transmission. The world's growing population must be connected to the best available renewable resources, be it via village mini-grids or continental "electricity highways". Local renewables – including rooftop solar panels, wind and small hydropower – can meet much of our energy needs. Long-distance transmission can deliver the rest from large-scale solar power stations, dams or wind farms in sparsely populated areas such as deserts, mountain ranges and coastal seas.

2. Targets. Morocco has set an ambitious target of 42% of electricity from renewable energy by 2020, starting from a low base of less than 10% today. The EU has set a 2020 target of 20% of energy from renewables. Britain has legislated a binding national target of 80% reduction of greenhouse gas emissions by 2050. Every nation should have such targets to drive the renewable revolution.

3. Incentives. New investment mechanisms must be created to encourage big institutional investors to direct hundreds of billions of dollars into renewables; these could include feed-in tariffs, power purchase agreements and partial government guarantees for bonds and loans

4. Fossil fuel subsidies. As the IMF has called for, the $1.9 trillion annual subsidy to fossil fuels has to stop. Part of those subsidies should be converted into cash payments to poorer citizens to help cover their energy bills.

5. Efficiency and electrification. Building insulation and other efficiency measures can reduce the amount of renewable energy we have to produce. Electric vehicles use 20% of the energy of oil-powered vehicles and can run on renewable electricity. Electric home heating can replace gas and heating oil, thus finally freeing the economy from fossil fuels.

Taking legislative action in these five areas will not be easy. Yet there is one group of people who have all the tools required: the world's Members of Parliament and Congress. Elected legislators vote on laws, taxes and budgets, oversee the operations of government, and have direct access to Ministers, Prime Ministers and Presidents. They can influence national policy, build strong legislative frameworks, direct spending in new directions, and establish stronger targets for action on climate change and renewable energy. This proposal outlines a way to use the influence of legislators in a part of the world that is well placed to show leadership on all five steps: North Africa and Europe.

The Climate Parliament

The Climate Parliament is an international cross-party network of legislators, dedicated to preventing climate change and promoting renewable energy. We support parliamentarians to undertake initiatives at national and regional levels to help accelerate the global renewable switch at the speed and scale required. The Climate Parliament has been supporting MPs in their work on renewable energy for over five years, and has established a network of legislators from across Asia, Africa and Europe, all dedicated to effecting the renewables transition.

Climate Parliament legislators have already achieved some notable successes in climate and energy legislation within their national and regional parliaments. For example, our Climate Parliament India group of MPs have played the lead role in more than doubling the country's 2020 renewable energy target from 6% to 15% of electricity, and more than doubling the national renewable energy budget from 0.3% to 0.7% of the national budget. But we need to do much more.

Together with the UN Development Programme, the Climate Parliament is currently implementing a joint project, entitled Parliamentary Action on Renewable Energy. This programme aims to increase the capacity of parliamentarians in ten developing countries to develop parliamentary initiatives to support renewable energy. These ten countries are India and Bangladesh in South Asia; Jordan, Lebanon, Morocco and Tunisia in in the Middle East & North Africa; and Congo Brazzaville, Senegal, South Africa and Tanzania in Sub-Saharan Africa. As part of the programme we have hired four Regional Coordinators, based in India, Morocco, Senegal and South Africa, who co-ordinate legislative activity and provide support to parliamentarians in their respective areas. Thanks to their hard work, we have established formal cross-party groups of MPs in the Parliaments of India, Bangladesh and the EU, and are in the final stages of incorporating further groups in Jordan, Morocco, Senegal, Tanzania and Tunisia.

MPs in our network are already taking action on climate in their respective parliaments. Our group in the European Parliament, led by our Chairman Sir Graham Watson MEP, recently successfully advanced budget amendments in key committees which could move up to €2 billion in additional funding into electricity highways in the Europe-Mediterranean region. In the course of the negotiations on the new Seven-Year EU Budget, our MEPs met with the 10 relevant European Commissioners, including the President of the European Commission José Manual Barroso, to urge greater support for renewables and new grids. Meanwhile in Tunisia, MPs in our network have submitted proposals to the Constitutional Assembly that would enshrine environmental considerations at the heart of Tunisia's new constitution. And in Morocco, our MPs helped to draft a successful amendment to the Environmental Bill, which expanded the mandate of the Economic and Social Council (a civil body charged with advising the government) to cover climate and environmental issues.

The Opportunity: North Africa and Europe can lead the way

To demonstrate that the transition to large-scale renewable energy is possible, one region needs to go first. The nations of North Africa and Western Europe are well placed to do so, for several reasons:

1. Ambition. Morocco, Denmark and Germany have the most ambitious renewable energy targets in the world, along with one or two small island states. Other West European nations are not far behind, Germany has the largest total surface of photovoltaic (PV) panels of any nation, Italy the second largest. Britain has more offshore wind turbines than the rest of the world combined.

2. Unlimited energy resources. Between the desert sun, the strong winds on Morocco's desert coast, Europe's windy seas, and the huge hydropower and pumped storage capacity in the Alps and the Scandinavian mountains, the region has enough clean energy to meet its energy needs now and forever. Just to take one example, if solar thermal power stations with heat storage were built across the northern Sahara covering a combined area equalling 150 km X 150 km, they could meet all of Europe's current electricity demand, day and night.

3. Short distances. Europe is not a big place, and the Mediterranean is not a wide sea. HVDC power lines comparable in length to those now being installed in China could easily provide the electricity highways to move clean energy wherever it is needed within the region. HVDC lines work well under water and underground as well as overhead.

Linking the population centres of the EUMENA region with the abundant clean energy reserves of the North African desert via a HVDC network would drive development, accelerate decarbonisation, and provide much-needed momentum to the global renewable transition. This is a win-win proposition for the region: investment in large-scale renewable energy would spur sustainable economic growth North Africa by fighting energy poverty, reducing reliance on expensive fossil fuels, generating thousands of new jobs, and creating new sources of export revenue from the sale of clean, reliable electricity. Per dollar invested, renewable technology creates three times as many jobs as fossil fuel industries, while renewable energy exports from North Africa to Europe could generate over €60 billion in export revenues per annum – more than Morocco and Egypt's current export revenues combined.

Europe, meanwhile, would gain access to a vast reserve of cheap, clean energy, enabling it to meet its 2050 decarbonisation targets and insulate itself from rising fossil fuel prices. With Europe committed to a 90% decarbonisation by 2050, integrating MENA region solar and wind resources into the European grid could save the EU €33 billion every year. Furthermore, HVDC networks overcome the intermittent nature of renewable energy by integrating different energy sources into the same grid, so that if the wind drops in one area, the shortfall can be met by other sources from elsewhere. Integrating North African wind and solar into a European renewables network would thus improve the reliability and stability of energy supply across the continent, reducing the need for fossil fuel back up capacity. Finally, by utilising energy resources from multiple countries, the security of European supply will be much improved; at present, EU electricity

production relies heavily on imported coal and gas, the vast majority of which comes from just a handful of suppliers like Russia, Libya and Algeria.[1]

The early development of the European Union was driven in part by a group of influential young legislators (such as Willy Brandt and Ted Heath) convened by the EU's principal founder, John Monnet. The Renewable Energy Law that made Germany of the world's biggest market for renewables was drafted not by the government but by a small group of Members of the Bundestag, Germany's Parliament. The Climate Parliament is now proposing to create a similar group of legislators to provide leadership for the drive to create a single market for clean energy stretching from the Sahara to northern Europe.

The task of these MPs is to clear away the political, regulatory and bureaucratic barriers to energy trading between North Africa and Europe, and between West European countries. The governments of the region have already committed themselves to this goal in the Union for the Mediterranean and in other fora. But resistance from vested interests is strong, and progress is slow. A single interconnector between Spain and France took 20 years to negotiate between the electricity bureaucracies of the two countries; we don't have time to proceed at this glacial pace. Legislators, like good sheepdogs, can get things moving!

1 Integrating renewable energy sources from North Africa into the European grid is not a substitute for maximising local and national investment in renewable energy production within Europe itself, however. Imported North African electricity is not and cannot be a replacement for locally-produced wind, solar or hydro power; it must be a complimentary source of energy, working in tandem with national renewable generation to provide stable, sustainable electricity at scale.

The EUMENA Strategy

To promote the Europe-North Africa energy partnership, we will create a network of legislators from 13 countries. The 13 are: Austria, Belgium, Denmark, France, Germany, Italy, Morocco, the Netherlands, Portugal, Spain, Switzerland, Tunisia and the United Kingdom. Among other things, these countries account for the two simplest route northwards from North Africa to northern Europe – one from Morocco via Iberia and France, the other from Tunisia via Italy.

The network will have two main goals: to maximise renewable energy production at the national level, using legislation, infrastructure spending and investment incentives to maximise growth in domestic sustainable industries; and to lay the foundations for large-scale renewable exports from the deserts of North Africa to the European grid via HVDC interconnectors.

As funds are raised, we will create a staff team to support the network. This will begin with a Regional Coordinator based in London, followed by National Coordinators in as many of the national capitals as possible. As mentioned earlier, we already have a Regional Coordinator for North Africa based in Morocco. The staff will work to:

1. Build up the network of MPs

If new legislation is to gather enough support to be voted into law, it must have the support of a critical mass of MPs from across the political spectrum. Network building is thus the cornerstone of our work. Typically, we begin by forging relationships with interested members of parliamentary bodies working in relevant fields, such as energy, environment and development committees, and we then work together with our initial contacts to identify and invite interested MPs from the parliamentary body as a whole.

Where we can provide staff support at the national level, we will explore the formation of a national Climate Parliament group. Two co-convenors, preferably from different parties, are appointed to lead the group within the Parliament, and a Chairperson is elected. Regular group meetings are held in the Parliament, in order to discuss future strategy and opportunities for action, identify potential new members, invite relevant experts to present their work to the group, and engage with the wider stakeholder community (such as officials, development agencies, relevant businesses and banks, NGOs, etc).

2. Build support and cooperation through dedicated supergrid events

Bringing a EUMENA supergrid to fruition will require input, expertise and cooperation from many diverse sectors: governments, industry, NGOs, investors, development agencies, and citizens. To bring these actors together, the Climate Parliament proposes to organise and host two meetings a year in support of the supergrid concept: the first to be a smaller, strategic Forum where a steering committee of legislators and policy experts can plan parliamentary action, and the second to be a larger Hearing for building cooperation and collaboration amongst key stakeholders.

North Africa's potential as a wellspring of renewable energy has already attracted attention from forward-thinking legislators, investors and developers. The Desertec Industrial Initiative has set out ambitious plans to link the European, North African and

Middle Eastern regions into a single supersmartgrid, exporting wind and solar power from the deserts to regional population centres, while Nur Energie has outlined proposals for cables to link Tunisian solar thermal power stations to the Italian mainland. Such projects, however, need dedicated legislative support from committed MPs if they are ever to clear the financial and legislative hurdles that currently keep too many of them pinned to the drawing board. The Climate Parliament, as the only parliamentary network dedicated to renewable energy and new grids, is therefore uniquely positioned to help generate this political will.

Our Hearings will bring together MPs, government officials, industry representatives, science, engineering and technology experts, investors, NGOs and senior figures from multi- and bi-lateral development agencies for strategic discussions on making the supergrid concept a reality. Encouraging large development agencies and banks to invest in the supergrid will be essential, and will be a key goal of our supergrid meetings. The Climate Parliament has already established good working contacts with several financial and development agencies, which have expressed a strong interest in working together with us on climate and energy initiatives. These agencies include the African Development Bank, the Agence Française de Développement, the Desertec Foundation, the European Investment Bank, the European Bank of Reconstruction and Development, Deutsche Gesellschaft für Internationale Zusammenarbeit, the International Energy Agency, the International Renewable Energy Agency, the Islamic Development Bank, the Norwegian Agency for Development Cooperation, the OECD, SwissAid, the UN Development Programme, the UN Environment Programme, and the World Bank.

From our past experience, we have learnt that the most effective action takes place when meetings are combined with a strong network of active MPs who can continue to push for ongoing action after the participants of such events have returned home to their various countries. Even more can be achieved when we have staff on the ground to support the efforts of our parliamentary network. To maximise the efficacy of our events, we propose to allow six months for recruiting national staff and building the parliamentary network before organising the first meeting.

3. Enhance legislators' capacity to advance policy and legislative proposals

As we have shown in India, where we have for staff members, our best results are achieved when we have staff on the ground to support MPs on a daily basis. This is particularly the case in parliaments which have only limited ability to provide MPs with staff and office facilities. Experience has shown us that dedicated staff support can make a huge difference in the legislative effectiveness of even the most dedicated MP. Legislators are extremely busy people; a dedicated team of staff to convene legislators, conduct research, co-ordinate cross-party action and draft parliamentary questions, legislative amendments, budget proposals or other interventions can ensure that their parliamentary action on renewables is as effective as possible.

Climate Parliament staff can identify opportunities for action in parliamentary timetables; assist in drafting parliamentary questions and interventions; contribute towards relevant committee agendas; shape legislative and budgetary amendments; conduct research requested by MPs; and engage with bilateral and multilateral development agencies in order to channel policy ideas, model legislation and best practice to MPs.

Among other priorities the MPs may wish to focus on:

- It would be very useful if legislators in Morocco and Tunisia can be supported to work on a proactive proposal to European nations regarding how much power could be exported, at what price, with what royalties for the exporting countries, etc. There is no reason why North African countries have to wait for Europeans to arrive with proposals.

- New rules and possibly new laws will be required to ensure that as many European countries as possible open their electricity markets to imports of renewable energy from North Africa, and vice versa.

- Governments on both sides of the Mediterranean should offer partial guarantees for project bonds or loans to finance the construction of both the necessary HVDC interconnectors and the large-scale generating capacity. This requires new budget lines in national budgets. As mentioned earlier, we have already been working on this in the EU budget.

- Multilateral development banks should be encouraged to get behind these tasks. The Climate Parliament has already made good connections with the World Bank, the European Investment Bank, the European Bank for Reconstruction and Development, the Islamic Bank for Development and the African Development Bank, among others.

- Any bureaucratic and political resistance from incumbent power companies or grid operators needs to be firmly confronted and overcome.

- New EU rules on financing of international electricity interconnectors are under consideration, and have the potential to unleash more private investment by ensuring a fair return on that investment. Such rules need parliamentary support. Recently built interconnectors in Europe (such as the NorNed undersea cable linking Norway and the Netherlands) have paid for themselves very quickly through user fees and energy trading.

- Ways that North African renewable energy can benefit from European subsidies need to be explored. For example, the company Nur Energie has agreement in principle from Italian electricity bodies that imported solar energy from Tunisia can qualify for Italy's Green Certificates.

4. Connect legislators with like-minded colleagues through the Climate Parliament's international network

Our network of legislators dedicated to action on climate continues to grow. Twice a year, we organise international parliamentary meetings to bring together our MPs and provide them with an opportunity to share best practice, identify opportunities for joint action, and question leading experts on the policy, economics and science of climate change and renewable energy. We combine the meetings with field trips to local renewable energy facilities, which allow the MPs to see clean, sustainable energy in action. Seeing is believing!

Our most recent event was held in the European Parliament in Brussels, and brought together over 160 delegates (including 52 MPs) for three days of debate and discussion.

Speakers included the Director-General of the International Renewable Energy Agency, Adnan Amin; the President of the African Development Bank, Dr Donald Kaberuka; the Chairman of the Desertec Foundation, Dr Gerhard Knies; the Managing Director of the World Bank, Sri Mulyani Indrawati; the Deputy Secretary-General of the OECD, Rintaro Tamaki; and the Vice-President of the European Investment Bank, Jonathan Taylor.

Furthermore, we provide relevant information for MPs in various forms, ranging from Policy Briefings on specific aspects of renewable legislation or climate science, to resources for parliamentarians on our website, at www.climateparl.net. We also send regular updates to over 16,000 MPs through our unique global database of email addresses for the world's national legislators.

Conclusion

Time is running out: we need legislative action now, on every continent. The Climate Parliament is linking up concerned legislators around the globe. Through national parliamentary groups, international meetings and Internet outreach, we're pressing for both public and private investment to switch the world's power supply to renewables - before it is too late.