

# Response to Consultation Document

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*The 2015 International Climate Change Agreement: Shaping international climate policy beyond 2020*

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## Context

The consultation document (Brussels 2013) sets the following context:

- Scientific advances have removed any reasonable doubt that we are warming the planet;
- Emerging economies are an increasing source of economic growth and GHG emissions;
- Significant sustainable development challenges remain;
- Addressing climate change also brings significant opportunities;
- Increasing global trade will continue to raise issues about production-related emissions, and preventing carbon leakage (carbon intensive activities shifting from high ambition to low ambition countries).

I will accept this context for the purposes of the response. This does not mean that I fully accept or endorse the context. In particular, I believe that:

- Although there is no doubt that we are contributing to the warming of the planet, there is growing evidence that we have underestimated the role of natural variation;
- Continuing debates in the peer-reviewed science mean that there is greater uncertainty over the level of CO<sub>2</sub> required to create 2°C of warming, which may make the problem less urgent than is popularly perceived. See for instance (A. Otto et al. 2013)

This does not affect my overall findings or recommendations.

## Assumptions

- Modern society is largely built on large-scale energy consumption; any disruptions to energy supply are very likely to lead to civil unrest and a voter backlash.
- Developing economies require increasing amounts of energy to fuel their economic development; there seems little basis for believing they will rein in their ambitions.
- Recession-hit Western economies will have little appetite for economically damaging policies.

- Current renewable technologies are diffuse and do not offer continuous or controllable power outputs; e.g. continent-wide lulls in wind-speed are common in the winter months when energy consumption is highest.
- Many environmentalists (Wackernagel & Burns 2011), (Meadows 2004) claim that humanity is resource-bound and that over-population will make the problem worse. I reject this view. There is abundant evidence that as the poor become richer, birth rates fall below replacement rates. The best way to avoid overpopulation is to ensure that everyone has the potential to live a healthy and poverty-free life. Over-population is a non-problem; it will solve itself.
- Environmentalists and intellectuals such as Bjorn Lomborg (Lomborg 2001) and Matt Ridley (Ridley 2011) have argued that many environmental trends are positive; that pollution levels are falling; that resource utilisation per capita is falling; that physical reserves are increasing rather than falling.
- The philosopher Julian L Simon has argued at length that resources are things which humanity creates rather than things that we use or destroy (Simon 1998), and that there is no practical limit to human ingenuity, as we can substitute resources. For example, Elizabethan England was concerned about the diminishing availability of trees; a problem solved by the adoption of coal as an energy resource, a resource which had previously been used for little more than decoration and carvings (McInnes n.d.).
- Unfortunately the environmentalist movement has embraced a neo-Malthusian, zero-sum outlook and this has poisoned the whole debate. Clear thinking is needed.
- The debate around climate change centres on the changes attributed to human influence. In reality, even if we emitted no carbon dioxide into the atmosphere, the climate would change anyway. It always has and it always will. Natural disasters and extreme weather will continue to happen regardless of what we do. Extreme weather events will continue to have a disproportionate effect on the world's poorest people.
- We cannot preserve the climate, or our environment, in some imagined "natural state". Instead, we should accept that humanity must always adapt to changing conditions. The best way to manage this is to ensure that the whole of humanity (and not just the rich northern countries) have the resources, institutions, wealth and technology at their disposal to allow them to adapt to these changes (whether natural or man-made). The objective should be to focus on enriching the world's poorest, to give them the resources to adapt to climate change and extreme weather events.
- We are approaching a crossroads at which we must choose our priorities. We can either choose to try and conserve the planet in aspic, at the expense of the economic growth and wellbeing of the majority of humanity; or we can put human development first and accept that we have a right to mould our environment for the good of our species.

## Question 1

*How can the 2015 Agreement be designed to ensure that countries can pursue sustainable economic development while encouraging them to do their equitable and fair share in reducing global GHG emissions so that global emissions are put on a pathway that allows us to meet the below 2°C objective? How can we avoid a repeat of the current situation where there is a gap between voluntary pledges and the reductions that are required to keep global temperature increase below 2° C?*

I reject the objective; the objective should be to increase the living standards of the world's poorest as fast as we can so that they are rich enough to adapt to climate change (whether man-made or natural).

However, if we accept the objective at face value there are significant challenges in delivering it.

Simplistically, there are two ways in which the necessary action can be achieved.

- It can be imposed in a top-down manner through regulation and legislation;
- Private individuals and private businesses, acting voluntarily in their economic best interest, can embrace it in a bottom-up manner.

Until now the EU approach has largely been top-down, for instance

- Bans on incandescent light-bulbs to encourage sales of compact fluorescent bulbs (despite their higher cost and questionable environmental benefits)
- Subsidies to energy technologies such as wind, solar, biomass, wave, tidal
- Changes to waste and recycling management

These changes have typically had the effect of raising costs for the end user, but have had very little impact on CO<sub>2</sub> emissions.

The tenor of the consultation document suggests a further continuation of this top-down approach. For instance, it suggests that individual governments should be held to account for the implementation of the necessary action. Such a top-down approach is likely to be counter-productive.

Voluntary pledges will be more forthcoming from developed countries such as the EU and even the US, as President Obama's recent announcement demonstrates. However, such pledges may lack substance, and could be revoked at any time if public opinion swings against these policies, which is very likely. Top-down imposition at a national or regional level will lead to a consumer and voter backlash, and to further outsourcing of industry from EU member states.

Developing countries pose a different challenge. They have no incentive to adopt constraints that could strangle their growth. At the moment, most of the policy provisions act as constraints. Compared to the Montreal protocol, where countries

were asked to ban CFCs imposing only a small cost on their economies, attempts to control GHG emissions are likely to have a significant impact on growth.

The challenge for richer countries is to find incentives that developing countries will want to use, rather than being forced to use. It is difficult to see how an agreement can be imposed globally without the threat of sanctions or the use of force; both of which would leave the EU open to charges of imperialism. Indeed, this is a potential source of increasing diplomatic tensions.

Indeed, if several countries do voluntarily sign up to the 2015 agreement, this will create an incentive for other countries to stay outside of the agreement. As with offshore tax havens, there will be competition between countries to attract industry and investments, and it is not hard to imagine the rise of “carbon havens”. This will shift the problem without solving it.

Instead of attempting an agreement, it would be better to seek a bottom-up approach based on economic self-interest. This would provide the required dynamism and would act to accelerate the process. Instead of picking winners (through subsidies of particular types of power generation), the EU should consider an approach that fosters innovation, for instance by using a carbon tax to fund R&D into other forms of energy generation, and the adoption of a Pigou tax on CO<sub>2</sub> emissions to encourage market innovation.

A bottom-up approach would:

- Prioritise R&D over the rollout of existing technologies
- Provide incentives for businesses to develop new low-carbon technologies
- Shift the risk from taxpayers to investors

## **Question 2:**

*How can the 2015 Agreement best ensure the contribution of all major economies and sectors and minimise the potential risk of carbon leakage between highly competitive economies?*

See Question 2; I do not believe that this is possible without incentives that are aligned with economic growth; at the moment these are not aligned and so will compete to avoid decarbonisation.

## **Question 3**

*How can the 2015 Agreement most effectively encourage the mainstreaming of climate change in all relevant policy areas? How can it encourage complementary processes and initiatives, including those carried out by non-state actors?*

Since climate change will happen regardless of human interference, the mainstreaming of climate change really means focusing on how we adapt to it rather than how we prevent it.

This means developing a focus on resilience, to mitigate the impacts on our societies and populations. This is the subject of renewed academic interest. Judith Curry, a leading climate scientist, has recently posted an overview of this important topic at (Curry n.d.)

The EU should also consider the imposition of a Pigou tax on carbon emissions. “Tax bads rather than goods”. This would spur new innovations in the market-place in a bottom-up manner without significant state intervention. For example: emissions targets for motor vehicles have led to innovation from car manufacturers. This has been achieved without picking winners or mandating the types of technology to be used.

#### **Question 4**

*What criteria and principles should guide the determination of an equitable distribution of mitigation commitments of Parties to the 2015 Agreement along a spectrum of commitments that reflect national circumstances, are widely perceived as equitable and fair and that are collectively sufficient avoiding any shortfall in ambition? How can the 2015 Agreement capture particular opportunities with respect to specific sectors?*

No answer.

#### **Question 5**

*What should be the role of the 2015 Agreement in addressing the adaptation challenge and how should this build on ongoing work under the Convention? How can the 2015 Agreement further incentivise the mainstreaming of adaptation into all relevant policy areas?*

No answer.

#### **Question 6**

*What should be the future role of the Convention and specifically the 2015 Agreement in the decade up to 2030 with respect to finance, market-based mechanisms and technology? How can existing experience be built upon and frameworks further improved?*

I will concentrate on energy and technology.

There is a great deal of scope to reduce CO2 emissions without adopting renewable resources. (In reality, no resource is fully renewable; entropy always wins).

To date, most reductions in CO2 emissions have been restricted to OECD countries and for reasons that have little or nothing to do with their climate mitigation policies. EU CO2 reductions have been largely as a result of weak economic conditions, mild winters and the high price of oil; USA CO2 reductions have been due to the displacement of coal power by natural gas obtained by fracking. (Olivier et al. 2012)

Some of the renewable technologies such as solar have great potential and are developing rapidly; however wind power is a technological dead end and is a spectacularly inefficient form of power generation. There is evidence that adoption of these technologies can lead to destabilisation of power grids, and there is an increased risk of brown-outs and black-outs as a result.

In the rush to zero-carbon and renewable technologies, the role of lower-carbon technologies has been overlooked. Efficient gas turbines have significantly lower CO2 emissions than coal plants and thanks to the development of shale gas resources there is the potential for significant reductions in CO2 emissions without imposing economic hardship. This is exactly the type of bottom-up incentive that I was referring to in my answer to question one.

The current subsidy-based approach is creating a series of perverse incentives that will hamper the rollout of more effective power generation technologies. We are already seeing examples of nuclear power companies demanding price parity with wind power before they will commit to building new power plants in the UK. Energy consumers are paying the price for these market distortions.

Indeed, if a completely clean, high-density, zero-carbon power source was developed tomorrow it would be difficult to encourage its adoption due to the subsidies that are accorded to other forms of power generation. These subsidies are acting as a brake on innovation and must be slashed.

Instead of attempting to move straight to expensive and ineffective low-carbon technologies, we should focus on adopting technologies that have lower emissions than current large-scale technologies (e.g. lower than coal) while guaranteeing economic continuity of supply.

This lowering of emissions will buy some time, while the EU invests significant R&D resources in the development of other technologies. These should include renewable technologies such as solar, which have a good chance of delivering price parity. They must also include significant investments in nuclear.

The EU needs to encourage environmental NGOs to overcome their dislike of nuclear. Technologies such as 4<sup>th</sup> Generation nuclear, fast breeder reactors and

thorium reactors have the potential to not only generate large amounts of safe power for the long-term, but also to act as a destination for high-grade nuclear waste from older reactors, which still contain significant amounts of untapped energy. It is worth pointing out that many renewables technologies (wind, solar) are effectively nuclear-powered by proxy, given that they derive their power (directly or indirectly) from the great fusion reactor in the sky.

There is also a lot of potential in hydrogen fuel-cell technology, which can be completely carbon-free. It is possible to imagine a future energy system where nuclear provides base-load and generates hydrogen fuel from water. The hydrogen would then be used to provide load-following capability (a weak point for nuclear), and to power the transport infrastructure. This would be an efficient and practical carbon-free system.

We must also deprecate the use of biomass for energy production; this is a dirty and inefficient way of generating power and is diverting land previously used for food crops. The UN estimates that this is killing several hundreds of thousands of people per year as it has forced up the price of food staples for some of the world's poorest people.

Summary of recommendations:

- The desire to decarbonise our energy supply must be balanced against the need for economic growth and for stability of the energy supply
- The provision of cheap, available power must be the top priority; decisions which put this at risk will be punished electorally if and when brown-outs and black-outs begin to happen
- The EU should change from an “adopt the cleanest” strategy (i.e. moving straight to renewables at any cost) to a “remove the dirtiest” strategy: replacing dirty coal plants with gas derived from shale resources and increasing the role of nuclear in base-load generation
- The EU should make significant R&D investments in other forms of power generation: renewables, nuclear- and hydrogen-based
- Encourage greater adoption of nuclear power
- Remove the incentives for mass rollouts of ineffective technologies such as wind power; accept that other technologies such as solar have their own momentum and will achieve price parity without unnecessary and distorting incentives
- Take steps to discourage biofuels, which are displacing food crops and causing famine, while doing nothing to reduce CO2 emissions

## Question 7

*How could the 2015 Agreement further improve transparency and accountability of countries internationally? To what extent will an accounting system have to be*

*standardised globally? How should countries be held accountable when they fail to meet their commitments?*

No answer.

## **Question 8**

*How could the UN climate negotiating process be improved to better support reaching an inclusive, ambitious, effective and fair 2015 Agreement and ensuring its implementation?*

The COP process has turned into an expensive and ineffective circus. It has an embarrassingly high carbon footprint of its own and generates little concrete benefit. Attempts to improve its governance are simply tinkering at the edges. I would recommend scrapping the process altogether.

## **Question 9**

*How can the EU best invest in and support processes and initiatives outside the Convention to pave the way for an ambitious and effective 2015 agreement?*

The EU should undertake an initiative to review the international recommendations on nuclear safety, to determine if there are ways to safely reduce some of the costs associated with operating and decommissioning a nuclear reactor.

Nuclear safety limits are currently based around the LNT (Linear No-Threshold) hypothesis, which states that no dose of radiation can be considered safe, no matter how low. Some scientists now argue that it is time to review this assumption (Allison et al. n.d.):

*Current safety regulations for the public in the environment are designed to ensure that doses are kept As Low As Reasonably Achievable (ALARA) under limits, which are many thousand times lower than those used in medical treatment, and over a hundred times lower than the doses received by the public naturally in some parts of the world without any observed increased illnesses*

I am not proposing any relaxation in safety; indeed I would argue that in the wake of Fukushima there needs to be a renewed focus on passive safety design and engineering for a range of potential disaster scenarios. However, given that decommissioning is a significant cost of the lifecycle of a nuclear plant, there should be research into whether some of the safety standards have been set so ridiculously low that they impose a punitive and unnecessary cost on the energy consumers, with no actual safety benefit. I would encourage the EU to commission research into the possible economic benefits of a review of these standards.

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