ENERGY

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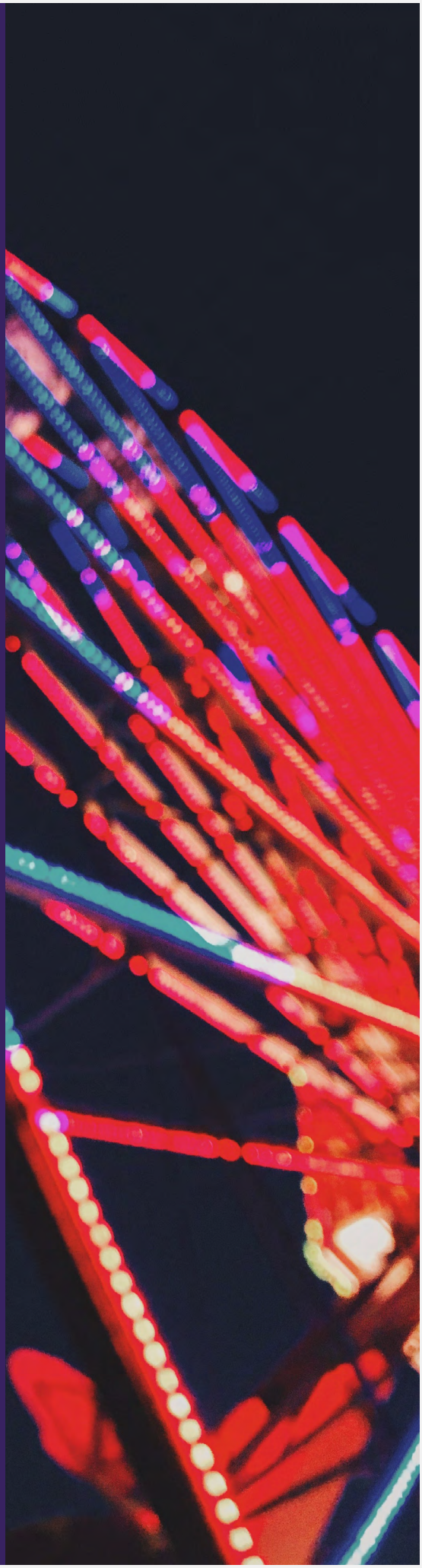
REPLANET

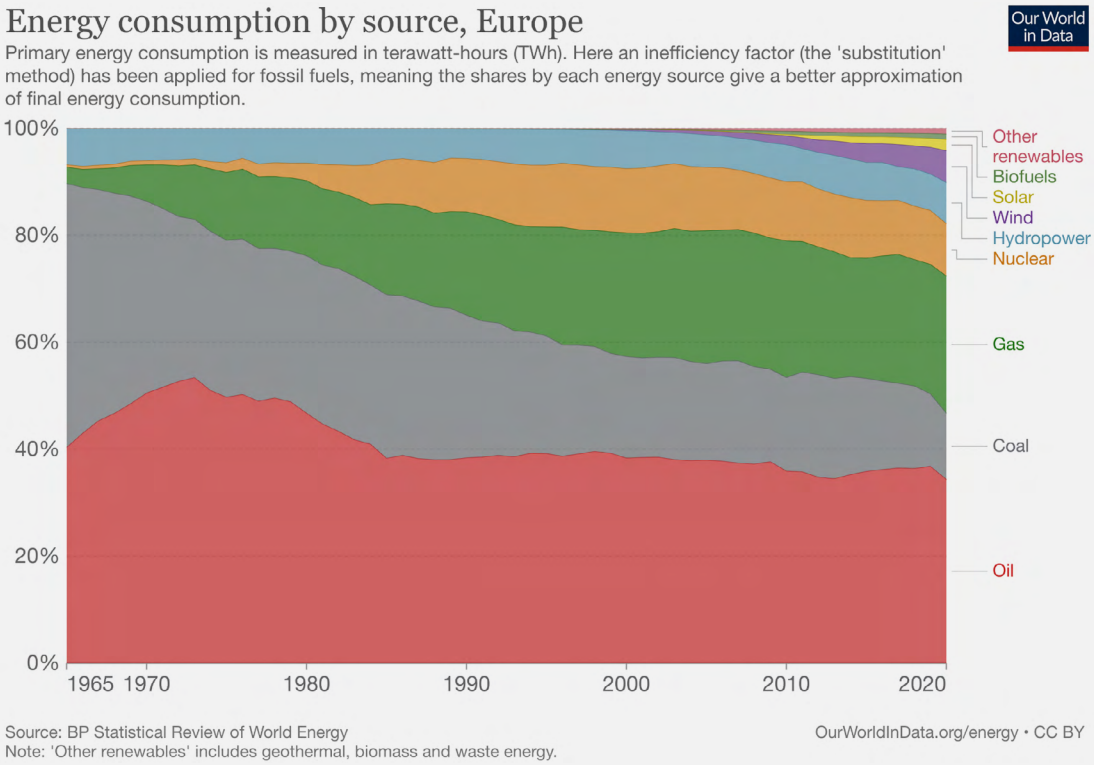
INTRODUCTION

Let's have an abundant, clean energy system. Human prosperity and development depend on affordable, plentiful, and reliable energy. Our living biosphere's survival depends on human activity having a small environmental footprint.
We need to combine these two.



THE CHALLENGE

Energy production and use cause more than two thirds of our greenhouse gas emissions, and a lot of other harm to both humans and the environment. This is due to almost 85% of global and ~73.5% of European primary energy use coming from fossil fuels[1]. In Europe, energy policy has recently been focused on ideology instead of science and choosing popular approaches rather than setting a pragmatic goal. As a result, our energy is dirtier and more harmful, less reliable, more expensive, has higher emissions and a larger environmental footprint as well as lower security of supply than should be the case.
While the share of clean energy sources has been growing globally, the absolute amount of fossil fuel use has also been growing, increasing our annual emissions.



OUR SOLUTIONS

- **Set technology-neutral, outcomes-focused policies.**
  The outcome we want is efficient CO2 emissions reductions to a level compatible with the Paris Agreement while maintaining a low-cost and reliable energy system[2]. Policies must focus on this singular goal. We should dismantle current policies that set mandates or targets for certain technologies providing a certain share of total energy production or a given level of efficiency improvement.

- **Use and strengthen market-based solutions where available and feasible.**
  Markets are an effective way to make change happen, if we design and regulate them well and let them operate without undue political interference. Europe currently has a market-based emissions trading system (EU ETS[3]). It should be strengthened and more sectors should be added to it, such as house heating with oil or gas and transportation fuels. However, energy markets are also known for their tendency to lock in incumbent participants and technologies, so adding policies to level the playing-field for innovative new entrants and underutilised but necessary technologies remains essential.

- **Carbon Duties.** European industry and jobs need protection from carbon leakage - where our industry's competitiveness suffers due to domestic emissions costs, and production moves to countries with less regulations and more environmental damage. To prevent this carbon offshoring we need to have carbon duties at Europe's borders for products and services coming from countries that do not have comparable emissions-reducing measures.

- **Stop discriminating against nuclear.** Nuclear energy is Europe's biggest source of clean electricity[4,5]. It has proven to be an effective and scalable way to reduce emissions, and is at least as sustainable as any other clean energy source. The discrimination and ideological opposition towards nuclear technology needs to stop at both European and national levels. Nuclear should receive the same level of acceptance and policy support as any other clean energy source. This requires proactive government measures for positive, accurate and objective public information and consultation.

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- **Support for new technologies, innovation, and standardisation smartly and efficiently**. Government/EU support for new technologies should focus on funding research, development and deployment of demo and pilot projects. Governments should also de-risk large and long-term clean projects such as building nuclear power stations. This can be done through direct investments and loan guarantees or even mechanisms like the SaHo-Model[6].

- **Ensure a just transition especially for those most affected.** Escalating carbon and energy costs hit the poorest hardest, and any sustainable transition must also be economically and socially sustainable. "Demand Flexibility" is too often a euphemism for energy poverty, and disruption of local communities should be minimised through appropriate retraining and support programs by EU and national governments. The 'on-shoring' of clean-tech industries in particular, including the mining and processing of so-called rare-earth minerals and other heavy industries completing clean-tech supply chains into Europe should be high on the "Just Transition" agenda.

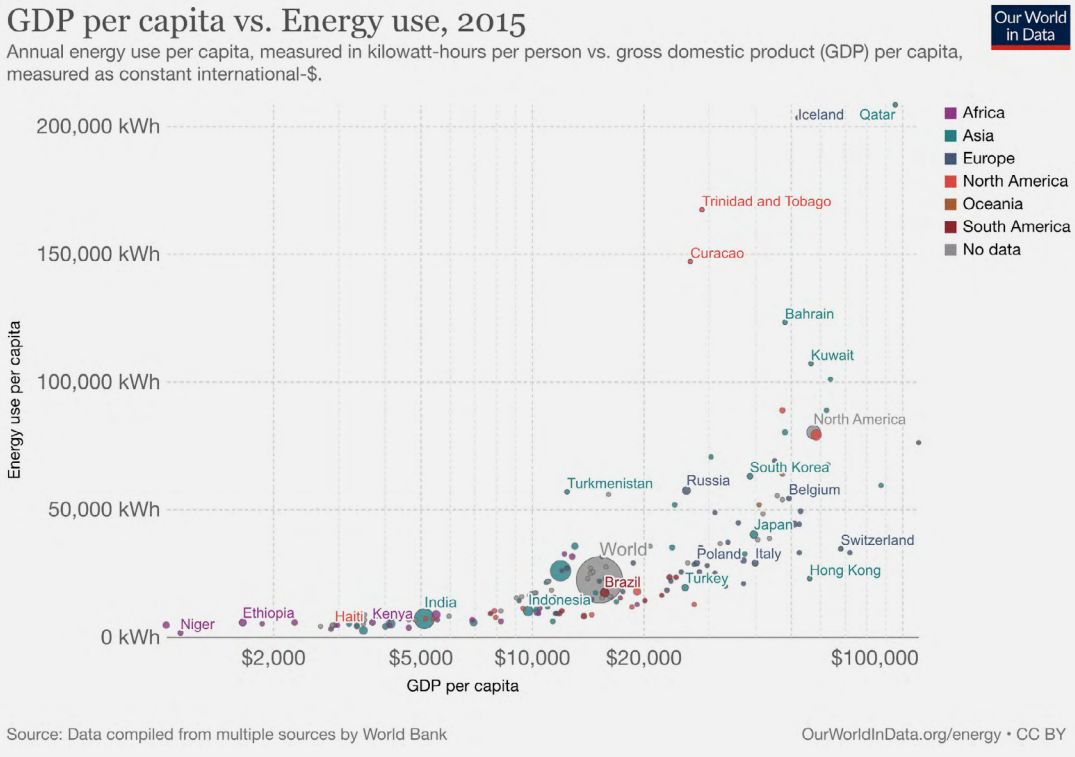
RePlanet Position on European Energy Policy

WHERE WE ARE AND WHERE WE WANT TO BE

Reliable, high quality and low cost energy services are the backbone of increased productivity and higher living standards[7]. Higher productivity and sustained surplus in energy and materials production enable the many services we today take for granted, as well as the existence of institutions and education that drive human progress, science, and technology forward.
Traditionally, these energy services have been produced with increasing use of fossil fuels, but now the cost of using these fuels is becoming more and more unbearable both for us and our future generations. This is due to the greenhouse gases released from using these fuels, which accelerate climate change.

Effective climate mitigation and the Paris Agreement climate targets require Europe to reduce its emissions from energy both rapidly and deeply. On the other hand, a related crisis with depleting biodiversity is also escalating, so we need to make sure we do not solve one while harming the other[8,9]. With further development and massive deployment of clean, low impact energy production, we can decrease our environmental impact and stop emitting greenhouse gases and other harmful pollution into our environment, eventually rewilding land back to natural ecosystems.

Furthermore, to keep the social and political acceptability of our



common climate project from eroding, we need to make sure that as few people as possible feel threatened or see their living standards decrease due to increased energy poverty or prescriptive policies that violate their perceived freedoms and make their everyday lives harder. The energy transition to low carbon and low impact energy should not only be rapid, but it also has to be just.

Positions on specific topics

MARKETS AND GOVERNMENTS

Should we abandon market-focused practises in favour of government-driven projects, or regulate the markets better?

Today, European energy markets are mostly operated by a mix of privately and partly or fully state owned utility companies, and are relatively open to competition. Emissions reductions are primarily driven by the market-based EU-ETS, an EU-wide emissions cap and trade-system.

Historically, the fastest and most cost-efficient emissions reductions were done with government-led nuclear programs like the French Messmer-plan and the Swedish nuclear program, which took place between the 1970s and the 1990s. This historical experience provides a powerful argument for more direct and strong state intervention.

Should we move back to more government-driven energy production to get faster emissions reductions? **RePlanet's current position is that we should use the markets, companies and institutions we already have in place, but we need to regulate them better and keep the focus on deep emissions reductions, while not restricting governments from taking important initiatives that de-risk critical clean energy investment.** This is the least risky and most practical way forward, as shifting to more direct state intervention would introduce delays, uncertainty, volatility and more opportunities for new risks to emerge.

Further, each nation state has the sovereign right to set its own energy policy. The EU-ETS sees to it that on the European level, energy emissions get reduced by the politically set amount and as cost-effectively as possible. **Governments and the EU should focus on setting the emissions in the EU-ETS to a Paris-compatible level and offering a technology neutral level playing field for markets to solve the issues, while enabling low-cost funding and other de-risking for large projects.**

EXPAND AND TIGHTEN THE EU ETS

(Emissions Trading System)

The European Emissions trading system (EU ETS) is a marketplace for emissions allowances in the European Union. The total number of allowances made available is reduced over time, ensuring a predictable reduction of emissions. Sectors included in emissions trading currently are power and district heating production, heavy industry and EU internal flights. The EU ETS covers roughly 11,000 installations and 45 % of European emissions.

The EU ETS is an effective mechanism to reduce emissions, as the number of emission allowances for a future period is set in advance. The reason for that is that it is market-based, where only the goal is set politically. Any national or EU-level policy that interferes with an installation that is within the EU ETS will make the marketplace function less efficiently. For example, Jos Delbeke, Director-General for Climate at the European Commission has suggested that Belgium can close down nuclear plants and replace them with natural gas plants as it will have no effect on emissions at the EU level because the EU ETS will take care of it[10]. This is completely counter to how the EU ETS is supposed to work and shows a lamentable lack of solidarity towards the less wealthy in Europe who will also need to pay the increased costs and may be less able to. The purpose of the EU ETS is not to conveniently clean up the mess that politicians choose to create in their countries. The premise of it is to incentivise industry investments in the low-carbon transition without national or EU policymakers directly deciding technologies or investments. This keeps the overall cost of the transition as low as possible for everyone.

RePlanet supports the EU ETS as an effective tool to reduce emissions. However, it must be tightened further. We therefore call for the amount of emissions allowances in the EU ETS to be lowered to a level that is compatible with the Paris Accord the EU has signed[11]. Simultaneously, we must strive to tackle energy poverty and offshore carbon leakage caused by increasing carbon costs.

We also support the addition of other sectors into the EU ETS, such as local building heating with fossil fuels. Transportation fuels should also be included in the EU ETS in order to make the overall transition more cost effective (although car fuels are often already heavily taxed, so there might be a need for local harmonisation). Depending on local circumstances, we are generally not in favour of national or EU policies that cause the EU ETS to operate less efficiently.

LET'S REMOVE REDUNDANT TARGETS AND FOCUS ON EMISSIONS

Today the EU has multiple redundant targets regarding climate. We have emissions reductions, targets for shares of renewable energy production and targets for increasing energy efficiency. While these may seem complementary, they actually make the ultimate target - emissions reductions - harder, slower and more expensive to reach. Expanding renewable energy, which often includes biomass, is an ill-defined and unscientific term by itself and can lead to overall harmful outcomes[12].

Targets should be focused on carbon emission outcomes, not particular tools and means to get to those outcomes. Prescribing how a problem should be solved through political ideology and preferences instead of allowing it to be solved in the most technologically effective way is harmful for progress.

Regarding climate policy, the EU must focus on CO2 reductions with Paris-compliant targets set and achieved. In energy policy, the most effective way to do this is to set the number of emissions allowances available in the EU ETS to a level compatible with the Paris Accord and 1.5C of warming while expanding the EU ETS to new energy-related sectors, as recommended above.

RePlanet suggests that conflicting and counterproductive climate "sub-targets" be removed as soon as possible and replaced with a focus on emissions reductions in a technology neutral way, with an eye towards preserving nature and biodiversity, and supporting a level playing field for solutions.

TOWARDS A SCIENCE-BASED TAXONOMY

The Taxonomy of sustainable activities is the EU's attempt to create a list of activities that green funds and other financing sources can easily fund as part of their sustainable portfolios[13]. The stated purpose of the Taxonomy is to be a technology neutral and science-based list, but it has become a contest of political ideology and special interests, threatening the credibility of the whole exercise. A political and ideological taxonomy will steer funding into politically and ideologically-preferred activities, ignoring science and evidence. This increases the risk of failure in climate mitigation and environmental protection and threatens people's wellbeing.

The Taxonomy must be technology neutral, science-based and treat all activities with similar criteria on a level playing field. We at RePlanet think that if the Taxonomy becomes a list of politically-chosen favourites and compromises instead of a technology neutral list of truly the most sustainable activities, it will lose both its justification for existing and its credibility, which might harm the growing ESG-funding sector for years to come. Nuclear must therefore be a part of the Taxonomy, as the EU's own scientific advisors have recommended[14].

CARBON DUTIES

It would be counterproductive to drive out industry and jobs from Europe with responsible climate and environmental policies and then buy the same goods and commodities from other countries that have chosen not to put a price on carbon.

Therefore, RePlanet supports the policy of taxing imported goods and services at Europe's borders if they are made in countries that lack comparable carbon prices to the EU. We recognise the complexity of dealing with this issue. Yet the threat of 'carbon leakage', referring to the risk of driving carbon intensive industry overseas, thus resulting in non-decreasing emissions and creating a competitive disadvantage, will only increase and cannot be ignored. The continuous pursuit of international economic cooperation and cost-sharing initiatives should complement carbon leakage prevention policies.

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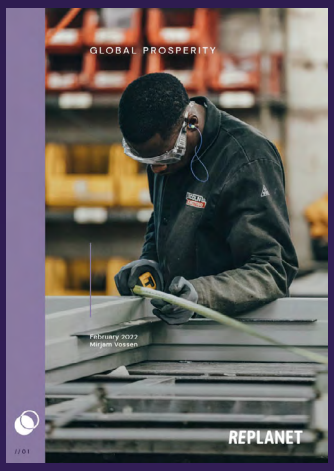

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