

THE POWER OF ENERGY SAVINGS



INFORMAL ENERGY COUNCIL ON ENERGY EFFICIENCY

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Which future will Europe choose?

Europe is facing an uncertain future. The UK's vote to leave the European Union, emboldened far right political parties, the failure to humanely welcome refugees seeking sanctuary and failed austerity economics have brought the EU project to a crossroads.

In these turbulent times, it is crucial for the European Union to prove its value to an increasingly sceptical public and reconnect with its citizens. These crises can constitute an opportunity for the EU to redefine itself and put well-being, health, as well as the protection of our environment at the core of its project. If it can convince citizens it works to improve their quality of life, the EU can restore trust in its institutions. Big ideas centering the environmental and social justice must be put forth: this should include the urgent transformation of our energy system away from fossil fuels.

In the public debate, the energy transition is still widely perceived as a costly burden. In the face of financial, social and political turmoil, climate policy is repeatedly pushed down Europe's agenda – even as our energy systems are intrinsically linked with these challenges.

Job creation, warmer homes, cleaner air, a cooler climate, increased energy security, cheaper energy bills for households, stronger communities... The benefits of the energy transition in general and increased efforts in energy efficiency in particular are countless. They are also concrete, and offer a bright way forward for Europe.

The energy transition must be seen as the opportunity it really is: the chance to build a stronger and fairer Europe. We may be on the right track, but the scale remains insufficient: money and efforts need to be redirected. The Clean Energy Package is a chance to move forward!

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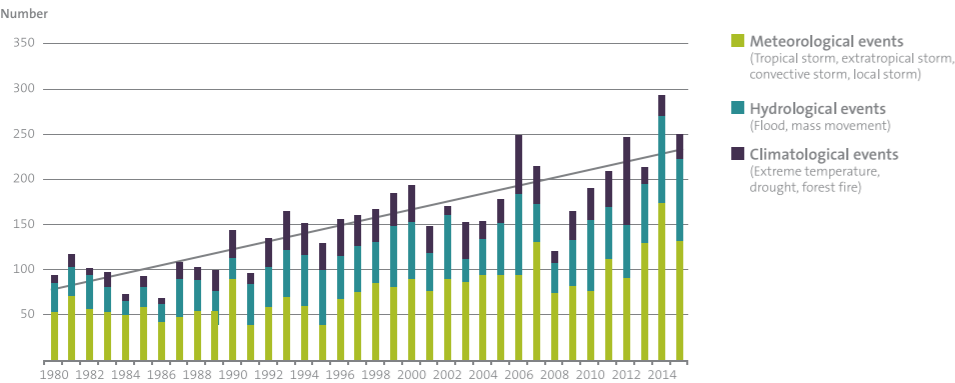
For every additional 1% energy savings:

336,000 jobs created
0.7% reduction in greenhouse gas emissions
29€ annual savings on energy bills
4% less EU gas imports

Climate action is more urgent than ever

With carbon dioxide concentration in the atmosphere exceeding 410ppm¹, and 16 of the 17 hottest years on record happening since 2001² – it is clear we have now entered uncharted territory when it comes to climate change.

Since 1980, the number of extreme weather events in Europe has tripled



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Extreme weather events are multiplying, and citizens are increasingly aware of the impacts of changing weather patterns on their lives and livelihoods. Floods in Central Europe, heatwaves and forest fires in Mediterranean regions, reduced agricultural yields, changing coastlines, melting glaciers threatening water supplies... Briefly put: we are playing Russian roulette with our future. There is an urgent need to bridge the gap between what science says is required and political action. Business as usual is no longer an option.

The Paris Agreement has set the world a collective challenge: keeping the global temperature rise below 1.5°C. But the clock is ticking, and time is running out fast. The EU has settled for a target of 40% emissions reductions by 2030, but science tells us this is insufficient. Recent research³ shows 80% cuts are needed in the same time period if the EU is to live up to its historical responsibility in climate change⁴.

According to Nicholas Stern's 2016 Review on the economics of climate change⁵, inaction on climate change could cost the world between 5% and 20% of global GDP, while action on climate change is estimated to cost 1% of global GDP. **It makes economic sense to do everything we can while there's still time.**

The election of Donald Trump is bad news for climate action. More than ever, the EU must show leadership in the global energy transition. The EU's Clean Energy Package is the opportunity to live up to the promise of Paris, deliver on climate action and ensure well-being and a safe future for all.

Empowering people to take ownership of the energy transition

As part of the European Commission's commitment to put citizens at the heart of the energy transition, the Clean Energy package gives citizens and their community energy projects the right to produce, store and sell renewable energy. This is a vital way to make sure the energy transition can proceed at the pace and scale required.

The member states that have had the most success transitioning to renewable energy are those where citizens and communities play a central role – in planning, financing, and sharing the benefits of renewables. In Germany the “Energiewende” is now a reality and half of installed capacity is owned by citizens⁶. Europe's entire energy system needs a similar shift.

Community-owned windfarms give eight times as much local added value as internationally owned projects.⁷ This is because community-owned schemes are more likely to give contracts to local contractors, to use local banks and to provide investment opportunities to local residents. Instead of paying out millions of euros in exchange for the delivery of polluting fossil fuels, profits from local generation stay in the community.

Getting the buy-in of communities and citizens to local renewables projects not only speeds up the energy transition – it is also good for European cohesion. **European Union policies can often seem abstract to citizens: community energy projects are real to people, it is about their homes and their communities.** It is a chance for Brussels to have a positive impact on people's lives and re-establish trust in the European project, and in democracy. People need to be the ones who benefit from the energy transition.

Exchanging one fossil fuel dependency for another doesn't solve the problem, it just moves it around. If Europe is locked into a system of importing fuel, it will always be vulnerable to volatile prices. There is no fuel cost with renewables. That's why it's so important to have a solid way to deliver the EU's full renewable energy potential. This is best served by production of renewable energy in as many places as possible – a diverse and decentralised energy system is the surest way to energy security.

100% renewables also implies deep energy savings: the two go hand in hand.



1 <http://www.climatecentral.org/news/we-just-breached-the-410-parts-per-million-threshold-21372>
2 <https://www.nasa.gov/press-release/nasa-noaa-data-show-2016-warmest-year-on-record-globally>
3 http://www.foe.co.uk/resource/reports/reckless_gamblers.pdf
4 <http://www.climatefairshares.org/#>
5 http://webarchive.nationalarchives.gov.uk/20080910140413/http://www.hm-treasury.gov.uk/media/F/0/Chapter_9_Identifying_the_Costs_of_Mitigation.pdf
6 <https://ilsr.org/citizen-ownership-remains-foundation-german-renewable-energy-explosion/>
7 <http://www.erneuerbareenergien.de/local-added-value-from-a-community-wind-farm/150/437/96249/>

The cheapest and cleanest energy is the one we don't use

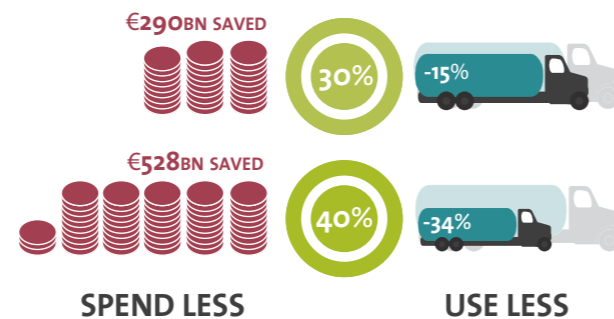
The International Energy Agency (IEA) estimates that half of the EU's emission cuts must be delivered through energy savings policies⁸. The figures speak for themselves, according to the Commission, every 1% improvement in energy efficiency means saving the equivalent of the emission of about 12 million cars.

The Commission's Clean Energy Package has rightfully increased the ambition for energy efficiency to a 30% binding target for 2030 — but with energy efficiency's countless benefits, why stop there?

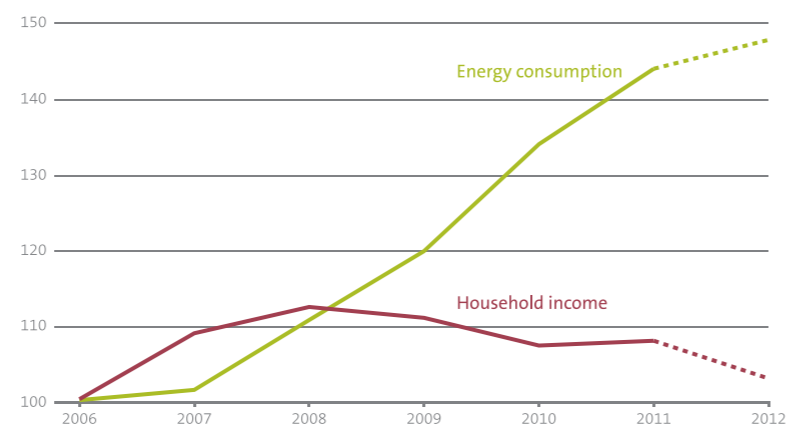
Better air quality saves lives: Improved air quality resulting from an ambitious EU energy efficiency target could save hundreds of thousands of lives. Compared to the current 27% target, the number of life years gained with a 30% target increases is about 31,000 lives. According to the Commission, with the 40% target, this increases to about 210,000 lives.

Improves energy security: Further ambition on energy efficiency would translate into increased energy security for Europe, and billions of Euros saved due to reduced gas imports.

Reduces energy poverty: With real energy prices up 70%⁹ since 2004, energy is becoming something of a luxury item across Europe. Excess winter deaths resulting from cold homes represent more than 200,000 casualties every year¹⁰. Increasing the 2030 efficiency target from 27% to 30% would help lift 7 million people in the EU out of energy poverty (from a total of at least 50 million people living in energy poverty in the EU)¹¹. No one should have to choose between heating and other vital expenses.



Energy Poverty in Spain
Household incomes and energy consumption



FUNDING ENERGY EFFICIENCY

Energy efficiency is often seen as costly when in fact funding opportunities are multiple. EU structural funds have a key part to play, and private funding can be mobilised as renovation efforts are a safe investment. Furthermore, too often, the cost of inaction is equally overlooked, when climate change impacts, dependence on fossil fuel imports and health spending alone costs billions. Wasted energy is wasted money!

Gas isn't the answer

Natural gas is increasingly considered as a priority low-carbon option to improve Europe's energy security and to fight climate change. Yet reality doesn't support these flattering alleged benefits.

1. Increasing gas imports will not provide energy security

With the construction of the Southern Gas Corridor — a system of mega-pipelines aiming to transport gas from the Caspian region to Europe — many new gas interconnectors and several LNG terminals, investments in import capacities for gas are currently booming in the EU. In three years, gas Projects of Common Interest (PCIs) have received more than €1 billion of EU public support while electricity PCIs have received only half of this sum.¹² **It is highly questionable whether these projects will help Europe diversify its gas supplies** (Russia is likely to make most use of these new infrastructures¹³). And another problem remains: many of these projects aim to compensate for the accelerated decline of Europe's domestic production.

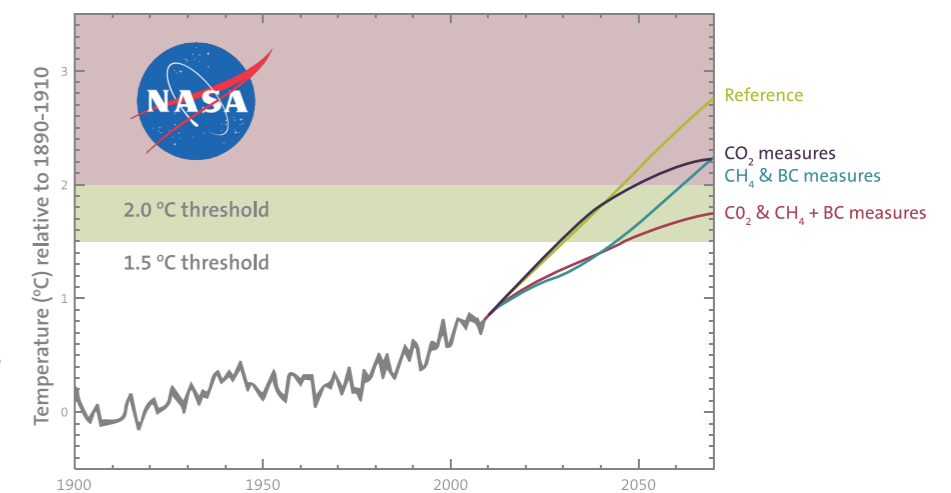
Gas imports represent a growing part of the EU's total gas demand (around 75% today). As recently analysed by the Oxford Institute for Energy Studies, Turkey provides an interesting illustration of the energy security threat posed by import dependency. Gas now accounts for about 60% of the country's trade deficit, significantly slowing Turkey's growth. The lack of domestic back-up turns any possible shortage of imported gas into a national energy security risk. This has pushed the country to start developing a new energy policy mostly based on renewable power (hydropower, wind and solar).¹⁴

2. Climate change mitigation requires an urgent phase-out of ALL fossil fuels

Gas is often presented as a low-carbon alternative as it emits half as much carbon as coal. This assumption omits the extraction, treatment, transformation and transport of gas which are all necessary before its consumption and which are all important sources of emissions.

In the case of gas, mostly composed of methane (CH₄), the climate impact of all these losses is significant as methane has a Global Warming Potential 86 times higher than CO₂ on a 20-year timescale (IPCC-AR5)¹⁵. **Gas is therefore neither a clean fossil fuel nor a low-carbon one.** As presented in a 2012 peer-reviewed study by a team of NASA scientists, our only chance of staying below 2°C is to significantly reduce CO₂ and CH₄ emissions. Cutting only CO₂ emissions will not help us achieve the commitments made in the Paris Agreement — See graph.¹⁶

The Efficiency First principle serves as a reminder of the full potential of energy savings: it offers a clear way forward, away from costly fossil fuel infrastructure.



Source: Shindell and others (2012). Science 335: 183-189.

⁸ Energy and climate change, World Energy Outlook, © OECD/IEA 2015
⁹ Walker, Thompson, Liddell, (2013) Fuel poverty 1991-2012) Commemorating 21 years of action, policy and research. University of Ulster and University of York
¹⁰ European Monitoring of excess mortality for public health action (EuroMOMO)
¹¹ How to end fuel poverty? Scrutiny on Current EU and Member States Instruments — Study for the ITRE committee, © European Union, 2015

¹² <http://www.foeeurope.org/commission-billionth-euro-fossil-fuel-subsidies-170216>
¹³ <http://www.euractiv.com/section/energy/news/eu-gets-wake-up-call-as-gazprom-eyes-rival-tap-pipeline/>
¹⁴ <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2017/04/Turkeys-gas-demand-decline-reasons-and-consequences-OIES-Energy-Insight.pdf>
¹⁵ IPCC, 2013: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the IPCC - Page 714
¹⁶ <http://www.sciencemag.org/content/335/6065/183.abstract>

The way forward for Europe

CASE STUDY

Malta is a case in point when it comes to the climate contradictions exposed in this briefing. It is also an excellent example of the potential of an ambitious energy transition.

The country is especially vulnerable in the face of climate change: it faces predicted increased temperatures, prolonged heatwaves, a changing coastal line as sea levels rise, severe water shortages, and more frequent extreme weather events. Climate change threatens Malta's economy in general, and top industry in particular: tourism. Malta also has the second highest excess winter death rate¹⁷ in the EU.

In this context, while the country's renewable and energy efficiency potential has yet to be tapped into, the current government is planning a 155km long gas interconnector with Italy¹⁸. Studies show that with increased energy efficiency efforts, solar power could supply close to 80% of Malta's energy needs¹⁹ while expensive fossil-fuel infrastructure would perpetuate energy dependence and lock the country into dirty energy for decades. The way forward is clear! Malta is at a crossroads, the time for bold political decisions is now.

MEMBER STATES MUST:

- 1. Support a 40% energy efficiency target for 2030, as consistently put forth by the European Parliament. The more energy savings, the bigger the benefits. 40% has been shown to be cost-effective and would provide the necessary dynamic to move beyond business as usual and harness energy efficiency's full benefits.**
- 2. Back the European Commission's proposal for a binding energy efficiency target, to show governments are serious about delivering benefits to European citizens and secure an increase in private investment flows.**
- 3. Support an annual energy savings rate of at least 1.5%, and remove the loopholes that weaken the objective.**
- 4. Support a long-term 2050 perspective for energy efficiency measures, to ensure planning and vision beyond 2030.**

¹⁷ Energy Poverty handbook © European Union, 2016

¹⁸ https://ec.europa.eu/energy/sites/ener/files/documents/pci_5_19_en_2015.pdf

¹⁹ http://thesolutionsproject.org/wp-content/uploads/2015/11/100_Malta-1.pdf



Friends of the Earth Europe is campaigning to create the much-needed, fair and urgent transition to a fossil fuel free Europe by 2030. This means dismantling the fossil fuel system and creating the just, clean energy future that people want and need.



Friends of the Earth Europe campaigns for sustainable and just societies and for the protection of the environment, unites more than 30 national organisations with thousands of local groups and is part of the world's largest grassroots environmental network, Friends of the Earth International.



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