



**European
Climate Foundation**
ANNUAL REPORT 2014

TAKING ADVANTAGE OF INTERDEPENDENCE

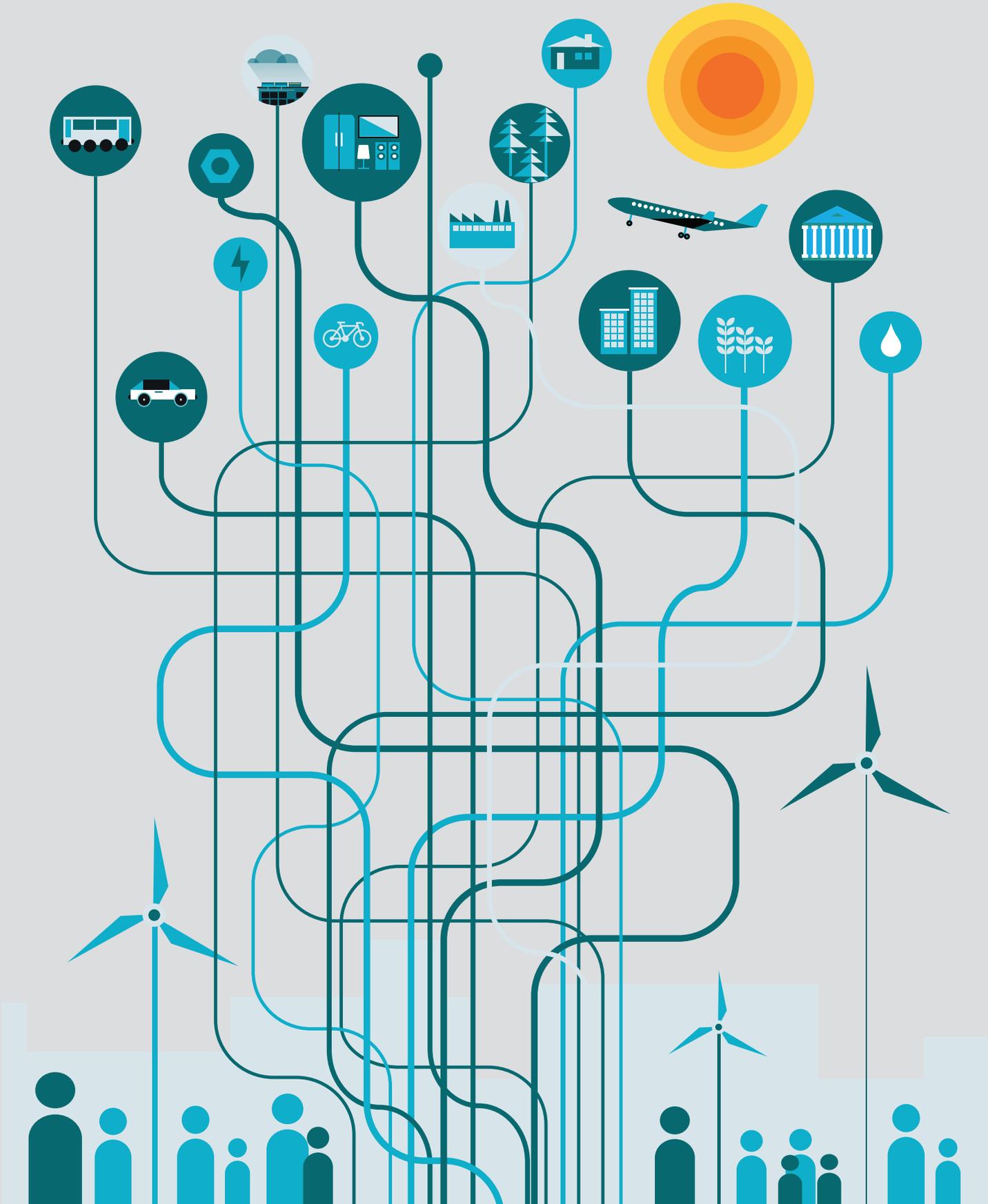


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Chairman's Note



I am delighted to share with you this 2014 annual report, which outlines the initiatives and organisational changes the European Climate Foundation (ECF) undertook this past year to foster the development of a low-carbon society. In collaboration with a diverse group of partners and grantees, the ECF contributed to the achievement of important milestones and made a significant impact at both the European and Member State levels.

Expertise in power systems, energy efficiency and transport has always been a core building block of the ECF's success. Increasingly, however, we are recognising the interdependence of climate protection, economic growth and energy security – and that these issues are best addressed through an integrated approach. To that end, in 2014 the ECF grouped its initiatives by overarching themes, including industrial innovation and governance. This shift reflects the need to act in terms of synergies and will continue in 2015.

2014 was characterised by major policy decisions, such as the agreement on the European Union (EU) *2030 Framework for Climate and Energy Policies*, progress on the development of the internal energy market, new energy performance requirements for products such as electric transformers and the reform of the German *Renewable Energies Law* (EEG). As in past years, the ECF and its partners contributed to the development of ambitious yet feasible solutions through analysis and discourse. Notably, in Germany, the ECF and the Mercator Foundation continued to fund the Agora Energiewende platform. In 2015, we plan to develop a conceptually similar forum for high-level dialogue with a focus on industrial innovation in Europe, building on 2014's in-depth analysis of the perceived conflict between climate and competitiveness in the chemical sector. This work at the interface of climate protection and economic growth is very much in line with the New Climate Economy Report, *Better Growth, Better Climate*, presented by the Global Commission on the Economy and Climate, on which I serve as a member.

The ECF Supervisory Board has been pleased to witness the ECF's successful evolution, made possible by a highly motivated and competent team as well as by inspirational leadership. The Supervisory Board itself also continued to evolve. Two of our members were asked to assume highly significant global climate roles. Mary Robinson was appointed by United Nations (UN) Secretary-General Ban Ki-moon as Special Envoy for Climate Change; Laurence Tubiana accepted the roles as French Special Representative for the Foreign Minister at the Paris Conference of the Parties to the UN Framework Convention on Climate Change (COP 21) and as French Ambassador for Climate Change Negotiations. In December, ECF founding board member Kristian Parker resigned from the board due to other commitments. We thank Kristian for his enthusiasm and for the invaluable expertise he contributed during his seven years of board service. Succeeding him is Kathleen Cravero-Kristoffersson, President of the Oak Foundation, who brings extensive experience and expertise in international development and crisis prevention. We also welcome Tom Steinbach from The William and Flora Hewlett Foundation. Tom has worked on environmental protection, climate change and clean energy for many years. We look forward to working closely with these new members.

Thank you for your interest in the ECF and for your support.

A handwritten signature in black ink that reads "Caio Koch-Weser". The signature is written in a cursive, slightly slanted style.

Caio Koch-Weser
Chair, ECF Supervisory Board

Supervisory Board



**Caio Koch-Weser
(Chair)**

Vice-Chair, Deutsche Bank Group



**John McCall MacBain
(Founding Chair
and Vice-Chair)**

President, McCall MacBain Foundation and Pamoja Capital



**Susan Bell
(Vice-Chair)**

Principal, Susan Bell & Associates



Kathleen Cravero-Kristoffersson

President, Oak Foundation

Joined in 2014



Kate Hampton

Executive Director of Climate Change, the Children's Investment Fund Foundation (CIFF)



Kristian Parker

Chair of the Oak Foundation and trustee lead on the Foundation's Environment Programme, member of Oceana's founding Board of Directors

Left in 2014



Charlotte Pera

President and Chief Executive Officer, ClimateWorks Foundation



Mary Robinson

UN Secretary-General's Special Envoy for Climate Change, President, Mary Robinson Foundation-Climate Justice



Tom Steinbach

Environment Programme Director, The William and Flora Hewlett Foundation

Joined in 2014



Laurence Tubiana

Special Representative for the 2015 Paris Climate Conference (COP 21) of the Ministry of Foreign Affairs of France, Ambassador for Climate Negotiations of France

Message from the CEO



2014 was an intense year for all those engaged in mitigating climate change, and the ECF was no exception as we implemented major changes in strategy and organisation to better address the challenges of cross-sectoral collaboration and systemic thinking. The general sense of urgency is growing, with ever-stronger scientific explanations highlighting the dangerous dynamics of climate change and a humbling appreciation of the difficulties of accelerating the transition towards low-carbon societies.

Large-scale risk from climate change was starkly affirmed by scientists in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

I would like to reflect on 2014 by first highlighting important strategic aspects of the climate debate and then pointing at the essential role philanthropic interventions can play. The good news is that 2014 saw a shifting tide driven by a better understanding of risks from climate change and more visibility into the hidden price of burning fossil fuels.

Increasingly, societies are experiencing extreme weather events, droughts and climate pattern shifts. Large-scale risk from climate change was starkly affirmed by scientists in the *Fifth Assessment Report* (AR5) of the Intergovernmental Panel on Climate Change (IPCC) in

2014. Although many stakeholders continue to ignore these developments, some are taking the risk of continuing business-as-usual seriously. The ECF and its partners worked hard this past year to help translate the scientific results and predicted risks into more accessible language than the prevailing technical parlance.

A challenge will be to build a broader appreciation of the nature of risk. Tipping points and changes in unmanageable systems like ocean acidification or the melting of the West Antarctic ice shelf carry a different type of risk. Tipping points and run-away feedback loops due to increasing CO₂ emissions elude exact prediction in terms of timing and impact.

We are trapped in the orthodoxy of “you get what you measure” and thus make the rather illogical mistake of ignoring those risks that cannot be measured easily

As such, mainstream economics, financial models and corporate cost-benefit analyses tend to disregard or heavily discount these hard-to-quantify yet existential risks. We are trapped in the orthodoxy of “you get what you measure” and thus make the rather illogical mistake of ignoring the very real risks that cannot be measured easily. In fact, existential risk, while not well captured by mainstream economics, is of a moral nature and needs to be addressed as such.

Challenges to the fossil-fuel economy have become stronger as the incompatibility of future prosperity and continued fossil-fuel dependence is becoming clearer. The ECF and its partners have been effective in demonstrating that externalities from burning fossil fuels show up as real costs ranging from the effects of air pollution to security costs. The fact that defence ministers were invited to join their climate and energy colleagues at the UN Climate Change Conference in Lima (COP20) last December reflects the increasing recognition of the impact climate change has on international affairs and foreign policy.

Organisational changes at Europe's largest utility, E.ON, and Sweden's Vattenfall are signs of the shifting tides

Overall, we see conventional utility business models faltering in Europe. The announcement that Europe's largest utility, E.ON, would split into a "clean company", which will keep the E.ON name, and a "new company", bundling fossil fuel and nuclear activities, is interesting. The intention of Swedish utility Vattenfall to divest its lignite operations is another sign of the shifting tides.

Our ECF strategies in 2014 were front and centre of this shift in the political and economic context. What has become increasingly clear is that a more sophisticated and systemic interpretation of the transition to the low-carbon economy needs to be framed, communicated and understood. That is why over the course of 2014 we have reorganised our activities around new clusters of initiatives that allow us to overcome sectoral limitations. "Better Integration" will be the ECF leitmotif for 2015.

We must build confidence that transitioning to a low-carbon economy is feasible

Let us be clear as to the nature of the challenge. It is not sufficient to point at the long-term win-wins of green growth. We must build confidence that transitioning to a

low-carbon economy is feasible. The very real transitional challenges of fundamentally changing business models, stranded assets, increasing carbon prices and shifting investment portfolios to low-carbon infrastructure in a global, competitive world have to be taken seriously and addressed without naiveté.

Currently we see investors waiting for unambiguous signals attesting to Europe's commitment to the transformation to a low-carbon economy. While bold cross-sectoral and cross-regional moves need to be made to trigger the innovation necessary for a successful transformation, policymakers, lobbyists and advocates tend to get stuck in silos and trench warfare around incremental reforms.

The ECF supports platforms that allow exploration not only of the "what" but also of the "how" of the low-carbon transition

To resolve this dilemma, the ECF seeks to ensure its activities and grants reflect a balanced portfolio. On the one hand, we are investing in activities that lead to robust carbon tonne abatements. These build credibility and confidence that much can be done cost-efficiently. On the other hand, we are increasing investment in building platforms that allow serious exploration not only of the "what" but also of the "how" of the low-carbon transition. As a simple solution is unavailable, the exploration of multiple pathways has become a necessity.

The most visible example of this has been the work of the Agora Energiewende in Germany. This major platform, established by the ECF and the Mercator Foundation, provides constructive, critical input to address the very real challenges of the German energy transition while avoiding damaging polarisation. It is a testament to the great work of the Agora that its first director, Rainer Baake,

was appointed State Secretary for the Energiewende and Europe in the German Federal Ministry for Economic Affairs and Energy at the beginning of 2014.

We may wish to remind ourselves of the child in Hans-Christian Andersen's tale of The Emperor's New Clothes

Regarding the dynamics and psychology of the fundamental changes necessary, we may wish to remind ourselves of the child in Hans-Christian Andersen's tale of The Emperor's New Clothes: We have to relentlessly point out where we have no clothes – i.e., in what ways are attempts to mitigate the risks insufficient. The ECF's aspiration is to emphasise the current state of things and to point the direction to some good tailors. In this effort I am a pragmatic optimist. I believe that the level of necessary systems change is well within our reach. Institutions and markets can be reformed to effectively meet the climate change challenge.

Europe is in a privileged position to demonstrate how democratic countries can work together to address a fundamental problem that transcends immediate national

interests and boundaries. I firmly believe that climate change poses not only an existential risk for large parts of humanity but is testing the validity of our democracies as well.

In 2014, the ECF and its partners continued to work hard to validate and nurture dialogue amongst widely disparate constituencies with the aim of ensuring that the low-carbon transition was firmly recognised as a vital goal for Europe's future. This included discussions concerning the European 2030 energy and climate ambitions, the alignment of economic growth and climate protection objectives, and the necessary preparations on the road to the COP 21 Climate Conference in Paris. As key parameters of the European and global low-carbon transitions will need to be negotiated and agreed upon, we expect 2015 to be a year of critical importance.



Johannes Meier
Chief Executive Officer

“The ECF team aims to understand in detail the interconnections and links between different processes and sectors. In this way, it can identify precisely those gaps where it is most useful to intervene with funding, facilitating cooperation and exchange, or building capacity. The ECF acts as a balcony player and uses its overview to help grantees and partners connecting the puzzle and providing a bigger picture.”

Source: *Social Investment Bridge Builders Cooperation for Impact Report*, Centre for Social Investment (CSI), 2014

Leadership Team

EXECUTIVE MANAGEMENT TEAM



Johannes Meier

Chief Executive Officer



Christoph Wolff

Managing Director

Joined in 2014



Chris Barrett

Executive Director
Finance & Economics

Joined in 2015



Tom Brookes

Executive Director Strategic
Communications



Martin Porter

Executive Director I²C -
Industrial Innovation for
Competitiveness

Joined in 2014

EXTENDED LEADERSHIP TEAM

- **Keith Allott** Senior Associate, UK Programme
- **Rebecca Collyer** Programme Director, Power
- **Patty Fong** Programme Director, Energy Efficiency
- **Thomas Fricke** Chief Economist
- **Pete Harrison** Programme Director, Transport
- **Robin Millington** Director of External Relations
- **Matt Phillips** Director, International Energy Project
- **Julia Reinaud** Director, Industrial Policies **Joined in 2014**
- **Martin Rocholl** Programme Director, Germany
- **Tomasz Terlecki** Head of Central Europe & Eastern Europe Programme
- **Mayta Villafane** Chief Operating Officer

FELLOWS



**Princess
Laurentien van
Oranje-Nassau**



Bert Metz



Julian Popov

Joined in 2014



John Ashton

Left in 2014

Our Vision and Strategy

VISION: A LOW-CARBON SOCIETY FOR PROSPERITY AND ENERGY SECURITY

At current rates of atmospheric pollution, climate change will decisively alter the environment and standards of living. According to estimates by the IPCC, global annual emissions will rise from today's 50 Gt CO₂ to 68 Gt CO₂ by 2030 if current trends continue. During the coming 15 years, annual emissions will need to be scaled down to 42 Gt CO₂ if we are to stand a chance of staying below 2°C of warming relative to pre-industrial levels and prevent major climate instabilities, economic and social harm, and existential risks.

In a low-carbon society, citizens would live and work in energy efficient buildings with intelligent heating and cooling systems. People would drive electric and hybrid cars and live in cleaner cities with less air pollution and better public transport. Industries would be characterised by high levels of efficiency and lower emissions. Besides cutting the vast majority of its emissions, Europe would reduce its use of key resources like oil and gas, raw materials, land and water. This, in turn, would lessen dependency on energy imports and contribute to increased economic stability and security of supply.

The transition to a low-carbon society could boost Europe's economy

Many of the technologies needed to drive the transition to a low-carbon society exist today but must be developed further. Increased innovation and investment in clean technologies and advanced materials and products would not only be good for the climate but could boost Europe's economy. A low-carbon economy would have a much greater need for recyclable product components, materials enhancing energy efficiency in buildings and fuel efficiency in transport, smart grid equipment, renewable sources of energy, low-carbon power generation and carbon capture and storage technologies.

The ECF's fundamental hypothesis is that tackling climate change effectively is a prerequisite for peaceful, prosperous societies in Europe and around the world. Therefore, the winning economic and security strategy seeks to progressively reduce carbon emissions based on scientific evidence and in line with the internationally agreed goals.

A clean energy system lies at the heart of a low-carbon society

The core challenge is to address path dependencies in the transition and find a balance among climate change mitigation, energy security needs, and competitiveness and growth challenges. While a clean energy system lies at the heart of a low-carbon society, existing energy systems based predominantly on fossil fuels have been built up and optimised over decades. Beyond step-by-step improvements, decarbonisation comes with fundamental character changes in terms of energy choices, infrastructure and sector integration, and energy market designs. Systems and markets will have to be redeveloped in Europe and around the world.

The ECF's *Roadmaps to Reality* report, co-developed with Third Generation Environmentalism (E3G), the Regulatory Assistance Project (RAP) and ClientEarth, concluded that it is critical to revisit the governance of European climate and energy policies across sectors and jurisdictions. Currently, EU energy policy can be characterised by a patchwork of interventions on different levels. The sense of uncertainty is exacerbated by perceived tensions between the EU and Member States over control of the energy policy agenda.

This undermines the confidence that is critical to investors' willingness to invest in the new energy infrastructure – both to support economic recovery and improve energy security.

The trans-boundary nature of the challenge calls for a collective and coherent response

Energy risks cannot be contained within national borders or managed in isolation. The scale and trans-boundary nature of the challenge calls for a collective and coherent response, reflecting the gains in energy security and economic resilience obtained from demand management, low-carbon infrastructure and technology. The new Energy Union theme in Europe has the potential to contribute to the decarbonisation agenda. If handled well, the Energy Union should strengthen the case for a transition to a more efficient and decarbonised EU energy system. If handled badly, it could mean that many of the most affected Member States in Eastern Europe will return to coal and crowd out infrastructure investments with new gas pipeline projects. It is an ECF objective to ensure that the alternatives are well understood and a reversal to unabated fossils is avoided at all levels.

Energy policy is an exercise in risk management that involves strategic interventions to stimulate innovation, encourage alternative technology pathways and promote a flexible network infrastructure able to adapt to a range of future circumstances. The realisation of the multi-level governance challenges inspired the European Commission to put the topic on the agenda in the context of the post-2020 climate and energy package. A new governance system for climate and energy is now a live debate in the European Council and will continue to be in the coming years. This is a space in which the ECF and its partners are well positioned to contribute.

Almost irrespective of the choices made on decarbonisation, the EU is set to face major economic challenges over the coming years. These include investment increases needed to maintain and replace the

region's outdated energy infrastructure from the current €800 billion per year (2010-2020) to up to €1,000 billion per year (2040-2050), as calculated by the European Commission. The New Climate Economy Report, *Better Growth, Better Climate*, highlights that infrastructure choices made in the next five to 15 years will be decisive. If channelled wisely, these investments can help ensure climate stability, economic prosperity and energy security. If channelled poorly, however, they risk locking in high-carbon assets that will contribute to climate change, air pollution and less secure energy supplies.

Interdependence points to synergies of economic growth, energy security and climate protection

Throughout 2014, the ECF has continued to explore how to catalyse the debate and address the "how" of the transition in a non-ideological manner. The ECF and its grantees are contributing to the debate by highlighting key path dependencies and the implications of different policy options in this transition. Will, objectives and capacities differ – this is as true in the international climate process as much as in the European and national debates. At the same time, interdependencies among public, private and third sectors; among sub-sectors such as energy efficiency, power, heating and transport; among jurisdictions (international, EU, national); and among climate protection, economic growth and energy security objectives are critical and should be viewed as an opportunity to find synergies.

That is why the ECF began to cluster initiatives in 2014 to address the challenges of externalities, finance, governance, industrial innovation and the Energy Union in an integrated manner. This approach will help to knit together disparate or partial perspectives both internally and externally.

STRATEGY: ACKNOWLEDGING COMPLEXITY, TRANSCENDING DIVIDES

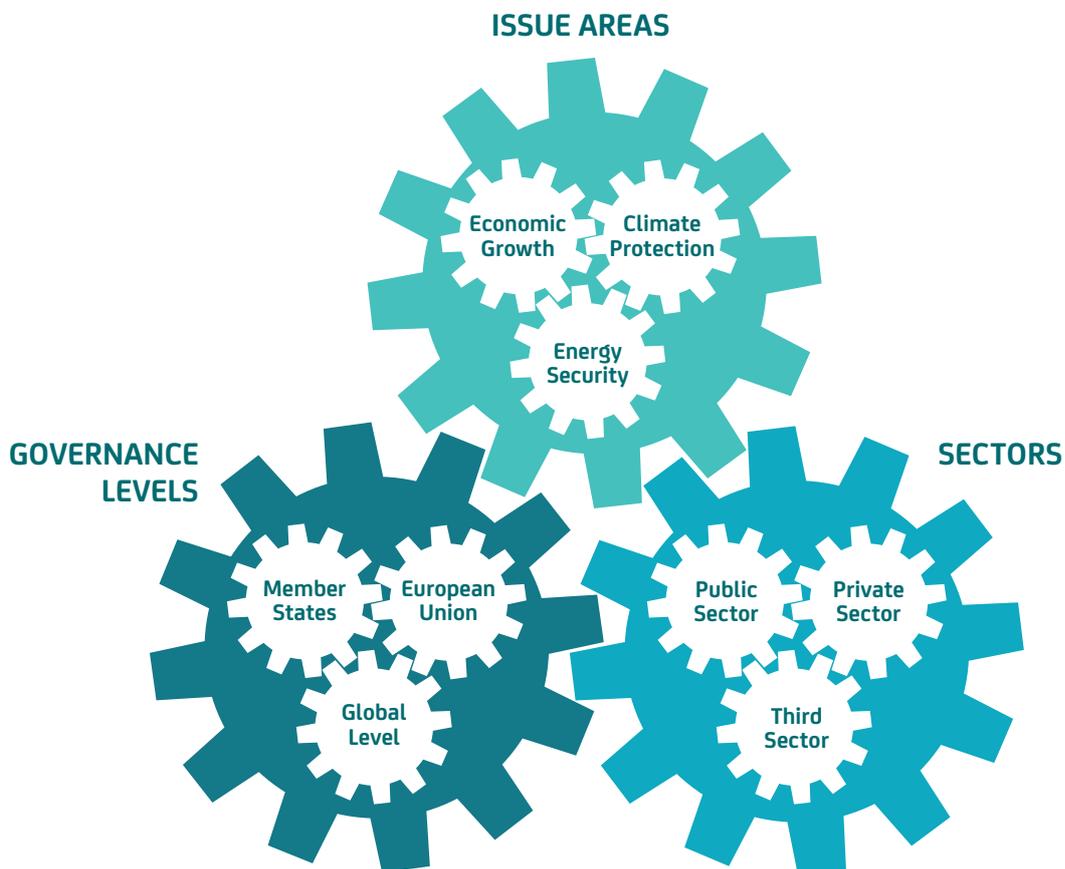
As climate change ignores national and sectoral boundaries, climate protection strategies need to build bridges across those divides. Building bridges usually comes with uncertainties. The complex nature of interrelations between issue areas, governance levels and sectors makes it difficult to come up with *a priori* solutions and, certainly, solutions will hardly ever be of a simple character under these conditions. The idea of a transformational logic of change lies at the heart of this perspective.

Moving beyond divides and across boundaries, the ECF seeks to identify synergies of goals, proceed in collaboration with diverse actors and contribute to the development of more integrated, revised energy systems ensuring the wellbeing of society.

Solving simple problems can be highly ambitious: For example, defining a labelling or performance standard for products is not straightforward but does follow a well-understood formula. Given the necessary resources and expertise, one can reliably predict the required efforts, timeline and result.

More complicated problems, such as the development of a functioning energy-only market (a market where producers are paid per unit of electricity generated but not for capacity), may take many attempts before a successful formula is developed, but each successive attempt builds on prior knowledge and experience. This gradually allows results to be predicted.

From Siloes to Synergies: Taking Advantage of Interdependence



Organisational Development

In 2014, we commissioned a consultant to interview more than 50 senior grantees, industry partners and policymakers with an eye to assessing the role the ECF should play to foster the development of a low-carbon society. These interviews revealed that the ECF is perceived and needed as a bridge builder across stakeholder perspectives. At the same time, it has become increasingly clear that our initiatives are characterised by interdependencies that must be taken into account if our work is to have the greatest impact. Therefore, we have started to cluster initiatives according to overarching themes: governance, externalities, industrial innovation, finance and Energy Union. This approach requires additional leadership capacity:

- **Christoph Wolff**, a former McKinsey director and executive in the rail and solar industries, joined the ECF as Managing Director in October 2014. He will ensure better alignment across ECF initiatives.
- **Martin Porter**, previously Managing Director of Edelman in Europe, joined the ECF in late 2014 to lead the new Industrial Innovation cluster and the Industrial Innovation for Competitiveness (I²C) initiative.
- **Chris Barrett**, former Australian Ambassador to the Organisation for Economic Co-operation and Development (OECD) and Chief of Staff of the Australian Minister of Finance, joined the ECF as Executive Director, Finance and Economics in January 2015. He heads the new Finance cluster.

Together with Johannes Meier and Tom Brookes, these senior leaders constitute the newly formed ECF executive management team. This addition of senior capacity ensures the leadership needed to address complex problems: Balancing inquiry with execution as well as openness and exploration with delivery calls for leaders with the requisite experience. The ECF seeks to foster a culture that invites all stakeholders and partners to engage in collaborative problem solving and encourages moving beyond simplification.

Complex problems, such as the competitiveness-sustainability conflict in industrial development, however, are dynamic, nonlinear and may exhibit counterintuitive dynamics. They, in particular, are the result of the continuous interplay among multiple interdependent factors.

Complex problems are the result of the interplay between multiple, interdependent factors

Along a continuum from incremental to transformative change in societies, solutions to simple problems tend to correspond to incremental changes, whereas complex problems and transformative change appear to go hand-in-hand, and complicated problems lie in between. This implies that a multitude of pathways must be embraced. Change often comes in many oblique forms. This insight does not invalidate the core elements of strategic philanthropy that the ECF adheres to:

- Identifying the problem to be tackled,
- Formulating clear goals,
- Drawing on state-of-the-art research and best practices,
- Basing action on solid political context analysis,
- Developing a hypothesis for how best to approach the problem,
- Monitoring initiative and overarching strategy implementation,
- Evaluating results and learning from experience.

Strategic philanthropy increases the odds of success. This approach can be applied to simple, complicated and complex problems – although goals and procedures may be of a different nature depending on the type of problem. Thus, instead of advocating particular solutions, the ECF in some instances will work towards establishing a new field

Planning and Evaluation

The move to more integrated approaches and objectives reinforces the importance of sharing the same language and tools within the organisation when it comes to planning, monitoring and grant management. Therefore, the ECF has continued to develop and implement an integrated online planning, monitoring and grant-management system comprising three platforms: PARL, FLUXX and Smart Chart v3.0.

In 2014, we started using Smart Chart v3.0, a planning tool developed by Spitfire Consulting supported by a grant from the David and Lucile Packard Foundation. The tool helps in defining objectives and designing theories of change. The resulting logic models are captured in PARL, where progress is monitored. 2015 will see specific work focusing on the improvement of indicators and further measurement techniques.

that is capable of approaching solutions. This may well be an innovative endeavour involving creativity and patience – prototyping, testing and learning. Along the way, we support the development of fact bases, engage in gaps analysis and build capacity. Our work in Germany with the Agora Energiewende is one example.

An appropriate time horizon matters if systemic impact is to be achieved

An appropriate time horizon matters if systemic impact is to be achieved. Systematically taking new developments and insights into account, the ECF pursues emergent strategies over multi-year horizons. We continuously assess

social challenges and examine the role we can play in tackling them. This includes exchanging ideas with various organisations and representatives from diverse sectors as well as launching forums for debate that can transcend sectoral and national divides.

In solving problems, we draw on highly integrated, internal pillars of substantive expertise in economics, energy, efficiency and transport, and apply this expertise at all governance levels. We focus on Member States such as Germany, the United Kingdom (UK), France and Poland that play a critical role in channelling Europe's energy and climate transformation. Europe itself should constitute a laboratory and model for the rest of the world in the transition to a low-carbon, prosperous and equitable society.

Communications

Supporting the transition to a low-carbon economy requires shaking off the simplistic assumption that good policy justifies itself and will therefore overcome politics. The transition will produce losers as well as winners. The likely losers include obvious economic actors such as the coal or oil industries, but also less obvious constituencies such as those whose belief systems lead them to advocate minimal public-sector intervention.

Recognising the importance of supporting a fact-based dialogue, translating state-of-the-art research into easily understood content and sharing information in a timely manner, the ECF has increased its media capacity, research capability and overall communications resources over the past few years. We support www.carbonbrief.org, www.naukaoklimacie.pl and www.klimafakten.de, entities that shine a light on misstatements or negative interpretations of climate science and related facts in the media. In 2014, we worked with other foundations to support two new platforms: the Energy and Climate Intelligence Unit (ECIU) and Clean Energy Wire (CLEW), both of which contribute to informed debates on energy and climate change developments in the UK and Germany respectively.

Leveraging Interdependence and Co-Development of Strategies - Five Questions to Christoph Wolff, ECF Managing Director



Q As the low-carbon transition approaches critical thresholds, what does that mean for the ECF and its partners?

A The ECF and its partners have been very successful in supporting focused initiatives such as the initiative to restrict CO₂ emissions from light vehicles to 95g/km. As we aim for reduced emissions and for higher shares of renewable energy, systemic change beyond current boundaries needs to happen. Transport electrification is a good example: Technological change, appropriate infrastructure investments and new business models encouraging change in consumer behaviour are all required in parallel, alongside policy regulation to provide the right incentives.

Q The European climate and energy debate seems to have recently diverted from climate change to competitiveness and energy security. Does this challenge the mission of the ECF and its partners?

A Focusing on climate alone is increasingly difficult as decision makers have to balance sustainability with these other two issue areas. The ECF and its partners need to reach out to new audiences, for example in industry, in order to establish how the energy transition and climate change can create new global markets. The energy transition can act as a driver for innovation and global industrial leadership in new product and service categories if European industry is determined to move swiftly. We also aim to engage with experts in the fields of defence and foreign policy. Energy efficiency and renewable deployment are key thrusts to reduce energy dependency.

Q How does the ECF react to the need for change across the entire energy system?

A Until 2014, the ECF's power, energy efficiency and transport teams worked with a common overarching goal but proceeded rather independently. Developments such as the electrification of heating and transport systems, their prospective function to store intermittent renewable sources and the paramount importance of securing demand-side measures across all sectors bear extensive potential for further integration of the energy system. We believe systemic interventions become increasingly inevitable. Therefore, in summer 2014, we created thematic clusters, which reach across initiatives.

Q What does that mean for the way the ECF is collaborating with its core grantees?

A Core grantees lead or co-lead the clusters, define work programmes and guide resource allocation. Teams of grantees and ECF staff share expertise, engage in quality assurance and collaborate in shaping key messages. It is a new way of working together.

Q Will we see increasingly new formats for creating and delivering content?

A The Agora Energiewende, jointly funded by the ECF and the Mercator Foundation, both supports and challenges the German Energiewende. The associated Agora Council functions as a convening platform on the national level for leading actors from politics and industry to probe new ideas and approaches. The ECF seeks to develop similar platforms for other countries in search of their own pathway. In addition, the ECF may engage in regional learning labs where changes beyond established thresholds are piloted and enacted in innovative multi-stakeholder platforms on the ground.

SPOTLIGHT

The 2030 Framework for Climate and Energy Policies

In October 2014, after a long process of negotiations and debate, the European Council adopted a set of headline targets and principles for the EU's climate and energy policies beyond 2020. Throughout 2014, to inform this process, the ECF and its partners provided a wealth of analysis and built alliances of stakeholders across multiple sectors of society.

The targets to be met by 2030 include the following:

1. A binding greenhouse gas (GHG) reduction target of at least 40% compared to 1990 levels, from domestic abatement efforts,
2. A target of at least 27% for the share of renewable energy sources in final EU energy consumption,
3. A target to improve EU energy efficiency by at least 27% compared to the European Commission's projections of future energy consumption. This target is to be reviewed by 2020 with a level of 30% in mind – the minimum needed to continue the current momentum of energy efficiency policies.

The “at least” character of the GHG, renewable energy and energy efficiency targets is significant

The 40% GHG target is in line with the European Commission's 2050 low-carbon economy roadmap from 2011, if at the lowest end of the range. The renewable energy and energy efficiency targets are also at the low end of the identified cost-effective potential in each of these areas. However, in each case the European Council conclusions provide for greater ambition,

both within the EU and at the global level, by signalling that Europe is willing to continue reducing emissions beyond 2020.

Much remains to be done to translate the 2030 macro-level targets into an investable framework for Europe's low-carbon transition. The GHG target will continue to be translated into national targets and national law, while the renewable energy and energy efficiency targets will apply at the EU level. The 2030 targets provide only a framework for the development of more specific policies and measures, but the “at least” character of all three is significant in that it recognises the need for review in light of a changing economic, political and scientific context.

It is well established by the work of the ECF and many others that the most efficient energy transition – one that makes the best use of Europe's renewable resources, reduces fuel imports fastest, and diminishes the costs for business and consumers – must be coordinated across the continent. This is underlined by the inclusion of a new 15% interconnection target in the package, which helps make the internal energy market a reality. However, if Europe is to capture maximum economic and societal benefit from the low-carbon transition, the governance of that transition will be key.

Development of a governance system that can deliver both the internal energy market and the energy system envisioned in the Commission's roadmaps will be a significant challenge for President Jean-Claude Juncker. There is also a clear economic opportunity to be seized by the EU, which requires strong leadership. The need to balance short-term transitional competitiveness concerns and the requirement to reduce emissions on a more ambitious trajectory demand an integrated approach – not just across countries but also across economic sectors and policy areas. Transport is an important example.

The European Council conclusions foresee continued increases in vehicle fuel efficiency, an important route not only to fossil-fuel import reduction but also to innovation.

There is an ongoing dilemma of increasing emissions due to low coal prices and ineffective implementation of the carbon price

Another major challenge in energy policy for the years ahead is the ongoing dilemma of increasing emissions due to low coal prices and ineffective implementation of the carbon price. Uncertainties remain over the degree to which the 2030 policy framework is consistent with the phase-out

of coal in Europe, with lower-income Member States still permitted to give a significant proportion of free Emissions Trading System (ETS) allowances to the energy sector. The European Council conclusions include provisions for a modernisation fund for low-carbon energy and buildings retrofit, although its application remains to be clarified.

The process that follows these headline conclusions will determine Europe's ability to align objectives and successfully manage the transition to a low-carbon economy so as to promote prosperity, competitiveness and security. Creating the conditions for ambition and the realisation of these objectives has been and will be central to the work of the ECF and its partners.

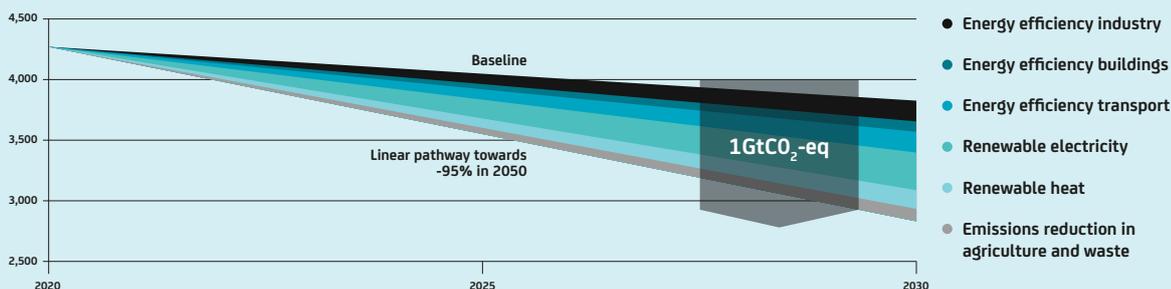
Climate Actions to Keep Europe on Track

THE GAP Emissions in the EU [MtCO₂-eq]

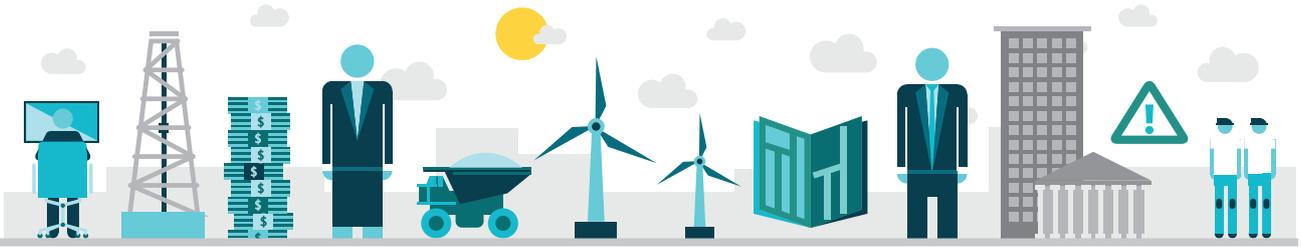


The baseline emissions (2013 PRIMES baseline) and the pathway towards 95% emissions reduction by 2050. The indicated period is 2005-2050. The gap between the baseline and the 95% pathway is nearly 1 GtCO₂-eq. The emissions reduction target communicated by the European Commission is -40%. The indicated reductions (%) reflect changes compared to 1990 levels. Source: *Six Feasible Climate Actions to Keep Europe on Track*, ECOFYS, 2014.

THE WEDGES Emissions reduction options in the EU [MtCO₂-eq]



A selection of options to bridge the gap between the baseline emissions (2013 PRIMES baseline) and the pathway towards 95% emissions reduction by 2050 (compared to 1990 emissions). These wedges do not reflect the full potentials: Within each wedge, more emissions reductions are possible. Source: *Six Feasible Climate Actions to Keep Europe on Track*, ECOFYS, 2014.



2014 announcement of a new investment package for Europe. In this regard, we focused on the question of how this package could contribute to both economic growth and climate protection. One of our ideas is to introduce an accelerated depreciation scheme for new investments, with special treatment for investments in energy efficiency.

Survey results countered some of the myths around the impact of the energy transition

We also commissioned the first-ever survey of French and German business leaders on the energy transition under way in both countries. The representative sample of 1,000 CEOs

and high-level managers revealed a converging sense of urgency on the need for the energy transition (84% and 87% of French and German respondents, respectively). While Germany is seen to be well positioned to succeed in its energy transition, only 16% of French respondents believe their government has put in place adequate instruments.

These perceptions of leading business representatives have been matched by a number of studies published in 2014. Our efforts included commissioning a study from Ernst & Young that compared projections for growth, jobs and other parameters under a business-as-usual scenario with those under a decarbonisation trajectory. This study, *Macroeconomic Impacts of a Low-Carbon*

The ECF Energy Price Monitor

Energy prices are a critical economic factor to be taken into account when designing climate policies. The speed and extent of energy price changes may affect competitiveness and influence the acceptance and impact of climate policies. However, there has long been no generally accepted indicator reflecting overall energy price trends. The ECF Energy Price Monitor (EPM), launched in October 2014, is intended to fill this gap. The EPM, which has also been hosted by the Agora Energiewende, describes recent changes in consumer energy prices in Germany on a monthly basis, highlighting which types of energy contribute to rising or falling overall prices and comparing German price trends with trends in other European countries.

International energy price trends comparison Index 2010=100



Source: Eurostat

The monthly release can be found online:

www.europeanclimate.org/de/category/news/ecf-energy-price-monitor/

Transition, synthesised estimates from the European Commission roadmaps and other sources on the possible economic impact of a low-carbon transition and found that decarbonisation provides extensive potential for economic development over the medium to long term.

Europe can increase its competitiveness while simultaneously reducing GHG emissions

This is in line with the findings of the more specific analysis the ECF undertook with analytical support from McKinsey & Company. The study, *Europe's Low-Carbon Transition: Understanding the Challenges and Opportunities for the Chemical Sector*, looks at the relationship between historical and potential emissions reductions and competitiveness, using the European chemicals industry as a case study. The key finding: Europe can increase its competitiveness while simultaneously reducing its GHG emissions. The study also highlights the increased integration and governance complexity necessary to unlock the abatement potential. This will require businesses and policymakers to engage closely and implies creating new frameworks that encourage cross-company and cross-industry optimisation.

The New Climate Economy report has rekindled the debate on the economic consequences of ambitious climate policies

Similarly, development of industries involved in the production of low-carbon technologies such as alternative vehicles, smart technologies and energy storage hinges on credible political direction and support, as does the development of more mature industries such as wind and solar photovoltaics. This was shown by the ECF-commissioned Ernst & Young report, *Europe's Low-Carbon Industries: A Health Check*, which takes a deeper dive into the development of low-carbon industries.

The ECF's work in this area was reflected in the recommendations released in September by the Commission on the Economy and Climate, on which the ECF Supervisory Board Chair, Caio Koch-Weser, serves as a commissioner.

The New Climate Economy report, *Better Growth, Better Climate*, has rekindled the debate on the economic consequences of ambitious climate policies. Industry, economists and politicians are showing considerable interest in further exploration as to how climate policies and economic growth can be mutually reinforcing in Europe. Specifically, this will require further development of knowledge and design of measures reducing emissions, while simultaneously cutting associated costs for industry, facilitating public and private investment, and encouraging innovation.

In 2015, the ECF will continue to expand the fact base and to support the development of new narratives and analyses that move beyond confrontation and encourage mutually reinforcing thinking and acting. Further work will concentrate on approaches to the low-carbon transition and its impacts on economic growth and consumption patterns.

Another focus will be to establish a safe space for dialogue and analyses on industrial innovation, and a more consensual approach to industrial competitiveness issues. Industrial Innovation for Competitiveness (I²C), a new ECF initiative, will convene a group of business representatives, political leaders and civil society with the aim of exploring approaches that strengthen Europe's strategic advantage in the transition to a new global economy.

Translating the IPCC AR5 Findings into Clear Sector Implications

The IPCC completed its *Fifth Assessment Report* (AR5) in November 2014. This 5,000-page report took more than 800 lead authors, drawing on more than 30,000 pieces of research, five years to complete. The ECF, in collaboration with the University of Cambridge Institute for Sustainability Leadership and other partners, worked to bring the key findings and data, including adaptation options and mitigation solutions, to the business community through a 13-part series of tailored summaries, presentations and infographics.

The AR5 summaries were translated into nine languages, including Chinese, Spanish and Turkish.

Our partners included:

- University of Cambridge Institute for Sustainability Leadership (CISL)
- Buildings Performance Institute Europe (BPIE)
- Business for Social Responsibility (BSR)
- European Trade Union Institute (ETUI)
- Global Military Advisory Council on Climate Change (GMACCC)
- Institute for Environmental Security (IES)
- Institutional Investors Group on Climate Change (IIGCC)
- Local Governments for Sustainability (ICLEI)
- Sustainable Fisheries (SFP)
- UNEP Finance Initiative (UNEP FI)
- World Energy Council (WEC)



Agriculture



Buildings



Cities



Defence



Employment



Energy



Extractive & Primary Industries



Finance & Investment



Fisheries & Aquaculture



Tourism



Transport

Climate: Everyone's Business - The initiative covered 11 sectors in addition to two summaries on *The UN Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5)* and *Climate Change: Action, Trends and Implications for Business*.

Linking Climate and Economics: Examples of Workshops Organised by the ECF in 2014

- **A Climate Deal to Rescue Europe – Berlin, 7 and 8 May**
With experts from Cambridge Econometrics, Agora Energiewende, Observatoire Français des Conjonctures Économiques (OFCE)/Sciences Po, Gesellschaft für wirtschaftliche Strukturforchung mbH (GWS), E3G and other representatives from the public sector and the third sector.
- **The Low-Carbon Transition: Exploring the Role of Industrial Policy in Europe – Brussels, 2 September**
With various experts, including representatives from OECD, the Carbon Trust, the Institute for Sustainable Development and International Relations (IDDRI) and the Centre for European Policy Studies (CEPS).
- **Climate and the Business Cycle – Berlin, 14 October**
With representatives from the German Federal Ministry for Finance, the German Federal Ministry for Economic Affairs and Energy, Deutsche Bundesbank and leading research institutes.
- **How to Make Juncker's Investment Package More Sustainable – The Industry Contribution – Paris, 26 November, co-hosted by OFCE/Sciences Po**
With industrial efficiency experts and macro-economists, including organisations such as the International Energy Agency (IEA), DNV GL, OFCE and Union Investment.

SPOTLIGHT

The European Chemicals Industry

Energy-intensive industries sit at the very centre of the concerns that ambitious European climate policies could endanger Europe's industrial competitiveness. These industries are, by definition, disproportionately affected by increasing energy costs vis-à-vis the United States of America (U.S.) or other geographies.

In the spirit of trying to find a route by which decarbonisation and resource efficiency could be combined with and support a competitive European industry, in early 2014 the ECF brought together industry players to discuss the transition dynamics for chemicals, an especially important energy-intensive industry. The ECF commissioned McKinsey & Company to analyse the industry, and the resulting report, *Europe's Low-Carbon Transition: Understanding the Challenges and Opportunities for the Chemical Sector*, lays out the transition dynamics and explores how to turn the challenge of reducing carbon emissions into an opportunity.

Significant opportunities to reduce emissions further

The study finds that Europe's chemical industry nearly halved its GHG emissions compared to 1990, while in the same timeframe increasing production volumes by around 20%, producing more and better products than before. A key conclusion is that there are significant opportunities to reduce emissions further – enough to keep the industry on its fast improvement trajectory and enough to keep it on track for an 80-95% emissions reduction by 2050 – while at the same time maintaining or increasing competitiveness.

The report shows how GHG emission reduction opportunities strengthen the sector's competitiveness and are therefore attractive irrespective of an international level playing field (for example, a global carbon price).

These “sweet-spot” initiatives are disproportionately geared towards three industrial themes:

1. Circularity,
2. Cross-value chain collaboration and process optimisation, and
3. Advanced technology and materials innovation and commercialisation.

However, the challenge is the increased integration and governance complexity needed to unlock further abatement potential. This will require businesses and policymakers to interact and engage closely, and means creating new frameworks that encourage cross-company and cross-industry optimisation. It also means that Europe needs to reach an agreement around a comprehensive notion of competitiveness that reflects the dynamics and potential of profiting from the challenges of the transition. There must be an acknowledgement of climate benefits as a co-benefit of a necessary industrial transformation – instead of a focus on concerns about climate change.

Consensual approach to competitiveness is essential

The report was launched in March 2014 in Brussels at an event attended by high-level participants from the EU institutions, industry, civil society and academia. Shortly following the launch, ECF staff followed up with outreach and interviews with policymakers, academics and business representatives, in order to gather feedback from experts on what they believe it would take to make today's economic and political environment more conducive to the change needed for a low-carbon Europe.

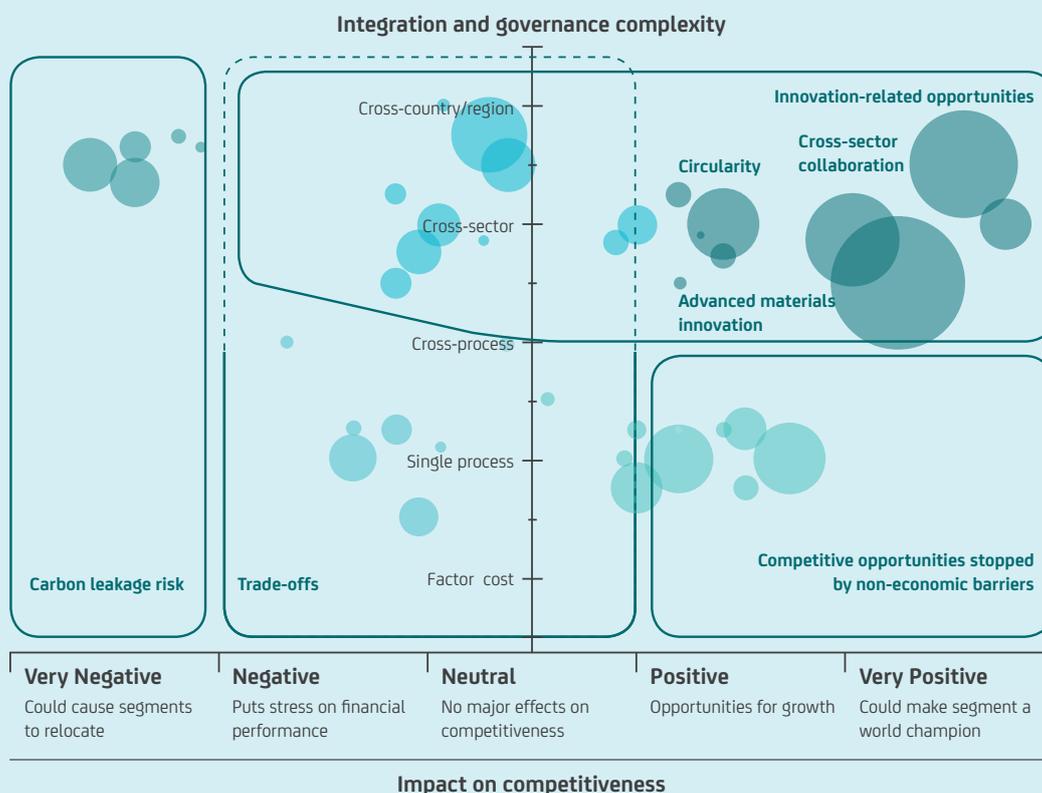
All experts interviewed confirmed that a consensual approach to competitiveness – moving beyond chemicals and involving both business and policymakers – would be key to further industrial policy and development.

New Industrial Innovation for Competitiveness (I²₄C) initiative

With this goal in mind, the ECF has established the Industrial Innovation for Competitiveness (I²₄C) “think-do tank”, to provide a new space for high-level thought

leadership and dialogue on European industry’s competitiveness and innovation opportunities, substantiated by solid analyses. Recognising that a range of factors, including the decarbonisation and eco-efficiency imperatives, are driving a fundamental transition of the economy and society, I²₄C starts with the assumption that innovation is a prerequisite to industrial competitiveness. I²₄C aims to build consensus around the key success factors for smart innovation in Europe. More specifically, it seeks to understand the bottlenecks to industrial transformation and to inform policy so as to ensure competitiveness in the transition to a low-carbon economy.

Industrial Themes for the Chemical Industry



The size of the bubbles represents the size of the GHG abatement potential.

Please visit www.europeanclimate.org/europes-low-carbon-transition-understanding-the-chemicals-sector

Moving towards Energy Systems Optimisation

A clean, integrated energy system is a critical prerequisite for a low-carbon economy. With the right infrastructure in place, decarbonised electricity can serve traditional purposes, supply heat for buildings and replace fossil fuels in powering cars and trucks. Decarbonising the energy system means using a range of low-carbon power generation options and rapidly expanding renewable energy sources. Increased reliance on renewables such as wind and solar in turn requires having resilient and interconnected grids so the power system can draw on different types of energy in a complementary way. As access for renewables, demand response and distributed generation to the EU's markets become key, the electricity markets must also continue balancing power generation and consumption reliably.

Coherent strategic planning of the European energy system will be critical for success

Given the complexities of the systems transition, energy policy can be considered an exercise in risk management that involves strategic interventions to promote innovation, develop alternative technology pathways, trigger energy savings and deliver a flexible network infrastructure. Coherent strategic planning of the European energy system is critical for successful development of a best-value approach for energy consumers and society as a whole.

The ECF supports the development of an integrated low-carbon energy system along with reduced reliance on high-carbon assets. In 2014, we continued to engage at the European and Member State level in collaboration with our grantees and partners to provide thought leadership, convene stakeholders and generate shared perspectives on the risks and opportunities of the transition.

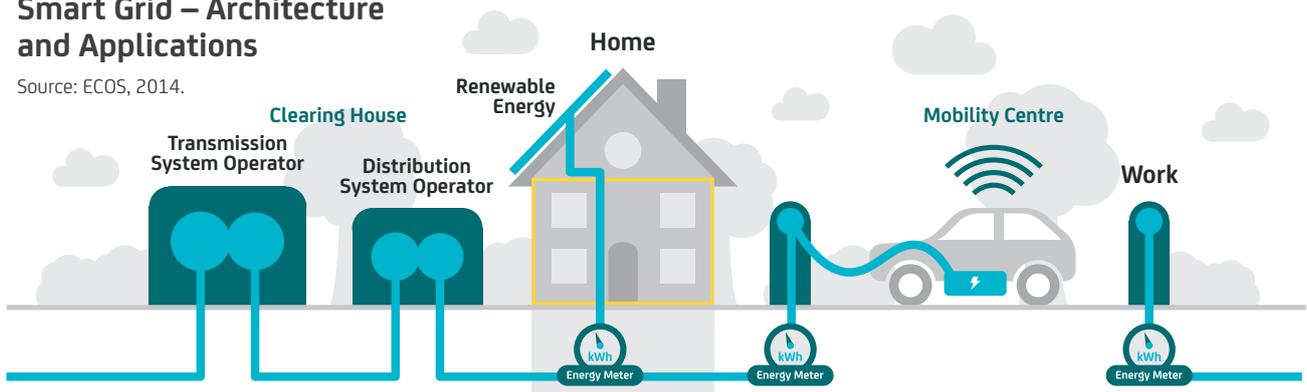
In order to ensure a renewables pathway and further EU grid integration, we focused much of our efforts in 2014 on shaping the *EU 2030 Framework for Climate and Energy Policies* through analysing how best to frame governance and indicators, contributing to the discourse on decarbonisation strategies and linking activities of diverse stakeholder groups. The adoption of a 27% renewable energy target translates into a renewable electricity target of around 40-45% in 2030. Although this is at the lower end of the acceptable pathways that the ECF outlined in our *Power Perspective 2030* report launched in November 2011, the target is a starting point for further policy deliberation.

Grid integration allows the realisation of economic benefits

The 2030 interconnection target of 15% in the framework package came as a result of governments realising the economic benefits of grid integration, mobilisation of technology providers and transmission system operators,

Smart Grid – Architecture and Applications

Source: ECOS, 2014.





the input of key think tanks and non-governmental organisations in clarifying the trade-offs between gas and electricity infrastructure, and better understanding of the environmental impacts of grids. Special mention must be given to ECF partners E3G and the Renewables Grid Initiative (RGI) for tackling key elements of the grid challenge in Europe.

The EU Commission's communication on the *Progress Towards Completing the Internal Energy Market*, published in October 2014, acknowledges the relevance of regional integration as supported by the ECF and its partners. Regional initiatives such as the North Seas Countries' Offshore Grid Initiative are considered a basis for delivering the internal energy market through concrete, visible results. Indeed, the ECF and its partners were able to support progress on several important electricity interconnectors (UK-BE, UK-DK, UK-DE, DE-NO, FR-ES).

At the same time, the Commission communication accepts that the development of smart grids needs to be beneficial for consumers, which suggests that the link between retail and wholesale markets must be improved so that lower wholesale prices lead to lower consumer prices. ECF partners RAP, Client Earth and E3G worked to put regional integration on the agenda and to ensure that the role of demand response was recognised as a driver in retail markets. The proposal of regional integration and demand response for

2015 is a positive step towards the market integration as set out in the ECF's *Roadmaps to Reality* (R2R) report launched in several European capitals in 2013 and 2014.

In 2014, the ECF and its partners continued to focus on EU level rules that affect the most CO₂-intensive forms of power generation. Grantees such as Climate Action Network (CAN) Europe, the European Environment Bureau (EEB) and World Wide Fund For Nature (WWF) have worked to ensure credible implementation of the Industrial Emissions Directive. They have also explored the potential for a U.S.-style emissions performance standard in the EU and at the Member State level.

At the Member State level, the ECF and its partners continued to support a low-carbon transition pathway

At the Member State level, the ECF and its partners continued to support a low-carbon transition pathway, particularly in the UK, Germany and Poland:

In the UK, we focused on effective implementation of the UK *Climate Change Act* and new electricity market reforms by contributing research and facilitating discourse across sectors. Successes included the UK Government reconfirming its support for the fourth carbon budget

Agora Goes European

Since Germany is the main transit country for energy in Europe, a European perspective on Germany's energy transition is imperative. Therefore, Agora Energiewende, a joint project of the Mercator Foundation and the ECF, widened its scope and started the European Energy Cooperation programme in mid-2014 to support market integration. The cooperation of Germany with its neighbours, specifically Poland, France and the Nordic countries, is critical to the success of this programme. The Agora and its partners initiate joint research projects, facilitate stakeholder dialogue and identify synergies and ways to jointly drive forward the energy transition. These are also the key activities that the Agora and its partners IDDRI and CE Delft pursue to support the official process of the Pentilateral Energy Forum, one of the most promising attempts to drive regional market integration as an intermediate step towards Europe-wide solutions.

under the *Climate Change Act*, equivalent to a 50% cut in GHG emissions by 2025 from 1990 levels. We contributed to informed debates about the need for a binding target to secure substantial decarbonisation of the UK power sector by 2030, including the phasing out of ageing coal power stations. Also, the UK introduced a capacity market mechanism, with ECF grantees providing analysis to make the case for effective incentives for demand reduction and demand management. Green Alliance's report, *Kickstarting the Negawatts Market: How to Make Sure the Electricity Demand Reduction Pilot Succeeds*, assessed the potential of energy saving (negawatts) to reduce peak electricity demand and recommended ways to improve the government's two-year pilot scheme to test energy demand reduction in the capacity market.

In Germany, the ECF and the Mercator Foundation continued to fund the Agora Energiewende platform, where policymakers and other key stakeholders can deliberate over the major challenges of the Energiewende with timely access to high-quality research. In 2014, the Agora platform concept papers on the *Renewable Energy Law*

(EEG) reform were widely debated, and a broad coalition came together to support Germany's CO₂ targets for 2020. In this context, the pitfalls of incentivising continued coal use were highlighted by the Agora and RAP.

In Poland, efforts by the ECF, the Agora, RAP and the Warsaw Institute for Studies in Economics to build an energy system modernisation platform are starting to have traction. We established the Forum for Energy Analysis (FAE), a non-profit initiative that engages in analysis and expert dialogue on the energy sector. It also assesses the impact of the energy sector on economic growth and develops recommendations with regard to the implementation of the EU 2030 framework.

Looking forward to 2015, the ECF will continue working to accelerate the transition to a European low-carbon energy system, focusing on decarbonisation, renewables, market design and integration. In addition, the energy team will contribute to the ECF's new overarching themes, including governance, externalities and the Energy Union.

Regional Energy and Grid Integration

In 2014, the ECF focused on two regions to accelerate the cooperation on grid integration. These regions were chosen for their potential: the North Seas region as a leading example for efficient use of renewable resources and the South East region as an example of a region with significant underutilised renewable resources.

The European Commission and key Member States have recognised the role of regions in European energy system governance. As well as agreeing on an interconnection target in the 2030 package, the Commission has proposed a new initiative on market design and regional electricity markets. The North Seas Grid, thanks to the efforts of ECF partners E3G, Stichting Natuur & Milieu (SN&M), Concito, the Institute for Public Policy Research (IPPR) and Ecologic, has been recognised as having great potential, and new institutional arrangements are emerging to realise that potential. In particular, the Commission published in October 2014 an analysis with Ecofys quantifying the economic, social and environmental benefits of a meshed North Seas grid. The next step will be for Member States to further develop the arrangements for closer regional cooperation, looking to the Pentalateral Energy Forum and Nordel for examples of market integration, and then accelerating from these promising starting points.

In South Eastern Europe, the ECF and its partners have contributed to the recognition of energy infrastructure and market integration as a key policy block of the emerging Energy Union. ECF partners assisted the Balkan Forum in establishing the South East Europe Energy Cooperation Initiative, based in Greece; worked with the Directorate-General for Energy in developing the concept of the Southern Electricity Corridor (in parallel with the Southern Gas Corridor); supported the Tirana conclusions, *Energy Efficiency Policies in the Balkans: Opportunities for Regional Cooperation*; and promoted models for possible intergovernmental energy cooperation agreements among governments.

SPOTLIGHT

Germany's Energiewende Survives Big Challenge

While electricity generation from renewables has been steadily growing to become the number-one source of power production in Germany in 2014, CO₂ emissions in that country still rose between 2011 and 2013 and began dropping only last year. The main reason is that natural gas was pushed out of the power market by coal, which is much more CO₂-intensive per kilowatt-hour than gas. Why did this happen?

Low prices for CO₂ allowances in the European ETS, a drop of coal prices by 30% since 2012 and renewables entering the electricity market with marginal costs close to zero have depressed wholesale prices at the electricity exchange. Consequently, coal-fired power stations have ramped up production and are replacing gas-fired plants, which have higher operational costs.

Risk of missing GHG target averted

In the summer of 2014 it became clear that Germany was at risk of missing its self-proclaimed 40% target for GHG emissions reductions by 2020 by as much as 5-8% points. There were no plans as to how to restrict coal, and energy efficiency was low on the political agenda.

In the face of this challenge, ECF grantees and partners contributed expert knowledge and ensured voices from all sectors of society were heard. Reminding Chancellor Angela Merkel and Vice-Chancellor Sigmar Gabriel of their promise in 2008, this broad alliance helped change the debate and put ambitious emissions reductions atop the agenda. Specifically, clarity emerged among policymakers that reaching minus 40% would not be possible without starting the phase-out of coal and reversing the gas-to-coal switch.

These efforts resulted in a promising *Climate Action Programme 2020*, which the German government announced in December 2014. The programme reinforces the aim of 40% GHG emissions reduction by 2020.

It calls for massive improvements in energy efficiency, measures in transport, agriculture, waste and industry as well as a plan to further cut CO₂ emissions from fossil-fuel power plants – including hard coal and lignite. Thus, energy use is increasingly being decoupled from CO₂ emissions.

Looking forward to COP21 in Paris

The fact that Germany has confirmed its commitment to reducing GHG emissions by 40% in 2020 can be seen as a major success – this is one of the most ambitious reduction paths worldwide. The same is true for Germany's recognising for the first time that phasing out coal is an important part of effective climate mitigation. If this pathway is continued, Germany will be able to present itself as a climate champion at COP21 in Paris. The Energiewende can thereby live up to expectations and provide a model to the rest of the world – showing that it is not only successfully contributing to the use of renewables but also ensuring significant reduction of CO₂ emissions.



“Do you still have your goal in mind?": Civil society reminded Chancellor Angela Merkel and Sigmar Gabriel, Minister for Economic Affairs and Energy, of the 40% GHG reduction target for 2020.

Realising Multiple Benefits of Energy Efficiency

Using less and saving more is the key to energy efficiency – the invisible powerhouse to improve energy security, increase industrial productivity, lower bills and help achieve critical climate goals.

Energy efficiency got more attention in 2014 as geopolitical tensions in the Ukraine propelled energy security concerns to the fore. As long as the EU continues to import 66% of the gas and nearly 90% of the oil it consumes, its energy supplies will remain insecure and its economies dangerously vulnerable to oil and gas price shocks. Fraunhofer Institute for Systems and Innovation Research (Fraunhofer ISI) estimates that efficiency opportunities in buildings, transport, industry, appliances and energy supply have the potential to deliver up to 40% cost-effective energy savings by 2030 compared to 2005 levels, which could reduce import dependence by a similar amount.

The advantages of energy efficiency go far beyond energy security and climate protection, however. In 2014, the IEA published a major new report, *Capturing the Multiple Benefits of Energy Efficiency*, identifying at least 15 distinct benefits from the so-called “first fuel”. These range from improved public budgets and asset values to reduced local air pollution and increased disposable income. The value of improvements in industrial productivity can be worth 2.5 times the value of actual energy savings, and health benefits can outweigh the costs of efficiency improvements by a factor of four. The IEA urges policymakers to give much more holistic consideration to such outcomes.

Energy efficiency acknowledged as vital to reducing energy dependence

Thanks partly to concerted efforts by ECF partners, energy efficiency was acknowledged by the European Commission and several Member States in 2014 as vital to reducing energy dependence. It features prominently in

the Commission’s new *Energy Security Strategy* and in its ideas for an Energy Union. These can be seen as positive early signs of a more integrated vision for the EU’s energy system, in which demand-side solutions are treated on an equal footing with supply measures.

But there is a large gap between applauding energy efficiency in speeches and strategy documents, and delivering it on the ground. The fact that savings opportunities are widely dispersed means they are often perceived as – and indeed often are – complicated and messy to deliver. And, as much as they may like energy efficiency in principle, cash-strapped governments often resist pursuing helpful policies due to concerns over upfront investment costs.

High-level targets to be effectively transposed and implemented

The ECF and its grantees, together with the Coalition for Energy Savings and the EU Alliance to Save Energy (EU-ASE) and their members, work across all sectors to help design and build political support for an appropriate combination of high-level targets and frameworks underpinned by sectoral policies.

A key focus for Brussels grantees in 2014 was to seek the adoption of a 2030 headline target for energy efficiency, as part of the much-anticipated climate and energy package. Early indications from the European Commission were for a weak objective of 25% compared to projections. Concerted work by a broad group of stakeholders contributed to the Commission eventually proposing 30%, and to eight Member States (Germany, France, Denmark, Portugal, Luxembourg, Belgium, Ireland and Greece) writing to state their support for an ambitious binding target. The target finally adopted in October 2014 was for “at least 27%”. Revision of this target is to occur by 2020 with a level of 30% “in mind”.



On specific legislation, work continued on the delivery of efficiency in various countries, and on more energy efficient product design through Ecodesign and energy labelling. Concerning the latter, grantees including the European Environmental Citizens' Organisation for Standardisation (ECOS), EEB and TopTen supported the adoption of new sets of Ecodesign and energy labelling measures with technical analysis. The resulting minimum energy performance requirements for products that were adopted in 2014 will lead to total energy savings of 158TWh a year by 2030. This means that, by 2030, at least 68 Mt CO₂ emissions will be reduced annually due to these requirements, which is equivalent to taking 22 coal power plants out of production:

- 59 Mt CO₂/year (by 2025) – new energy efficiency and energy labelling requirements for tertiary air conditioning.
- 2 Mt CO₂/year (by 2020) – new energy efficiency and energy labelling requirements for cooking appliances (kitchen hoods, ovens, hobs and grills).
- 5 Mt CO₂/year (by 2025) – new energy efficiency requirements for power transformers.
- 2 Mt CO₂/year (by 2030) – new energy efficiency requirements for solid fuel boilers and solid fuel local space heaters.

Taking into account the different timelines of the emissions reduction calculations of the Ecodesign measures, 68 Mt annual emissions reduction is rather an underestimation of the actual emissions reduction by 2030.

With the ECF's support, the Coalition for Energy Savings and BPIE also embarked on an effort to scrutinise Member States' implementation of key elements of the Energy Efficiency Directive, including their plans to deliver the 1.5% annual savings target, the 3% public buildings renovation target and long-term renovation strategies for the country's full building stock. The Coalition's report on the 1.5% annual savings target, *Implementing the EU Energy Efficiency Directive: Analysis of Article 7 Member*

States' Reports, received considerable policymaker and media attention, with coverage in at least 11 countries and widespread attention in the Brussels-based media.

Good analysis is key to good policymaking. Access to documents requested by grantees WWF and ClientEarth provided clear evidence that when assessing the impact of efficiency policies, the European Commission has chosen to use only high-end estimates of policy costs and to compare these to a limited selection of the benefits. This is especially pertinent given how much costs factor into political resistance. Grantees including Friends of the Earth Europe (FoE), E3G and the Coalition for Energy Savings have drawn attention to these issues, and the matter is now a live debate within the European Commission, to build on in 2015.

Fuel Poverty in the UK



The UK has some of the least energy efficient housing in Europe. Some five million households suffer from fuel poverty, meaning that they must spend more than 10% of their household income to keep warm – with serious impacts on health and wellbeing. Energy efficiency measures offer the best long-term solution, but current policies are underfunded and limited in scope. The ECF-supported Energy Bill Revolution calls for a much higher level of public funding to greatly increase the energy efficiency of all low-income households by 2025, and to incentivise ambitious efficiency measures in wealthier households. The initiative, which runs from 2013 to 2015, represents a broad alliance of 190 organisations, including children's and older people's charities, health and disability groups, consumer organisations, trade unions and businesses.

SPOTLIGHT

Scaling Energy Efficiency Efforts in Spain and Poland

Capturing real energy savings at scale is complicated and messy. It requires a coordinated effort on multiple fronts:

1. An ambitious, binding objective,
2. Specific policies and measures effectively designed for target sectors and consumer groups, and
3. Technical assistance along with monitoring and evaluation to facilitate learning and replication.

The ECF supports efforts at all levels – from multi-stakeholder coalitions advocating binding energy efficiency targets to advice on best-practice policy designs and monitoring and evaluating implementation progress at the EU and national levels. We also look to provide replicable, scalable examples to inspire and build confidence among politicians and financial investors.

Energy efficiency for economic benefits in Spain

Spain's severe economic crisis and massive unemployment, notably in the construction sector, offered a silver lining: an opportunity to demonstrate the economic and employment benefits that energy efficiency could provide. Since 2011, the ECF has been supporting analysis and coalition building via El Grupo de Trabajo sobre Rehabilitación (GTR), a coalition of influential energy efficiency experts from academia, the construction sector and the financial sector that is advocating for large-scale building efficiency retrofits in Spain. Its reports provided a roadmap and recommendations for retrofitting the country's inefficient housing stock.

Politically committed to energy efficiency, the national government submitted one of the best long-term national building renovation strategies to the European Commission in 2014 (as a requirement under the EU Energy Efficiency Directive) and announced the establishment of a €350 million per year National Energy Efficiency Fund. However,

much work still lies ahead to ensure that implementation of these plans results in effectively designed instruments and measures. In 2013, ECF began supporting Climate Strategy & Partners in its partnership with local authorities, a utility and a construction company in the cities of Madrid and Zaragoza. The goal is to pilot the feasibility of a financial model for urban-scale renovations of multi-family co-owned apartment buildings.

Burning coal indoors – the cheapest form of heating in Poland?

The ECF has been supporting similar efforts in Poland, where more than 60% of households still burn coal indoors as the cheapest form of heating. Residents of Krakow in the Malopolska region, Poland's second largest city, breathe air that is equivalent to smoking 2,500 cigarettes every year. ECF grantees have been building broad political support for energy efficiency through a variety of coalitions.

In December 2014, the Institute of Environmental Economics (IEE), the National Energy Conservation Agency (KAPE), the National Agency for Energy Savings (NAPE), and BPIE launched a long-term building renovation roadmap following a two-year effort. A new business coalition established by IEE – Efficient Poland – will build on the recommendations, which include a financial instrument specifically designed to finance investments in single-family homes.

Since 2013, IEE and RAP have been working with Krakow and the Malopolska region to design solutions to ameliorate worsening air quality. Krakow plans to ban the burning of coal indoors while the Malopolska region has set aside a significant budget to incentivise the replacement of inefficient and polluting coal stoves and investment in energy efficiency measures. IEE and KAPE have also been promoting and providing models for sustainable local energy planning, resulting in a coalition

of 70 municipalities and the establishment of a grant scheme by the National Fund for Environmental Protection for local authorities to hire experts to design their plans. With applications by more than 800 municipalities in

the first year, the scheme was quickly oversubscribed, indicating significant interest in energy efficiency by those who benefit most directly when financial and technical assistance is available.

Standard of Buildings in Poland Based on the Criterion of Thermal Insulation – Estimation of the Number of Buildings

VERY HIGH STANDARD

1.2% / 45 thousand



Modernised/modern installation
Wall insulation minimum 15 cm
Roof insulation
Energy-efficient, triple glazed windows

Source: *Energy Efficiency in Poland 2013 Review*, IEE, 2014.

HIGH STANDARD

6.7% / 335 thousand



Modernised/modern installation
Wall insulation minimum 11 cm
Roof insulation
Double glazed windows

AVERAGE STANDARD

20.1% / 1 million



Modernised/modern installation
Wall insulation minimum 8-10 cm
Roof insulation
Double glazed windows

LOW STANDARD

34.0% / 1.7 million



Buildings with insulated walls
Insulation layer thinner than 8 cm

VERY LOW STANDARD

38.0% / 1.9 million

Uninsulated buildings



Transforming Transport

Following several years of raising awareness for the need to improve the energy efficiency of cars, vans, trucks and planes, the ECF's transport programme is preparing for a challenging new phase of decarbonisation that will increasingly demand a more radical transition to alternative energy sources and new mobility concepts.

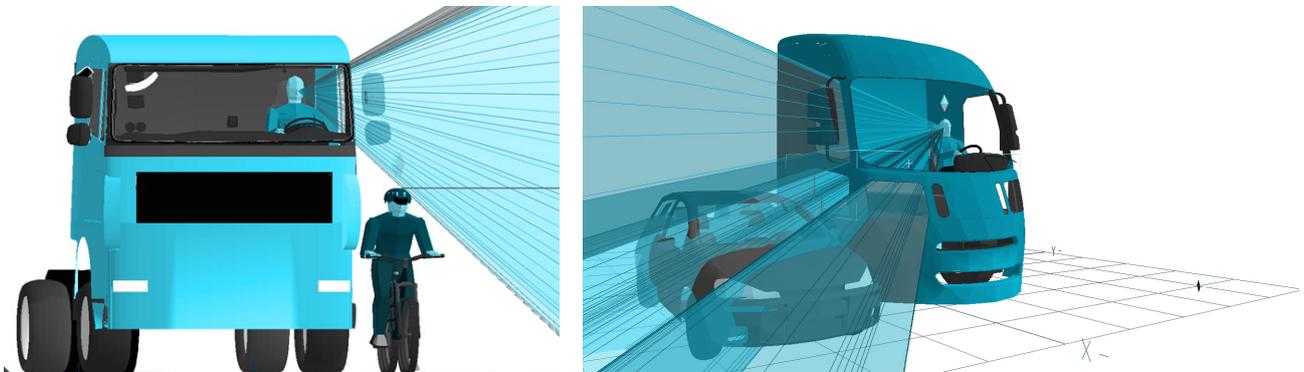
The transport sector today accounts for about one-quarter of anthropogenic CO₂ emissions globally. In Europe the figure is even higher, at 31%, and CO₂ emissions remain

above 1990 levels. Within the global transport sector, about 70% of all CO₂ emissions are from road vehicles, with the remaining 30% from aviation, shipping and rail.

We are starting to see the first signs of a decline in European road transport emissions since 2007, mainly due to the introduction of mandatory CO₂ standards for cars and vans, long a key demand of the ECF's transport grantees. Among them is the European Federation for Transport and Environment (T&E), whose innovative and

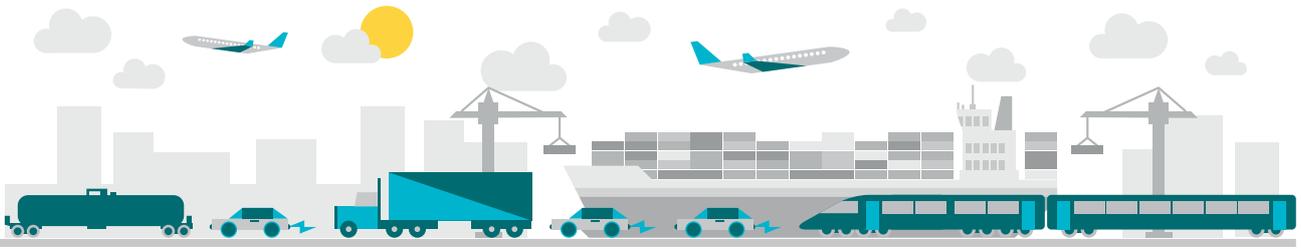
Smarter Truck Designs Save Emissions and Improve Crash Performance

Source: *Ending Lorries' Deadly Track Record: A Matter of (Direct) Vision*, T&E, 2014.



Assessing the Energy Security Benefits of Low-Carbon Vehicles

While political discussions about Europe's energy security focus largely on gas supplies, excessive dependence on imported oil also creates economic and geopolitical risks. In 2012, Europe imported around 527 million tonnes of crude oil at a value of €338 billion, with one-third of that coming from Russia and another third coming from the Middle East. Continuing the current rate of efficiency improvements for cars until 2030 can shield Europe against oil price spikes. Analysis by the ECF and its partners shows the impact of an oil price shock would be 35% lower for the average motorist in a low-carbon scenario than under business-as-usual.



evidence-based approach to working towards vehicle efficiency was recognised when its initiative for more efficient cars was awarded a prize for Low-Carbon Road Transport Initiative of the Year in 2014 by the UK's Low-Carbon Vehicle Partnership (LowCVP).

Trucks in Europe have for decades looked like bricks

T&E's thought leadership has also catalysed major European efforts to improve the aerodynamics of trucks. Trucks in Europe, and by extension in much of the rest of the world, have for decades looked like bricks. Their flat front-ends cause unnecessary fuel waste and emissions, as well as road deaths. The root cause is an EU law that indirectly restricts the length of truck cabins to 2.35m, and since 2009 T&E has been supporting a reform of this law to allow longer, rounded cabins. In 2012, T&E published a ground-breaking study showcasing that minor changes to the EU truck dimensions law would allow smarter truck designs that save around 5 Mt of CO₂ each year in Europe. These changes would also improve driver vision and crash performance, saving hundreds of lives each year. Inspired by T&E's ideas, the European Commission proposed new rules in 2013, which were approved by EU ministers in December 2014. Parliament endorsed these common-sense rules early in 2015, and new designs will hit the roads from 2022.

Aerodynamic improvements are among the cheapest options for reducing the fuel-burn in trucks, and there remains much that can be done to slash emissions more deeply. Significant knowledge gaps remain in this area, and ECF grantees will be working hard in 2015 to highlight the need to support the uptake of new low-carbon technologies.

One option for trucks could be to reduce the carbon intensity of fuel by blending with low-carbon advanced biofuels. Intense debate continued in the EU during 2014 over the sustainability of food-based biofuels, with ECF grantees raising awareness of the advantages of a system that rewards those biofuels that deliver the highest climate

benefits and penalises those with carbon intensities close to that of fossil fuel. There are signs that a political deal might be reached in 2015. With an eye to building solutions for the future, the ECF brought together technology providers and environmental groups to start working on a vision for sustainable low-carbon advanced biofuels. The results, launched at the Swedish Embassy in Brussels in April 2014, are already having an impact on political discussions about how to support this nascent sector.

ECF partners also developed suggestions to reduce emissions from aviation and shipping

During 2014, ECF partners also further developed and advanced suggestions to reduce emissions from aviation and shipping. Aviation's governing body, International Civil Aviation Organisation (ICAO), has been working towards delivering a global agreement in 2016 on measures to tackle rapidly growing aviation emissions. Our partners are engaged in this process via experts offering technical advice to ensure these measures have environmental integrity.

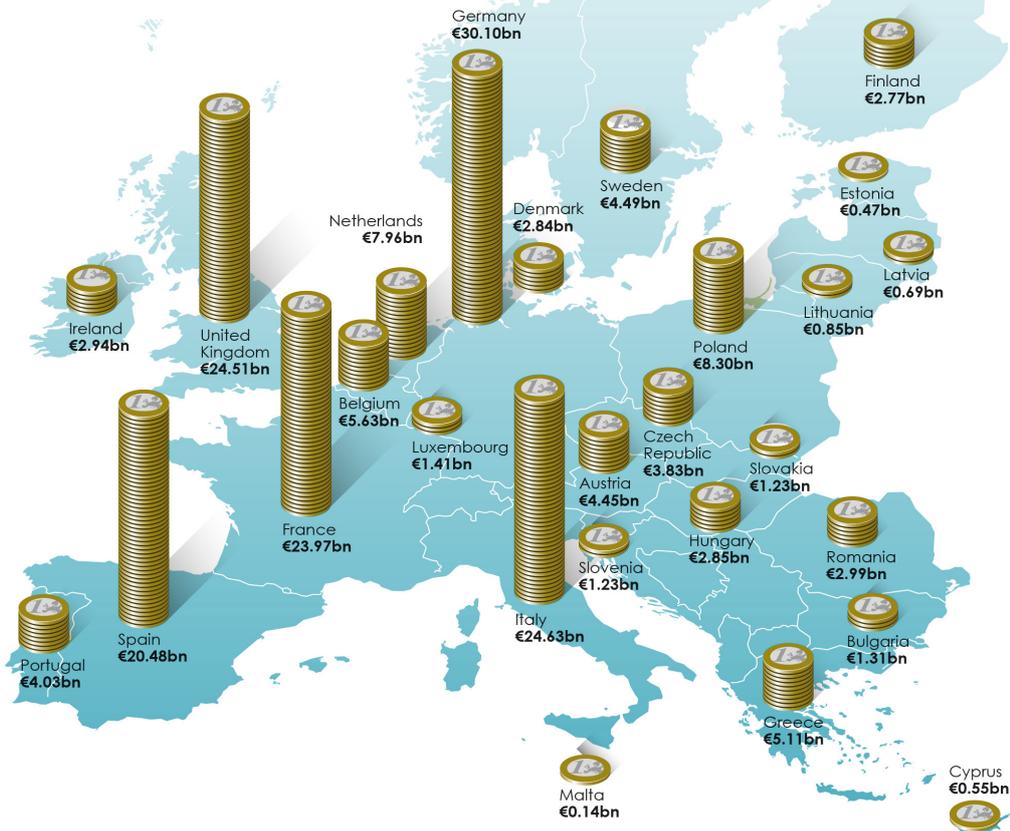
In the shipping arena, ECF grantees have contributed to discourse about the monitoring, reporting and verification (MRV) of emissions from ships. This past year saw an agreement between the European Council and Parliament on the European Commission's proposal envisaging MRV for all ships calling at EU ports.

A major shift by 2030 to alternative energy sources for vehicles, such as electricity and hydrogen, will be necessary

Following the success of the 2013 initiative for fuel-efficient cars, ECF transport grantees started preparing for the next wave of target setting during 2014. While hybridisation and improvements to efficiency are capable of delivering most of the emissions reductions required in 2025, a major shift by 2030 to alternative energy

EU Spending on Petrol and Diesel

Source: *Fuelling Europe's Future*, Cambridge Econometrics, 2013. The report won LowCVP's award for Outstanding Low-Carbon Publication in 2014.



sources for vehicles, such as electricity and hydrogen, will be necessary to stay below 2°C of warming relative to pre-industrial levels.

Society has much to gain from the shift to alternative vehicle fuels, as identified in the ECF-funded project, *Fuelling Europe's Future*, which brought together a wide array of transport sector stakeholders to analyse the economic impacts of this transition. The report from that project – which won LowCVP's award for Outstanding Low-Carbon Publication in 2014 – quantified how the shift away from imported petroleum fuels towards domestically produced electricity and hydrogen would improve Europe's energy trade balance. This shift, combined with increased investment in automotive technologies and charging infrastructure, would have positive impacts on GDP, employment and economic resilience to oil price volatility. Meanwhile, emissions of CO₂ and toxic air pollutants would be strongly curbed.

However, the shift to such alternative energy technologies is not expected to be straightforward. Electric vehicles comprise 3% of new car sales in Sweden and 4% in the Netherlands, but in all other European countries they remain below 1%. Car buyers continue to worry about high prices, driving range, recharging times and many other factors. These changes will also occur amid a transport system undergoing significant disruption. New concepts, such as Uber taxi, autonomous vehicles and car-sharing schemes are likely to radically alter the norms of mobility.

In 2015, the ECF will therefore build initiatives to help improve understanding of these interconnected changes, in the hope of smoothing the road towards a new paradigm of ultra-low-emissions mobility.

SPOTLIGHT

Implementation Efforts in France, Germany and at the EU Level

Two sweeping pieces of legislation have changed business-as-usual scenarios in the EU. The Energy Efficiency Directive agreed in 2012 sets requirements for EU Member States to reduce their annual end-use energy consumption by 1.5% annually. And the 2020 CO2 standards for cars require a 3% improvement each year for new cars sold.

Good implementation often hampered by the lack of capacity and knowledge

These seminal decisions now need to be implemented at national, regional and local levels. However, good implementation is often hampered by a lack of political will, or the lack of capacity or knowledge and access to best practices. The ECF supports organisations and coalitions that work with governments and stakeholders to help with the implementation of framework policies and their trickle-down effect. These efforts can be country based, such as those driven by Effizienzwende and Deutsche Unternehmensinitiative Energieeffizienz (DENEFF) in

Germany, the Coalition France pour l'efficacité énergétique (CFEE) and CLER in France, and the Energy Bill Revolution and E3G in the UK. Or they can address issues on an EU-wide basis, like the Coalition for Energy Savings, BPIE, RAP, WWF, FoE, CAN Europe and T&E.

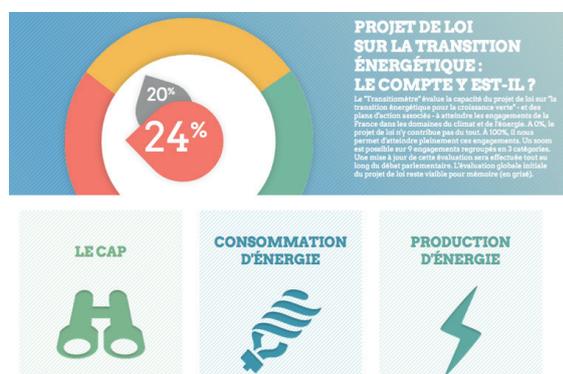
In France, the *Energy Transition Bill* calls for the reduction of final energy consumption by 20% in 2030 and 50% in 2050 as compared to 2012. It also includes a plan for 500,000 home renovations per year starting in 2017 and an obligation to “energy-renovate” homes if a building undergoes major work. The bill, if implemented well, is potentially a game-changer. ECF partners are monitoring and providing expert advice to ensure the government designs appropriate instruments that deliver real savings.

Measures as effective and ambitious as possible

In Germany, the government announced the *National Action Plan for Energy Efficiency* in December 2014, as the key effort to reduce energy consumption by 20% in 2020. The plan's announcement is just the beginning. Individual measures still need to be elaborated in detail and negotiated in a legislative process. The ECF and its partners will strive to ensure these measures are as effective and ambitious as possible.

The EU, meanwhile, is reforming its outdated testing procedures for cars to close a number of loopholes that allow manufacturers to exaggerate official fuel-economy ratings. Recent data shows that real-world fuel-economy figures are up to 30% worse than those advertised. ECF grantee T&E has been highlighting measures car makers apply to game the system, such as adding special lubricants to reduce friction, taping door hinges to reduce drag and removing weighty extras such as stereos.

French Energy Transition



The "Transition-meter" tool was inspired by the Coalition for Energy Savings' Gapometer and was funded by the ECF.

Please visit

www.transitionenergetique.org/transiometre/index.html

Run-Up to the Paris Climate Summit

Most established governance systems are built around geographic jurisdictions and designed to address sector-specific or defined societal issues. When it comes to climate change, however, the level of complexity increases. The history of EU climate and energy policy illustrates these complexities.

In 1997, the EU played a leadership role in the *Kyoto Protocol*, advocating for the long-term goal of keeping average global temperatures from rising more than 2°C above pre-industrial levels, while also proposing strong targets for reducing emissions in industrialised countries. It was the implementation plan of the *Kyoto Protocol* that introduced mechanisms like the EU Emissions Trading Scheme into Europe and the series of national targets and plans that the ECF continues to support work on today – for example, the UK *Climate Change Act* and Germany’s 40% target for GHG emissions reductions by 2020. In 2007, the G8 in Germany and the upcoming Copenhagen UN climate conference were the international hooks for the EU 20-20-20 package, which catalysed further reforms of European directives and national laws. That European commitment would not have been possible without the detailed work building support for action on the national level and the international stage. European action was placed in the spotlight.

The agreement on a robust 2030 framework: a manifestation of complexity challenges

Effective action on climate change therefore requires a much more complex approach to governance than existing systems provide for. It demands collaboration among multiple levels of administration, from international to regional, national and local levels. Interdependencies also stretch across industrial sectors, and policy decisions need to address several broader societal issues simultaneously. The process of moving the EU’s 28 Member States to agree on a robust *2030 Framework for Climate and Energy Policies* was a clear manifestation of the complexity challenges. What kind of energy policy framework would ensure a meaningful reduction of CO₂ and at the same time work for

Poland, with its tradition in lignite mining; for Germany, with its rising share of renewables; and for France, with its high share of nuclear power? What level of ambition would the business sector resist or support? And what impacts would different levels of ambition have on jobs, economic growth and security of supply?

Europe’s effort set the bar for other countries

The importance of the EU adopting the 2030 framework in October 2014 cannot be overestimated. Internationally, as part of the agreement under the *UN Framework Convention on Climate Change* (UNFCCC) in December 2015, every country has agreed to table its “national contribution” for what it will do in the post-2020 time period. Europe was the first to come forward, so its effort set the bar for other countries.

Putting forward new models of working that bring together the best ideas for short-term implementation and long-term planning with the top decision-makers and stakeholders has been fundamental on the national level. This is also important internationally, for if the implementation of EU legislation or the German *Energiewende* fail, the economic and environmental effectiveness of the shift to a low-carbon economy will be called into question in the U.S. and China.

In view of the anticipated international agreement in December 2015, European action remains key

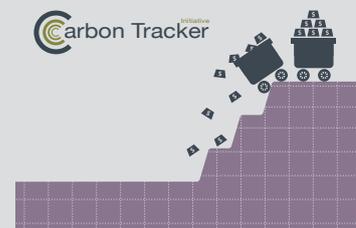
Greater detail for the long term is needed to signal the transformational shift required. Acknowledging the complexities of multiple levels of governance, the ECF collaborated with ClimateWorks Foundation, the Children’s Investment Fund Foundation (CIFF) and the Oak Foundation to launch the International Policies and Politics Initiative (IPPI) in 2013. The concept of adopting a long-term transformational goal – supported by IPPI through 2014 – has gained significant momentum and has made its way into the negotiation text agreed at COP20 in Lima. 2015

will be a watershed year to support and catalyse European action in view of the anticipated international agreement in December. The work done by the ECF and its partners on

the 2030 framework and action in specific Member States helped prepare Europe for discussion about its contribution to solving the global climate problem.

The Costs of Coal

Globally, coal is the single biggest source of CO₂ emissions. Moving away from high-carbon fuels such as coal is therefore critical if the world is to avoid the worst impacts of climate change. The use of coal leads to other serious impacts on society, notably air pollution. The Health and Environment Alliance (HEAL) estimates that in the EU alone, emissions from coal power plants lead to tens of thousands of premature deaths each year and impose health costs of up to €42.8 billion per year.



There are other sound reasons for Europe to move away from unabated coal. The handful of new coal plants built in the EU in recent years are incurring large financial losses, as renewable energy acts to reduce wholesale power prices. Despite this, coal continues to be supported by a patchwork of benefits and payments hidden from scrutiny.

Around the world, the model of development based on heavy use of coal is increasingly being questioned. Work by the Carbon Tracker Initiative and others has shown that the global coal sector is badly exposed to the risk of stranded assets because of decreasing demand, policies to address air pollution and carbon emissions, competition from cleaner energy sources and low coal prices. Coal use in the EU fell substantially in 2014, especially in Germany and the UK. However, analysis by Sandbag suggests that without additional policies, coal use in the EU could remain stubbornly high through to 2030 – despite a growing expectation that developed countries should lead the way in moving their economies beyond coal.

International Access to the German Energiewende

As the German Energiewende has been attracting international interest and giving rise to competing interpretations, the Mercator Foundation and the ECF established the Clean Energy Wire (CLEW) in 2014 as a resource for international journalists. CLEW provides and supports quality journalism about the Energiewende. The goal is to ensure facts and figures are not trumped by misinformation in international debates.

CLEW offers a daily news digest of the German media coverage, organises study tours and supports international journalists on request. The website www.cleanenergywire.org offers relevant news to keep journalists and the interested public up to date, an expert database, reading lists and background information dossiers, which are updated regularly. The dossiers cover the energy transition and related issues from different angles. Ranging from economic topics via climate and coal issues to citizens' energy and the transformative effects on society, the dossiers create a 360° view on the Energiewende.

Some of Our Grantees and Partners in 2014





- WWF European Policy Office
- WWF Italy
- WWF Turkey



Selected Publications in 2014

January

[Mind the Gap Report: Manipulation of Fuel Economy Test by Carmakers](#) European Federation for Transport & Environment (T&E)

[Proposal for a Revision of the Industry Exemption Rules under the German EEG](#) Agora Energiewende, Oeko Institut

[The Implications of a European 2030 Renewable Energy Target for the UK](#) Green Alliance

February

[Demand Response: What Can We Learn from California?](#) Agora Energiewende, Institute for Advanced Sustainability Studies (IASS)

[Staying with the Leaders: Europe's Path to a Successful Low-Carbon Economy](#) The German Institute for Economic Research (DIW), Institute for Sustainable Development and International Relations (IDDRI), Climate Strategies (CS)

[The Economic Case for Recycling Carbon Tax Revenues Into Energy Efficiency](#) Prashant Vaze Consultancy

[The EU Parliament's 2030 Resolution Could Achieve Emissions Reductions of up to 54%](#) Ecofys

[Use of Sustainably-Sourced Residue and Waste Streams for Biofuel Production in the European Union: Rural Economic Impacts and Potential for Job Creation](#) The National Non-Food Crops Centre (NNFCC)

[WWF Recommendations: 2030 Framework for Climate & Energy - The European Council Must Call for a More Effective System](#) WWF European Policy Office

[Wasted: Europe's Untapped Resource - An Assessment of Advanced Biofuels from Wastes & Residues](#) European Climate Foundation (ECF) and partners

March

[Europe's Low-Carbon Transition: Understanding the Challenges and Opportunities for the Chemical Sector](#) European Climate Foundation (ECF)

[Review of the Impact Assessment for a 2030 Climate and Energy Policy Framework](#) CE Delft

[The Positive Effects of Energy Efficiency on the German Electricity Sector](#) Prognos, IAEW RWTH Aachen University with Regulatory Assistance Project (RAP)

April

[Comparing the Cost of Low-Carbon Technologies: What Is the Cheapest Option?](#) Agora Energiewende

[Energy Efficiency Can Reduce German Dependence on Russian Gas by 50%](#) Ecofys

[European Countries Talk Climate...But Finance Coal](#) WWF European Policy Office

[Implementing the EU Energy Efficiency Directive: Analysis of Article 7 Member States Reports](#) Coalition for Energy Savings

[The German Energiewende and Its Climate Paradox](#) Agora Energiewende

[Why EU Action on Energy Efficiency Is Needed](#) Green Alliance

[Your Complaints: For a Strong Implementation of the Energy Efficiency Directive](#) Stefan Scheuer SPRL

May

[Alleviating Fuel Poverty in the EU](#) Buildings Performance Institute Europe (BPIE)

[Climate: Everyone's Business - Sectoral Summaries of the IPCC Fifth Assessment Report](#) University of Cambridge Institute for Sustainability Leadership (CISL) and partners

[How Clean Are Europe's Cars?](#) European Federation for Transport & Environment (T&E)

[How the UK Benefits from EU Action on Climate Change](#) Green Alliance

[Load Management as a Way of Covering Peak Demand in Southern Germany](#) Agora Energiewende

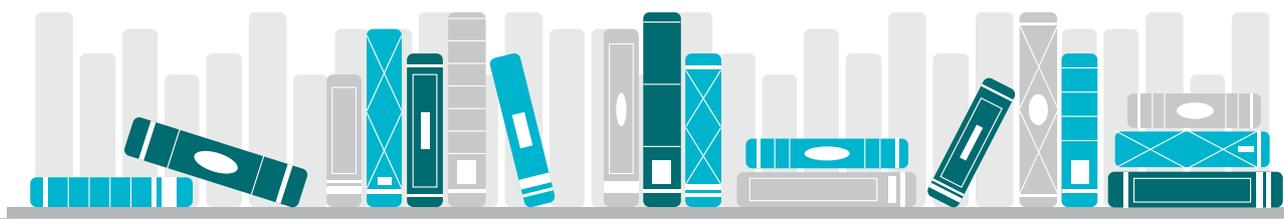
[Market Mechanisms for Resource Adequacy and System Security: Framing the Issues](#) Regulatory Assistance Project (RAP)

[Space for Energy Crops](#) Institute for European Environmental Policy (IEEP) for European Federation for Transport & Environment (T&E)

June

[Comparing Electricity Prices for Industry](#) Agora Energiewende

[Macroeconomic Impacts of the Low-Carbon Transition](#) Ernst & Young (EY)



July

- Dirty Deals – How Trade Talks Threaten to Undermine EU Climate Policies** Friends of the Earth Europe (FoE)
- Europe's Dirty 30 - How the EU's Coal-Fired Power Plants Are Undermining Its Climate Efforts** WWF European Policy Office, Climate Action Network (CAN) Europe, European Environmental Bureau (EEB), Health and Environment Alliance (HEAL), Klima-Allianz
- Europe's Failure to Tackle Coal: Risks for the EU Low-Carbon Transition** Sandbag
- Keeping Coal Alive and Kicking** Third Generation Environmentalism (E3G)
- Kickstarting the Negawatts Market: How to Make Sure the Electricity Demand Reduction Pilot Succeeds** Green Alliance
- New Policy Frameworks for Electricity Infrastructure Cooperation in South East Europe** Third Generation Environmentalism (E3G)
- Response to European Commission's Consultation Relating to the Review of the EU CCS Directive** Regulatory Assistance Project (RAP)
- Securing Options through Strategic Development of North Seas Grid Infrastructure** Third Generation Environmentalism (E3G)
- Strategic Development of North Sea Grid Infrastructure to Facilitate Least-Cost Decarbonisation** Third Generation Environmentalism (E3G), Imperial College
- The Demand Side of the Electricity Market** Third Generation Environmentalism (E3G)

August

- 10 Questions and Answers on the 2014 Reform of the German Renewable Energy Act** Agora Energiewende
- A Brighter Future: How Tackling Climate Change Can Deliver Better Living Standards and Shared Prosperity** Institute for Public Policy Research (IPPR)
- Scoping Study on Options and Risks for 2030 Decarbonisation** Imperial College

September

- 2030 Framework for Climate & Energy – The European Council Must Reach a Meaningful Agreement in October** WWF European Policy Office
- A Critique of the UK's Capacity Market Proposals** Regulatory Assistance Project (RAP)
- Ending Lorries' Deadly Track Record: A Matter of Vision** European Federation for Transport & Environment (T&E)
- Energy Efficiency in Poland 2013 Review** Institute of Environmental Economics (IEE)
- Energy Security and the Connecting Europe Facility** Third Generation Environmentalism (E3G)
- Energy Storage in the German Energy Transition** Agora Energiewende
- Perspectives of French and German Business Leaders on the Energy Transition** Harris Interactive, Euros Agency
- Re-Build Britain: National Benefits of Recycling Carbon Taxes to Make UK Homes Energy Efficient** Prashant Vaze Consultancy
- Report on the Dutch Power System** Agora Energiewende, Regulatory Assistance Project (RAP)

October

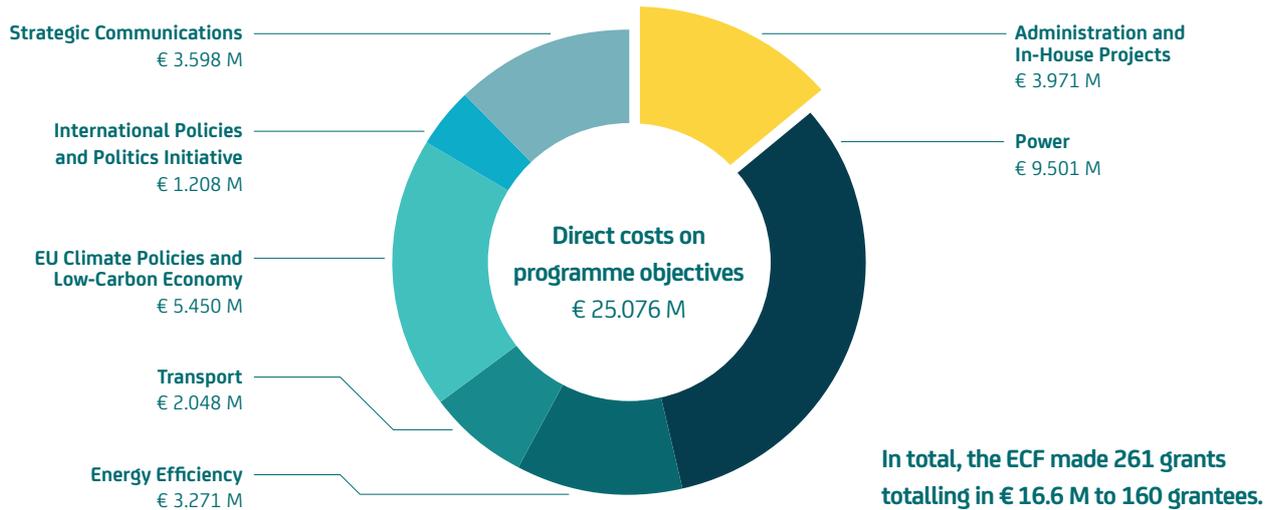
- Building the Future: The Economic and Fiscal Impacts of Making Homes Energy Efficient** Cambridge Econometrics, Verco
- Europe's Low-Carbon Industries: A Health Check** Ernst & Young (EY)
- GTR 2014 Report: National Strategy for Buildings Renovation - Analysis of Current Progress in Spain** Grupo de Trabajo de Rehabilitación (GTR), Universitat Politècnica de Catalunya, Climate Strategy & Partners
- Including Transport in the ETS: Counterproductive and Legally Questionable** European Federation for Transport & Environment (T&E)
- The Impact of Including the Road Transport Sector in the EU ETS** Cambridge Econometrics

November

- Energy Performance Certificates (EPC) Across the EU: Mapping of Approaches** Buildings Performance Institute Europe (BPIE)
- Massive Financing of the Energy Transition** Association for the Financing of the Ecological Transition and Thermal Renovation (AFTER)
- Offshore Grids and the Jobs, Growth and Investment Package** Third Generation Environmentalism (E3G)
- Renovation Strategies of Selected EU Countries - Compliance with Article 4 of the Energy Efficiency Directive** Buildings Performance Institute Europe (BPIE)
- Scenarios for a Sustainable Evolution of the German Power Fleet** The German Institute for Economic Research (DIW)
- The Need for Smart EU Energy Markets** Third Generation Environmentalism (E3G)
- Turkey's Changing Power Markets** Bloomberg New Energy Finance

Financial Overview and Core Funders

Financial Overview



Core Funders

The ECF greatly appreciates the funding that supports our work and contributes to effective progress on the route towards a low-carbon society. We are supported by a number of core funders with established credentials working for climate and the environment.



Children's Investment Fund Foundation (United Kingdom)
www.ciff.org



ClimateWorks Foundation (United States of America)
www.climateworks.org



McCall MacBain Foundation (Switzerland)
www.mccallmacbain.org



Nationale Postcode Loterij (Netherlands)
www.postcodeloterij.nl



Oak Foundation (Switzerland)
www.oakfnd.org



Villum Fonden (Denmark)
www.villumfonden.dk

Carbon Offsets

As in previous years, the ECF will compensate for the carbon emissions linked to its activities in 2014. In 2013, we compensated for a total of 326 tons of CO2 equivalent.

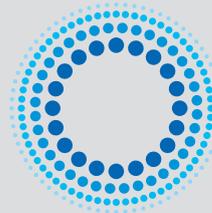
Stay Updated - Online Resources

This section offers a selection of websites and media outlets that provide up-to-date and accessible information on climate and energy related issues in Europe and beyond.

The Carbon Brief

Carbon Brief
www.carbonbrief.org

Latest developments in climate science and fact-checking on climate with particular focus on the UK media.



Naukao Klimacie
www.naukaoklimacie.pl

Science-based knowledge about climate change for a Polish-speaking audience.



Clean Energy Wire
www.cleanenergywire.org

Briefing service committed to providing and supporting quality journalism about the energy transition in Germany.



Agora Energiewende
www.agora-energiewende.org

Forum for planning Germany's transition to a high share of renewable energy resources.



Energy & Climate Intelligence Unit
www.eciu.net

Supports an informed debate on energy and climate change issues in the UK through accessible briefings.



Green Growth Best Practice Initiative
www.ggbp.org

Global network of practitioners and policymakers sharing best practices for green growth planning and implementation.



klimafakten.de
www.klimafakten.de

Offers clear and easily understandable information about the facts of climate change to a German-speaking target audience.



Climate: Everyone's Business
www.cisl.cam.ac.uk/ipcc

Clear, concise summaries of the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC) for business.

Front Cover Images

Icebergs in Alaska Robert Zaleski / Stocksy 423151
Solar Panels and Wind Generators against City View artJazz / iStock 45904444
The Parliament's Hemicycle (Debating Chamber) during a Plenary Session in Strasbourg
 (Photo by DAVID ILIFF. License: CC-BY-SA 3.0 / Wikimedia Commons)

Back Cover Images

Complex Network Background mattjeacock / iStock 35255820
Icebergs in Alaska Robert Zaleski / Stocksy 423151

Illustrations on selected pages were taken from the series of IPCC AR5 summaries **Climate: Everyone's Business**.





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