

Impact

2021

Annual digest of our
research and activities
in energy and climate
economics

Editorial

2021 was another tumultuous year in which the pandemic continued to disrupt our activities. But thanks to the resilience and ingenuity of our staff and researchers, it has also been a successful period for the TSE Energy & Climate Center.

At the COP26 climate summit in Glasgow, more than 140 countries pledged to reach net zero greenhouse-gas emissions by 2050. But how will these goals be met? As France assumes the presidency of the EU Council, economic expertise will be crucial for developing and meeting such targets. Evidence-based research will also be crucial for guiding policy in the energy sector, which has been thrown into upheaval by new technologies, record prices, and Russia's war in Ukraine.

The TSE Energy & Climate Center was set up in 2017 to develop answers to such challenges. Last year, we hosted 17 seminars and our economists continued to produce world-class research on energy and environment issues, including 16 articles in peer-reviewed journals. Our members have also been extremely active participants in the public debate, with regular contributions to international media and outreach events.

At the invitation of French President Emmanuel Macron, 2021 also saw the publication of a special report on the long-term structural challenges facing post-Covid society. Inside, we feature a discussion of its climate recommendations by Olivier Blanchard and TSE's Jean Tirole, who chaired an independent international commission to produce the report.

The first Common Good Summit underlined TSE's commitment to share the ideas of leading researchers and engage with decision-makers in both the public and private sectors. Attended by six Nobel laureates and France's Minister for the Ecological Transition, this flagship public event showcased the ideas of TSE researchers on the fight against global warming, the energy transition, and other 21st-century challenges. We look forward to the next Summit on May 19-20.

In these pages, we also provide highlights of our other scientific events, publications, teaching, outreach, and ideas, illustrating the impressive breadth and depth of the Center's activities. So much of this work depends on the generosity and engagement of our partners and we are deeply grateful for their support. In particular, we welcome the renewal of our partnership with EDF, which covers an exciting scientific agenda to be pursued in during the next three years.

Wishing our readers every success in 2022!



Stefan Ambec

Stefan Ambec, *Director of the Energy & Climate Center*



About the Energy & Climate Center

TSE Energy & Climate Center was created five years ago. It provides a platform for discussions among faculty and students interested in energy and climate economics and aims at promoting research in this field. Combining TSE's own expertise with its private and public partners' financial support and knowledge, the Center supports a variety of research, as well as scientific and policy-oriented activities. Regular publications as well as events offer opportunities to share knowledge about the institutional framework, empirical observations, and basic theoretical modelling.

MISSIONS

Scientific production

- Development of new knowledge resulting in academic publications
- Organization of scientific conferences and seminars

Dissemination of economic knowledge

- Production of outreach materials and organization of bespoke events to inform practitioners, policymakers or a wider audience
- Participation of researchers in the public debate in France and internationally

ADVISORY BOARD

The primary role of the advisory board is to provide advice and support for the development and dissemination of the Center's activities. It meets once a year, and is composed of TSE researchers, representatives of the Center's three main donors, and three external members.

Representing TSE	Representing main partners	Other external members
<ul style="list-style-type: none">• Stefan Ambec <i>Director of the Center</i>• Claude Crampes• Christian Gollier• Gilles Lafforgue• Yassine Lefouili	<ul style="list-style-type: none">• Jean-Christophe Caffet, <i>TotalEnergies (until November 2021)</i>• Jean-Pascal Clemençon, <i>TotalEnergies (from November 2021)</i>• Laurent Joudon, <i>EDF</i>• Pierre-Laurent Lucille, <i>ENGIE</i>	<ul style="list-style-type: none">• Paul Champsaur• Alejandro Hernández, <i>International Energy Agency</i>• François Lévêque, <i>MINES Paris Tech</i>

Highlights

page 9

The Blanchard-Tirole report
for President Macron

Research

page 13

Research focus & scientific projects
Scientific team, visitors
Research grants
Prizes & awards

Publications

page 21

Articles in peer-reviewed journals
Working papers
Contributions to policy-oriented publications

Scientific events

page 24

Environment economics seminars

Outreach

page 27

Common Good summit
Chair at Collège de France
Franco-German roundtable
EDF Digital Forum
TSE-SBCA European webinar
Meet the experts
Blog posts and op-eds
Press articles and media

Partnerships

page 39

A renewed partnership
Current partners
Join forces

Connecting research and education

page 43

Advanced master program
Executive education



2021 by numbers

41 researchers

5 partners

16 articles in
peer-reviewed
journals

8 working
papers

17 environment
economics
seminars

Highlights

The Blanchard-Tirole report for President Macron

The TSE community is determined to address global challenges facing our societies. During the summer of 2021, French President Emmanuel Macron asked Olivier Blanchard, Professor Emeritus at MIT and TSE's Jean Tirole, to chair an independent international commission on the challenges of building a better world in the aftermath of the pandemic. They chose to focus on three long-term structural challenges: climate change, economic inequality and insecurity, and demographic change (aging, health and immigration).

Over the following pages, we bring you the highlights of their report's first chapter on climate change. This chapter was authored by TSE's Christian Gollier and Mar Reguant, Associate Professor of Economics at Northwestern University, Illinois.



France should lead the Green Deal

What are your recommendations on global warming?

Jean Tirole: The urgency of global warming requires rapid and large-scale action, and success will largely depend on technological advances. We must avoid increasing the costs of ecological transition, which will be high in any case, by opting for measures that are not effective. The good news is that people are clearly concerned about global warming. The bad news is that they are reluctant to bear the cost of the ecological transition and its consequences on their way of life. At the same time, the lack of transparency on the cost and effectiveness of different measures does not make the discussion any easier. The public's attitude towards green taxes is determined more by their visibility than their effectiveness. Although unpopular, carbon pricing is essential to the transition because not only does it encourage greener behavior and stimulates green R&D in a transparent and efficient way, but, perhaps more importantly, it allows better choices to be made and overpriced solutions to be ruled out. To implement a fair carbon price, it needs to be expanded. The existing system is weakened by abusive use of exemptions and subsidies for fossil fuels. We must also be particularly concerned about potential losers, such as modest households living in suburban and rural areas.

To avoid environmental dumping in other countries, this tax must be accompanied by a carbon adjustment at our borders. This is the only way our societies can face the challenge of global warming in the long run.

Olivier Blanchard: The report also points out that governments need to encourage fundamental research breakthroughs to reach net-zero carbon emissions by 2050. In addition to carbon pricing, targeted subsidies, standards, bans, and incentives have a role to play. These types of interventions are however more arbitrary than carbon pricing and more prone to lobbying, regulatory capture, and red tape, which means that we need to ensure good governance. We propose the creation of two independent bodies, if possible at the European level: the first, which we call EU-ARPA-E, would be used to finance high-risk, high potential R&D projects; the second would be used to inform citizens and public decision-makers of the costs of different ways to achieve climate objectives.

Can France make a difference?

Jean Tirole: France is responsible for less than 1% of greenhouse gas emissions. However, French public opinion largely supports measures to reduce these emissions, which is a major political asset in international negotiations. Together with other ambitious European countries, France should lead the Green Deal for Europe and create a “climate club” with the Biden administration, which would work toward a uniform and universal carbon price for the coalition and a WTO compatible border carbon adjustment. Membership in such a club could quickly become attractive to other regions of the world, as it would confer trade and carbon dividend benefits that would offset the costs of losing the ability to engage in environmental dumping.

Key recommendations on climate



Christian Gollier, *TSE*



Mar Reguant,
*Northwestern
University*

- 1 Carbon pricing is essential to encourage greener behaviors, and to stimulate green R&D in a transparent and efficient way.
- 2 Exemptions and subsidies for fossil fuels must be quickly phased out.
- 3 Potential losers, such as modest households living in peri urban and rural areas, should be compensated.
- 4 To prevent environmental dumping, the carbon tax must be accompanied by a carbon adjustment at borders.
- 5 R&D must be accelerated. An independent EU organization to finance high-risk, high-potential R&D projects must be created.
- 6 Targeted subsidies as well as standards, bans and incentives are warranted when carbon pricing reaches its limits. But these are complex and prone to capture. Another independent body should inform citizens and decisionmakers of the cost of various climate actions.
- 7 France can set an example and put pressure on other countries, promoting innovations that benefit poor countries, and developing effective international agreements.

For more extensive discussion of the report, see issue 22 of TSE Mag.



Auditorium

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College of
Economics
and
Business
TAMU

Research

Research focus
& scientific projects

Scientific team & visitors

Research grants

Prizes & awards

RESEARCH FOCUS & SCIENTIFIC PROJECTS

TSE research focuses on two main themes in the field of energy and climate. This section presents these themes along with a selection of scientific projects.

- Economics of energy industries
- Economics of natural resources and the environment



Economics of energy industries

Objectives:

- Investigate how the energy transition modifies energy markets and the industrial organization of the sector,
- Identify market designs and pricing mechanisms that insure a reliable supply on clean energy for electricity provision and transportation,
- Focus on wholesale and retail markets, network tariffs and international trade.



Claude Crampes



Jérôme Renault

Scientific project

Imperfect competition in electricity markets

Claude Crampes (TSE) - Jérôme Renault (TSE)

With the massive development of intermittent sources of electricity generation, as long as demand remains poorly price-responsive and storage is too costly, the operators of dispatchable plants must rely on partially flexible technologies.

We consider partially flexible power plants for which production is more costly if it is not decided in advance, with the price increasing as the time lag shortens. If two such firms compete to supply a random residual demand, what strategies will they follow? The outcome is very dependent on how markets are organized.

“How do firms exerting some market power adapt their strategies when their technologies are partially flexible and demand is both random and price responsive? This question is sensible in terms of competition policy. Indeed, in the energy field, competition authorities face questions such as ‘Are units inflexible because they are old and inefficient, because owners have not invested in increased flexibility or because they serve as a mechanism for the exercise of market power?’ (2018 Quarterly State of the Market Report for PJM).

Our model provides some intuitions that help identify strategic uses of (in)flexibility in timing. One possibility is that all trade occurs in a spot market with known demand; another is the addition of a day-ahead market with random demand. When all trade occurs ex post, the least flexible firm is not necessarily disadvantaged.

Adding a day-ahead market makes consumers better off and firms worse off by increasing total output. It increases welfare but transfers risks to consumers.”



Economics of natural resources and the environment

Objectives:

- Analyze public policies and business strategies that aim to decarbonize economic activities and improve the environment,
- Evaluate their impact on the economy, health, biodiversity and the climate,
- Provide policy recommendations and impact evaluations to practitioners and policy makers.



Mathias Reynaert

Scientific project

Colluding against environmental regulation

Mathias Reynaert (TSE)

Jorge Alé-Chilet (Bar-Ilan University) - Cuicui Chen (State University of New York at Albany) - Jing Li (MIT Sloan School of Management)

In July 2021, three of Germany's largest automakers (BMW, Daimler, and Volkswagen) settled with the European Commission (EC) to pay a total of €875 million for restricting competition on the effectiveness of emission cleaning systems in their diesel vehicles. This is the first instance of a cartel prohibition decision by the EC for cooperation in technical development. Why would automakers benefit from collusion over NOx cleaning technology in their diesel vehicles? This paper delves into the incentives, the impact on automakers' profits, consumer surplus, and societal health damages.

"We study collusion among firms under imperfectly monitored environmental regulation. We have developed a model in which firms increase variable profits by shading pollution and reduce expected non-compliance penalties by shading jointly. We apply our model to a case with three German automakers colluding to reduce the size of diesel exhaust fluid (DEF) tanks, an emission control technology used to comply with air pollution standards.

To estimate our model, we use data from the European automobile industry from 2007 to 2018. We find that jointly choosing small DEF tanks lowers the expected non-compliance penalties by at least €188 million to €976 million. Smaller DEF tanks improve buyer and producer surplus by freeing up valuable trunk space and saving production costs, but they create more pollution damages. Collusion reduces social welfare by €0.78 billion to €4.44 billion.

Environmental policy design and antitrust play complementary roles in protecting society from collusion against regulation."

Scientific team

Today more than 40 TSE researchers have an interest in the field of energy and climate economics.

- Stefan Ambec, *INRAE, TSE*
- Jean-Pierre Amigues, *UT1 Capitole, TSE*
- Henrik Andersson, *CNRS, TSE*
- Philippe Bontems, *INRAE, TSE*
- Catherine Cazals, *UT1 Capitole, TSE*
- Sylvain Chabé-Ferret, *TSE*
- Frédéric Cherbonnier, *IEP, TSE*
- Claude Crampes, *UT1 Capitole, TSE*
- Philippe De Donder, *CNRS, TSE*
- Olivier De Groot, *UT1 Capitole, TSE*
- Isis Durrmeyer, *UT1 Capitole, TSE*
- Frédérique Fève, *TSE*
- Christian Gollier, *UT1 Capitole, TSE*
- André Grimaud, *UT1 Capitole, TSE*
- Ulrich Hege, *UT1 Capitole, TSE*
- Norbert Ladoux, *UT1 Capitole, TSE*
- Gilles Lafforgue, *Toulouse Business School, TSE*
- Michel Le Breton, *UT1 Capitole, TSE*
- Yassine Lefouili, *UT1 Capitole, TSE*
- Nour Meddahi, *UT1 Capitole, TSE*
- Céline Nauges, *INRAE, TSE*
- Manh-Hung Nguyen, *INRAE, TSE*
- Elena Panova, *TSE*
- Jérôme Renault, *UT1 Capitole, TSE*
- Patrick Rey, *UT1 Capitole, TSE*
- Mathias Reynaert, *UT1 Capitole, TSE*
- Arnaud Reynaud, *INRAE, TSE*
- François Salanié, *INRAE, TSE*
- Stéphane Straub, *UT1 Capitole, TSE*
- Jean Tirole, *TSE*
- Nicolas Treich, *INRAE, TSE*
- Stéphane Villeneuve, *UT1 Capitole, TSE*

TSE and IAST researchers also regularly collaborate with researchers at other prestigious institutions on energy and climate issues.

- Catherine Bobtcheff, *CNRS*
- Estelle Cantillon, *FNRS Research Director, Université Libre de Bruxelles*
- Natalia Fabra, *University Carlos III Madrid*
- Daniel F. Garrett, *University of Essex*
- James K. Hammitt, *INRAE, secondment from Harvard*
- Carole Haritchabalet, *University of Pau and Pays de l'Adour*
- Bard Harstad, *Oslo University*
- Thomas-Olivier Léautier, *EDF*
- Bert Willems, *Tilburg University*



Michel Moreaux (1941-2021)

Michel was Professor Emeritus at University Toulouse 1 Capitole - TSE. At nearly 80 years old, he continued his research on renewable resources and environmental economics.

He played a major role with Jean-Jacques Laffont in laying the foundations for the TSE project, dedicating his energy and enthusiasm to the development of Toulouse as a vibrant hub for world-class research in economics. He was a brilliant, insatiable economist who will be dearly missed by the scientific community and his colleagues.

Visitors

- Julian Reif, (*University of Illinois*)
June 14 - December 31, 2021
- Tatyana Deryugina, (*University of Illinois*)
July 7 - December 31, 2021
- Douadia Bougherara, (*INRAE, CEE-M*)
June 30, 2021 - July 2, 2021
& October 27-29, 2021
- Niklas Mohring, (*CEBC-CNRS*)
September 27-28, 2021
- Léa Crépin, (*AgroParisTech*)
November 22, 2021
- Anca Voia, (*Paris School of Economics*)
November 22-23, 2021
- Adrien Fabre, (*ETH Zurich*)
December 6, 2021

Research grants

In 2021, two TSE researchers of the Energy and Climate Center received funding from the European Research Council (ERC) for ongoing research projects.



Starting grants



Isis Durrmeyer

“Understanding price dispersion: New structural models of price discrimination and applications”

Advanced grants



Jean Tirole

“Markets and their limits”

In 2021, seven TSE researchers were involved in research projects funded by the ANR.

(Projects hosted by the Foundation Jean-Jacques Laffont or by the Laboratory TSE-R)



- **Henrik Andersson: BRISK** - *“Déterminants comportementaux des préférences individuelles pour la réduction des risques pour la santé”*
- **Sylvain Chabé Ferret: PENSEE** - *“Payments for Environmental Services: an Evidence-based Evaluation”*
- **Frédéric Cherbonnier: EDIN** - *“Economy of Disruptive Innovation”*
- **Isis Durrmeyer & Mathias Reynaert: CAREGUL** - *“Breathe in, breathe out: Regulation on the European automobile market and air quality”*
- **Christian Gollier: LONGTERMISM** - *“Évaluation des investissements ultra-long”*
- **Nour Meddahi: COVID-METRICS** - *“Econometrics, Time Series, and Risk Management of Covid-19”*
- **Stéphane Villeneuve: PACMAN** - *“Principal-Agent, Contracts and Mean-field Games for Energy”*

Prizes & awards

Yuting Yang wins 2021 EAERE Award

Yuting Yang, Thomas Douenne and Frikk Nesje were the three laureates of the European Association of Environmental and Resource Economists (EAERE) Award for Best Doctoral Dissertations in Environmental and Resource Economics. Yuting obtained her PhD in Economics at TSE and was awarded the prize for her work on energy transition and environmental regulations. Last year she joined the University of New Mexico as an assistant professor.

SBCA prizes for two TSE members

Two TSE members were among the 2021 recipients of the prizes awarded by the Society for Benefit-Cost Analysis. **James Hammitt** received the Outstanding Achievement Award, created in 2016 to recognize individuals who make significant contributions to the field of benefit-cost analysis. **Henrik Andersson** (jointly with Massimo Florio) received the Richard Zerbe Distinguished Service Award, created in 2014 for individuals who make significant contributions to helping the SBCA fulfil its mission.



Publications

Articles in peer-reviewed journals

Working papers

Contributions to policy-oriented
publications

Articles in peer-reviewed journals

- **Philippe De Donder** and **Stefan Ambec**, “Environmental Policy with Green Consumerism”, *Journal of Environmental Economics and Management*, vol. 111, December 2021
- Yeon-Koo Che, Elisabetta Iossa and **Patrick Rey**, “Prizes versus Contracts as Incentives for Innovation”, *The Review of Economic Studies*, vol. 88, n. 5, October 2021, p. 2149–2178
- **Claude Crampes** and **Yassine Lefouili**, “Green Energy Pricing for Digital Europe”, *Enjeux numériques - Annales des Mines*, n. 15, September 2021, pp. 37–41
- **Patrick Rey**, Marie-Laure Allain and Sabrina Teyssier, “Vertical Integration as a Source of Hold-up: an Experiment”, *European Economic Review*, vol. 137, August 2021
- **Stefan Ambec** and Jessica Coria, “The informational value of environmental taxes”, *Journal of Public Economics*, vol. 199, n. 104439, July 2021
- **Nicolas Treich**, “Cultured meat: Promises and challenges”, *Environmental and Resource Economics*, vol. 79, May 2021, p. 33–61
- Sarah Ann Wheeler, **Céline Nauges** and Alec Zuo, “How stable are Australian farmers’ climate change risk perceptions? New evidence of the feedback loop between risk perceptions and behaviour”, *Global Environmental Change*, vol. 68, n. 102274, May 2021
- **Christian Gollier**, “A general theory of risk apportionment”, *Journal of Economic Theory*, vol. 192, n. 105189, March 2021
- **Nicolas Treich** and **Yuting Yang**, “Public safety under imperfect taxation”, *Journal of Environmental Economics and Management*, vol. 106, n. 102421, March 2021
- **Mathias Reynaert** and James M. Sallee, “Who Benefits When Firms Game Corrective Policies?”, *American Economic Journal: Economic Policy*, vol. 13, n. 1, February 2021, pp. 372–412
- **Stefan Ambec** and **Claude Crampes**, “Real-time electricity pricing to balance green energy intermittency”, *Energy Economics*, vol. 94, n. 105074, February 2021
- **Mathias Reynaert**, “Abatement Strategies and the Cost of Environmental Regulation: Emission Standards on the European Car Market”, *The Review of Economic Studies*, vol. 88, n. 1, January 2021, pp. 454–488
- **Céline Nauges**, Sarah Ann Wheeler and Kelly Fielding, “The relationship between country and individual household wealth and climate change concern: The mediating role of control”, *Environment, Development and Sustainability*, vol. 23, n. 11, 2021, pp. 16481–16503
- Matthew Adler, Maddalena Ferranna, **James K. Hammitt** and **Nicolas Treich**, “Fair Innings? The Utilitarian and Prioritarian Value of Risk Reduction over a Whole Lifetime”, *Journal of Health Economics*, vol. 75, n. 102412, January 2021
- **Claude Crampes** and **Michel Moreaux**†, “Valeur de l’eau et de l’électricité des barrages-réservoirs. Une version cyclique de la règle de Hotelling”, *Revue Économique*, vol. 72, n. 3, 2021, pp. 377–420
- **Claude Crampes** and **Thomas-Olivier Léautier**, “White certificates and competition”, *Competition Law Review*, n. 1-2021: “Law & Economics, Concurrences”, 2021, pp. 66–74

Working papers

- **Sylvain Chabé-Ferret** and **Anca Voia**, “Are Grassland Conservation Programs a Cost-Effective Way to Fight Climate Change? Evidence from France”, *TSE Working Paper*, n. 21-1248, September 2021
- **Patrick Rey** and Volker Nocke, “Consumer Search and Choice Overload”, *TSE Working Paper*, n. 21-1239, August 2021
- **François Salanié** and **Vera Zaporozhets**, “Water Allocation, Crop Choice, and Priority Services”, *TSE Working Paper*, n. 21-1235, July 2021
- **Claude Crampes** and **Michel Moreaux**†, “L’effet surface/volume et ses limites”, *TSE Working Paper*, n. 21-1200, April 2021

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- Jorge Ale-Chilet, Cuicui Chen, Jing Li and **Mathias Reynaert**, “Colluding Against Environmental Regulation”, *TSE Working Paper*, n. 21-1204, April 2021, revised October 29, 2021
 - **Claude Crampes** and **Thomas-Olivier Léautier**, “Les certificats d’économie d’énergie entre économie et politique”, *TSE Working Paper*, n. 21-1205, April 2021
 - **Claude Crampes** and **Jérôme Renault**, “Imperfect competition in electricity markets with partially flexible technologies”, *TSE Working Paper*, n. 21-1198, March 2021
 - **James K. Hammitt** and **Nicolas Treich**, “Fatality Risk Regulation”, *TSE Working Paper*, n. 21-1177, January 2021



Contributions to policy-oriented publications

For the Blanchard-Tirole report on the climate challenge, see ‘Highlights’, pages 9-11

Christian Gollier’s contributions to the CEPR

Christian Gollier contributes to the CEPR which, since October 1, 2021, opened a new Paris office which will eventually become its headquarters. Among these contributions, Christian Gollier wrote the chapter *The French Case* in the CEPR book *No Brainers and Low-Hanging Fruit in National Climate Policy* written by Francesco Caselli, Alexander Ludwig, and Rick van der Ploeg. He also leads the Research Professionals Network (RPN) on Climate Change established in January 2020 for an initial four-year term.

The Institute Montaigne’s report chaired by Christian Gollier

Christian Gollier chaired a report “*Europe’s Energy Transition: A Common Challenge*” which aims is to contribute to a substantial acceleration of the energy transition necessary for the EU to meet its climate goals. Institut Montaigne analyses the means and tools for accelerating and completing the European Green Deal. The Institute interviewed several stakeholders such as academics, policymakers, industry leaders, representatives of civil society to generate policy recommendations. They advocate for a unified European strategy for energy transition, integrating the divergent interests of member states and supporting the effects of this transformation over time.



Scientific Events

Environment economics seminars

Organized by **Céline Nauges** until the end of 2021 and by **Anouch Missirian** from 2022.



The Environment economics seminar series presents renowned scholars working in the field of environmental economics. Invited speakers discuss recent advances with a special focus on energy resources and climate change. Featuring both theory and empirical work, the seminar series covers issues such as the impact of climate change on growth and energy resources, the management of risk and uncertainty, and the design and evaluation of public policies.

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- November 29, **Jens Rommel** (*Swedish University of Agricultural Sciences*), “Learning about collective agri-environmental contracts from co-designed public goods games with farmers in Germany”
 - November 22, **Astrid Dannenberg** (*University of Kassel*), “The effects of environmental information and observability on food choice”
 - November 15, **Alberto Salvo** (*National University of Singapore*), “Willingness to fight on: Environmental quality in dynamic contests”
 - November 8, **Pierre Fleckinger** (*Mines ParisTech*), “Implementing a Circular Economy with Producer Responsibility Organizations”
 - October 18, **Ottmar Edenhofer** (*Potsdam Institute for Climate Impact Research*), “Asset Pricing and the Carbon Beta of Externalities”
 - October 11, **Anouch Missirian** (*TSE*), “Identifying supply elasticities of the world’s fisheries: Implications for fisheries policy”
 - October 4, **Ridwan D. Rusli** (*Cologne University of Applied Sciences*), “Transboundary Fire and Haze Games: Local Capture and Common Agency”
 - September 27, **Niklas Möhring** (*Centre d’Etudes Biologiques de Chizé - CNRS*), “Pesticide-free agriculture? The adoption of a large-scale wheat production standard in Switzerland.”
 - May 31, **Francesco Ricci** (*Université de Montpellier*), “Critical raw materials for the energy transition”
 - May 17, **Andreas Gerster** (*Mannheim University*), “Information Avoidance and Moral Behavior: Experimental Evidence from Food Choices.”
 - May 10, **Fanny Henriet** (*CNRS, Paris School of Economics*), “‘Bad’ Oil, ‘Worse’ Oil and Carbon Misallocation”
 - May 3, **François Bareille** (*INRAE*), “Decomposing Weather Impacts on Crop Profits: the role of Agrochemical Inputs Adaptation”
 - April 12, **Charles Pébereau** (*TSE*), “Tariff complexity as a barrier to adoption: Evidence from real-time electricity pricing in New Zealand.”
 - March 29, **François Libois** (*INRAE, Paris Jourdan Sciences Economiques*), “Man Overboard! Industrial Fishing as Driver of Migration out of Africa”
 - March 22, **Sven Heim** (*Mines ParisTech*), “Public Support for Renewable Energy: The Case of Wind Power”
 - March 15, **Julie Subervie** (*INRAE, Centre d’Economie de l’Environnement de Montpellier*), “Inventory Credit to Enhance Food Security in Africa”
 - March 1, **Philippe Delacote** (*BETA, Université de Strasbourg, INRAE*), “Distinguishing potential and effective additionality to revisit the location bias of REDD+ projects”



Saving the Common Good Summit

Challenge T
Le Sommet "Sauver le Bien commun"

COMMON GOOD SUMMIT

Challenge T

Séance Sauver le Bien commun Closing Saving

Outreach

Common Good Summit

Chair at Collège de France

Franco-German roundtable

EDF Digital Forum

Meet the experts

TSE-SBCA European webinar

Blog posts and op-eds

Press articles and media

“Saving the Climate” session during Common Good Summit



The Common Good Summit was organized by TSE, *Les Echos*, and *Challenges* business magazine on May 27 and 28, 2021. A “Saving the climate” session was dedicated to energy, climate and environmental issues.

The fight against global warming was at the heart of the discussions with an introduction by French Minister for the Ecological Transition Barbara Pompili, followed by a panel on the cost of the transition, with ExxonMobil Europe President Philippe Ducom, SNCF Chairman and CEO Jean-Pierre Farandou, and TSE Director Christian Gollier.

A second panel on the challenges of decarbonizing transport engaged the minds of Transdev Chairman and CEO Thierry Mallet, TSE’s Mathias Reynaert, and GeoPost/DPDgroup Chairman and CEO Boris Winkelmann†.

Here are some of the key highlights from the exchanges.



Barbara Pompili, Minister for the Ecological Transition

Keynote speaker on the Common Good and the Ecological Transition.

“The market has limits, and the ecological shift will have political consequences that will mark our entire century. The question asked by Jean Tirole – how to save the Common Good – invites us to rethink all our organizations, and it is not surprising to see this question resurface at the end of the health crisis. We need to build an economy that is useful and resilient to the challenges of tomorrow.

It is together that we will succeed, and we will because the dominant ideology is gradually crumbling. It is always the most vulnerable who pay the highest price when the common good is ransacked; they cannot adapt when their housing or their vehicle is no longer up to standard.

The Common Good had long disappeared from the scene and today it is back with a bang, at the center of the debate.”

The fight against global warming

“Traveling by train is much less polluting than flying or driving, and our objective is to convince individuals and companies to choose the train. We aim to divert 10% of road traffic to our business, which means doubling the use of trains for passengers and goods within 10 years. This will require new infrastructures, especially for freight. In France, we need solutions: For instance, 20% of our trains run on fossil fuel because the local network is not electrified.

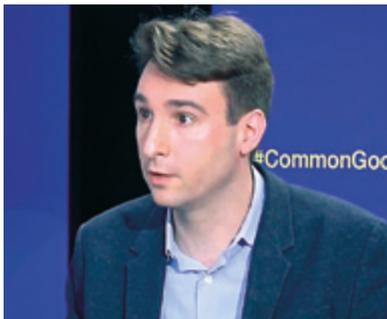
I am a strong believer in hydrogen. It could be the solution for a successful transition. The world will always need more energy. If we make massive investments, we could reach net zero by 2050.”

Jean-Pierre Farandou, CEO - SNCF





Extensive highlights of the 2021 Common Good Summit can be found in TSE Mag, issue 22.



“Electric vehicles could be a great solution to global warming and air pollution. The issue is the generation of electricity, as only a greening of the electricity system would mean green electric cars. Another issue is the cost, as we don’t anticipate electric vehicles to reach price-equilibrium compared to thermic cars in the next five years. We have a network issue because we need charging stations on the map for people to buy electric cars, and we need people to buy electric cars to develop chargers.

Economists agree that a carbon price would help pass down the cost of using a thermic vehicle to the consumers. This solution would be much more efficient than the current different regulations: France has the bonus-malus, for example.”

Mathias Reynaert, Researcher - TSE



Register and find out more at commongoodsummit.com

“Transport in the city centers has been electrified and developed so that there are many alternatives to cars. But in the suburbs there aren’t many solutions for consumers and companies.

People are currently trapped in their cars. They don’t necessarily have other options, so the objective is to propose a better alternative in terms of public transport. When we propose a high-quality service, as we’ve done in Germany on small train lines, consumers switch to public transport.

In 2016, we had 15 electric vehicles in the world. We now have 1,500 and will have around 5,000 in the next five years. When we consider the full lifetime cost of a bus in France, we are right now already at an equilibrium. That isn’t the case in Germany or in the US because fuel isn’t taxed in the same way and electricity is particularly cheap in France.”



Thierry Mallet, CEO - TransDev

“Avenir Commun Durable” Chair at Collège de France

December 9



Christian Gollier is a visiting professor on the annual “Avenir Commun Durable” Chair at Collège de France.

On December 9, he gave an opening lecture “*Entre fin du mois et fin du monde: économie de nos responsabilités envers l’humanité*”.

The chair was created as part of an eponymous initiative launched in 2021 by the professors of the Collège de France.

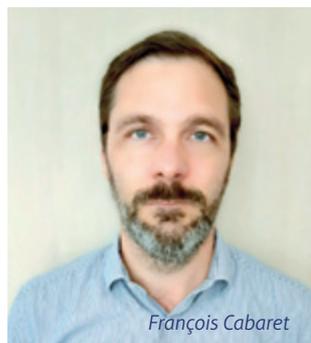
Dedicated to the challenges of the environmental and energy transition, it invites international experts each year to highlight current research in this field. This chair is supported by the Collège de France Foundation and its major sponsors, Covéa and TotalEnergies.

“Future generations will experience a climate change whose intensity will depend on the sacrifices we make to face our responsibilities. The time for action is now! But given the myriad of actions for the climate, which ones should be rationally implemented, at what cost, at what intensity, and when?”

A full list of lectures and seminars given by Christian Gollier is available on the Collège de France website.

Franco-German roundtable on European Climate Policies

October 18



As part of the Franco-German fortnight, TSE organized a roundtable with Christian Gollier, the German economist **Ottmar Edenhofer**, Director and Chief Economist of the Potsdam Institute for Climate Impact Research, and **François Cabaret**, in charge of Global Market Forecast at Airbus.

They discussed the recent Fit-for-55 European green package, announced by the European Commission.

EDF Digital forum

June 6, organized by EDF

The EDF Group has a strong presence in Occitania. The EDF regional delegation organized a digital forum in Toulouse which brought together associations, representatives of the social and solidarity economy, a professor from TSE, as well as representatives of different sectors of activity within the Group (hydroelectricity, nuclear...). During this public digital forum, Sébastien Pouget (TSE) explained how corporate social responsibility, driven by private actors, naturally compensates for the failures of state regulation in certain sectors.

Meet the experts: The economics of animal welfare

March 29, Online



In this “Meet the experts” webinar, TSE experts **Nicolas Treich** (a research associate at INRAE, and member of TSE and IAST) and **Romain Espinosa** (a researcher at CNRS) talked about the economics of animal welfare and presented their analyses on the determinants of meat consumption, the evolution of our diet, income, and consumption, and its impacts on our health and the planet.

Watch the webinar replay on the TSE YouTube channel. 

TSE-SBCA European webinar

May 7, Online



The Society for Benefit-Cost Analysis and TSE were proud to co-host their first European webinar together on “*Economics of Biodiversity*”.

The inaugural speaker was **Partha Dasgupta**, who has been Professor of Economics at the University of Cambridge since 1985, serving as Chairman of the Faculty of Economics from 1997 to 2001. He has won numerous awards and was named Knight Bachelor for services to economics in 2002.

His research interests cover welfare and development economics, technological change, population, environmental and resource economics, game theory, and the economics of undernutrition and social capital. In 2019 he was commissioned by the UK Treasury to lead a global independent review on the economics of biodiversity.

Blog posts and op-eds

Members of the Center regularly publish blog posts and op-eds that can be consulted online in TSE Debate's "Energy" section.



Would green consumerism save the planet?

Stefan Ambec and Philippe De Donder

December 14

Why is green consumerism changing the effectiveness and relevance of environmental policies?

It is difficult to escape the frenzy of consumption in the run-up to Christmas. If we can't consume less, we can try to consume better by choosing fewer polluting products. Reducing packaging, buying organic food, driving an electric car, signing a 100% renewable electricity contract... there are plenty of opportunities.

Of course, it will cost you a little more, but isn't that the price to pay to save the planet? Companies are responding to this

expectation by focusing their promotional campaign on the benefits of their actions on the environment. They compete with initiatives to plant trees, install solar panels, reduce waste, water consumption, the use of polluting chemicals, etc. And they make it known on their ads with beautiful images of nature.

An inefficient outcome

In a recently published article, we analyze the consequences of this craze for eco-consumption on environmental policies and, ultimately, on environmental protection.

First lesson: The presence of eco-consumers can be economically inefficient. The demand of eco-consumers creates a supply of products differentiated by their environmental quality, so that pollution control efforts are not allocated optimally. We end up with products that avoid pollution at a higher cost than others. For example, foodstuffs labelled as organic reduce water pollution (pesticides and nitrogen) at much higher costs than if the standards of conventional agriculture were raised. We could then achieve the same improvement in the quality of our waterways at a lower cost for the agricultural sector.

Second lesson: Eco-consumption reverses the superiority of taxes over standards as an environmental policy instrument. A carbon tax amplifies the difference in costs of reducing CO₂ emissions between products, which worsens the inefficiency of allocating pollution control efforts. The same level of environmental protection could be achieved at a lower cost with a technological standard of energy efficiency, or of the share of renewables in the energy mix.

Laxer environmental policies

Another perverse effect of eco-consumption is to encourage the adoption of less stringent environmental policies. Society may favor a status quo with pollution abatement efforts driven by green consumerism rather than reinforcing environmental standards. Whereas, in the absence of green consumerism, people would have pushed for stricter environmental policies, they do not get cheaper products. As consumers, they can buy products of poor environmental quality at a low price or contribute to environmental protection at a higher but still affordable price. As citizens, they are satisfied with this milder level of environmental protection. The planet would have been better off if the contributions to the environment were better distributed among consumers.

The active consumers in each of us wonder how we could save the planet from predicted ecological disasters. Our consumption choices can contribute to this. But our behavior as green consumers cannot replace our duties as citizens. Voting with our wallet is not enough, we must also ensure that stringent environmental policies are imposed on producers.

Climate: how to manage an unmeasurable or poorly measurable risk? (available in French)

Frédéric Cherbonnier – December 9

How to react to global warming? This is a complex question that requires us to estimate the climatic risk, the potential damage, the investments to be made in order to face it, but also to arbitrate in time. Should we wait until we are more technologically advanced or know more about it? Or should we act now as a precaution?



Fishermen against wind turbines

Stefan Ambec and Claude Crampes – October 27

The French fishermen who are trying to prevent the nibbling of their fishing grounds by offshore wind farms have seen their appeal against the granting of state aid to investors rejected by the Court of Justice of the European Union. The legal reasons for this dismissal are singularly lacking in economic substance.

Low-cost solar energy

Stefan Ambec and Claude Crampes – October 5

Producing electricity from the sun is a well-mastered technology. This is good news for the climate and an opportunity for people left out of the electrification network. But will it be enough to foster the development of emerging countries?



On the rationality of electricity consumers

Stefan Ambec and Claude Crampes – June 29

To balance in real time electrical systems that are increasingly fed by non-dispatchable production sources, we heavily rely on the rational reaction of consumers to market prices. But are we asking too much of them?

Organizing the electricity industry

Stefan Ambec and Claude Crampes – June 7

The proposed reorganization of the energy giant EDF has sparked a media debate in France on the organization of the electricity industry. Everyone has their own proposals. Given the specificities of electricity production and consumption, no industrial structure is ideal; but not all options are equal.





Carbon tax at borders: Europe must act without delay

(available in French)

Frédéric Cherbonnier – May 20

Crises sometimes unblock situations that have been frozen for years. The Covid crisis is a perfect example.

Concessions for hydroelectricity

Stefan Ambec and **Claude Crampes** – May 5

The hydroelectric power plants installed in France whose concession contracts have expired are coveted by current or potential competitors of EDF and SHEM (Société Hydro-Electrique du Midi). While a competitive bidding process is in line with the European Commission's doctrine, it is not exclusively beneficial because it concerns the management of a common good: water.



The European carbon market borders

Stefan Ambec and **Claude Crampes** – April 8

The border carbon adjustment mechanism adopted by the European Parliament will change the way the EUETS operates.



A winter in Texas

Stefan Ambec and **Claude Crampes** – March 5

How do you ensure that an economy is still running under critical weather conditions? The polar episode that recently hit Texas provides us with some answers on the economic and political dimensions of the question.

Relying on the market to fight air pollution

Stefan Ambec and **Claude Crampes** – February 24

How far should we go to improve air quality? Market instruments inform us about the costs of depollution. This information is useful for improving our public policies with regard to health and environmental damage.





The economic regulation of electricity storage

Stefan Ambec and Claude Crampes – January 22

With the deployment of wind and solar installations, electrical power generation becomes more variable with circadian and seasonal cycles, cloud cover, and wind patterns. Smoothing the supply of green energy through storage is becoming a necessity. So not only must we make progress in energy storage technologies, we must also create a regulatory framework that provides incentives for storage.

EU's climate pledges: from 20/20 to 100/50

Stefan Ambec and Claude Crampes – January 5

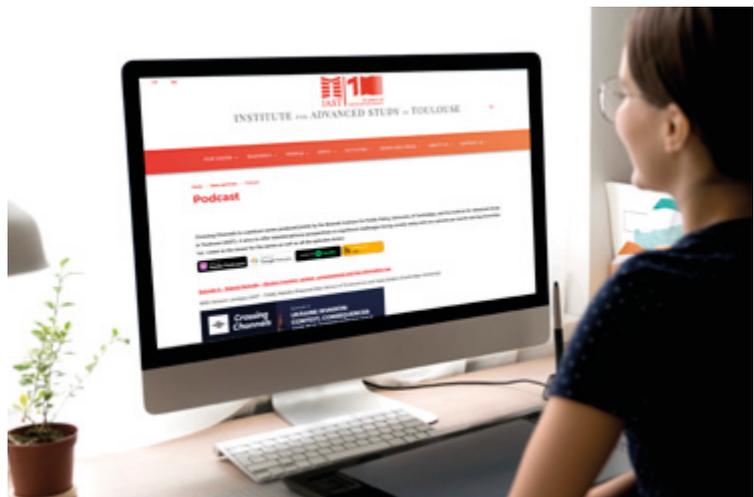
After the famous 20-20-20 target in 2020, the European Union has committed to carbon neutrality by 2050. Assessment and prospects.



Press articles and media

Podcast – Crossing Channels

TSE's sister institution IAST has joined forces with the Benett Institute for Public Policy to produce a podcast series that offers interdisciplinary perspectives on significant challenges facing society today. Listen to the debate on *What does it mean to bring nature into the economy?* with Matthew Agarwala (Bennett), Cristina Peñasco (Cambridge), and Nicolas Treich (TSE-IAST-INRAE).



Interviews

- Christian Gollier, Pour une vraie évaluation du coût des éoliennes, *L'Express*, December 12
- Christian Gollier, Le Collège de France entre fin du mois et fin du monde, *Le Figaro*, December 12
- Christian Gollier, Fin du mois, fin du monde : les énergies du désespoir, *France Culture*, December 9
- Christian Gollier, Nous vivons sur l'utopie d'une transition écologique heureuse, *Les Échos*, December 9
- Frédéric Cherbonnier, Climat : comment gérer un risque non ou mal mesurable ? *Les Échos*, December 9
- Christian Gollier, Fin du monde ou fin du mois ?, *TV5 Monde*, December 8
- Christian Gollier, Qu'est-on prêt à payer aujourd'hui pour réduire un dommage qui se produira dans deux siècles ?, *Collège de France*, November 25

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- **Christian Gollier**, Dumping environnemental, pression fiscale... pourquoi Shell déménage son siège au Royaume-Uni, *Novethic*, November 17
 - **Jean Tirole**, When politicians promise lots of green jobs, I'm very skeptical. If it were that easy, they would have existed long ago. (In German), *Neue Zürcher Zeitung*, November 11
 - **Jean Tirole**, On green jobs and other climate issues, (In German), *Neue Zürcher Zeitung*, November 11
 - **Christian Gollier**, sur le changement climatique : "Il va falloir se serrer la ceinture", *Midi Libre*, November 6
 - **Christian Gollier**, La tarification du carbone pourrait-elle être l'un des grands enjeux de la COP26 ?, *GEO*, November 4
 - **Christian Gollier**, Entre climat et justice sociale, un difficile équilibre, *La Croix*, October 24
 - **Mathias Reynaert**, Moulding a new generation of economists who are change agents, *Study International*, October 22
 - **Christian Gollier**, La tarification du carbone est la solution, *Le Point*, October 21
 - **Stefan Ambec**, La décarbonation de l'économie commence avec l'énergie, *Touléco*, Octobre 21
 - **Christian Gollier**, Climat, ce qu'il faut savoir, *Le Point*, October 21
 - **Christian Gollier**, Avec la flambée de l'énergie, l'État va-t-il dépenser 2 fois ce qu'il va gagner ?, *Le Figaro*, October 19
 - **Nicolas Treich**, Will lab-grown meat ever be tasty and profitable?, *Sifted*, October 19
 - **Nicolas Treich**, Alimentation : les raisons profondes de notre attachement à la viande, *Médiacités*, October 11
 - **Christian Gollier**, Pour ou contre la taxe carbone ?, *Ouest France*, Octobre 7
 - **Christian Gollier**, Le gaz rend les marchés incandescents, *L'Agefi - Actifs*, October 7
 - **Christian Gollier**, Il ne faut pas cacher le coût de l'énergie au consommateur, *L'Opinion*, October 7
 - **Christian Gollier**, Climat et économie : Christian Gollier répond aux questions de Dimitri Pavlenko, *Europe 1*, October 6
 - **Christian Gollier**, Prix de l'énergie : comment le gouvernement veut faire face à la hausse, *Le Point*, September 29
 - **Christian Gollier**, Personne ne sait comment atteindre le zéro émission nette de CO2 en 2050, *Le Point*, September 21
 - **Christian Gollier**, Les rapports se succèdent et donnent systématiquement des résultats pires qu'annoncés précédemment, *BFM Business*, August 9
 - **Christian Gollier**, Les ressorts du capitalisme de marché, *Le Nouvel Économiste*, July 7
 - **Christian Gollier**, Un marché carbone européen, *Le Maine Libre*, June 30
 - **Christian Gollier**, On n'échappera pas à la taxe carbone, *Le Point*, May 10
 - **Nicolas Treich**, Cantines scolaires : quel serait l'impact d'une option végétarienne quotidienne ?, *France 2 TV*, March 29
 - **Christian Gollier**, Jean-Marc Jancovici, l'écolo qui atomise tout le monde, *L'Obs*, March 11
 - **Nicolas Treich**, La polémique sur les menus sans viande dans les cantines scolaires passe à côté des vrais enjeux, *March 5*
 - **Christian Gollier**, Faut-il changer de manière durable notre rapport à l'aviation ?, *Europe 1*, February 21
 - **Nicolas Treich**, Les paradoxes de la longue bataille pour le bien-être animal, *Le Monde*, January 29
 - **Stefan Ambec**, France contributes to protection of Amazon stronghold, Yasuni National Park, *Mongabay*, January 27

Other editorial contributions

- **Christian Gollier**, COP 26 : on va encore jouer la comédie!, *L'Express*, November 4
- **Christian Gollier**, Enfin un vrai prix pour le carbone!, *L'Express*, September 23
- **Christian Gollier and Jean Tirole**, L'objectif de réduction des émissions de gaz à effet de serre doit avoir le moindre impact social, *Le Monde*, September 3
- **Mathias Reynaert**, L'amende européenne aux constructeurs automobiles constitue une décision courageuse et juste, *Le Monde*, July 31
- **Christian Gollier**, Le Pacte Vert européen, un courageux passage de la parole aux actes, *L'Express*, July 17
- **Christian Gollier**, Rapport du Giec : Tout va très bien, Madame la marquise !, *L'Express*, August 10
- **Frédéric Cherbonnier**, Il faut développer la recherche publique sur l'agriculture cellulaire, *Le Monde*, May 26
- **Stefan Ambec, Lucie Bottega, Marion Desquilbet, Vincent Réquillart, François Salanié and 700 experts**, Climat et biodiversité : "Les petits pas de la politique agricole commune ne suffisent plus", *Le Monde*, May 3
- **Frédéric Cherbonnier**, Why France risks missing out on "artificial" meat, *Les Échos*, April 8

Partnerships

A renewed partnership

Current partners

Join forces

A renewed partnership



Our partnership with EDF, which started in 2008, has been renewed for another three years. The partnership covers both academic research and professional training for EDF group managers. With the support of EDF as a long-standing partner, TSE researchers are developing their research in three main areas:

- Investment and production
- Pricing and distribution
- Competition and strategy

“ Our research team will address a wide range of topics of interest to our partner, including the role of regulatory instruments accompanying the energy transition. We will provide new scientific insight on issues related to the reform of the European market for CO2 emission permits, to the border adjustment carbon tax or to the geographical reconfiguration of electricity markets at the European level. Analyzing how households respond to price signals depending on the pricing method and taxation will also be part of our research agenda.

Stefan Ambec



Current partners

We are highly grateful to all our partners and donors for their support.

Main donors



Research project sponsors

- Electricité de France (EDF)
- Engie
- Gaz Réseau Distribution France (GRDF)
- Réseau de Transport d'Electricité (RTE)



Join forces

Connecting our research to real-world issues

Philanthropic support and research partnerships have played a significant role in the creation and development of TSE Energy & Climate Center. Today, more than ever, the long-term support of our public and private partners is essential to promote research in energy and climate economics.

TSE Energy & Climate Center is designed to encompass the participation of a wide range of partners, whether corporations, institutions, individuals or charitable organizations from France and around the world. That is because there is a constant need for increased analysis and collaboration on topics related to energy and climate economics. Working alongside practitioners, TSE researchers aim to develop targeted research projects directly connected to society concerns and economic

“By joining the community of partners, you will help us achieve our ambitious scientific goals and encourage the emergence of a leading research center in Europe on energy and environmental issues.

actors, as well as outreach initiatives that anchor TSE scientific expertise in the public debate.

You can support research undertaken with a specific scientific project and/or contribute to a fund dedicated to the long-running operations of the Center. Such funding could help us secure existing posts and endow new ones. We are also looking for funding to create new research projects and visiting programs, and to offer additional research grants and scholarships. In addition, we value the provision of databases our researchers can work on. Last but not least, we enthusiastically welcome financial support for projects with a multidisciplinary approach.

Donations made to TSE through the Jean-Jacques Laffont – TSE Foundation, through TSE-Partnership Foundation (TSE-P) or through American Friends of TSE, provide tax benefits to the donor.

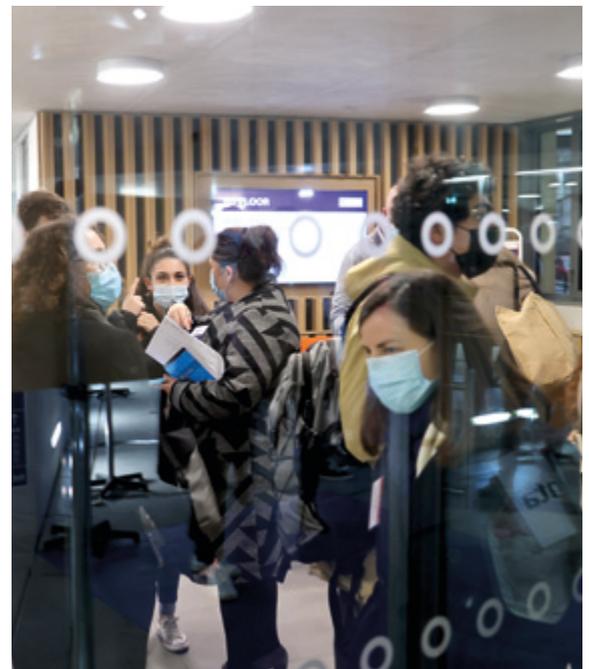
Some research programs may be at the crossroads of several themes. Take a look at the list of our other thematic centers:

- **TSE Competition Policy & Regulation Center**
- **TSE Digital Center**
- **TSE Health Center**
- **TSE Infrastructure & Network Center**
- **TSE Sustainable Finance Center**



Eve Séjalon

If you would like to join us, please contact **Eve Séjalon**, Head of Research Partnerships and Centers at partnership@tse-fr.eu





Connecting research and education

Advanced Master Program Executive Education

Although they take place outside the framework of TSE Energy & Climate Center, we find it interesting to highlight educational activities in the field of energy and climate economics carried out by other entities within the TSE's big tent.

TSE faculty involved in the research activities of TSE Energy & Climate Center are also often committed to transferring cutting-edge knowledge to the students in an initial or continuing education program.

Advanced Master Program

M2 – Environmental and Natural Resources Economics (ERNA)

- **Course contents include:** Environmental policies, energy economics and climate policy, natural resource management, non-market valuation, cost-benefit analysis, applied econometrics, advanced environmental economics, development economics, etc. *Full description of courses available on our website.*
- **Skills acquired:** The program combines recent developments in economic theory and quantitative techniques with applications to real-world problems. The M2 ERNA provides students with the analytical skills to evaluate economic policies and policy recommendations on energy and transport as well as environmental and natural resource management issues.
- **Career opportunities:** Students can target jobs as economic experts on environmental management and resources, including energy. For instance, they could work as consultants, supervisors of economic analysis in public institutions, international organizations, NGOs, think tanks, and large companies, or pursue an academic career.

Program director: Henrik Andersson

M2 – Economics and Ecology

Master program offered by TSE in partnership with University Toulouse 3 Paul Sabatier.

- **Course contents include:** Ecosystem management and policies, sustainable management and valuation of ecosystems, cost-benefit analysis, applied project in ecology and economics. *Full description of courses available on our website.*
- **Skills acquired:** Mastering the tools to understand how biodiversity and ecosystems are modeled and measured, how the ecological and economic value of biodiversity and ecosystems can be measured, and how economic policy can be used to influence human behavior and its consequences for biodiversity and ecosystems.
- **Career opportunities:** Economists, researchers, consultants or analysts specializing in environmental issues for national and local government agencies, supranational organizations, large companies (e.g. energy, transportation, water, infrastructure development), NGOs, think tanks and research centers, with a target of modeling, data treatment and the interface of economics and ecology.

Program director: Marion Desquilbet



Master ERNA - 2020/2021



Lorna Briot

Preparing our students for their future careers and strengthening our relationships with business and policy communities is of primary importance to TSE. The TSE Careers Team offers a wide range of services to both students and recruiters. For more information, please contact **Lorna Briot**, Head of Careers at careers@tse-fr.eu

Executive Education

An excellent opportunity to exchange thoughts, ideas, and spar with truly outstanding economic thinkers.

TSE Executive Education adapts to the interests and needs of practitioners and businesses by offering a variety of training program formats. Our programs are delivered in both open online and face-to-face sessions, as well as in customized sessions, working closely with organizations to provide a unique learning experience.

In 2021, we organized tailor-made sessions for clients interested in upskilling their talent in energy and climate economics. Our training sessions included non-technical lectures based on the latest economic research, and focused on providing economic tools that could be used for problem solving.

Overview of the sessions delivered:

- The functioning and design of energy markets
- Carbon taxation around the world
- The effect of public policies and business strategies that aim to decarbonize economic activities on health, biodiversity, and the climate
- The rationale for Corporate Social Responsibility (CSR)
- Role of financial industry in sustainability
- Impact of responsible strategies on financial performance



Priyanka Talim

Our programs are designed to deliver excellence through a practical and innovative experience.

If you would like to conduct a brainstorming session to identify your organization's needs and develop a customized course, please contact

Priyanka Talim, Head of Innovation
at exed@tse-fr.eu



“ The sessions were an in-depth understanding of the latest economic thinking in terms of policies implemented to address environmental issues, business strategies and activities, and their commitment to climate change, to name a few.

Stefan Ambec

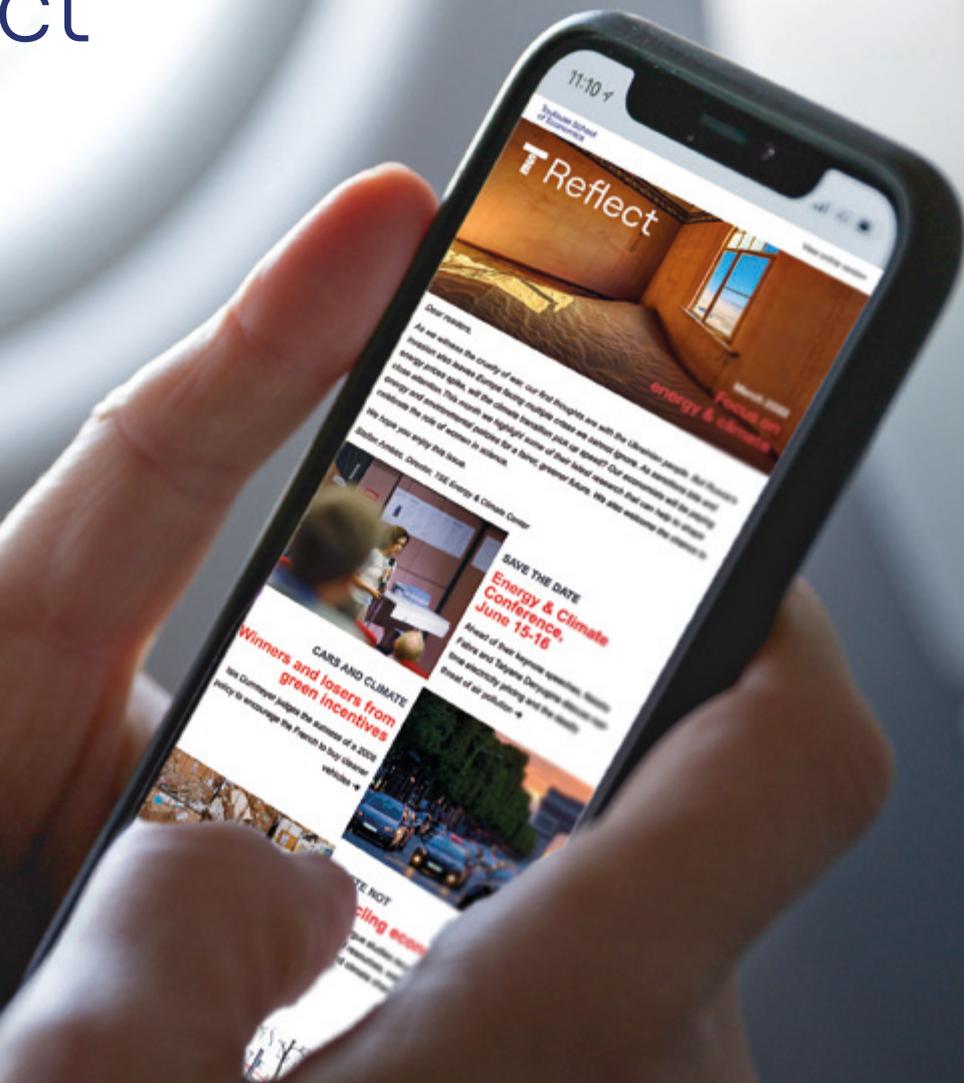
Stay tuned

We'll keep you posted on the latest research and activities via TSE Reflect, our monthly thematic newsletter, aimed at bringing insight to economic practitioners.

Once a month we will deliver analysis from our academic community on important current topics in the fields of competition, digital economics, energy & climate, health, infrastructure & networks, and sustainable finance. We are pleased to bring you insights on our advances in the economics of energy and climate in the March edition of TSE Reflect.

Sign up at tse-fr.eu/tse-reflect

 Reflect



Save
the date

June 15-16
2022

13th Toulouse Conference on the Economics of Energy and Climate

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