



Annual
Report
2020

Highlights

page 4

Report on the EU-Mercosur trade deal

page 5

Appointments

page 5

Special TSE Mag

page 6

Scientific team

page 8

Outreach

page 9

Events

page 10

Blog posts, Op-eds

page 11

Articles, Podcasts, Interviews

page 11

Publications

page 13

Academic papers

page 14

Working papers

page 15

Editor's message

As you may expect, 2020 has been a very peculiar year for us. We were lucky enough to organize the Energy Workshop in January before the lockdown. We travelled to Madrid where we were welcomed by Natalia Fabra at the University Carlos III in her EnergyEcoLab. The workshop was a delightful opportunity to share our current research projects. Nine papers were presented covering various on energy and climate topics. We enjoyed dynamic discussions during the sessions, coffee, lunch and dinner breaks, something that all of us miss so much nowadays! Since lockdown began in March 2020, as most academic institutions, we moved our seminars online.

The pandemic has shown us that global problems need global solutions. Climate change is one of those. Energy transition is part of the solution. Scientists and decision-makers should join their forces to decarbonate our energy mix at the lowest cost for society on a worldwide scale. Since 2017, the TSE Energy and Climate Center has brought together more than 40 researchers who share a common interest in energy and climate matters. This report includes an overview of achievements in 2020. Despite the Covid crisis, the center has produced high quality research. It has also contributed to the policy debate, not only in the media, but also through active participation to two governmental mandated committees of experts.

Needless to say, this achievement would not have been possible without our donors and partners. We are very grateful for their continual support.

Stefan Ambec

Director, TSE Energy & Climate Center

Key figures

3 donors

4 research project sponsors

36 researchers

13 events

17 academic papers

21 working papers



Highlights

- Report on the EU-Mercosur trade deal
- Appointments
- Special TSE Mag

Stefan Ambec delivers the report on the EU-Mercosur trade deal

Presented to the French government in September 2020, the report evaluates the impact of the EU-Mercosur trade deal on sustainable development

A panel of experts, commissioned by the Prime Minister and chaired by Stefan Ambec found that opening up markets will bring limited trade benefits but increase deforestation and carbon emissions.

"The EU missed an opportunity to use its negotiating power to obtain solid guarantees that meet the environmental, health and social concerns of its citizens," said Stefan. His panel has recommended substantial amendments and better impact assessments.

Read more in the article from our [November newsletter](#).



Appointments



May 2020

Christian Gollier

was appointed by French President Emmanuelle Macron to join a team of 26 international economists focusing on three major challenges: climate, inequality and demography.

This special economic commission, led by TSE founder Jean Tirole and Olivier Blanchard will propose an analytical framework based on economic science, from which it will make recommendations for more effective policy solutions. Christian Gollier led the climate team charged with finding solutions to the challenges of the Covid-19 era.



September 2020

Céline Nauges

has been appointed editor of the *European Review of Agricultural Economics* which publishes theoretical and applied work on a wide range of topics including agricultural production, food, trade, rural development, and use of natural resources.

This edition deals with the economics of global warming and how to expect our global economies to fight the looming climate crises after the pandemic

Climate: The next threat

Special TSE MAG

We need a climate coalition

Jean Tirole



The Covid-19 vaccine has demonstrated our societies' capacity for radical, collective action to address global challenges. But the development of vaccines responded to a problem with immediate impact. The fight against global warming is no less urgent, but its delayed impact has led to a large market and political failure. We all have our part to play, says TSE founder Jean Tirole, in urging the international community to prevent global warming from inflicting lasting damage on future generations. Drawing on his book 'Economics for the Common Good', he maps a common-sense path to putting earlier negotiations back on track.

[Find out more](#)

The health of our planet

Stefan Ambec, Dominique Bureau, Christian Gollier, Thierry Pech, Mar Reguant, Katheline Schubert

Global warming threatens to have far more catastrophic effects than Covid-19. Have we learned any lessons from this pandemic to stave off environmental collapse? Will 2020 be the year the world began to fight back? We asked some leading thinkers for their perspectives.

Europe bets on hydrogen

Claude Crampes & Stefan Ambec

European governments are risking billions of euros on a bet that hydrogen will gradually become a "clean, safe and affordable" energy carrier. But this may be wishful thinking, say TSE energy experts Claude Crampes and Stefan Ambec, unless there is a significant decline in production and distribution costs.

The food and climate puzzle

Céline Bonnet

Our high-carbon eating habits have damaged the environment and now threaten our future. Encouraging more sustainable practices, from the farm to the kitchen table, will require a regulatory recipe with multiple ingredients, says TSE economist Céline Bonnet. But consumers may find it hard to swallow.

Vehicle emission standards

Mathias Reynaert

In the wake of the 2015 Volkswagen testing scandal, research by TSE's Mathias Reynaert suggests that emission standards can be a risky and unpredictable policy tool. Investigating strategic responses in the European car market, he finds a growing divergence between on-road fuel consumption and laboratory results that suggests widespread 'gaming' of tests by manufacturers.

Scientific team

36 highly renowned scholars working together on the economics of energy and climate.

- Stefan Ambec
- Jean-Pierre Amigues
- Henrik Andersson
- Catherine Bobtcheff
- Philippe Bontems
- Estelle Cantillon
- Sylvain Chabé-Ferret
- Frédéric Cherbonnier
- Claude Crampes
- Philippe De Donder
- Olivier De Groot
- Isis Durrmeyer
- Natalia Fabra
- Christian Gollier
- André Grimaud
- James K. Hammitt
- Carole Haritchabalet
- Bard Harstad
- Norbert Ladoux
- Gilles Lafforgue
- Stefan Lamp
- Michel Le Breton
- Thomas-Olivie Léautier
- Yassine Lefouili
- Nour Meddahi
- Michel Moreaux
- Céline Nauges
- Manh-Hung Nguyen
- Elena Panova
- Patrick Rey
- Mathias Reynaert
- Arnaud Reynaud
- François Salanié
- David Salant
- Stéphane Straub
- Jean Tirole

Outreach

- Events
 - Contributions to public debate
 - Newsletters
-

Events

TSE Webinar series

• **Climate: the next threat?** *December 16, 2020*



In the midst of the Covid-19 crisis, it is clear that the health of our bodies, economies, and our shared planet are deeply interconnected. December's special edition webinar, brought together TSE climate experts to address current and future threats, and discuss economic solutions to getting public goals, tools and policies right - worldwide - to save the planet, collectively.

During this online event, we also heard news from alumni and students who received TSE funding to launch a project. Team members William L'Heudé, Anaïs Escanes, Jaime Avila Farrar, Vincent Larrieu and Tiphaine Gouraud believe that raising carbon footprint awareness is essential in reducing greenhouse gas emissions. Their free carbon footprint calculator will encourage individuals, businesses and communities to modify their consumption patterns as existing tools are often expensive, fragmented and lacking in methodological transparency. The website is currently under development.

• **The world after Covid-19**, *June 9 & June 22, 2020 (in French)*

In June, as France was easing lockdown measures, TSE organized two webinars to debate the consequences of Covid-19. The first of these online events was open to the general public, another historic step in TSE's efforts to reach beyond the traditional research community.

Various experts including **Zohra Bouamara-Mechemache**, **Catherine Casamatta**, **Christian Gollier**, **Sophie Moinas**, **Paul Seabright** and **Jean Tirole** took the floor to explain some of the unprecedented societal, environmental and economic impacts of the current crisis, as well as suggesting policy solutions. An exclusive webinar was also organized for TSE's partners along similar themes.

• **Energy workshop**, *Universidad Carlos III, Madrid, January 28, 2020*

This workshop gathered energy economists from TSE as well as associate faculties. Nine papers were presented with a broad range of topics including environmental regulation, renewable energy sources, markets and taxes:

- "What is Price Discovery Achieving in the New Zealand Electricity Market?" Estelle Cantillon (*Université Libre de Bruxelles*)
- "(Mis)allocation of Renewable Energy Sources" Stefan Lamp (*TSE*)
- "Technology Neutral versus Technology Specific Regulation" Natalia Fabra (*University Carlos III of Madrid*)
- "Storing Power: Market Structure Matters" David Andres (*European University Institute*)

Find more information on these presentations on page 19 of the [April edition of the Center's newsletter](#).

• **Business talk**, *November 5, 2020*

Floriane Fesquet (*Research program director at EDF*) presented a conference on energy economics "Energy scenarios and carbon neutrality: a holistic approach for the region of Occitanie".

Contributions to public debate

Blog posts

TSE debate gathers opinions and analysis of TSE researchers on topics of high public interest such as electric cars, carbon emissions and renewable energies.

- **The Regulation Sandbox** - Stefan Ambec, Claude Crampes - *December 2, 2020*
- **Barriers to the exit of fossil fuels** - Stefan Ambec, Claude Crampes - *November 9, 2020*
- **Plugging carbon leaks** - Stefan Ambec, Claude Crampes - *October 22, 2020*
- **Betting on hydrogen** - Stefan Ambec, Claude Crampes - *September 14, 2020*
- **Energy efficiency in buildings: from theory to practice** - Stefan Ambec, Claude Crampes - *July 7, 2020*
- **Tesla on the lookout for profitable electrons** - Stefan Ambec, Claude Crampes - *June 2, 2020*
- **Oil during and after lockdown** - Stefan Ambec, Claude Crampes - *May 13, 2020*
- **Water Division** - Claude Crampes, Michel Moreaux - *April 28, 2020*
- **Covid-19: infected electricity markets** - Stefan Ambec, Claude Crampes - *April 15, 2020*
- **The cost of avoiding the carbon tax with standards** - Stefan Ambec, Claude Crampes - *March 31, 2020*
- **The costs of nuclear phase-out in Germany** - Stefan Ambec, Claude Crampes - *February 19, 2020*

Op-Eds

An op-ed, short for "opposite the editorial page", is a written prose piece typically published by a newspaper or magazine which expresses the opinion of an author usually not affiliated with the publication's editorial board.

- **Le bac à sable de la régulation** - Stefan Ambec, Claude Crampes, *La Tribune, December 1, 2020*
- **Barrières à la sortie des énergies fossiles** - Stefan Ambec, Claude Crampes, *La Tribune, November 3, 2020*
- **MAC : un écran de fumée pour cacher le bilan carbone des traités commerciaux ?** - Stefan Ambec, Claude Crampes, *La Tribune, October 10, 2020*
- **Le Pari de l'Hydrogène** - Stefan Ambec, Claude Crampes, *La Tribune, September 10, 2020*
- **Efficacité énergétique des bâtiments : la pratique loin des attentes théoriques** - Stefan Ambec, Claude Crampes, *La Tribune, June 30, 2020*
- **Roulement de batterie chez Tesla** - Stefan Ambec, Claude Crampes, *La Tribune, May 30, 2020*
- **Le partage des eaux** - Claude Crampes, Michel Moreaux, *La Tribune, April 29, 2020*
- **Le pétrole à l'épreuve du confinement** - Stefan Ambec, Claude Crampes, *La Tribune, May 14, 2020*
- **Il faut prendre en considération le rôle de la consommation de viande et l'élevage intensif dans ces nouvelles épidémies** - Nicolas Treich, *Le Monde, March 31, 2020*

Articles

- **L'accord UE-Mercosur risque d'accélérer la déforestation, selon les experts** - Stefan Ambec, *Le Monde, September 17, 2020*
- **Faire payer les Chinois pollueurs, est-ce réaliste ?** - Christian Gollier, *Capital, February 7, 2020*

Podcast

- **Les normes internationales sauveront-elles la planète ?** - Stefan Ambec, *France Culture, September 23, 2020*

Interviews

- **Lundi vert : "S'interroger sur nos habitudes alimentaires n'est pas anecdotique pour l'environnement"** - Nicolas Treich, *20 Minutes, October 4, 2020*
- **Le paradoxe de la viande** - Nicolas Treich, *L'Usine Nouvelle, September 30, 2020*
- **Lundi Vert : est-ce que c'est utile d'adopter le "Lundi Vert" qui bannit viande et poisson ?** - Nicolas Treich, *Grazia, September 28, 2020*
- **Lundi vert : ni viande ni poisson une fois par semaine, les consommateurs vont-ils suivre ?** - Nicolas Treich, *Sud Ouest, September 24, 2020*
- **"Soyons honnêtes, la transition énergétique nous coûtera à tous de l'argent"** - Christian Gollier, *L'Echo, September 13, 2020*

- Climat: "Il est illusoire de penser que les mesures coercitives ne sont pas coûteuses" - Nicolas Treich, *L'Opinion*, June 23, 2020
- La crise renforce la nécessité de relancer le marché du CO2 - Christian Gollier, *L'Agéfi*, June 2, 2020
- Neutralité carbone : des engagements mais des résultats mitigés pour les compagnies pétrolières européennes
Stefan Ambec, *La Tribune*, May 15, 2020
- Climat: les Européens prêts à des efforts, mais sans dépenser plus - Christian Gollier, *La Croix*, March 9, 2020

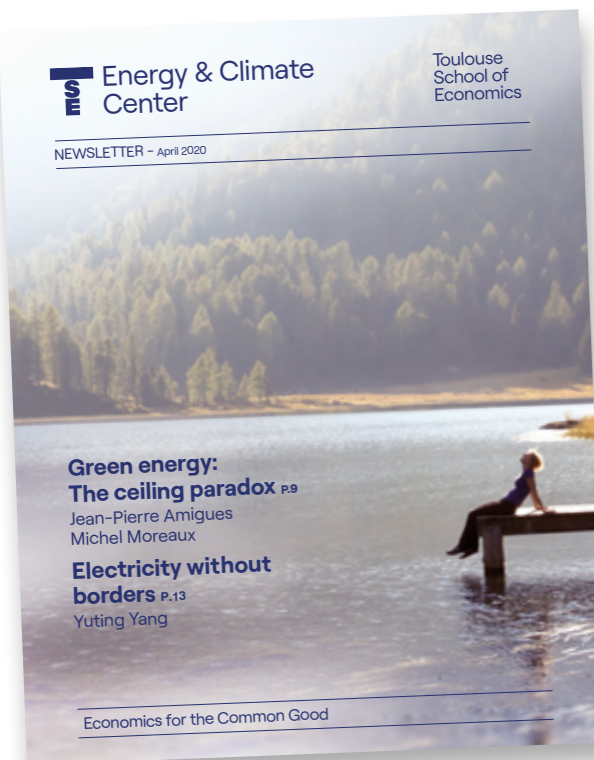
Seminars

Weekly seminars related to environmental issues are organised in Toulouse.

- Stefan Lamp (Toulouse School of Economics), "Energy Tax Exemptions and Industrial Production", *Environment Economics Seminar*, December 7, 2020
- Grischa Perino (University of Hamburg), "Overlapping climate policies", *Environment Economics Seminar*, November 30, 2020
- Massimo Filippini (ETH, Zurich), "Can information about energy costs affect consumers choices? Evidence from a field experiment", *Environment Economics Seminar*, November 23, 2020
- Kathrine Von Graevenitz (ZEW Mannheim), "The Effect of Electricity Network Charges on German Manufacturing Plants", *Environment Economics Seminar*, November 16, 2020
- Mark Freeman (York University -United Kingdom), "Reconciling disagreement on climate change policy", *Environment Economics Seminar*, November 2, 2020
- Cloe Garnache (University of Oslo), "Peak pricing in Norway - A large-scale field experiment", *Environment Economics Seminar*, September 28, 2020
- Francisco Alpizar (Wageningen - University and Research), "Input Efficiency as a Solution to Externalities: a randomized controlled trial", *Environment Economics Seminar*, March 9, 2020
- Knut Einar Rosendahl (Norwegian University of Life Sciences (NMBU)), "Endogenous Emission Caps Always Produce a Green Paradox", *Environment Economics Seminar*, March 2, 2020
- David Hemous (University of Zurich - Switzerland), "Climate Change, Directed Innovation, and Energy Transition: The Long-run Consequences of the Shale Gas Revolution", *Department Seminar*, February 24, 2020

Newsletters

Twice a year, the center publishes a newsletter covering the latest research and analysis of our experts.
If you wish to receive the center news, please send an email to partnership@tse-fr.eu



Publications

- Academic papers
- Working papers

Academic papers

- Christian Gollier, “Les entreprises et la finance face à leurs responsabilités climatiques”, *Revue d'économie financière*, vol. 138, December 2020.
- Céline Bonnet, Zohra Bouamra-Mechemache, Vincent Réquillart and Nicolas Treich, “Viewpoint: Regulating meat consumption to improve health, the environment and animal welfare”, *Food Policy*, vol. 97, n. 101847, December 2020.
- Christian Gollier, “Aversion to risk of regret and preference for positively skewed risks”, *Economic Theory*, vol. 70, n. 4, November 2020, pp. 913–941.
- Anders Bondemark, Henrik Andersson, Anders Wretstrand and Karin Brundell-Freij, “Is it expensive to be poor? Public transport in Sweden”, *Transportation*, vol. 70, October 2020.
- Jihyun Kim and Nour Meddahi, “Volatility Regressions with Fat Tails”, *Journal of Econometrics*, vol. 218, n. 2, October 2020, pp. 690–713.
- Henrik Andersson, Yana Jin and Shiqiu Zhang, “Do preferences to reduce health risks related to air pollution depend on illness type? Evidence from a choice experiment in Beijing, China”, *Journal of Environmental Economics and Management*, vol. 103, September 2020.
- Yassine Lefouili and Joana Pinho, “Collusion between two-sided platforms”, *International Journal of Industrial Organization*, vol. 72, n. 102656, September 2020.
- Andrea Attar, Thomas Mariotti and François Salanié, “The Social Costs of Side Trading”, *The Economic Journal*, vol. 130, n. 630, August 2020, pp. 1608–1622.
- Bård Harstad, “Technology and Time Inconsistency”, *Journal of Political Economy*, vol. 128, n. 7, July 2020, pp. 2653–2689.
- François Salanié and Nicolas Treich, “Public and private incentives for self-protection”, *The Geneva Risk and Insurance Review*, vol. 45, n. 2, July 2020, pp. 104–113.
- Meng-Wen Tsou, Jin-Tan Liu, James K. Hammitt, Chyi-Horng Lu and Szu-Yu Zoe Kao, “The Effect of Prenatal Exposure to Radiation on Birth Outcomes: Exploiting a Natural Experiment in Taiwan”, *Japanese Economic Review*, vol. 71, n. 3, July 2020, pp. 379 – 403.
- Estelle Midler, Marianne Lefebvre and Philippe Bontems, “Adoption of environment-friendly agricultural practices with background risk: experimental evidence”, *Environmental and Resource Economics*, vol. 76, May 2020, pp. 405–428.
- James K. Hammitt, P. Morfeld, J.T Tuomisto, and T.C Erren, “Premature Deaths and Statistical Lives: Identification, Quantification, and Valuation of Mortality Risks”, *Risk Analysis*, vol. 40, n. 4, April 2020, pp. 674–695.
- Stéphane Straub and Julia Bird, “The Brasilia Experiment: The Heterogeneous Impact of Road Access on Spatial Development in Brazil”, *World Development*, vol. 127, March 2020.
- Cécile Aubert, and Arnaud Reynaud, “Does flood experience modify risk preferences? Evidence from an artefactual field experiment in Vietnam”, *The Geneva Risk and Insurance Review*, vol. 45, n. 1, March 2020, pp. 36–74.
- Céline Nauges and Jean-Paul Chavas, “Uncertainty, learning and technology adoption in agriculture”, *Applied Economic Perspectives and Policy*, vol. 42, n. 1, March 2020, pp. 42–53.
- Marco Battaglini and Bård Harstad, “The Political Economy of Weak Treaties”, *Journal of Political Economy*, vol. 128, n. 2, February 2020, pp. 544–590.

Working papers

- Romain Espinosa and Nicolas Treich, “Moderate vs. Radical NGOs”, *TSE Working Paper*, n. 20-1159, November 2020.
- Brian Love, Yassine Lefouili and Christian Helmers, “Do Standard-Essential Patent Owners Behave Opportunistically? Evidence from U.S. District Court Dockets”, *TSE Working Paper*, n. 20-1160, November 2020.
- Claude Crampes and Thomas-Olivier Léautier, “White certificates and competition”, *TSE Working Paper*, n. 20-1167, November 2020.
- Michel Moreaux and Jean-Pierre Amigues, “Energy Conversion Rate Improvements, Pollution Abatement Efforts and Energy Mix: The Transition toward the Green Economy under a Pollution Stock Constraint”, *TSE Working Paper*, n. 1157, November 2020.
- Emmanuelle Lavaine, Philippe Majerus and Nicolas Treich, “Health, air pollution and animal agriculture”, *TSE Working Paper*, n. 20-1158, November 2020.
- Matti Liski and François Salanié, “Catastrophes, delays, and learning”, *TSE Working Paper*, n. 20-1148, September 2020.
- Jean-Pierre Amigues, Ujjayant Chakravorty, Gilles Lafforgue and Michel Moreaux, “Comparing volume and blend renewable energy mandates under a carbon budget”, *TSE Working Paper*, n. 20-1138, August 2020.
- Stefan Ambec, “Environmental markets exacerbate inequalities”, *TSE Working Paper*, n. 20-1120, July 2020.
- Stefan Ambec and Philippe De Donder, “Environmental Policy with Green Consumerism”, *TSE Working Paper*, n. 20-1124, July 2020.
- Gilles Lafforgue and Etienne Lorang, “Recycling under environmental, climate and resource constraints”, *TSE Working Paper*, n. 20-1125, July 2020.
- James K. Hammitt, “Accounting for the distribution of benefits & costs in benefit-cost analysis”, *TSE Working Paper*, n. 20-1116, June 2020.
- Doh-Shin Jeon and Yassine Lefouili, “Decentralizing Cooperation through Upstream Bilateral Agreements”, *TSE Working Paper*, n. 20-1119, June 2020.
- Christophe Bontemps, Douadia Bougherara and Céline Nauges, “Do Risk Preferences Really Matter? The Case of Pesticide Use in Agriculture”, *TSE Working Paper*, n. 20-1095, May 2020.
- Jihyun Kim and Nour Meddahi, “Volatility Regressions with Fat Tails”, *TSE Working Paper*, n. 20-1097, May 2020.
- Stefan Lamp and Mario Samano, “(Mis)allocation of Renewable Energy Sources”, *TSE Working Paper*, n. 20-1103, May 2020.
- Douadia Bougherara, Lana Friesen and Céline Nauges, “Risk Taking with Left - and Right-Skewed Lotteries”, *TSE Working Paper*, n. 20-1085, April 2020.
- Kelly Fielding, Céline Nauges and Sarah Ann Wheeler, “The relationship between country and individual household wealth and climate change concern: The mediating role of control”, *TSE Working Paper*, n. 20-1086, April 2020.
- Stefan Ambec and Claude Crampes, “Real-time electricity pricing to balance green energy intermittency”, *TSE Working Paper*, n. 20-1087, April 2020.
- Marianne Lefebvre, Estelle Midler and Philippe Bontems, “Adoption of environmentally-friendly agricultural practices with background risk: experimental evidence”, *TSE Working Paper*, n. 20-1079, March 2020.
- Elisabetta Iossa, Simon Loertscher, Leslie Marx and Patrick Rey, “Collusive Market Allocations”, *TSE Working Paper*, n. 20-1084, March 2020.
- Marie-Laure Allain, Claire Chambolle, Patrick Rey and Sabrina Teyssier, “Vertical Integration as a Source of Hold-up: an Experiment”, *TSE Working Paper*, n. 20-1062, January 2020.

The TSE Centers showcase research and academic activities, supporting Toulouse experts in their efforts to build new analytical tools to meet contemporary challenges.

The three existing centers are the Digital Center, the Energy and Climate Center and the Sustainable Finance Center.

Bringing together the skills and experience of leading industrial and academic partners, the centers are created around wide, overreaching topics with the scope to cover a range of industrial and policy issues affecting society at all levels.

Donors



Research project sponsors

- Electricité de France (EDF)
- Engie
- GRDF
- Réseau de transport d'électricité (RTE)