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A systemic approach to the energy transition in Europe



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Science Advice for Policy by European Academies



SAPEA has received funding from the EU's Horizon 2020 research and innovation programme under grant agreement number 737432.

Working group members

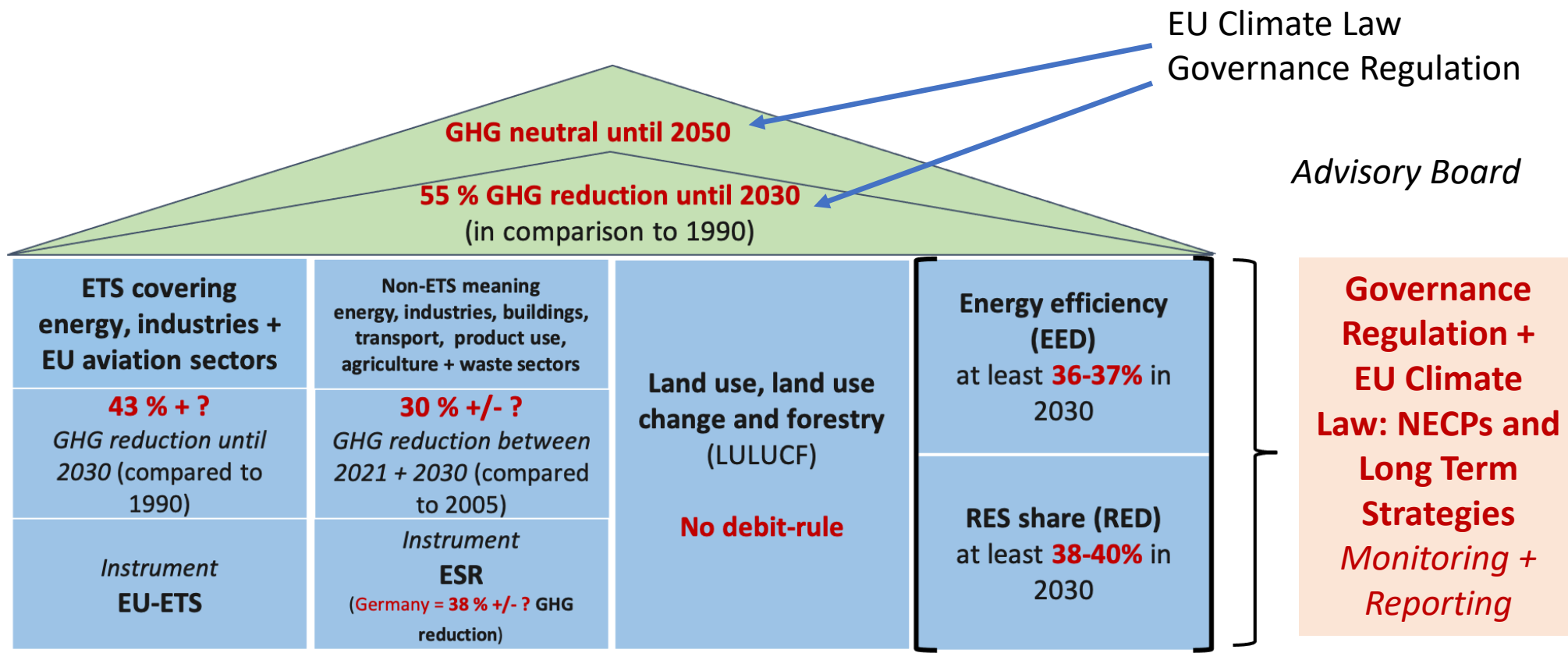


- Carlos Alejandre**, Director, Centre for Energy, Environment and Technology Research, Spain
- Ronnie Belmans**, Professor, KU Leuven, Belgium & EnergyVille
- Pantelis Capros**, Professor, National Technical University of Athens, Greece
- Frank Carré**, Scientific Director, Alternative Energies and Atomic Energy Commission, France
- Ottmar Edenhofer**, Professor, Potsdam Institute for Climate Impact, Mercator Research Institute on Global Commons and Climate Change, Technical University Berlin, Germany
- Ana Estanqueiro**, National Laboratory for Ecology and Geology, Portugal
- Lidia Gawlik**, Professor, Mineral and Energy Economy Research Institute of the Polish Academy of Sciences, Poland
- Filip Johnsson**, Professor, Chalmers University of Technology, Sweden
- Andreja Kutnar**, Professor, University of Primorska & InnoRenew CoE, Slovenia
- Andreas Löschel**, Professor, University of Münster, Germany
- Peter Lund**, co-chair (until 11 May 2021) and chair (after 11 May 2021), Professor Aalto University, Denmark
- Marianne Ryghaug**, Professor, Norwegian University of Science and Technology
- Alessandra Sanson**, National Research Council, Italy
- Sabine Schlacke**, Professor, University of Münster, Germany
- Christoph Schmidt**, co-chair (until 11 May 2021), Professor, Leibniz Institute for Economic Research, Germany
- Benjamin Sovacool**, Professor University of Sussex, UK and Aarhus University, Denmark
- Goran Štrbac**, Professor, Imperial College London, UK
- Diana Urge-Vorsatz**, Professor, Central European University, Hungary
- Brian Vad Mathiesen**, Professor, Aalborg University, Denmark
- Richard van de Sanden**, Professor, Eindhoven University of Technology, Netherlands

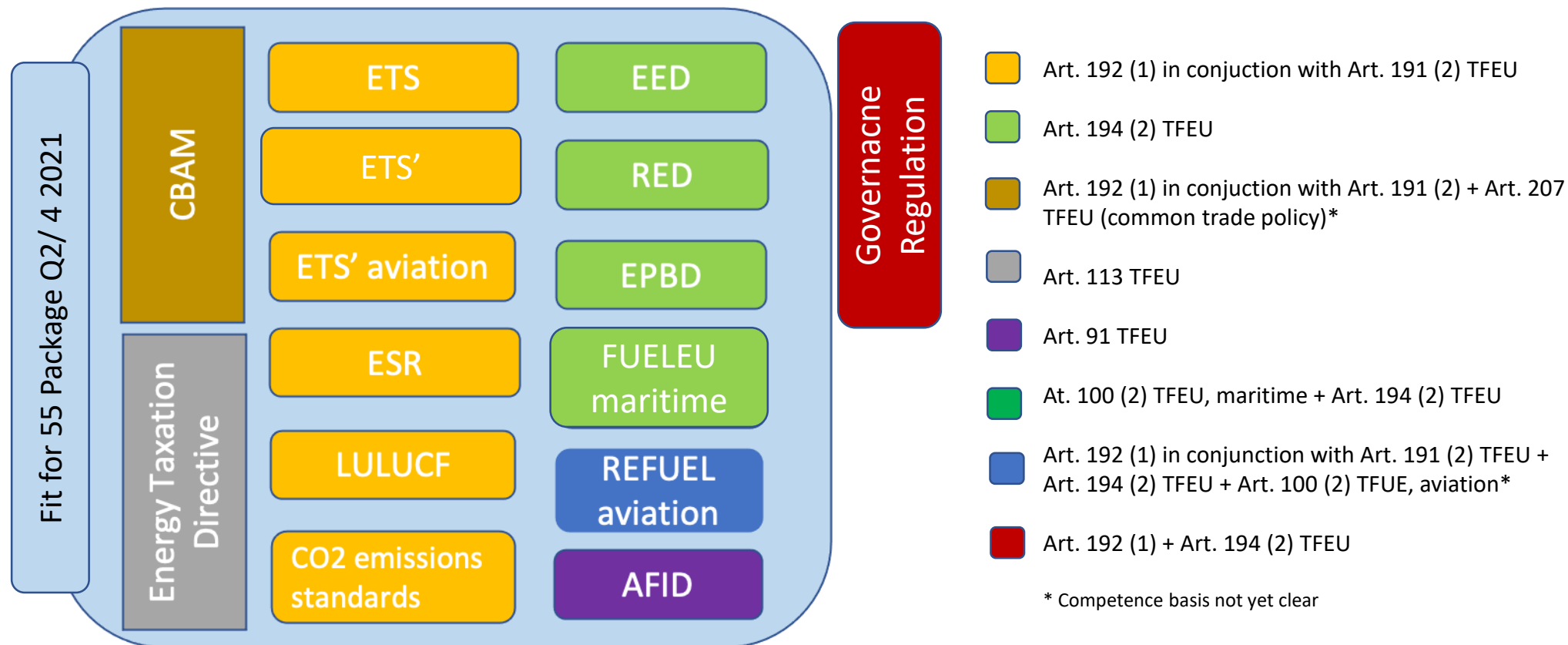


Challenges by European Climate Law and the revised Governance Regulation

Raise of Ambition



Fit for 55-package





| | REGULATION | Inconsistent MIXED | Consistent MIXED | PRICES |
|----------------------------------|--------------|--------------------|------------------|--------------|
| Effectiveness | | | | |
| Consistency | intermediate | low | intermediate | high |
| Control of implementation | low | intermediate | intermediate | high |
| Transformative potential | | | | |
| Enforcement mechanism | intermediate | intermediate | intermediate | high |
| Mindset | high | intermediate | intermediate | high |
| Economic efficiency | | | | |
| Coordination | low | low | intermediate | high |
| Information-gathering | low | low | intermediate | high |
| System compatibility | | | | |
| Competitiveness | low | low | intermediate | high |
| Social balance | intermediate | intermediate | intermediate | intermediate |
| Political feasibility | | | | |
| Procedural barriers | low | intermediate | intermediate | low |
| Path dependencies | low | intermediate | intermediate | low |

Table 2. Assessment of the regulatory philosophies implied by the European Commission's impact assessment. The table assesses the three principal regulatory philosophies being reflected in the impact assessment's scenarios REG, MIX, and CPRICE, according to the set of criteria discussed in the text of the present report. It incorporates elements of the corresponding table in Knodt, Pahle et al. (2020, p. 9), but also partially deviates from it.



Economic and regulatory aspects of the energy transition: Assessment Criteria

- Effectiveness:** achieving the EU climate targets consistently and controlled
- Transformative potential:** enabling a system-wide transformation and enforcement and behavioural change
- Economic efficiency:** achieving climate targets at the lowest costs, coordination and avoidance of information deficits
- System compatability:** legal coherence, avoidance of carbon leakage and maintaining a social balance
- Political feasibility:** procedural hurdles/path dependencies

6 Policy Options

1. **Shaping an effective and efficient regulatory strategy**
2. **Supporting technical innovation**
3. **Geopolitical perspective remains important**
4. **Strong system integration key for expanding electrification**
5. **Technology diversity should be maintained**
6. **Policy must stimulate behaviour alongside technology**



Thank you for your attention!

- ❑ **SAPEA (2021): Evidence review report “A systemic approach to the energy transition in Europe”**
<https://www.sapea.info/wp-content/uploads/energy-transition-report.pdf>
- ❑ **Knodt, Pahle et al. (2020): Ariadne-Kurzdossier: Wegmarken für das EU-Klimaziel 2030. Versteckte Risiken und Chancen der Szenarien der EU-Kommission für den Pfad zur Klimaneutralität**
<https://ariadneprojekt.de/publikation/wegmarken-eu-klimaziel-2030/>
- ❑ **Sabine Schlacke, Miriam Köster, Helen Wentzien und Eva-Maria Thierjung (2021): Kursänderung der EU: Verschärfung der Klimaschutzziele, EnWZ, 7-13**
<https://beck-online.beck.de/?vpath=bibdata%2fzeits%2fENWZ%2f2021%2fcont%2fENWZ%2e2021%2eH0102%2eNAMEINHALTSVERZEICHNIS%2ehtm>
- ❑ **Sabine Schlacke, Michèle Knodt (2019): The Governance System of the European Energy Union and Climate Action, JEEPL 16 (4), 323 -339, DOI: [10.1163/18760104-01604002](https://doi.org/10.1163/18760104-01604002)**