CEO Alliance for Europe's Recovery, Reform & Resilience: our contribution to the EU Green Deal and our support to the Fit for 55 Package

Who we are – a cross-industry Action Tank with full commitment to climate neutrality

The **CEO Alliance for Europe's Recovery, Reform, and Resilience (R3) is** a group of leading European companies representing different industries. We and our **1.7 million employees** all **stand ready to strongly support** the **European Union's Recovery Plan "Next Generation EU" (NGEU)** to kick-start the economies in short-term, but also prepare for the longer-term transformation to build a more resilient, digitalized, prosperous and sustainable Europe for future generations. In particular, we **support ambition climate targets of the European Union,** achieving **carbon neutrality by 2050** and a GHG emission reduction of **at least minus 55% by 2030.**

The CEO Alliance is convinced that **these targets are necessary and achievable.** In this regard, the **Fit for 55 package is a unique opportunity** to review and evolve EU's major regulatory strategies, frameworks and instruments, to ensure the achievement of the EU's climate objectives. In particular, subsidies that support legacy technologies with high CO_2 emissions have to be phased out rapidly.

Overall, we encourage the EU Commission to maintain the **high ambition level** (avoid watered-down compromises), take **courageous decisions** (maintain big picture and win support of citizens) and ensure **consistency** (avoid getting lost in technical details, avoid establishing conflicting instruments). In particular, we recommend to win support of all major industry sectors and support to the transformation of Southern and Eastern Europe. Overall, we suggest to shape the transformation towards climate neutrality in an efficient and economical way, to protect vulnerable EU citizens and to enable large-scale investments of zero carbon technologies, in particular in renewable power generation.

Our support to main strategies and instruments of the Fit for 55 Package

The **CEO Alliance's unique contribution** is a European-wide **cross-industry view,** a **high ambition level** on decarbonization and a **strong focus on implementation.** Consequently, we offer our support to policy leaders to overcome obstacles that might emerge from separated sector perspectives. For these **main strategies and instruments of the Fit for 55 Package, the CEO Alliance provides a strong partnership** as follows. In addition, we will contribute on implementation in separate papers as basis for discussion.

- **EU ETS and carbon pricing:** We are convinced that a **strong carbon price signal is one key instrument** to achieve the EU's climate targets. As fundamental system, we recommend emission cap-and-trade schemes, building on the existing EU ETS (for power and heavy industry) and step by step **implement further sector-specific cap-and-trade systems**, e.g. for the mobility & transport sector, and for the buildings sector. In the short-term, these systems should/ could be separate to account for sector-specific challenges – with **convergence towards a unified system in the long run, from 2030 onwards.** In all systems, we support a strict tightening of the cap on GHG emissions, to provide strong carbon price signals to all stakeholders (businesses and end customers). We also see the need for **accompanying instruments,** in particular in sectors whose carbon-neutral technological options are still immature and, hence, have high abatement costs.

- **Mobility and Transport:** We are convinced that battery electric vehicles will be the dominating technology for passenger cars within the end of the decade, and in the mid- to long-term also for light and heavy duty vehicles. The rapid build-up of charging infrastructure across Europe will be one key success factor – and several members the CEO Alliance contribute with individual investments, joint endeavors, in particular in Southern Europe. In addition, carbon pricing is a key instrument to improve competiveness of BEV in comparison to ICE (see above: "EU ETS and carbon pricing"). For aviation and shipping, we see advanced synfuels and biofuels as main carbon neutral energy carrier.
- **Renovation Wave:** We support the acceleration of the **sustainable transition,** including decarbonization, of the **buildings stock,** via an ambitious target for the renovation rate (at least triple to today) and clear targets on renovation depth (EU-wide Energy Performance Certification System). We also recommend ambitious **standards for new-builds**, e.g. energy efficiency, renewables and sustainable materials (incl. embedded carbon). We are convinced that the EU should accelerate the replacement of fossil-fuel heating, by rapid roll-out of electric heat pumps, district heating, digital solutions or other, whichever is the most sustainable and most efficient option (e.g. targets to increase renewable energy usage by 1.3% p.a.).
- **Energy System Integration:** The decarbonization of the economy should be based on the energy efficiency first principle, and on flexibility solutions in all sectors to integrate fluctuating electricity generation from wind and solar. Wherever possible, we support direct electrification of final energy consumption, like heating and cooling of buildings, and mobility and transport, regarding the dimensions of energy efficiency, cost competitiveness and climate neutrality. We recommend to build the future energy system mainly on renewables, in particular solar and wind.

Main areas for the transformation and top ten policy recommendations

The CEO Alliance is truly an "Action Tank": The CEO Alliance members have already pledged to invest **more than EUR 100 billion over the next ten years in their respective decarbonization roadmaps** to help reach these targets. We offer our support to the EU institutions by sharing insights from cross-sector projects and by realizing visible opportunities for sustainable investments and job creation along three main areas:

- **Accelerating the energy transition and electrification, based on renewables**
- **Building up infrastructure(s) for a climate neutral economy**
- **Industrializing and championing key technologies**

This will also include targeted deployment of **financial resources,** e.g. from the **EU Recovery Fund and the EU Green Deal** to build production facilities in particular in regions affected by the transition away from carbon-intense industries and also to contribute to a "level playing field" with global players.

Accelerating the energy transition and electrification

1. **More renewables and faster coal exit – decarbonize power generation by boosting renewables and rapidly phase out coal plants:** In order to reach the required net growth in renewables, we would suggest to review and accelerate the EU Member States' NECPs (National Energy and Climate Plans) and to revise the **Renewable Energy Directive** (regarding targets and investment

frameworks), in order to promote renewable power generation, in particular Photovoltaics, wind onshore and wind offshore**.** For that, we recommend to

a. ensure rapid growth by various (market oriented) instruments, e.g. setting tenders with ambitious annual volumes (on national level), fostering long-term PPAs (for private and public customers);
b. accelerate and streamline permission processes (incl. alignment between EU and national levels) and to remove national obstacles (e.g. restrictive distance rules for wind in Germany);
c. aim for an ambitious, accelerated phase-out of coal plants in all Member States, i.e. shut down of ~105 GW by 2030 (70% of today's capacity), e.g. by strong price signals in the EU ETS or by tangible actions for transformation
d. evolve the power market designs towards the integration of wind and PV, but also demand side management, e-mobility, electricity, heat or green gas storage, and back-and-force conversion between power, heat and other energy carriers, where and when contributing to the optimization of the system

2. **Electrification of everything – promote and accelerate electrification based on affordable renewable power:** In order to anchor electrification, we encourage to remove today's barriers and to ensure competitiveness of renewable electricity compared to other energy sources and carriers. We recommend to evolve the **Renewable Energy Directive** (e.g. introducing specific targets for direct electrification), reform **(energy) taxes and charges at EU and national level,** e.g. reduce taxes and charges unrelated to supply costs (e.g. VAT rates in some countries), enable internalization of external environmental cost, and also improve permitting framework/ processes
3. **Sustainable and healthy living – reform the buildings sectors towards sustainable, healthy, and smart buildings and cities:** We support the EU Renovation Wave as well as other policies contributing to green and sustainable buildings (e.g. revision and evolution of regulations on energy efficiency and distributed renewable energy). We recommend to develop an ambitious policy roadmap at EU level to accelerate and scale-up the deployment of (often existing) solutions and technologies, amongst others by
    a. putting electrification of energy operations of buildings (in particular heating and cooling) taking into account energy efficiency and costs on infrastructure and system level
    b. accelerating an ecosystem perspective and life cycle approach (from materials, construction to lifetime and digital tools), by introducing regulatory standards and financial incentives, by unlocking private investments (e.g. bankable efficiency projects and public traded energy efficiency funds), by promoting sustainable buildings products and by establishing a wider scope of indicator, incl. health and well-being aspects
    c. supporting system-optimal solutions by targeted approaches for specific local conditions, and by removal of systemic barriers, e.g. complex landscape of owner-user dilemmas and today's levies and taxes, and by accelerating the integration of e-mobility solutions

Building up infrastructures for a climate neutral economy

4. **Smart Grids – strengthen, expand and evolve power grids:** We and the EU's climate neutral economy rely on a strengthened EU electricity grids (the backbone), both on transmission and distribution level. Special focus should be on a more resilient and digital distribution networks to enable energy transition and to empower customers; for that, we propose to accelerate, simplify and smooth permission processes and foster deployment of digitalization and innovative technologies (e.g. smart meters), ensuring adequate investment remuneration and promoting incentive schemes
5. **Electrification of transport of people and goods – scale up charging infrastructures for passenger cars, buses, and trucks:** We propose to consider electrification as key option for green mobility and transport. In particular, for the electrification of heavy duty transport, we would like to discuss a suitable funding for pilots and scale-up of mega-charger and catenary infrastructure to electrify key transport corridors.
6. **Green Hydrogen infrastructure – build up infrastructure for deployment in heavy industry first ("industrial valleys") and, if needed, also in other sectors:** Develop suitable approaches for infrastructure investments and operations (establish adequate frameworks, conduct no-regret analysis and avoid stranded assets).

Industrializing and championing key technologies

7. **Battery production in Europe for Europe – develop a globally competitive battery industry:** We suggest to "go bold on batteries in Europe", since they are key for mobility, transport and power – experts see the need to increase battery production capacity to 750 GWh p.a. by 2030.
8. **Technology leadership in renewables – (re)build and strengthen sustainable manufacturing:** We propose to discuss a strategic approach on value creation and re- and near-shoring in sustainable manufacturing in power generation technologies. The EU could consider to reclaim its initial technology leadership in the PV manufacturing industry and to strengthen its competence in wind component manufacturing. In this context, approaches to focus either on key steps (e.g. silicon production for PV) or cover the full value chain should be discussed.
9. **Technology leadership in green hydrogen production – build and scale electrolyzer manufacturing:** We propose to anchor green hydrogen as key success factor to decarbonize sectors where electrification reaches its limits. Hence, we recommend that Europe should "aim high for green hydrogen" and industrialize manufacturing of future green hydrogen/ electrolyzer technologies, by financial support for research, development, demonstration, and deployment of new technologies at scale. This would yield a "double dividend": ensuring the decarbonization of steel and chemical industries, and offer export opportunities of zero carbon technologies.

- **Digital and smart technologies – do it, but digital:** In our view, digital solutions and infrastructure (5G) are indispensable, contributing to smart energy distribution, advanced mobility and transport solutions, management of buildings and carbon tracking and monitoring. In order for Europe to reach high speed connectivity, we recommend a 'Digital Deal' for Europe, in particular, discussing the following potential elements:
    - Develop and implement a digital manufacturing strategy in all industrial sectors of the EU economy to enable sustainability and decarbonization;

- Develop European performance indicators to measure decarbonization achieved through digital technology use along the entire value chain and product lifecycle;
- Ensure public funding for development, piloting and scaling of zero emission innovation, e.g. digital technologies, circular economy/ circular design;
- Anchor impact assessments as key element in developing new policy initiatives and regulations, regarding their contribution to the EU's transformation towards climate neutrality, resilience, prosperity, and digitalization.

The transformation towards climate neutrality – momentum for Europe, and the world

We, as members of the CEO Alliance for Europe's Recovery, Reform and Resilience, firmly believe that the **EUGD and NGEU** will put Europe's innovation and business ingenuity to the service of the global climate cause, will kick-start a **wave of investments into sustainability** and resilience and **will create future-proof jobs across the EU,** across entire value chains and with increasing cross-sector collaboration. This is substantiated by experts' estimations on the scale of the transition to climate neutrality by 2050: this would require massive **investments of EUR ~1 tn p.a. between now and 2050, summing up to EUR ~30 tn in total**. Nevertheless, it will be manageable, with additional EUR 180 bn investments p.a. compared to the average annual capital spending of EUR 800 bn and will create **net gains in employment of ~5 mn jobs.**

Consequently, we as Alliance **jointly implement pan-European Joint Projects** with strong emphasis on **cross-sector collaboration and ecosystems.** We have **kick-started several pan-European Joint Projects:** Cross-EU charging infrastructure for heavy duty trucks, Integration of EU Power systems, in particular grids, Digital carbon footprint tracking, Sustainable healthy buildings for the future of work and living, E-buses for Europe, Green hydrogen value chain, and Rapid build-up of battery production. We plan to **deliver first results** and **discuss implementation** with high level EU representatives in a joint summit **in September 2021.** Further projects are in preparation, e.g. on steel, sustainable finance and circular economy.

The **transformation to net zero carbon** is **a global endeavor:** Beyond the EU Green Deal, we see political and legal **momentum all over the world:** From the verdict of the German Federal Constitutional Court on the need to sharpen the "Climate Protection Law" and the commitment to reach carbon neutrality already by 2045, the U.S. Green Deal to re-entry into Paris climate agreement and to reach 100% clean energy economy and net zero emissions by 2050, and China's commitment to carbon neutrality before 2060.

Björn Rosengren

Thierry Vanlancker

Francesco Starace

Leonhard Birnbaum

Börje Ekholm

Henrik Henriksson

Ignacio Galán

Frans van Houten

Christian Klein

Christian Levin

Jean-Pascal Tricoire

Herbert Diess