



## Infrastructure for high amounts of green gas projected to be a third more expensive than for energy efficiency and smart electrification

**Building the infrastructure to decarbonise the EU's energy system by 2050 through large amounts of green gas is projected to be up to 36% more expensive than through energy efficiency and smart electrification, even in European countries with a cold climate, according to "Towards fossil-free energy in 2050" (1), a new report launched today.**

The report, conducted by Element Energy and Cambridge Econometrics, and commissioned by the European Climate Foundation, finds that fossil-free energy systems in Europe by 2050 are feasible in different configurations and can come with benefits from a socioeconomic point of view compared to a current policies baseline:

- **1.8 million additional jobs could be created by 2050.** The report does find large structural shifts between sectors, away from fossil-fuel reliant industries towards electrical engineering and manufacturing. Efforts will need to be made to ensure workers are retrained for quality jobs in the growth sectors of the future.
- **European families, aggregated across Europe, could save up to €23 billion in energy spending;**
- **A 2.1% boost to EU GDP.**

The key is to unlock building renovations and smart electrification of road transport and heating sectors as these bring important benefits compared to passive and inefficient energy systems:

- **A 54% reduction in thermal back-up needs;**
- **Renewables curtailment drops by 70% in total;**
- **22% lower infrastructure investment as building renovations reduce peak energy demand in buildings.**

The report provides a practical guide to fossil free energy systems by 2050 as part of the European Net Zero Economy goal.

## QUOTES

**Laurence Tubiana, CEO of the European Climate Foundation:**

“The debate is no longer about whether Europe can be climate neutral by 2050 but about how we get there. It is time to make clear choices towards fossil free energy systems in Europe. The “Europe we want” is one that protects its citizens from global threats such as climate change, helps them take back control of their lives but also that reaps the economic and social benefits of the zero-carbon transition.”

**Lisa Fischer, Senior Policy Adviser at E3G:**

“The EU can now confidently move from scenarios to choices towards a zero carbon energy system. This is indispensable for a well-managed and just transition – and the agenda is clear: Protecting consumers by prioritising investments in efficiency and active demand and avoiding investments in unabated fossil infrastructure. Build investor confidence through an unambiguous renewables and smart electrification agenda reflected in an updated assessment of EU infrastructure needs. Strengthen the EU’s competitiveness by supporting innovative, climate-neutral technologies for solving continuing challenges like seasonal storage.”

**Benjamin Denis, Advisor at the European Trade Union Confederation:**

“The report rightfully and importantly refers to the need for a more comprehensive “just transition” strategy for all affected sectors of the economy. The transition to a Net Zero Economy will impact regions and workers above and beyond the coal mining sector. Dedicated efforts must be made to ensure workers have the skills needed for high-quality, well-paid jobs in the growth sectors of the future.”

The full energy system modelling results for the archetypes studied, as well as the cost assumptions used are available for download here:

- [Cost assumptions](#)
- [Archetype Modelling results](#)

## Contacts

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