

Scaling the 4 I's of Energy Efficiency

In Spring 2015 the European Union (EU)'s Energy Union Framework prioritised energy efficiency with the "Energy Efficiency First" (EE1st) principle as a key pillar to delivering a secure, low-carbon energy future for Europe. This ambition signifies the collective political impact of the European Climate Foundation (ECF)'s grantees and partners. However, the aspiration alone is insufficient to reduce energy demand in Europe. Success ultimately depends on the political leadership and technical and financial capacity of EU Member States.

Translating Europe's significant energy savings potential into real, delivered savings on the ground is complex and lagging. For example, efficiency renovation rates in the buildings sector, estimated at 1%, need to be tripled along with the renovation depth in order to reach Europe's greenhouse gas emissions reduction ambition. This potential requires an estimated €200 bn per year and at least a doubling of current investment levels.

A challenge of this magnitude necessitates concerted effort at all levels:

- A target, which specifies ambition, to serve as an organising framework under which policies, programmes, and measures are designed and coordinated.
- Political resources and stakeholder dialogue to support effective implementation and compliance.
- An integrated approach that internalises energy efficiency within the decision-making structures around energy security and energy system design.
- Removal of public and private sector disincentives to investment.
- Innovation to overcome the hassle and lower the costs of delivering deep, whole-building energy efficiency improvements.

While the ECF has supported coordinated activities on targets for many years, it has increasingly given more attention and resources to the other four points. More action is needed to realise significant scaling of energy efficiency.

Implementation

The EU has an overarching target and comparably extensive Directives, such as the Energy Performance of Buildings Directive (EPBD), the Energy Efficiency Directive (EED), and the Ecodesign and Energy Labelling Framework Directives. ECF grantees and partners monitor and evaluate Member State progress on implementation — highlighting leaders and laggards, and identifying scalable best practices. The ECF also supports efforts to ensure that energy efficiency becomes or remains a political priority by linking its benefits to national concerns, such as energy security, energy system decarbonisation, employment, air quality and fuel poverty. For example, air quality has become a catalyst to develop new energy efficiency financing programmes in Poland thanks to ECF grantees.

Integration

The EU's political commitment to an EE1st principle signals emerging political consensus around the critical role of energy efficiency as a driver of energy security and a foundation stone of the Energy Union. However, EE1st will not be achieved via the current governance regime. In addition to the EED, EPBD and Ecodesign, energy efficiency and its benefits need to be inserted in, and aligned across, many other areas. Examples include energy system planning, modelling assumptions, energy policy design, energy regulator mandates, budgeting and accounting standards, and public procurement rules. ECF grantees highlighted the impact on EU policy making of the high discount rate applied specifically to energy efficiency measures in the European Commission's model of the energy system. As a result, the European Commission agreed to use a lower discount rate that is on par with energy supply measures. This reduces the

relative costs of greater energy efficiency investment. The objective of the ECF will be to think beyond the current energy efficiency measures and near-term political cycle to propose a governance regime that coherently enables the scaling of energy efficiency improvements in the European economy.

Investment

The Energy Efficiency Financial Institutions Group (EEFIG), a group of 120 participants representing financial institutions, manufacturers, service providers and policy experts convened by the European Commission and the United Nations Environment Programme Finance Initiative (UNEP FI), produced a report in early 2015 detailing the long list of drivers that need to be addressed to scale both the supply and demand for investments in energy efficiency. Based on the group's recommendations, the ECF and its partners are tracking ongoing efforts at EU level and identifying the remaining gaps. For example, analysis was commissioned to better understand how accounting standards create disincentives for energy efficiency investments and hinder the development of the energy efficiency services market. The ECF also replicated the EEFIG process at the national level, convening financial institutions and policy experts in Bulgaria, France, Germany, Poland and Spain to better understand at a more granular level how the specific investment drivers vary across different economic, social and cultural contexts.

Innovation

Energy efficiency investments are particularly important for the European building stock. A study commissioned by the ECF in 2015 identified promising innovation opportunities, such as industrialised building processes, new, higher performance materials, smart home technologies, and reusable or recyclable building materials. However, these innovations are not penetrating at sufficient scale or speed especially for the existing building stock. The building sector value chain is diverse, highly fragmented, and characterised by a large number of small businesses. Scaling the rate and depth of energy efficiency improvements requires an industrialised approach to organising the building retrofit market, and needs to include not only the construction sector but also financial and delivery services. This type of coordination will not happen without careful management. Therefore, the ECF is convening stakeholders with experience in deploying innovative technologies and services to discuss key components of a comprehensive and industrialised building retrofit market. Furthermore, it is supporting the replication of innovative approaches such as the Energiesprong, a Dutch model to renovate the social housing stock to net-zero energy standards, to better understand how to overcome the large variance of structural contexts across EU Member States.

Implementation, integration, investment and innovation represent four key pillars of the ECF energy efficiency work. Success requires not only a strategic vision but also a sustained effort to foster leadership, multi-stakeholder engagement, and technical capacity over the long-term. Based on the work in 2015, the ECF continues to engage to ensure energy efficiency is seen as a highly effective pathway to increase European competitiveness and energy supply independence while affordably reducing greenhouse gas emissions and protecting human and environmental health.

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