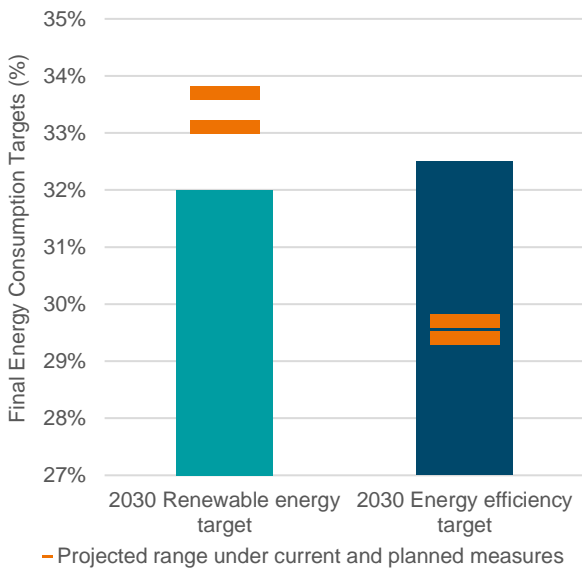


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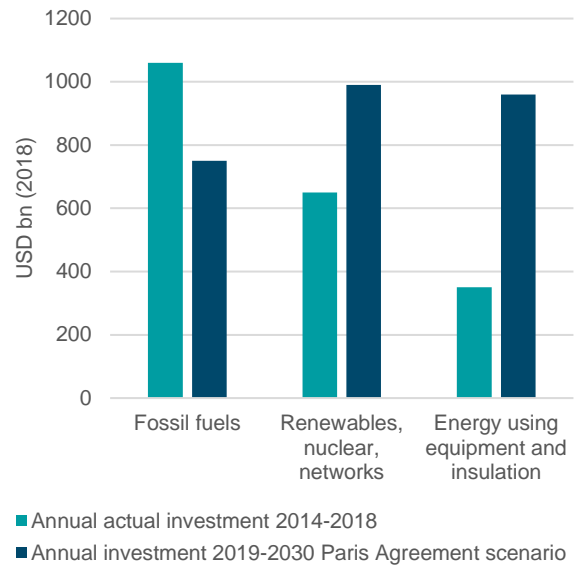
October 2020 / Infrastructure Update

# Sustainable Energy Trends: Small is Beautiful

EU'S 2030 RENEWABLE ENERGY AND ENERGY EFFICIENCY TARGETS AND PROJECTIONS



IEA: ADDITIONAL ENERGY INVESTMENT NEEDS



Source: DWS, European Commission "National Energy and Climate Plans: Member State contributions to the EU's 2030 climate ambition" as at September 2020, IEA, November 2019. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

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## Key highlights

- **A Carbon-Intensive Past:** In 1973, a year marked by the occurrence of the oil crisis, the global economy was mainly powered by centralised, large-scale, fossil fuel-based technology. In the same year, “Small Is Beautiful”, a book published by the economist E.F. Schumacher, appeared somewhat atypical to many, as it presented the idea of an economic model based on sustainable, small-scale, decentralised energy technologies.
- **A Sustainable, Decentralised Future:** Today, sustainability is increasingly at the center of the political and investors’ agenda, and Schumacher’s vision appears to be coming true, as investments in small-scale renewables and energy efficiency technologies are growing, supporting the transition to a low carbon economy. A recent survey of central bankers and finance officials sees energy efficiency as a key area of investment to stimulate the economy.<sup>1</sup>
- **Ambitious Sustainability Goals:** Sustainability standards are rapidly becoming more ambitious. For instance, nearly 1,000 private and listed companies are committed to science-based emissions reduction targets.<sup>2</sup> This trend is supporting demand for the installation of small-scale renewables, for more energy efficient buildings and for a range of behind-the-meter services supporting a more efficient use of energy.
- **Small-scale Renewables Market Growing:** The last decade was marked by an initial shift from thermal generation to renewables. We anticipate the pipeline for large-scale renewables to expand, but we expect distributed generation and small-scale renewables to form an essential part of the pipeline for infrastructure investors, with industrial, commercial and residential projects ranging from smaller solar rooftop installations to larger combined heat and power (CHP) and cogeneration plants.
- **Energy Efficiency Market Expanding:** The International Energy Agency (IEA) estimates that over the next decade investment in energy efficient technologies and insulation may have to triple from current levels of USD 360 bn. to nearly USD 1 tn. to help meet the goals of the Paris Agreement, with residential and commercial projects representing the bulk of the investment gap.
- **Regulation Supports Small-Scale Renewables and Energy Efficiency:** Regulation continues to drive demand through a range of measures, such as feed-in-tariffs, tax reliefs and grants that vary by country and technology. This supports the installation of rooftop solar and energy efficiency technologies, including smart meters, the replacement of inefficient boilers, or the electrification of heating and cooling systems.<sup>3</sup>
- Europe seems to have taken the regulatory lead in recent years, and we expect CO2 reduction targets to continue to be addressed through “green certificate” style incentives, supporting decarbonisation. Moreover, the EU should publish a “Renovation Wave Strategy” in October 2020, covering a range of policies to scale up investment as part of the European Green Deal. Data indicate that EU renewables could surpass the 2030 target of 32%, while a gap may still remain under the EU’s 2030 energy efficiency targets.<sup>4</sup>
- However, regulation is increasingly supportive also across other global regions. Looking at the U.S., for example, twenty-nine states and the District of Columbia have a renewable portfolio standard (RPS), which requires a certain percentage of a utility’s electricity to come from renewables and utilities are required to achieve energy efficiency improvements.
- Regulators are also establishing minimum energy efficiency standards, requiring buildings to achieve a certain efficiency level before they are sold or leased. In Europe, including in the U.K., France, Netherlands and Belgium, we expect that regulatory requirements on buildings may expand, as governments seek to improve energy efficiency, and as more investors advocate for stronger policies that support net zero portfolio targets. In the U.S., some states have established programs to link repayment of building renovations through property taxes (Property assessed clean energy: PACE), to support

<sup>1</sup> University of Oxford, Oxford Smith School of Enterprise and the Environment, “Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?”, May 4, 2020

<sup>2</sup> Science Based Targets September 2020

<sup>3</sup> LSE, Climate Change Laws of the World, accessed as at September 2020

<sup>4</sup> European Commission “National Energy and Climate Plans: Member State contributions to the EU’s 2030 climate ambition”, September 2020

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energy efficiency, helping reduce split incentives between landlords and tenants. Moreover, thirty-three major U.S. cities require the public benchmarking of existing buildings' energy efficiency, and some also set performance targets, requiring building improvements.

**An Investment Opportunity for Infrastructure Investors:** As demand for small-scale renewables and energy efficiency solutions appears to be driven by a solid underlying market trend, we observe growing market interest from larger utilities and infrastructure investors. The constant flow of smaller renewables projects provides infrastructure investors with an opportunity to partner with larger independent energy services providers, supporting capital deployment, as the development and installation of small-scale renewable projects can be more profitable than large-scale renewables.

The market of installers and service providers has historically been very fragmented, and the complexity of regulation can be a challenging aspect for SMEs and large customers alike, limiting adoption rates. These factors create a market opportunity for larger, efficient independent energy services providers, supported by economies of scale, in the installation of small-scale renewables, and in the provision of behind-the-meter energy efficiency services. As technology matures, additional services, such as EV charging, demand response services and battery storage may enhance the service offering to end customers.

**Bridging The Funding Gap:** Although demand is growing, financing for small-scale renewables and energy efficiency projects can be a major challenge and represents a limit for the adoption of these technologies and the reduction of CO2 emissions. Moreover, the sector may gradually transition away from government subsidies. Infrastructure investors, alongside utilities may play a key role in the provision of integrated financing and payment solutions to end customers, helping to bridge the widening funding gap and CO2 curb emissions.

Source: DWS, European Commission "National Energy and Climate Plans: Member State contributions to the EU's 2030 climate ambition" September 2020, IEA, November 2019, Regulatory Assistance Project, June 2020, C2ES September 2019, Hepburn et al May 2020, LSE/Grantham Research Institute 2019, SENSEI 2020, Science Based Targets September 2020. Past performance is not indicative of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

We hope you find this update of interest. If you have any questions or would like a specific topic covered, please reply to this email.



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