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Accelerating the energy transition for all: Evaluation's role in effective policy making

Know the grounds: evaluating investment in climate and energy transition in Czechia, Latvia, and Germany

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EXTENDED ABSTRACT

The presentation illustrates that the method of mapping energy and climate investment is useful for the preparation of National Energy and Action Plans (NECPs) by EU Member States. It provides selected conclusions and lessons learned from designing the maps and assessing their results in Germany, Czechia, and Latvia, providing examples of these mostly from Czechia. The presentation features selected results of "Climate Investment Capacity 2030" project funded by the European Climate Initiative (EUKI).

Aims and methodology

To achieve the EU Green Deal targets, the Sustainable Europe Investment Plan aims to mobilise EUR 1 trillion until 2030. In 2020, EU Member States submitted NECPs, which identified investment levels in meeting the targets against their needs, as well as measures to close the investment gap. The presentation features selected results of the project, which aimed to assess these aspects in Czechia and Latvia, and some of them in Germany. The presentation focuses on the discussion of recent investment in buildings, and centralized renewable energy supply and infrastructure (the RE energy sector). For details, see the dedicated reports [1].

We assessed the investment in meeting the 2030 national targets using climate and energy investment maps. To design them, we use a bottom-up approach, tracking actual disbursements at technology level and aggregating them at sector level. The approach was introduced by Climate Policy Initiative, which tracked these at global level starting in 2011, using the Landscape of Climate Finance diagram. The approach was used to assess domestic investment in Germany for 2010 and in France from 2015. The maps provide a snapshot of the investment flows, from the sources of capital, through relevant intermediaries and financial instruments, to recipient technologies. We considered climate-specific investment in actual technologies targeting or resulting in GHG emissions reductions, excluding 'soft measures', such as information campaigns. The maps reflected total capital investment for the energy sector and additional investment for the buildings sector. We compared the investment flows and the investment needs, as provided by literature, and complemented with own estimates.

Results and discussion

We found mapping energy and climate investment as a useful tool to understand how investment and investment patterns address domestic climate commitments and therefore it is a useful method to consider for

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[1] Novikova, A., Stelmakh, K., Klinge, A., Stamo I. 2019. Climate and energy investment map of Germany. Status Report 2016. Berlin: IKEM; Valentová, M., Knápek, J., Novikova, A. 2019. Climate and energy investment map – Czechia. Status Report 2017: buildings and renewable energy supply and infrastructure. Prague: CVUT; Kamenders, A., Rochas, C., Novikova, A. 2019. Investments in Energy Efficiency and Renewable Energy Projects in Latvia in 2018. Riga: RTU.

the preparation of NECPs. They helped understand a deficit or an excess of investment in sectors and/or in specific technologies. Overall, the diagrams could serve as a guidance for an effective shift of financial incentives and an efficient policy instrument design. Figure 1 presents the maps for Czechia and Latvia. In 2017, investment in the buildings sector and the RE energy sector of Czechia was EUR 612 million and EUR 98 million, respectively. This was factor five and factor seven lower than the respective investment need. In Latvia, investment in the buildings sector and the RE energy sector in 2018 was EUR 190 million and EUR 41 million, respectively. To address the investment need, the annual investment must increase by factor 2 and factor 9, respectively.
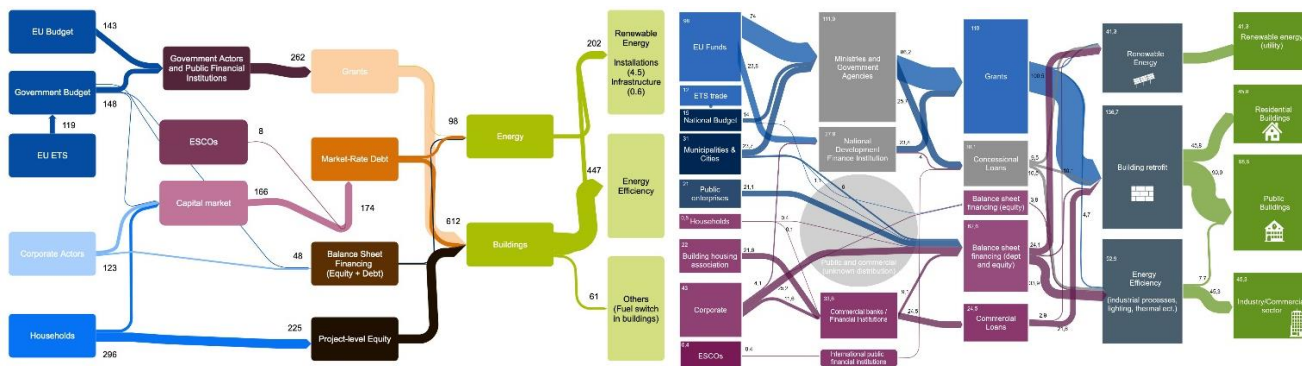

Figure 1. Climate and energy investment maps for Czechia (2017) and Latvia (2018), million EUR. *Source:* research results.

The comparison of national landscapes illustrates different pathways of energy transition. In Germany, the map insists on the central role of the KfW bank, the main public financial institution, in structuring the 'onlending' (intermediated lending) model through the local branches of private banks, resulting in a significance of low-interest concessional loans and corporate actors as the main investors. Investment supported with grants originating from the European Structural and Investment Funds (ESIF) and disbursed through government-owned financial institutions play the key role in Latvia and Czechia, according to the maps.

By the time of designing the maps, the EU Taxonomy of Sustainable Activities was not yet available. The definition of climate finance and setting tracking boundaries were defined by us in line with key national strategies and plans. One of our messages was the need for common definitions and methodologies, including the definition of climate finance, how and to what extent climate-related measures should be accounted for, as well as how to calculate additional and incremental costs, which do actually contribute to energy transition beyond the business-as-usual case. The EU Taxonomy adopted in 2020 addressed some of these aspects, however many questions remain open, especially for transition activities, as exemplified by the Czech heating sector, which realistically can only switch to natural gas, until energy efficiency and renewables will scale up.

There is a need that systematic tracking shall cover governmental budgets at all level, including federal, regional, and local government budgets, as well as climate programmes by public banks and agencies. In all countries, analysed data on energy and climate financing in the public sector was mostly available, however tend to lack systematic tracking. This could be implemented by introducing tagging and/or evaluation procedures.

We also identified the need to introduce private sector surveys, or to evaluate and streamline the existing ones. In all countries, we see a large share of private investment. The respective data is more difficult or even not possible to obtain as private companies and commercial financial institutions lack reporting. This causes in an underestimate of the total investment and a lack of understanding how the private flows are structured.

There is a need to understand better how to compare the current investment to investment needs. The investment need assessments assume optimal technology mix, a selection of the lowest technology cost, and strictly the incremental share of investment. The investment occurring in the real world does not reflects this situation. Furthermore, the incrementality is understood by financing institutions, private investors, and the public sector (including the understanding reflected in the EU Taxonomy) differently from what is calculated by investment need assessment, including the models used by the European Commission. Therefore, the gap between the investment need and current investment may be larger than the numbers show.