

Household Energy Affordability: Data and Indicators

A methodological framework for
national monitoring

International
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Executive summary

Energy affordability has become a central issue for energy security, social well-being and the success of energy transitions. Recent escalations of energy prices, supply disruptions, extreme weather, alongside low efficiency levels of buildings and appliances, have been exacerbating existing vulnerabilities related to affordability challenges in accessing adequate energy services.

While physical energy access has been monitored globally as part of Sustainable Development Goal 7, systematic and comparable monitoring of how affordable energy is for households remains fragmented. Even where physical access to energy is ensured, the ability of households to afford essential energy services remains highly uneven and insufficiently understood. Across countries, affordability is measured using diverse definitions, indicators and data sources, limiting comparability, weakening policy targeting and constraining the ability to assess progress across countries.

This report addresses this gap by providing a practical and structured methodological framework that enables countries to design and implement household energy-affordability monitoring systems. Drawing on expert consultation across IEA member countries, survey evidence and existing national practices, it moves beyond a review of approaches to propose a clear framework:

- what to measure (dimensions of affordability)
- how to measure it (indicators and methodologies)
- how to operationalise it (data sources and collection strategies).

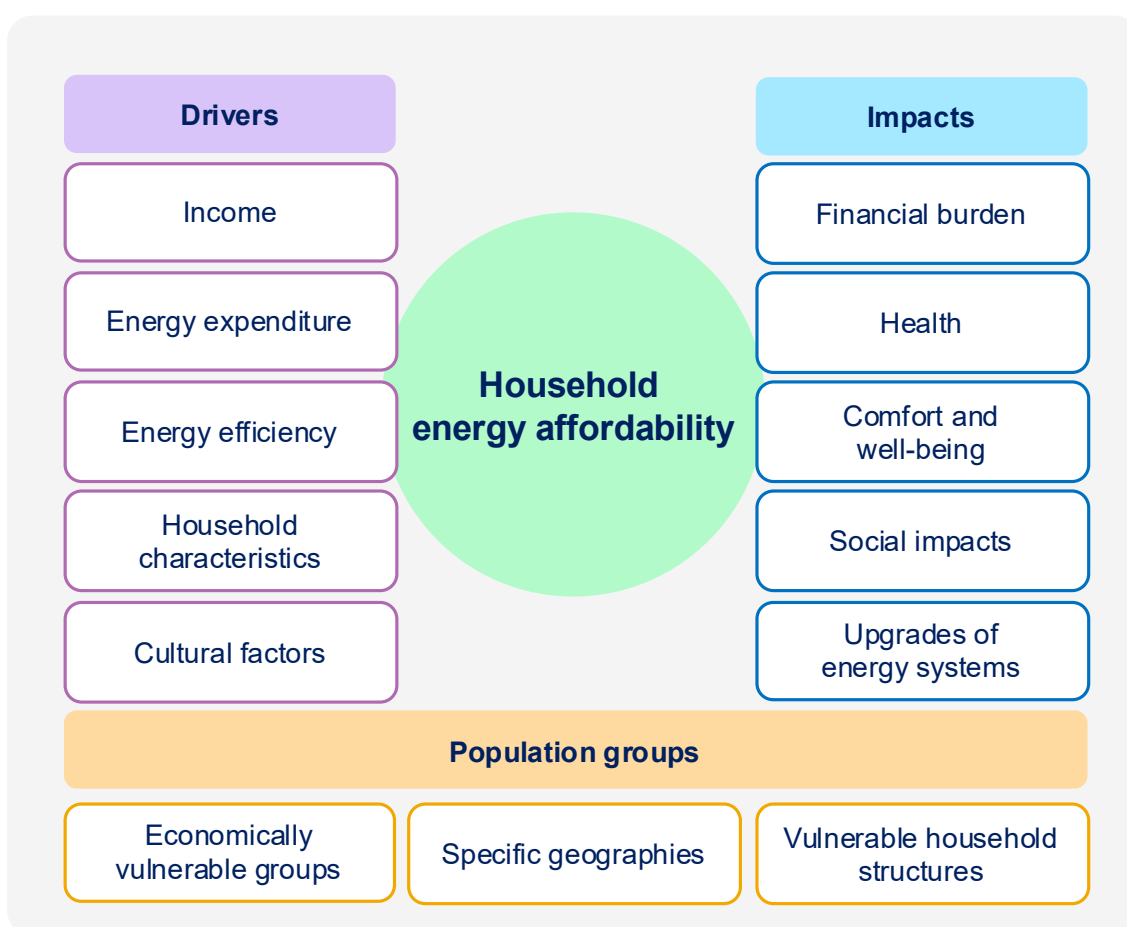
In doing so, the report translates existing experience into a coherent and operational approach that supports more consistent and policy-relevant monitoring across countries.

The report identifies that, despite national differences, energy affordability for a household is consistently shaped by a core set of drivers – household income, energy expenditure and energy efficiency – among other factors such as household characteristics, while also reflecting broader impacts on living conditions, health and social inclusion. Importantly, these dynamics do not affect all households in the same way: differences across population groups, including, for instance, income level, geographical location and housing conditions, play a critical role in shaping how affordability challenges are experienced. This highlights both the need to capture the distributional dimension of affordability and to ensure that monitoring frameworks are able to identify and distinguish between groups that are more exposed or at risk.

To reflect this complexity, the report structures affordability around a set of core dimensions, each highlighting a distinct but interrelated aspect of how households experience and manage energy costs, covering:

- The drivers and other underlying factors shaping households' ability to address affordability challenges.
- The impacts and outcomes of affordability challenges on households.
- The population groups affected or at risk.

Summary of drivers impacting households' ability to afford energy costs; impacts; and impacted population groups, as detailed in the report

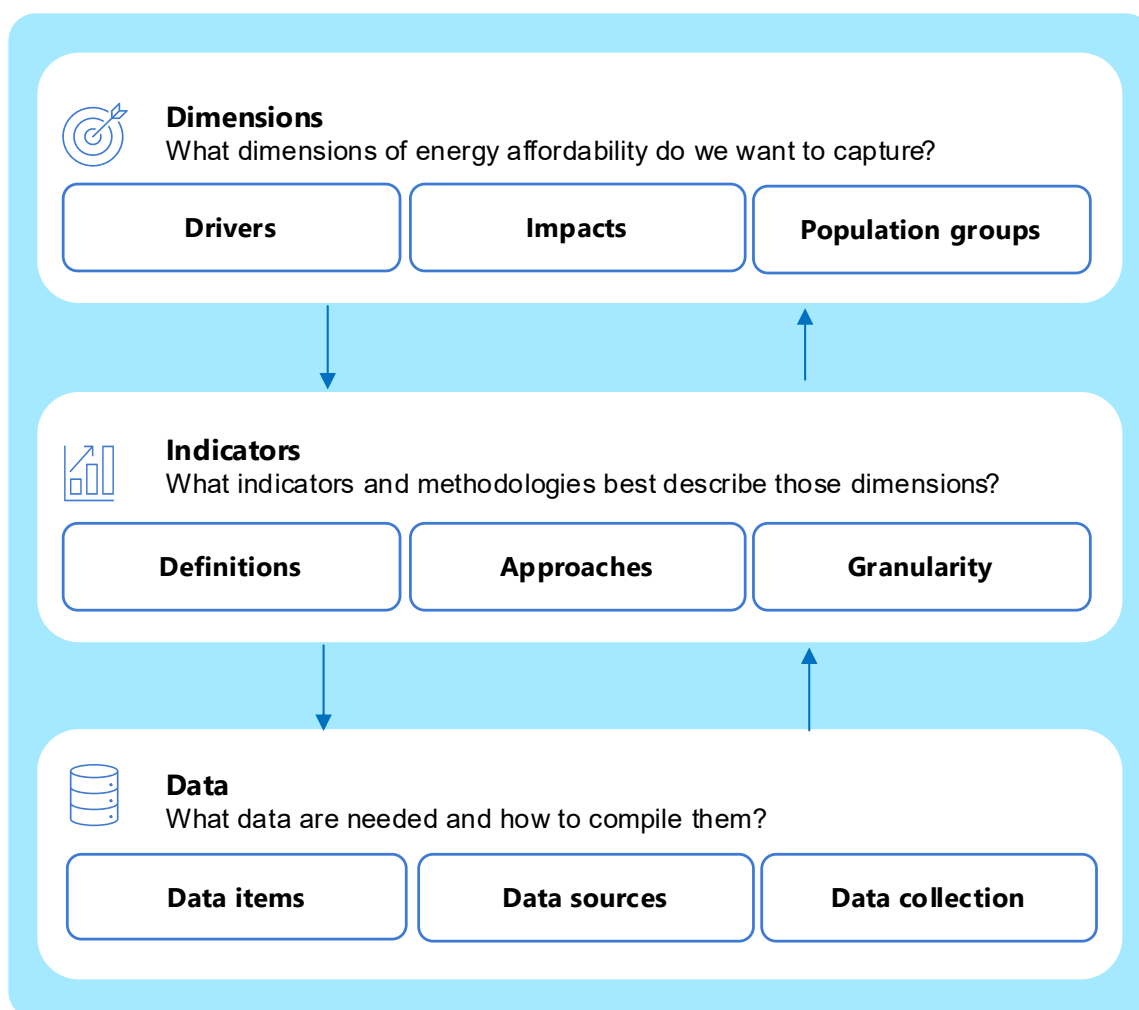


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The report organises these dimensions within a coherent methodological framework, providing a conceptual foundation for selecting indicators and identifying relevant data sources. This framework provides practical guidance for countries to:

- Identify nationally relevant affordability dimensions, in line with policy priorities.
- Select complementary sets of indicators reflecting different dimensions.
- Design coherent data collection strategies.

Schematics of the methodological framework to monitor household energy affordability described in the report



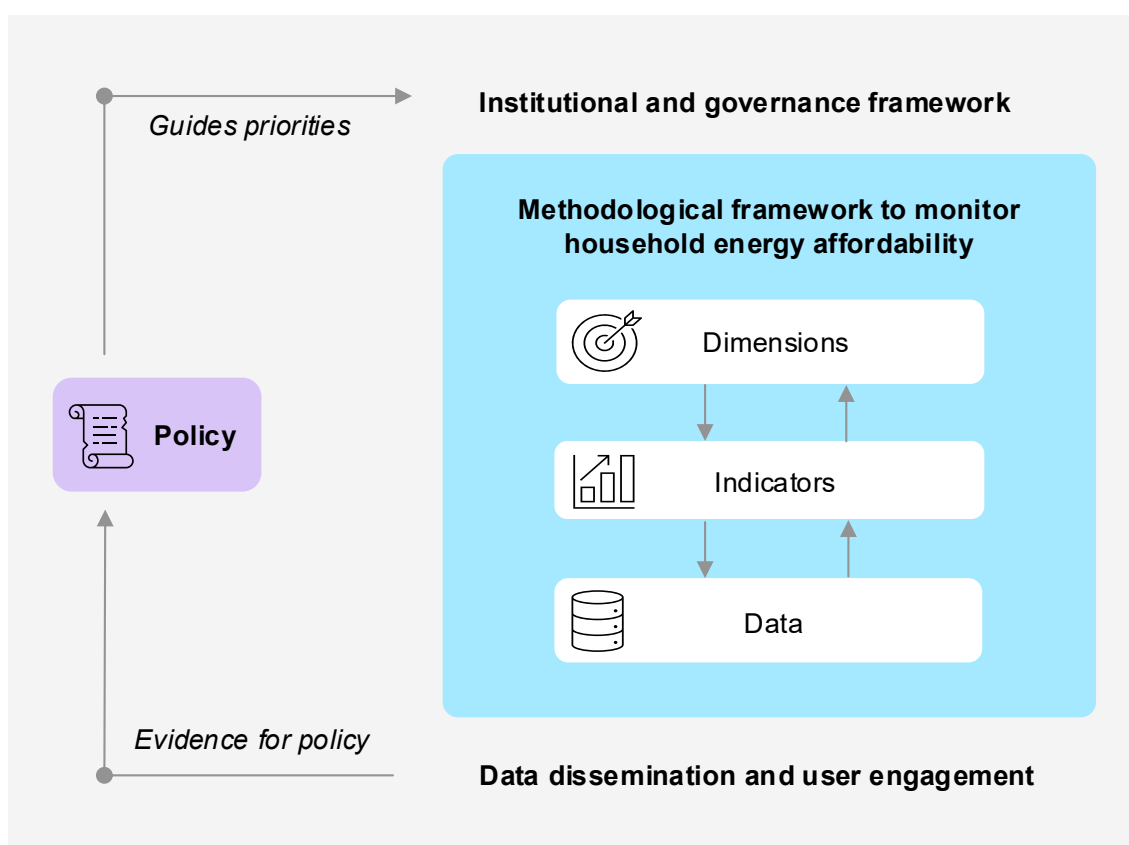
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The starting point is to identify and select the dimensions that matter the most in each national context, driven by policy priorities, covering drivers, impacts and how different population groups are affected. A set of relevant indicators can be defined – recognising that multiple approaches and alternative indicator choices are possible – and the data required need to be compiled, leveraging readily available data first, and addressing data gaps through a structured data collection plan. It is of course relevant to ensure that the indicators obtained are appropriately disseminated, reaching the intended target audiences, notably by feeding back into national policies.

While this report focuses on the methodological aspects of energy affordability data, it recognises that policy priorities ultimately shape how affordability is defined, measured and monitored. Indicators are selected, adapted and interpreted in light of specific policy objectives, such as targeting vulnerable

populations, assessing the distributional impact of price changes or evaluating the effectiveness of support measures. At the same time, robust indicators and data systems play a critical role in informing policy decisions, strengthening evidence-based design and enabling policy evaluation. This report therefore positions the methodological framework as part of a broader policy–data feedback loop. A detailed analysis of policy design, instruments and governance frameworks falls outside its scope.

A methodological framework feeding policy-driven monitoring of household energy affordability, as described in the report



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International collaboration is a key enabler to advance methodologies, improve comparability and strengthen national monitoring frameworks. Sharing good practices and joint collaborative efforts help advance existing work. The IEA is keen to support its member countries and beyond in developing and strengthening their energy-affordability monitoring frameworks and in facilitating collaboration in relevant forums.

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