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Climate policy- Imperative for integrating three energy demand goals

The paper in the Science journal, "New demand goals for energy and climate resilience," was led by researchers from Iscte—University Institute of Lisbon and the International Institute for Applied Systems Analysis (IIASA). It proposes a "triple-triple" agenda: tripling progress in *energy efficiency, electrification, and action to curb extreme energy consumption.*

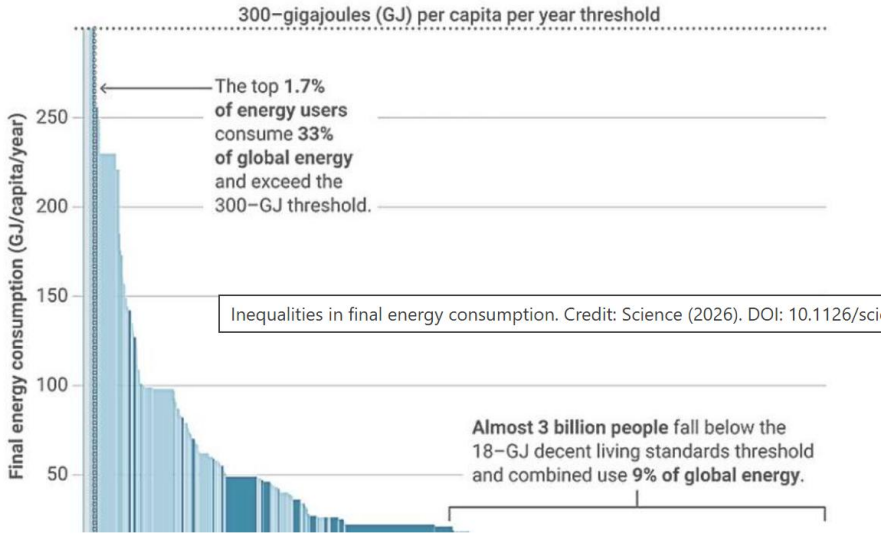
The authors argue that international climate efforts and energy policy have concentrated heavily on expanding clean energy supply, while giving much less attention to final energy demand—the energy actually used in transport, housing, heating, cooling, and industry. The authors emphasize that these goals are not about austerity or deprivation; they are about delivering better energy services with less waste, lower risk, and greater fairness.

Growing energy demand is also making economies more vulnerable to energy crises and external shocks, reinforcing the need to address the demand side more directly. Energy demand is still too often treated as a by-product of growth rather than as a strategic policy domain. But demand is where energy services are delivered, where inequalities are most visible, and where some of the fastest gains for resilience and emissions reduction can be achieved.

Global inequality in energy use

The article highlights a stark global imbalance: while half of the world's population live at or below decent living standards (with an estimated threshold between 15 and 18 GJ per person per year) and more than 700 million people still lack basic electricity services, the top 2% of consumers worldwide use well over 300 GJ per person per year and account for one-third of global energy use. By contrast, the bottom half of the global population accounts for only around 10%.

According to the researchers, reducing patterns of excessive consumption—often benefiting from light or no taxation—is essential not only for cutting emissions, but also for improving energy security and social fairness.



Inequalities in final energy consumption

Three concrete goals for 2035

The first proposed goal is to triple the annual rate of improvement in energy efficiency, raising the reduction in final energy intensity of GDP to 4% per year. The second is to triple the pace of electrification, increasing the share of electricity in final energy use at a 4% annual growth rate and reaching 33% by 2035. The authors say this would accelerate the spread of efficient technologies such as electric vehicles and heat pumps.

The third is to apply fairer taxation to extreme energy use, through a surcharge on consumption above 300 GJ per person per year. The article argues that stronger taxation of luxury energy use, such as private jets and yachts, which currently enjoy low or no taxation, could help curb excess demand while generating between $0.2 trillion and $2 trillion annually to expand energy access and support low-carbon investment.

Linking demand, fairness, and resilience

The researchers say the three goals are designed to reinforce one another. Efficiency helps limit overall demand growth. Electrification makes it easier to deliver energy services more efficiently. And taxing excessive consumption can both reduce pressure on energy systems and help finance a fairer transition. Rather than treating lower demand as a side effect of other policies such as decarbonization, the paper presents it as a policy goal in its own right.

The purpose of the energy system is to provide decent levels of clean and affordable energy services. We propose three integrated and systemic energy demand goals that would together bring multiple benefits to the people and the planet (Source: N. Bento et al, New demand goals for energy and climate resilience, *Science* (2026).