



POLICY BRIEF

HOW HAVE PROSUMERS RESPONDED TO THE CURRENT ENERGY CRISIS?

The war in Ukraine has prompted significant psychological, social, and economic responses across Europe, particularly in the energy sector, where energy security has emerged as a central challenge and prices have surged. Disruptions to natural gas and oil supplies from Russia have driven governments to revise energy policies, while citizens have adapted their behaviour, spurring grassroots initiatives for renewable energy development. These efforts, which have included prosumer investments in photovoltaic systems and the adoption of alternative heating solutions such as heat pumps, signal a shift towards more localized energy sources. Decentralized renewable energy systems empower communities to take control of their energy consumption, fostering resilience – even against military threats – and independence from external energy suppliers. This shift promises not only a sustainable energy future but also a substantial reduction in electricity costs. Nevertheless, the ongoing crisis has exacerbated energy poverty for many households.

To explore these dynamics, our [research](#), supported by the International Visegrad Fund, focuses on the experiences of prosumers, heat pump users, and those facing energy poverty in the Visegrad Group (the Czech Republic, Hungary, Poland, and Slovakia). We conducted a series of focus groups and reported the results in a [policy report](#). In this policy brief, we present our aggregated findings on prosumers (i.e. those who both consume and produce energy, for example through rooftop photovoltaic panels) and propose a series of recommendations for policymakers.

For the prosumers who participated in our research, their choice to install solar panels was primarily motivated by economic considerations. Key factors included the competitive cost of renewables and low-carbon alternatives, the long-term savings associated with electric vehicles (charged using self-generated electricity), and a desire for greater energy independence. Only in Poland did the war play a significant role in accelerating the development of small-scale photovoltaic installations. Prosumers also highlighted the independence gained from installing solar panels, which enhanced their sense of energy security. However, what they meant by this was often independence from domestic electricity providers, towards whom they were largely critical; Polish prosumers in particular expressed a desire to be independent of the state. Some Czech prosumers differed in this regard, viewing strong energy companies as essential to their energy security. This argument can likely be traced to the peak of the energy crisis, when several small to mid-sized Czech energy companies went bankrupt, leaving hundreds of thousands of customers reliant on a large supplier of last resort.

Prosumers identified clear benefits to owning photovoltaic systems, noting that the energy crisis had significantly shortened the return on investment due to increased savings. Along with this advantage, however, they also highlighted two main challenges. The first relates to storage, both physical and virtual. Prosumers reported difficulty investing in storage infrastructure, having already committed substantial resources to the solar panels themselves, and expressed concerns about the return on such an investment. This was especially true for those who had adjusted their energy usage to align

with peak production times – such as charging electric vehicles during peak solar output. Our research indicates that prosumers adapted their behaviour to maximize the efficiency of their photovoltaic power systems and minimize the amount of energy being sent to the grid.

Furthermore, prosumers reported having become much more engaged with the energy market, consumers' rights, and weather forecasts after installing their photovoltaic systems. The use of virtual batteries – which allow surplus energy to be sent to the grid until needed by the prosumer – was found to be more favourable in Hungary and the Czech Republic, where the option is both supported and widely utilized. In other Visegrad Group countries, however, regulations were much less accommodating for prosumers, leading most to prioritize immediate consumption over the use of virtual battery options.

This issue ties into a second main challenge related to the existing regulatory framework and prosumers' relationships with energy companies. Ever-changing and often unclear regulations, which many prosumers consider unfair, discourage households from investing further in renewables. Prosumers highlighted the lack of permanent regulations on the pricing and billing of the energy they produce and draw from the grid – a situation that has sparked protest movements in Poland. This challenge is compounded by an inadequate electricity grid that struggles to accommodate energy from prosumers on high-production days (i.e. sunny days), limiting the potential of photovoltaic installations. As a consequence, prosumers face extended payback periods for their investments.

Significant barriers to greater uptake of solar power include a lack of public awareness of its long-term financial benefits, a lack of environmental awareness, and insufficient consumer information. Most prosumers in our study reported difficulty accessing reliable information, noting that this information vacuum is often filled with “online experts” on social media, which raises the risk of misinformation. While prosumers actively share information and best practices among themselves, they remain sceptical about the prospect of forming energy communities with neighbours to support photovoltaic development locally. Cultural and social barriers have hindered the transition from individual micro-installations to energy cooperatives and other community-based energy initiatives. Even Hungarian prosumers – who have expressed the most optimism about the formation of energy communities – expressed concern that technical challenges (e.g. grid development), cultural factors (e.g. lack of solidarity), and other issues may pose significant obstacles to their implementation.

Recommendations

- Establish transparent, fair regulations to allow all prosumers flexibility and access to the electricity market.
- Streamline the flow of information to potential prosumers and invest in clear, accessible communication on existing and forthcoming regulations, market organization, limitations, and available support schemes. Support the development of energy communities by

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establishing a comprehensive framework that ensures equity for all members and shareholders.

- Enhance planning and development of the electricity grid to accommodate more renewables.
- Introduce support schemes to incentivize individuals to purchase storage facilities (i.e. batteries).
- Implement regulations to make virtual battery options more convenient for prosumers, using Hungarian and Czech models as examples for other Visegrad Group countries.