

Getting retail tariffs right for the energy transition

The success of the energy transition depends on addressing two interconnected challenges: aligning electricity consumption with the variable supply from renewables and expanding grid capacity to support the growing demand from electrified heating, transport, and industry.

Retail tariffs sit at the crossroads of these challenges. Their structure can incentivize more flexible demand, while their level is the main mechanism for financing grid investments. These two goals are often treated separately, but in practice they are deeply linked. Flexibility can reduce the need for costly upgrades, and smart grid investments can unlock more flexibility.

The **DemandFlex workshop** explored how tariff design can be used to manage this balance and highlighted several practical insights and policy priorities.

Designing retail tariffs to enable flexibility

Belgium's growing share of renewables (reflected in record negative wholesale prices last year) requires retail tariffs that support demand-side flexibility. Recent tariff innovations at low voltage level, such as the end of net metering, capacity tariffs or dynamic tariffs respectively encourage self-consumption, flatten consumption patterns, and induce consumption at times of low wholesale prices. These behaviors ultimately contribute to lower costs for the system.

During the first panel, we identified four key lessons:

1. **Network tariffs signals and wholesale prices are not always aligned, especially during summer.**

In Flanders, dynamic pricing incentivizes consumers to shift usage to midday in summer, when solar production peaks and grid congestion is already high. This creates a conflict with the goal of capacity network tariffs of reducing the peak. Since energy prices are set after network tariffs, the design of network charges should anticipate these dynamics.

2. **Consumers with shiftable assets respond to price signals.**

The capacity tariff in Flanders has led to a measurable reduction in peak load, around 1 to 3% at the cabin level, mostly due to changes in when EVs are charged. This shows that with the right signals, consumers *do* adapt their behavior.

3. **Simple time-of-use prices can already go a long way.**

Even in the absence of smart meters, existing two-rate meters (which respond to a signal from the system operator) can support seasonal time-of-use prices. If allowed to vary by season, these simple structures can already capture much of the variation in wholesale prices and support meaningful flexibility, at least as a transitional solution.

4. **Retail pricing innovation needs to be understandable.**

As network tariffs and retail contracts become more complex, one also needs to help consumers navigate them. There may be a role for regulators to provide (or require) bill simulators that help consumers compare options and understand the impact of their choices.

Retailers also play a key role. Their pricing strategies can amplify or hinder the effects of network tariffs. A growing concern is the emergence of conflicting signals, especially when retailers and DSOs are not aligned.

Financing the grid without undermining electrification

Synergrid estimates that **€31 billion will be needed to upgrade the grid by 2030, with around 70% of that dedicated to electricity.**

Flexibility can help lower investment needs. The capacity tariff experience in Flanders shows that price signals can reduce peak demand and ease grid strain. But investment planning remains fragmented. Actors rely on different scenarios and assumptions, leading to inefficiencies and a risk of overbuilding.

Tariffs must strike a careful balance. If charges are too high, they may discourage electrification. If too low or poorly targeted, they shift costs unfairly and reduce incentives for flexibility, and may even be illegal under cost-reflectivity rules. Policymakers must navigate this trade-off transparently, balancing fairness, efficiency, and long-term system goals.

To manage this, Belgium needs a **shared vision** for how the energy system will evolve. This includes developing **national reference scenarios** that guide investments and regulatory decisions, and defining **clear roles** for DSOs, TSOs, and retailers. Importantly, the regulator **CREG should be given more resources and stronger regulatory powers** to scrutinize network investment plans, reduce information asymmetries, and avoid unnecessary costs being passed on to consumers. This also requires a clear and faire decision on who will ultimately pay for these investments.

Looking ahead

The workshop made it clear: **integrated retail tariff design is essential.** Coordination across energy and network charges, across governance levels, and across actors is the only way to make tariffs enablers of flexibility and decarbonization, rather than barriers.

There is no simple answer, and several questions remain. Who should be expected to be flexible? Everyone or only those that have assets to shift or decentralized generation capacity and are therefore those creating the need to upgrade the grid? How do we align individual incentives with collective needs? How do we ensure grid investments are efficient and equitable?

Addressing these questions will require continued collaboration across academia, industry, and policy. The discussions from this workshop offer a strong foundation to build that effort.

The DemandFlex team.