

The Consumer Voice in Europe

ELECTRICITY AGGREGATORS: STARTING OFF ON THE RIGHT FOOT WITH CONSUMERS



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Why it matters to consumers

In the future, many consumers will no longer pay for electricity to just illuminate and heat their homes. In the 'smart home' where heating, cooling and household appliances can connect to one another and the grid, consumers will be able to subscribe to services that increase or decrease their electricity consumption according to whether electricity is plentiful or in short supply. This means that the role of electricity suppliers as we know it will change. New types of energy companies will enter the market and offer these new types of services to consumers. These services can enable consumers to better control their energy bills, provided the right incentives and safeguards are in place.¹

Summary

The scope of this paper is limited to aggregators. An aggregator is a new type of energy service provider which can increase or moderate the electricity consumption of a group of consumers according to total electricity demand on the grid. An aggregator can also operate on behalf of a group of consumers producing their own electricity by selling the excess electricity they produce. The recommendations presented in this paper aim at ensuring that consumers will benefit from these electricity services.

BEUC calls on EU and national policymakers to act upon the following recommendations when opening the market to new electricity service providers:

- **Promote competition across the energy market**
 - The entry of independent aggregators in the market and their engagement with residential consumers should be made easy.
 - Consumers should be free to engage with the independent aggregator and supplier of their choice, without facing contractual obstacles from either type of company.
- **Make participation voluntary and give the right nudges to consumers**
 - Consumers engaging with offers from aggregators should be voluntary. Consumers should always be able to choose from a wide range of affordable electricity offers including with non-variable prices.
 - Aggregators should assess consumers' consumption profile to provide offers that reflect their needs and lifestyle.
 - Offers and contracts should be clear and transparent. Early termination fees should only be allowed in fixed-term contracts under strict conditions.
 - National Regulatory Authorities should be informed about the entry of aggregators into the market with a view to facilitate market monitoring. National Regulatory Authorities must have the power to intervene when their market monitoring indicates there is consumer detriment due to aggregation offers.

¹ [Consumer engagement with the market: where do energy and other regulated markets fit in a consumer hierarchy of priorities? - Citizens Advice, July 2015](#)

- **Ensure consumers reap the benefits of flexibility**
 - Consumers must be financially remunerated for their flexibility. Energy savings claims should be realistic and verifiable.
 - Consumers should not bear the cost of payments/compensations between market operators. If there is a verified need for financial arrangements between market operators these should be financed through the benefits accrued by all market operators.
 - The overall benefits from the use of flexible electricity consumption in terms of lower system costs must be passed to all consumers through lower network costs.

- **Policy makers and regulators must work together across policy areas**
 - EU safety, security and liability policies should be updated to address new risks arising from the use of digital technologies in the energy sector.
 - Regulators across sectors must collaborate more in order to address the new complexities that flexible electricity services will bring.

- **Prosumers engaging with aggregators should enjoy the same level of protection as other consumers.**

1. Aggregation- a new type of services in the revised Electricity Directive.

For decades electricity was produced by big power plants which generated enough power to cover society's demand. However, the increasing share and variable nature of electricity produced by renewable energy sources means that a reform of this system is inevitable. One of the ways to achieve a cleaner, more secure and more efficient electricity grid is not only through cleaner energy sources but also through, to a certain extent, making electricity consumption more flexible. Adjusting electricity consumption in order to reduce peaks in demand or take advantage of renewable sources is often described as 'demand-side flexibility'.

Aggregation entails **grouping the energy consumption or generation** of several consumers.

When it comes to **consumers**, an aggregator can set up an agreement with several consumers, based on which he can temporarily reduce their electricity consumption when there is high demand for electricity. He then sells this flexibility i.e. the 'avoided' electricity consumption in electricity markets. An aggregator could also be operating the reverse action and could increase the consumption of an electricity consumer when electricity prices are favourable. Aggregation can be carried out by traditional energy businesses such as **suppliers, or by new entrants such as independent aggregators**. **Independent aggregators** are, thus, electricity service providers. In practice, when consumers engage with them, they have one contract with the supplier and a separate one with the aggregator.

An aggregator can also operate on behalf of a group of consumers engaging in self-generation by selling their excess electricity.

In European markets, there are limited examples of independent aggregators engaging with residential consumers. Existing aggregators are mainly working with industrial or commercial customers. However, it is expected that new technologies will make it possible for residential flexible electricity consumption to become more commercially attractive and play a bigger role in the stability and efficiency of the system.

The reason for this future potential in the household sector is twofold. First, through digitalisation, energy supply and demand can be matched almost in real time. As a direct consequence many consumer products such as smart meters, thermostats, heating and cooling appliances can be integrated into networks that can help to optimise energy consumption. Also, home automation will further facilitate flexible energy consumption in the residential sector.

Second, transport will increasingly use electricity as its source of power. The fact that more and more consumers may be switching to electric vehicles means that car batteries could be integrated in the grid as a storage facility for surplus energy and become a source of energy supply when the car is not in use.

1. 1. Open the market to new players without cutting corners

With the revision of EU energy policy, the European Commission seeks to ease the entry of independent aggregators into the energy market. The European Commission intends to facilitate the integration of more renewable sources in the grid and to attract consumers to engage with the electricity market through innovative services. Making energy markets more flexible should also help to avoid building additional power plants and this, in turn, should reduce overall system costs.

1.1. 1. Ensure competition and provide consumer choice

The legislative proposals under the Clean Energy for All Europeans package attempt to lift the barriers that impede independent aggregators from entering the market. More specifically, according to the proposed revision of the Electricity Directive, independent aggregators should be able to enter the market and engage with consumers without the consent of energy suppliers. Today, independent aggregators find it difficult to engage with consumers and access some wholesale markets which are currently reserved for traditional players: electricity suppliers or generators. This may limit consumer choice and competition.

The degree to which demand-side flexibility is treated in the market as a resource, just like electricity generation, varies considerably around Europe. Figure 1 illustrates that in certain Member States access of independent aggregators into the market is either not foreseen or impossible.

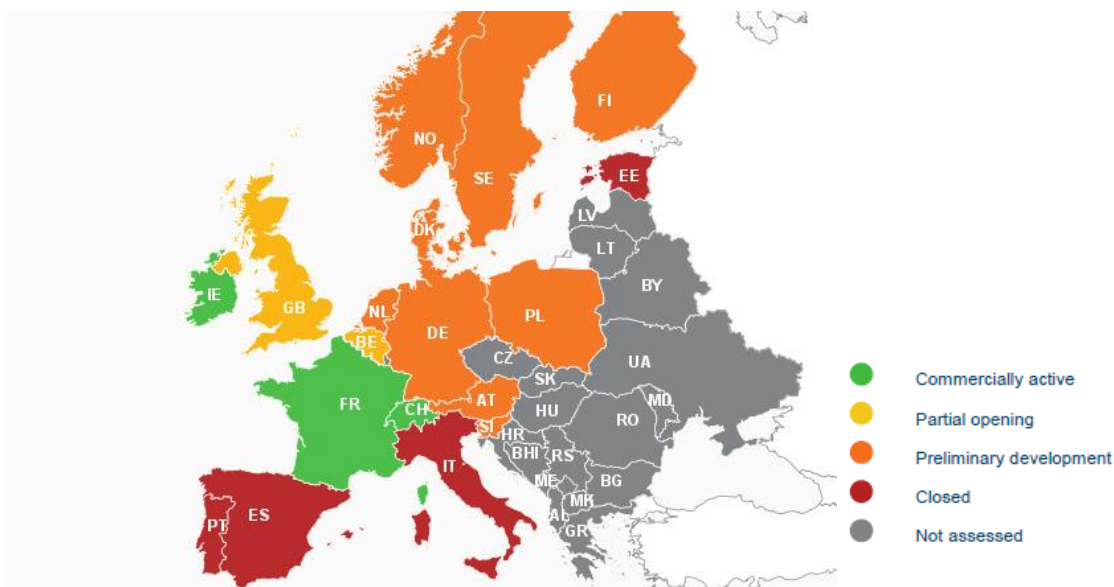


Figure 1. Aggregators' access to markets. [Explicit Demand Response in Europe Mapping the Markets, SEDC, 2017.](#)

Independent aggregators and suppliers can have opposing interests. The former sell flexibility whereas the latter sell electricity. Consumers will have separate contracts with these two types of energy companies. To ensure that the market is competitive and delivers a wide range of innovative services, contractual practices that prohibit consumers from engaging with either type of company should not be allowed. On the one hand, suppliers should not obstruct consumers' engagement with aggregators. On the other hand, a contract concluded with an aggregator separately to a consumer's supply contract should have no impact on the choice of the consumer with regards to tariffs or electricity suppliers.

How to design an innovative and competitive market that ensures consumer choice?

- The policy framework should facilitate the entry of independent aggregators in the market and their engagement with residential consumers.
- Electricity suppliers should not obstruct consumers in any way to engage with independent aggregators.
- Aggregators should not be able to undermine consumers' rights to switch supplier or choose a specific tariff.

1.1.2. New market players should have consumer protection responsibilities

Electricity consumption underpins a wide range of daily activities and as a result, certain consumers will not be flexible in their electricity consumption. Therefore, consumer engagement with aggregators should take place on a voluntary basis. There should be a sufficient and affordable choice of electricity supply offers with a stable price for consumers who can't or don't want to take up a flexible electricity service.

But even the flexibility of those consumers who can shift their electricity consumption can vary. This means that offers should be designed based on consumers' needs. Aggregators should assess the consumer's consumption and needs. They should provide to consumers the information to assess whether a flexible electricity offer is right for them free of charge. For example, elder consumers or consumers with health conditions could be put at risk during a heat wave, in case they have subscribed to an air-conditioning demand reduction programme that leaves them without air cooling for several hours. In addition, consumers should have clarity about their exact rights and obligations with regards to providing flexibility as well as with regards to the consequences in case they cannot be flexible when it is requested.²

Furthermore, suppliers are obliged to comply with requirements regarding bills, contracts and dispute settlement. The aggregator's relationship with consumers is however not subject to equivalent sector-specific obligations at European level yet. This entails the risk that unfair, misleading or unclear practices in today's electricity markets, for instance in relation to back-billing, transparent billing or aggressive sales, continue with aggregators. The potential consumer detriment may, however, be greater given aggregators' access to data and possible control over consumers' energy usage and appliances.

² Peak rewards programs have been in place for several years in the United States. In 2011, subscription to unsuitable programmes, bad communication on behalf of the company and inability to respond to complaints left high risk consumers without cooling for hours in the hottest day of the year. <http://www.baltimoresun.com/news/maryland/bs-md-bge-peak-rewards-psc-20110725-story.html>

The market opening to these market players should be accompanied by sufficient consumer protection. Therefore, existing consumer protections should be extended to new market players and be adapted to provide equivalent safeguards with regards, for example, to offers, billing, and contracts.

Aggregators' offers are expected to come bundled with energy management devices or smart appliances. Bundled energy offers accompanied by high termination fees are obstacles that deter consumers from taking advantage of better offers. When aggregators' offers are bundled with equipment such as smart thermostats and other smart devices, the consumer should be able to switch easily and quickly. In case of termination fees, the aggregator may recover either the remaining depreciated value of the appliance or the remaining service fee, whatever is lower. The burden of proof of the economic loss must always be on the aggregator and monitored by the National Regulatory Authority.

National Regulatory Authorities should also monitor systematically whether offers from aggregators are adequate for residential electricity consumers or if the financial risk is too high for certain consumer groups. They should also monitor how consumers are benefiting or losing out. This analysis should include whether consumers receive clear, relevant and complete information to accurately assess the risks and opportunities of entering in aggregation contracts and how consumers' data is protected. The results of the monitoring should be made public. National Regulatory Authorities should have the power to introduce more protections if their monitoring indicates this is needed.

How to build consumers' trust in new service providers?

- Signing up to an aggregator's offer should always be voluntary. Consumers who cannot be flexible should always have access to affordable, non-variable tariffs.
- Independent aggregators should assess, free of charge, if flexible electricity offers are suitable for a particular consumer and propose offers that match consumer's consumption and lifestyle. Consumers should have the possibility to renegotiate their contract in case their circumstances change.
- Independent aggregator offers and contracts should be clear, transparent and reader-friendly.
- Early termination fees should only be allowed in fixed term contracts and should be strictly limited to the direct economic loss of the aggregator.
- To facilitate market monitoring, independent aggregators should inform National Regulatory Authorities that they intend to enter the market. National Regulatory Authorities should monitor the integration of aggregation offers by price comparison tools in order to ensure transparency and comparability.
- National Regulatory Authorities should publish regular analyses of aggregators' offers on different consumer groups and should intervene when the analysis reveals negative impacts on consumers.

1.1.3 Ensure consumers benefit from flexible electricity services

It is important that consumers know that their flexibility becomes a commodity, just like produced electricity, and should, therefore, be financially rewarded for offering it. Services of independent aggregators are expected to rely on automation and could provide consumers with a detailed insight into their electricity consumption through information technology. However, this should not obscure the actual transaction between the independent aggregator and the consumer. Consumers will offer their flexibility to aggregators who will trade it just like electricity is traded.

When considering savings and the impact on consumers' bills, it is necessary to distinguish between demand-side flexibility and energy efficiency. While energy efficiency implies energy savings, demand-side flexibility aims at an optimal use of energy from a system perspective. This means that in practice, engaging with an independent aggregator will not necessarily lead to a reduction in energy consumption but rather to a postponement in energy consumption. This distinction is important because it means that consumers engaging in aggregation might not be able to save on their bill when there are limited energy savings.

The full benefits of demand-side flexibility are yet to be seen but an analysis from 2016 estimates savings up to €1.6 billion as a result of reduced wholesale market clearing prices during the period that demand-side flexibility is applied.³ In addition, the European Commission impact assessment on demand-side flexibility identifies benefits for the system operators under all policy scenarios related to the deployment of demand-side flexibility. This indicates that demand-side flexibility could lead to lower costs for consumers if the benefits for market operators and system operators are passed on to them.

However, the market arrangements for the participation of independent aggregators in the energy markets and whether they should pay compensation to suppliers have sparked a heated debate. This debate is linked to the roles, interests and responsibilities of traditional market participants. Often, suppliers play the role of the balancing responsible party that ensures there is a balance between the electricity produced and the electricity consumed. If an imbalance between production and consumption occurs, then suppliers with the balancing responsibility are financially responsible. Therefore, suppliers claim compensation arguing that when an aggregator reduces the electricity consumption within their area of responsibility they will need to pay for the imbalances caused to them by the aggregator as well as for the extra electricity that they procured but was not consumed.

The losses, if any, which are incurred by suppliers due to their balancing responsibility and are caused by the activities of independent aggregators must be verified. In case such costs are identified, they should be financed through the financial gains accrued by all market participants due to lower clearing prices and the policy and regulatory framework must ensure a fair distribution of costs and benefits stemming from the participation of independent aggregators in the market.

France is in the process of addressing these challenges as it is one of the few EU Member States with a framework in place that enables independent aggregators to engage with residential consumers. Since 2013, France has set up the NEBEF mechanism (Notification d'Echanges de Blocs d'Effacement), which is comprised by a set of rules enabling electricity peak demand reduction to participate alongside generation in electricity markets.

³ More information is available through "Benefiting Customers While Compensating Suppliers: Getting Supplier Compensation Right": <http://www.raponline.org/wpcontent/uploads/2016/10/baker-benefiting-customers-compensating-suppliers-2016-oct.pdf>

Opening the market to independent aggregators in France

A French decree published in 2015 foresaw a premium to be paid to independent aggregators engaging in electricity demand reduction. This premium would be financed by the CSPE levy (renewable and social surcharge on electricity bills) and would be set at €16/MWh for peak periods and €2/MWh for off-peak periods. The decree was founded on the assumption that half of the consumption reduced by independent aggregators would be consumed at a later stage. However, according to two demand reduction scenarios tested by ADEME, The French Environment and Energy Management Agency, the actual consumption reduction for water heaters was zero and between 30 to 40% for heating (more information at ADEME- L'effacement diffus- Septembre 2014). French consumer organisation UFC-Que Choisir took legal action against this decree arguing that it failed to take into consideration actual savings and could distort market competition. This action resulted in an annulment of the premium.

How to ensure consumers can reap benefits from better market functioning and optimised energy system?

- Consumers should be financially remunerated for being flexible in their electricity consumption. Where consumers are rewarded for their flexibility through energy savings, these should be verifiable and communicated to them in monetary terms on a regular basis.
- Consumers should not bear the cost of payments/compensation between suppliers and independent aggregators. If the need for such payments is verified, these should be financed by all market participants benefiting due to the trade of flexibility in the wholesale market.
- Independent aggregators should have balancing responsibility.
- The avoided system optimisation costs resulting from the use of demand-side flexibility in place of generation must be systematically analysed and reflected in consumers' bills via lower network costs.

1.1.4. The 'internet of energy' requires enhanced cross-sectoral cooperation

Aggregation relies on software, smart appliances and intelligent energy management devices such as smart thermostats that allow the remote adjustment of electricity consumption. Connected devices used in home energy management make it technically possible to store and process consumers' personal data. As they control vital activities of a households' everyday life the remote reading of electricity consumption can provide a detailed insight into households' private sphere. Aggregators requesting consumers' data should provide justification on the necessity of the data and should be able to access it only after the explicit consent of the consumer. Competent authorities should monitor the enforcement of European data protection rules.

At the same time, if the security of connected devices used in aggregation is not safeguarded, consumers could be exposed to a number of risks. Security flaws can make

consumers vulnerable to data theft or request of ransomware to run their appliances. In addition, the concept of 'safety' in the General Product Safety Directive and sector-specific legislation is too narrow and fails to protect consumers from the security flaws that come along with connected devices. This is because product safety is understood in the traditional sense only with regard to the potential harm for consumers' health and physical integrity. This does not address risks that could arise for consumers' safety in case, for example, his smart heating or cooling device is hacked and abused in a way that exposes him to the risk of overheating or fire.

The use of devices that can control essential household operations such as heating and cooling can expose consumers to new vulnerabilities and this poses new regulatory challenges. If damage occurs in a household that participates in aggregation, new and unanswered questions related to product liability may arise. The EU Product Liability Directive from 1985 applies to movable products only and does not include services while it remains unclear whether it would apply to digital technologies such as software. When it comes to smart and connected devices, such as those that are used in aggregation, the definition of liable persons under current rules is inappropriate too. Besides the producer, product liability rules should apply to any professional in the product supply chain, including creators of digital content or software, when his activities have affected the safety of a product placed on the market.

The digitalisation of the energy sector also gives rise to uncertainties with regards to the competences of the authorities shouldered with the responsibility to supervise the application of law and protect consumers. For example, privacy is an issue that for decades was outside the scope of energy regulators. These rapid changes taking place in the energy sector require more cross-sectoral collaboration and must be urgently addressed by policy makers. In this respect, BEUC also supports the Partnership for the Enforcement of European Rights (PEER)⁴, an initiative led by Europe's energy regulators that aims at more effective consumer protection in an era of increasingly intertwined consumer markets. More specifically, the goal of PEER is to strengthen the enforcement of European consumers' rights at EU level through an enhanced inter-authority cooperation of relevant public entities with consumer-related responsibilities.

How to make the digitalisation of energy carefree for consumers?

- The collection and processing of personal data should be subject to consumers' explicit concern and in accordance to General Data Protection Regulation. The implementation of these rules should be monitored regularly.
- The scope of the Product Liability Directive should be extended to all types of products, digital content products, and (digital and other) services.
- Connected devices should be secure by design and by default. Product safety legislation needs to be amended to ensure the safety and security of all connected devices placed in the EU markets.
- Any professional in the product supply chain should be liable for defects when his activities have affected the safety of a product placed on the market, including software.
- Policy makers and regulators from across sectors should strengthen their collaboration under initiatives such as the PEER initiative.

⁴ <https://www.ceer.eu/en/peer>

2. Consumers producing their own electricity should also enjoy a high level of protection

Another role that aggregators can play is that of grouping excess electricity generated by self-consumers and selling it in the wholesale markets.⁵ This model already exists: some Member States have feed-in tariffs or net-metering with a designated purchaser. In these cases, the Distribution System Operator or the supplier aggregates the electricity and sells it to the wholesale or retail markets. New independent aggregators could provide those services.

The challenges arising from aggregators' engagement with those consumers who produce electricity are similar to those arising from aggregators' engagement with households who just consume electricity. All consumers, including those who produce electricity, should enjoy a high level of protection and an easy access to aggregators' services.

More specifically, those consumers producing electricity should have the right to switch suppliers and aggregators independently. Suppliers should not be able to block any consumer from signing purchase contracts with independent aggregators. Aggregators should offer clear contracts to those who generate electricity and should provide information that includes electricity volumes sold and corresponding price. Last but not least, all consumers should be able to take advantage of the best offer, so price comparison tools should also include offers from aggregators to those consumers producing electricity.

How to foster prosumer-friendly aggregation services?

- Consumer protections should apply to contracts between prosumers and aggregators contracted to sell prosumers' excess electricity. Aggregators engaging with prosumers should be subject to equivalent requirements as those applicable to suppliers e.g. in terms of consumer rights or information on electricity volumes sold and prices.

⁵ For more information on BEUC's recommendations on renewable self-consumption, please check our paper [Enabling consumers to generate their own renewable electricity](#).



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