



Paid offtake interruption in order to preserve the grid

Elia's tertiary reserve comprises two types of reserve: tertiary production reserve and tertiary offtake reserve. These two types of reserve complement primary reserve, secondary reserve and capacity supplied under the CIPU contract, to cope with major imbalance and congestion problems. Implementation of tertiary offtake reserve is based on the principle of interruptibility: on Elia's request, a grid user undertakes to reduce its offtake to below a certain pre-agreed limit. The user will also make reserve power available to Elia. Elia pays for both the provision of reserve and the activation of the interruptibility service. Elia and the grid user are bound by an "interruptibility" contract.

I. Interruptibility: principles

I.1. The context of primary, secondary and tertiary reserves

The Belgian high-voltage grid is part of a larger, interconnected European system. UCTE (Union for the Co-ordination of Transmission of Electricity) the body responsible for the co-ordination of the operation and development of the European interconnected system (otherwise known as the UCTE synchronous area), recommends that all the system operators act in a spirit of solidarity to ensure the security and reliability of the European grid. Elia handles this in its control area, taking the measures needed to meet the objectives of reliability, efficiency and security.

The provision of power reserves is one component of grid management in general. Their specific function is to maintain the frequency, voltage and efficient handling of imbalances or congestions in the Elia control area.

Grid users provide Elia with three kinds of power reserves: primary, secondary and tertiary. The primary reserve can be activated very quickly (within 0 to 30 seconds) and is used to maintain frequency; the secondary reserve can be activated quickly and alleviates common imbalances; and the tertiary reserve can be activated in the event of major imbalances and substantial congestions.

I.2. Interruptibility: one of the two facets of tertiary reserve

Tertiary reserve takes two different forms:

- tertiary production reserve, i.e. the injection of supplementary power into the grid;
- tertiary offtake reserve, i.e. the reduction the amount of power the grid user takes from the grid.

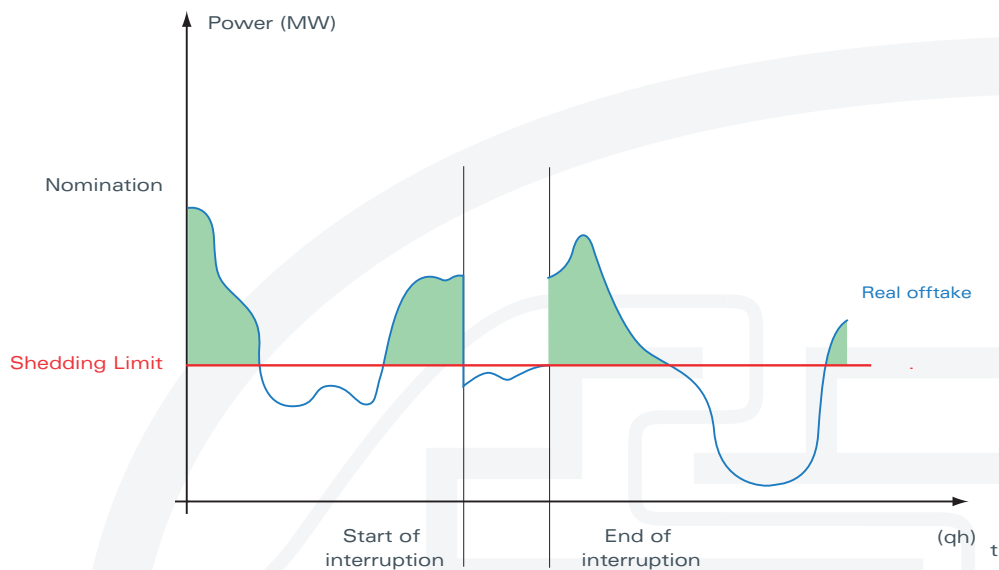
To activate tertiary offtake reserve, a grid user must agree to interrupt part of its offtake: this is called "interruptibility". In other words, it is a service provided by the grid user who, on Elia's request, undertakes to reduce the amount of power it takes from the high-voltage grid to below a contractually agreed level. This contractual limit is called the 'shedding limit'.

I.3. Reserve - an adjunct to interruption

A grid user that undertakes to reduce his offtake, provides Elia with an average annual power reserve referred to in the contract as the "reference power reserve". The value of this reserve is stipulated in the contract.

The power reserve really made available by the grid user is determined by evaluating the difference, if positive between the reference power of the industrial unit subject to interruptibility and the shedding limit stipulated in the contract. In other words, all power not taken off and consumed by the grid user is made available to Elia. There is a stipulated minimum volume for the reserve power: it must be at least 5 MW per tariff period, otherwise the grid user cannot offer this service.





I.4. A service that can be activated in 3 minutes

Elia decides when the interruptibility service must be activated. There is a specific procedure for activation:

- Elia activates, by remote control, a device located in the grid user's process;
- when this signal is received, the grid user's offtake must drop below the shedding limit within 3 minutes of Elia's request;

The interruptibility service is subject to other conditions:

- Elia may activate the interruptibility service no more than four times per year;
- there must be at least 24 hours between two interruptions;
- there is never any prior warning before Elia activates the interruptibility service;
- the total duration of periods of unavailability, i.e. the length of time during which the grid user cannot provide this service, is specified in the contract.

I.5. Two possible levels of service

There are two different versions of the interruptibility service:

- A4 service: the maximum duration of interruption requested by Elia is 4 hours, and the total duration of interruption over the contractual period is limited to 16 hours;
- A8 service: the maximum duration of interruption requested by Elia is 8 hours, and the total duration of interruptions over the contractual period is limited to 24 hours.

II. Remuneration for the interruptibility service

Elia pays two kinds of remuneration to grid users who provide the interruptibility service:

- payment for providing the reserve;
- payment for activation of the service.

II.1. Payment for providing the reserve

Even if Elia does not request the activation of the interruptibility service, it pays those grid users with whom it has signed an interruptibility contract. However, payment for provision of reserve only covers those periods during which the service is actually available to Elia: those periods which the grid user has defined as unavailable do not count.

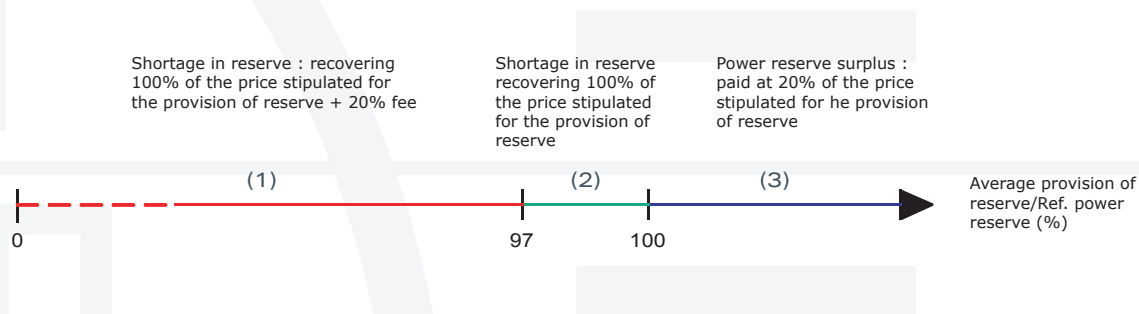
Payment according to tariff period

Elia has defined distinct tariff periods in order to ensure that the payment for the interruptibility service is more favourable for a period during which the likelihood of activation is particularly high. Remuneration will be greater during peak hours than during off peak or weekend hours.

Payment in the form of advances

Payment for provision of reserve is made via a system of monthly advances. The amount of the advance is set in accordance with the periods during which the grid user actually makes the reserve stipulated in the contract available to Elia, i.e. outside periods of unavailability. Elia settles up at the end of the contract. The advance to be paid is calculated per tariff period, by comparing the average power reserve actually made available to Elia (subject to measurements) to the contractually stipulated reference power reserve.

- if the average power reserve actually provided is greater than the reference power reserve, Elia will remunerate the average surplus at 20% of the price stipulated for making the service available(3);
- if the average power reserve actually provided is between 97% and 100% of the reference power reserve, Elia will recover all of its advances(2);
- if the average power reserve actually provided is less than 97% of the reference power reserve, Elia (1):
 - will recover 100% of the advance paid;
 - will recover 20% extra on the price stipulated for making the service available. This will apply to everything below the 97% reference power mark.

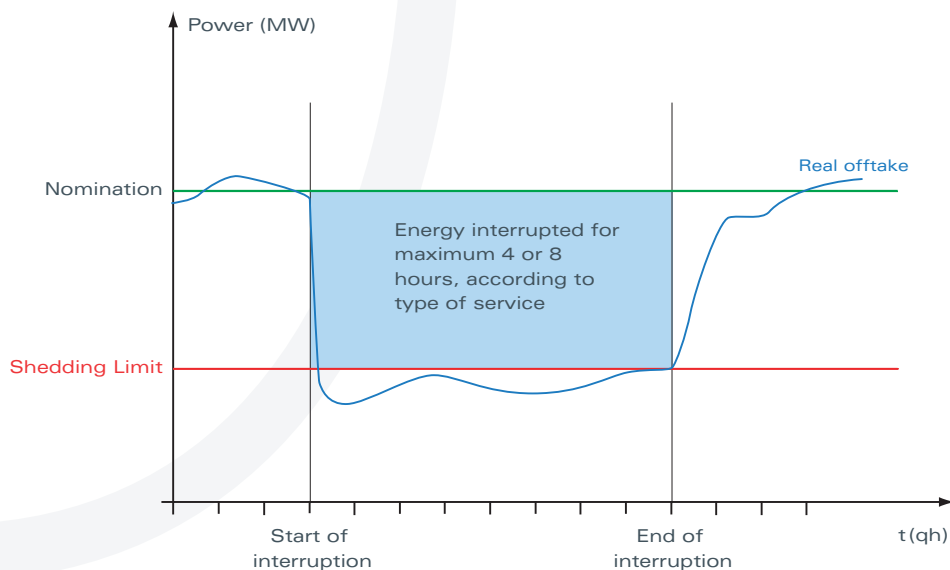


II.2. Payment for activation of the service

Two components make it possible to calculate the payment due for activating the interruptibility service: the quarter-hourly values measuring the interruption and the activation price.

The activation price is valid for a period of one quarterly hour. It is linked to the bid prices for upward activation (incremental bid) selected by Elia in connection with the CIPU contract or the tertiary production reserve for that same quarter hour. The activation price is set at 110% of the highest "incremental bid" selected by Elia. Elia also stipulates a minimum payment of €75 per MWh.

To assess the volume of interrupted energy during the quarter hour, the difference is calculated between the nomination and the actual power taken from the grid. Even if it is below the shedding limit, the value of power taken from the grid used in the calculation will never be less than the contractual limit.



II.3. Impact of interruptibility on the ARP's balancing perimeter

The nomination submitted by an ARP (instead of the actual measured offtake) serves as a reference point for calculating the ARP's balancing perimeter when the interruptibility service is activated. The aim is to prevent the ARP from being billed in the event that the interruption decided upon by Elia leads to imbalance within its perimeter.

III. Benefits of the interruptibility service for suppliers

Thanks to the interruptibility service, the user actively takes part in managing the grid. The user's actions make it possible to efficiently reduce the risk of blackout, from which he benefits indirectly because a grid blackout would have a harmful impact on its processes. Moreover, the grid user is paid for a service which is simple to apply and whose flexibility makes it possible to significantly limit the impact on its processes.

IV. How to become an interruptible customer ?

Every year, Elia sets a total volume for its tertiary offtake reserve. This volume must be approved by CREG. Once approval has been received, Elia organises a call for candidates and then a call for tender. The tenders offering the most attractive prices are selected until the total volume approved by the regulator is reached. After this selection process, Elia signs contracts with the selected grid users. The selection of the offers is made based on the "merit order" principle.

V. Legal and contractual basis

Elia and the grid user offering this service sign an interruptibility contract. To be eligible, the user must be connected directly to the Elia grid. In addition, the user's access point must be covered by an access contract and the user must have designated an ARP who undertakes to manage that access point within its balancing perimeter.

Interruptibility in 5 key points

- The interruptibility contract allows Elia to request that a specific volume of power not be taken from its grid.
- The tertiary offtake reserve is called upon to resolve major imbalance or congestion problems on the high-voltage grid.
- Elia requests a given user to provide the interruptibility service no more than four times per year.
- The grid user undertakes to reduce its offtake to below a contractually stipulated threshold known as the 'shedding limit'. The user also undertakes to provide a power reserve.
- Elia pays two kinds of remuneration: the first for the provision of reserve and the second for the actual activation of the interruptibility service.

