

Proposal to Transfer Energy Imbalances Resulting from the Delivery of Balancing Services to the Transmission Company

Paper by National Grid

Introduction

National Grid contracts with various parties for the provision of Balancing Services such as response, reserve and black start. These services are essential to allow National Grid to balance the system. The delivery of these services (or tests required to show service capability) can result in the provider generating or consuming different volumes of energy than they had planned or contracted for. These imbalances result in providers (or their suppliers) incurring an imbalance charge. The imbalance charge was designed to reflect the cost imposed on the system by a user not meeting their contracted position. It seems inappropriate to apply the charge to “imbalances” that assist the balancing of the system. Currently imbalance charges present an economic deterrent to provide Balancing Services, and hence reduce the efficiency by which the Transmission Company can balance the system.

This paper considers the Balancing Services that cause imbalance, and looks at the impact of imbalance charges on service providers and the economic provision of Balancing Services. It concludes that transferring the energy associated with Balancing Services to the Transmission Company is the most effective solution, as this energy is not subject to imbalance charges.

Delivery of Balancing Services

The delivery of the following Balancing Services result in the provider being potentially out of balance:

- i. Frequency Response (both mandatory and commercial);
- ii. Standing Reserve from providers not participating in the BM; and
- iii. Tests witnessed by National Grid of service capability (notably Black Start and governor tests for response capability).

There are two reasons why it may not be possible to give Bid Offer Acceptances:

- i. Smaller providers, especially demand side providers, do not wish to take on the overhead of becoming a BSC signatory or operating and maintaining a BMU; and
- ii. The volume of energy associated with a Balancing Service (notably response) is not known in advance, and the price of the energy agreed for the Balancing Service may not be equal to the Bid Offer price.

Consequences of Charging Imbalance for the Delivery of Balancing Services

Where Balancing Services result in the provider moving away from their contracted energy position without, for the reasons discussed previously, receiving a bid offer acceptance, they (or their supplier) are exposed to imbalance prices, which historically have been extremely volatile. This has had the following consequences:

- i. Due to the uncertainty of imbalance prices, the provider increases the service price to mitigate the risk; or
- ii. Where the provider finds the risk unacceptable, the service is withdrawn. This results in the Transmission Company having to use more expensive services and increases the cost of balancing the system. In addition, extensive withdrawal of services would reduce the level of system security.

Currently, Grid Code mandatory response providers receive a refund of the imbalance payments they are expected to incur as a result of deviation from their expected output (FPN plus bid offer acceptances). This is undesirable for the following reasons:

- i. Where a generator's FPN position does not equal their contracted energy position, refunding their imbalance exposure calculated against FPN position (rather than the contract position) can lead to perverse incentives.
- ii. The incentive on the provider to deliver the service is reduced. There is no imbalance exposure as a result of failing to deliver the service, although compensation is still received; and
- iii. Providers have expressed serious concerns with the compensation method as their exposure to SSP and SBP cannot be totally removed.

In summary, the current position is increasing the cost of balancing the system, resulting in the loss of services essential to balance the system and can reduce the incentive on providers to deliver the service.

Proposal

One of the design principles under NETA was that users paid the cost they imposed on the system resulting from their imbalance. This led to the development of dual imbalance prices to reflect both the residual benefit of a party taking less energy than their contracted position (System Sell Price, SSP), and the cost of taking additional energy beyond their contracted position (System Buy Price, SBP).

The delivery of Balancing Services assists the Transmission Company to balance the system and does not impose costs on the system. Therefore, we propose that the energy associated with the delivery of Balancing Services is transferred from the providers' (or their suppliers') account into the Transmission Company's energy account which is not exposed to imbalance charges. The Transmission Company would pay for this energy in accordance with the Balancing Services contract. The adjustment volume would be calculated post event by the Transmission Company, using an agreed methodology. This is analogous to the mechanism currently used for interconnectors, where if the transfer on an interconnector is varied for the purposes of balancing the system, Interconnector Users' energy accounts are unaffected.

We expect this proposal to have the following impacts:

- i. A greater availability of Balancing Services, particularly from the demand side, as providers would no longer be exposed to imbalance price risk;
- ii. Failure to deliver firm Balancing Services (notably response and reserve) will expose providers (or their suppliers) to imbalance charges. This will correctly reflect onto the provider the cost of the failure to deliver the energy element of the service; and
- iii. The removal of imbalance charges and imbalance refunds will reduce the cost of providing Balancing Services. This will reduce the overall cost of system balancing, leading to greater market efficiency.

Recommendation

The transfer of Balancing Services' energy to the Transmission Company will remove imbalance exposure from the provision of Balancing Services and should lead to an overall cost reduction. We therefore propose that the BSC is modified to allow energy associated with Balancing Services to be transferred to the Transmission Company. This should result in lower prices and greater service availability (due to reduced risk) for Balancing Services, leading to an overall reduction in the cost of balancing the system.