

# Introduction to Balancing Services Use of System Charges (BSUOS)

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# Introduction

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# BSUoS Charging

- The Transmission Licence allows The Company to derive revenue in respect of the Balancing Services activity through the Balancing Services Use of System (BSUoS) charges.
- The Balancing Services Activity is defined in the Transmission Licence as the activity undertaken by The Company as part of the Transmission Business including the operation of the transmission system and the procuring and using of Balancing Services for the purpose of balancing the transmission system.

# Balancing Services Use of System Charges

- Recover costs incurred as opposed to fix allowance
- Recover the cost of 'balancing the system' and the system operator function
- Paid by users of the transmission system
- Lead party of BMU is actually billed
- Calculated and settled in accordance with the Statement of Balancing Use of System Charging Methodology

# Who pays BSUoS?

BSUoS charges are paid by:

Generators

Suppliers

Note:

- *Interconnectors have been exempt since 28 August 2012*
- *Mostly the same customers pay TNUoS*

# What makes up BSUoS?

**BSUoS charges comprise the following costs, services and special provisions**

- I. The Total Costs of the Balancing Mechanism
- II. Total Balancing Services Contract costs
- III. Payments/Receipts from National Grid incentive schemes
- IV. Internal costs of operating the System
- V. Costs associated with contracting for and developing Balancing
- VI. Costs invoiced to The Company associated with Manifest Errors and
- VII. BETTA implementation costs

# BSUoS Calculation and Billing

- Charges apportioned on a half hourly £/MWh basis
- Applied proportionally according to your portfolio share
- Charged half hourly
- Billed Daily
- Two stage Financial Settlement (SF & RF)

Run Type	Definition	When you will be billed
II	Interim Initial	Settlement Day + 5 working days (no invoice sent)
SF	Settlement Final	Daily, Settlement Day + 16 working days
RF	Reconciliation Final	Daily, Settlement Day + 14 months

# Settlement Final and Reconciliation Final

## Settlement Final (SF)

The Company will calculate initial settlement (SF) BSUoS charges in accordance with the methodology set out in Chapter 9 using the latest available data, including data from the Initial Settlement Run and the Initial Volume Allocation Run.

## Reconciliation Final (RF)

Final Reconciliation will result in the calculation of a reconciled charge for each settlement day in the scheme year. The Company will calculate Final Reconciliation (RF) BSUoS charges (with the inclusion of interest as defined in the CUSC) in accordance with the methodology set out in Chapter 9 using the latest available data, including data from the Final Reconciliation Settlement Run and the Final Reconciliation Volume Allocation Run.



# What comprises your BSUoS charge

Your BSUoS charge recovers the costs incurred by National Grid, acting as the System Operator, in executing our obligation to balance the Electricity Transmission System on behalf of the industry

There are two main components of BSUoS, external and internal:

**External** – the monies National Grid pays providers for delivering balancing services

**Internal** – the business costs of providing this function (e.g. staff, buildings, systems etc.)

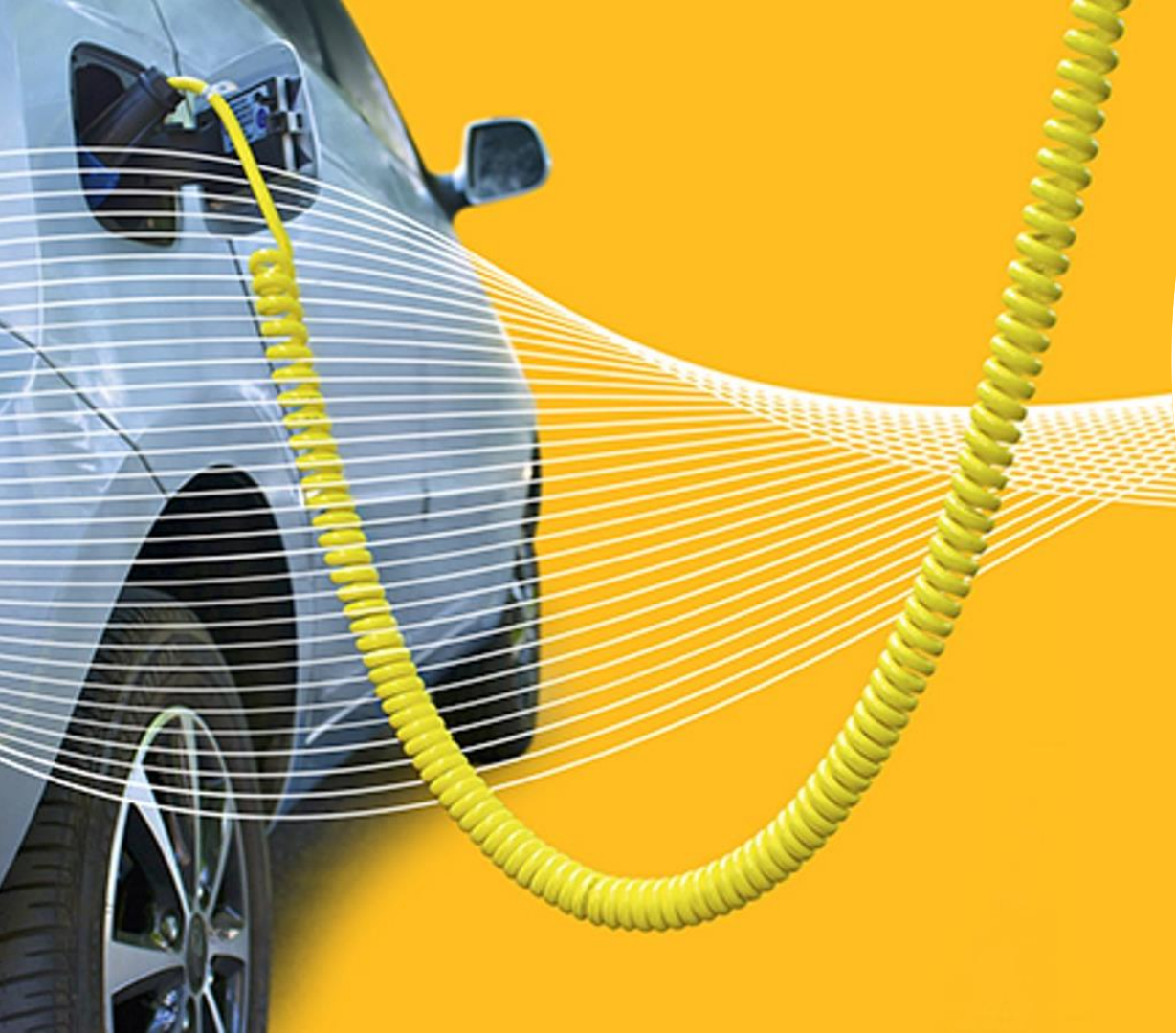
*Note:*

Both External and Internal Costs have an Incentive Scheme Adjustment applied to them to incentivise National Grid to balance the system economically and efficiently

All generators and suppliers are subject to a BSUoS charge

# How to calculate your BSUoS Charge

$$\text{BSUoS Charge} = \text{BSUoS tariff } \pounds/\text{MWh} \times \text{BM Unit Metered Energy Volume (MWh)} \times \text{Transmission Loss Multiplier} \times \text{Trading Unit Delivery Mode (+ or -1)}$$



## BPA example



# BPA report backing data (2/4)

BM UNIT SETTLEMENT DAY CHARGES:	
BM Unit Id	Balancing Services Use of System Charge (£)
2_AABCD	-358.09
2_BABCD	-144.38
2_CABCD	0
2_DABCD	-244.15
2_EABCD	-334.54
2_FABCD	-307.34
2_GABCD	-21.61
2_HABCD	-318.25
2_JABCD	-66.23
2_KABCD	-242.71
2_LABCD	-202.51
2_MABCD	-474.6
2_NABCD	-26.65
2_PABCD	33.42
C_DBCDE	0
C_FBCDE	0
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BSC PARTY BALANCING SERVICES USE OF SYSTEM CHARGE	-2,707.64

This is a list of each BMU's individual BSUoS charges for this settlement day.

## Breakdown of BSUoS charge per BMU

This section of the BPA file will show a list of every BMU owned by the BSC Party ID/ Lead Party ID, including directly connected & embedded BMU's as well as the supplier BMU's shown to the left.

# BPA report backing data (3/4)

NGC BALANCING SERVICES USE OF SYSTEM CHARGES					
BSC PARTY CHARGING ADVICE (BPA)					
Date:	20180515				
Settlement Day:	20180419				
CAB Run Number:	2	SAA Run Number:	2	Settlement Run Type:	SF
				NGC Version Id:	1
Internal Scheme Code:	18/19	Internal Scheme Name:	2018/2019	Internal Scheme Day:	19
External Scheme Code:	18/19	External Scheme Name:	2018/2019	External Scheme Day:	19
BSC PARTY ID:	XXXXX	BSC Party Name:	XXXXXXXXXXXX		
BM UNIT SETTLEMENT PERIOD DATA:					
BM UNIT ID:	2_AAABCD				
Settlement Period	BM Unit Metered Energy Volume (MWh)	Transmission Loss Multiplier	Trading Unit Delivery Mode	Balancing Services Use of System Charge (£)	
1	1.948	1.0172379	-1	-13.782	
2	1.827	1.017628	-1	-12.364	
3	1.155	1.0170298	-1	-7.924	
4	1.819	1.0163888	-1	-13.429	
5	3.859	1.0160457	-1	-23.641	
6	4.735	1.0149942	-1	-31.539	
7	4.467	1.0148752	-1	-24.958	

The rest of the BPA file will show how the BSUoS Charge was applied to each BMU

This table applies the BSUoS Charge to each metered volume period from BMU '2\_AAABCD'

Useful calculation

**BSUoS Charge Calculation**  
 $BSUoS\ Price\ \text{£/MWh} \times BM\ Unit\ metered\ Energy\ Volume\ (MWh) \times Transmission\ Loss\ Multiplier \times Trading\ Unit\ Delivery\ Mode\ (+\ or\ -1) = BSUoS\ Charge\ for\ Settlement\ Period$   
 $\text{£}6.9953 \times 1.948 \times 1.0172379 \times -1 = \text{-£}13.782$

## BPA report backing data (4/4)

BM UNIT SETTLEMENT PERIOD DATA:				
BM UNIT ID:	2_PABCD			
Settlement Period	BM Unit Metered Energy Volume (MWh)	Transmission Loss Multiplier	Trading Unit Delivery Mode	Balancing Services Use of System Charge (£)
1	0.879	0.9677364	1	5.916
2	0.934	0.967474	1	6.009
3	0.927	0.9677468	1	6.051
4	0.969	0.9682556	1	6.815
5	0.986	0.968559	1	5.758
6	0.869	0.9690831	1	5.526
7	0.896	0.9692148	1	4.781
8	0.939	0.9693277	1	4.529
9	0.909	0.9696446	1	3.916
10	0.949	0.9702299	1	3.593
11	0.873	0.9708463	1	3.904
12	0.941	0.9712337	1	3.871
13	0.766	0.971835	1	2.821
14	0.678	0.9890128	-1	-1.438
15	0.64	0.9886449	-1	-0.553
16	0.728	0.9885363	-1	-0.683

### Example: Charge to credit

This is a good example of how the BM unit metered volume stays more or less the same, but the charges flip to a credit due to the trading unit delivery mode changing at the Settlement Period 14.

# What makes up the BSUoS Charge

The following section gives the pricing information for how the BSUoS Charge is calculated, more detail for these components can be found in the daily BCR files

BCR report

NGC BALANCING SERVICES USE OF SYSTEM CHARGES							
BSC PARTY CHARGING ADVICE (BPA)							
Date:	20180515						
Settlement Day:	20180419						
CAB Run Number:	2	SAA Run Number:	2	Settlement Run Type:	SF	NGC Version Id:	1
Internal Scheme Code:	18/19	Internal Scheme Name:	2018/2019	Internal Scheme Day:	19		
External Scheme Code:	18/19	External Scheme Name:	2018/2019	External Scheme Day:	19		
SETTLEMENT PERIOD CHARGING COMPONENTS:							
Settlement Period	Internal Balancing Services Use of System Charge (£)	External Balancing Services Use of System Charge (£)	Settlement Period Balancing Services Use of System Charge (£)	Total Adjusted Energy Volume (MWh)	Balancing Services Price (MWh)		
1	9,064.33	145,241.84	154,306.16	22,185.40	6.9553		
2	8,979.61	137,166.47	146,146.08	21,976.53	6.6501		
3	8,910.78	138,168.23	147,079.02	21,804.42	6.74538		
4	8,974.32	150,534.85	159,509.17	21,959.53	7.26378		
5	8,820.78	121,325.18	130,145.96	21,585.06	6.02945		
6	8,540.16	128,591.76	137,131.92	20,896.43	6.56246		
7	8,439.57	105,300.50	113,740.07	20,660.01	5.50532		
8	8,376.03	93,619.97	101,996.00	20,500.00	4.97542		
9	8,466.04	83,615.68	92,081.72	20,724.05	4.44323		
10	8,651.35	73,970.61	82,621.96	21,172.43	3.90234		

The components of this table make up the Total BSUoS Charge amount by settlement period for this this settlement day

The Balancing Services Price is published daily on the National Grid Website under 'Current BSUoS Data', there is a file for each run type: II, SF & RF





[nationalgridso.com](http://nationalgridso.com)

National Grid SO, Faraday House, Warwick Technology Park,  
Gallows Hill, Warwick, CV346DA

**nationalgrid**ESO