

USER GUIDE

BACK OFFICE BALANCING API

Version V1.2

Effective date: 20 07 2021

Version	Date	Amendments
0.1	07/08/2018	First version
0.2	16/11/2018	Addition of startup-related settings
0.3	01/04/2019	Upgrade
0.4	21/11/2019	Addition of monthly balance and detailed monthly balance Modification of Trace RTE as PM effective
0.5	21/01/2020	Addition of control rules Addition of return codes for activation resources and activated offers Correction of URLs Modification of maximum values of items retrieved by calls
1.0	15/05/2020	Modification of examples for application of "case sensitive" fields Activated_offers resource: addition of description of 'technical_id' field and correction to name 'effective_prices_chronical' Description of control rules Modification of return codes Activated_offers/id resource: correction of URL
1.1	02/07/2020	Activated offers resource – addition of international network grounds Description of Monthly Report & Detailed Monthly Report updated "Content-Range" and "Accept-Range" labels corrected
1.2	10/06/2021	The two "/activated_offers" resources: "offer_status" field added.

CONTENTS

1	INTRODUCTION	5
1.1	Object of the document	5
1.2	Reference documents	5
1.3	Definitions	5
1.4	Changes in technical specifications.....	6
2	ACCESS TO RTE IS	7
2.1	Back Office Balancing API	7
2.2	Requirements.....	7
2.3	Getting a PKI certificate	7
2.4	Technical support.....	7
3	FUNCTIONAL DESCRIPTION OF THE BACK OFFICE BALANCING API	8
3.1	"Activations" resource	8
3.2	"Activated offers" resource	9
3.3	"Activated offers" resource	9
3.4	"Programmes" resource	9
3.5	"Adjustment difference settlement price" resource	10
3.6	"Monthly statement for billing" resource - Not currently available	10
3.7	"Detailed monthly balance for billing" resource - Not currently available...	10
4	ACCESS TO THE BACK OFFICE BALANCING API	11
4.1	Data confidentiality.....	11
4.2	Termination	11
5	RESOURCES EXPOSED BY THE BACK OFFICE BALANCING API	12
5.1	ressource/activations	12
5.1.1.1	Call methods	12
5.1.1.2	Inputs	12
5.1.1.3	Reply (output)	13
5.1.1.4	Control rules.....	19
5.1.1.5	Returncodes	21
5.2	/activated_offers resource.....	22
5.2.1.1	Call methods	22
5.2.1.2	Inputs	22
5.2.1.3	Reply (output)	23
5.2.1.4	Control rules.....	26
5.2.1.5	Return codes	28
5.3	Resource /activated_offers/id	30
5.3.1.1	Call methods	30
5.3.1.2	Inputs	30
5.3.1.3	Reply (output)	30

5.3.1.4	Control rules.....	33
5.3.1.5	Error codes.....	34
5.4	Schedules / resource	36
5.4.1.1	Call methods	36
5.4.1.2	Inputs.....	36
5.4.1.3	Reply (output).....	37
5.4.1.4	Control rules.....	42
5.4.1.5	Return codes	43
5.5	Prea / resource	45
5.5.1.1	Call methods	45
5.5.1.2	Inputs.....	45
5.5.1.3	Reply (output).....	46
5.5.1.4	Control rules.....	55
5.5.1.5	Return codes	55
5.6	Monthly_balance_report resource	56
5.6.1.1	Call methods	56
5.6.1.2	Inputs.....	56
5.6.1.3	Reply (output).....	57
5.6.1.7	Control rules.....	59
5.6.1.12	Error codes.....	59
5.7	Detailed_monthly_scale_report resource	60
5.7.1.1	Call methods	60
5.7.1.2	Inputs.....	61
5.7.1.3	Reply (output).....	63
5.7.1.4	Control rules.....	64
5.7.1.5	Error codes.....	64
6	DETAILS OF ERRORS	66
6.1	Functional errors	67
6.2	Technical errors.....	69
7	APPENDICES	71
	END OF DOCUMENT	71

1 Introduction

1.1 Object of the document

This document is intended for users of private back-office data published by RTE via the Back Office Balancing API (or BOB API) on the Adjustment Mechanism. It is intended for all Adjustment Actors.

The Back Office Balancing tool allows the establishment of the valuation components necessary for the billing of each Adjustment Actor for all offers participating in the Adjustment Mechanism: remuneration of activated offers, valuation of adjustment differences, penalties in case of infringement.

This document is an integral part of the IS Rules and:

- describes the Back Office Balancing API and the resources made available by RTE (access, parameters, control rules, reply structure);
- presents the technical procedures implemented for using the Back Office Balancing API.

1.2 Reference documents

Short reference	Document title	Complete reference
[R1]	Terms of use for RTE's APIs	http://clients.rte-france.com/lang/fr/visiteurs/accueil/portail.jsp
[R2]	User's manual PKI software certificate	http://clients.rte-france.com/lang/fr/visiteurs/accueil/portail.jsp

In the event of inconsistencies between this Implementation Guide and the reference documents cited above, the indications of the present guide shall prevail.

1.3 Definitions

The terms used in this User Guide (the first letters of which are always capitalised) are defined below. Otherwise, their definitions are given in the General Conditions of Use **[R1]**:

API	Application Programming Interface
Authentication	Protection Mode for ensuring that the identity of the Sender or Receiver has been verified by RTE, and that they are authorised to access the IT system and use the Applications.
EIC	"Energy Identification Code" – a system for uniquely identifying stakeholders and objects on the energy market (e.g.: entities, zones, measuring points, electrical interconnection links), defined by the ENTSO-E.
Sender	Party which sends a Message
Message	Set of computer data used to transmit information, structured in accordance with a particular order that is specified in the User Guide. A Message can be sent by the User or by RTE.
Method	A method is the way in which the client interacts with the API's resource. An HTTP verb is always used (for example: GET for reading)

Party or Parties	Within the framework of the User Guide, these terms refer to either RTE or the User individually, or to both RTE and the User collectively.
Receiver	Party which receives the Sender's Message.
Resource	A resource is the data in relation to which the client application interacts.
URL	Uniform Resource Locator: character string based on a specific format used to locate a resource on a network and specify what protocol should be used on this resource.
User(s)	Legal entity which has agreed to RTE's General Terms and Conditions for Using APIs and which has been granted access to RTE's IT system for the purposes of using the APIs it has made available.

1.4 Changes in technical specifications

Each of the technical specifications in this implementation guide can be revised at RTE's initiative. Unless otherwise specified, users will be notified of these revisions at least six (6) months before they are scheduled to come into operational service.

2 Access to RTE IS

The terms and conditions for access to the RTE IS are defined by the rules for access to the information system and the use of RTE applications.

(<http://clients.rte-france.com/lang/fr/visiteurs/accueil/portail.jsp>).

2.1 Back Office Balancing API

Requests for access to generic applications (e.g. BOB) are made using a form.

(https://clients.rte-france.com/secure/fr/visiteurs/accueil/portail_adhesion.jsp).

2.2 Requirements

To access the BOB application, Adjustment Actors must:

- hold a valid PKI certificate recognized by the BOB application;
- hold a valid AA or PR participation agreement.

One PKI certificate will be required for testing and another for generation.

2.3 Getting a PKI certificate

To be able to use the BOB API, Adjustment Actors must place a request with their CRM (Customer Relationship Manager).

Once their request has been processed, Adjustment Actors are issued with an electronic key (PKI certificate) for connecting to the RTE IS. This key must be implemented in accordance with the procedures described in reference document [R2] 1.2.

2.4 Technical support

In the event of difficulties accessing or using an API, users can contact the telephone support services provided by RTE in accordance with the technical conditions detailed in the General Terms and Conditions of Use.

3 Functional description of the Back Office Balancing API

The API provides access to various resources:

- Activations
- Active offers
- Programmes
- Adjustment difference settlement price
- Monthly statement for billing - **Not currently available**
- Detailed monthly statement for billing - **Not currently available**

These four resources are available in read-only mode, via a **GET**-type operation.

3.1 "Activations" resource

This resource provides access to data defined in the EDA grid.

No later than 15 minutes after the end of each difference settlement period, RTE shall make available to the Adjustment Actor, for each of the EDAs in its Adjustment Perimeter, and at intervals of 5 minutes:

- List of activated offers;
- Expected Theoretical Volume, downward and upward;
- Expected Actual Volume, downward and upward;
- For thermal EDAs, if applicable, start-up information:
 - Start Index
 - Start and end time
 - Start power
 - Start cost
- The list of activated offer types (standard or specific) at intervals of 5 minutes

No later than the end of month M+1 and subject to the availability of data necessary for the calculation of the volumes realized, RTE makes available to the Adjustment Actor, for each of the EDAs in its Adjustment Perimeter and at intervals of 5 minutes:

- Volume realized, downward and upward;
- Volume of Adjustment Difference, positive and negative;
- Valuation of Adjustment Difference, positive and negative;
- Failure Volume;
- Penalties for failure.

Depending on the type of offers activated in the 5-minute interval, Theoretical Expected Volumes and Effective Expected Volumes values are calculated as follows:

	Specific case	Standard case	Mixed case
Activation	$CVAT = PM_{eff} - PA$ $CVAE = PM_{eff} - PA$	PM actor $CVAT = \text{Theoretical trapezium}$ $CVAE = PM_{eff} - PA$	PM actor absent $CVAT = \text{Theoretical trapezium}$ $CVAE = CVAT$
Offer activated	Specific $CVC_{spec} = CVAT = PM_{eff} - PA$	Standard $CVC_{std} = \text{Power step 15 min/12}$	Specific $CVC_{spec} = CVAT - \text{Theoretical trapezium}$

The "activations" resource is technically described in 5.1 of this document.

3.2 "Activated offers" resource

This resource provides access to data defined in the activated offer grid.

No later than 15 minutes after the end of each difference settlement period, RTE shall make available to the Adjustment Actor, for each of its activated offers and at intervals of 5 minutes:

- Commercial volume, accompanied by a reason;
- The remuneration price;
- The remuneration amount;
- For specific offers relating to thermal generation assets, in the case of startups, the actual price and associated remuneration.

The "activated_offers" resource is technically described in 5.2 of this document.

3.3 "Activated offers" resource

For an activated offer identified as a parameter, this resource provides access to detailed data.

This resource is used with the "Activations" resource. The "Activations" resource returns the list of Activated Offers related to Activation, as well as the URL for detailed information.

No later than 15 minutes after the end of each difference settlement period, RTE shall make available to the Adjustment Actor, for each of its activated offers and at intervals of 5 minutes:

- Commercial volume, accompanied by a reason;
- The remuneration price;
- The remuneration amount;
- For specific offers relating to thermal generation assets, in the case of startups, the actual price and associated remuneration.

The "activated_offer" resource is technically described in 5.3 of this document.

3.4 "Programmes" resource

This resource provides access to the program data that was used to establish back-office volumes and valuations. The data are in the EDA or EDP grid according to the constitution of the EDA.

No later than 15 minutes after the end of each imbalance settlement period, RTE shall make available to the Adjustment Actor, for each EDA/EDP in its Adjustment Perimeter, in the form of chronicles:

- The Call Program;

- The running schedule transmitted by the Adjustment Actor;
- the Effective Program: The running schedule outlined by RTE for the Specific and Standard offers.

The Schedules resource is technically described in section 5.4 of this document.

3.5 "Adjustment difference settlement price" resource

This resource makes available to Adjustment Actors the adjustment difference settlement prices that are used in valuing adjustment differences.

This data is calculated for a day D at the end of day D+3, and cannot be changed after that date.

The "adjustment difference settlement price" resource is technically described in section 0 of this document.

3.6 "Monthly statement for billing" resource - Not currently available

This resource allows the Adjustment Actors at the end of month M+1 to be provided with the valuation components used for purposes of billing for month M, both for the amounts due by the Adjustment Actor to RTE and for the amounts due by RTE to the Adjustment Actor.

The data are aggregated by the billing month and the adjustment month specified in the parameter.

The "monthly_balance_report" resource is technically described in section 5.6 of this document.

3.7 "Detailed monthly balance for billing" resource - Not currently available

This resource allows the Adjustment Actors at the end of month M+1 to be provided with the valuation components used for purposes of billing for month M, both for the amounts due by the Adjustment Actor to RTE and for the amounts due by RTE to the Adjustment Actor.

The data are broken down by day, for one or all of the EDAs within the perimeter of the Adjustment Actor, for the billing month and the specified adjustment month.

The "detailed_monthly_balance_report" resource is technically described in section 5.7 of this document.

4 Access to the Back Office Balancing API

As is the case for all of the APIs provided by RTE, accessing and using them are subject to the provisions of the General Terms and Conditions of Use **[R1]**.

The method used to authorise access to the API is certificate-based authentication. A certificate can be obtained from RTE, as described in the [FAQ – Obtaining a certificate](#).

It should be remembered that the company's EIC (French company ID number) is required for accessing these APIs.

In order to get an EIC code, complete the form available at the following URL:

https://clients.rte-france.com/lang/fr/clients_producteurs/services_clients/bureau_form.jsp

4.1 [Data confidentiality](#)

The information contained in messages may not be used for any purposes other than those described in the General Terms and Conditions **[R1]**.

4.2 [Termination](#)

A subscription to an API is automatically terminated when the user deletes their account on RTE's digital portal.

Should the User wish to cease using an API without terminating their subscription, they simply need to stop sending calls to it.

5 Resources exposed by the Back Office Balancing API

5.1 [ressource/activations](#)

5.1.1 [GET /activations](#)

5.1.1.1 Call methods

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	https://digital.iservices.rte-france.com/pki/bob/v1/activations/{eic_code}?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING
Sandbox URL (*)	https://digital.iservices.rte-france.com/pki/bob/v1/activations/sandbox/data

(*) The sandbox can be used to test the API's accessibility, as well as viewing the data format returned by the DATA portal. The way in which the resource is called can be configured and different results are returned.

5.1.1.2 Inputs

The retrieval of information about activations with history via the BOB API is processed via a single request (**GET-activations method**) to the web service:

- The actor's EIC code must be included in the parameters of the request, allowing the caller to whom the requested data is to be sent to be identified.

The **GET-activations** method must be called with the following **parameters**:

NAME	DESCRIPTION	PARAMETER TYPE	DATA TYPE	VALUES / FORMAT	MANDATORY
start_date	Start date	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	YES
end_date	End date	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	YES
date_type	The resource can be queried by two types of date: <ul style="list-style-type: none"> - The adjustment date - The update date 	Query	String	UPDATED = update date BALANCING = adjustment date	YES
eda_code	EDA code	Query	String	e.g.: EDACODE1	NO
retrieve_history	If equal to NO, returns the latest version of the data If equal to YES, returns the replay history Default is NO	Query	String	YES, NO Default = NO	NO

range	This field enables the service user to manage the page layout. It designates the interval of elements retrieved per call. The maximum number of elements retrieved in a single call is 100.	Query	String	In format: X-Y X is the index of the first element that the consumer of the service wishes to recover. Y is the index of the last element that the consumer of the service wishes to recover.	NO
--------------	---	-------	--------	---	-----------

Comments

The call to the method returns structured information detailed in the reply section 5.1.1.3.

Call examples:

With the obligatory parameters:

URL:

```
GET [HOST]/activations/{eic_code}?start_date=2019-12-29T23:00:00Z&end_date=2019-12-30T23:00:00Z&date_type=BALANCING
```

HTTP/1.1

Headers:

Host: [HOST]

Authorization:

With all parameters:

URL:

```
GET [HOST]/activations/{eic_code}?start_date=2019-12-29T23:00:00Z&end_date=2019-12-30T23:00:00Z&eda_code=EDA_CODE&date_type=BALANCING&retrieve_history=YES&range=1-100
```

HTTP/1.1

Headers:

Host: [HOST]

Authorization:

5.1.1.3 Reply (output)**5.1.1.3.1. HTTP headers (reply):**

NAME	DESCRIPTION	DATA TYPE	VALUES / FORMAT
Accept-Range	Maximum number of elements that can be returned by the resource	String	Example: 100
Content-Range	Range of elements returned by the resource	String	X-Y/Z where X represents the number of the first point returned, Y the last, and Z the total of existing points Example: 1-100/1080

5.1.1.3.2. Reply

Depending on the parameters sent in the request, the BOB API returns NULL, activation, or a list of activations.

Reply structure table

Back office balancing "Activations"		Table of values {JSON} structured as follows:			
Field	Cardinality	Type		Description	Values / Format
activation_id	[1..1]	Alphanumerical		Functional identifier of the activation. It is unique and built as follows: [EDA-CODE]_[YYYY-MM-DD]	Example: EDACODE1_2019-01-24
start_date	[1..1]	Date		Activation start date: [J 00 :00 :00	YYYY-MM-DDTHH:mm:ssZ in UTC time
end_date	[1..1]	Date		The activation end date D+1 00:00:00 [YYYY-MM-DDTHH:mm:ssZ in UTC time
eda_code	[1..1]	Alphanumerical		EDA code	EDACODE1
revision_number	[1..1]	Integer		The activation version	[1..N]
updated_date	[1..1]	Date		The update date of the Activation object	YYYY-MM-DDTHH:mm:ssZ in UTC time
vat_up_chronical		Table of objects		Chronicle of expected theoretical upward volumes	{},{},...
[0..n]	position	[1..1]	Integer	5-minute interval position	[1..300]
	value	[1..1]	Integer	interval value in MWh	with a precision of 3 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
vat_down_chronical		Table of objects		Chronicle of expected theoretical downward volumes	{},{},...
[0..n]	position	[1..1]	Integer	5-minute interval position	[1..300]
	value	[1..1]	Integer	interval value in MWh	Accurate to 3 decimal points and with a "." (point) as separator.
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
[1..n]					

vae_up_chronical		Table of objects		Chronicle of expected effective upward volumes	{0,0,...}
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in MWh	Accurate to 3 decimal points and with a "." (point) as separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
vae_down_chronical		Table of objects		Chronicle of expected effective downward volumes	{0,0,...}
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in MWh	Accurate to 3 decimal points and with a "." (point) as separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
vr_up_chronical		Table of objects		Chronicle of realized upward volumes	{0,0,...}
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in MWh	Accurate to 3 decimal points and with a "." (point) as separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
vr_down_chronical		Table of objects		Chronicle of realized downward volumes	{0,0,...}
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in MWh	Accurate to 3 decimal points and with a "." (point) as separator.

	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
eap_chronical		Table of objects		Chronicle of positive adjustment differences	{},{}...
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in MWh	Accurate to 3 decimal points and with a "." (point) as separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
ean_chronical		Table of objects		Chronicle of negative adjustment differences	{},{}...
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in MWh	Accurate to 3 decimal points and with a "." (point) as separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
valo_eap_chronical		Table of objects		Chronicle of positive adjustment difference valuations	{},{}...
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in €	Accurate to 2 decimal points and with a "." (point) as separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
valo_ean_chronical		Table of objects		Chronicle of negative adjustment difference valuations	{},{}...
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in €	Accurate to 2 decimal points and with a "." (point) as separator.

	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
vdef_chronical			Table of objects	Chronicle of defective volumes	{},{},...
[0..n]	position	[1..1]	Integer	5-minute interval position	[1..300]
	value	[1..1]	Integer	interval value in MWh	Accurate to 3 decimal points and with a "." (point) as separator.
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
penalty_chronical			Table of objects	Chronicles of penalties	{},{},...
[0..n]	position	[1..1]	Integer	5-minute interval position	[1..300]
	value	[1..1]	Integer	interval value in €	with a precision of 2 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
Startup_chronical			Table of objects	Startup chronicle	{},{},...
[0..n]	start_date	[1..1]	Date	Startup start date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	end_date	[1..1]	Date	Startup end date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	start_offer_index	[1..1]	Integer	Index of the N th EDA start in the day.	[1..N]
	energy	[1..1]	Integer	start energy in MWh	with a precision of 3 decimal places and "." (point) as a separator.
	startup_fee	[1..1]	integer	startup cost in €	with a precision of 2 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	Date of data update	YYYY-MM-DDTHH:mm:ssZ in UTC time
activated_offer_type_chronical			Table of objects	List of activated offer types	{},{},...

	[0..n]	position	[1..1]	Integer	5-minute interval position	[1..300]
		value	[1..1]	Integer	type of activated offers in 5-minute interval 0 for special 1 for standard RR 2 for standard RR and special	[0..2]
		revision_number	[1..1]	Integer	The data version	[1..N]
		updated_date	[1..1]		Date of data update	The update date
	list_activated_offers			Table of objects	List of activated Offers	[{},{},...]
	[0..n]	technical_id	[1..1]	Integer	technical identifier of the activated offer associated with activation	exp: 1235
		href	[1..1]	alphanumeric	indicates the path for accessing the activated offer using its unique identifier	link: exp:[HOST]/activated_offers/eic_code/[technical_id]

Table 1: details of activation attributes

Example of the reply format for an activation called by an actor identified by its EIC code provided as an attachment.

5.1.1.4 Control rules

Control rules for different input parameters:

Input parameters affected by the control rule	Description	Number
eic_code	The actor's EIC code (eic_code) must be included in the parameters of the request (PATH), allowing the caller to be identified and the requested data to be sent to it.	RG_E_01
start_date end_date date_type	Mandatory parameters	RG_E_02
start_date end_date	The date format must be ISO 8601: YYYY-MM-DDThh:mm:ssZ	RG_E_03
start_date end_date date_type	If date_type = BALANCING, the period between the start_date and end_date parameters must be 24 hours	RG_E_04
start_date end_date date_type	If date_type = UPDATED, the period between the start_date and end_date parameters must not exceed 7 days	RG_E_05
start_date end_date	The start_date parameter must be lower than the end_date parameter	RG_E_06
date_type	The date_type parameter must be included in the list: UPDATED / BALANCING	RG_E_07
retrieve_history	The retrieve_history parameter is optional. When specified, it must be included in the list: YES / NO. If it is not specified, the default value is NO. For NO, the sender will receive the latest version of the published data. If the value is YES, the sender will receive the history of the published data.	RG_E_08
range	The range parameter must be in the form X-Y (numeric value). Example for a first call: 1-1000. The X value is the first requested element, and Y is the last element. This parameter is used to manage page layout. In the event of a partial reply, return code 206 is returned.	RG_E_09

Output control rules applied:

Number	Description
RG_S_01	Results will be ordered by EDA and adjustment date.

Number	Description
RG_S_02	Results will be ordered by EDA and date of update.
RG_S_03	Chronicles are at intervals of 5 minutes
RG_S_04	Only points explicitly present in the chronicles are associated with volumes or valuations.
RG_S_05	In the chronicles, the position field corresponds to the position number of the 5-minute interval during the day. For example, for an adjustment on 08/04/2020, from 01:00 to 01:05 in FR time This is position 13 - This is translated into UTC time as 07/04/2020 11:00Z to 07/04/2020 23:05Z
RG_S_06	All energy values are expressed in MWh, to a precision of 3 digits after the separator
RG_S_07	All amounts are expressed in euros, to a precision of 2 digits after the separator
RG_S_08	The Activation object is created over the period [00h00, D+1 00h00[, it is an aggregate view of the EDA grid of the volumes activated on the day, regardless of the activated offers.
RG_S_09	The activation_id field is a functional identifier of the activation. It is unique for a one-day EDA, and is built as follows: [EDA-CODE]_[YYYY-MM-DD]
RG_S_10	On the current day, the Activation object is created as version 1. It is not versioned in the current day but rather updated, it concerns the object and all of its chronicles. The version remains at 1, with modifications indicated in the updated_date field.
RG_S_11	At the beginning of the current day, the Activation object is versioned. The revision_number attribute is incremented with each published version, and the updated_date is updated.
RG_S_12	For a query with the parameter date_type = UPDATED, all chronicles that make up the ACTIVATION object are returned, including unchanged chronicles
RG_S_13	The activated_offer_typology_chronical chronicle identifies the type of offers associated with each 5 min. interval. If it is a standard TERRE offer, a specific offer, or if the 2 offers are activated in the same 5 min. interval. For intervals not included in this chronicle (see RG04), no offers are activated.
RG_S_14	The startingup-chronical parameter lists the startups associated with an EDA over the day, with the following given for each startup: its index, the total energy volume concerned, the cost, the period
RG_S_15	The list of activated offers associated with an activation is returned in the table The table contains each activated offer's unique identifier and the URL to access the details of the offer via the activated_offers/id resource

Number	Description
RG_S_16	Beyond 100 returned elements, a new page is put in place and return code 206 is returned The resource returns elements based on the value of the "range" field The Content-Range field shows the number of objects returned, and the total number of objects corresponding to the request. The Accept-Range field indicates the maximum number of elements returned by the resource. It is positioned at 100. The page layout must be implemented to ensure results are complete. When querying with a range value greater than the Accept-Range value, code 400 is returned

5.1.1.5 Returncodes

The following table lists the return codes that can be returned when the resource is called.

Error type	Error code	Details
Functional	BALANCING_COMMON_F01	§6.1
Functional	BALANCING_COMMON_F02	§6.1
Functional	BALANCING_COMMON_F03	§6.1
Functional	BALANCING_COMMON_F04	§6.1
Functional	BALANCING_COMMON_F05	§6.1
Functional	BALANCING_COMMON_F06	§6.1
Functional	BALANCING_COMMON_F07	§6.1
Functional	BALANCING_COMMON_F08	§6.1
Functional	BALANCING_COMMON_F09	§6.1
Functional	BALANCING_COMMON_F10	§6.1
Functional	BALANCING_COMMON_F11	§6.1
Functional	BALANCING_COMMON_F12	§6.1
Functional	BALANCING_COMMON_F13	§6.1
Functional	BALANCING_COMMON_F14	§6.1
Technical	401	§6.2
Technical	403	§6.2
Technical	404	§6.2
Technical	408	§6.2
Technical	413	§6.2
Technical	414	§6.2
Technical	429	§6.2
Technical	500	§6.2
Technical	503	§6.2
Technical	509	§6.2

5.2 [/activated_offers resource](#)

5.2.1 [GET /activated_offers](#)

5.2.1.1 Call methods

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	https://digital.iservices.rte-france.com/pki/bob/v1/activated_offers/{eic_code}?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING
Sandbox URL (*)	https://digital.iservices.rte-france.com/pki/bob/v1/activated_offers/sandbox/data

(*) The sandbox can be used to test the API's accessibility and view the format of returned data.

5.2.1.2 Inputs

Retrieval of activated offer data via the BOB API is done through a single request (**the GET-activated_offers method**) to the web service:

- The actor's EIC code must be included in the parameters of the request, allowing the caller to whom the requested data is to be sent to be identified.

NAME	DESCRIPTION	PARAMETER TYPE	DATA TYPE	VALUES / FORMAT	MANDATORY
start_date	Start date	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	YES
end_date	End date	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	YES
date_type	The resource can be queried by two types of date: The adjustment date The update date	Query	String	UPDATED =update date BALANCING = adjustment date	YES
offer_type	Specifies the type of offer	Query	String	"STDRR" for standard RR offers SPECIFIC for specific offers	NO
eda_code	EDA code	Query	String	example: EDACODE1	NO
retrieve_history	If equal to NO, returns the latest version of the data If equal to YES, returns all versions Default is NO	Query	String	YES; NO	NO

range	This field enables the service user to manage the page layout. It designates the interval of elements retrieved per call. The maximum number of elements retrieved in a single call is 100.	Query	Integer	In format: X-Y X is the index of the first element that the consumer of the service wishes to recover. Y is the index of the last element that the consumer of the service wishes to recover.	NO
--------------	---	-------	---------	---	-----------

Call examples:

With the obligatory parameters:

URL:

```
GET [HOST]/activated_offers/{eic_code}?start_date=2019-12-29T23:00:00Z&end_date=2019-12-29T23:00Z&date_type=balancing
```

HTTP/1.1

Headers:

Host: [HOST]

Authorization:

With all parameters:

URL:

```
GET [HOST]/activated_offers/{eic_code}?start_date=2019-12-29T23:00:00Z&end_date=2019-12-29T23:00Z&eda_code=edaCode&date_type=BALANCING&offer_type=SPECIFIC&retrieve_history=NO&range=1-50
```

HTTP/1.1

Headers:

Host: [HOST]

Authorization:

5.2.1.3 Reply (output)**5.2.1.3.1. HTTP headers (reply):**

NAME	DESCRIPTION	DATA TYPE	VALUES / FORMAT
Accept-Range	Maximum number of elements that can be returned by the resource	String	Example: 100
Content-Range	Range of elements returned by the resource	String	X-Y/Z where X represents the number of the first point returned, Y the last, and Z the total of existing points Example: 1-100/1080

5.2.1.3.2. Reply

Depending on the parameters sent in the request, the BOB API returns an empty table, an activated offer, or a list of activated offers.

Reply structure table

Back office balancing		Table of values {JSON} structured as follows:			
	Field	Cardinality	Type	Description	Values / Format
[1..n]	activated_offer_id	[1..1]	integer	Activated offer identifier - same for all versions of the activated offer <ul style="list-style-type: none"> For specific: SyGA identifier For standard: The MRID Prefixed by BO for other offers (RG_S_11) 	
	eda_code	[1..1]	alphanumeric	EDA code	exp: EDACODE1
	start_date	[1..1]	Date	the start date of the processed offer	YYYY-MM-DDTHH:mm:ssZ in UTC time
	end_date	[1..1]	Date	the end date of the processed offer	YYYY-MM-DDTHH:mm:ssZ in UTC time
	offer_type	[1..1]	String	Type of offer	SPECIFIC; STDRR
	offer_status	[1..1]	String	Type of offer: Valid / blocked	AVAILABLE; BLOCKED For "SPECIFIC" type enabled offers, the value is always "AVAILABLE"
	is_start_offer	[1..1]	boolean	If the activated offer is linked to a startup	true/false
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	offer_flow_direction	[1..1]	String	supply direction	UP, DOWN

	technical_id	[1..1]	integer	Unique technical identifier, changes with each version of the activated offer	
	offer_reference	[1..1]	String	Reference of the offer sent by the actor	18322_1_5
	vc_chronical		Table of objects	Commercial volume chronicle	[{} , {} , ...]
[1..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	reason	[1..1]	alphanumeric	reason	"P=C", "RSO", "MAR", "SSY", "RSO_INT"
	value	[1..1]	Integer	interval value in MWh	with a precision of 3 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	prices_chronical		Table of objects	Chronicle of prices	[{} , {} , ...]
[1..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	remuneration_price_value	[1..1]	Integer	This is the price of the offer or the clearing price. Expressed in €/MWh	with a precision of 2 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	effective_prices_chronical Price with breakdown of startup costs		Table of objects	Chronicle of effective prices	[{} , {} , ...]
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	effective_price_value	[1..1]	Integer	For specific offers associated with a startup, this is the price of the offer including startup costs. Expressed in €/MWh	with a precision of 2 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	remuneration_chronical Price (no startup)*volumes		Table of objects	Chronicles of remunerations	[{} , {} , ...]
[1..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in €	with a precision of 2 decimal places and "." (point) as a separator.

	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	remuneration_startingup_chronical	[1..n]	Object	Start-up remuneration chronicle <i>Price (with startup)*volumes</i>	[{},{},...]
[0..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in €	with a precision of 2 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time

Table 2: details of attributes of activated offer object

Example of the reply format for an activated offer called by the actor identified by its EIC code, provided as an attachment

5.2.1.4 Control rules

Control rules for different input parameters:

Input parameters affected by the control rule	Description	Number
eic_code	The actor's EIC code (eic_code) must be included in the parameters of the request (PATH), allowing the caller to be identified and the requested data to be sent to it.	RG_E_01
start_date end_date date_type	Mandatory parameters	RG_E_02
start_date end_date	The date format must be ISO 8601: YYYY-MM-DDThh:mm:ssZ	RG_E_03
start_date end_date date_type	If date_type = BALANCING, the period between the start_date and end_date parameters must be 24 hours	RG_E_04
start_date end_date date_type	If date_type = UPDATED, the period between the start_date and end_date parameters must not exceed 7 days	RG_E_05
start_date end_date	The start_date parameter must be lower than the end_date parameter	RG_E_06
date_type	The date_type parameter must be included in the list: UPDATED / BALANCING	RG_E_07

offer_type	The offer_type parameter must be in the list: STDRR / SPECIFIC If the offer_type parameter is not indicated, the resource returns all data	RG_E_08
retrieve_history	The retrieve_history parameter is optional. When specified, it must be included in the list: YES / NO If it is not specified, the default value is NO. For NO, the sender will receive the latest version of the published data If the value is YES, the sender will receive the history of the published data	RG_E_09
range	The range parameter must be in the form X-Y (numeric value). Example for a first call: 1-1000 The X value is the first requested element, and Y is the last element. This parameter is used to manage page layout. In the event of a partial reply, return code 206 is returned	RG_E_10

Output control rules applied:

Number	Description
RG_S_01	Results will be ordered by EDA and adjustment date

Number	Description
RG_S_02	Results will be ordered by EDA and date of update.
RG_S_03	Chronicles are at intervals of 5 minutes, no breakpoints
RG_S_04	Only points explicitly present in the chronicles are associated with volumes or valuations.
RG_S_05	In the chronicles, the position field corresponds to the position number of the 5-minute interval during the day. For example, for an adjustment on 08/04/2020, from 01:00 to 01:05 in FR time This is position 13 - This is translated into UTC time as 07/04/2020 11:00Z to 07/04/2020 23:05Z
RG_S_06	All energy values are expressed in MWh, to a precision of 3 digits after the separator
RG_S_07	All amounts are expressed in euros, to a precision of 2 digits after the separator
RG_S_08	The activated offer is not updated when Realized is checked. Volume changes are at the activation level.
RG_S_09	The start_date and end_date associated with the activated offer correspond to the window for which the offer is posted
RG_S_10	The technical_id field is a unique identifier (for an offer, a day and a version)
RG_S_11	The activated_offer_id is the identifier of the submitted offer that has been activated: - The technical id created by SyGA for specific submitted offers - TOPASE MRID for STD offers - An identifier prefixed by BO for additional or exceptional offers
RG_S_12	The offer_reference field takes the following values: For specific offers: identifier transmitted by the adjustment actor For STD offers: this field contains the "mrid" of the standard offer (identical to activated_offer_id) Specific offers created manually (not received via SyGA) are prefixed "BO"

RG_S_13	Offers created manually by RTE are offers sent by telephone or fax. To identify them, the "offer_reference" field is prefixed "BO" No RTE reference is transmitted by the actor.
RG_S_14	An activated offer is associated with a single offer: specific or standard. The activated offer is not a starting offer, but is associated with the starting offer. When a specific offer is activated - if a startup is detected - it is the specific offer that enables the activated offer to be created. The start-up cost and associated volumes enable the chronicles remuneration_startingup_chronical and effective_prices_chronical to be created The " remuneration_startingup_chronical " chronicle will contain as many points as the " remuneration_chronical " chronicle. It is the price including the startup cost * the volume in the 5-min interval. The flat-rate start-up cost is allocated to all activated points, weighted by the volume of energy.
RG_S_15	If the activated offer is associated with a starting offer, " effective_prices_chronical " takes into account the starting cost broken down over the 5-min interval. The startup cost is broken down in terms of the total volume activated during startup. effective_price = offer_price + (startup_cost/startup_energy)
RG_S_16	If the activated offer is associated with a startup, all chronicles are present. If remuneration_startingup_chronical is assigned a value, compensation_chronical is also assigned a value. If the activated offer is not associated with a startup, all chronicles are present except " effective_price_chronical " and " remuneration_startingup_chronical "
RG_S_17	Beyond 100 returned elements, a new page is put in place and return code 206 is returned The resource returns elements based on the value of the "range" field The Content-Range field shows the number of objects returned, and the total number of objects corresponding to the request. The Accept-Range field indicates the maximum number of elements returned by the resource. It is positioned at 100. The page layout must be implemented to ensure results are complete. When querying with a range value greater than the Accept-Range value, code 400 is returned
RG_S_18	The offer_status field gets the following values: 'AVAILABLE' for the specific offer enabled "AVAILABLE" for the standard offer whose order is not blocked by RTE "BLOCKED" for the standard offer whose order is blocked by RTE

5.2.1.5 Return codes

The following table lists the return codes that can be returned when the resource is called.

Error type	Error code	Details
Functional	BALANCING_ACTIVATED_OFFERS_01	following table
Functional	BALANCING_COMMON_F01	§6.1
Functional	BALANCING_COMMON_F02	§6.1
Functional	BALANCING_COMMON_F03	§6.1
Functional	BALANCING_COMMON_F04	§6.1
Functional	BALANCING_COMMON_F05	§6.1
Functional	BALANCING_COMMON_F06	§6.1
Functional	BALANCING_COMMON_F07	§6.1

Functional	BALANCING_COMMON_F08	§6.1
Functional	BALANCING_COMMON_F09	§6.1
Functional	BALANCING_COMMON_F10	§6.1
Functional	BALANCING_COMMON_F11	§6.1
Functional	BALANCING_COMMON_F12	§6.1
Functional	BALANCING_COMMON_F13	§6.1
Functional	BALANCING_COMMON_F14	§6.1
Technical	401	§6.2
Technical	403	§6.2
Technical	404	§6.2
Technical	408	§6.2
Technical	413	§6.2
Technical	414	§6.2
Technical	429	§6.2
Technical	500	§6.2
Technical	503	§6.2
Technical	509	§6.2

BALANCING_ACTIVATED_OFFERS_01 (http code 400)	
RG	If the 'offer_type' parameter is unknown, the service generates this error.
Message	Unknown value of the parameter : offer_type. Example : STDRR or SPECIFIC
Example of a call	GET /activated_offers/17X123456789?start_date=2019-12-03T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING&offer_type=UNKNOWN

5.3 [Resource /activated_offers/id](#)

5.3.1 [GET /activated_offers/id](#)

5.3.1.1 [Call methods](#)

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	https://digital.iservices.rte-france.com/pki/bob/v1/activated_offers/id/{eic_code}/{technical_id}
Sandbox URL (*)	https://digital.iservices.rte-france.com/pki/bob/v1/activated_offers/id/sandbox/data

(*) The sandbox can be used to test the API's accessibility and view the format of returned data.

5.3.1.2 [Inputs](#)

Retrieval of activated offer data via the BOB API is done through a single request (**the GET-activated_offers method**) to the web service:

- The actor's EIC code must be included in the parameters of the request, allowing the caller to whom the requested data is to be sent to be identified.
- The technical identifier of the activated offer must be included in the parameters of the request

Call examples:

With the obligatory parameters:

```

URL:
GET [HOST]/activated_offers/id/{eic_code}/39930
HTTP/1.1
Headers:
Host: [HOST]
Authorization:

```

5.3.1.3 [Reply \(output\)](#)

5.3.1.3.1. [Reply](#)

Depending on the parameters sent in the request, the BOB API returns an empty table, an activated offer, or a list of activated offers.

[Reply structure table](#)

Back office balancing		Table of values {JSON} structured as follows:			
Field	Cardinality	Type	Description	Values / Format	
activated_offer_id	[1..1]	alphanumeric	Activated offer identifier - same for all versions of the activated offer <ul style="list-style-type: none"> For specific: SyGA identifier For standard: The MRID Prefixed by BO for other offers (RG_S_10) 		
eda_code	[1..1]	alphanumeric	EDA code	exp: EDACODE1	
start_date	[1..1]	Date	the start date of the processed offer	YYYY-MM-DDTHH:mm:ssZ in UTC time	
end_date	[1..1]	Date	the end date of the processed offer	YYYY-MM-DDTHH:mm:ssZ in UTC time	
offer_type	[1..1]	String	Type of offer	SPECIFIC; STDRR	
offer_status	[1..1]	String	Offer Type (validated or blocked)	AVAILABLE; BLOCKED	
is_start_offer	[1..1]	boolean	If the activated offer is linked to a startup	true/false	
revision_number	[1..1]	Integer	The data version	[1..N]	
updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time	
offer_flow_direction	[1..1]	String	supply direction	UP, DOWN	
technical_id	[1..1]	integer	Unique technical identifier, changes with each version of the activated offer		
offer_reference	[1..1]	String	Reference of the offer sent by the actor	18322_1_5	
vc_chronical	Table of objects		Commercial volume chronicle	[{};{};...]	
[1..n]] position	[1..1]	Integer	5-minute interval position	[1...300]	

	reason	[1..1]	alphanumeric	reason	"P=C", "RSO", "MAR", "SSY", "RSO_INT"
	value	[1..1]	Integer	interval value in MWh	with a precision of 3 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	prices_chronical		Table of objects	Chronicle of prices	[{},{},...]
[1..n]	position	[1..1]	Integer	5-minute interval position	[1..300]
	remuneration_price_value	[1..1]	Integer	This is the price of the offer or the clearing price. Expressed in €/MWh	with a precision of 2 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	effective_prices_chronical <i>Price with startup cost breakdown</i>		Table of objects	Chronicle of effective prices	[{},{},...]
[1..n]	position	[1..1]	Integer	5-minute interval position	[1..300]
	effective_price_value	[1..1]	Integer	For specific offers associated with a startup, this is the price of the offer including startup costs. Expressed in €/MWh	with a precision of 2 decimal places and "." (point) as a separator.
	starting_cost_updated_time	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	remuneration_chronical <i>Price (no startup)*volumes</i>		Table of objects	Chronicles of remunerations	[{},{},...]
[1..n]	position	[1..1]	Integer	5-minute interval position	[1..300]
	value	[1..1]	Integer	interval value in €	with a precision of 2 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1..N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
	remuneration_startingup_chronical	[1..n]	Object	Start-up remuneration chronicle <i>Price (with startup)*volumes</i>	[{},{},...]

	position	[1..1]	Integer	5-minute interval position	[1...300]
	value	[1..1]	Integer	interval value in €	with a precision of 2 decimal places and "." (point) as a separator.
	revision_number	[1..1]	Integer	The data version	[1...N]
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time

Table 3: details of attributes of activated offer object

Example of the reply format for an activated offer called by the actor identified by its EIC code, provided as an attachment

5.3.1.4 Control rules

Control rules for different input parameters:

Input parameters affected by the control rule	Description	Number
eic_code	The actor's EIC code (eic_code) must be included in the parameters of the request (PATH), allowing the caller to be identified and the requested data to be sent to it.	RG_E_01
technical_id	The actor's technical_id must be included in the parameters of the request (PATH).	RG_E_02

Output control rules applied:

Number	Description
RG_S_01	Results will be ordered by EDA and date of update.
RG_S_02	Chronicles are at intervals of 5 minutes, no breakpoints
RG_S_03	Only points explicitly present in the chronicles are associated with volumes or valuations.
RG_S_04	In the chronicles, the position field corresponds to the position number of the 5-minute interval during the day. For example, for an adjustment on 08/04/2020, from 01:00 to 01:05 in FR time This is position 13 - This is translated into UTC time as 07/04/2020 11:00Z to 07/04/2020 23:05Z
RG_S_05	All energy values are expressed in MWh, to a precision of 3 digits after the separator
RG_S_06	All amounts are expressed in euros, to a precision of 2 digits after the separator
RG_S_07	The activated offer is not updated when Realized is checked. Volume changes are at the activation level.
RG_S_08	The start_date and end_date associated with the activated offer correspond to the window for which the offer is posted
RG_S_09	The technical_id field is a unique identifier (for an offer, a day and a version)

RG_S_10	The activated_offer_id is the identifier of the submitted offer that has been activated: - The technical id created by SyGA for specific submitted offers - TOPASE MRID for STD offers - An identifier prefixed by BO for additional or exceptional offers
RG_S_11	The offer_reference field takes the following values: For specific offers: identifier transmitted by the adjustment actor For STD offers: this field contains the "mrid" of the standard offer (identical to activated_offer_id) Specific offers created manually (not received via SyGA) are prefixed "BO"
RG_S_12	Offers created manually by RTE are offers sent by telephone or fax. To identify them, the "offer_reference" field is prefixed "BO" No RTE reference is transmitted by the actor.
RG_S_13	An activated offer is associated with a single offer: specific or standard. The activated offer is not a starting offer, but is associated with the starting offer. When a specific offer is activated - if a startup is detected - it is the specific offer that enables the activated offer to be created. The start-up cost and associated volumes enable the chronicles remuneration_startingup_chronical and effective_prices_chronical to be created The " remuneration_startingup_chronical " chronicle will contain as many points as the " remuneration_chronical " chronicle. It is the price including the startup cost * the volume in the 5-min interval. The flat-rate start-up cost is allocated to all activated points, weighted by the volume of energy.
RG_S_14	If the activated offer is associated with a starting offer, " effective_prices_chronical " takes into account the starting cost broken down over the 5-min interval. The startup cost is broken down in terms of the total volume activated during startup. effective_price = offer_price + (startup_cost/startup_energy)
RG_S_15	If the activated offer is associated with a startup, all chronicles are present. If remuneration_startingup_chronical is assigned a value, compensation_chronical is also assigned a value. If the activated offer is not associated with a startup, all chronicles are present except " effective_price_chronical " and " remuneration_startingup_chronical "
RG_S_16	The offer_status field gets the following values: 'AVAILABLE' for the specific offer enabled "AVAILABLE" for the standard offer whose order is not blocked by RTE "BLOCKED" for the standard offer whose order is blocked by RTE

5.3.1.5 Error codes

The following table lists the error codes which may be returned when the resource is called.

Error type	Error code	Details
Functional	BALANCING_ACTIVATED_OFFERS_ID_01	following table
Functional	BALANCING_ACTIVATED_OFFERS_ID_02	following table
Functional	BALANCING_COMMON_F05	§6.1
Functional	BALANCING_COMMON_F14	§6.1
Technical	401	§6.2
Technical	403	§6.2
Technical	404	§6.2
Technical	408	§6.2

Technical	413	§6.2
Technical	414	§6.2
Technical	429	§6.2
Technical	500	§6.2
Technical	503	§6.2
Technical	509	§6.2

BALANCING_ACTIVATED_OFFERS_ID_01 (http code 400)	
RG	If the "technical_id" parameter does not match the expected format, the service generates this error.
Message	technical_id in the API input does not follow the format described in the user guide. Please verify compliance with the format for each field
Example of a call	GET /activated_offers/17X123456789/XXXXX
BALANCING_ACTIVATED_OFFERS_ID_02 (http code 400)	
RG	If the "technical_id" parameter does not exist, the service generates this error.
Message	technical_id {technical_id} in the API input {technical_id} doesn't exist
Example of a call	GET /activated_offers/17X123456789/000000

5.4 [Schedules / resource](#)

5.4.1 [GET /schedules](#)

5.4.1.1 Call methods

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	https://digital.iservices.rte-france.com/pki/bob/v1/schedules/{eic_code}?date_type=SCHEDULE&start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&schedule_type=PA
Sandbox URL (*)	https://digital.iservices.rte-france.com/pki/bob/v1/schedules/sandbox/data

(*) The sandbox can be used to test the API's accessibility, as well as viewing the data format returned by the DATA portal. The way in which the resource is called can be configured and different results are returned depending on the input parameters.

5.4.1.2 Inputs

The retrieval of data in programs with history via the BOB API is done through a single request (**the GET- schedules method**) to the web service:

- The actor's EIC code must be included in the parameters of the request, allowing the caller to whom the requested data is to be sent to be identified.

NAME	DESCRIPTION	PARAMETER TYPE	DATA TYPE	VALUES / FORMAT	MANDATORY
start_date	Start date	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	YES
end_date	End date	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	YES
date_type	Resource can be queried by two date types - adjustment/scheduling date - update date, allowing retrieval of data modified in the period start_date/end_date.	Query	String	UPDATED =update date SCHEDULE = scheduling/adjustment date	YES
eda_code	EDA code	Query	String	Exp: EDACODE1	NO
edp_code	EDP code	Query	String	Exp: EDPCODE1	NO
schedule_type	Type of program desired	Query	String	PM=PM Actor PM_EFFECTIVE = PM plotted by RTE PA=Program Call	YES
retrieve_history	If equal to NO, returns the latest version of the data If equal to YES, returns all versions Default is NO	Query	String	YES, NO	NO
range	This field enables the service user to manage the page layout. It designates the interval of elements retrieved per call.	Query	String	In format: X-Y X is the index of the first element that the consumer of the service wishes to recover.	NO

	The maximum number of elements retrieved in a single call is 100.			Y is the index of the last element that the consumer of the service wishes to recover.	
--	---	--	--	---	--

⁽¹⁾ Input dates are expressed in UTC.

Comments

If the EDA is not an EDP, the call to this resource can be made by entering the EDA code.

If not, the call to this resource can be made by entering the EDA, EDP or both codes.

The call returns detailed structured information in the reply section 5.4.1.3

Call examples:

With the obligatory parameters:

URL:

```
GET [HOST]/schedules/{eic_code}?start_date=2018-09-01T22:00:00Z&end_date=2018-09-02T22:00:00Z&schedule_type=PA&date_type=SCHEDULE
```

Headers:

Host: [HOST]

Authorization:

With all parameters:

URL:

```
GET [HOST]/schedules/{eic_code}?start_date=2018-09-01T12:00:00Z&end_date=2018-09-02T12:30:00Z&date_type=SCHEDULE&retrieve_history=YES&range=1-50&eda_code=edacode&edp_code=edpcode&schedule_type=PA
```

HTTP/1.1

Headers:

Host: [HOST]

Authorization:

5.4.1.3 Reply (output)

Depending on the parameters sent in the query and particularly the "**schedule_type**" parameter, the API returns an empty table ([]) or a list of schedules. Below is an example of the response format for schedules called by a party identified by its EIC code.

The replies below represent a Call Program, an Actor running schedule and an effective running schedule with associated chronicles.

5.4.1.3.1. HTTP headers (reply):

NAME	DESCRIPTION	DATA TYPE	VALUES / FORMAT
Accept-Range	Maximum number of elements that can be returned by the resource	String	Example: 100
Content-Range	Range of elements returned by the resource	String	X-Y/Z where X represents the number of the first point returned, Y the last, and Z the total of existing points Example: 1-100/1080

5.4.1.3.2. Reply

Back office balancing "Call Program"		Table of values {JSON} structured as follows:			
Field	Cardinality	Type	Description	Values / Format	
start_date	[1..1]	Date	The program start date	YYYY-MM-DDTHH:mm:ssZ in UTC time	
end_date	[1..1]	Date	The program end date	YYYY-MM-DDTHH:mm:ssZ in UTC time	
revision_number	[1..1]	Integer	The data version	[1...N]	
business_type	[1..1]	String	power type	P0	
schedule_type	[1..1]	String	program type	PA or PM or PM_EFFECTIVE	
updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time	
registered_resource	[1..1]	alphanumeric	EDP or EDA code	Example: EDPCODE1	
schedule_level	[1..1]	String	EDA or EDP	Example: EDA	
sender_eic	[1..1]	Alphanumeric	Adjustment actor's EIC code	Example: 99X999A999999999	
sender_name	[1..1]	Alphanumeric	Actor code: Name of adjustment actor	Example: ACTOR1	
resolution	[1..1]	alphanumeric	no PA, PM or PM scheduling EFFECTIVE	PT5M	

POINTS			table of objects	Program points chronicle	[{},{},...]
[1..n]	position	[1..1]	Integer	5-minute interval position	[1...300]
	quantity	[1..1]	Integer	interval value in MW.	with a precision of 3 decimal places and "." (point) as a separator.

Table 3: details of program attributes

Example of a "PA" call program object:

```
[
  {
    "start_date": "2019-12-29T23:00:00Z",
    "end_date": "2019-12-30T23:00:00Z",
    "revision_number": 1,
    "business_type": "P0",
    "schedule_type": "PA",
    "updated_date": "2020-02-17T09:29:20Z",
    "registered_ressource": "EDA_CODE",
    "schedule_level": "EDP",
    "sender_eic": "00X0123456789",
    "sender_name": "TOTO",
    "resolution": "PT5M",
    "points": [
      {
        "position": 1,
        "quantity": 0.000
      }
    ]
  }
]
```

Example of an effective PM object "PM_EFFECTIVE":

```
[
  {
    "start_date": "2019-12-29T23:00:00Z",
    "end_date": "2019-12-30T23:00:00Z",
    "revision_number": 1,
    "business_type": "P0",
    "schedule_type": "PM_EFFECTIVE",
    "updated_date": "2020-02-17T09:29:20Z",
    "registered_ressource": "EDACODE",
    "schedule_level": "EDP",
    "sender_eic": "00X0123456789",
    "sender_name": "TOTO",
    "resolution": "PT5M",
    "points": [
      {
        "position": 1,
        "quantity": 40.000
      },
      {
        "position": 8,
        "quantity": 0.000
      }
    ]
  }
]
```

Example of an object of type running schedule "PM actor":

```
[
  {
    "start_date": "2019-01-23T23:00:00Z",
    "end_date": "2019-01-24T23:00:00Z",
    "revision_number": 1,
    "business_type": "P0",
    "schedule_type": "PM",
    "registered_ressource": "EDP_CODE ou EDA_CODE",
    "schedule_level": "EDP",
    "sender_eic": "17X999999999999999",
    "sender_name": "AA/RP",
    "resolution": "PT5M",
    "updated_date": "2019-03-21T15:29:15Z",
    "points": [
      {
        "position": 1,
        "quantity": 0
      },
      {

```



```
[
  {
    "position": 79,
    "quantity": 89
  },
  {
    "position": 193,
    "quantity": 0
  }
]
```

5.4.1.4 Control rules

Control rules for different input parameters:

Input parameters affected by the control rule	Description	Number
eic_code	The actor's EIC code (eic_code) must be included in the parameters of the request (PATH), allowing the caller to be identified and the requested data to be sent to it.	RG_E_01
start_date end_date date_type schedule_type	Mandatory parameters	RG_E_02
start_date end_date	The date format must be ISO 8601: YYYY-MM-DDThh:mm:ssZ	RG_E_03
start_date end_date date_type	If date_type = SCHEDULE, the period between the start_date and end_date parameters must be 24 hours	RG_E_04
start_date end_date date_type	If date_type = UPDATED, the period between the start_date and end_date parameters must not exceed 7 days	RG_E_05
start_date end_date	The start_date parameter must be lower than the end_date parameter	RG_E_06
date_type	The date_type parameter must be included in the list: UPDATED / SCHEDULE	RG_E_07
schedule_type	The schedule_type parameter must be in the list: PM / PM_EFFECTIVE / PA	RG_E_08
eda_code edp_code	If the eda_code and edp_code parameters are not specified, the resource returns all programs for the actor over the period. Programs are prioritized for publication in the EDP grid, where appropriate in the EDA grid.	
retrieve_history	The retrieve_history parameter is optional. When specified, it must be included in the list: YES / NO If it is not specified, the default value is NO. For NO, the sender will receive the latest version of the published data If the value is YES, the sender will receive the history of the published data	RG_E_09
range	The range parameter must be in the form X-Y (numeric value). Example for a first call: 1-1000 The X value is the first requested element, and Y is the last element. This parameter is used to manage page layout. In the event of a partial reply, return code 206 is returned	RG_E_10

Output control rules applied:

Number	Description
RG_S_01	Results will be ordered by EDA and adjustment date

Number	Description
RG_S_02	Results will be ordered by EDA and update date

Number	Description
RG_S_03	The returned programs will be ordered by EDA and EDP code if they exist.
RG_S_04	Positions are at breakpoint; the convention is the start point. The first value is the first point of the day. Position 1 (corresponding to 23:00 UTC or 22:00 UTC)must always be completed.

Number	Description
RG_S_05	There are no call programs for an EDA without EDP. The resource returns an empty table.
RG_S_06	No PAs are sent for extraction EDAs, the resource returns an empty table.
RG_S_07	If there is no adjustment, the effective PM is equal to the call program
RG_S_08	The program grid is specified in schedule_ level . If the return value is "EDA", the program is in the EDA grid, otherwise "EDP" means it is in the EDP grid.
RG_S_09	Beyond 100 returned elements, a new page is put in place and return code 206 is returned The resource returns elements based on the value of the "range" field The Content-Range field shows the number of objects returned, and the total number of objects corresponding to the request. The Accept-Range field indicates the maximum number of elements returned by the resource. It is positioned at 100. The page layout must be implemented to ensure results are complete. When querying with a range value greater than the Accept-Range value, code 400 is returned

5.4.1.5 Return codes

The following table lists the error codes which may be returned when the resource is called.

Error type	Error code	Details
Functional	BALANCING_SCHEDULES_01	following table
Functional	BALANCING_SCHEDULES_02	following table
Functional	BALANCING_SCHEDULES_03	following table
Functional	BALANCING_SCHEDULES_04	following table
Functional	BALANCING_COMMON_F01	§6.1
Functional	BALANCING_COMMON_F02	§6.1
Functional	BALANCING_COMMON_F03	§6.1
Functional	BALANCING_COMMON_F04	§6.1
Functional	BALANCING_COMMON_F05	§6.1

Functional	BALANCING_COMMON_F06	§6.1
Functional	BALANCING_COMMON_F08	§6.1
Functional	BALANCING_COMMON_F09	§6.1
Functional	BALANCING_COMMON_F10	§6.1
Functional	BALANCING_COMMON_F11	§6.1
Functional	BALANCING_COMMON_F12	§6.1
Functional	BALANCING_COMMON_F13	§6.1
Functional	BALANCING_COMMON_F14	§6.1
Technical	401	§6.2
Technical	403	§6.2
Technical	404	§6.2
Technical	408	§6.2
Technical	413	§6.2
Technical	414	§6.2
Technical	429	§6.2
Technical	500	§6.2
Technical	503	§6.2
Technical	509	§6.2

BALANCING_SCHEDULES_01 (http code 400)	
RG	If the parameter 'date_type' is unknown, the service generates this error.
Message	Unknown value of the parameter : date_type. Example : UPDATED or SCHEDULE
Example of a call	GET /schedules/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=UNKNOWN&schedule_type=PA
BALANCING_SCHEDULES_02 (http code 400)	
RG	If the parameter 'schedule_type' is unknown, the service generates this error.
Message	Unknown value of the parameter : schedule_type. Example : PA or PM or PM_EFFECTIVE
Example of a call	GET /schedules/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=UPDATED&schedule_type=UNKNOWN
BALANCING_SCHEDULES_03 (http code 400)	
RG	If the parameter 'edp_code' is unknown, the service generates this error.
Message	Programming entity [{0}] in the API input does not exist
Example of a call	GET /schedules/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=UPDATED&schedule_type=PA&edp_code=EDPCODEUNKNOWN
BALANCING_SCHEDULES_04 (http code 400)	
RG	If the 'edp_code' is not associated with 'eda_code' or is not within the actor's perimeter, the service generates this error
Message	Programming entity [{0}] is not in the perimeter of the actor or associated the Balancing entity
Example of a call	GET /schedules/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=UPDATED&schedule_type=PA&edp_code=EDPCODE1&eda_code=EDACODE99

5.5 [Prea / resource](#)

5.5.1 [GET /prea](#)

5.5.1.1 [Call methods](#)

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	https://digital.iservices.rte-france.com/pki/bob/v1/prea/{eic_code}?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z
Sandbox URL (*)	https://digital.iservices.rte-france.com/pki/bob/v1/prea/sandbox/data

(*) The sandbox can be used to test the API's accessibility, as well as viewing the data format returned by the DATA portal. The way in which the resource is called can be configured and different results are returned depending on the input parameters.

5.5.1.2 [Inputs](#)

The retrieval of the "Adjustment Difference Settlement Price" data via the BOB API is done through a single request (**GET - prea method**) to the web service

NAME	DESCRIPTION	PARAMETER TYPE	DATA TYPE	VALUES / FORMAT	MANDATORY
start_date	Start date	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	YES
end_date	End date	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	YES

Call examples:

With the obligatory parameters:

<p>URL: GET [HOST]/prea/{eic_code}?start_date=2018-09-01T22:00:00Z&end_date=2018-09-02T22:00:00Z</p> <p>Headers: Host: [HOST]</p> <p>Authorization:</p>
--

5.5.1.3 Reply (output)

Depending on the parameters sent in the request, the BOB API returns an empty table, or price chronicles.

Reply structure table

Back office balancing "PREa"		Table of values {JSON} structured as follows:			
start_date	[1..1]	Date		is the start date	YYYY-MM-DDTHH:mm:ssZ in UTC time
end_date	[1..1]	Date		is the end date	YYYY-MM-DDTHH:mm:ssZ in UTC time
preap_chronical		Table of objects		Positive adjustment difference settlement price chronicle	[{},{},...]
[0..n]	position	[1..1]	Integer	position of 30 minute interval	[1...50]
	value	[1..1]	Integer	interval value in €/MWh	with a precision of 2 decimal places and "." (point) as a separator.
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time
prean_chronical		Table of objects		Negative adjustment difference settlement price chronicle	[{},{},...]
[0..n]	position	[1..1]	Integer	position of 30 minute interval	[1...50]
	value	[1..1]	Integer	interval value in €/MWh	with a precision of 2 decimal places and "." (point) as a separator.
	updated_date	[1..1]	Date	The update date	YYYY-MM-DDTHH:mm:ssZ in UTC time

Example of "PREa" adjustment difference settlement price object:

```
{
  "start_date": "2019-12-07T23:00:00Z",
  "end_date": "2019-12-08T23:00:00Z",
  "preap_chronical": [
    {
      "position": 48,
      "value": 27.53,
      "updated_date": "2020-02-17T09:29:20Z"
    },
    {
      "position": 47,
```

```
    "value": 29.04,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 46,  
    "value": 24.02,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 45,  
    "value": 18.45,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 44,  
    "value": 29.34,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 43,  
    "value": 51.24,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 42,  
    "value": 50.58,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 41,  
    "value": 59.05,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 40,  
    "value": 56.04,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 39,  
    "value": 52.42,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 38,  
    "value": 33.79,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 37,  
    "value": 43.11,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 36,  
    "value": 39.95,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 35,  
    "value": 44.17,  
    "updated_date": "2020-02-17T09:29:20Z"
```

```
},
{
  "position": 34,
  "value": 36.91,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 33,
  "value": 43.17,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 32,
  "value": 31.39,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 31,
  "value": 31.65,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 30,
  "value": 31.98,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 29,
  "value": 31.31,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 28,
  "value": 36.51,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 27,
  "value": 37.47,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 26,
  "value": 39.25,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 25,
  "value": 38.4,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 24,
  "value": 41.02,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 23,
  "value": 41.68,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
```



```
    "position": 22,  
    "value": 107.49,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 21,  
    "value": 80.27,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 20,  
    "value": 106.57,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 19,  
    "value": 97.91,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 18,  
    "value": 59.72,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 17,  
    "value": 59.53,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 16,  
    "value": 33.94,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 15,  
    "value": 35.03,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 14,  
    "value": 31.93,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 13,  
    "value": 35.09,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 12,  
    "value": 27.25,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 11,  
    "value": 30.36,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 10,  
    "value": 47.99,
```

```
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 9,
    "value": 51.18,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 8,
    "value": 26.02,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 7,
    "value": 25.45,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 6,
    "value": 26.91,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 5,
    "value": 47.64,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 4,
    "value": 58.01,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 3,
    "value": 50.47,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 2,
    "value": 65.54,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 1,
    "value": 55.05,
    "updated_date": "2020-02-17T09:29:20Z"
  }
],
"prean_chronical": [
  {
    "position": 48,
    "value": 27.53,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 47,
    "value": 29.04,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 46,
    "value": 24.02,
```

```
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 45,
    "value": 18.45,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 44,
    "value": 29.34,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 43,
    "value": 51.24,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 42,
    "value": 50.58,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 41,
    "value": 59.05,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 40,
    "value": 56.04,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 39,
    "value": 52.42,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 38,
    "value": 33.79,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 37,
    "value": 43.11,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 36,
    "value": 39.95,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 35,
    "value": 44.17,
    "updated_date": "2020-02-17T09:29:20Z"
  },
  {
    "position": 34,
    "value": 36.91,
    "updated_date": "2020-02-17T09:29:20Z"
  },
},
```

```
{
  "position": 33,
  "value": 43.17,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 32,
  "value": 31.39,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 31,
  "value": 31.65,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 30,
  "value": 31.98,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 29,
  "value": 31.31,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 28,
  "value": 36.51,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 27,
  "value": 37.47,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 26,
  "value": 39.25,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 25,
  "value": 38.4,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 24,
  "value": 41.02,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 23,
  "value": 41.68,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 22,
  "value": 107.49,
  "updated_date": "2020-02-17T09:29:20Z"
},
{
  "position": 21,
```

```
    "value": 80.27,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 20,  
    "value": 106.57,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 19,  
    "value": 97.91,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 18,  
    "value": 59.72,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 17,  
    "value": 59.53,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 16,  
    "value": 33.94,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 15,  
    "value": 35.03,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 14,  
    "value": 31.93,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 13,  
    "value": 35.09,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 12,  
    "value": 27.25,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 11,  
    "value": 30.36,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 10,  
    "value": 47.99,  
    "updated_date": "2020-02-17T09:29:20Z"  
  },  
  {  
    "position": 9,  
    "value": 51.18,  
    "updated_date": "2020-02-17T09:29:20Z"
```

```
    },  
    {  
      "position": 8,  
      "value": 26.02,  
      "updated_date": "2020-02-17T09:29:20Z"  
    },  
    {  
      "position": 7,  
      "value": 25.45,  
      "updated_date": "2020-02-17T09:29:20Z"  
    },  
    {  
      "position": 6,  
      "value": 26.91,  
      "updated_date": "2020-02-17T09:29:20Z"  
    },  
    {  
      "position": 5,  
      "value": 47.64,  
      "updated_date": "2020-02-17T09:29:20Z"  
    },  
    {  
      "position": 4,  
      "value": 58.01,  
      "updated_date": "2020-02-17T09:29:20Z"  
    },  
    {  
      "position": 3,  
      "value": 50.47,  
      "updated_date": "2020-02-17T09:29:20Z"  
    },  
    {  
      "position": 2,  
      "value": 65.54,  
      "updated_date": "2020-02-17T09:29:20Z"  
    },  
    {  
      "position": 1,  
      "value": 60.57,  
      "updated_date": "2020-02-17T09:29:20Z"  
    }  
  ]  
}
```

5.5.1.4 Control rules

Control rules for different input parameters:

Input parameters affected by the control rule	Description	Number
eic_code	The actor's EIC code (eic_code) must be included in the parameters of the request (PATH), allowing the caller to be identified and the requested data to be sent to it.	RG_E_01
start_date end_date	Mandatory parameters	RG_E_02
start_date end_date	The date format must be ISO 8601: YYYY-MM-DDThh:mm:ssZ	RG_E_03
start_date end_date	The period between the start_date and end_date parameters must be less than 24 hours	RG_E_04
start_date end_date	The start_date parameter must be lower than the end_date parameter	RG_E_05

Output control rules applied:

Number	Description
RG_S_01	Chronicles cover intervals of 30 minutes
RG_S_02	The data is calculated at the beginning of day D+4 and is no longer updated after this point.

5.5.1.5 Return codes

The following table lists the error codes which may be returned when the resource is called.

Error type	Error code	Details
Functional	BALANCING_COMMON_F01	§6.1
Functional	BALANCING_COMMON_F03	§6.1
Functional	BALANCING_COMMON_F04	§6.1
Functional	BALANCING_COMMON_F06	§6.1
Functional	BALANCING_COMMON_F09	§6.1
Functional	BALANCING_COMMON_F14	§6.1
Technical	401	§6.2
Technical	403	§6.2

Technical	404	§6.2
Technical	408	§6.2
Technical	413	§6.2
Technical	414	§6.2
Technical	429	§6.2
Technical	500	§6.2
Technical	503	§6.2
Technical	509	§6.2

5.6 [Monthly balance report resource](#)

5.6.1 [GET /monthly balance report](#)

5.6.1.1 [Call methods](#)

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	[HOST]/monthly_balance_report/{eic_code}
Sandbox URL^(*)	[HOST]/monthly_balance_report/sandbox

(*) The sandbox can be used to test the API's accessibility, as well as viewing the data format returned by the DATA portal. The way in which the resource is called can be configured and different results are returned depending on the input parameters.

5.6.1.1

5.6.1.2 [Inputs](#)

The retrieval of "monthly balance" data via the BOB API is done by means of a single request (**the GET method - monthly_balance_report**) to the web service.

The actor's EIC code must be included in the parameters of the request, allowing the caller to whom the requested data is to be sent to be identified.

The **GET- monthly_balance_report** method should be called with the following **parameters**:

NAME	DESCRIPTION	PARAMETER TYPE	DATA TYPE	VALUES / FORMAT	MANDATORY
billing_month	Billing month	Query	date	YYYY-MM	NO
balancing_month	Adjustment month	Query	date	YYYY-MM	NO
Document_type	Document type	Query	string	BILL; ORDER; PENALTIES; ALL	NO

Call examples:

With the obligatory parameters:

URL:

```
GET [HOST]/monthly_balance_report/{eic_code}? balancing_month=2020-01
```

Headers:

Host: [HOST]

Authorization:

With all parameters:

URL:

```
GET [HOST]/monthly_balance_report/{eic_code}? balancing_month=2020-01&billing_month=2020-02&document_type=BILL
```

Headers:

Host: [HOST]

Authorization:

5.6.1.3 Reply (output)

Depending on the parameters sent in the query, the BOB API returns an empty table, a monthly balance sheet, or an error.

Reply structure table

Back office balancing		Table of values {JSON} structured as follows:				
	Champ	Cardinality	Type	Description	Values / Format	
[1..1]	actor_eic	[1..1]	alphanumeric	Adjustment actor's EIC code	Example: 99X999A999999999	
	document_list	Table of objects		list of invoices/orders	[{},{},...]	
	[0..N]	balancing_month	[1..1]	Date	Adjustment month	YYYY-MM-DD
		billing_month	[1..1]	Date	Billing month	YYYY-MM-DD
		document_type	[1..1]	alphanumeric	document type	BILL ORDER PENALTIES
document_reference		[1..1]	alphanumeric	document number	123456789	

	document_amount	[1..1]	integer	total amount of document	with a precision of 2 decimal places and "." (point) as a separator.
	upward_commercial_volume	[1..1]	integer	Upward activated business volumes (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
	downward_commercial_volume	[1..1]	integer	Downward activated business volumes (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
	upward_cv_remuneration	[1..1]	integer	Reimbursement of commercial volumes for upward activated offers (EUR)	with a precision of 2 decimal places and "." (point) as a separator.
	downward_cv_remuneration	[1..1]	integer	Reimbursement of commercial volumes for downward activated offers (EUR)	with a precision of 2 decimal places and "." (point) as a separator.
	eap_volume	[1..1]	integer	Volume of positive adjustment differences (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
	ean_volume	[1..1]	integer	Volume of negative adjustment differences (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
	eap_value	[1..1]	integer	Valuation of positive adjustment differences (euros)	with a precision of 2 decimal places and "." (point) as a separator.
	ean_value	[1..1]	integer	Valuation of negative adjustment differences (euros)	with a precision of 2 decimal places and "." (point) as a separator.
	def_volume	[1..1]	integer	Failure volume (MWh)	with a precision of 3 decimal places and "." (point) as a separator.

	penalties	[1..1]	integer	Penalties (EUR)	with a precision of 2 decimal places and "." (point) as a separator.
--	-----------	--------	---------	-----------------	--

5.6.1.4**5.6.1.5****5.6.1.6****5.6.1.7 Control rules****Control rules for different input parameters:**

Number	Description
RG_E_01	The balancing month or billing month must be entered in the resource's call settings
RG_E_02	The billing month entered must be after the adjustment month
RG_E_03	The standard document field is used to identify whether it is an invoice or an order This field is case sensitive: it must be uppercase.

Output control rules applied:

Number	Description
RG_S_01	Output data is aggregated by billing month and adjustment month

5.6.1.8**5.6.1.9****5.6.1.10****5.6.1.11****5.6.1.12 Error codes**

The following table lists the error codes which may be returned when the resource is called.

Error type	Error code	Details
Functional	BALANCING_MONTHLY_REPORT_01	following table
Functional	BALANCING_MONTHLY_REPORT_02	following table
Functional	BALANCING_MONTHLY_REPORT_03	following table
Functional	BALANCING_MONTHLY_REPORT_04	following table

Functional	BALANCING_COMMON_F06	§6.1
Functional	BALANCING_COMMON_F14	§6.1
Technical	401	§6.2
Technical	403	§6.2
Technical	404	§6.2
Technical	408	§6.2
Technical	413	§6.2
Technical	414	§6.2
Technical	429	§6.2
Technical	500	§6.2
Technical	503	§6.2
Technical	509	§6.2

BALANCING_MONTHLY_REPORT_01 (http code 400)	
RG	If both the <code>billing_month</code> and <code>balancing_month</code> parameters are missing from the query
Message	At least, <code>billing_month</code> or <code>balancing_month</code> are missing
Example of a call	GET /monthly_balance_report/17X123456789?document_type=BILL
BALANCING_MONTHLY_REPORT_02 (http code 400)	
RG	If the <code>balancing_month</code> or <code>bill_month</code> parameters are not in "YYYY-MM" format, the Service generates this error with a message
Message	<code>Balancing_month [{0}]</code> in the API input does not follow the format described in the user guide. Please verify compliance with the format for each field.
Example of a call	GET /monthly_balance_report/17X123456789?balancing_month=2019-12-4T23-00-00Z
BALANCING_MONTHLY_REPORT_03 (http code 400)	
RG	If the invoice month entered is before the balancing month
Message	<code>Balancing_month</code> must be prior to <code>billing_month</code>
Example of a call	GET /monthly_balance_report/17X123456789?balancing_month=2019-12&billing_month=2019-03
BALANCING_MONTHLY_REPORT_04 (http code 400)	
RG	If the value of the <code>document_type</code> parameter is unknown, the Service generates this error.
Message	Unknown value of the parameter : <code>document_type</code> . Please check the user guide
Example of a call	GET /monthly_balance_report/17X123456789?balancing_month=2019-12&document_type=UNKNOWN

5.7 [Detailed monthly scale report resource](#)

5.7.1 [GET /detailed monthly balance report](#)

5.7.1.1 [Call methods](#)

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	[HOST]/detailed_monthly_balance_report
Sandbox URL (*)	[HOST]/detailed_monthly_balance_report/sandbox

(*) The sandbox can be used to test the API's accessibility, as well as viewing the data format returned by the DATA portal. The way in which the resource is called can be configured and different results are returned depending on the input parameters.

5.7.1.2 Inputs

The retrieval of the "detailed monthly balance for billing" data via the BOB API is done via a single request (**GET method - detailed_monthly_balance_report**) to the web service.

The actor's EIC code must be included in the parameters of the request, allowing the caller to whom the requested data is to be sent to be identified.

The **GET- detailed_monthly_balance_report** method must be called with the following parameters:

NAME	DESCRIPTION	PARAMETER TYPE	DATA TYPE	VALUES / FORMAT	MANDATORY
billing_month	Billing month	Query	date	YYYY-MM	NO
balancing_month	Adjustment month	Query	date	YYYY-MM	NO
eda_code	EDA code	Query	alphanumeric	EDA1	NO
balancing_day	Adjustment day	Query	date	YYYY-MM-DDTHH:mm:ssZ in UTC time	NO
Document_type	Document type	Query	string	BIL; ORDER	NO

Call examples:

With the obligatory parameters:

<p>URL: GET [HOST]/detailed_monthly_balance_report/{eic_code}? billing_month=2020-01</p> <p>Headers: Host: [HOST]</p> <p>Authorization:</p>
--

With all parameters:

<p>URL: GET [HOST]/detailed_monthly_balance_report/{eic_code}? billing_month=2020-03&balancing_month=2020-02&eda_code=EDACODE&balancing_day=2020-02-23T23:00:00Z&document_type=ORDER</p> <p>Headers: Host: [HOST]</p>

Authorization:

5.7.1.3 Reply (output)

Depending on the parameters sent in the query, the BOB API returns an empty table, a detailed monthly balance sheet, or an error.

5.7.1.3.1. Reply

Reply structure table

Back office balancing		Table of values {JSON} structured as follows:			
	Field	Cardinality	Type	Description	Values / Format
	actor_eic	[1..1]	alphanumeric	Adjustment actor's EIC code	Example: 99X999A999999999 9
	eda_day_chronicals	Table of objects		list of invoices/orders	[{},{},...]
[1..1]	balancing_month	[1..1]	Date	Adjustment month	YYYY-MM-DD
	billing_month	[1..1]	Date	Billing month	YYYY-MM-DD
	eda_code	[1..1]	alphanumeric	EDA name	EDACODE1
	Balancing_day	[1..1]	Date	adjustment date	YYYY-MM-DDTHH:mm:ssZ
	document_type	[1..1]	alphanumeric	document type	BILL ORDER
	document_reference	[1..1]	alphanumeric	document number	123456789
	upward_commercial_volume	[1..1]	integer	Upward activated business volumes (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
	downward_commercial_volume	[1..1]	integer	Downward activated business volumes (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
	upward_cv_remuneration	[1..1]	integer	Reimbursement of commercial volumes for upward activated offers (EUR)	with a precision of 2 decimal places and "." (point) as a separator.
	downward_cv_remuneration	[1..1]	integer	Reimbursement of commercial volumes for downward activated offers (EUR)	with a precision of 2 decimal places and "." (point) as a separator.
	eap_volume	[1..1]	integer	Volume of positive adjustment differences (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
	ean_volume	[1..1]	integer	Volume of negative adjustment differences (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
eap_value	[1..1]	integer	Valuation of positive adjustment differences (euros)	with a precision of 2 decimal places and "." (point) as a separator.	

	ean_value	[1..1]	integer	Valuation of negative adjustment differences (euros)	with a precision of 2 decimal places and "." (point) as a separator.
	def_volume	[1..1]	integer	Failure volume (MWh)	with a precision of 3 decimal places and "." (point) as a separator.
	penalties	[1..1]	integer	Penalties (EUR)	with a precision of 2 decimal places and "." (point) as a separator.

Below is an example of the reply format for a monthly reporting with daily detail, called by an actor identified by its EIC code.

```
[
]
```

5.7.1.4 Control rules

Control rules for different input parameters:

Number	Description
RG01	One of the fields - billing_month or balancing_month - must be filled in to get results
RG02	The billing month entered must be after the adjustment month
RG03	EDA code and adjustment day filters are optional. If they are given, only one value is entered in the call to the resource.
RG04	By default, the resource returns data for all EDAs, per day for the billing and adjustment months indicated
RG05	The "balancing_day" field must be part of the balancing month when it is filled in.

Output control rules applied:

Number	Description
RG01	Output data is aggregated by EDA and by day

5.7.1.5 Error codes

The following table lists the error codes which may be returned when the resource is called.

Error type	Error code	Details
Functional	BALANCING_MONTHLY_REPORT_01	following table
Functional	BALANCING_MONTHLY_REPORT_02	following table
Functional	BALANCING_MONTHLY_REPORT_03	following table
Functional	BALANCING_MONTHLY_REPORT_04	following table
Functional	BALANCING_MONTHLY_REPORT_05	following table
Functional	BALANCING_COMMON_F03	§6.1
Functional	BALANCING_COMMON_F06	§6.1
Functional	BALANCING_COMMON_F13	§6.1
Functional	BALANCING_COMMON_F14	§6.1
Technical	401	§6.2
Technical	403	§6.2
Technical	404	§6.2
Technical	408	§6.2
Technical	413	§6.2
Technical	414	§6.2
Technical	429	§6.2
Technical	500	§6.2
Technical	503	§6.2
Technical	509	§6.2

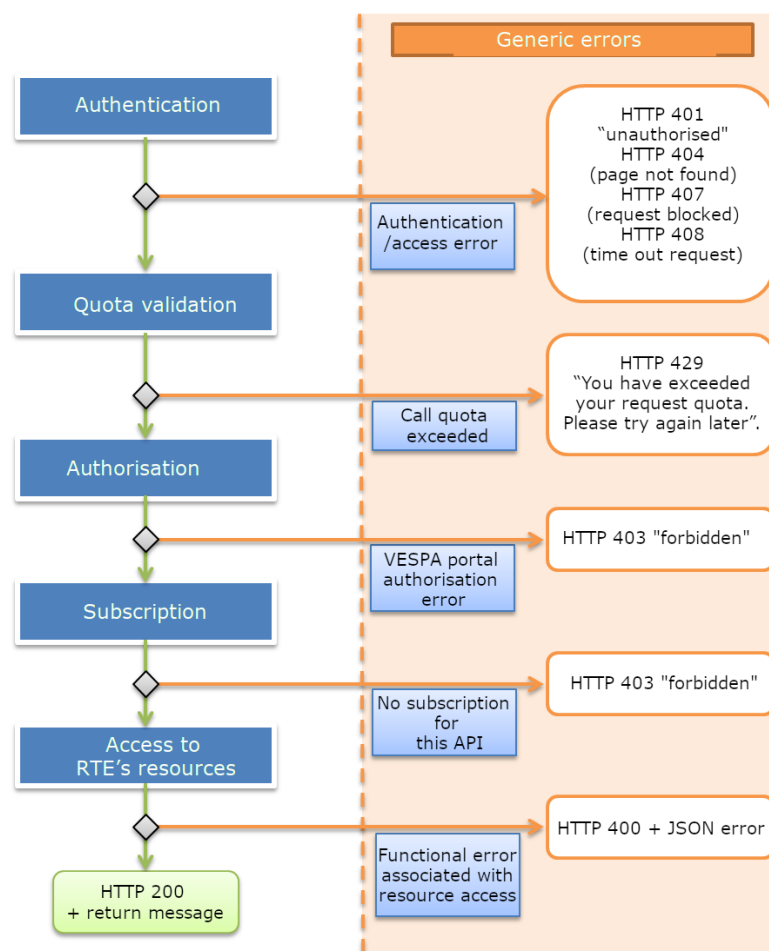
BALANCING_MONTHLY_REPORT_01 (http code 400)	
RG	If both the <code>billing_month</code> and <code>balancing_month</code> parameters are missing from the query
Message	At least, <code>billing_month</code> or <code>balancing_month</code> are missing
Example of a call	GET /detailed_monthly_balance_report/17X123456789?document_type=BILL
BALANCING_MONTHLY_REPORT_02 (http code 400)	
RG	If the <code>balancing_month</code> or <code>bill_month</code> parameters are not in "YYYY-MM" format, the Service generates this error with a message
Message	<code>Balancing_month [{0}]</code> in the API input does not follow the format described in the user guide. Please verify compliance with the format for each field.
Example of a call	GET / detailed_monthly_balance_report /17X123456789?balancing_month=2019-12-4T23-00-00Z
BALANCING_MONTHLY_REPORT_03 (http code 400)	
RG	If the invoice month entered is before the balancing month
Message	<code>Balancing_month</code> must be prior to <code>billing_month</code>
Example of a call	GET / detailed_monthly_balance_report /17X123456789?balancing_month=2019-12&billing_month=2019-03
BALANCING_MONTHLY_REPORT_04 (http code 400)	
RG	If the value of the <code>document_type</code> parameter is unknown, the Service generates this error.
Message	Unknown value of the parameter : <code>document_type</code> . Please check the user guide
Example of a call	GET /monthly_balance_report/17X123456789?balancing_month=2019-12&document_type=UNKNOWN
BALANCING_MONTHLY_REPORT_05 (http code 400)	

RG	If the balancing day is not included in the balancing month
Message	Balancing_day must be part of balancing_month
Call example	GET / detailed_monthly_balance_report /17X123456789?balancing_day=2019-12-4T23-00-00Z&balancing_month=2020-12

6 Details of errors

The diagram below shows the codes returned to the API's User depending on the sequencing of calls.

This paragraph details the generic errors that are common to all of the API's resources. As such, it does not describe request errors (http code 400). These errors are described resource by resource in the corresponding paragraph.



In the event of an error encountered during the authentication phase (while validating the username and password), an HTTP 401 "unauthorised" code is returned to the caller.

The second stage involves checking that the user has not exceeded the maximum number of calls authorised for the organisation. In the event of the number being exceeded, the caller is informed with an HTTP 429 code. In such cases, the response from the server will contain a "Retry-After:" header giving the time (in seconds) that the client will need to wait before resubmitting their request.

The third stage involves checking that the application has been created/authorised to access the VESPA technical platform. Otherwise, the caller is informed by an HTTP 403 "forbidden" code.

The fourth stage involves checking that the application has actually subscribed to the API. Otherwise, the caller is informed by an HTTP 403 "forbidden" code.

The fifth stage involves accessing RTE's resources. Various functional errors may occur. These are communicated to the User as JSON errors with an HTTP 400 code.

In the event of a technical incident occurring while processing the request at any of the stages, the caller will be informed by an HTTP 500 code.

JSON structure:

```
{
  "error": "short_name, error's explicit description",
  "error_description": "long name, readable by a user",
  "error_uri": "URI to the user guide on the VESPA technical platform or the FAQ/documentation on VESPA's web portal"
  "error_details" : {
    "transaction_id" : "unique call identifier, useful in the event of an incident"
  }
}
```

- The short description ("error") is a code which enables the calling application to automatically process error messages. It is represented by a series of words separated by "_".
- The long description ("error description") is a description enabling users to understand the source of the error more precisely.
- The URI to the user guide is present so as to provide more explanations depending on the API called.
- The transaction_id field: provides a unique call identifier. This identifier can be communicated with RTE's support services if there is an incident.

6.1 [Functional errors](#)

These tables summarize the functional errors returned by the resources (http code 400 or 403).

BALANCING_COMMON_F01 (http code 400)	
RG	The period between the start_date and end_date parameters for a request regarding adjustment dates must not be greater than 24 hours, otherwise the service generates this error.
Message	The API does not provide feedback on a period greater than 1 day, in one call. To retrieve all the data please make it with several calls to the API.
Call example	GET /activations/17X123456789?start_date=2019-12-03T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING
BALANCING_COMMON_F02 (http code 400)	
RG	The period between the start_date and end_date parameters for a query on update dates must not be greater than 7 days, otherwise the service generates this error.
Message	The API does not provide feedback on a period greater than 7 days, in one call. To retrieve all the data please make it with several calls to the API.

Call example	GET /activations/17X123456789?start_date=2019-12-03T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=UPDATED
BALANCING_COMMON_F03 (http code 400)	
RG	If the start_date or end_date parameters are not in the format "YYYY-MM-DDTHH:mm:ssZ", the service generates this error, accompanied by a message
Message	Start_date [{0}] in the API input does not follow the format described in the user guide. Please verify compliance with the format for each field.
Call example	GET /activations/17X123456789?start_date=2019-12-4T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING
BALANCING_COMMON_F04 (http code 400)	
RG	If the start_date parameter is greater than end_date, the service generates this error, accompanied by a message
Message	The field 'start_date' [{0}] in the API input is more recent than the field 'end_date' [{1}]. Please correct the values of these fields.
Call example	GET /activations/17X123456789?start_date=2019-12-05T23-00-00Z&end_date=2019-12-04T23-00-00Z&date_type=BALANCING
BALANCING_COMMON_F05 (http code 403)	
RG	If the {eic_code} parameter is missing from the path, the service generates this error, accompanied by a message
Message	Access is denied
Call example	GET /activations?start_date=2019-12-05T23-00-00Z&end_date=2019-12-04T23-00-00Z&date_type=BALANCING
BALANCING_COMMON_F06 (http code 400)	
RG	If the value of the {eic_code} parameter is unknown, the service generates this error, accompanied by a message
Message	Unknown value of the parameter : {eic_code}
Call example	GET /activations/EIC-CODE?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING
BALANCING_COMMON_F07 (http code 400)	
RG	If the value of the date_type parameter is unknown, the service generates this error, accompanied by a message
Message	Unknown value of the parameter : date_type. Example : UPDATED or BALANCING
Call example	GET /activations/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=UNKNOWN
BALANCING_COMMON_F08 (http code 400)	
RG	If the value of the retrieve_history parameter is unknown, the service generates this error.
Message	Unknown value of the parameter : retrieve_history. Example : 'YES' or 'NO'
Call example	GET /activations/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING&retrieve_history=UNKNOWN
BALANCING_COMMON_F09 (http code 400)	
RG	If one of the required parameters is missing, the service generates an error accompanied by a message.
Message	Missing mandatory parameter : {parameter_name}
Call example	GET /activations/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z
BALANCING_COMMON_F10 (http code 400)	
RG	If the value of the "range" field is not valid, the service generates this error.
Message	Unknown value of the parameter : range. Example : 1-100

Call example	GET /activations/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING&range=a
BALANCING_COMMON_F11 (http code 400)	
RG	If the maximum value of the "range" field is lower than the minimum value, the service generates this error.
Message	Incorrect value [{range}] - second value must be greater than first value
Call example	GET /activations/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING&range=99-1
BALANCING_COMMON_F12 (http code 400)	
RG	If the number of items called on the page is greater than the maximum value set, the service generates this error.
Message	more items called than the default value : [{default_value}]
Call example	GET /activations/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING&range=1-99999
BALANCING_COMMON_F13 (http code 400)	
RG	If the value of the "eda_code" field is not valid, the service generates this error.
Message	Balancing Entity EDA [{0}] in the API input does not exist
Call example	GET /activations/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING&eda_code=EDACODE
BALANCING_COMMON_F14 (http code 403)	
RG	If the company does not have authorization to access the service, the service generates this error.
Message	The company does not have sufficient authorization to access this service. Please contact RTE Market services
Call example	GET /activations/17X123456789?start_date=2019-12-04T23-00-00Z&end_date=2019-12-05T23-00-00Z&date_type=BALANCING

6.2 Technical errors

401	
HTTP code	401
Message	Unauthorized
Description	Error generated when authentication has failed
403	
HTTP code	403
Message	Forbidden
Description	Error generated if the caller is not authorised to call the resource
404	
HTTP code	404
Message	Not Found
Description	The resource called does not exist or no page was found
408	
HTTP code	408
Message	Request Time-out

Description	Error generated when the service called does not reply or when the service called times out (HTTP 408).
413	
HTTP code	413
Message	Request Entity Too Large
Description	The size of the response to the request is greater than 2 MB (maximum reached for calls to 3 metering points and over a maximum of one month)
414	
HTTP code	414
Message	Request-URI Too Long
Description	The URI sent by the caller is longer than 2048 characters.
416	
HTTP code	416
Message	Requested Range not satisfiable
Description	Error sent when at least one resource cannot be found on page
429	
HTTP code	429
Message	Too Many Requests
Description	The maximum number of calls has been made in a given period of time.
500	
HTTP code	500
Message	Internal Server Error
Description	All other technical errors. (This error is accompanied by a JSON message with an error_code and error_description field)
503	
HTTP code	503
Message	Service Unavailable
Description	Error generated during maintenance (HTTP 503).
509	
HTTP code	509
Message	Bandwidth Limit Exceeded.
Description	The total number of client requests has reached the maximum limit.

7 Appendices

END OF DOCUMENT