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Test details

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Market

Distribution list

Name	Company	Note	Date
Balance Group Managers			20.11.2023

Revision

Date	Version	Author / Department	Section
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1 Introduction

This document describes the BG Acceptance Test, which contains one test scenario that is carried out using the Swissgrid test schedule system. Successful completion of the test scenario described is a prerequisite for a balance group to be activated by Swissgrid for trading in the Swiss control area.

This document also describes the prerequisites required for the test as well as details of the organizational procedure and the test itself.

2 Test procedure

In principle, the test scenario attempts to represent a real situation in operational scheduling. The balance group to be tested must fulfil the specifications for the test scenario. In general, the balance group to be tested must be able to create a TPS in accordance with Swissgrid's resp. ENTSO-E specifications and correctly interpret the feedback from the Swissgrid schedule system and react accordingly.

Only after successful completion of the test scenario may the balance group continue the registration process with Swissgrid and be activated for trading in the Swiss control area.

An existing ECP integration connection with Swissgrid's ECP endpoint is a basic requirement for the test execution. Testing via e-mail or sFTP is not permitted.

3 General information

3.1 Organisation of the test

The BG Acceptance Test generally takes place on working days Mon - Fri between 08:00 and 14:30.

As soon as you are in the registration process with Swissgrid, you will be asked to set up the secure ECP communication channel. As soon as this has been completed and you have successfully completed the ECP integration test with Swissgrid, we will arrange a test date for the BG Acceptance Test with you.

The BG Acceptance Test is carried out online via MS Teams. We will send you an Outlook appointment of approx. 1 hour during which we will carry out the test scenario live.

We will send you the details of the test, such as the exact scheduling day and the rights document required for the test scenario, with the Outlook invitation.

3.2 Contact details

For all enquiries regarding the BG Acceptance Test, please contact balancegroup@swissgrid.ch. Your enquiries will be answered during office hours from Mon - Fri 08:00 - 12:00 and 13:00 - 16:00.

3.3 Basic principles of the test scenarios

- Receipt of the BG Acceptance Test document including the description of the test scenario and the required rights document by MS Teams invitation via Outlook.
- Communication channel for scheduling message exchange only via ECP
- If the TPS is sent manually or if the business application is connected to the ECP endpoint via FSSF, the file name must be according to the ECP specification. In the case of a connection via WS and AMQP, the file name does not matter.

- The test is conducted live via MS Teams. We will guide you through the test and give you appropriate instructions.
- For this BG Acceptance Test, the rights document is sent by Swissgrid and not from JAO as in real operation
- The Swissgrid balance group always acts as the counterparty for the Swiss internal trade with EIC 12X-0000001861-Q
- An A:A registration is made for the external trade for the nomination at the CH - IT border
- Times in schedule messages must be specified in UTC (see “Technical Balance Group Regulations”)
- Important for certifying the parties is an agreement on the way the XML-documents must be created and verified. For ESS V2R3 the references are to a DTD
- For testing purposes, the timing for the Day-Ahead process as in the operational process is not considered. The test is manually steered by Swissgrid in the MS Teams call
- If a time series will be rejected due to a failure in the TPS the relevant time series has to be incremented. The time series versions which are stated in the test cases showing the ideal case
- Long-Term, Intra-Day and PSA are not part of the test
- Balance groups with metering points:
 - PROD/CONS/PUMP time series in the schedule message is mandatory
- Unless otherwise specified, the TPS schedule messages in the test scenario are tested for the following:
 - Correctness of the XML message according to ESS V2R3
 - Standardized XML reference to DTD for ESS v2r3 messages
 - Compliance with the Technical Balance Group Requirements
 - Compliance with the capacity specifications in the right documents
 - EIC codes (plausibility)

4 Reference Documents

The documents listed below describe the messages required for the exchange of schedule messages between Swissgrid and the balance group. These are decisive for the correct creation and interpretation of these.

- Swissgrid: Actual Technical balance group regulations (V 3.9, part of the balance group contract)
- ENTSO-E references on website <https://www.entsoe.eu/publications/electronic-data-interchange-ed-library/Pages/default.aspx>
- IEC 62325-451-2: Scheduling business process and contextual model for European market

- ENTSO-E: Scheduling System ESS Version 2 Release 3
- Scheduling System ESS Implementation Guide V2R3
- IEC 62325451-5: Problem statement and status request business processes, contextual and assembly models for European market
 - ENTSO-E: Status Request Document (ESRD) V2R0
- Common information model (CIM) European style market profile
 - ENTSO-E: Core Components (ECC) and ENTSO-E Code List (ECL)
 - VSE: Glossary for the rules governing the Swiss electricity market

5 Glossary

Business Day: Schedule Day

BRP: Balance Responsible Party

Day-Ahead process: Nomination of schedules for Day-Ahead (tomorrow)

TPS: Trade Responsible Party (schedule message)

ACK: Acknowledgement

ANC: Anomaly Message for capacity violation

iCNF: Intermediate confirmation

CCT: Capacity Contract Type

CAI: Capacity Agreement Identification

PROD/CONS/PUMP: Time series for production, consumption and pumps

ECP: ENTSO-E communication platform

FSSF: File System Shared Folder

Other terms: See VSE document «Glossary for the rules governing the Swiss electricity market»

6 Testcases on Swissgrid test scheduling system

6.1 Day-Ahead test case

Scenario:	1
Execution:	Mandatory
Purpose:	<p>Matching process Day-ahead with one external and one internal trade</p> <p>The BRP sends a TPS which matches for the internal trade but for the external trade there is a capacity violation in version 1. The BRP must update the external time series in version 2 to match his capacity rights according to the Rights Document. The BRP should be able to interpret the received ACK, ANC and iCNF which he receives from the Swissgrid test scheduling system.</p>
Note:	----
Timing:	Day-Ahead test case The timing of the test scenario is according to the Swissgrid MS Teams invitation

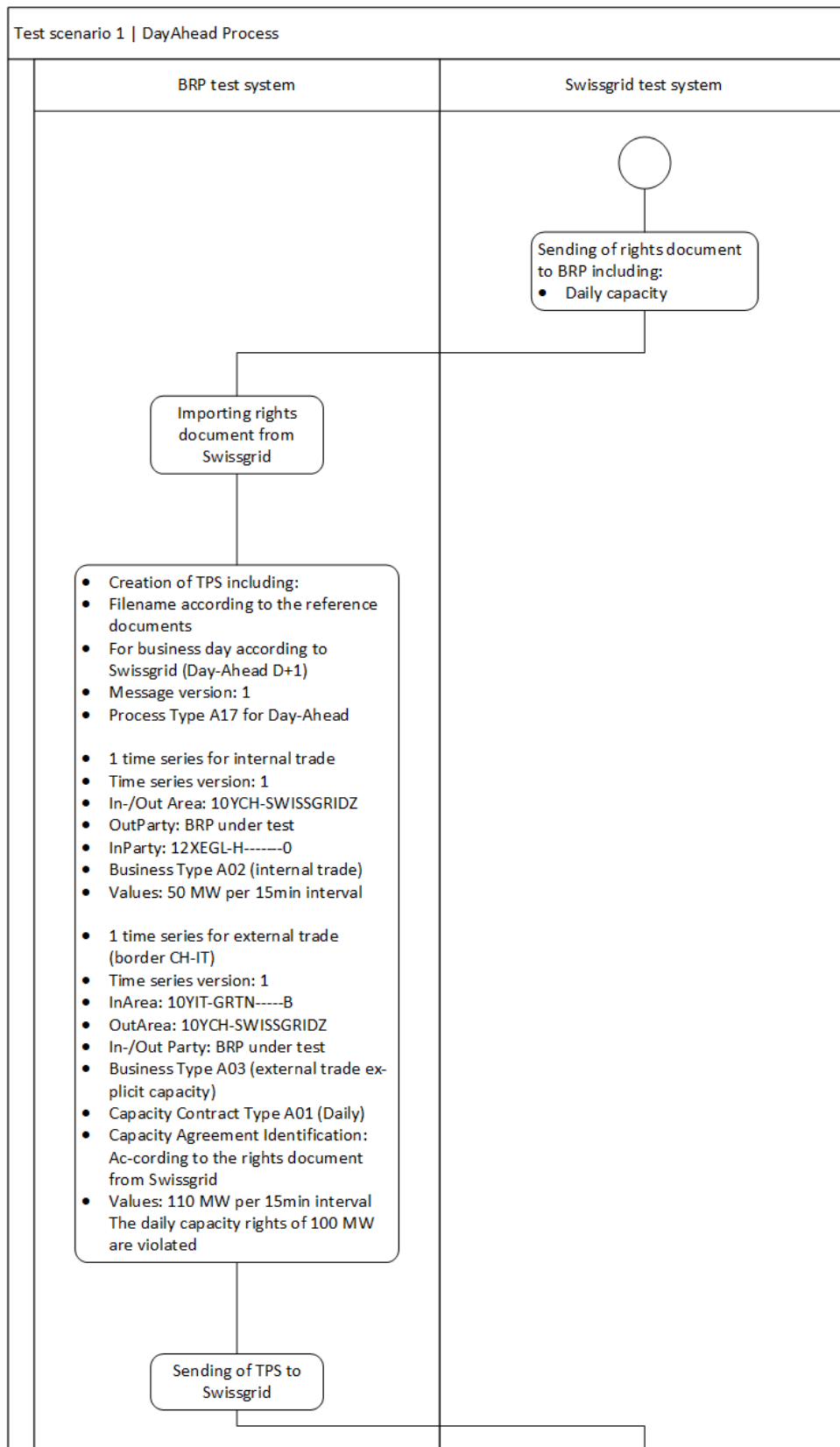
#	BRP Test System	Swissgrid Test System
1		<p>Swissgrid sends a Rights Document including a daily capacity base product of 100 MW for the whole day for border CH-IT and the relevant business day to the BRP.</p> <p>Swissgrid scheduling test system: -----Gate open-----</p>
2	<p>BRP sends a TPS:</p> <ul style="list-style-type: none"> • Filename according to the ECP specification document • Business day according to the information of Swissgrid (Day-Ahead) • Message version: 1 • Process Type A17 for Day-Ahead • 1 time series for internal trade <ul style="list-style-type: none"> ○ Time series version: 1 ○ In-/Out Area: 10YCH-SWISSGRIDZ ○ OutParty: BRP under test ○ InParty: 12X-0000001861-Q ○ Business Type A02 (internal trade) ○ Values: 50 MW per 15min interval • 1 time series for external trade (border CH-IT) <ul style="list-style-type: none"> ○ Time series version: 1 ○ InArea: 10YIT-GRTN-----B ○ OutArea: 10YCH-SWISSGRIDZ ○ In-/Out Party: BRP under test ○ Business Type A03 (external trade explicit capacity) ○ Capacity Contract Type A01 (Daily) ○ Capacity Agreement Identification: According to the rights document from Swissgrid ○ Values: 110 MW per 15min interval → The daily capacity rights of 100 MW are violated 	

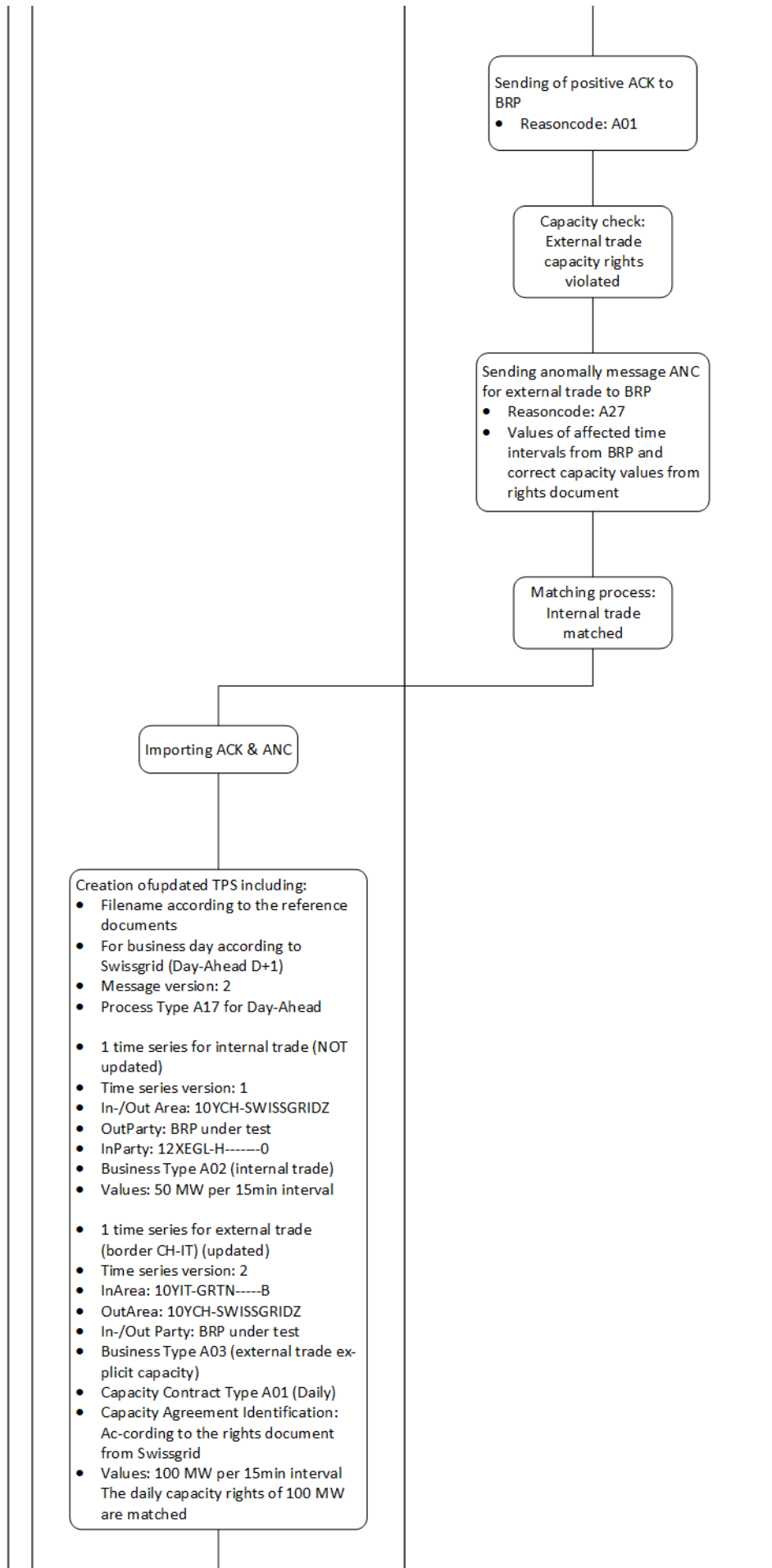
3		Sends a positive ACK message Reason code A01 "Message fully accepted"
4		Sends an ANC message Reason code A27 "Cross border capacity exceeded" Swissgrid scheduling test system: -----Gate closer-----
5	<p>BRP sends an updated TPS:</p> <ul style="list-style-type: none"> • Filename according to the ECP specification document • Business day according to the information of Swissgrid (Day-Ahead) • Message version: 2 • Process Type A17 for Day-Ahead • 1 time series for internal trade (NOT updated) <ul style="list-style-type: none"> ○ Time series version: 1 ○ In-/Out Area: 10YCH-SWISSGRIDZ ○ OutParty: BRP under test ○ InParty: 12X-0000001861-Q ○ Business Type A02 (internal trade) ○ Values: 50 MW per 15min interval • 1 time series for external trade (border CH-IT) (updated) <ul style="list-style-type: none"> ○ Time series version: 2 ○ InArea: 10YIT-GRTN-----B ○ OutArea: 10YCH-SWISSGRIDZ ○ In-/Out Party: BRP under test ○ Business Type A03 (external trade explicit capacity) ○ Capacity Contract Type A01 (Daily) ○ Capacity Agreement Identification: According to the rights document from Swissgrid ○ Values: 100 MW per 15min interval → The daily capacity rights of 100 MW are matched 	
6		Sends a positive ACK message Reason code A01 "Message fully accepted"
7		Swissgrid scheduling test system: -----CutOffTime----- Sends an iCNF message for internal trade (intermediate confirmation) Reason code A07 "Schedule global position partially accepted"
8		Sends an iCNF message for internal & external trade (intermediate confirmation) Reason code A07 "Schedule global position partially accepted"

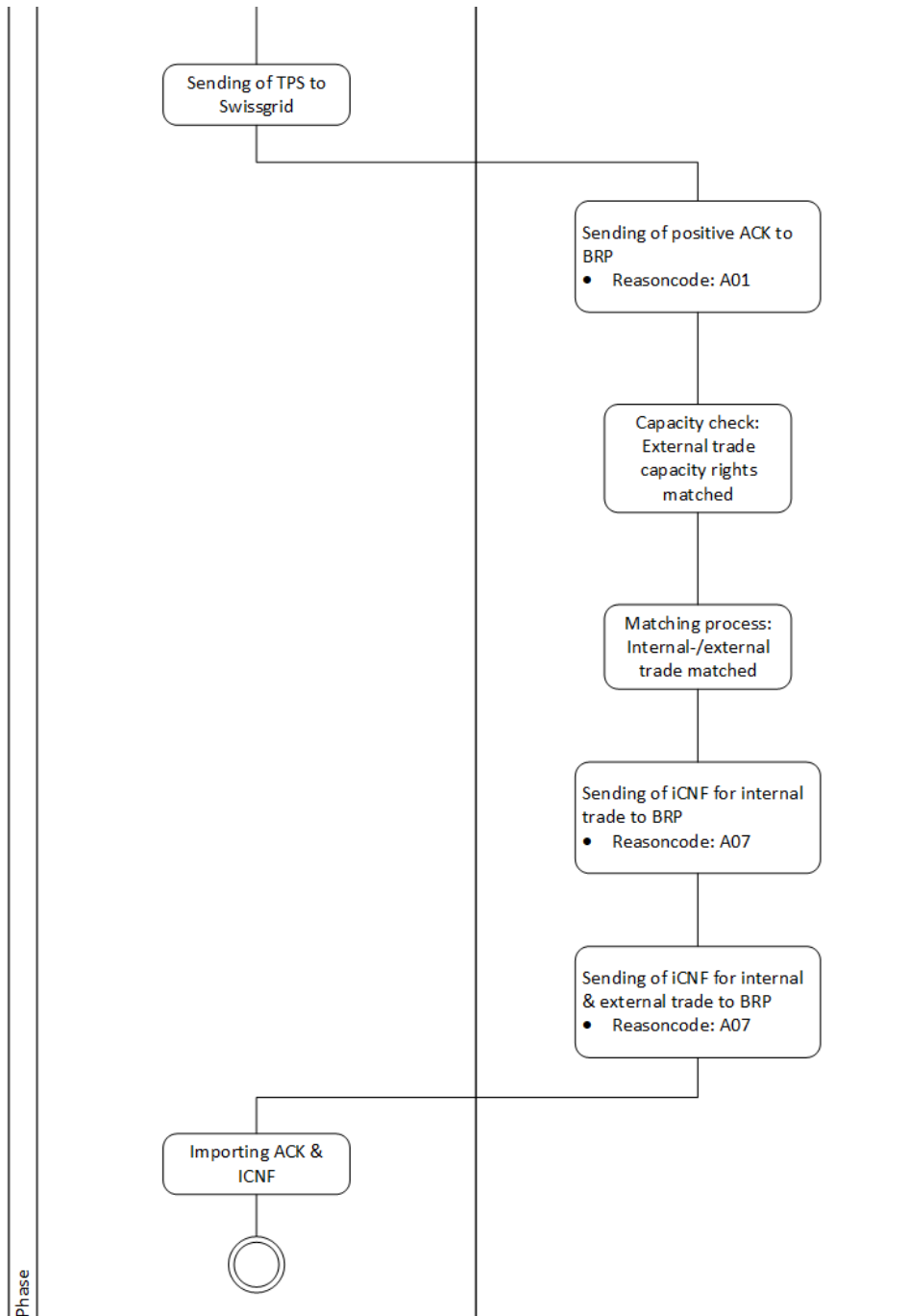
Note:

Your counterpart for the internal trade is always the Swissgrid balance group with EIC 12X-0000001861-Q. For the external trade it is always a A:A nomination, which means that the counterpart is always your own balance group.

6.2 Day-Ahead test case, sequence diagram







Phase