swissgrid

Technical Balance Group Regulations

Date   01.11.2016

Technical Regulations of the Balance Group Contract

Preamble

The following Technical Balance Group Regulations form an integral part of the Balance Group Contract between Swissgrid and the BGM. They describe the provisions governing the operational implementation of the Balance Group Contract and the management of schedule messages and balance group billing.

The general requirements and procedures applicable to balance groups are contained in the General Balance Group Regulations, which likewise form an integral part of the Balance Group Contract.

1 Trade types in schedule management

1.1 General

Two trade types are differentiated between in the context of schedule management:

a. internal trade
b. external trade

Refer to Figure 1 below for a graphical overview of the two trade types.
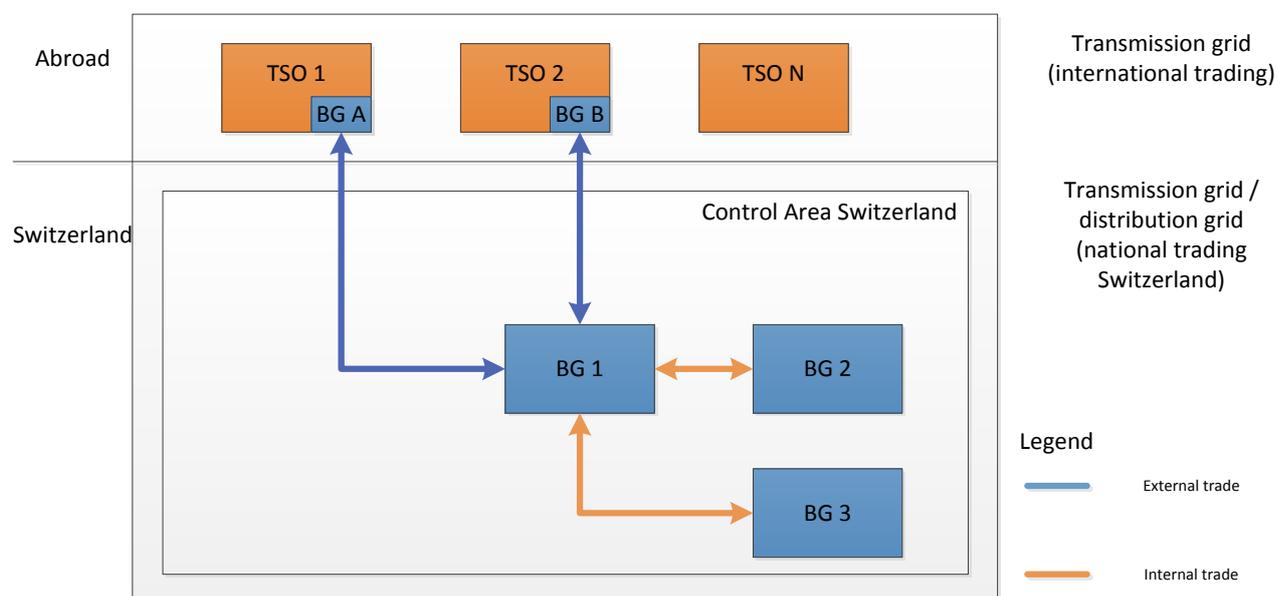
Fig. 1: Balance group model – schematic representation

Balance group schedules are registered under the following business types, process types and capacity contract types. The already registered values must continue to be included in the new schedule message. If business type and capacity contract remains the same in the various process steps, then values from respective process steps must be aggregated.

Trade type	Process step	CH business type	CH process type	CH capacity contract type
Internal trade (incl. PP schedules based on shareholdings)	Day-ahead	«A02» (Internal trade)	«A17» (Schedule day)	None
	Intraday	«A02» (Internal trade)	«A17» (Schedule day)	None
	Post-scheduling	«A02» (Internal trade)	«A17» (Schedule day)	None
External trade (without capacity check, DE and AT)	Day-ahead	«A06» (External trade without explicit capacity)	«A17» (Schedule day)	None
	Intraday	«A06» (External trade without explicit capacity)	«A17» (Schedule day)	None
External trade (without capacity check, FR)	LTC nomination	«A06» (External trade without explicit capacity)	«A17» (Schedule day)	None
	Day-ahead	«A06» (External trade without explicit capacity)	«A17» (Schedule day)	None
	Intraday	«A06» (External trade without explicit capacity)	«A17» (Schedule day)	None
External trade (with capacity check, FR (balancing market))	Intraday	«A03» (External trade explicit capacity)	«A17» (Schedule day)	«A11» with capacity agreement identification «####XTCH», where #### represents the short form of the market participant pursuant to the intraday capacity platform
External trade (with capacity check, IT)	Day-ahead	«A03» (External trade explicit capacity)	«A17» (Schedule day)	«A05» (Total)
	Intraday	«A03» (External trade explicit capacity)	«A17» (Schedule day)	«A05» (Total)
Consumption forecast («CONS»)	Day-ahead	«A04» (Consumption)	«A17» (Schedule day)	None
	Intraday	«A04» (Consumption)	«A17» (Schedule day)	None
Secondary control energy	Post-scheduling	«A12» (Secondary control)	«A17» (Schedule day)	None
Tertiary control energy	Post-scheduling	«A10» (Tertiary control)	«A17» (Schedule day)	None

Control pooling (schedule for BGM and difference schedule for BGM of the ASP)	Post-scheduling	«A14» (Aggregated energy data)	«A17» (Schedule day)	None
Energy deficit	Day-ahead	«A15» (Losses)	«A17» (Schedule day)	None
National redispatch	Post-scheduling	«A85» (internal redispatch)	«A17» (Schedule day)	None

Overview of the attributes to be used in the schedule

1.1.1 Consumption forecast (CONS)

Balance groups with metering points must register the consumption forecast (CONS) in the TPS (TPS = **t**rade-responsible **p**arty **s**chedule). Otherwise the whole TPS message will be rejected.

Balance groups without metering points submit either no consumption forecast or a consumption forecast with zero values in the TPS. Otherwise the whole TPS will be rejected.

Consumption forecasts must be registered for the first time in the day-ahead process. In intraday, the same lead times apply as for internal trades.

If an interval includes a change in values after the submission deadline, the whole time series is rejected and the time series that was last accepted applies.

Value changes in the consumption forecast are not permitted during post-scheduling adjustment process. Otherwise the whole TPS will be rejected.

1.2 Internal trade

All exchanges of electrical energy between balance groups within the control area Switzerland is managed in the form of internal trade. All Balance Groups can exchange electrical energy with one another via their respective balance groups by means of schedule messages. This is presupposing that the involved balance group schedule messages have been submitted to Swissgrid with the same business type and identical schedule values. The procedure comprises the following steps (see also Fig. 2):

The BGMs concerned coordinate all schedule messages with each other. Following this coordination, the BGMs must submit the schedule messages to Swissgrid via TPS message within the deadline specified by Swissgrid.

Swissgrid carries out the formal validation and matching of the messages received.

The BGM concerned is notified by Swissgrid if any discrepancies are revealed during the formal validation or the matching process. The BGM may correct incorrect schedule messages within the time period specified by Swissgrid.
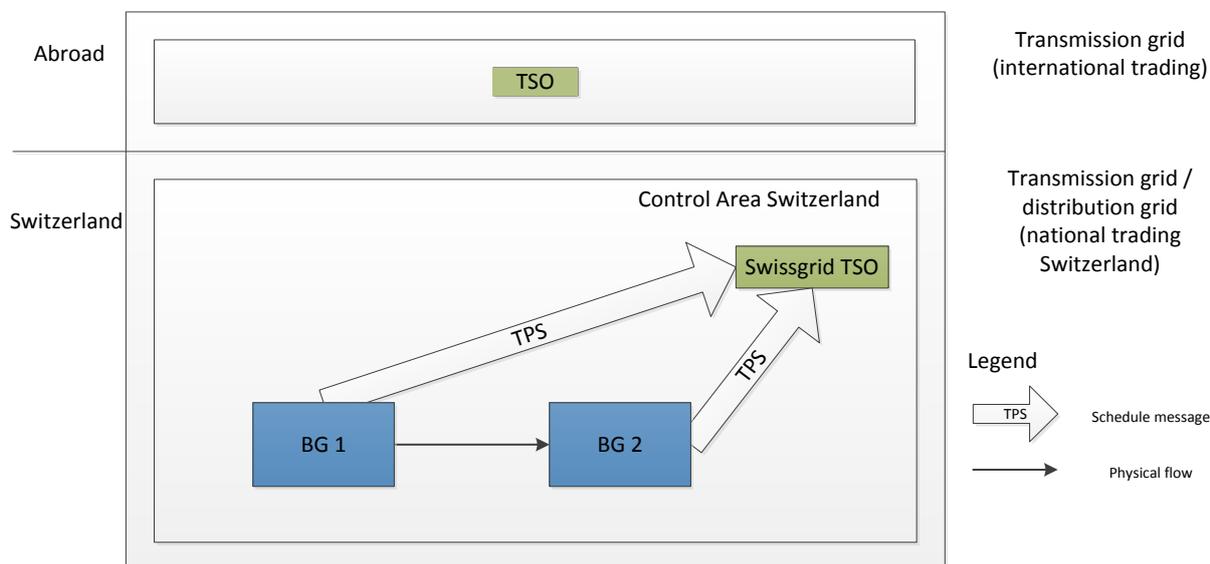
Fig. 2: Internal trade within the Swiss control area

1.3 External trade

An external trade represents the exchange of electrical energy between a balance group in the control area Switzerland and a balance group in an adjacent control area, whereby the balance group in Switzerland and the balance group in the adjacent control area are generally assigned to the same BGM (1:1 nomination). Alternatively, another procedure may be applied per border (e.g. 1:n nomination). This is published on the Swissgrid website (www.swissgrid.ch) or in the corresponding allocation rules. The procedure comprises the following steps (see also Fig. **3**):

The BGM must submit schedule messages (TPS) that correspond to the counterpart schedule message to Swissgrid and the BGM abroad to the respective TSO within the specified time periods.

Swissgrid carries out the formal validation of the received schedule messages. The TSO in the adjacent control area concerned carries out a similar validation of the schedules submitted to it. Schedule matching is then carried out by Swissgrid jointly with the TSO by comparing the corresponding control area schedule (CAS) and TPS.

If any discrepancies during the formal validation or in case of mismatch, the BGM concerned is notified by Swissgrid. The BGM is obligated to correct incorrect schedule messages within the specified time period.
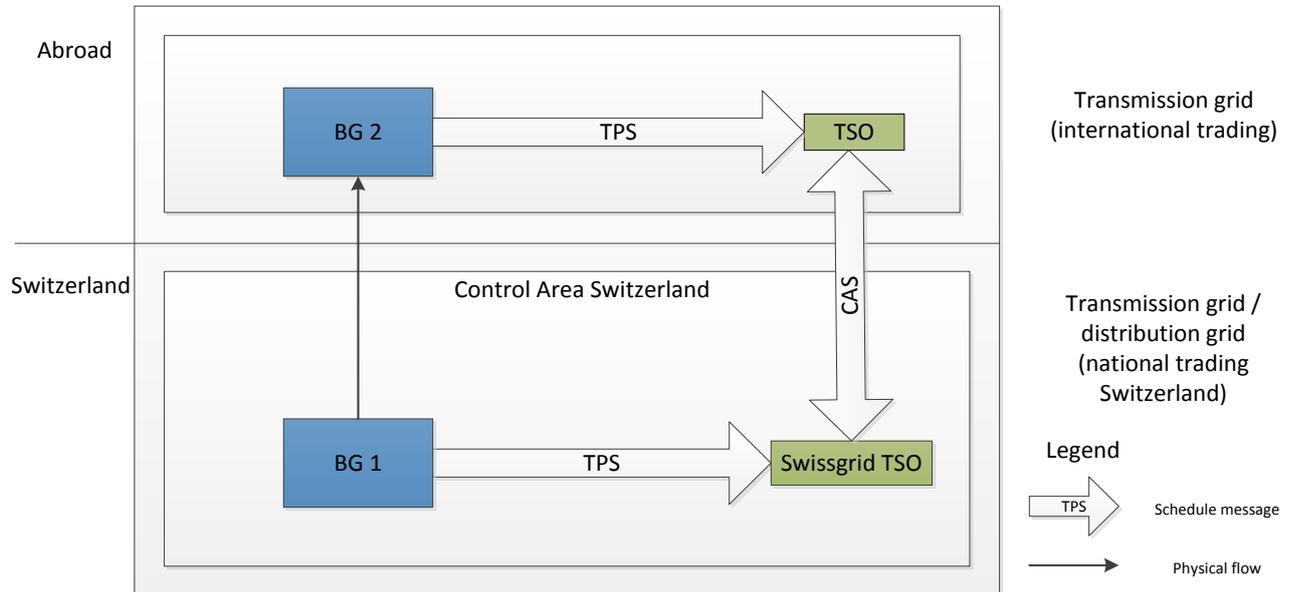
Fig. 3: External trade between control areas

2   Classification of schedule messages

Schedule messages are classified as follows:

«submitted» means that a schedule message has been submitted to Swissgrid in accordance with the DTD/XSD and ESS.

«accepted» means that a schedule message has been read and passed the formal validation by the scheduling system.

«rejected» means that a schedule message, or one or more schedule time series, has not passed the formal validation.

«matched» means that successful schedule coordination has been carried out for a schedule time series. The BGM receives an Intermediate Confirmation Report.

«confirmed» means that the schedule has been run. After the final submission deadline on the schedule day, i.e. after the end of the Post-scheduling adjustment process, the BGM receives a Final Confirmation Report.

3   Status request

The BGM may send a status request according to the ESRD (ENTSO-E Status Request Document Implementation Guide). The status request can be processed at the earliest after the day-ahead matching (approx. 3.00 p.m.) and until at the latest one day after the post-scheduling adjustment.

Once the status request has been received, Swissgrid carries out a verification check of the existing data. The time that the check was carried out is of relevance to the results of the status request.

The status request file name has to be in line with the naming convention in Clause 17.

4   Additions to the ESSIG

Schedule message submission and matching in Switzerland is managed in accordance with the ENTSO-E (www.entsoe.eu) ESS Implementation Guide (ESSIG). These Technical Balance Group Regulations take precedence over the ESSIG.

The structure of the schedule messages is based on the rules described in Clause 3.3 of ESSIG v2r3. The following supplementary, specific or contrary provisions to the ESSIG rules must be fulfilled:

Rule 1: The BGM must submit all schedule messages in XML format in accordance with ESSIG v2r3.

Rule 3: If a time series is rejected in the day-ahead and intraday process, the entire message is not discarded (each time series is checked individually and accepted or discarded). In the post-scheduling adjustment process the entire message is always discarded. The stipulations pursuant to Clause 2.1.1. apply to the consumption time series (CONS).

Rule 10: A schedule time series always comprises the full calendar day. A schedule time unit comprises 15 minutes. Each schedule time series thus comprises 96 schedule time units. Exceptions are 92 schedule time units at the start of summer time and 100 schedule time units at the start of winter time (see also Fig. 4).

Rule 11: The time interval of the schedule message must be identical to the time intervals of the schedule time series it contains. The start and end time of the interval are specified in UTC (local day 12.00 a.m.-12.00 a.m., see also Clause 6).

Rule 12: Negative values are not allowed in schedule time series. The direction is not determined by a sign but by the following information: «out area», «in area» and/or « out party», «in party». The schedule time series are netted schedules, i.e. if energy supplies are exported and imported on one schedule day, then two time series must be submitted. Only one of these two schedule time series can be not equal to zero in each schedule time unit.

Rule 14: Values for a schedule time series are specified as mean power. MW (code «MAW») is defined as the unit. Up to three decimal digits are allowed. A period («.») is always used as the decimal separator. The decimal digits are not mandatory. Omitted decimal digits are assumed to be zero (100 MAW = 100.000 MAW). Internal schedule time series takes account of the three decimal digits (152.006 ≠ 152.007). For external schedule time series different provisions apply depending on the border:

The following additional rule applies to all schedule messages: The sender of a schedule message specifies the version number. All acknowledgments (Acknowledgement Message, Anomaly Report, Intermediate Confirmation Report or Final Confirmation Report) must include the version number of the schedule message concerned.

A schedule message should normally consist exclusively of schedule time series that contain a value not equal to zero in at least one schedule time unit (exception: schedule time series in accordance with ESSIG Clause 2.3, rule 3). Unsubmitted schedule time series are interpreted as schedule time series with zero values.

A schedule message may not contain any country-specific special characters. In the same way as for the EIC, «0» to «9», «A» to «Z», and «-» are valid characters as well as – if necessary – «a» to «z».

Schedule time series in schedule messages with the process type «A17» (schedule day), containing new or modified power values corresponding to a time period in the past and received by Swissgrid before the end of the intraday process, are rejected in the formal validation.

Different values may be contained in the schedule messages for each schedule time unit.

In the case of external schedule time series, the schedule management guidelines of the TSO responsible at the respective borders must be observed.

5 Version numbers in schedule messages

Version numbers must be specified in compliance with ESSIG Clause 4.2.2.1.1.

The allocation of version numbers starts again at 1 every day. They must be indicated in each schedule time series as well as in the message header of the schedule message (see also Example 1).

Example 1: First submission of a schedule message

Version number of the schedule message	Schedule time series of the schedule message	Version number of the schedule time series
1	Schedule time series 1	1
	Schedule time series 2	1
	Schedule time series 3	1

A schedule message must be rewritten and resubmitted each time its content changes. The version number of the schedule message («message version») must be increased, and the changed schedule time series identified with this new version number (see also Examples 2 and 3). Otherwise, the schedule time series is interpreted as unchanged and rejected in the schedule coordination.

Example 2: Second submission of the schedule message (change of schedule time series 2)

Version number of the schedule message	Schedule time series of the schedule message	Version number of the schedule time series
2	Schedule time series 1	1
	Schedule time series 2	2
	Schedule time series 3	1

Example 3: Third submission of the schedule message (change of schedule time series 1 and 3)

Version number of the schedule message	Schedule time series of the schedule message	Version number of the schedule time series
3	Schedule time series 1	3
	Schedule time series 2	2
	Schedule time series 3	3

If a schedule time series is added to the schedule message, the version number of the schedule message is increased by 1 and the new schedule time series is identified with this version number.

Example 4: Fourth submission of the schedule message (addition of a new schedule time series 4)

Version number of the schedule message	Schedule time series of the schedule message	Version number of the schedule time series
4	Schedule time series 1	3
	Schedule time series 2	2
	Schedule time series 3	3
	Schedule time series 4	4

If the unchanged schedule message needs to be processed again, the version numbers of the schedule message itself and all schedule time series must be increased (see also Example 5).

Example 5: Fifth submission of the schedule message (all schedule time series are unchanged but need to be read in again)

Version number of the schedule message	Schedule time series of the schedule message	Version number of the schedule time series
5	Schedule time series 1	5
	Schedule time series 2	5
	Schedule time series 3	5
	Schedule time series 4	5

When transferring from day-ahead to intraday or from intraday to the post-scheduling adjustment process, the version numbers need to be incremented further. The message ID remains unchanged.

The allocation of a version number is usually the responsibility of the BGM submitting the schedule message.

6 Times in schedule messages

All times and dates given in the document are in local Swiss time (CET).

All times in schedule messages must be specified in UTC. UTC deviates from local Swiss time (CET) by one hour in winter and two hours in summer (refer also to Figure 4).

Times are specified as follows in the schedule messages:

YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ in UTC

YYYY: year

MM: month

DD: day

HH: hour

MM: minute
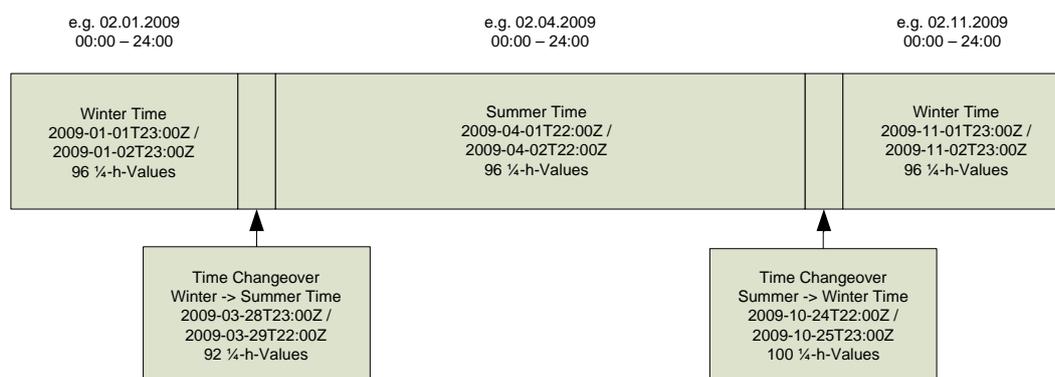
Fig. 4: Changeover to summer or winter time (times in CET)

7 Schedule difference rules

The schedule difference rules are applied if at the settlement deadline schedule differences exist between the schedule time series of the BGM and the corresponding schedule time series or capacity rights are not adhered to. Special rules can be applied for special processes. The following cases are differentiated between:

7.1 Internal trade

- Day-ahead
  - If the schedule time units concerned have the same electrical energy delivery direction in both the schedule message and the counterpart schedule message, the lower of the two values in the schedule message and the counterpart schedule message is selected in the event of schedule differences between these schedule time units.
  - If the electrical energy delivery direction is not the same in the schedule message and in the counterpart schedule message, the relevant schedule time series in the two schedule messages are set to zero in the schedule time units concerned.
  - A missing schedule time series is considered as a time series with zero values.

- Notwithstanding the aforementioned provisions, in the case of a mismatch of schedule time units between the balance group and the Central Counterparty (CCP), the values of the Central Counterparty (CCP) are adopted.

- Intraday / post-scheduling adjustment process
  - Irrespective of whether the electrical energy delivery direction in the schedule message and in the counterpart schedule message is the same or not, the schedule time series concerned of the two schedule messages in the schedule time units concerned are set to the last successfully matched status. When a schedule message is submitted for the first time, the last matched state is zero.
  - In the case of the delivery of schedules by Swissgrid to the BGM as part of the processing of ancillary services, Swissgrid's values shall take precedence in the event of differences.
  - Notwithstanding the aforementioned provisions, in the case of a mismatch of schedule time units between the balance group and the involved Central Counter Party (CCP), the values of the Central Counter Party (CCP) are adopted.

7.2 External trade

At the respective Swiss borders the following rules apply:

- Italian border in the day-ahead export to Italy
  - In the event of absence of the corresponding schedule time series, the minimum required capacity values are set. In the event of value differences, the minimum value is set taking into account the minimum necessary capacity rights and the daily right.

    If the schedule time series match but the capacity rights are disregarded, the minimum required capacity values are set.
- Italian border in the day-ahead import from Italy and in the intraday in both directions
  - In the event of value discrepancies, the Terna values take precedence.
- French, German and Austrian border:
  - In the day-ahead and intraday, the values of the neighbouring TSO take precedence in the event of mismatches.

8 Nomination rules

The following nomination rules are valid for the nomination process at Swissgrid. If the nomination process is performed by the partner TSO (TransnetBW, Amprion, RTE, APG or Terna), the rules of the partner TSO are applicable.

Yearly/monthly PTRs

	Border CH-DE	Border CH-FR	Border CH-AT	Border CH-IT
Nomination	TransnetBW No nominations on Swissgrid nomination platform	RTE No nominations on Swissgrid nomination platform	APG No nominations on Swissgrid nomination platform	Direction IT->CH: Terna Direction CH->IT: Swissgrid nomination platform https://www.swissgrid.ch/swissgrid/de/tools/login-sns.html
Nomination principle	n/a	n/a	n/a	A:A and A:N
Counterparty notification	n/a	n/a	n/a	Details can be found on the Swissgrid website (http://www.swissgrid.ch/swissgrid/en/home/experts/topics/congestion_management/ch-it/auction_registration.html)
Nomination deadline	n/a	n/a	n/a	D-1 8.30 a.m.
Nomination type	n/a	n/a	n/a	Per contract ID and direction
Nomination timeframe	n/a	n/a	n/a	As soon as the contract ID is known
Format (see Clause 16.1.2)	n/a	n/a	n/a	Manual entry at the Swissgrid nomination platform
Matching rules	n/a	n/a	n/a	In the case of mismatch in the direction CH->IT the Swissgrid nomination shall prevail

Daily PTRs

	Border CH-DE	**Border CH-FR**	**Border CH-AT**	**Border CH-IT**
Nomination	TransnetBW, Amprion and Swissgrid	Both RTE and Swissgrid	Both APG and Swissgrid	Both Terna and Swissgrid
Nomination principle	A:A	A:A	A:A	A:A or A:B
Counterparty notification	n/a	n/a	n/a	Details can be found on the Swissgrid website (http://www.swissgrid.ch/swissgrid/en/home/experts/topics/congestion_management/ch-it/auction_registration.html)
Nomination deadline	D-1 2.30 p.m.	D-1 2.30 p.m.	D-1 2.30 p.m.	D-1 2.30 p.m.
Nomination type	Total netted	Total netted	Total netted	Total netted
Nomination timeframe	From receipt of capacity rights from JAO to D-1 2.30 p.m.	From receipt of capacity rights from JAO to D-1 2.30 p.m.	From receipt of capacity rights from JAO to D-1 2.30 p.m.	From receipt of capacity rights from JAO to D-1 2.30 p.m.
Format (see Clause 16.1.2)	ESS V2R3 (business type A06)	ESS V2R3 (business type A06)	ESS V2R3 (business type A06)	ESS V2R3 (business type A03)
Matching rules	Acceptance of TransnetBW's and Amprion's nomination	Acceptance of RTE's nomination	Acceptance of APG's nomination	In the case of mismatch in the direction CH->IT the minimum capacity rights shall prevail In the case of mismatch in the direction IT->CH the Terna values shall prevail

Intraday PTRs

	Border CH-DE	**Border CH-FR**	**Border CH-AT**	**Border CH-IT**
Nomination platform	Both TransnetBW, Amprion and Swissgrid	Swissgrid	Both APG and Swissgrid	Both Terna and Swissgrid
Nomination principle	A:A	A:A	A:A	A:A
Counterparty notification	n/a	n/a	n/a	n/a
Nomination deadline	45 min. prior to start of delivery	45 min. prior to start of delivery 15 min. prior to start of delivery for control energy market	45 min. prior to start of delivery	ID1: D-1 5.30 p.m. ID2: D 12.30 p.m.
Nomination type	Total netted	Total netted	Total netted	Total netted
Nomination timeframe	Until 45 min. prior to start of delivery	Until 45 min. prior to start of delivery or 15 min. prior to start of delivery for control energy market	Until 45 min. prior to start of delivery	ID1: D-1 5.00 p.m. to 5.30 p.m. ID2: D 12.00 p.m. to 12.30 p.m.
Format	ESS V2R3 (business type A06)	ESS V2R3 (standard: business type A06 control: business type A03, capacity contract type A11)	ESS V2R3 (business type A06)	ESS V2R3 (business type A03, capacity contract A05)
Matching rules	Acceptance of TransnetBW's and Amprion's nomination	Acceptance of values from CAS by RTE	Acceptance of APG's nomination	In the case of mismatch, the nomination at Terna shall prevail

Post-scheduling

	Bilateral trades between BGs	**Trades for the processing of ancillary services by Swissgrid**
Nomination platform	Swissgrid	Swissgrid
Nomination principle	A:N	A:B (A=Swissgrid)
Nomination deadline	D+2 working days 4.00 p.m.	Submission of INS Data up to D+2 working days 10.00 a.m. Coordination D+2 working days 4.00 p.m.
Nomination type	Total netted	Total netted
Nomination timeframe	From D+1 working days 12.00 a.m. to D+2 working days 4.00 p.m.	From D+1 working days 12.00 a.m. to D+2 working days 10.00 p.m.
Format (see Clause 16.1.2)	ESS V2R3 (business type A02)	ESS V2R3 (business type A10, 12 or 14)
Matching rules	Last matched values	Swissgrid values shall prevail

9 Process for long-term rights (yearly and monthly rights, merchant lines and LTC)

9.1 Capacity Usage Authorisations (CUA)

The relevant allocation rules published on the website of the Joint Allocation Office (www.jao.eu/; JAO SA, 2 rue de Bitbourg, 1273 Luxembourg Hamm, Luxembourg) apply to the assignment of CUAs.

9.2 Nomination of capacity rights for the border with Italy

9.2.1 Nomination in the web-based system

Holders of yearly and monthly rights and merchant line rights in the direction Switzerland to Italy nominate their rights with Swissgrid according to the following deadlines with the corresponding Capacity Agreement Identification (CAI) that was reported in the CUAs (www.swissgrid.ch/swissgrid/de/tools/login-sns.html). The auction participants receive the CUAs from the Joint Allocation Office (JAO). The CUAs for LTC are issued to the relevant parties by Swissgrid.

This nomination is performed by Swissgrid for holders of yearly and monthly rights and merchant line rights and for any LTC rights and is binding for the BGM holder in Switzerland and their counterparty in Italy.

The following deadlines must be observed for nomination:

- Switzerland->Italy: D-1 8.30 a.m.

9.3 Nomination of capacity rights for the borders with Germany, Austria and France

9.3.1 Nomination

Nominations of rights in both directions are performed by the respective neighbouring TSO. Further information is available on the websites of the participating TSOs:

Germany - TransnetBW:

https://www.transnetbw.de/de/strommarkt/engpassmanagement/de-ch/

Amprion

http://www.amprion.net/auktionierung-deutschland-schweiz

Austria:

http://www.apg.at/de/markt/grenzueberschreitender-austausch/auktionen

France:

http://clients.rte-france.com/lang/an/clients_traders_fournisseurs/services_clients/inter_france_suisse.jsp#tab

10 Day-ahead procedure

10.1 Overview of the day-ahead procedure

Day-ahead schedules can be submitted up to one month in advance. Schedules submitted earlier than this are responded to with a negative acknowledgement (NACK). Different rules may apply for cross-border schedule relationships with an allocation procedure. The respective allocation rules take precedence over these Technical Balance Group Regulations.

The formal validation is carried out by Swissgrid as soon as the schedule message is received. Schedule matching in connection with the day-ahead procedure takes place on the day preceding the day on which the schedule message is executed.

Day-ahead schedule messages are submitted with process type A17 (schedule day) in accordance with ESSIG with sequential versioning.
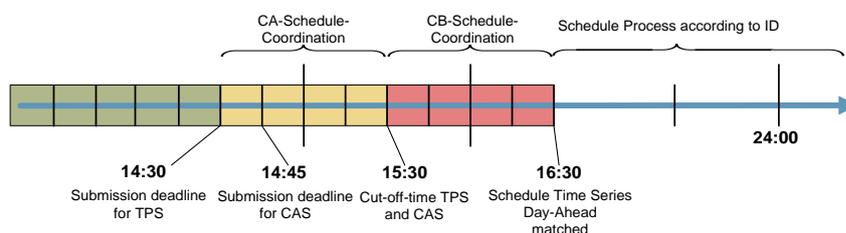
Fig. 5: Day-ahead procedure (times in CET and D-1)

The submission deadline specified by Swissgrid for schedule messages for the day D is D-1 2.30 p.m.

Schedule matching within the control area and schedule matching between Swissgrid and the neighbouring TSOs commences at 2.30 p.m. on D-1. Balanced schedules can no longer be adapted in day-ahead. If Swissgrid establishes discrepancies in the schedule message, it notifies the BGM. From D-1 2.30 p.m. until the settlement deadline (D-1 3.30 p.m.), the BGMs whose schedule messages do not correspond to the counterpart schedule messages are given time to correct such discrepancies. The BGMs concerned may correct incorrect schedule time series with a new schedule message. The versioning requirements in accordance with Clause 6 must be complied with. If they do not succeed in rectifying the discrepancies within the specified time period, Swissgrid applies the schedule difference rules at D-1 3.30 p.m.
Coordination between the affected control blocks takes place from D-1 3.30 p.m.

10.2 Details of the day-ahead procedure
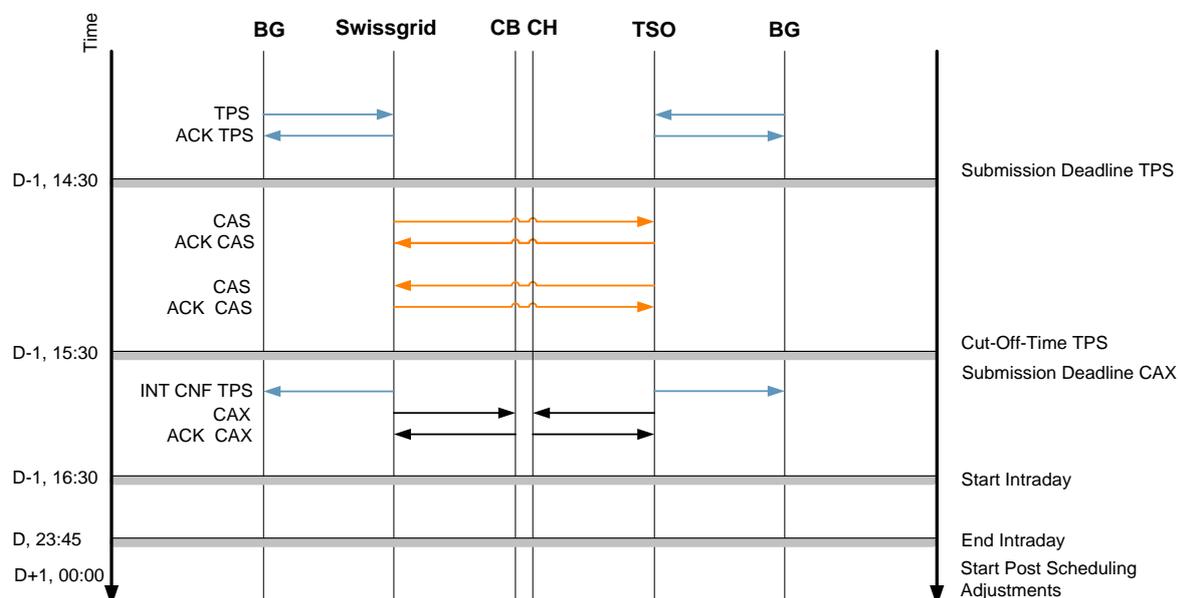
Fig. 6: Day-ahead procedure (external trade)

Figure 6 shows the steps necessary for successful matching in the day-ahead procedure (without discrepancies or corrective measures).

Day preceding the day on which the schedule message is executed (D-1):

Until 2.30 p.m.:	Submission of schedule messages for the next day to Swissgrid by the BGM. An acknowledgment message is sent by Swissgrid to the BGM each time a schedule message is received.
2.30 p.m.	Submission deadline for schedule messages submitted to Swissgrid by the BGM. Day-ahead schedule messages (process type A17, schedule day) submitted after 2.30 p.m. are partially rejected if they contain new schedule time series. Schedule differences may be corrected, however. Further schedule time series can only be submitted in the context of intraday schedule messages (process type A17, schedule day). Newly submitted intraday schedule time series are accepted from 3.30 p.m. onwards but processed only within the intraday procedure from 4.30 p.m.
From 2.30 p.m.	Start of schedule matching in the Swiss control area and between Swissgrid and the TSOs in the neighbouring control areas. In the event of schedule mismatches, an Anomaly Report is sent to the BGM concerned. Schedule differences can be corrected by submitting a new day-ahead schedule message (process type A17, schedule day). Matched schedule time series can no longer be changed in the day-ahead process.
3.30 p.m.	Cut-off deadline: From this point in time onwards, day-ahead schedule messages for correcting schedule differences can no longer be submitted by the BGM. At the settlement deadline, all successfully

matched day-ahead schedule messages are classified as «matched». If schedule differences still exist, they are corrected according to the schedule difference rules. Any schedule messages that are received after 3.30 p.m. (process type A17, schedule day) are, however, processed in the form of intraday schedule messages from 4.30 p.m. onwards as part of the intraday procedure.

From 3.30 p.m.	After the settlement deadline and the possible application of the schedule difference rules, Intermediate Confirmation Reports are sent to the BGM. This means that the day-ahead schedule message is classified as «matched». Coordination is subsequently carried out at control block level. Intraday schedule messages for the next day (D) are read in during this phase but not processed further
From 4.30 p.m.	The control block operators carry out a grid security calculation on the basis of the matched day-ahead schedule messages.

11 Intraday procedure

In addition to the modified or new schedule time series, intraday schedule messages always contain all schedule time series relating to the current day that have already been submitted. They cover the whole day (12.00 a.m. to 12.00 a.m.). Intraday schedule messages are submitted with process type A17 (schedule day), the same message ID as day-ahead and sequential versioning.

11.1 Overview of intraday procedure for external trades on the borders with Germany, Austria and France
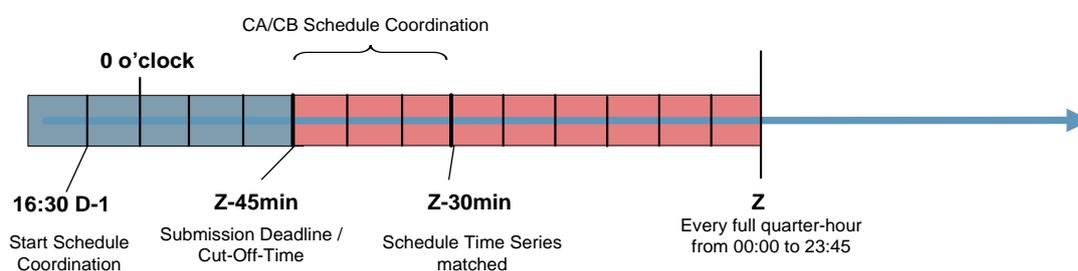
Fig. 7: Intraday procedures for external trades (times in CET)

Schedule messages for the next day that are submitted after D-1 3.30 p.m. and schedule messages for the current day are managed using the intraday procedure.

The submission deadline for schedule messages submitted to Swissgrid using the intraday procedure is 45 minutes prior to the time (Z) at which a modification or a resubmission is supposed to become effective. This time (Z) can be any full 15-minute period. Any schedule messages received after that time (Z-45) are rejected

Schedule coordination takes account of all schedule time series from the time (Z) until the end of the day and is confirmed with an Intermediate Confirmation Report. An Anomaly Report is sent to any BGM whose schedule message contains schedule differences. If schedule differences still exist after the settlement deadline, the schedule difference rules are applied

A grid security calculation is performed by Swissgrid after each schedule coordination.

11.1.1 Details of intraday procedures for external trades
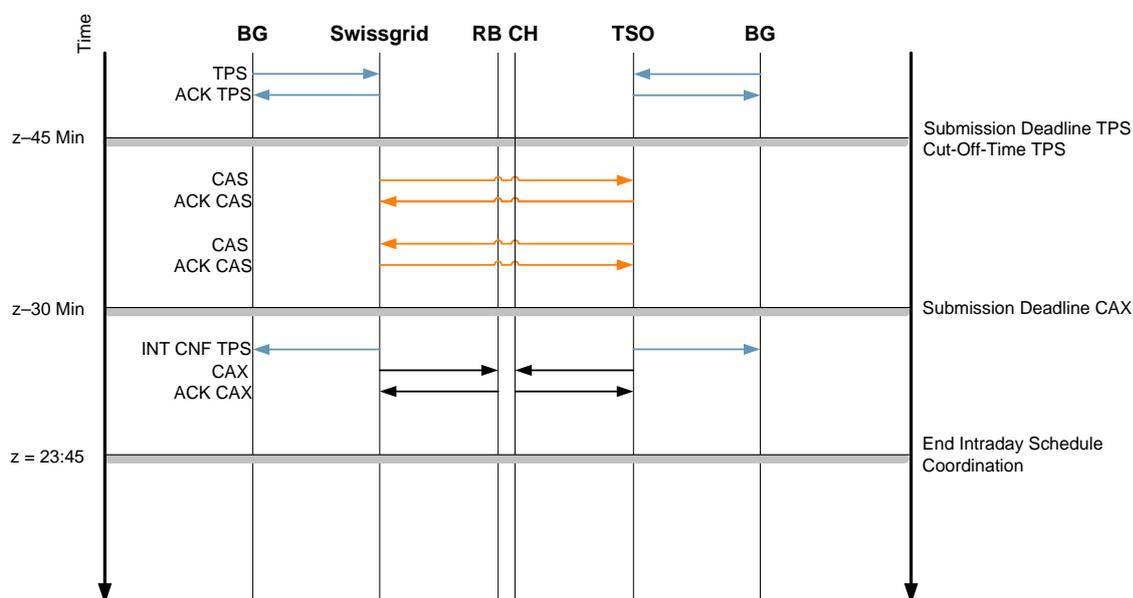
Fig. 8: Shows the steps necessary for successful coordination in the intraday procedure (without discrepancies or corrective measures).

Day preceding the day on which the schedule message is executed (D-1):

From 3.30 p.m. No intraday schedule messages for the following day are processed for the duration of the day-ahead schedule coordination between Swissgrid and the TSOs in the neighbouring control areas. If such schedule messages are received, they are read into the scheduling system (confirmation by acknowledgement) but are not processed until completion of schedule coordination (confirmation by intermediate confirmation).

From 4.30 p.m. Start of intraday schedule coordination for the following day.

The procedure described below is repeated every full quarter of an hour up until the latest time at which an intraday schedule message can be successfully submitted (4.30 p.m. (D-1) to 11.00 p.m. (D)).

Until T-45 Intraday schedule messages submitted by the BGM must be received by Swissgrid no later than 45 minutes before the time at which the schedule message is to be executed. The submission deadline for a new or modified intraday schedule message that is supposed to become effective at 12.00 a.m. (D) is therefore 11.15 p.m. (D-1).

The submission phase is followed by the schedule coordination phase. Once schedule coordination is complete, the coordination results are sent to the BGM (Anomaly Report, Intermediate Confirmation Report). The Anomaly Report notifies the BGM concerned of any schedule differences. The BGM may submit a new schedule message up to the submission deadline for the purpose of correcting schedule differences. If the counterpart schedule is missing, the BGM, which has already submitted a notification, will be notified of the missing

counterpart schedule by means of an ANO. If the counterparty is known, it will also be informed of the missing schedule.

T-45   Submission deadline and settlement deadline for intraday schedule messages.

From T-45   Start of schedule coordination for all remaining schedule time series in the current day starting from the time (T). Following schedule coordination, an Intermediate Confirmation Report is sent to the BGM. The Anomaly Report is used by Swissgrid to notify the BGM concerned of any schedule differences. As a result of this report, the schedule message submitted by the BGM is either rejected or adapted according to the schedule difference rules. The BGM has the opportunity to submit a suitably corrected schedule message for the next change time.

T-30   Completion of schedule coordination for the time (T).

T-15   Intraday schedule messages submitted by the BGM in the context of control energy delivery must be received by Swissgrid no later than 15 minutes before the time at which the schedule message is to be executed.

D 11.00 p.m.   Latest possible submission deadline and settlement deadline for intraday schedule messages relating to the current day (for the 15-minute period from D 11.45 p.m. to D 12.00 a.m.).

Additional anomaly check:

15 minutes after receipt of a schedule message, a check is made to see if the counterpart schedule is in place. An anomaly report is sent to the submitter of the schedule and the relevant counterparty if necessary.

T-65   Check to see if the counterpart schedule has been received and possible dispatch of an Anomaly Report to the submitter of the schedule.

T-45   Check to see if the counterpart schedule has been received and possible dispatch of an Anomaly Report to the submitter of the schedule.

11.2 Overview of intraday procedures for short-term external trades with France

In the case of control energy delivery, it is also possible to submit external trades with France with a lead time of 15 minutes. This trade is submitted in accordance with Clause 1.1.

The BGM has to meet the following requirements to be able to participate in the control energy market:

- Access to production or consumption capacities suitable for control energy use or reserve supplies and that can be used to guarantee deployment at short notice.

In addition, one of the following conditions must also demonstrably be met:

- The balance group can provide proof of participation in an international control energy market.
- The balance group participates in the national control energy market.
- The balance group can prove reserve supply contracts for power plant operators.

Fig. 9: Intraday procedure (short-term external trade on the Swiss-French border)

Day preceding the day on which the schedule message is executed (D-1):

From 3.30 p.m.	No intraday schedule messages for the following day are processed for the duration of the day-ahead schedule coordination between Swissgrid and the TSOs in the neighbouring control areas. If such schedule messages are received, they are read into the scheduling system but not processed until completion of schedule coordination.
From 4.30 p.m.	Start of intraday schedule coordination for the following day. The procedure described below is repeated every full quarter of an hour up until the latest time at which an intraday schedule message can be successfully submitted (4.30 p.m. (D-1) to 11.30 p.m. (D)).
Until T-15	Intraday schedule messages submitted by the BGM must be received by Swissgrid no later than 15 minutes before the time at which the schedule message is to be executed. The submission deadline for a new or modified intraday schedule message that is supposed to become effective at 12.00 a.m. (D) is therefore 11.45 p.m. (D-1). The submission phase is followed by the schedule coordination phase. Once schedule coordination is complete, the coordination results are sent to the BGM (Anomaly Report, Intermediate Confirmation Report). The Anomaly Report notifies the BGM concerned of any schedule differences. The BGM may submit a new schedule message up to the submission deadline for the purpose of correcting schedule differences. If the counterpart schedule is missing, the BGM, which has already submitted a notification, will be notified of the missing counterpart schedule by means of an ANO.
T-15	Submission deadline and settlement deadline for intraday schedule messages.
From T-15	Start of schedule coordination for all remaining schedule time units in the current day starting at the time (T). Following schedule coordination, an Intermediate Confirmation Report is sent to the BGM. The Anomaly Report is used by Swissgrid to notify the BGM concerned of any schedule differences. As a result of this report, the schedule message submitted by the BGM is either rejected or adapted according to the schedule difference rules. The BGM has the opportunity to submit a suitably corrected schedule message for the next change time (the following intraday schedule coordination).
T-10	Completion of schedule coordination for the time (T).
11.30 p.m.	Latest possible submission deadline and settlement deadline for intraday schedule messages relating to the current day (for the 15-minute period from 11.45 p.m. to 12.00 a.m.).

Additional anomaly check:

	5 minutes after receipt of a schedule message, a check is made to see if the counterpart schedule is in place. An Anomaly Report is sent to the submitter of the schedule if necessary.
T-35	Check to see if the counterpart schedule has been received and possible dispatch of an Anomaly Report.

11.3 Intraday procedure for external trade at the Switzerland-Italy border for balance groups

11.3.1 Overview of intraday procedure

At the Switzerland-Italy border, free capacity is allocated by JAO in two intraday capacity auctions (the first on day D-1 between 3.40 p.m. and 3.55 p.m. -> XBID1, and the second on day D between 10.25 a.m. and 10.40 a.m. -> XBID2) based on explicit auctions with a «marginal price». For more information on how to register and the respective intraday allocation rules, please visit http://www.jao.eu/. The following diagrams illustrate the process schematically:
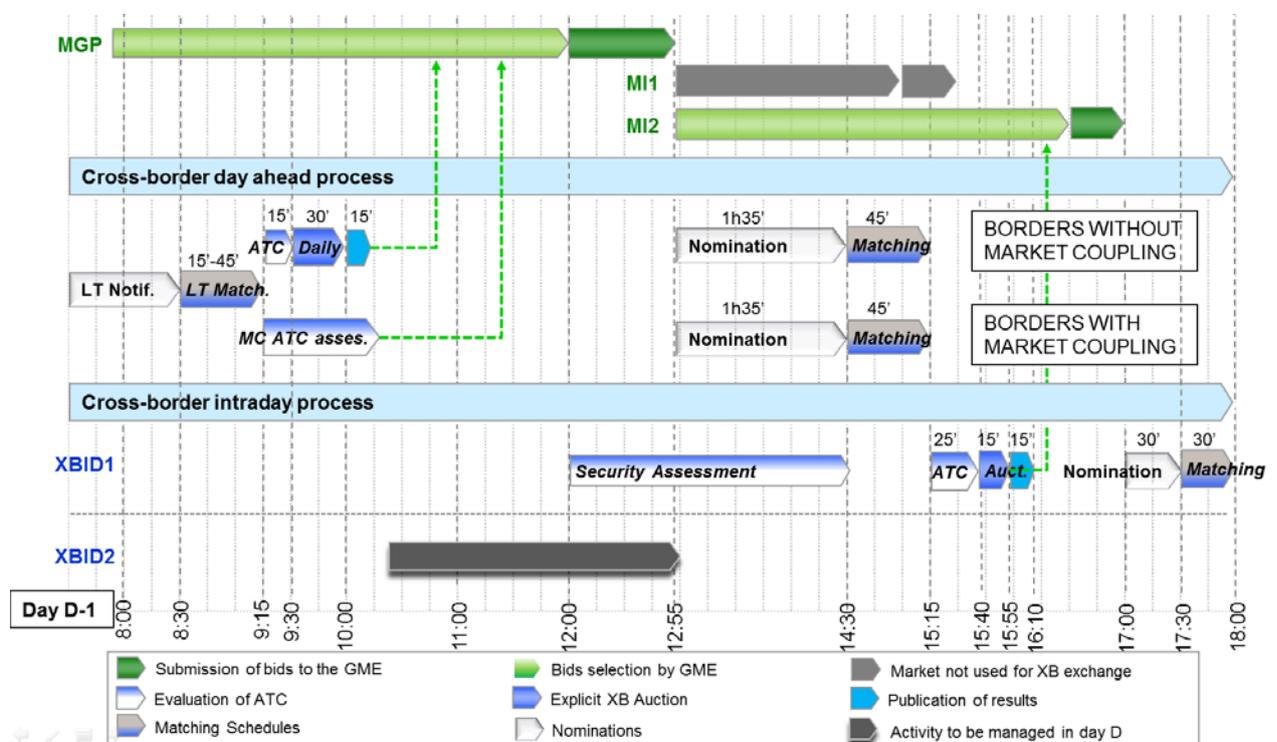
Fig. 10: Intraday procedure Switzerland-Italy (D-1 process)
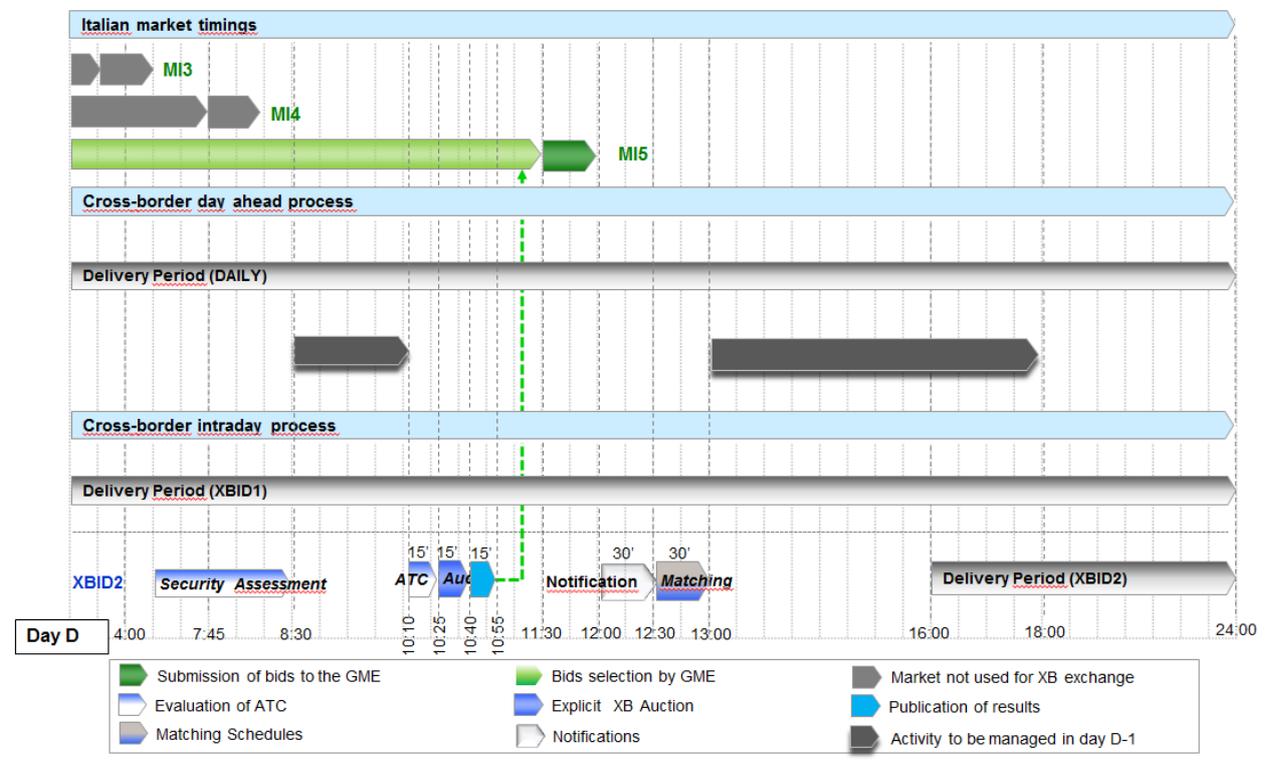
Fig. 11: Intraday procedure Switzerland-Italy (D process)

In which MI 1-5 refer to **M**ercato **I**nfragiornaliero 1-5 in Italy

11.3.2 Details of intraday procedure

Intraday schedule messages are submitted to Swissgrid and to Terna.

Schedule messages for the next day submitted to Terna and to Swissgrid after 4.30 p.m. and schedule messages for the current day are managed via the intraday procedure.

The deadline for submitting schedule messages in the intraday procedure is for the first intraday auction D-1 5.30 p.m. (12.00 a.m.-12.00 a.m.), and for the second intraday auction on day D, 12.30 p.m. (4.00 p.m.-12.00 a.m.). Afterwards Swissgrid and Terna perform a 30-minute correction cycle. In the case of mismatch, nomination at Terna will prevail. Submissions to Terna must be made in accordance with the provisions of the currently applicable Italian Dispatching Contract (Contratto di dispacciamento).

11.4 Overview of intraday procedures for internal trades

0 o'clock

Z-15min
Submission Deadline / Cut-Off-Time

Z
Every full quarter hour
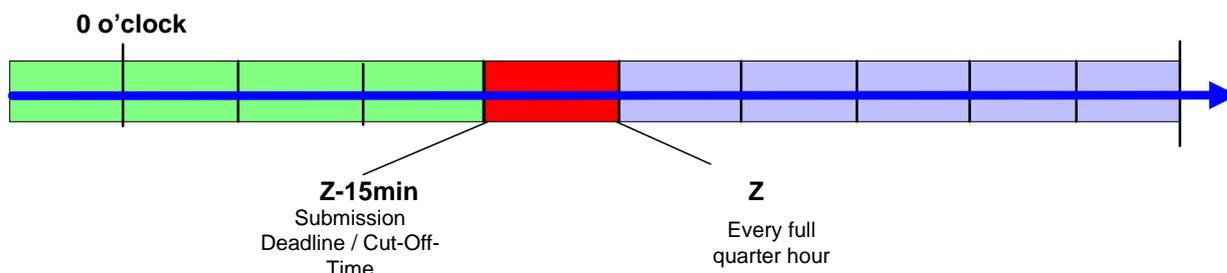
Fig. 12: Intraday procedures for internal trades

The schedules must be received by Swissgrid 15 minutes before the schedule change.

Additional anomaly check:

> 5 minutes after receipt of a schedule message, a check is made to see if the counterpart schedule is in place. An Anomaly Report is sent to the submitter of the schedule if necessary. If the counterparty is known, i.e. it has already submitted another schedule on that day, it will also be informed of the missing schedule.

T -35   Check to see if the counterpart schedule has been received and possible dispatch of an anomaly report. If the counterparty is known, it will also be informed of the missing schedule.

12 Post-scheduling adjustment

0 o'clock

24:00 D
End Intraday

00:00 D+1
Start Post Scheduling Adjustment

continuous
Coordination of incoming schedules

16:00 D+x
End Post Scheduling Adjustment on the second working day

Fig.13: Post-scheduling adjustment (times in CET)

12.1 Overview of post-scheduling adjustment

Schedules for internal trades can be changed or re-submitted on working days up to 4.00 p.m. D+2. Swissgrid publishes applicable holidays on its website, with exact definitions of the working days (D+2) and hence the post scheduling adjustment settlement deadline. The BGMs

are informed separately each year, but no later than the end of November, of the rules regarding Christmas/New Year.

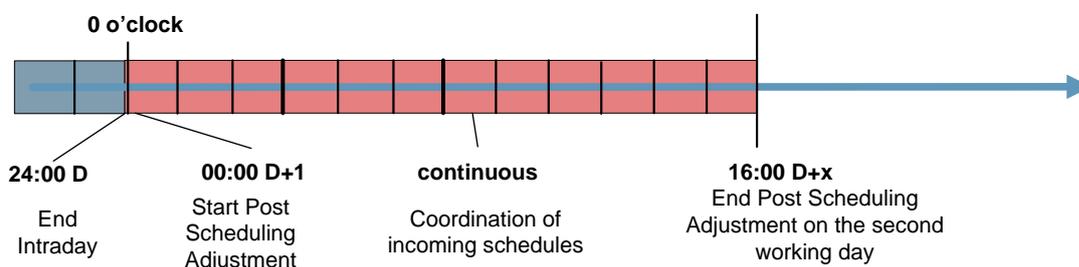Swissgrid offers support for the post-scheduling adjustment process as an accompanying process only between D+2 1.30 p.m. and D+2 4.00 p.m. (on working days). No support for post-scheduling adjustment is offered at any other time, but schedules can be submitted at any time within the post-scheduling adjustment process deadlines.

Changes and re-submissions of schedules on the following two working days take place with the process type A17 (schedule day), the same message ID as long term, day-ahead and intraday and sequential versioning.

In addition to the changed and new internal time series, subsequent changes to the schedule always contain each of the time series already submitted for the balance group in day-ahead and intraday, including the consumption forecast (CONS) for balance groups with metering points. They cover the entire schedule day (12.00 a.m.-12.00 a.m.) and all internal and external time series. The values of the external time series and as the case may be the consumption forecast (CONS) must correspond to the last matched version in the day-ahead and/or intraday process. Otherwise the entire message will be rejected with reason code A02 «Message fully rejected».

All the positions for the schedule days (previous days and preceding weekend and/or holidays) are continually matched, i.e. the post-scheduling process for Thursday is concluded on the following Monday. Coordination for Friday, Saturday and Sunday takes place on the following Tuesday. BGMs receive an Anomaly Report on their schedule message if, at the schedule deadline, schedule differences exist between the schedule time series of the BGM and the corresponding schedule time series. Time series with discrepancies are rejected immediately if the settlement deadline has been reached (the version of the schedule message that has already been successfully matched is used).

The schedule messages of balance groups without metering points can be rejected in the post-scheduling adjustment process if the open position exceeds limit 3 within the meaning of Clause 2.2.2 of the General Balance Group Regulations and the open position increases compared with the last schedule message.

Submission procedure for post-scheduling adjustment

Messages can be submitted at any time after the end of the schedule day prior to the post-scheduling adjustment submission deadline and are formally validated immediately (ACK). They are matched as soon as the counterpart schedule is received. The BGM receives an ICNF Report and additionally an Anomaly Report in the case of value differences.
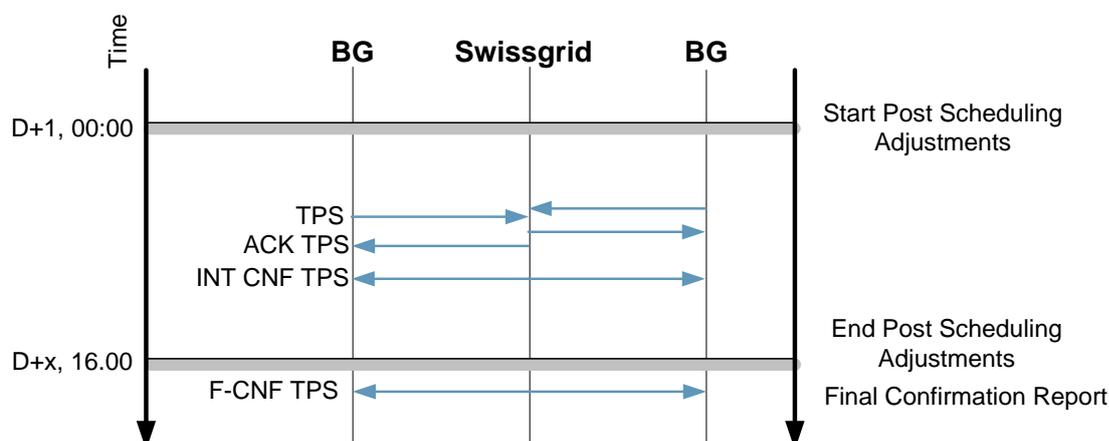
12.2 Details of post-scheduling adjustment

Fig.14: Post-scheduling adjustment shows the procedural steps of the coordination process

From 12.00 a.m. D+1	Start of post-scheduling adjustment schedule check. Messages submitted with the process type A17 (schedule day) after the end of the schedule day D are read in and formally validated and an ACK is sent.
	As soon as a comparison with the counterparty is possible, the entire position of the day is matched and the corresponding results dispatched (Intermediate Confirmation Report or Anomaly Report). The intermediate confirmation is used to supply information about the status of the schedule message to the BGM. The Anomaly Reports are used by Swissgrid to inform the BGMs concerned in the event of schedule differences. In the post-scheduling adjustment process the entire schedule message is always either accepted or rejected. In the post-scheduling adjustment process the entire schedule message is always either accepted or rejected. The BGMs can re-submit the corrected changes.
Until 4.00 p.m. D+x	Post-scheduling adjustment schedule changes by the BGM must be received before the submission deadline on the second working day after the schedule day D.
4.00 p.m. D+x	Submission and settlement deadline for post-scheduling adjustment schedule changes from the BGM to Swissgrid (TPS).
After 4.00 p.m. D+x	If schedule differences exist after the submission deadline, the schedule difference rules apply.
	Swissgrid sends a Final Confirmation to the BGMs (on working days). The BGMs are thus informed about their executed, billing-related schedule time series.

Other anomalies:

From 12.00 a.m. D+1   15 minutes after receipt of a schedule message, a check is made to see if the counterpart schedule is in place. An Anomaly Report is sent to the submitter of the schedule and also to the relevant counterparty.

13 Status request

Two roles are involved in the processing of the status request:

- The BGM sends the status request (active role)
- Swissgrid receives the status request and answers it (passive role)

The status request will be answered as fast as possible, taking into consideration the priority of the processing of TPS messages.
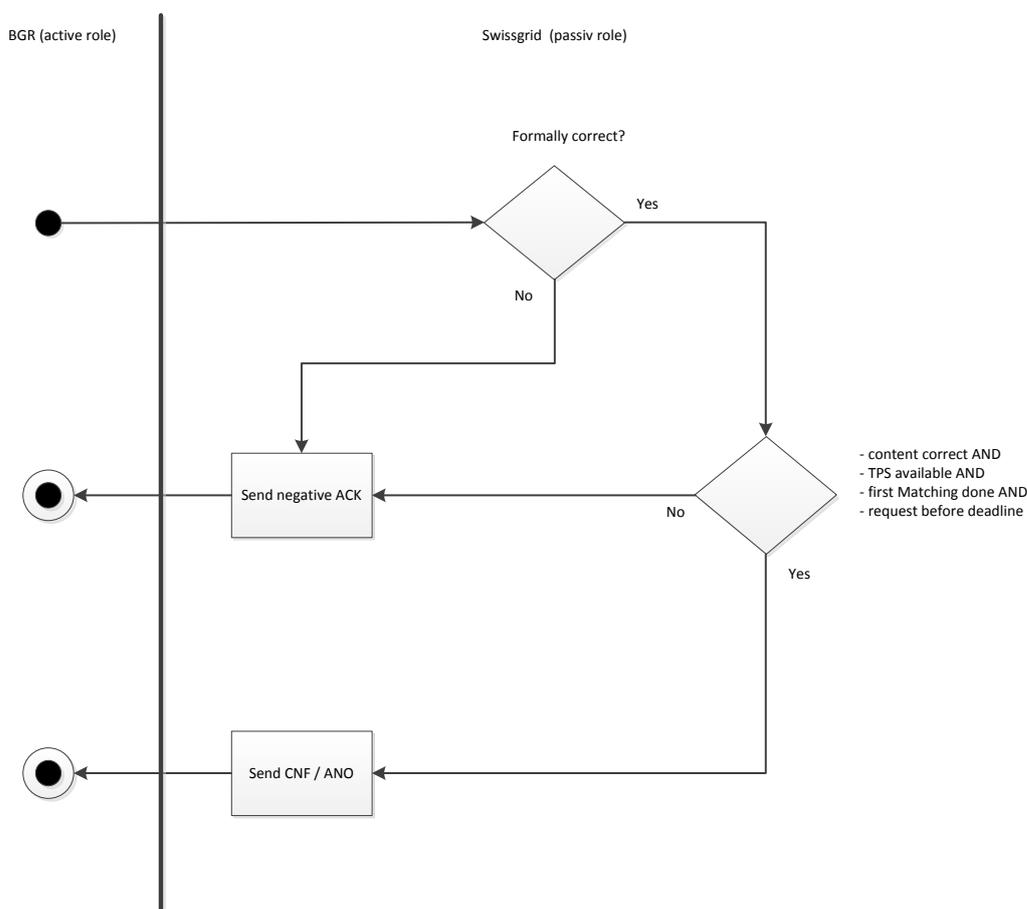
Fig.15: Diagram of status request

The incoming status request is checked formally and in terms of content. In an error case, an acknowledgement («ENTSO-E Acknowledgement Document V5R1») is sent with the information that the status request is incorrect and therefore cannot be processed.

A status request is only processed if matching has already taken place. Therefore, a status request is possible for the first time for the border CH-IT from around 3.00 p.m., for the other borders and internal trades from approx. 2.45 p.m. The status request is possible until one day after the post-scheduling adjustment.

If the status request is correct, it will be answered with the current CNF and, if known, ANO message.

14 Maintenance of grid security in case of congestion

14.1 Compliance with capacity rights

If electrical energy is delivered across a control area border with limited capacity, the schedule messages must not under any circumstances exceed the capacity rights of the BGM, nor must they fall short of the long-term capacity rights that have already been nominated for use. Details can be found in the allocation rules for the corresponding allocation procedures on the corresponding control area border. The relevant allocation rules can be found on the Swissgrid website (www.swissgrid.ch) or corresponding links are provided.

In the case of external trade, the schedule time series must be identified with the coding specified in Clause 17.1.2 below in compliance with the instructions issued by Swissgrid. The BGM is notified about the Capacity Agreement Identification when the capacity rights are allocated. If the schedule time series values exceed the relevant capacity rights, or if the values are below the capacity rights of the BGM that have already been nominated, the BGM will be notified by Swissgrid or the foreign TSO. The BGM must in this case submit a corrected schedule message. If this is not submitted by the settlement deadline, Swissgrid will set the schedule values in accordance with the provisions of Clauses 8.2 and 9.

In the event of a violation of the capacity rights, Swissgrid reserves the right to reject the schedule message or modify it in accordance with the schedule difference rules, even after ACK and ICNF have been sent.

15 Limit monitoring

Swissgrid monitors the compliance of the open position of the BGM. If limits are exceeded within the meaning of Clause 2.2 of the General Balance Group Regulations, Swissgrid can make the BGM concerned aware of compliance with his limits with an automatic telephone message (DAKS) and/or an e-mail.

Failure to send messages or delays in sending messages will not result in any rights for the contracting parties, nor will they be released from their contractual obligations.

16 Content and structure of individual documents

The four or five ESS documents and the status request described below are exchanged between Swissgrid and the BGM in the course of balance group management:

a. schedule message;
b. acknowledgment message;
c. Anomaly Report;
d. Intermediate or Final Confirmation Report;
e. status request.

The structure and content of the first four of these documents are stipulated by ESSIG. For detailed information, for instance concerning the code combinations to be used, please refer to ESSIG and the ESS Code List. The structure and content of the status request is defined by the ENTSO-E Status Request Document (ESRD) Implementation Guide V2R0.

Reason codes contained in the ESS Code List that are not mentioned in the following tables are not used in Switzerland.

16.1 Schedule message

The content and structure of the schedule message must comply with the rules specified in Clause 3.3 of ESSIG v2r3 as well as with the supplementary, specific or contrary provisions described in Clause 4 above.

A schedule message (XML document) and the schedule time series it contains are identified by specifying codes as well as other means of identification for their individual elements. The following tables describe the codes that must be used in accordance with the latest version of the ESS Code List.

16.1.1 TPS message header codes

	TPS
MESSAGE ID	According to ESSIG
Message version	According to ESSIG
Message type	A01
Process type	Long term, day-ahead, intraday, post-scheduling adjustments: A17
Schedule classification type	A01
Sender identification, coding scheme	EIC of the balance group A01
Sender role	A01
Receiver identification, coding scheme	EIC of the TSO (10XCH-SWISSGRIDC) A01
Receiver role	A04
Message date and time	According to ESSIG

	TPS
Schedule time interval	YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ in UTC

Therefore, only the entry time stamp is relevant for categorising the TPS in the respective processes (e.g. day-ahead or intraday) at Swissgrid. The message ID and the subsequent sender time series identification do not change during the schedule day.

The EIC of the corresponding ESS participant (BGM, TSO or Swissgrid) is used to identify the sender and the receiver.

16.1.2 Schedule time series codes

	In TPS [1]	In TPS [2]
Sender TS identification	According to ESSIG	According to ESSIG
Sender TS version	According to ESSIG	According to ESSIG
Business type	A03	A06
Product	8716867000016	8716867000016
Object aggregation	A01	A01
In area [3], coding scheme = A01	EIC importing control area (area) [5]	EIC importing control area (area) [5]
Out area [3], coding scheme = A01	EIC exporting control area (area) [5]	EIC exporting control area (area) [5]
Metering point ID [4], coding scheme	--	--
In party, coding scheme = A01	EIC importing party	EIC importing party
Out party, coding scheme = A01	EIC exporting party	EIC exporting party
Capacity contract type	A05 total A11 intraday balancing mechanism (RTE)	--
Capacity agreement identification	Capacity ID [6]	--
Measurement unit	MAW	MAW

Notes on the table:

«--» means that the element concerned may not be contained in a schedule message.

[1] External trade, cross-border capacity is limited. (Valid on the border with Italy and for balancing energy with RTE)

[2] External trade, cross-border capacity is not limited. (Valid on the border with France, Germany and Austria) with the exception of short-term external trade to France.

[3] Area codes according to the EIC (with Y) and not party codes (with X).

[4] Not currently used in the Swiss control area.

6) In the case of schedule messages relating to a control area border with limited capacity, the capacity contract type and the capacity agreement identification, which must include the capacity ID of one of your rights, must be specified in the corresponding schedule time series. These are allocated as part of the allocation procedure. For control energy transactions with RTE, the definition of the capacity agreement identification can be found in the table in Clause 1.1.

Schedule time series codes for internal trade

	Internal trade	Secondary control energy	Tertiary control energy	Control pooling	Lost energy	National redispatch	Consumption
Sender TS identification	According to ESSIG						
Sender TS version	According to ESSIG						
Business type	A02	A12	A10	A14	A15	A85	A04
Product	8716867000016						
Object aggregation	A01						
In area	EIC Swissgrid [1] Coding scheme =A01					--	
Out area	EIC Swissgrid [1] Coding scheme = A01						
Metering point Coding scheme	--						
In party	EIC importing party, coding scheme = A01					--	
Out party	EIC exporting party, coding scheme = A01						
Capacity contract type	--						
Capacity agreement identification	--						
Measurement unit	MAW						

Notes on the table:

[1] EIC area code for Swissgrid: 10YCH-SWISSGRIDZ.

16.2 Acknowledgment message (ACK)

Version 5.1 ENTSO-E Acknowledgement Document is used for the ACK.

The formal validation is carried out after a schedule message is received. The BGM is notified of the result of this validation in the form of an acknowledgement message. This message also serves the BGM as confirmation of receipt. If there is a discrepancy in a schedule message, the schedule message is partially or fully rejected.

The BGM is notified of discrepancies in the schedule message by means of reason codes in the acknowledgement message. Acknowledgment that discrepancies have been identified is sent at several levels if necessary. Under certain circumstances, several reason codes may be used at each level. The reason codes enable any discrepancies ascertained to be specified in greater detail.

The acknowledgement message for an accepted schedule message contains reason code «A01».

The acknowledgment message for a rejected schedule message contains reason code «A02» and at least one other reason code.

The acknowledgment message for a partially rejected schedule message contains reason code «A03» and at least one other reason code for the rejected schedule time series.

It is the duty and obligation of the MBGM to submit schedule messages punctually with the correct structure and content.

16.2.1 Reason codes message level (ACK)

Reason codes at message level contain a global description of the result of the formal validation as well as the classification of the schedule message by Swissgrid. They are as follows:

Reason code	Meaning
A01	The schedule message is formally fully accepted
A02	The schedule message is fully rejected (other codes are used to describe the reason for the rejection)
A03	Schedule time series are incorrect
A04	Either the time interval of the schedule message is incorrect or a schedule message is not allowed for this time interval at the time of the formal validation
A05	The sender is not an active balance group
A51	An identical or higher version of the schedule message has already been received
A51	This schedule message has already been received with a different message identification
A51	The message identification is not present
A51	The message identification is longer than the permitted 35 characters
A51	The message version is invalid
A52	One or more schedule time series are missing (reduced information content of the documents)
A53	Receiver identification is incorrect
A53	The receiver role is incorrect

Reason code	Meaning
A53	The receiver coding scheme is invalid
A57	The permissible submission time period has been exceeded
A57	Message received before permitted submission time period
A59	XML DTD version/release different than expected
A59	Invalid message type
A59	Invalid request component/attribute
A59	Sender identification does not correspond with the sender identification in the file name
A59	Receiver identification does not correspond with the receiver identification in the file name
A59	Does not conform with local market rules
A59	File name does not conform with the market rules
A59	Schedule classification type is invalid
A59	Message date and time not present
A59	Message date and time format invalid
A59	Adjustment of consumption TS not allowed
A59	No consumption allowed
A59	Consumption TS required
A59	Increase of open position not allowed
A69	Compulsory attributes missing
A78	The sender identification is invalid
A78	The sender role is invalid
A78	The sender coding scheme is invalid
A78	The sender does not have a valid contract
A79	The process type is invalid
A94	Initial version of schedule message not yet received
A94	Matching not yet started
A94	The document cannot be processed by the receiving system
A94	Requested time interval exceeded

16.2.2 Reason codes time series level (ACK)

Reason codes at time series level describe discrepancies in the schedule time series identified by a time series rejection element. These reason codes are mandatory in combination with reason codes A02 and A03 at message level. They are as follows:

Reason code	Meaning

Reason code	Meaning
A04	The time interval of the schedule message (schedule time interval) and the schedule time series (time interval of the period class) are not identical
A20	The schedule time series is fully rejected (other codes are used to describe the reason for the rejection)
A22	«In party» or «out party» error (e.g. the balance group is not allowed or unknown)
A22	Coding scheme for in party or out party is invalid
A23	Error in the designation of the control areas (e.g. incorrect EIC, control area not known or schedule time series not allowed)
A23	Coding scheme for in area or out area is invalid
A27	The capacity rights have not been taken into account
A41	The time resolution is inconsistent or invalid
A42	The quantity is inconsistent or invalid
A50	There is a version conflict concerning a schedule time series (e.g. power value(s) changed or new schedule time series and version are not equal to the message version, the version is lower than the version already submitted, or the version is higher than the message version, version not valid)
A55	Error in the schedule time series identification (e.g. schedule time series occurs more than once)
A55	Schedule time series identification is not present
A55	The schedule time series identification is longer than the permitted 35 characters
A56	The schedule time series has not been netted
A57	The permissible submission time period has been exceeded (either a day-ahead schedule message is late or an intraday schedule message has been changed in the past)
A59	The unit is not MW (MAW)
A59	The entry under «Product» is not 8716867000016
A59	The entry under «Object aggregation» is invalid
A59	Capacity contract type missing
A59	Capacity contract type invalid
A59	Capacity agreement identification missing
A59	Capacity agreement identification invalid
A59	Submission too early, day-ahead schedule message not allowed
A59	Post-scheduling adjustment process does not allow this adjustment
A59	BusinessType does not fit to Process
A62	The business type is invalid
A76	The capacity agreement identification exceeds the permitted 35 characters

Reason code	Meaning
A77	The capacity contract type and capacity agreement identification are required
B06	Time series accepted for processing but not yet matched with counterparty or capacity check still outstanding

The A59 reason codes referred to above are submitted to the sender of a schedule message together with the above explanations.

16.2.3 Reason codes time interval level (ACK)

Reason codes at time interval level describe discrepancies relating to power values in the schedule time units of a schedule time series. The schedule time unit concerned is identified by a time interval error element. Reason codes at time interval level are mandatory in combination with reason codes A02 and A03 at message level. They are as follows:

Reason code	Meaning
A27	Maximum capacity value exceeded
A27	Minimum capacity value not reached
A42	The power value is invalid (e.g. more than three decimal digits, decimal separator is not a full stop)
A46	The power value is negative
A49	Error in the item number of the power value (e.g. the number is missing or outside the power value range)

16.3 Anomaly Report

One or more Anomaly Reports are used to notify the BGM of any schedule differences. An Anomaly Report generally only contains those schedule time series that have been identified as incorrect. Please note that an Anomaly Report does not necessarily contain all incorrect schedule time series (the required information may not yet be available because, for instance, a counterpart schedule message does not yet exist). This means there could be several Anomaly Reports for a single schedule time series.

Reason codes in the Anomaly Report:

Reason code	Meaning
A09	Schedule time series do not correspond (the Anomaly Report contains both schedule time series)
A28	Time series expects that 1) the counterparty has sent a schedule that is now also expected from the BGM 2) a schedule message is expected in accordance with the minimum capacity rights to be met
A28	The counterpart schedule message is missing. The values in the schedule time series are set according to the schedule difference rules (the Anomaly Report contains the received schedule time series)
A59	Schedule time series correspond. However, cannot be adopted as the schedule time series in the opposite direction do not correspond

16.4 Intermediate and Final Confirmation Report

The Intermediate Confirmation Report (message type A07) is a message used by Swissgrid to inform the BGM which schedule time series have been classified as "matched" following the settlement deadline and the application of the schedule difference rules in the case of schedule

differences. If Swissgrid has applied the schedule difference rules and changed any values, this is indicated by specifying the appropriate reason codes.

Schedule time series that were rejected following the formal validation are no longer contained in the Intermediate Confirmation Report or, alternatively, the originally matched schedule time series are shown. Please note that several Intermediate Confirmation Reports may, under certain circumstances, be written for one schedule message. An Intermediate Confirmation Report with a more recent message date and time replaces all previous Intermediate Confirmation Reports. The message date and time of the Intermediate Confirmation Report are decisive and not the time at which the BGM receives the Intermediate Confirmation Report. The ICNF always contains the complete position currently matched with Swissgrid. If additional counterpart schedules are received or the schedule difference rules are applied, this situation could still change. A new ICNF is sent in this case.

If a time series is modified, the modification always refers to the last agreed values, not to the version most recently sent by the BGM.

At the end of the day, Swissgrid sends the BGM a Final Confirmation Report (message type A08) indicating all confirmed, matched and executed schedule time series.

A time series will be imposed if it was not included in the schedule but was expected by Swissgrid. In this case, the identification of the relevant time series, which was generated by Swissgrid and added to the BGM schedule, will be «ET3K». This time series identification can be changed once by the BGM. After this change, the time series ID must remain the same for all subsequent schedule messages during the schedule day concerned.

If the BGM has not sent a schedule for this schedule day by the time the imposed time series is generated by Swissgrid, the message identification will also be «ET3K» and can also be changed once by the BGM and must then remain the same for the rest of the schedule day.

16.4.1 Reason codes message level (CNF)

Reason code	Meaning
A06	All submitted schedule time series in the schedule message have been fully accepted.
A07	The submitted schedule time series in the schedule message have been partially accepted.
A08	The schedule message that was previously accepted as structurally correct is rejected (e.g. because the counterpart schedule message is missing).

16.4.2 Reason codes time series level (CNF)

Reason code	Meaning
A20	The schedule time series is fully rejected. The power values are set to zero and identified with code A45 at time series interval level.
A26	The schedule time series have been changed according to the schedule difference rules because no settlement was reached (counterpart schedule message missing, error in the schedule message). The changed power values are identified with code A45 (default value in accordance with schedule difference rule) at time series interval level.
A30	The schedule time series was imposed by Swissgrid. The schedule time series is

	identified as an imposed time series.
A63	The schedule time series was manually changed by Swissgrid (copy from counterpart schedule time series, manual value entry). The changed power values are identified with codes A43 (power values increased) and A44 (power values reduced) at time series interval level.

16.4.3 Reason codes time interval level (CNF)

Reason code	Meaning
A43	The power value of the schedule time unit has been increased.
A44	The power value of the schedule time unit has been reduced.
A45	The default value for the schedule time unit has been used (if the schedule difference rules are applied).

16.5 Status request

The structure and content of the status request refers to «ENTSO-E STATUS REQUEST DOCUMENT (ESRD) IMPLEMENTATION GUIDE (V2r0)».
The following requested attributes must be used:

- Subject party: use the EIC of the party for which the status is to be requested. In addition to the attribute, the coding scheme must also be used (A01 = EIC).

- Subject role: use the role of the party for which the status is requested. According to the ENTSO-E code list, code A01 (= trade responsible party) must be used.

- Process type: use the process type A17 (=schedule day).

- Time interval: use the time interval for which the status is requested. The specification according to Chapter 8 must be used.

17 Naming conventions

The letters «A-Z» in the English character set, the numbers «0-9» and the special characters underscore «_» and hyphen «-» may be used in file names. All XML files have the «xml» extension. Both upper- and lower-case letters are permitted in file names; extensions are always in lower case.

Files with names that do not correspond to the conventions will not be read into the Swissgrid scheduling system.

17.1 File names for schedule messages

YYYYMMDD_type_EICofsender_EICofreceiver_VVV.xml

YYYYMMDD	Validity date of the schedule message
Type	«Type» of the schedule message (3 characters, e.g. TPS)
VVV	Version of the schedule message. The version number has three digits with leading zeros. Only decimals may be used in the version number. The version numbers start with «001» every day and are continued consecutively at the transition from day-ahead to intraday schedule messages.

Schedule message types		
TPS	**T**rade-responsible **P**arty **S**chedule	Schedule message (BGM to TSO or Swissgrid)
SRQ	**Status request**	Request for status (BGM to Swissgrid)

17.2 File names for acknowledgments

The file names for acknowledgments are generated as follows:

a. Acknowledgment message
YYYYMMDD_type_EICsenderoriginalmessage_EICrecipientoriginalmessage_VVV_ACK.xml

b. Anomaly Report
YYYYMMDD_type_EICsenderoriginalmessage_EICrecipientoriginalmessage_VVV_ANO_YYYY-MM-DDThh-mm-ssZ.xml

c. Intermediate and Final Confirmation Report
YYYYMMDD_type_EICsenderoriginalmessage_EICrecipientoriginalmessage_VVV_CNF_YYYY-MM-DDThh-mm-ssZ.xml

YYYYMMDD	Validity date of the schedule message
Type	Type of schedule message (3 characters, e.g. ACK)
VVV	Version of the schedule message. The version number has three digits with leading zeros. Only decimals may be used in the version number.

YYYY-MM-DDThh-mm-ssZ	Time at which the Anomaly Report or the Intermediate or Final Confirmation Report was created (in UTC). The time stamp serves to differentiate several Anomaly Reports (and possibly also Intermediate Confirmation Reports) for the same schedule message.

Acknowledgment types	
ACK	Acknowledgment message
ANO	Anomaly Report
CNF	Intermediate and Final Confirmation Report
SRD	Status Request Document

17.3 File names for status request

The file names for status requests are generated as follows:

YYYYMMDD_TPS_EICsender_EICreceiver_ SRQ_YYYY-MM-DDThh-mm-ssZ.xml
- YYYYMMDD: date of the schedule day for which the status is requested

- TPS: constant value

- EIC sender: EIC of the sending party

- EIC receiver: EIC of the receiving party (Swissgrid)

- SRQ: constant value

- YYYY-MM-DDThh-mm-ssZ: current time stamp in UTC

18 Submission of data

18.1 General

There are two options available to the MBGM for exchanging the various documents (see Clause 19.3 below).

In emergencies, Swissgrid can use an emergency system, which only has limited functionality.

18.2 Submission time

The times that are stipulated for the day-ahead procedure, the intraday procedure and the post-scheduling adjustment process refer to the time at which the schedule message arrives on the Swissgrid ftp or e-mail server.

18.3 Data submission options

The submission of schedule messages is always based on the bring system, in other words the BGM submits a schedule message to Swissgrid and Swissgrid submits messages to the BGM.

The BGM may choose either of the following two options for submission to Swissgrid:

E-mail

- Internet e-mail for the outbound and inbound paths according to the bring principle.
- The supply point is the recipient's e-mail server.

Each party sets up an e-mail account on an e-mail server for the purpose of submitting data by e-mail.

For system-related and security reasons, Swissgrid requires the e-mail address of the sender who will send the schedules to Swissgrid on behalf of the balance group. Schedules from unknown sources will not be processed. The e-mail addresses can be changed on the website of Swissgrid using the modification form.

E-mail addresses of large e-mail providers (e.g. Hotmail, GMX, Green.ch) are not processed in the event of cyber attacks.

Swissgrid maintains a whitelist with e-mail addresses that will not be disconnected in the event of a cyber attack. These partners would therefore still be able to register schedules if such an attack were to occur. The e-mail addresses can be changed on the website of Swissgrid using the modification form. Swissgrid must be informed if there is any change to the MX entry.

ftp

- Internet ftp for the outbound and inbound paths according to the bring principle.
- The supply point is the recipient's ftp server.

Due to the possibility of cyber attacks, Swissgrid has increased process security in relation to schedule management. Should Swissgrid be attacked, all communication activities can be suspended. This would mean that no schedules could be registered via FTP. Swissgrid maintains a whitelist with sender IP addresses that will not be disconnected in the event of a cyber attack. These partners would therefore still be able to register schedules if such an attack were to occur. The IP addresses can be changed on the website of Swissgrid using the modification form.

Swissgrid provides an IN directory for the BGM on its ftp server, to which the BGM uploads its schedule messages. When setting up a connection to the Swissgrid ftp server, please note that the ftp username, ftp password and ftp directory name are case-sensitive. Username and directory names are always written in upper case. Passwords are a combination of upper and lower case.

The BGM provides an ftp server with a suitable IN directory in its infrastructure for receiving acknowledgments from Swissgrid according to the bring principle.

Compressed files (e.g. .zip) are not accepted.

18.4 Data submission via ftp

Swissgrid and the BGM each set up a main directory and a subdirectory on their respective ftp server for incoming data.

The name of the main directory usually corresponds to the company name of the BGM or Swissgrid. The subdirectory is given the name «IN». The exact path name (e.g. «/ Name of

BGM/IN») must always be defined bilaterally. In addition, information required for submission must be additionally exchanged, in particular the server, username, password and address.

The receiver of the data removes the data in its IN directory as soon as it has been processed (acknowledgement sent or made available to the sender).

If an XML file is transferred and a file with the same name already exists on the ftp server, it will be overwritten, irrespective of the file date.

All file types that clearly do not conform to the specifications (e.g. Excel, CSV ASCII) must be deleted by the receiver.

18.5 Data protection and security

Swissgrid and the BGM are responsible for their own data security. If there is reason to suspect that data security has been violated, the other party must be notified without delay and all passwords changed immediately and coordinated at an agreed time.

Neither signatures nor encryption are used.

18.6 Combination of standard and standby connection

The available combination of options for exchanging data, which are listed in the following table, can be selected as required by the BGM. The configuration of a standby connection is optional but recommended.

Combination	Standard connection	Standby connection
1	E-mail	ftp
2	ftp	E-mail
3	E-mail	None
4	ftp	None

The BGM does not have to notify Swissgrid if it changes its connection. Swissgrid always sends acknowledgments using the same channel used by the BGM to send the original message.

19 Suspension of schedule message management

If the management of schedule messages is suspended by Swissgrid owing to a failure, Swissgrid will notify the BGM without delay. This notification is sent first by e-mail, or if this is not possible by fax, or if this is not possible by telephone. The BGM is notified of the anticipated duration of, and the reason for, the suspension of schedule message management. The BGM will be notified by Swissgrid as soon as it becomes possible to resume management of schedule messages.

If essential work needs to be carried out on the scheduling system that will result in a foreseeable interruption of schedule message management, Swissgrid will notify the BGM in advance and in good time by e-mail. Shortly before the start of the interruption, the BGM will be reminded of the impending suspension of schedule message management. The BGM will be

notified by Swissgrid as soon as it becomes possible to resume management of schedule messages.

To synchronise the scheduling system, the BGMs must be able to send Swissgrid the latest version of the schedules for all the days since the scheduling system failed and the latest schedule for the current and next day.

20 Energy data and imbalance data

The imbalance data (message type C01) is sent to the BGM by Swissgrid in accordance with the implementation document «Standardised Data Exchange for the Swiss Electricity Market», which is published on the Swissgrid website (www.swissgrid.ch), by no later than the 15th working day after the month's end to the specified contact office.

On the 15th to the 28th working day after the end of the month, Swissgrid sends updated imbalance data from 3.30 p.m. onwards if it receives new or corrected energy data from the DSO. The 28th working day is also the invoice date for the settlement of the balance group.

If amended energy data arrive between 28 working days and six months after the month's end, the updated imbalance data will be forwarded weekly (every Tuesday, where this is a working day). This ensures that metering data is continuously compared and matched between Swissgrid and the BGM.

21 Trial run of schedule management

The trial run is a prerequisite for the activation of a balance group. Testing a schedule message serves to ensure that the balance group is productive before going online. The following tests are performed:

a. Formal validation: the schedule messages are examined for compliance with requirements (day-ahead, intraday and post-scheduling adjustment). Objective: the schedule messages can be read in and processed by the scheduling systems.
b. Communication: submission and processing of the schedule message is tested. Objective: the submitted schedule messages are available to the relevant receiver for further processing.
c. Checking the correct trade configuration: all schedule time series that are submitted by a BGM are processed. Objective: all schedule time series are correctly identified.

In some cases, the trial run can be performed in collaboration with an external company commissioned by Swissgrid. By completing the trial run successfully, the applicant proves that it has the necessary technical infrastructure for managing schedule messages.

Swissgrid will contact the applicant to discuss how the trial run will be carried out.

Productive operation cannot commence until the trial run has been successfully completed.

22 Supplementary provisions

These Technical Balance Group Regulations are supplemented by the provisions described in ESSIG v2r3. Should any of the provisions contained in ESSIG v2r3 conflict with these Technical Balance Group Regulations, the provisions of these Technical Balance Group Regulations shall take precedence.