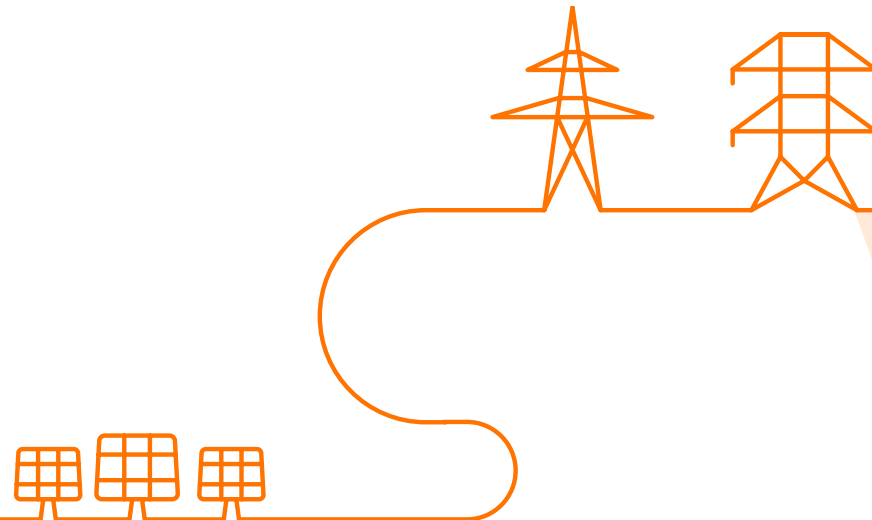# 2027-2028 T&C VSP

Public Consultation Comments

30/06/2025 | Alexandre Nève

Agenda

1. Introduction

2. January 2027 options

3. Changes to the remuneration reduction

4. VSP availabilities and reactive setpoint acceptance

5. Start-up and extension of activation

6. Miscellaneous

Introduction

Introduction

– Purpose of new T&C VSP: implement the 2023 incentive conclusions, updates required from the new communication system (ECL), future proofing the design for new inverter-based assets

– Recap of the main T&C Changes submitted to Public Consultation:

  – Switch from **sampled to continuous activation** control (change of remuneration reduction)

  – Structuration of the reactive power **availabilities** requested from the VSP

  – Option for NCC to request that a VSP "**starts/awakens**" to just provide reactive power service, or **maintains** the reactive power service instead of shutting down

  – Obligation for assets entering/leaving **Power Saving Mode** to let NCC know in real-time.

– Also submitted as part of the Public Consultation:

  – VSPs to provide a feedback on an **extension of the current contractual conditions** up to Jan 2027 included to have IT Go-Live of new comm system on 1st Feb 2027

Introduction

- Public Consultation on the VSP T&C for the 2027-2028 contractual period.
  - Ran from Thursday 27th of March 2025 until Monday 28th of April 2025
  - 4 Market Parties have submitted comments: FEBEG, Febeliec, BOP, BASF
  - No blocking point in feedback, but some information need to be gathered within Elia for the replies.
- Timeline:
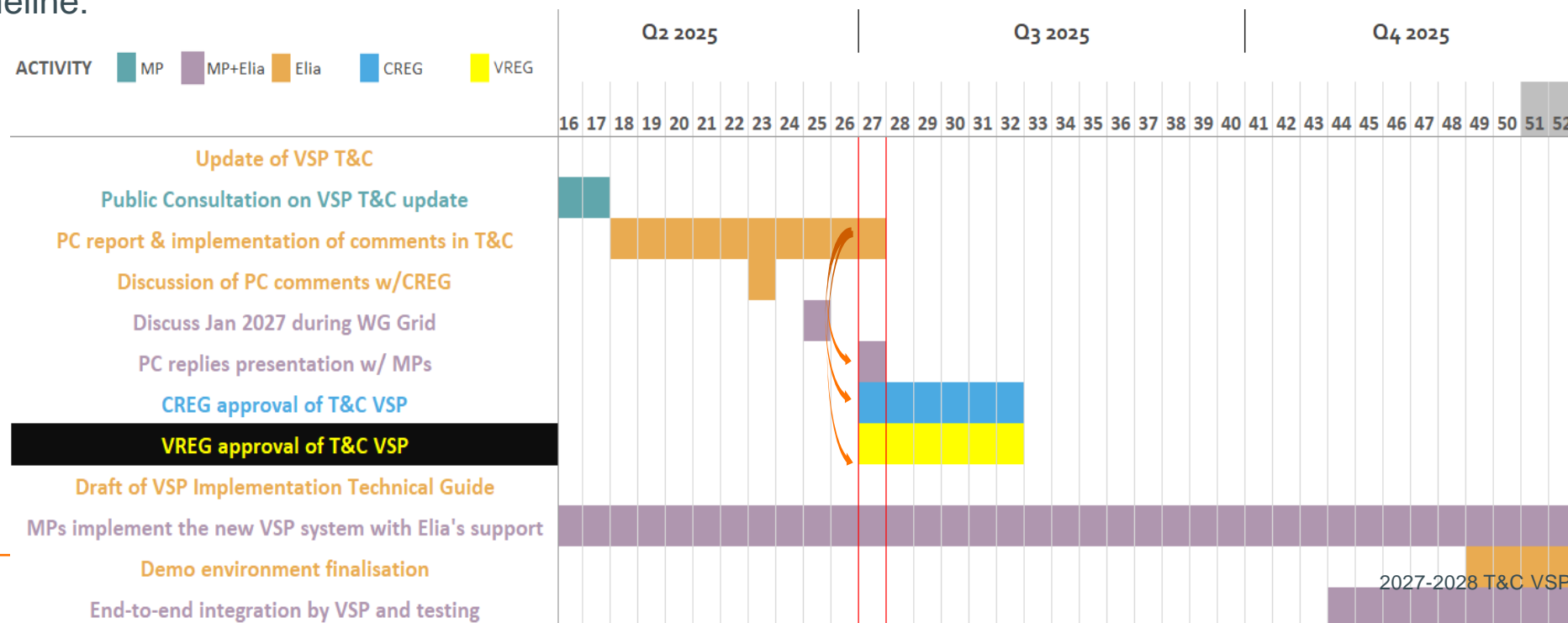
Legend of these slides

– Ribbons:

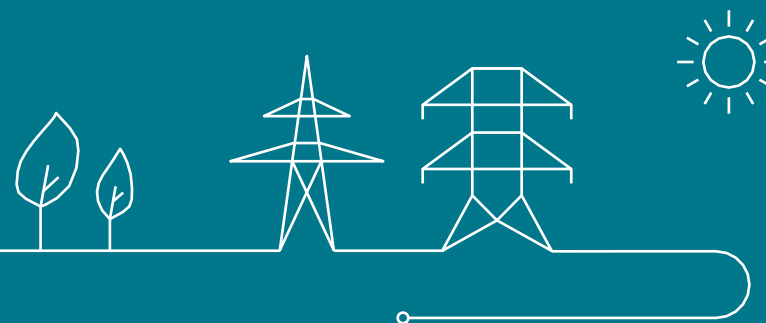– Minor comment

– Medium comment

– Major comment

– Stamp:

No T&C change foreseen Elia will not change the VSP T&C following this comment.

T&C change foreseen Elia will modify the VSP T&C following this comment.

January 2027 options

Start of next VSP contract period in 2027 and IT Go-Live

Advantages:
- Simpler process for everyone (one tender), less time constraints
- One more month to prepare IT tools
- No legal and timing constraints on the tender process

☑ – Elia and VSPs agree that VSP Communication IT Go-Live should be on Feb 1st 2027 instead of Jan 1st

☑ – **Preferred option discussed in WG Grid 16/06/2025 "Start of T&C VSP on Jan 1st 2027, with transitory modalities until Feb 1st 2027"**

  – Availability info exchanged using the backup channels (emails and phone)

    – For maintenance planned for Jan-Feb 2027 and affecting reactive power service, Elia requests VSPs to warn Elia by end of 2026

  – Entering/leaving Power Saving Mode: Elia will add an article stating entry into force from 1st of February 2027 for Art III.6.11

> III.6.11   The VSP has the obligation to message Elia as described in Annex 14 when one of its Technical Units enters into Power Saving Mode or leaves Power Saving Mode.

  – Elia will use the back-up communication system in Jan 2027 (emails and phone calls) to start and extend activation of assets in Compensator Mode or Offtake

Changes to the remuneration reduction
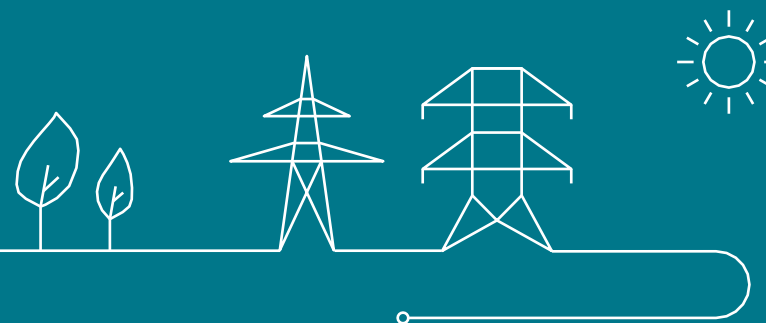
Remuneration reduction change - Summing discrepancies each Qh instead of considering only 1 Qh

- **Context:**
  - Currently, activation control are based on samples (due to technical limits until now): if sample shows requested setpoint is not reached, reduction of remuneration is applied.
  - Proposed in new T&C (enabled by technological evolution): continuous activation control – Integration until end of day or until new setpoints for each quarter-hour of the delta between the requested reactive setpoint and the measured reactive power.
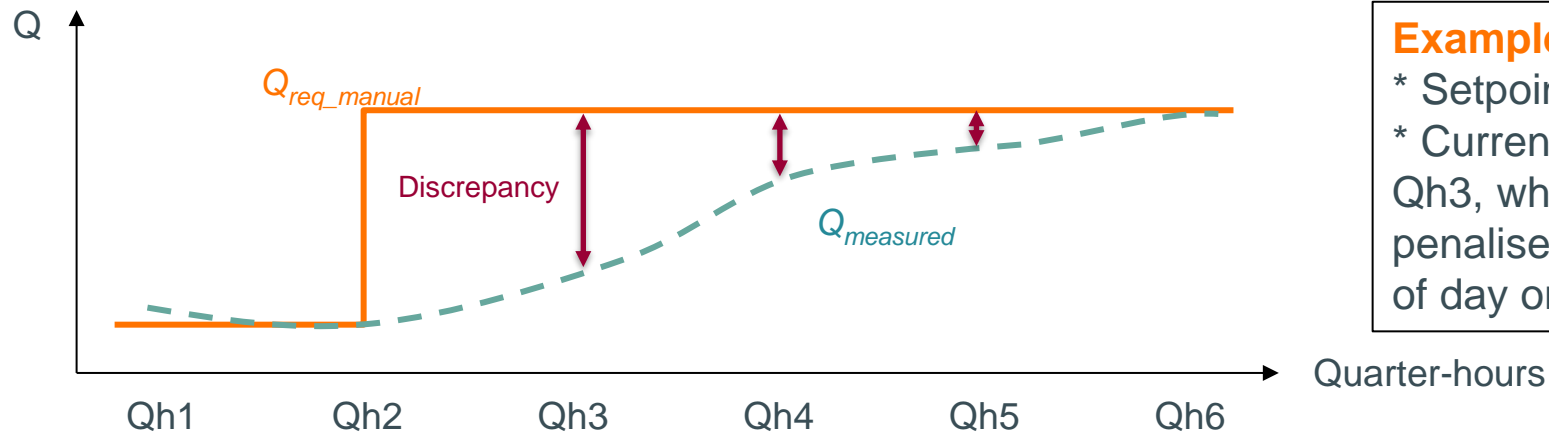
Example:
* Setpoint request in Qh2
* Current remuneration reduction penalises only Qh3, whilst proposed remuneration reduction penalises Qh3 and all subsequent Qh until end of day or new setpoint

Remuneration reduction change - Summing discrepancies each Qh instead of considering only 1 Qh

- For each quarter-hour, the discrepancy between the measured Q and the expected Q (i.e. $Q_{requested}$) is calculated:

$$Discrepancy = \left| Q_{requested} - Q_{measured} \right| - tolerance$$

For Automatic Control: $\quad Q_{requested} = -\dfrac{\left(GV - V_{startup}\right) * \alpha_{eq} * 0,45 * P_{tech\_max}}{U_{norm\_exp}} + Q_{initial}$

- In the current T&C, $V_{startup}$ and $Q_{initial}$ are reset at the measured values of the first Qh after the setpoint request: subsequent Qh are not subject to remuneration reduction

- In the new T&C, $V_{startup}$ and $Q_{initial}$ are extrapolated to what they should be if setpoint was not reached: subsequent Qh are subject to remuneration reduction until setpoint is reached or until values are reset at midnight.
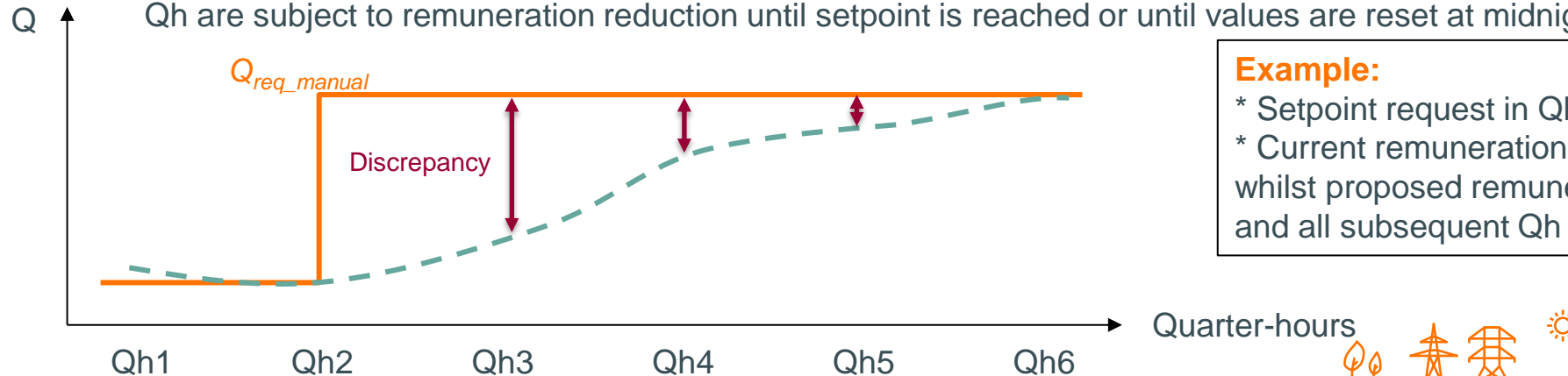
Q

Q_{req_manual}

Discrepancy

Qh1   Qh2   Qh3   Qh4   Qh5   Qh6   Quarter-hours

Example:
* Setpoint request in Qh2
* Current remuneration reduction penalises only Qh3, whilst proposed remuneration reduction penalises Qh3 and all subsequent Qh until end of day or new setpoint

Remuneration reduction change - Summing discrepancies each Qh instead of considering only 1 Qh

- **Example 1: Setpoint reached in due time**

  - Qh1: 0 MVAr (reference setpoint once the asset is injecting)

  - Qh2: NCC requests 5 MVAr (= Q_{req_manual}). The TU must reach the setpoint within 5 minutes.

  - Qh3: The TU reaches 5 MVAr (= $Q_{measured}$) ± tolerance. $V_{startup}$ and $Q_{initial}$ are reset to measured values.

  - Qh4 and subsequent Qh: The TU regulates reactive power based on voltage deviations
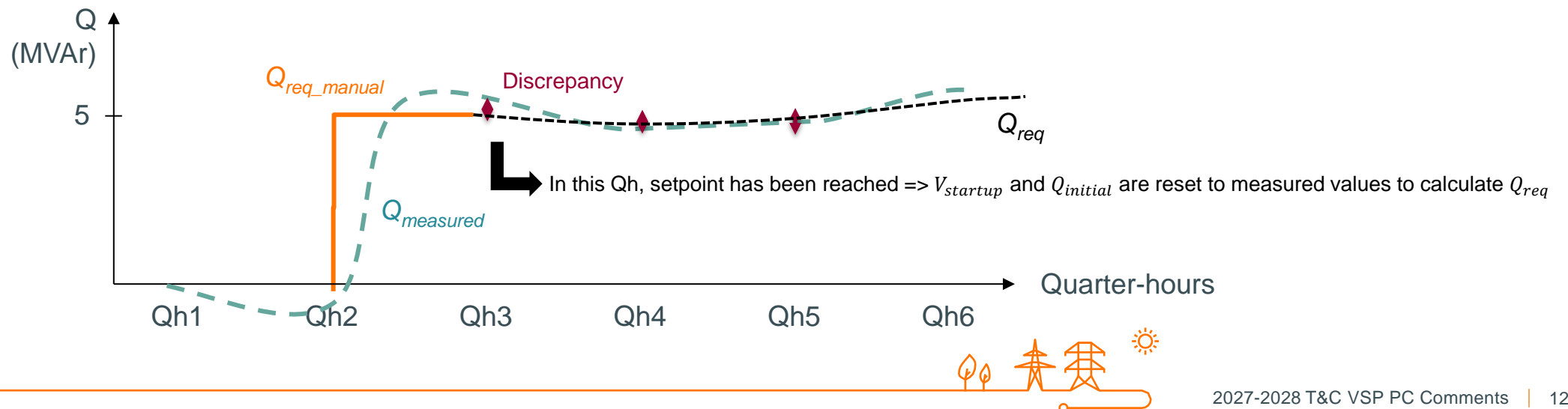
In this Qh, setpoint has been reached => $V_{startup}$ and $Q_{initial}$ are reset to measured values to calculate Q_{req}

Remuneration reduction change - Summing discrepancies each Qh instead of considering only 1 Qh

- **Example 1: Setpoint not reached in due time, no declaration of Forced Outage**

  - Qh1: 0 MVAr (reference setpoint once the asset is injecting)

  - Qh2: NCC requests 5 MVAr (= Q_{req_manual}). The TU must reach the setpoint within 5 minutes.

  - Qh3 until Qh5: The TU does not reach 5 MVAr (= $Q_{measured}$) ± tolerance, the sum of the Discrepancies for those Qh are summed to calculate the remuneration reduction (9,5 MVArh)

  - Subsequent Qh: The TU closes the gap with the target setpoint Q_{req}

In these Qh, setpoint has not been reached in Qh3 => $V_{startup}$ and $Q_{initial}$ are extrapolated and corrected for voltage drift as part of the Q_{req} calculation
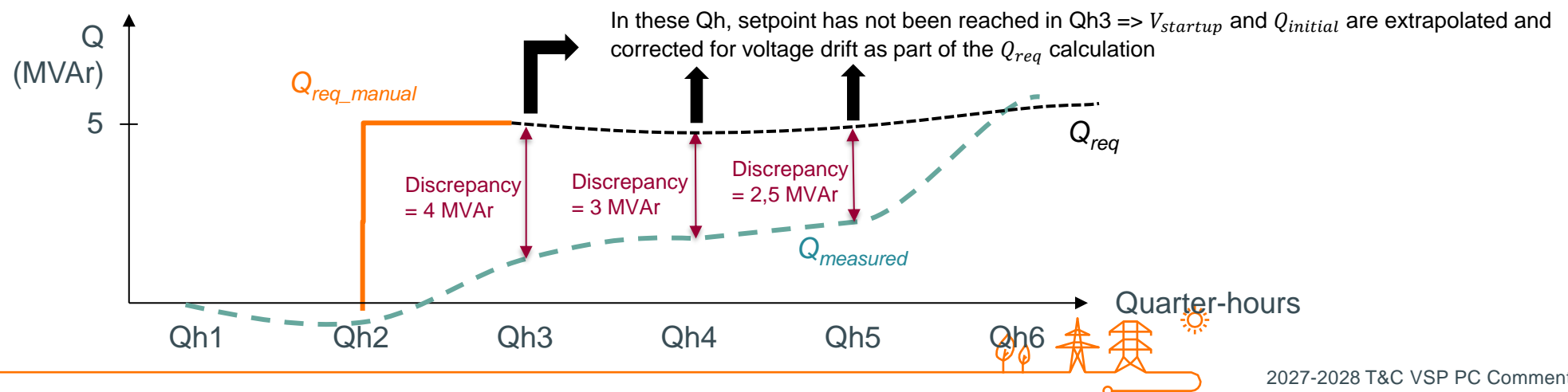
Remuneration reduction change - Summing discrepancies each Qh instead of considering only 1 Qh

- **Example 3: Setpoint not reached in due time, declaration of Forced Outage for technical reasons**

  - Qh1: 0 MVAr (reference setpoint once the asset is injecting)

  - Qh2: NCC requests 5 MVAr (= Q_{req_manual}). The TU must reach the setpoint within 5 minutes.

  - Qh3 until Qh5: The TU does not reach 5 MVAr (= $Q_{measured}$) ± tolerance

  - Qh5: The VSP declares this TU in FO for technical reasons from Qh3 until Qh5 => **no remuneration reduction is calculated for those Qh** (to be updated in the T&C: Q_{req_manual} is retroactively corrected within the available reactive band)
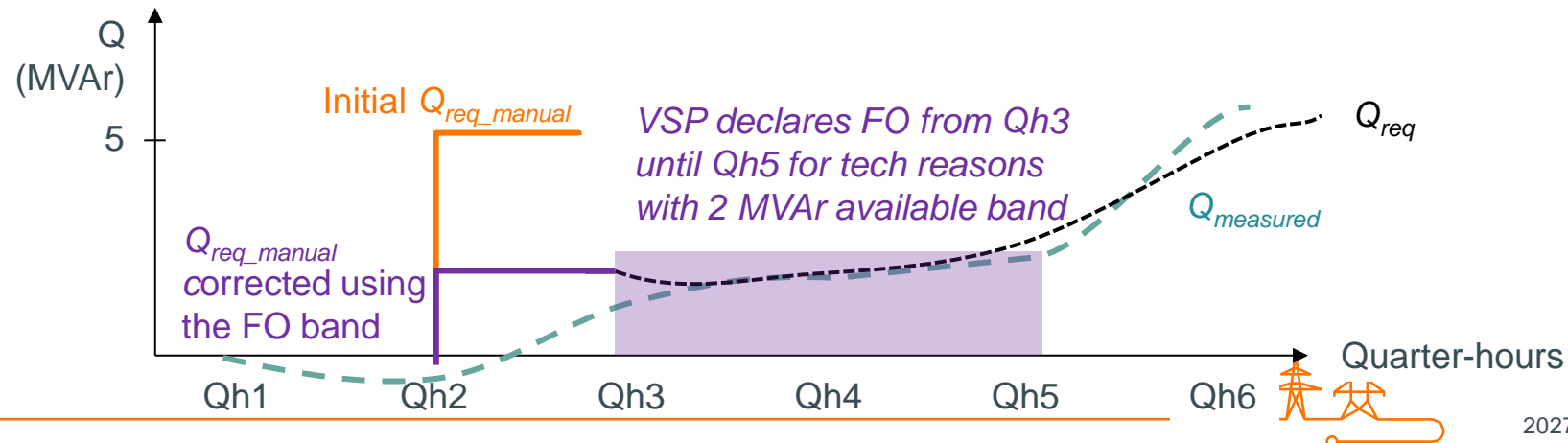
Remuneration reduction change - Summing discrepancies each Qh instead of considering only 1 Qh

– **Comment:** Cumulated remuneration reduction is disproportionate or proposed design introduces an inherent control error. Return to the current remuneration reduction formula or to an alternative one-time reduction formula is requested.

– **Elia's answer:**

  – The T&C proposal remunerates every Qh => logical to reduce remuneration for every Qh too.

  – The T&C proposal incentivizes delivering the setpoint later rather than never.

  – The factors converting the MVArh Discrepancies into a € remuneration reduction have been calibrated to ensure similar quality of service delivery before and after new VSP T&C.

  – VSP can declare TU in FO for technical reasons and avoid remuneration reduction

    – Reminder: Elia may request adjustments to the Availability status up to 5 Working Days prior to the start date of the availability.

  – Overall, remuneration reduction will only be applied during quarter-hours when the VSP does not comply with Elia's requests due to non-technical reasons.

Remuneration reduction change - Summing discrepancies each Qh instead of considering only 1 Qh

– **Elia's answer:**

– Elia will add example cases with setpoints not reached in Annex 2 and Annex 3. Elia will create a new Figure to illustrate the case when the setpoint is not reached, with a Curve 2 showing the delivered voltage to reactive power function. The sentence "The Technical Unit restarts the Automatic Control following the curve 1." will be corrected to refer to this curve 2.

– Elia will align the wording of Annex 2 and Annex 3 for the variables description.

– In case of FO due to technical reasons, this remuneration reduction is waived for the duration of the FO. Elia will clarify in Art. III.10.2 that the Qreq_manual will retroactively be modified to align with the available reactive power band declared with the FO status declaration. This allows to fall back in the case where the requested setpoint has been reached and the Vstartup and Qinitial can align with the measured values.

– To prevent excessive use of the "Forced Outage for technical reasons" unavailability status to avoid remuneration reduction, Elia will add an article in the T&C allowing Elia to request a Forced Outage report (including details on failed components, causes and estimated time for spare part supply) from the VSP in suspected cases of abuse.

Request for additional clarification of the remuneration reduction factors

– BOP requests further details on how remuneration reduction factors 1,5 (for underdelivery) and 0,5 (overdelivery) were calculated

$$Discrepancy = |Q_{requested} - Q_{measured}| - tolerance$$

$Underdelivery: Total\ remuneration\ reduction$
$$= \sum_{month} |Discrepancy * 1.5 * priceLastMVArSupplied|$$

$Overdelivery: Total\ remuneration\ reduction$
$$= \sum_{month} |Discrepancy * 0.5 * priceLastMVArSupplied|$$

– **Elia's answer:**

  – Remuneration reduction coefficients 1,5 and 0,5 were calibrated to result in the same remuneration reduction as in the former system for the same voltage service performance quality of the assets pool (same incentive).

  – Hypotheses: no Forced Outage declaration due to technical reasons, same prices, same units delivering the service…

  – In case of underdelivery, the coefficient needs to be above 1 to reimburse the cost of procuring the missing reactive power from another asset (assuming similar price between assets).

Request for additional clarification of the remuneration reduction factors

– BOP requests that Quarter hours already penalized through MVAr access tariffs are excluded from remuneration reduction in the continuous activation control

– **Elia's answer:**

  – Already in Annex 3 of T&C and kept:

    – "In order to avoid a double penalization related to the tariff for the offtake or injection of additional reactive energy and the delivery control of the Automatic Control Service Type, quarter-hours for which a Reactive Power volume has already been penalized through the tariff for the offtake or injection of additional reactive energy will not be considered in the delivery control of the Service."

  – Already in Annex 4 of T&C and kept:

    – "In order to avoid a double penalization related to the tariff for the offtake or injection of additional reactive energy and the delivery control of the Manual Control Service Type, quarter-hours for which a Reactive Power volume has already been penalized through the tariff for the offtake or injection of additional reactive energy will not be considered in the delivery control of the Service."

Request for additional clarification of the remuneration reduction factors

– BOP stresses the importance of keeping Art III.10.3 "The sum of the remuneration reductions under Art.III.10.1 will be subject to a monthly cap, without prejudice to any liability on the part of the VSP for the non-fulfillment of his obligations in accordance with Art. I.6 of the General Conditions. The remuneration reduction for each month may not exceed the VSP's remuneration for the Service as set in Art. III.9.3 for this month for the concerned Technical Unit or the aggregation of Technical Units as per Art. III.3.4 b)."

– **Elia's answer:**

  – Elia confirms that this article will remain as presented in the Public Consultation documents.

Quarter hours not considered in the remuneration reduction

– BASF comment in the T&C on "Kwarturen die niet in aanmerking worden genomen zijn beperkt tot:":

  – " Het betreft vermoedelijk een vergissing, maar de kwartieren waarin de minimumdrempel voor actief vermogen wordt overschreden, evenals het daaropvolgende kwartier, komen niet in aanmerking voor deze controle, net als de kwartieren waarin de dienst niet wordt geleverd (wanneer het actief vermogen lager is dan de minimumdrempel). Deze zijn namelijk niet opgenomen in de opsomming. Of begrijpen we dit verkeerd? "

– **Elia's answer:**

  – The quarter hours when the active power increases above the minimum active power threshold in injection or offtake, the quarter-hour thereafter and the quarter hours when active power is below the threshold, are also excluded.

  – These exclusions are already applied in the reduction remuneration calculation process but will be added to this list in the VSP T&C.

Measurement errors

– BOP comment: " Measurement errors (related to the accuracy of the current and/or voltage transformers) and thus the measurement deviations between Elia's measurement equipment and the measurements by the windfarm park controllers are an important reason for under- or over-delivery. The reactive power consumption or production is controlled by the park controller based on its internal measurements and not based on the measurements by Elia, resulting in deviations between the requested volumes and delivered volumes. We therefore request a possibility to apply a fixed correction (factor or formula) to the activation control based on a (possible) measured offset between Elia's meters and the meters of the park controller.

– **Elia's answer:**

  – If a fixed offset is observed between the plant measurement and Elia's measurement of reactive power, Elia recommends that the VSP contacts its Elia KAM to assess if an action should be taken. However, according to the article III.3.3 d) of the T&C, the service measurement point should be identified and agreed between Elia and the VSP during the prequalification procedure. The specifications of the metering devices of Elia are also at disposal of the VSP, upon request.

Fixes to Annexes 6 and 7

- FEBEG comment: "Annexes 6 and 7:

  - Discrepancy : a negative value of Discrepancy should be replaced by zero.

  - In Annexe 6 : The sentence "The remuneration reduction calculation depends on the discrepancy sign" is not correct and should be removed. The calculation depends on the situation of underdelivery or overdelivery as correctly described further in this annex and mentioned in Annex 7."

- **Elia's answer:**

  - Elia will add in Annex 6 and Annex 7 a sentence reading "A negative value of Discrepancy shall be replaced by zero".

  - Elia will also replace the Annex 6 sentence "The remuneration reduction calculation depends on the discrepancy sign" with "The remuneration reduction calculation depends on the under- or overdelivery of reactive power"

Fixes to Annexes 6 and 7

– BASF comment: "Het lijkt vermoedelijk een vergissing te zijn dat de Vergoedingsvermindering niet door 4 is gedeeld, terwijl dit wel het geval is bij de vergoeding zoals vermeld in annex 2."

– **Elia's answer:**

– Elia will correct the formula and add that this remuneration reduction applies per quarter-hour.

Fix to the Explanatory Note with regards to the Discrepancy parameter

– FEBEG comment: "For the Manual control service type, according to the "Explanatory Note", if the setpoint is not reached according to the contractual stipulations, a value of zero will be used for the Qmeas of the concerned quarter-hour in the activation control and remuneration reduction scheme. We don't find this clause in the T&C. If this is applicable, it should be clarified in the T&C."

– **Elia's answer:**

  – Elia confirms that Annex 7 of the T&C is applicable for the calculation of the remuneration reduction. The Discrepancy parameter will indeed be calculated from the absolute difference of Qrequested and Qmeasured to which the tolerance is subtracted. A negative value of Discrepancy will be set to zero.

$$Discrepancy = \left| Q_{requested} - Q_{measured} \right| - tolerance$$

  – That line in the Explanatory Note must therefore be discarded.

Conditions to waive remuneration reduction in case of limited availability / unavailability / forced outage

– BOP asks confirmation of the cases when remuneration reduction is not applied because setpoint could not be achieved for technical reasons

– **Elia's answer:**

  – If Status "Unavailable" or "Available with limited reactive power band", Elia will respectively not send a setpoint at all and not send a setpoint outside of the available band.

    – If VSP anyway receives a Setpoint outside declared available band, please contact Elia to correct.

  – If setpoint should have been achievable but was not reached, VSP must declare a Forced Outage with a reason. Elia checks the provided reason:

    – If technical reason, no remuneration reduction. Elia will retroactively correct the Qreq_manual and correct the future available reactive power band according to the Forced Outage declared available band.

    – If not technical reason, remuneration reduction applies. Elia will correct the future available reactive power band according to the Forced Outage declared available band.

    – If no Forced Outage declaration, remuneration reduction applies.

Remuneration report timing

- BASF comment on Art. III.11.1: *"Dit artikel vermeldt niet wanneer het verslag van de Vergoeding wordt ontvangen. Momenteel is het zo dat dit verslag eerder beschikbaar is dan de Vergoedingsvermindering."*

- **Elia's answer:**

  - This article states that the report is delivered at the latest on the 15th day of month M for reactive power services delivered in month M-2.

- BASF comment on Art. III.11.2: *"De tijd die de VSP heeft voor het opstellen van de pro-formafactuur is vrij beperkt (10 dagen, dag 25 van maand M - dag 15 van maand M). Elia zelf geeft aan dat er twee maanden nodig zijn voor het opstellen van het VSP-verslag (art. III.11.1), wat begrijpelijk is gezien de benodigde berekeningen en controles. Het is echter ongewoon om te verwachten dat de VSP binnen 10 dagen zowel de controle van het VSP-verslag uitvoert als de pro-formafactuur aan Elia kan verzenden, vooral niet tijdens vakantieperiodes, wanneer dit nog moeilijker te realiseren is."*

- **Elia's answer:**

  - There is an ongoing project within Elia to shorten the delivery of the monthly services delivery reports, which would extend the duration for report review by the market parties, coupled with a self-billing process once the market party agrees. This will facilitate the invoicing process for the market parties. T&C will be updated once this project is completed.

VSP availabilities and reactive setpoint acceptance
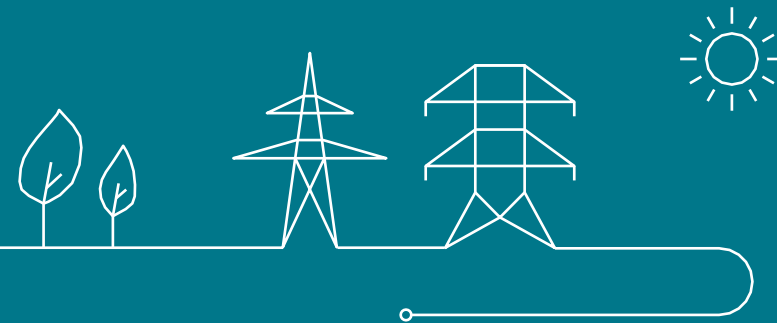
Requests that Elia uses OPA availabilities to determine reactive power availabilities

- T&C state that VSP must determine reactive power availabilities. 3 MPs request that Elia determines the reactive power availabilities so VSP do not have to provide them.

- **Elia's answer:**

  - Not always possible for Elia to conclude on reactive power availabilities using active power availabilities declared by OPAs

  - Some assets do not have OPAs but may have reactive power unavailabilities (e.g. condensatorbanks).

  - <u>Conclusion:</u> **VSPs must provide reactive power availabilities, Elia cannot rely solely on OPA availabilities**.

  - For TUs unable to provide the Voltage service without active power injection (i.e. conventional generators, some WT), **Elia will determine the future reactive power service actual availability from the combination of the Outage Planning Agent and from the Scheduling Agent schedules to reduce workload for VSPs**.

    - For all TUs with installed capacity <25 MW, Elia will align the entry into force of the obligations of declaration of the reactive power service availability with the entry into force of iCAROS Phase 2b

Requests that Elia uses OPA availabilities to determine reactive power availabilities

This chart displays Elia's proposal for MVAr unavailabilities determination logic, minimizing VSP efforts.

Process start (for each Qh)

N (i.e. active power injection needed for MVAr service)

OPA & SA availability check

(Technical) Compensator Mode on the Technical Unit?

Y (i.e. active power injection not needed for MVAr service)

Generator dispatched?

N

Y

VSP availability

(through ECL or Webclient)

Reactive power unavailable

No band

Available reactive power?

Partial band

Contractual band

Partial availability of reactive power band

Reactive power available

Corresponds to an internal Elia process

(The Explanatory Note will be adapted with this explanation and this Figure)

Requests that Elia uses OPA availabilities to determine reactive power availabilities

- **Elia's answer:**
  - Reminder: "Art. III.3.9 For each Technical Unit participating to the Service in both Injection and Compensator Modes, the Technical Control Band in Injection Mode must be equal to the Technical Control Band in Compensator Mode."
    - For assets with Compensator Mode, the Technical Control Band is identical in Compensator Mode and in Injection Mode.
    - For all assets the Technical Control Band has fixed contractual values, not varying as a function of the active power injection.
    - Elia checked that declarations at Technical Facility level will not be an issue for activation at Technical Unit level of existing units. No conflict has been identified.
      - Elia will implement such internal checks as part of future Pre-Qualification Tests procedures.

Return to Reference Setpoint in case of Unavailability

- FEBEG comment on Art. III.3.16 f): "In the event of unavailability of the Automatic Control service type of Controlling Units of a VSP Technical Unit, the VSP shall return the Technical Unit Reactive Power injection or absorption to the Reference Setpoint at the Access Point."

- FEBEG suggests following change : return to the Reference Setpoint <u>or the last received Setpoint at the Service Measurement Point.</u>

- **Elia's answer:**

  - The last received setpoint at the Service Measurement Point may lead to issues after a couple of hours or days. Elia therefore prefers to fall back to the Reference Setpoint of the contract (if feasible) to minimize risks to the grid operational safety.

  - Elia proposes to improve Art. III.3.16 f) into: "In the event of unavailability of the Automatic Control service type of Controlling Units of a VSP Technical Unit, the VSP shall return <u>if feasible</u> the Technical Unit Reactive Power injection or absorption to the Reference Setpoint at the Access Point"

Reactive power setpoint acceptance (1/4)

- BASF comment in the T&C on "De VSP bevestigt de ontvangst van de Referentiewaarde elektronisch binnen maximaal 10 seconden. Wanneer bevestiging uitblijft, zal de handmatige activering mislukt worden geacht en wordt er een vergoedingsvermindering toegepast volgens Annex 7. ":

  - "Gelieven de optie te bieden om een ontvangen Referentiewaarde binnen de 10 seconden af te keuren. Dit kan bijvoorbeeld het geval zijn wanneer de ontvangen referentiewaarde onjuist is of niet binnen het beschikbare vermogen valt. Volgens de huidige werkingsprincipes bestaat deze optie, en in dat geval wordt de ontvangen Referentiewaarde niet meegenomen in de vergoeding en de vergoedingsvermindering."

- **Elia's answer:**

  - The acknowledgment of the receipt of the setpoint request within 10 seconds is an automatic IT acknowledgment of the reception of the request on VSP side. Human intervention is not expected within this very short timeframe.

Reactive power setpoint acceptance (2/4)

- **Elia's answer:**

  - If the VSP is aware of technical limitations for one of its Technical Units due to maintenance, the VSP can declare up to 1 hour before the maintenance an **Available status with a reduced reactive power band** for this Technical Unit.

  - If the VSP knows that the Technical Unit will not be available at all for the Voltage Service, the VSP can declare an **Unavailable** status for this Technical Unit.

  - In case of unforeseen circumstances, the VSP can declare a **Forced Outage** status for a Technical Unit to correct the available reactive power band.

Reactive power setpoint acceptance (3/4)

– **Elia's answer:**

– For assets in **Available or Testing** status:

– Elia confirms that the reactive power setpoints sent by Elia to the VSP must respect the contractual reactive power band AND the available reactive power bands received from the VSP.

– If a setpoint is sent outside the available band for a unit in Available or Testing status, Elia invites the VSP to signal this mistake to Elia: Elia will retroactively correct this mistake internally as part of the Settlement process considering a Qreq_manual limited to the announced available band.

Reactive power setpoint acceptance (4/4)

–   **Elia's answer:**

   –   For assets in **Forced Outage** status :

      –   The Forced Outage status may not be known to Elia by the time the setpoint is sent, but Elia will integrate the available reactive power band as soon as possible to adjust the reactive setpoints requested afterwards.

      –   If a setpoint is sent within the band available for a unit with respect to the received Availability status and if that unit is afterwards declared in Forced Outage with a reduced available band making the received setpoint unreachable, Elia will analyse the cause of the Forced Outage.

         –   If a technical reason led to the Forced Outage (see Art. III.10.1 of the T&C), Elia will adjust the value of Qreq_manual during the Settlement process to the closest value within the available band declared with the Forced Outage declaration. The VSP will therefore still be remunerated for the delivered reactive power and will avoid a remuneration reduction in this context of Forced Outage for technical reasons.

         –   If the Forced Outage is not due to a technical reason, the remuneration reduction described in T&C Annex 6 and Annex 7 is applied.

Availability Status change request by Elia

- BOP comment on "*III.6.17 ELIA reserves the right to request the following changes to the Availability Status provided by the VSP until 5 Working Days before the day of start of the unavailability: …* "

- "From the discussion during the working group, we understood that this change request is meant to open the discussion with the VSP when potential issues arise due to announced (partial) unavailablities, and that this change request can be refused by the VSP. We can agree with this voluntary change request, but do not agree with the more compelling way it is written in the art III.6.17. Please re-phrase this clause to better reflect to ambitions of Elia."

- **Elia's answer:**
  - Elia will reword Art. III.6.17 into "Elia may request following adjustments to the Availability Status provided by the VSP up to 5 Working Days prior to the start date of the unavailability:".
  - Elia considers that this is in line with the Belgian Offshore Platform understanding.

Availability Status change request by Elia

– FEBEG comment "Elia can request changes in the Availability Status until 5 working days before the start of the unavailability : this request must be subject to the technical feasibility to restore the full availability of the service. In case the planning of the needed technical intervention must be advanced, Elia should compensate the extra costs. "

– **Elia's answer:**

  – This request by Elia is indeed subject to technical feasibility of the Technical Unit.

  – In case of extra costs due to the Availability Status change:

    – If this change also impacts active power, then OPA modalities for extra costs recovery apply.

    – Otherwise (i.e. no impact on active power availability), Elia will cover the extra costs through the VSP T&C using the same approach as in the OPA T&C. Elia will adapt the VSP T&C accordingly (see next slide).

Availability Status change request by Elia

- **Elia's answer:**
  - Elia will add in the T&C:
    - "If the Grid User incurs extra costs due to the Availability Status adjustment requested by Elia, and if that extra cost is not covered by OPA T&C modalities, then the VSP sends a price offer by email to the contractual responsible of Elia listed in Annex 10.
      This price must be cost reflective, meaning it must be **reasonable** (i.e. the costs reflect an additional cost or loss of revenue that cannot be recovered or remunerated elsewhere, based on available information at the moment of the submission), **demonstrable** (i.e. the VSP must be able to justify the amount by supporting information of a reliable source (in-voices, price offers of a contractor, reference prices,…), which must be kept at disposal for the CREG and for Elia) and **directly related to the request** (i.e. the cost would not have been incurred if the request for activation had not taken place.).
    - Elia can ask additional justification within 24 Months after receiving the offer, by email to the VSP contractual responsible listed in Annex 10."

Implementation costs & flexibility in implementation time

– Request from multiple parties that their IT implementation costs are remunerated.

– Request from BOP to provide sufficient flexibility in implementation time, to work with common industry standards and communicate asap on the on the required communication protocol changes.

– **Elia's answer:**

  – Elia designed the new availability messaging requirement to be as light as possible whilst improving the grid operational security. Elia will also use the OPA unavailabilities and SA schedules to conclude on the reactive power unavailability of TUs requiring active power injection above a threshold to provide reactive power service. VSP intervention is still required for reactive-specific unavailabilities.

  – Significant implementation time for the VSPs has been included in Elia's planning. This is also one of the drivers for the dedicated Public Consultation on these T&C, separate from the Public Consultation on the Tender, to give enough time for the implementation on VSP side.

  – The Implementation Guide draft version has been uploaded on the "MVAR evolution" webpage of Elia's website in Q2 2025.

Automatic control unavailable, manual control available

- BASF comment on Art. III.6.13 (Availability Service Control types): "De tabel is niet toegankelijk voor Niet-Regelende Technische Eenheden, aangezien automatische regeling voor dit type eenheden nooit mogelijk zal zijn."

- **Elia's answer:**

  - Elia will add an "Automatic Control unavailable, Manual Control available" case to the T&C

Manual control unavailable, automatic control available

– BOP comment: "Can Elia define what is expected when only the manual voltage service is unavailable. In case of e.g. maintenance at the communication platform, possible reactive power setpoints from Elia will not be executed (manual control service unavailable), however, the automatic service will keep controlling the reactive power according to the droop curve (automatic control service available). In practise, these kinds of situations occur several times a year for short periods. In those cases, it is also expected that Elia does not send any reactive power set-points and that the activation control of the manual control service is not applicable."

– **Elia's answer:**

– Elia will add an "Automatic Control available, Manual Control unavailable" case to the T&C. In such cases, Elia will not send reactive power setpoint requests.

Start-up and extension of activation
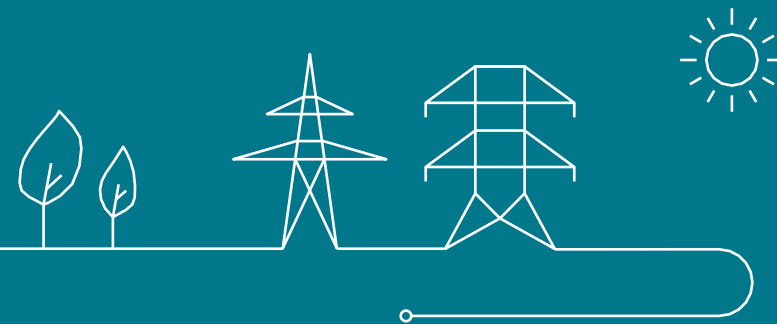
Start-up and extension of activation of limited reservoir storage devices for the reactive power service

- – FEBEG mentions that starting a storage device in Offtake (if there is no Compensator Mode for this asset) or extending its activation may be limited by the asset energy reservoir. FEBEG requests to let the VSP decide whether it wants to accept or reject the request to deliver the reactive power service while offtaking.

- – **Elia's answer:**

  - – Elia underlines that using storage units at their Minimum Active Power Threshold in Offtake would only be used if Compensator Mode is contractually unavailable for this asset.

  - – After further technical review of the energy storage assets case, it appears that energy storage assets without Compensator Mode don't even have a Minimum Active Power Threshold in Offtake (it equals 0 MW). For future assets capable to offtake energy and without contractual Compensator Mode, Elia will add as footnote that the Pmin must correspond to just the offtake of active power to deliver the Voltage Service. With this approach, the full state of charge of these storage assets cannot be reached.

Start-up and extension of activation of limited reservoir storage devices for the reactive power service

- FEBEG comment: "For the first condition for the BRP perimeter correction, in case of Injection Mode with active power offtake, a tolerance (proposal : 0,5% of Pmax, as a first estimate, to be further investigated with market parties / equipment suppliers) around the Minimum Active Power Threshold in Offtake should be introduced (it may be difficult to remain "exactly" at for instance '2,110 MW'). ".

- **Elia's answer:**

  - Elia will add in the T&C a Tolerance Tol_{VS} around the active power threshold in offtake (Pmin), equal to (in alignment with the Federal Grid Code):

    - 10% of Pmin for generators assets types C or D

    - 5% of Pmin for storage assets types C or D

  - Elia will add for generators and storage assets of type B respectively the above tolerance band, considering that the types C and D tolerances apply to type B as well.

Annex 2C: Start-up and BRP perimeter correction

- FEBEG comment:

  - "this requirement implies additional obligations for an in essence cost-based product. FEBEG wishes Elia to further explain how this could work in practice. Will Elia use the availability status and activate based on that? Do market actors need to send bids? If yes, could the redispatching not be used in order to reduce the number of mechanisms?

  - On top of that, the BRP perimeter correction needs to be in line with the perimeter correction for redispatching. The BRP-perimeter correction that is proposed, is not clear. What does Pmin means? Is there a tolerance band? If a Voltage Service Provider goes above Pmin and then back after Pmin, does he receive still perimeter correction.

  - At least, the cost of start-up to the Minimum Active Power Threshold in Offtake should also be foreseen in Annex 1."

Annex 2C: Start-up and BRP perimeter correction

- **Elia's reply:**

  - Elia will indeed use the availability status to understand which assets can be started (or with a similar effect taken out of Power Saving Mode).

  - The start-up cost is fixed for the duration of the VSP T&C and set by the VSP in Appendix 1 of the VSP T&C.

    - If the VSP asset has a Compensator Mode, this cost corresponds to the cost of increasing active power offtake to enter the Compensator Mode.

    - If the VSP asset does not have a Compensator Mode, this cost corresponds to the cost of increasing active power offtake to the Minimum Active Power Threshold in Offtake.

  - The BRP Perimeter will cover the corresponding active power consumption.

  - The redispatching system was not designed to address the requirements of the voltage service and therefore could not be used. This led to the system proposed in the T&C VSP.

Annex 2C: Start-up and BRP perimeter correction

– **Elia's reply:**

– A VSP asset going above Preq to pursue market opportunities will stop getting a BRP perimeter correction until the VSP asset returns to Preq. If the activation endtime has not been reached yet, then the BRP Perimeter correction will resume.

Annex 2C: Start-up and BRP perimeter correction

- "The energy requested of an asset started for the Service…" : it should completed with "or maintained for the Service" – Elia will implement the proposed change in the T&C

- "Delta t is the duration in minutes between the start-up request and the beginning of the concerned quarter-hour" : it would be clearer to write "between the beginning of the concerned quarter-hour and the start-up request" (chronological order). – Elia will modify the text to " Δt is the duration in minutes between the beginning of the start-up request quarter-hour and the start-up request time"

- The average consumption in Compensator Mode should be indicated by the VSP in Annex 1 and used for the BRP perimeter correction, instead of the average between the Minimum and the Maximum Active Power Threshold in Compensator Mode. This can be different. – Elia agrees to add the average consumption in Compensator Mode in Annex 1 and to refer to this average consumption as part of the BRP Perimeter correction

VSP obligation to inform the BRP

– BASF comment on Art. III.3.13 "Als de VSP niet is aangewezen als Balanceringsverantwoordelijke voor ten minste een van zijn Technische Eenheden die actief vermogen kunnen injecteren of opnemen, is de VSP verplicht om de Balanceringsverantwoordelijke te informeren over de specifieke modaliteiten van de Dienstverlening die van invloed kunnen zijn op de vergoeding van de Dienst":

– "Niet akkoord. De VSP is niet verantwoordelijk voor het informeren van de balanceringsverantwoordelijke; deze taak ligt bij de aanbieder van de VSP-dienst. Specifiek voor een CDS staat in III.2.7 dat de VSP de CDS-gebruiker op de hoogte moet brengen van de specifieke modaliteiten. Het is vervolgens aan de CDS-gebruiker om zijn balanceringsverantwoordelijke op de hoogte te stellen."

– **Elia's answer:**

  – Elia will reword this article into "If the VSP is not designated as BRP for at least one of its Technical Units able to inject or absorb active power, the VSP must ensure that <u>the Grid Users delivering the VSP service have warned their BRP of the modalities of the VSP service</u>."

VSP obligation to inform the BRP

– FEBEG comment on Annex 11 Grid User Declaration: The VSP should also inform the BRP (next to the Access Contract Holder) in case of any modification regarding to the delivery of the service.

– **Elia's answer:**

  – Elia will add "(and the Balance Responsible Party if the VSP is also the Grid User)" after "The VSP declares that he will inform the Elia Grid User and the Access Contract Holder […]"

Miscellaneous
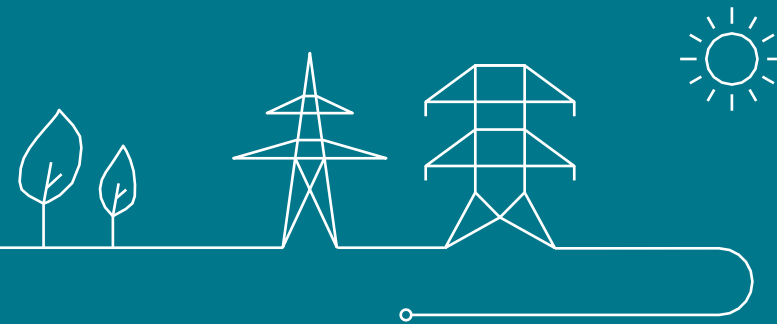
Proposed decoupling of price brackets

– BOP comment "We have indicated before that linking the higher and lower price brackets leads to an unclear or incorrect compensation for the higher price brackets (2, 4, 6, 8). This was discussed again with Elia in December 2024 and clarified by email on 19 December 2024. However, the current mechanism seems to have been retained. We therefore mention again that the compensation of the volume in these price brackets can best be adjusted in order to, as in the example, com-pensate the full 200 Mvar at the price in accordance with price bracket 2"

– **Elia's reply:**

  – Elia proposes to hold a bilateral meeting with BOP to further clarify this point.

Second Compensator Mode band not added

– BOP looked forward to the addition of a 2nd Compensator Mode at low active power injection values to reflect actual cost structure for wind farms.

– Elia chose not to include this feature in the T&C VSP.

– **Elia's answer:**

  – This 2nd Compensator Band would conflict with the feature of starting assets in Compensator Mode due to the BRP Perimeter Correction and could lead to a lot of confusion (e.g. "Which Compensator Band should be activated?", "Would the BRP reimburse Elia for active power injection in this 2nd Compensator Mode?"...).

  – Elia suggests lowering instead the Minimum Active Power Threshold in the T&C Annex 1 to cover low active power injection values. Entering the Compensator Mode will then correspond to active power offtake for which the wind turbine BRP perimeter can be corrected.

Memorization of Vstartup and Qinitial for 15 minutes

- BASF comment on cross-reference "Vstartup" (similar to FEBEG comment):

    - "De uitleg van dit begrip wijkt af van die in annex 3. Waarom is de volgende toelichting weggelaten? Wanneer het actieve vermogen van de technische eenheid onder de minimale drempel voor actief vermogen daalt, hetzij in de injectiemodus of in de compensatormodus, wordt Vstartup de komende 15 minuten opgeslagen."

    - "Waarom is deze initialisering niet opgenomen in de uitleg van de begrippen Q initial en V startup hierboven? Dit leidt tot verwarring."

- **Elia's answer:**

    - Elia will correct the definition of Vstartup in Appendix 2.A and Appendix 3 to align the definition. The memorisation of Vstartup for 15 minutes will show up in both definitions.

    - Elia will add the memorization of Qinitial for 15 minutes as part of the definition of Qinitial.

Aggregation of Technical Units to provide min 1 MVAR

– "Gelieve de optie te overwegen om meerdere Technische Eenheden te combineren, zodat het minimumvolume van 1 MVAr kan worden bereikt (bijvoorbeeld door enkele actieve front-end drives samen te voegen). "

– **Elia's answer:**

    – Aggregation of assets to provide 1 MVAr together will be considered in future versions of the T&C VSP to allow for internal verification of the technical feasibility of this feature and alignment with other Elia services .

Zerotage: Definitions of Starting Up and Shutting Down

- FEBEG noticed an incorrect interpretation of the zerotage function in the VSP T&C under PC:

  - Incorrect interpretation by Elia: Zerotage excluded during Starting Up and Shutting Down, defined **between 5% and 100% Pmin**.

  - Correction from FEBEG: Zerotage excluded during Starting Up and Shutting Down, **below 5% Pmin**.

- **Elia's answer:**

  - Elia agrees that the definitions must be corrected.

  - To avoid confusion, Elia will remove the definitions of Starting Up and Shutting Down and will correct Art. III.5.9 to avoid referring to Starting up and Shutting Down whilst preserving the objective of zerotage and the identified exceptions:

    - "When the Technical Unit is injecting (or offtaking) between 5% and 100% of its Minimum Active Power Threshold in Injection (or in Offtake) (as agreed in Annex 1) and is not providing the Service in Compensator Mode, Elia may request via an explicit order that the Technical Unit stops producing or absorbing Reactive Power (= 0 MVAR setpoint). Elia may not send this request to stop producing or absorbing Reactive Power when the Technical Unit is under 5% of its Minimum Active Power Threshold in Injection (or in Offtake)"

Technical Units with derogation with power > 25MW at voltage 110kV or larger

– FEBEG comment: "Extension of the voltage range in which the controlling technical unit mut be able to deliver the full MVAR range : between 0,90 and 1,05xUn instead of 0,925 and 1,05xUn : Technical units which have a derogation for the voltage/MVAr range with regards to the grid code, should not be restricted to participate to the MVAR Service".

– **Elia's answer:**

  – Elia will add that technical units to which a relevant derogation is granted are not subject to this article.

  – Elia has identified that the CREG decision project (B)2921 may be relevant to identify the units benefitting from this derogation.

Annex 13 – Pre-Qualification tests at the expenses of the VSP

– FEBEG comment on "The test is performed at the expenses of the VSP": Costs of Elia or of the independent body designated to perform the test by Elia should be borne by Elia, not by the VSP.

– **Elia's answer:**

  – The sentence will be modified to use the same wording as in other ancillary services: "The VSP is not remunerated for the communication test. The VSP is not remunerated for the prequalification test."

Annex 13 – Pre-Qualification tests

– BASF comment "*Gelieve toe te voegen dat de netstabiliteit niet in gevaar mag worden gebracht door een test. Dit kan mogelijk betekenen dat de test moet worden uitgesteld of dat niet het volledige bereik getest kan worden.*"

– **Elia's answer:**

  – Elia will clarify that this prequalification test is organised together between Elia and the VSP and will therefore be organised to avoid jeopardizing the grid operational safety.

– BASF comment on Qfailed and Qmanual_missing "*Deze begrippen worden niet meer gebruikt in dit contract.*"

– **Elia's answer:**

  – Elia will correct the variables names in accordance with the other Annexes.

Mandatory versus voluntary participation to the Voltage Service

– FEBELIEC request: […] the provision of voltage services is not part of the core business of consumers and can have a significant (technical and financial) impact on their processes. During certain periods of stress on the grid […], certain consumers have been requested explicitly by Elia to provide voltage services, in order to ensure grid stability and security. Febeliec wants to avoid that such explicit request by system operators would lead to an enduring mandatory participation to voltage services, as this could severely and negatively impact the processes of industrial consumers and would lead to a further erosion of the possibility for Elia to explicitly request such provision in periods of risks for grid security.[…] Febeliec thus explicitly asks Elia but also all other involved stakeholders such as regulators that this situation is described and excluded from mandatory participation in all related regulatory and contractual documents […].

– **Elia's answer:**

  – The split between mandatory or voluntary participation of the assets is defined in the Code of Conduct of the CREG and thus falls beyond the scope of Elia.
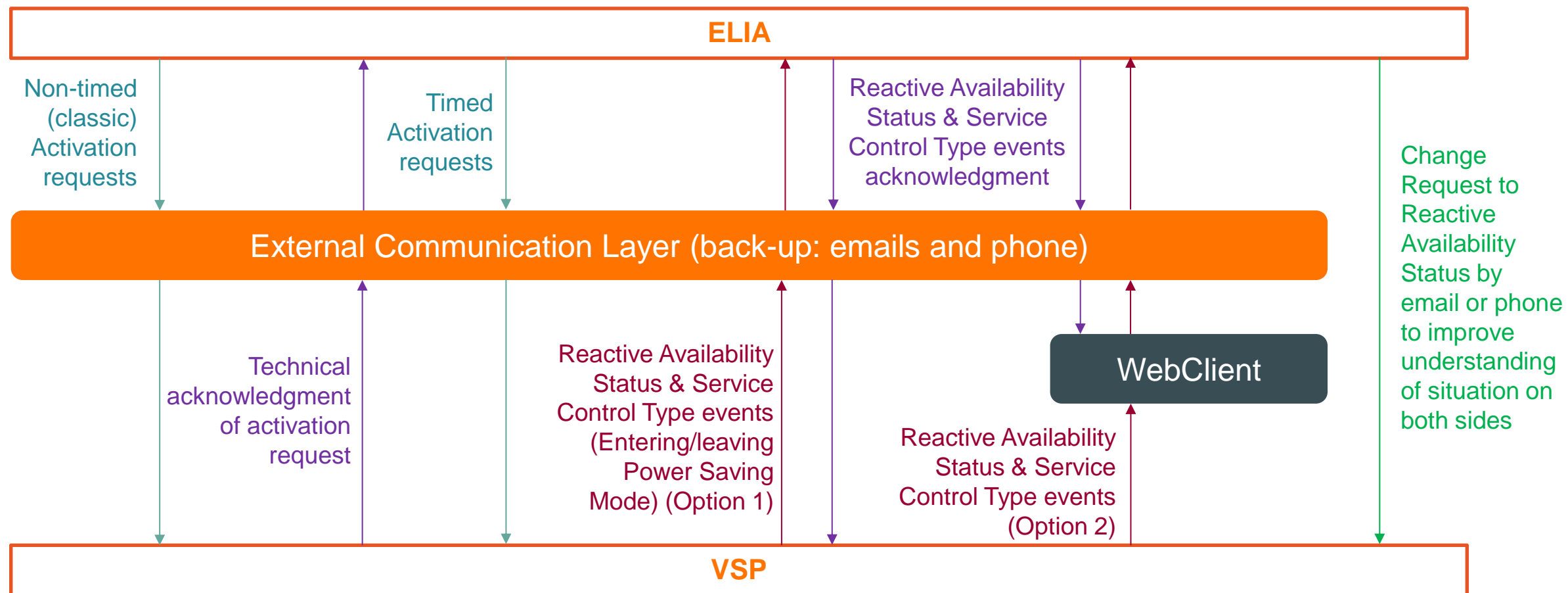
Communication through webclient and ECL

- FEBELIEC comment: "As Elia will develop a webclient in which the VSP can introduce their data manu-ally for all the incoming data (assets unavailabilities and acknowledgment messages), can Elia confirm that the implementation and use of the External Communication Layer is only mandatory for the communication by Elia to the VSP of setpoints, start-up requests and activation end times ?".

- **Elia's answer:**

  - Elia will add 2 Figures in Annex 14 to illustrate the communication channels (see next 2 slides)

    - Elia will communicate reactive power setpoints, start-up requests and activation with end times through the External Communication Layer.

      - The VSPs will communicate acknowledgment messages specifically for reactive power setpoints requested by Elia through the External Communication Layer.

    - VSPs have 2 options to communicate their assets availabilities to Elia, including Service Control Type events (and entering/leaving Power Saving Mode)

      - The webclient

      - The External Communication Layer

Communication through webclient and ECL

ELIA

Non-timed (classic) Activation requests

Timed Activation requests

Reactive Availability Status & Service Control Type events acknowledgment

Change Request to Reactive Availability Status by email or phone to improve understanding of situation on both sides

External Communication Layer (back-up: emails and phone)

Technical acknowledgment of activation request

Reactive Availability Status & Service Control Type events (Entering/leaving Power Saving Mode) (Option 1)

WebClient

Reactive Availability Status & Service Control Type events (Option 2)

VSP

Communication through webclient and ECL

ELIA

Non-timed (classic) Activation requests

Timed Activation requests

Reactive Availability Status & Service Control Type events acknowledgment

Change Request to Reactive Availability Status by email or phone to improve understanding of situation on both sides

Revolt

Emails and phone

WebClient

Technical acknowledgment of activation request

Reactive Availability Status & Service Control Type events (not Power Saving Mode) (Option 1)

Reactive Availability Status & Service Control Type events (not Power Saving Mode)(Option 2)

VSP

Alignment of definitions of Qtech,min and Qmin available

– FEBEG suggests that Qtech,min and Qmin available should be written as negative values to avoid confusion.

– In annex 1 Qtech,min is defined as a technical minimum that can be absorbed and is written as a negative value. Definitions of $Q_{tech,min}$ and $Q_{min\ available}$ should be aligned as much as possible. To avoid confusion, both values should be written as negative values, and their absolute value is the maximum reactive power that can be absorbed.

– **Elia's answer:**

  – Elia confirms the understanding and will correct the variable names in the T&C as this comment shows that confusion with the current variables names is possible.

Alignment of definitions of Qtech,min and Qmin available

– BASF comment for Annex 6 & 7: *"Het lijkt vermoedelijk een vergissing te zijn dat de Vergoedingsvermindering niet door 4 is gedeeld, terwijl dit wel het geval is bij de vergoeding zoals vermeld in annex 2."*

– **Elia's answer:**

  – Elia will correct the formula and add that this remuneration reduction applies per quarter-hour.

Alignment of definitions between VSP-OPA-SA contracts and connection contracts

– MP comment: discrepancies between T&C definitions of "Gedragscode" & "Leveringspunt" between OPA SA VSP on one hand, and Connection Contract on the other hand.

– **Elia's answer:**

  – Elia confirms that the definitions are not identical but that both versions make sense.

  – Changing the OPA SA and VSP contracts would be a more significant effort than changing solely the Connection Contract.

Conditions for Technical Units – Adding "DSO-users"

- MP comment: Adding "or other Grid Users" after "with one or more Elia Grid User(s) or CDS User(s)" in case of DSO on an Access Point.

- "III.3.1 The VSP operates Technical Units that are able to produce and/or absorb the Reactive Power to and from the Elia Grid or has concluded an agreement with one or more Elia Grid User(s) or CDS User(s) **or other Grid Users** that operate(s) Technical Units that are able to produce and/or absorb the Reactive Power to and from the Elia Grid."

- **Elia's answer:**

  - Elia will add "or DSO-users" to include units within Distribution Systems as potential VSP units to enable aggregation.

  - This change will also be implemented in Art. III.3.4

Controlling Units – Varying alpha eq coefficient

– BASF comment: "*Gelieve toe te lichten hoe er wordt omgegaan met een Regelende Technische Eenheid die voor elke positie van de stappenregelaar een andere gevoeligheidscoëfficiënt kan hebben en die voor elke stap moet voldoen aan de eisen van het FTR. Dit staat in contrast met dit contract, waarin slechts één gevoeligheidscoëfficiënt wordt toegepast*".

– **Elia's answer:**

  – The value of the sensitivity coefficient α_{eq} varies only marginally from one tap setting to another. Introducing variations of this sensitivity coefficient would complexify the units management and settlement process for a negligible return in service and settlement improvement.

Clarifications on definitions

– Art. III.1 Definitions - Afregelsnelheid van het Reactief Vermogen

   – Comment in de T&C: "Moeten Niet-Regelende Technische Eenheden ook niet worden opgenomen in deze definitie, of is dit niet relevant voor hen?"

   – **Elia's answer:** Non-Controlling Units do not feature the ability to control the reactive power ramp rate.

– Art. III.1 Definitions - Basisreferentiewaarde

   – Moeten Niet-Regelende Technische Eenheden ook niet worden opge-nomen in deze definitie, of is dit niet relevant voor hen?

   – **Elia's answer:** The Reference Setpoint may indeed apply to Non-Controlling units as well. Elia will adapt the T&C accordingly.

Wording fixes and suggestions

- Art. III.1 Definitions - Elia will reword "…and of its Minimum Active Power Threshold in Absorption..." into "Minimum Active Power Threshold in Offtake"

- Art. III.1 Definitions - Elia will reword "Forced Outage" in "Gedwongen niet-beschikbaarheid" in the Dutch T&C version

- Dutch version of the T&C: Elia will use Blindvermogendienst everywhere to describe the service

- Art. III.3.4 a) Proposed change in the T&C: replacing "uitzonderlijke" with "specifieke"

  - Comment in the T&C: "Voorstel om in specifieke omstandigheden te gebruiken in plaats van in uitzonderlijke omstandigheden."

  - **Elia's answer:** Elia will keep the wording as-is to stress that such configuration should remain an exception and not become part of the main-stream rule.

Thank you!